Design for **collective family experiences** during **online grocery shopping**.

by Mark Janssen

Colophon

Master thesis

Design for collective family experiences
during online grocery shopping.

Mark Janssen
February 2020

Abstract

Doing groceries is an inherent part of family life (Pettersson, Olsson, & Fjellström, 2004). Families are recognized as a unit for food choice and consumption. The influence of family members on food choices happens throughout family life and takes place in the private home or in the public sphere, mainly grocery stores. Picnic is an online-only grocery store delivering groceries in The Netherlands and Germany. Families are their biggest target group, averagely placing the largest and most frequent orders (Picnic, 2019).

However, since Picnic does not have brick and mortar stores, all orders are placed via their smartphone app for iOS and Android devices. This deviation from traditional grocery shopping profoundly changes the family decision-making process in food buying and consumption (Suwandinata, 2011). Whereas grocery stores can act as arenas of family interactions including children constantly influencing their parents, directly and indirectly (Haselhoff, Faupel, & Holzmüller, 2014), the online grocery shopping process is mainly an individual experience. This behavioural change significantly affects the sense of shared responsibility within families. Moreover, it prevents kids from learning how to act and behave as responsible consumers, to get educated about healthy eating habits and to understand the value of money (Suwandinata, 2011).

Therefore, the aim of this research is to explore ways to actively engage multiple family members in the online grocery shopping experience. With the goal of ultimately **fostering a feeling of togetherness and shared responsibility within families, making the online shopping process resemble a festive family ritual while celebrating the involvement of kids.**

Various design methods and tools are used during this project, mainly following the Design Thinking methodology and applying parts of the Vision in Product Design framework. After empathizing with internal and external stakeholders and gathering insights on the context from a higher perspective, a design statement has been formulated. Subsequently, multiple rounds of prototyping rounds were executed, constantly involving the target audience and gathering feedback from the company.

The final design takes a granular approach towards creating a collaborative digital grocery shopping process loop. "Picnic Family" facilitates a variety of collaborative family touchpoints throughout the entire service journey and offers new playful ways of grocery shopping. It supports the creation of new family rituals by providing tools that enable new habits of family communication and interaction during online grocery shopping.

The "Picnic Family" has been designed and prototyped for smartphones and tablets and each prototype has been evaluated with the target group and internally within Picnic. However, to fully validate the long-term effects of the app, it should be used by families in real life and over time. Additionally, the research of this project and the effects of the designed tools can be used to investigate family collaboration on other digital services, such as e-commerce businesses, travel planning tools, entertainment streaming platforms.

Acknowledgements

It has been a joy to work on my graduation project for the past six months. Although it was my most individual design project so far, I was lucky to have encountered many people that supported me and that provided me with a lot of positive energy when needed. For this, I am very grateful and I would like to thank everyone who has helped me make this project come to life.

First of all, I am very thankful for all the families who I was able to interview about their grocery shopping experiences. During all phases of this project, it was greatly energizing and inspirational to listen to their personal stories and to observe their reactions to my first ideas, early prototypes and final design.

I would like to thank Paul Hekkert and Rebecca Price for their support, provoking words and for pushing me to make the most of this project. Whenever I needed some guidance, I could always have a brief chat and feel ready-to-go again. I admire their ability to always being able to quickly tune-in on the project, ask the right questions and give advice in a constructive manner.

Huge thanks to the people at Picnic who gave me all the freedom, trust and fun during this project. With your help, I was able to quickly understand the context, get in touch with users and have access to all the people and tools needed to work on my design. Special thanks to Kay van Mourik for regularly checking in and always providing me with new insights, fresh ideas and original input. Thank you, Thomas Otter, for helping me construct the digital prototypes until they were pixel-perfect. Thank you Jelten Beekhuis, Wiemer Viet, Lars Lockefeer,

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Thanks to Marieke, Juliette and Roos for being my movie stars and for providing their apartment as a perfect movie set for an entire day. I could not have wished for better actors.

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Finally, thanks to Chris for being my favourite person on the planet and for giving me all the support and hugs I could possibly need.

Enjoy reading

Mark Janssen

Glossary

Android;
Android is a smartphone operating system developed by Google using a Linux kernel.

Backend developer;
A type of programmer who creates the logical back-end and core computational logic of a website, software or information system.

Call to action (CTA);
An instruction to the audience designed to provoke an immediate response.

Category tree;
Screen containing all product categories in the offering of Picnic.

EPV;
Picnic's own electric Picnic Vehicles. EPV are stationed at hubs and Runners use it to deliver groceries to people's homes.

Frontend developer
A type of computer programmer that codes and creates the visual front-end elements of a software, accessible by the end user or client.

Fulfilment center;
Packing warehouses where ordered groceries are loaded onto trucks for shipment to the hubs

Hub
Hubs are often located close to residential areas. The loaded trucks arrive and are unloaded here. The groceries for a single delivery round are loaded on an EPV. Hubs

iOS
iOS (formerly iPhone OS) is a mobile operating system created and developed by Apple, exclusively for its hardware.

iPadOS
The mobile operating system created and developed by Apple for its iPad line of tablet computers.

L1, L2 or L3 pages;
Resembles the level of a certain page in the Picnic store. The higher the number the deeper the page; or how higher the number of clicks the user made.

Minimum viable product (MVP);
A version of a product with just enough features to satisfy early customers and provide feedback for future product development.

PDP;
Product description page. Page in the Picnic app, describing a unique product

Picker;
A person that works at a fulfillment center, picking the ordered products and putting them into baskets

Product tile;
A square in the Picnic app showing the product photo and product name

Runner;
A person that works at a hub, delivering groceries in an EPV to the customers

SKU;
Stock indication unit. Unique number indicating an individual item

WMS
A warehouse management system is a software application designed to support and optimize warehouse functionality and distribution center management.

Reading guide

1. Colours represent the design phase

Different colours represent each stage from this design project, mainly following the design thinking process.

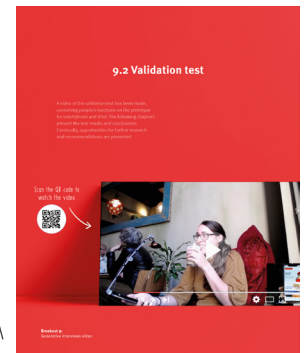| **Initiate** | **Analyze** | **Synthesize** | **Evaluate** |

2. Coloured blocks provide extra information

Blue and red coloured breakouts provide background information or extra content in form of posters and videos.

Blue breakouts provide extra background information.

Red breakouts provide extra content in form of posters and videos

3. Key takeaways

At the end of each section of this report, the main takeaways are presented. These pages can be recognized by illustrated streets.

Table of contents

Section III Synthesize

Section IV Evaluate

SECTION I
Initiate

SECTION I | Initiate

Chapter

01

Introduction

This chapter provides an introduction to the topic of this thesis project and provides the formulated research questions. Additionally, the scope of the project is presented. Finally, the overall structure of the report is explained on the basis of the design thinking methodology.

Figure 3
Francois Firmin-Girard, Autumn Market at Les Halles, 1842

1.1 Design brief

Doing groceries is an essential part of organizing family life. From toddler to teenager, we constantly fulfill a role in the family and influence the grocery shopping process.

As young kids, we often have no choice but to join our parents when going to the supermarket. During these shopping trips, kids have a big influence on the decision-making process (Kaur & Singh, 2006). When growing older, kids actively ask to join their parents on trips to the supermarket, influencing family decisions by requesting products and verbalizing their wishes. When moving out of the parental home, we begin to be more independent and start to do groceries on our own. Making our own decisions, which are most often based on habits, preferences and routines of the family.

As parents, the experience of doing groceries for the entire family can be a stressful one. In fact, people associate more stress with grocery shopping than with any other form of shopping (Terblanche & Boshoff, 2004). Parents want to be a good parent and provide their family with sufficient, healthy and varied food. However, this is easier said than done. Families live hectic lives and often choose for speed, ease and convenience over variety and quality.

Furthermore, the way families buy their products changed significantly in the last few years. Every year Dutch consumers spend more money online than the year before (Thuiswinkel Markt Monitor, 2019). In 2018, Dutch consumers spent €23,7 billion on products and services online, a growth of 10% compared to the previous year. This is 27% of the total spending. The food and nearfood sector, which includes supermarkets, has long been notorious for lacking behind in terms of online success. In 2012, only 1% of all groceries were bought online. Currently, the food sector is experiencing the largest growth in online spending of any product category (CBS, 2019). In 2030 the market share of online groceries in the Netherlands is expected to be between 15 and 20% (Rabobank, 2019) .

Whereas grocery shopping is traditionally (dictated to be) a social activity involving multiple members of the family, online shopping is inherently an individual experience. Online purchases are most often made individually, on personal devices like laptops, desktops, tablets and smartphones (Thuiswinkel Markt Monitor, 2019). This makes the online grocery shopping journey significantly more individual than the traditional way of grocery shopping.

As online-only grocer, Picnic is aware of the fact that their online shopping service is resulting in mostly individual use. At the same time, families with children are the biggest customer segment for Picnic, accounting for 50% of all customers (Picnic, 2019). While recognizing these facts, Picnic is currently not providing dedicated solutions to support collective grocery shopping for families.

Therefore, the aim of this master thesis is to improve the user experience for families doing their groceries at Picnic. To achieve this,

it is essential to understand the context of e-commerce, supermarkets and family life. The intended outcome of this project is a design proposal that enables families to collectively organize their groceries. When successful, Picnic should be able to implement the solution in their current service model.

The project brief, as approved by the IDE Board of Examiners, can be found in Appendix 1.

Figure 4
Picnic runner and family

1.2 Project scope and research questions

Project scope

In order to scope this project, the focus will be on designing collective online shopping experiences for families using Picnic.

While conventional shopping can be seen as a social and shared activity, right now online shopping experiences are mostly built for single-user experiences. The complete ordering and receiving process is tailored for a personal customer journey. However, there are many use cases, in which it can be valuable to offer a shared shopping experience. For example, when booking a trip together, or in this case, grocery shopping at Picnic. First of all, a shared shopping experience can be valuable for the user. No longer does a single user have to be responsible for deciding what to order, for when to place the order and for being home to receive the order.

For the e-commerce business, Picnic in this case, it can be of great value to involve more people in the shopping process as well. Sharing the Picnic experience with as many people as possible enlarges the chance of a habit aspect in these groups and can increase the amount of data gathered about users. This viral aspect can help companies to grow at speed and ensure more regular orders.

The main focus of the project is on families, as they account for 49% of all Picnic deliveries (Picnic, 2019). However, it is likely that the outcomes entail solutions which also can be of value for non-family customers. This would also be beneficial for Picnic. After all, 51% of its orders come from non-family customers. Additionally, singles and couples could even become the families of the future. However, for the sake of creating a narrow, specific and

workable scope, the scope of the project is on families.

The narrow scope of this project is focused on collective shopping experiences for families using Picnic. Research is conducted on why Picnic should enable collective online shopping experiences for its customers ('the why'). Investigated is how UX solutions can enable shared online shopping experiences and how they result in more routinical behaviour ('the how'). Finally solutions are designed that enable collectively organizing family groceries ('the what'), see figure 5.

Main research questions

RQ1: Why should Picnic enable collective shopping experiences within families?

RQ2: How can UX solutions enable shared online shopping experiences?

RQ3: How can shared online shopping experiences result in higher brand loyalty and more regular orders within groups?

RQ4: What should Picnic offer as solutions to families in order to enable collectively organizing family groceries?

Why? → **Purpose**
Why should Picnic enable collective shopping experiences within families?

How? → **Process**
How can UX solutions enable shared online shopping experiences?
How can shared online shopping experiences result in more routinical behaviour?

What? → **Outcome**
What should Picnic offer as solutions to families in order to enable collectively organizing family groceries?
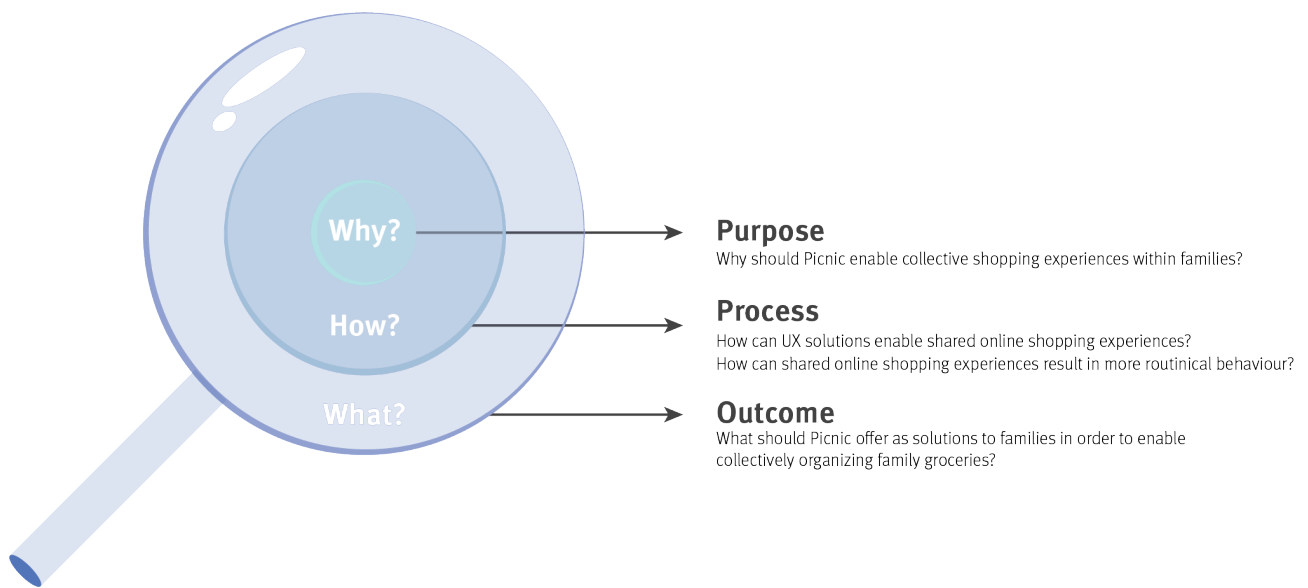
Figure 5
Research questions

Figure 6
Creative session at Picnic

Chapter

02

Approach

This chapter describes the approach the project. It provides information on how different design methodologies such as Vision in Product Design and Design Thinking are applied in the overall process.

2.1 Design approach

Naturally, this project takes a design approach. Meaning different design techniques are used in the creative problem-solving process. In the course of this 20-week project, design and research methodologies will be applied in order to end up with an intended outcome as a result.

The main design phases are based on the design thinking framework, as described in chapter 2.3. For this project the following six phases have been determined: empathize, define, ideate, prototype/test, validate and implement. Methodologies from the Delft Design Guide (Boeijen and Daalhuizen, 2013), Vision in Product Design (Hekkert and Van Dijk, 2011) and Convivial Toolbox (Sanders and Stappers, 2012) are used, adapted or combined throughout the entire process.

2.2 Design elements

User-centricity
Focus on users' experiences, especially the emotional ones. Understanding their true needs and wishes and translating them into relevant product requirements.

Rapid prototyping and high-fidelity prototyping
The use of a wide variety of prototypes to explore potential solutions. Valuing experimentation through creation. Exploring an open-minded culture by publicly displaying rough prototypes. The feedback gathered while conducting user tests with these prototypes will guide the decision-making process during this project.

Creative thinking

Creative thinking techniques enable to frame the problem and approach it from a variety of perspectives. Eventually creative thinking methods can help to come up with interesting ideas and ways to prototype, test and validate concepts.

Picnic Samen - Prototype Test

Storytelling

Storytelling will be an essential element during the entire project. By making use of visual material, such as illustrations, posters and movies the process and outcomes will be communicated to all stakeholders during the project.

Feedback loop

A constant feedback loop will be used during the entire process to ensure feedback, input and support from all stakeholders.
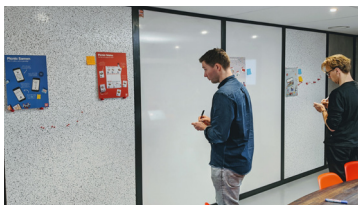
Company fit

As stated in my project brief, it is a personal ambition to design a solution that fits Picnic and that could be actually implemented. It should be of value for both its users and for Picnic itself.

2.3 Design Thinking

As stated before, elements of the design thinking methodology will be used throughout the process. Design Thinking is a framework for innovation. The approach, once used primarily in product design, is now infusing corporate culture as well (Jon Kolko, 2015). It roughly follows five main phases which are: empathize, define, ideate, prototype and test. The process is often visualized as an infinity loop to emphasize the iterative character of the process. The phases are not linear, sometimes testing a very quick prototype helps to define the context. The process is very human-centred and direct contact with the relevant stakeholders is necessary during all five phases. This flexible and human-centred approach is suitable for achieving success while working with large numbers of stakeholders and complex contexts. This project slowly follows each of the five phases of the Design Thinking framework while completing many complete framework cycles during each phase, see figure 7.

Empathize
What is the problem?
Get to know users
Understand (future) context

Observations
Interviews
Guerilla interviews
Literature study
Experience journey
Case studies

Ideate
How do we solve it?
Explore possibilities
Communicate ideas

Co-creation
Brainstorming
How-to's

Design Thinking

Analysis   Synthesis

Define
Why is it important?
Uncover needs
Listen for feedback

Literature study
Elements of Value
Insight mapping
Design statement
Opportunity areas

Test
Does it work?
Uncover new insights
Reflect

User Tests

Prototype
How do we create it?
Prototype concepts
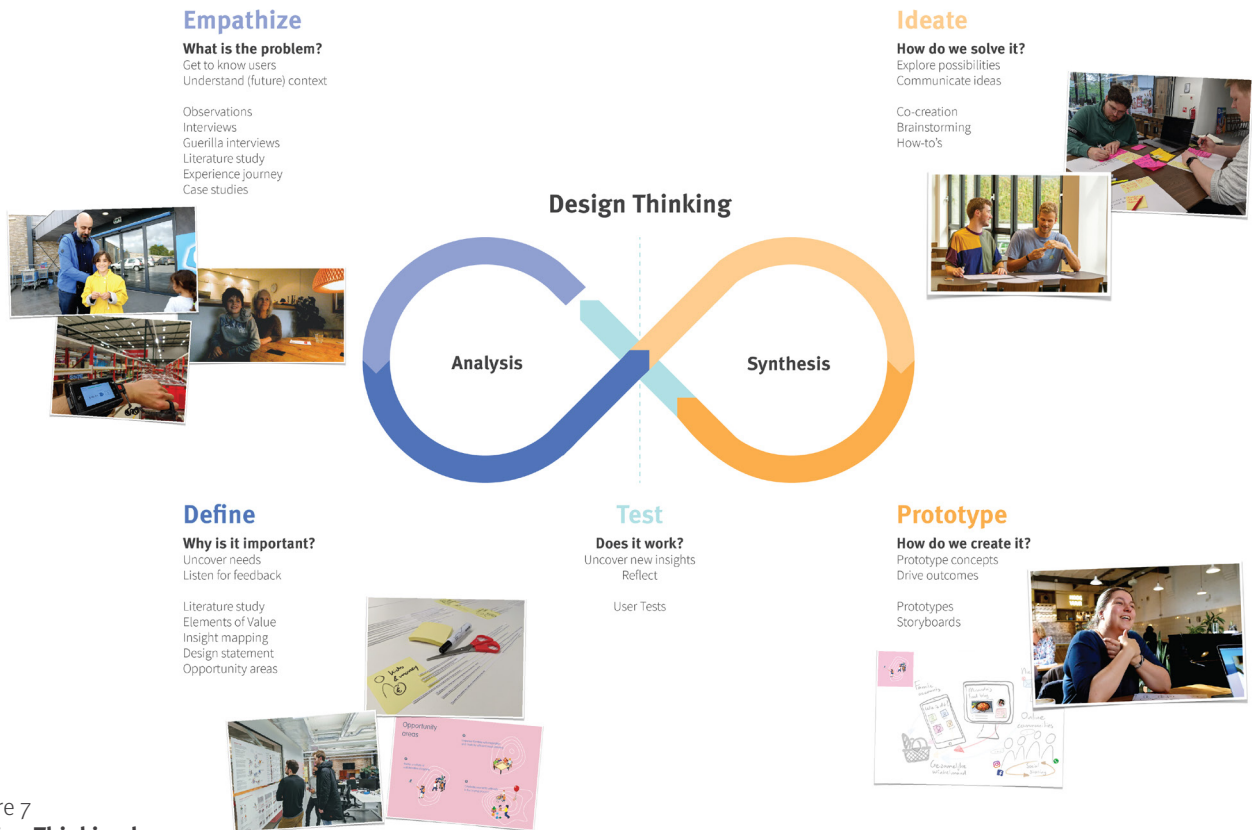Drive outcomes

Prototypes
Storyboards

Figure 7
Design Thinking loop

2.4 Report structure

This report is divided into four main sections: initiate, analyze, synthesize and evaluate. To keep the report structured and easy to read, the titles of chapters are kept the same as the phases of the design thinking process presented in figure 7. Additionally, section II, III & IV close by providing their main conclusions. Now follows a brief explanation of the four main sections in this document:

I: Initiate

The first part of the report acts an introduction into the project's goal, research questions and approach.

II: Analysis

The analysis of this project aims at emphasizing with the human context by creating a thorough understanding of the needs and desires of all stakeholders. Emphasizing with these stakeholders happened through qualitative and literature research activities. These activities, which are summed up in figure 7, are executed to find answers to the research questions. Subsequently, a design statement is formulated which helps to focus on solving a specific part of the larger design problem. This concludes the empathize and define phase as well as the analysis section.

III: Synthesis

Synthesis means combining all the pieces of knowledge together into ideas, concepts and prototypes. In this case, all the knowledge gathered during the empathize and define phase. Ideas are generated based upon the design

statement and research findings generated before. The ideation phase will eventually move into prototyping. During the prototyping phase, ideas are made tangible in order to test them with Picnic users and internal stakeholders. The outcomes of these tests act as building blocks for next prototypes. After developing and testing a series of prototypes, a final concept is designed and prototyped.

IV: Evaluation

Eventually, the final design and prototype is used to validate the concept both with end-users and with internal stakeholders within Picnic. By doing so, it is clear what the impact of the design is on the users and how the solution can be implemented by the company.

2.5 Vision in Product Design (ViP)

During the course of this project, elements of the ViP approach are applied. The ViP approach provides a framework to explore possible futures instead of solving present-day problems by looking at present-day solutions (Hekkert & van Dijk, 2001), see figure 8.

Future context
It showcases that instead of just looking at the current product and service, it is valuable to look at the broader domain and future context. In this case, the context is the one of (grocery) shopping, providing food for the family and even family life in general. So next to diving into the context of grocery shopping and empathizing with the target group of this project, universal principles are explored. These universal principles are instrumental in creating a view of the future context and formulating a design statement (the why).

Interactions
The ViP approach guides a designer to articulate the right question at the right time. It is based around the theory that products and services are a means of accomplishing actions interaction and relationships. In a typical ViP design process human-product interactions will be defined (the how), before thinking about the actual embodiment of the design (the what). By interacting with people, products obtain their meaning.

New product
With ViP the eventual design of a product or service is guided by defining product qualities it should entail. Before addressing any specific features or properties of the future product an understanding of the product on a qualitative level will be developed. Eventually the developed concepts will be evaluated on these qualities. Eventually leading to a final design.
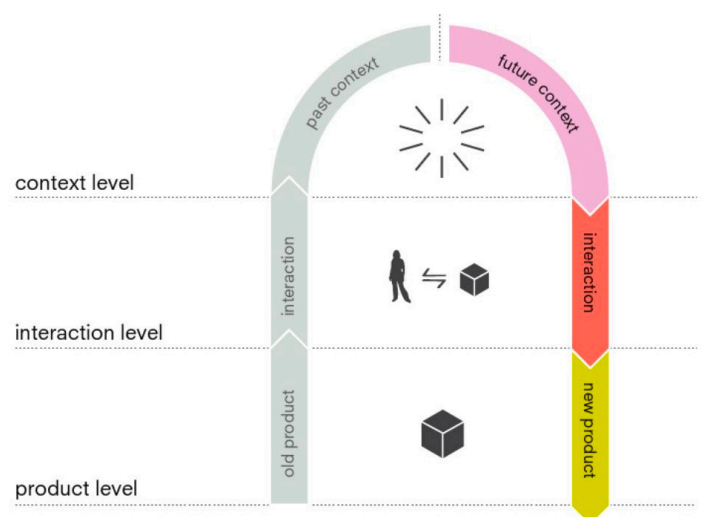
Figure 8
Steps of ViP model

2.6 Design process

During this design project, elements of the Design Thinking and Vision in Product Design approach have been combined, see figure 9. Personally, I value the future-proof approach of the ViP method and I tried to combine this with the elements of user-centricity and rapid prototyping often found in Design Thinking approaches. This chapter introduces this design process.

Analysis

During the analysis phase of the project, insights are gathered on two different levels. Firstly, on the narrow scope level of families and grocery shopping by applying empathizing techniques like interviewing and observing the target group. Secondly, insights are gathered by researching universal principles on the broader scope of the project's context. This is mainly done by literature research, interviewing experts and analyzing movements in the digital industry.

ViP lens

After the analysis phase, a design statement, an interaction metaphor and product qualities, will be formulated. Combined, these elements will act as a lens that guides the design and decision-making process during the synthesis phase.

Synthesis

During the synthesis phase, multiple ideas will be developed in a series of rapid prototyping rounds. The insights gathered by the tests of these prototypes, combined with the ViP lens, will eventually lead to the final design.

Critical reflection

Since these two design methods inherently carry conflicting some views on the design process, a critical reflection is provided at the end of this report.
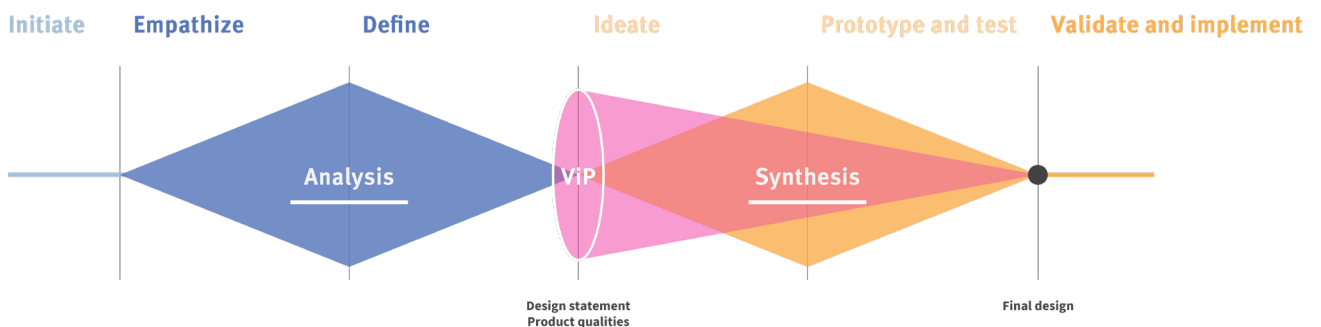
Figure 9
Steps of ViP model

SECTION II
Analyze

Figure 9
SRV-wagen / Mobile Supermarket

Chapter

03

Context

This chapter introduces the project context both from a user's point of view and from the company's perspective. The Picnic app and service will be introduced and the logistical operation of the company will be discussed.

3.1 Company context: Picnic

The user's perspective

The brand promise
The brand promise of Picnic is rather straightforward and often gets communicated to the customers is only four words "Laagste prijs, gratis thuis", meaning: Lowest price, free delivery (figure 12).

The brand vision
The vision of Picnic is to be like the milkman, figure 10, that used to deliver groceries to people's homes. The same level of personal service, but with an assortment comparable to supermarkets (Picnic, 2019).

The value proposition
In total, the value proposition of Picnic consists of five elements, see 11. In the following section all elements are described from the user's point of view.
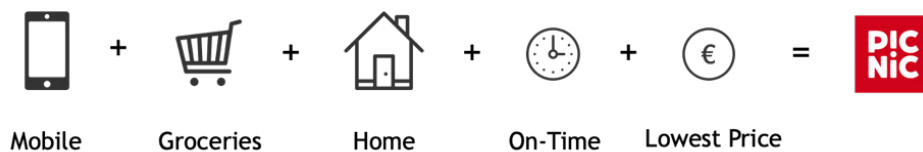

Figure 10
The milkman

Mobile + Groceries + Home + On-Time + Lowest Price = PICNIC

Figure 11
Value proposition

Figure 12
Picnic EPV with brand promise

Mobile

First of all, Picnic offers a mobile grocery shopping service in the shape of an app. The app can be installed on most iOS and Android devices and is optimized to be used on mobile phones, see figure 13.

The store consists of four main elements, as shown in figure 4, the storefront, search, the basket and the profile. Firstly, the "storefront" or the homepage of the app. In this element, customers can swipe between the top pages of the app. Internally these pages are called L1 pages, short for level one. The L1 pages in the storefront can be used to see user's most ordered products "Besteld", new products "Nieuw" and discounted products "Acties". Also, the storefront offers a weekly changing discover page "Ontdek", which highlights a single product category or type of product. The discover page is identical for every Picnic users, unlike apps like Instagram or Twitter. Special L1 pages can be added for specific events or holidays.
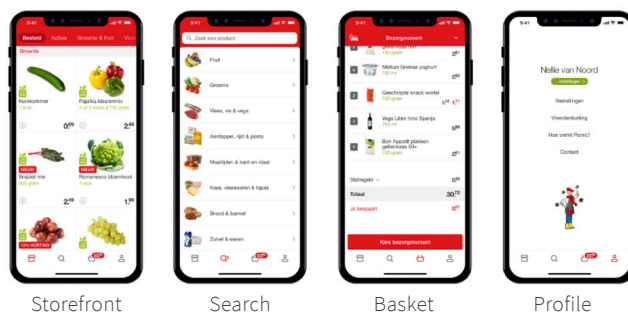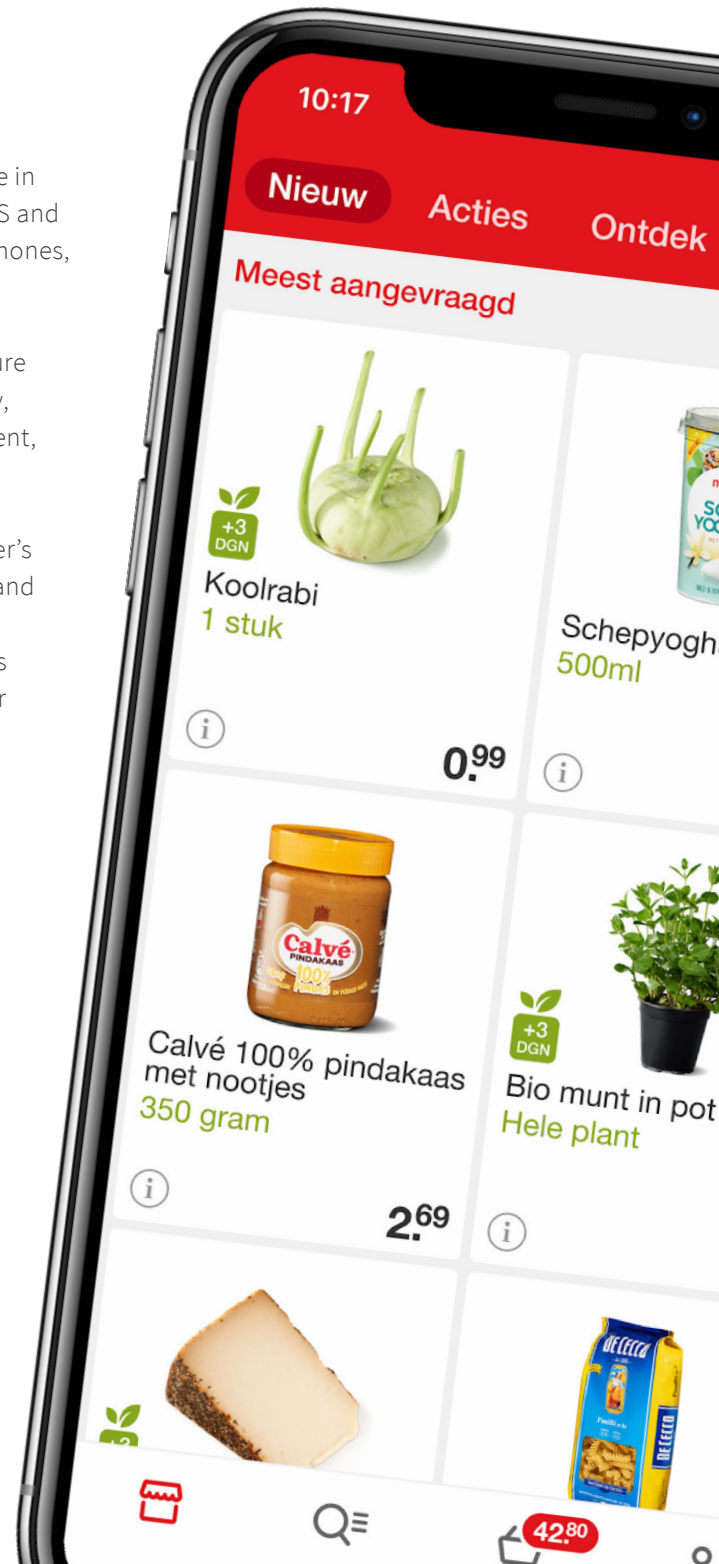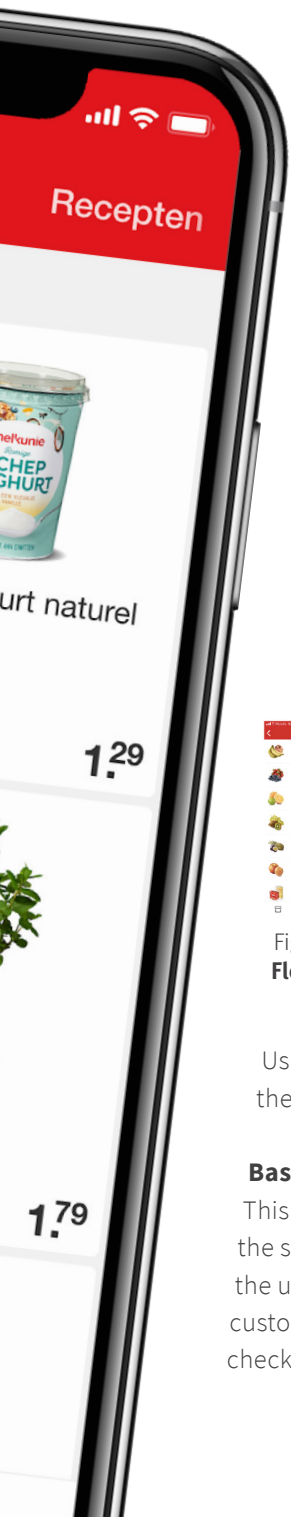

| Storefront | Search | Basket | Profile |

Figure 13
The Picnic app

The second element of the Picnic store is Search. On the search page, users can use the category tree to browse the different product categories, for example, fruit. These product category pages are called L2 pages. From these pages, users can dive deeper into more exact categories, like bananas, apples or pears. At Picnic, these pages are called L3 pages. On these L3 pages, users can select the exact product they would like to order. This brings them to the deepest layer of the Picnic app, the product description page, often abbreviated as PDP. Figure 14 shows this flow from the product category to the product description page.
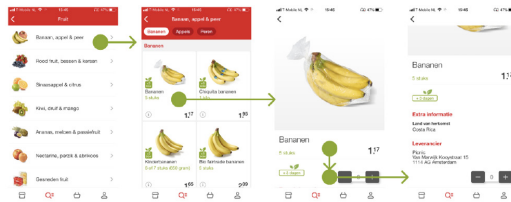

Figure 14
Flow to PDP

Using this flow, users can add any product to their basket within three clicks.

Basket
This brings us to the third main element of the store, the basket. All products selected by the user end up in the basket. On this page, customers can select a delivery slot and start the checkout procedure.

Profile
The fourth and final main element is the profile page, where users can adjust personal settings, see details on their latest order and find the contact information of Picnic.

Groceries
The app offers an entire supermarket on your smartphone with a selection of thousands of products from hundreds of suppliers. The product offering is co-created in collaboration with the users. At the end of every product section, users can request any product of their liking, see figure 15.
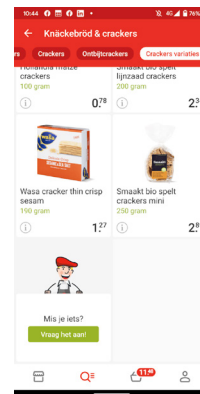
Figure 15
Product request notification

With a recent update of the app, a thousand new products have been added to the store, by which the total offer increased to more than 7000 products (Marketingtribune, 2019).

Home
Picnic mainly operates in the Netherlands where it currently serves customers in almost a hundred cities. This number is constantly growing with openings in new cities almost every couple of weeks. These cities are located in the west, middle and south of the Netherlands. There are also plans to start delivering groceries

in the Northern cities of the Netherlands (Daglad van Het Noorden, 2019), but there is no clear date for this expansion yet.

Picnic delivers the groceries to people's homes for free, with a minimum order value of €25. Especially in high-rise buildings, the saving of time and effort can be a big advantage for customers. The people that deliver the groceries are called Runners, see figure 16. The Runners drive around in the EPVs, small electric vehicles with recognizable Picnic branding, see figure 17.

Figure 16
Picnic runner delivering groceries

Figure 17
Picnic runner delivering groceries
The EPV is designed to be electric, practical and friendly. All vehicles are electric, making Picnic the owner of the biggest electric vehicle fleet in Europe.

Additionally, the newest EPVs are equipped with solar panels to generate extra energy. Instead of the traditional walkway down the middle, the cargo of the EPV is unloaded from the outside, as seen in figure 8. This makes the EPV small and compact, while still having a high capacity.

People shouldn't feel ashamed by a big truck stopping in front of their homes, blocking the entire street. The Picnic vehicle is designed to efficiently make deliveries with a friendly attitude.

On-time
If Picnic delivers in the area of the user, they only pass by their home once a day. Unlike other grocery delivery services like Albert Heijn, where users can select a big variety of delivery slots, see figure 18.
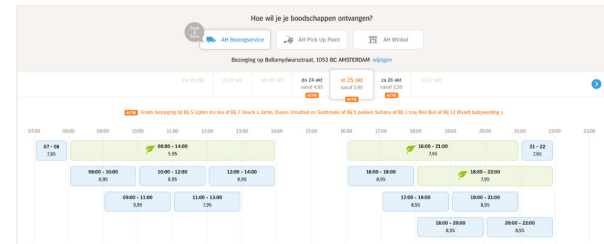
Figure 18
Delivery slots Albert Heijn online

The delivery rounds that Picnic makes are referred to as "Milkman rounds". It is comparable to the difference between taking a cab or a public bus. Where the cab can come to your house at any moment, the bus only comes around once in a while, following a strict schedule. The Milkman rounds are calculated by a complex algorithm taking into account many dependencies. This algorithm evolves and becomes even smarter over time. When the system knows how long an average delivery takes on a particular address, during a specific time frame, and including the weight of the groceries, it can predict very precisely at

what time the groceries will get delivered. For Picnic, this results in efficient delivery rounds, keeping costs low. For users, this results in free deliveries, up to the minute precise. Users can follow the delivery vehicle live in-app, using the "Boodschappenrader", see figure 19.
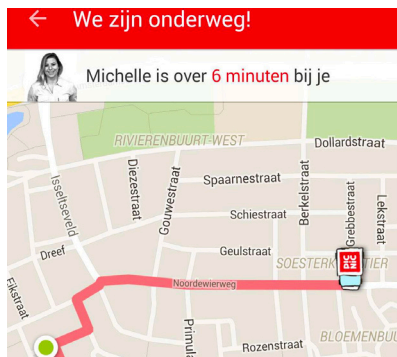
Figure 19
The "Boodschappenrader"

Lowest price
Picnic promises the user to deliver groceries for the lowest price. Every night, an external company tracks if the prices of products are equal or lower at national supermarkets with national online coverage: Albert Heijn, Jumbo and PLUS. If a customer bought a product and found it cheaper elsewhere, they receive their money back. Also, the Dutch consumer association, De Consumentenbond, recognized Picnic as the cheapest supermarket for A-brands (Consumentenbond, 2019), see figure 20.
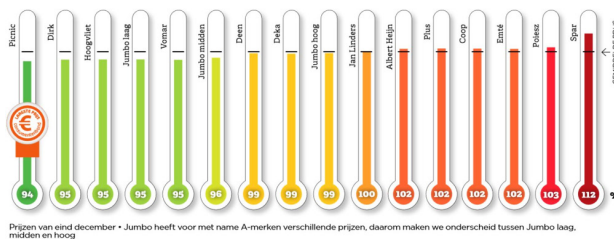
Figure 20
Price ranking Consumentenbond 2019

Mobile + Groceries + Home + On-Time +
All these elements together form the value proposed to the users of Picnic. This formula has proven to create very high demand. Picnic easily attracts a lot of customers. To cope with the demand, Picnic places new registering users on a wait list. When users are on the wait list, they receive free products to ease the wait, these products are called "Wachtverzachters".

Figure 21
Value proposition of Picnic

3.2 Company context: Picnic

From a company perspective

In the 5 years since its existence, Picnic has acquired a 19% share of the rapidly growing online grocery market (AGF, 2019). Picnic's share of the overall Dutch grocery market is 0,7%. Picnic can potentially reach 2,8 million people. In the areas where the company is active, it has an estimated 3,7% share of the total grocery market. Due to its unique value proposition described above, Picnic manages to acquire new customers at a relatively low cost. For Picnic, the first-mover advantage is not about being the first to offer online groceries, but the first to offer it with free deliveries and with a minimum order amount of only €25, as compared to market leader Albert Heijn's €75 (Albert Heijn, 2019). This has opened the market for online groceries for a much larger part of the Dutch population (FD, 2019).

Logistics
In the Netherlands, Picnic operates using five fulfillment centers (warehouses) and 50 hubs to cater for the 70+ cities it operates in, figure 22. Orders have to be placed before 22:00, so customers can receive them the next afternoon or evening. On average there is a period of 18 hours in between ordering and receiving groceries. The orders are collected in the fulfillment centers, where they are packed in crates. Each crate is destined for one unique customer. This means that when an order is packed in the warehouse, Picnic already knows for which city and customer it is. This allows Picnic to group orders and ship to the hubs efficiently.

Figure 22
Cities where Picnic delivers

Company roadmap

Picnic is founded in 2015 and developed a clear roadmap for the five years after, see figure 23. This roadmap consists of five elements, one per year, which are described in this chapter.

MVP

Back in 2015, the main goal was the successfully test and launch an MVP version of the Picnic service. This minimum viable product consisted of just enough features to satisfy early customers and provide feedback for future product development.

Features

The year after, Picnic focused on releasing more features for the Picnic app. So users could do their groceries more easily and receive more accurate information about their delivery.

Growth

In 2017 Picnic quickly grew its business by opening up more fulfilment centres and hubs throughout The Netherlands. By doing so it was able to increase its market share and engage more and more people.

Expansion

The year after, in 2018, Picnic expanded its business by starting operation in Germany. Currently, Picnic is operating in the North Rhine-Westphalia area in Germany and has a German head office based in Dusseldorf. Currently, Picnic is planning to expand its business to France and the US.

Scale

In order to make Picnic a scalable business, it started to develop most of its software by itself. This way it can easily be scaled to accommodate rapid growth.

Automation

The final phase of the five-year roadmap is automation. Currently, Picnic is starting to build a fully robotic distribution centre in Utrecht, for which the company recently obtained 250 million euros in financing.

Figure 23
Company roadmap

Fulfillment centers and pickers
In the fulfillment centers order pickers pick the right products for the customers. Order pickers use a wearable device to see which products have to be picked and to scan them before placing them in the right basket. The WMS software is developed by Picnic, to be completely tailored to their needs.

The order pickers operate in three different areas, the ambient area, chilled area and frozen food area. The hub managers keep track of the progress and make sure all groceries depart to the hubs on time.

The scanning device used by the pickers

Scanning the groceries before placing them in the totes

My colleagues for the day

People placing the plastic bags in the totes

Managing progress of all areas in realtime

The placement of the products is unlike the ordinary supermarket

Hubs and runners

The frames with totes are delivered to the hubs by delivery trucks. From here the delivery process starts. Runners load the frames in their EPV to start their delivery rounds. In 2019, Picnic transitioned from using pre-made software to using the Runner-app which is developed in-house. Runners navigate to their next delivery address and the app tells them which totes to unload from the vehicle. Subsequently, runners can handover the groceries to the clients. At this moment, clients can also return their plastic bags and bottles, which are then going to be recycled by Picnic.

Runners on their way with an overview of the deliveries

Working as a runner

Runners placing the frame with totes in the EPV

Safety information at every hub

A row of EPV being unloaded after a delivery round

The front side of the delivery vehicles

Figure 23
Interviews with the target group

Chapter

04

Empathize

It's time to start diving into user's needs, wishes and motivations! In this chapter the people using the Picnic app are highlighted. Creating an understanding of who exactly the people are that fall into the target group of this project. The design research methods used in this phase will be explained and the insight clusters are presented.

4.1 Design research

For this project, a large empathizing phase will be used to gain deep understanding of the needs, wishes and values of the target group. During this phase, different research methods will be executed to access this knowledge. So far, the current way of working of Picnic is explained and the assumption is that a more collaborative experience is beneficial for family users of the service. By sharing the Picnic experience with more people within the household could also enlarge the chance of a habit aspect. This means that a number of design assumptions are made:

- Current online shopping solutions do not empower users to shop collaboratively.
- A collaborative shopping approach results in an improvement of the shopping experience for users.
- The involvement of more family members collaborating in the shopping experience results in a habit effect, this can ensure more regular orders within these groups.

Research questions
To address each individual assumption multiple research questions need to be answered:

- What does the current context of families and grocery shopping look like? How do people currently order their online groceries? Who in the family is involved in each step in the grocery shopping process? How are online services combined with traditional supermarkets?
- How do families currently experience grocery shopping, online, as well as offline?

How do families make use of collaborative tools for grocery shopping? How are family members collaborating? How are kids involved in buying groceries?
- How regularly do families get their groceries at the supermarket and at Picnic? What influences their grocery shopping habits?

Research goal
The goal of this research is to answer the research questions stated above, to formulate a design statement and by doing so, identifying the most promising areas for improving the shopping experience for families using Picnic.

Methods
Different methods are used during this research, each method will be shortly explained in this chapter.

Participants
Many people participated in the research of this project. Picnic employees with different responsibilities and Picnic users from various backgrounds participated in this project by contributing to various interviews and workshops. In total, over 40 members of families are interviewed about their grocery shopping experiences.

Research methods
Stappers, Elizabeth and Sanders describe in their book, The Convivial Toolbox (2013) four layers of an individual's knowledge: explicit, observative, tacit and latent (figure 24). Research methods to explore all levels of individual knowledge

are proposed. These methods are 'Interviews', 'Observation' and 'Generative Sessions' or 'Make sessions'. Variations on all three research methods are used throughout this project. Next to these research methods, a literature study and expert interviews are used to form a broader scope on the topic and to gain more shed light on more universal states, principles developments and trends.
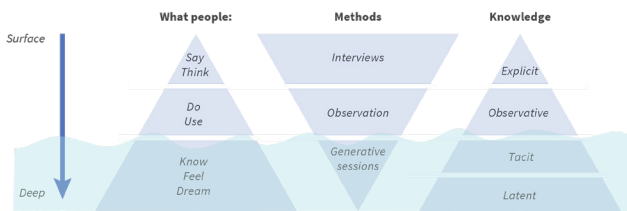

Figure 24

Methods to derive different layers of individual knowledge from the Convivial Toolbox (2013)

Interviews

Eight in-depth interviews of 45 to 60 minutes are done with family members, who are mainly responsible for doing the grocery shopping. The specific questions asked are documented in the appendix. Results from the interviews are transcribed, clustered and compared on the value pyramid of Bain & Company (see chapter 4.2) to find out which values are currently most important.

Guerrilla interviews

Six on-the-spot interviews of 5 to 10 minutes are done with families with kids, who are going to the local supermarket to get their groceries on a Saturday morning.

Observations

During the course of the last seven weeks, continuous observations will be executed at a wide variety of supermarkets in The Netherlands. This will help support the understanding of peoples behaviour. Also, assumptions and insights are checked and validated in real use situations.

Literature research

A literature study is executed in order to gain an understanding of the narrow scope of families and grocery shopping, as well as on the broader context of generational differences, family relations, healthy eating habits and movements in technology.

Generative sessions

Generative sessions with Picnic customers and internal stakeholders will be held during different stages of the project. The first generative session will be held internally in order to communicate the main research findings and to engage internal stakeholders with the project. A second generative session will be held with Picnic customers, enabling them to articulate their needs and wishes and to come up with possible solutions and first ideas.

Results and conclusions

Every part of the research will be further explained in the following chapters. Each chapter will start by explaining the approach of the research and eventually showing and discussing the results of these activities.

Universal principles

In addition to the research on the narrow scope of the project, focused on families and grocery shopping, a light will be shed on the broader and more universal principles surrounding this topic.

In order to create a better understanding of the universal context, several research activities are executed. Interviewing multiple experts supported the discovery of more underlying principles and human factors of the topic. Extended literature research is conducted in order to take a higher perspective and to create a broader field of view on the project scope, see figure 25. These universal insights are taken into account while formulating the design statement, and thereby directly influence the designed solution.

**The broader
perspective**

**Families and (online)
grocery shopping**

Figure 25
Two levels of research

4.2 The Elements of Value

When customers evaluate a product or service, they weigh its perceived value against the asking price (Harvard Business Review, 2016). Marketers have generally focused much of their time and energy on managing the price side of that equation, since raising prices can immediately boost profits. Therefore Bain&Company identified 30 elements of value, which can be used by companies to analyze what their customers currently value and to determine which values can improve the customer experience

These elements fall into four categories: functional, emotional, life changing, and social impact. Some elements are more inwardly focused, primarily addressing consumers' personal needs. Others are outwardly focused, helping customers interact in or navigate the external world.

This framework of value is used when analyzing the research of this project. Traditionally, the five most important elements of the grocery industry have been: quality, variety, reduces cost, saves time and rewards me (Bain&Company, 2018). However, the rise of e-commerce and companies like Amazon are driving the shift in what consumers value most. Over the past five years elements such as reducing effort and avoiding hassles have become more important consumers, see figure 27. The outcomes of this research should provide insight into what value Picnic currently delivers and what values could complement the experience of their customers.
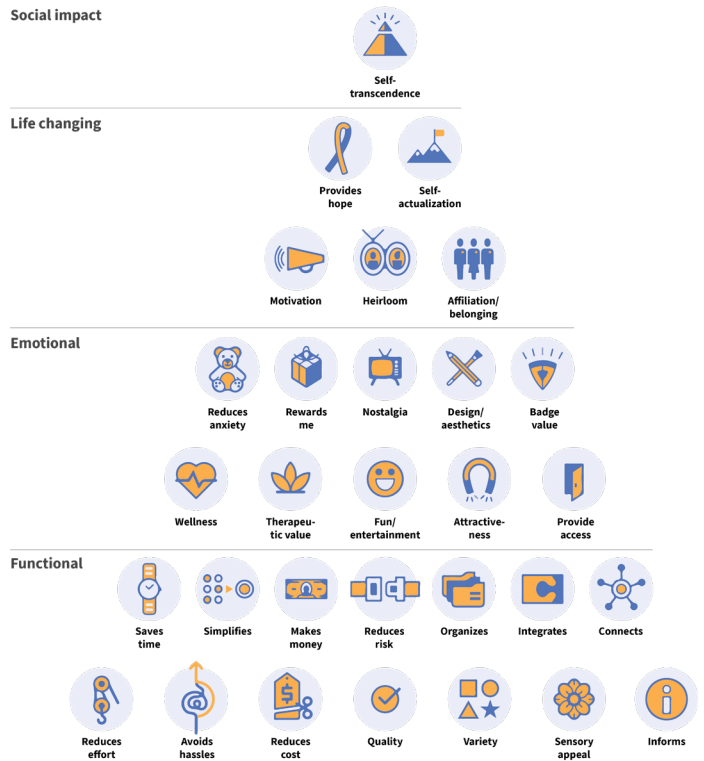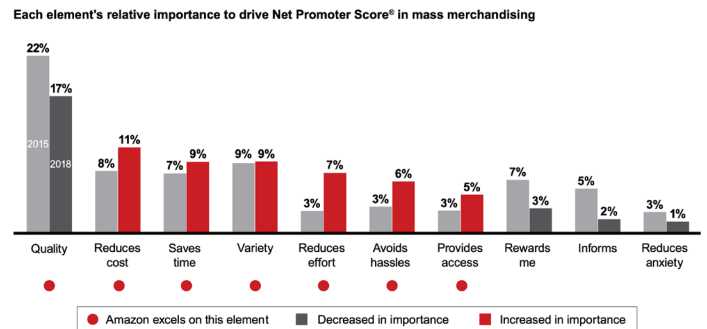
Figure 26
Elements of Value

Figure 27
Relative importance of values
(Bain & Company, 2017)

4.3 Families and (online) grocery shopping

In order to gain knowledge surrounding the context of families, grocery shopping and Picnic, different research methods were executed. These methods are listed in this chapter. Each method is briefly introduced and explained. Eventually, the results of this research are provided by using insight clusters. These clusters are formed by combining insights from interviews with Picnic users, interviews with supermarket visitors, observations of families who are grocery shopping and literature surrounding this context.

Empathizing through home interviews using contextmapping methods
In order to empathize with families using Picnic, home interviews were conducted with numerous of these families in Amsterdam, Delft, Hoofddorp and Almere. These interviews were held at people's home, often at the kitchen table, as seen in figure 28.

The goal of these interviews is to understand the needs and wishes surrounding the context of grocery shopping and families. In order to gain a rich understanding of people's experiences, participants are provided with tools and techniques to explore their current situation as well as past experiences in the realm of grocery shopping. And in order to invite people to explore future shopping experiences, it is vital to provide them with space that they can use to show or tell about ideas about future scenarios. (Sanders, E. B.-N., & Stappers, P. J., 2014) This framework that can be used to explore the present, past and future experience is called the path of expression, see figure 29.
During these interviews, participants are first asked to observe, reflect on, and describe their current grocery shopping experiences. All participants currently make use of the Picnic service, while still making use of traditional supermarkets as well.

Figure 28
Interviews at the kitchen table
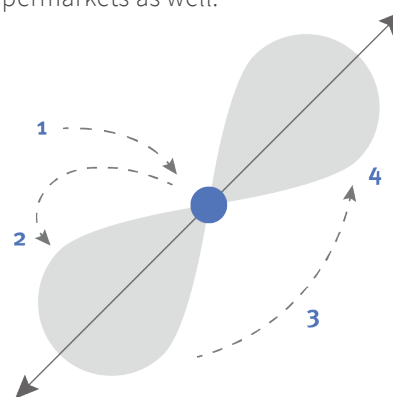
1. *Immerse in current experiences*
2. *Connect to memories of past experiences*
3. *Access underlying needs and values to explore future experiences*
4. *Imagine ideal future experiences*
Figure 29
Path of expression

Secondly, participants are asked to tell and reflect on previous grocery shopping experiences. These can both be experiences from before they started using Picnic, as well as, memories from when they visited the supermarket as kids themselves.

This sharing of experiences helps the participants to access underlying needs, wishes and values, which serve as the basis for exploring their ideas for future shopping experiences. All participants are asked to elaborate on their ideal future grocery shopping experience.

The use of the path of expression helps to connect people to meaningful experiences and us that as a springboard for ideation about the future. This method is often referred to as contextmapping, where people are considered as experts on their own experiences (Visser, 2005)

Empathizing through on-the-spot interviews using guerrilla tactics
On-the-spot interviews took place at the Albert Heijn in Delft where families were getting their groceries on a Saturday, see figure 30. Parents and their children were shortly interviewed and

asked about their internal motivations, pains and gains.

Empathizing by observing the target group in the context
Observing people in their world provides the opportunity to empathize with their experience, understand their context, uncover hidden needs. People have been investigated while shopping at supermarkets in The Netherlands, see breakout 3. Families have been shadowed and their interactions have been observed. These observations helped to gain new insights, as well as confirming insights that were discovered before.

Results
Summaries of the interviews and most interesting research papers can be found in the appendix 2. The insights gathered from the interviews and literature study can be found in appendix 3. Ultimately, these insights will be clustered and combined with knowledge gained from literature research. These clusters can be found in chapter 3.3.

Figure 30-33
Guerrilla interviews at the supermarket

Parents often allow their children to freely roam through the supermarket while their shopping. Usually kids return with a certain product and together they discuss if the product will be taken or not.

Some parents are observed to really take their time during grocery shopping. This man, for example, grabs a cup of coffee and wanders leisurely through the supermarket while his kid is quietly looking at what is happening around him.

It this case, a father takes the opportunity of being in the supermarket to explain all kinds of things to his son. They stop at multiple places and chat about why they buy certain products.

Elaine Selie

Two adults and two children
(girl of three years and boy of two months)

Amsterdam-West

47 Picnic orders
(also used Albert Heijn Online)

"Next to ordering from Picnic, we visit **the market** once a week. That's a real **social and fun family moment**. Our kids primarily enjoy to do everything themselves **"het zelf doen"** and to bring their own little bag, basket and wallet."

Linda Verkerk

Two adults and two children
(boys of eight and eleven years old)

Amsterdam

62 Picnic orders

"The shopping at Picnic I **primarily do myself**. Sometimes I involve my kids in doing groceries but not a lot." Kid: "Yes **we just say what we like and what we need**."

Most kids around here get their first phone when they are somewhere between 9-10 years old. But from a very early age **kids use iPads**, I think from three years old already.

Doortje Wanders

Two adults and three children
(boy of seven and two girls of four)

Almere Buiten

72 Picnic orders
(also used Albert Heijn Online)

I didn't join my parents to the supermarket that often but if we did, **it was a real event!** I believe that for kids, the **supermarket is a kind of playground**.

The kids also don't have their own phones yet. Bizarrely, I already see kids of seven, in my sons class, getting their first phones. Kids really grow up around all these devices. **They constantly use the iPad** and know exactly how everything works, better even than myself!

Breakout 4
Interviewing families at home

😊 **Lilian Eijkelhof**

👨‍👩‍👧 **Two adults and two children**
(two older boys, only home on the weekend)

🏠 **Hoofddorp**

🛒 **35 Picnic orders**
(also used Albert Heijn Online)

I can still remember going to the supermarket. It's a bit like how I now **go to the supermarket with my grandchildren**, my granddaughter crosses through the supermarket **with her kids trolley and grabs a lot of stuff**. Of course **grandma approves everything**, so that makes her very happy, haha!

😊 **Mariska Westhoff**

👨‍👩‍👧 **Two adults and two children**
(two older boys, only one living at home)

🏠 **Amsterdam**

🛒 **0 Picnic orders**
(used Albert Heijn Online and HelloFresh)

I don't like that doing groceries that returns every week. Maybe that is not really about buying the groceries in itself, but more the **planning on what to eat**.

I also tried **HelloFresh** for a year with three meals a week. It was great that you don't have to think about what to eat and to get surprised about new combinations. It was **fun, easy and very varied**.

😊 **Sarah van Kempen**

👨‍👩 **Two adults**

🏠 **Amsterdam-Zuid**

🛒 **0 Picnic orders**
(uses Albert Heijn Online and Allerhande Box)

My main reason to not order my groceries online is that I think it is **a big hassle to decide on what to order**. It is quite a lot of work if you have to search for everything and I'm **not very good at planning ahead**. But for a dinner or a party it can be a good solution.

4.4 Insight clusters

When conducting research in the context of families and (online) grocery shopping (figure 31), many insights were gathered. Afterwards, these insights are carefully combined to form clusters.

Since this project is an individual one and decisions are mostly made by the same researcher, insight cards are made to make the process more accessible to others, see figure 34-35. These cards are part of the continuous feedback loop. By discussing interpretations with other employees and designers, the context can be understood even better. Eventually, the final clustering process is executed in collaboration with different stakeholders within Picnic.

Each cluster shall be introduced and briefly explained in this chapter. Beneath all clusters the matching elements of value are shown. A list containing all the gathered insights can be found in appendix 3. All insight card can be found in appendix 4.
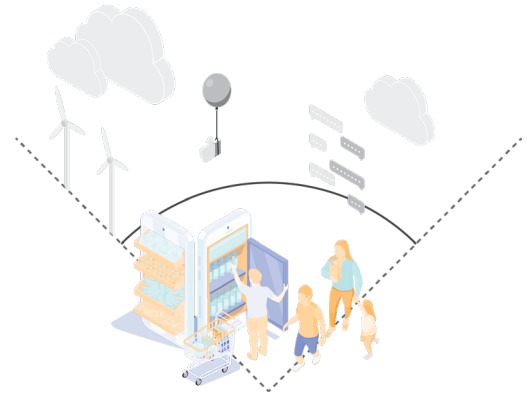

Figure 34
Families and (online) grocery shopping

Figure 34-35
Families and (online) grocery shopping

Shopping excursions are often pleasant experiences, with relaxed chatting and plenty signs of affection

Parents use the store visit to educate their child, for example to understand how fresh vegetables should feel

Gram, M. (2015). Buying food for the family: Negotiations in parent/child supermarket shopping. An observational study from Denmark and the United States. Journal of contemporary ethnography, 44(2), 169–195.

Children play an important role in family decision making

And influence their parents more than they realize

Hsieh, Y. C., Chiu, H. C., & Lin, C. C. (2006). Family communication and parental influence on children's brand attitudes. Journal of Business Research, 59(10–11), 1079–1086.

Buying food is not just about food but also emotional relationships and being a good parent and a good child.

Children are included as contributing members of the family

Gram, M. (2015). Buying food for the family: Negotiations in parent/child supermarket shopping. An observational study from Denmark and the United States. Journal of contemporary ethnography, 44(2), 169–195.

Families make up almost half of Picnic's deliveries

49% to be precise

Picnic Data, 2019

Western adolescents and children greatly influence their parents, product choices

But parents often underestimate their children's' influence

Borges, A., Chebat, J. C., & Babin, B. J. (2010). Does a companion always enhance the shopping experience?. Journal of Retailing and Consumer Services, 17(4), 294–299.

Insight card
The Picnic family experience

PICNIC   Graduation Project, Mark Janssen, 2019   TUDelft

1. Family time = quality time; also in the supermarket

Although many people see bringing their children to the supermarket as a threat for discussion and irritation, most families actually experience these interactions as pleasant, with plenty of signs of affection (Gram, 2015). Going to the supermarket is often a fun and social event for the entire family. Next to the supermarket, parents bring their kids along to the outdoor market on the weekend for leisure purposes. Also from a kids perspective, a trip to the supermarket is seen as a fun event (Suwandinata, 2011). Kids actively ask their parents if they can join the grocery shopping process.

Next to the emotional quality time, going grocery shopping together has big educational benefits for the children (Wilson & Wood, 2004). Parents use store visits to educate their child, for example, to understand how fresh vegetables should feel, what food is healthy, what the value of money is. So their kids are prepared to do groceries themselves later.

2. Shopping buddies positively influence the shopping experience

A shopping companion facilitates support and assistance in decision making, by doing so it significantly enhances the shopping experience (Borges, Chebat, & Babin, 2010). A social companion can enhance shopping emotions and create a more hedonically oriented shopping experience, which increases overall fun and enjoyment. These factors are primarily operant with friends as shopping companions. With family members as shopping companions, assistance motivations are met, for example, moral support for decisions and product expertise (Borges, Chebat, & Babin, 2010) The presence of shopping companions reduces the risk perceived by the main shopper and significantly boosts confidence over purchases. This reduction in stress and anxiety makes shopping trips more enjoyable. Especially in the context of grocery shopping, this can be seen as an important factor, because consumers associate more stress with grocery shopping than with other types of shopping (Terblanche & Boshofff, 2004) While couples acknowledge the value collaborative tools for online grocery shopping, right now grocery shopping is most often the responsibility of one person in the household. This responsibility lies most of the time with the mother of the household (Dohmen, 2018).

3. The bar for great customer service is constantly getting higher

Nowadays people are getting used to high levels of customer service delivered by businesses, as well as offline, as online. Gone are the times where stores were closed on Sundays. People are used to the ability to call service desks every day of the week, as well as in the evenings. Still, the Picnic customer service experience is often referred to as amazing. Clients can simply send a message via email or the social medium of their choice and receive an answer shortly after. However, experiences with any product category affect how customers experience products in other categories. These liquid expectations are raising the bar for great customer service across all industries. (Fjord, 2015) Additionally, clients are getting used to faster delivery times. Picnic gets compared with delivery speeds of bol.com and Coolblue, where same-day delivery is already an option in some cities. Convenience, speed and predictability are key in delivering high-quality customer service (Accenture Insights, 2019).

4. Picnic is not replacing the supermarket, yet...

Many users still visit the supermarket multiple times a week. While many Picnic users use the app for non-daily groceries, like olive oil, toilet paper and laundry detergents, the service is not a replacement for the traditional supermarket. The main reason for people to still go to the supermarket is to see and feel the products. Especially meat fruit and vegetables are preferably chosen based on their sensory appeal. On the other hand this is an issue about trust. If clients would trust Picnic enough to deliver them with good and fresh groceries, it would be unnecessary to touch or feel items yourself.

Another big reason to still visit the supermarket is the fact that most people simply pass one multiple times a day. For example, after parents drop their kids off at school. A big reason for people to skip the traditional supermarkets is the extreme business around 18:30, when it feels like everyone is doing groceries at the same time. Also, for parties or events like Christmas online supermarkets are seen as a major outcome, even for people who normally don't use online supermarkets.
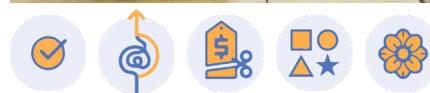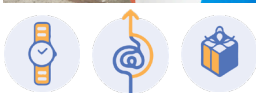
5. Meal planning is the biggest hassle, and a big family doesn't help

For most families planning on what to eat is seen as a heavy task. More so, meal planning is even seen at more cumbersome, than going to the supermarket itself. Also, the task of deciding what to eat is often recurring multiple times a week. "What do we eat tonight?" is a question asked in many daily lives. However, it is not always an easy question to answer, many families find it difficult to come up with healthy and diverse recipes. Some families try to make week menus, sometimes involving the entire family. This helps in ordering the weekly groceries. But many people can only remember the ingredients for a certain set of recipes. Meal box subscriptions tap into these needs by offering fun, ease and a lot of variation for families. Parents value that they don't have to think about what to eat again and again. Also, the Allerhande Box from Albert Heijn is seen as a very convenient product. Partly because it is easy to order some groceries alongside the meal packages.

6. Families want to unleash their inner bargain hunter

Currently, bargain hunters do not feel at home in the Picnic app. The presented offers are not seen as amazing deal. Also, the offers are not appealing because they feel unpersonalized. For example, the "Bonus" offers from Albert Heijn are often found to be seducing and highly personal. Also, users miss special promotions or collect campaigns "spaaracties", which are especially popular among families.

7. Kids want to learn and to become good consumers

Kids can get very excited about doing grocery shopping in supermarkets. Some kids like to bring their own little bag, basket and wallet. Most and foremost, kids want to do the things that grown-ups do. They want to show responsibility. By the age of eight, a child has all the skills to act as an independent consumer (Hsieh, Chiu & Lin, 2006). Parents often permit their children to participate in the role of consumer to a large degree. Overall, children were observed to be very active when browsing through the supermarket, and they are in constant ongoing interaction with their parents. (Gram, 2015). Contrastingly, kids are not involved in online grocery shopping. Partly because children do not have a smartphone until they go to high school.

8. Do you decide what you eat? Probably not, your kids do

Children play an important role in family decision making, and influence their parents more than they realize (Hsieh, Chiu & Lin, 2006). The context of the family is instrumental in teaching young people basic rational aspects of consumption (Riesman and Roseborough, 1955). In most daily lives, kids are involved in deciding what to eat. Their ideas are valued by their parents. And when shopping together, parents are found to listen to their child's input. This is typical for Western families, also characterized as negotiation families (Gram, 2015). This consumption relation between parents and children resembles the characteristics of friendship. Parents and children interact positively and work together collaboratively. While western adolescents and children greatly influence their parents' product choices, parents often underestimate their children's influence (Borges, Chebat, & Babin, 2010).

9. Families are big business

Families are defined as a household containing one or more adults and at least one child. Families are by far the biggest number of customers of Picnic, by representing 39% of all clients (Picnic, 2019). Other customer segments address smaller percentages, like singles with 17% and couples with 27%. Also, families are the most loyal and frequently ordering customers, making up 49% of all Picnic deliveries. Still, only 12.5% of families become an active user after registering in the app. An active customer is defined as a customer placing more than four orders. The average delivery value of a family is €62 (Picnic, 2019).

10. Picnic feels like the dream of doing groceries, the app doesn't

While many users praise the Picnic service, the app itself is often experienced as suboptimal. It can be hard for people to quickly find the right products. Also, being out of crucial products is one of the biggest barriers for families placing their order. Additionally, families show high routine behaviour, by using the "purchased" page most often and spending the least time in the app. On average, an order is spread out over 4.3 sessions in the Picnic app (Picnic, 2019).
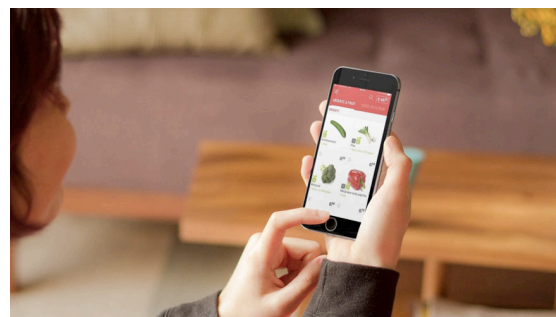
11. The EPV is the mascot of Picnic

The Picnic vehicles are very recognizable and appealing. Kids especially can get excited about the delivery moment and try to locate the EPV using the "boodschappenradar" in the app. Clients are also happy that the EPV does not block the entire street. People can feel ashamed when the big Albert Heijn truck stops in front of their house.

12. Grocery shopping is wrapped in nostalgia

Almost everyone still has vivid memories of joining their parents on a trip to the supermarket when they were younger. Those moments feel like a real social family event, even if they did not occur that often. Also, parents often still remember the Milkman and the small grocery truck stopping in their streets. Additionally, food brand preferences are transferred from one generation to another. Sometimes even for three or four generations within the same family (Hsieh, Chiu & Lin, 2006).

4.5 Customer experience journey

Before fully understanding the values, needs and wishes of Picnic customers, it is essential to understand how people experience each step of the ordering process. It is also interesting to see which family members contribute to every stage of the process and in what way. By doing so, a deeper understanding of their underlying motivations can be discovered.

The following customer experience journey provides a visual overview of the entire process. Hereby, the process is divided into four stages: preparing, ordering, receiving and aftercare. Each stage of the process will be briefly introduced. Also, activities that the primary user of the app has to undertake are described. Based on prior research the pains and gains of the user are mapped to form an emotion line. This line represents the level of positivity and negativity of the experience, as perceived by the user. Additionally, user stories ,representing these emotions, are mapped on the same line.

Reading guide
The customer experience journey exists of multiple elements, that together form the complete overview of the current customer experience. In this chapter, this overview will be provided in the same order. The content of the different elements will be provided here.

1. An overview of the different stakeholders within the family, a short description of their characteristics.
2. Since this poster is part of the feedback loop for internal stakeholders at Picnic, a brief

overview of insights gathered from literature research is presented.
3. The description of the experience phase including the main tasks and activities of the primary user.
4. The experience is presented using a graph that maps the emotional experience ranging from positive to negative. User stories supporting this experience are provided.
5. This part elaborates on the level of involvement from every stakeholder within the family. Providing a quick overview of the level of collective responsibility in the family.
6. The final part of the experience journey poster humanizes all the information by providing reader with the faces behind the research supporting this visual.

Family members
Within the family different internal stakeholders are defined. This separation supports the understanding of the variations and discrepancies in the values, needs and desires.

The primary user is the family member who is mainly responsible for doing groceries and has the Picnic app installed on his or her smartphone. This person follows all the steps of the customer journey. Noticeably, in most cases this person is female.

The secondary user is sometimes involved in certain parts of the shopping process. The level of involvement differs in individual cases.
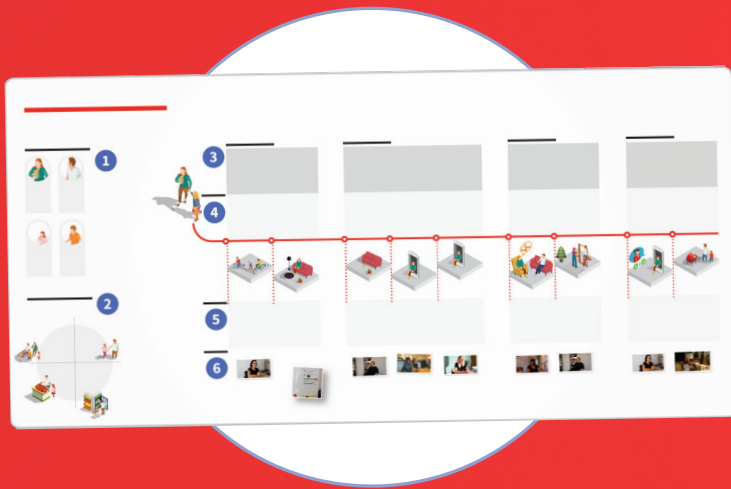
You can find the experience journey in appendix 5.

Breakout 5:
Customer experience journey poster

4.6 Taking a higher perspective

Main clusters
Next to conducting research on the narrow scope
of families and e-commerce, the broader context
is taken into account as well, see figure 36. By
investigating the project context from a higher
perspective many universal principles have been
found. All the gathered insights can be found
in appendix 6. These individual insights were
clustered, in order to structurize the context. This
chapter will introduce and briefly explain every
cluster.

Use cases
All clusters are accompanied with two use cases
of a digital service that tap into these insights.

Figure 36
The broader perspective

> "It doesn't really matter what exactly parents and children do together, as long as they make sure to **spend enough time together**. Doing groceries can definitely be one of those moments."

Charlotte Meire
Child and youth Psychologist - Parnassia Academy

What are **(hidden) stakeholders** within the family?

Culture

Spirit of time

Marketing / TV

Family
often has a bigger influence in non-Western families

Parents

Social media

Kids

Street, neighborhood, town or city

Inspiring school teachers or sports coaches

Friends
become of bigger influence around the age of 10-12

Government
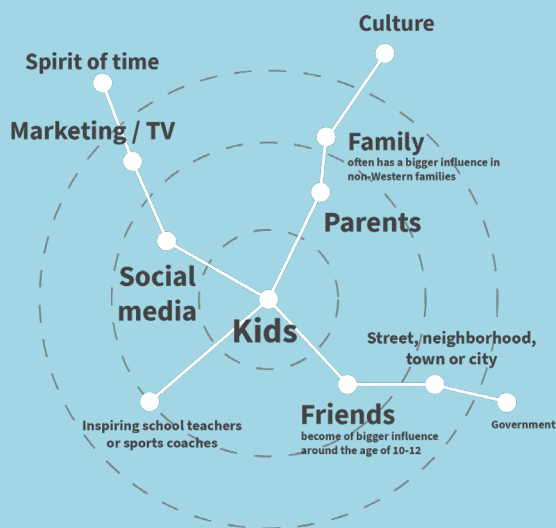
What are the general **life phases** of children?

4-8	8-12	12-17	18+
• Fantasizing, playing, experiencing a lot • Getting parked behind TV's and tablets • Playing to be older, role-playing • Being dependent on parents • **As a parent** it is important to provide attention and care	• Experimenting and discovering own borders • Thinking more as an individual • More responsible in the household • Start using phones and social media • **As a parent** it is important to set limits and let children discover things themselves	• Finding it important what others think of them • Appearance and clothing are an important way to express themselves • Starting discussions and wanting to know why things are the way they are • **As a parent** it is important to keep listening and to spend time together	• Letting go of parents and discover their own identity more and more • Starting more permanent friendships • **As a parent** it is important to keep thinking along about difficulties in life

You can find the interview guide and used canvases in appendix 12
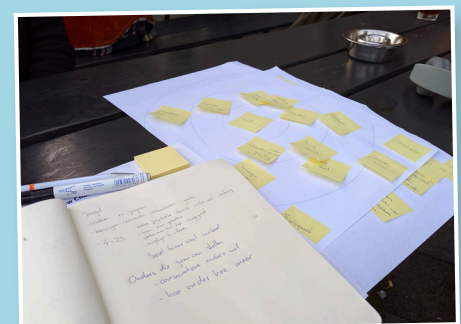
1. The last expansion of the internet, everyone and everything is connected

The internet is still getting more mature, and new possibilities are always in development. There are more people online than ever before, the first true digital natives are already born, and the majority of the elderly are embracing the internet (WIRED, 2018).

Even though we all describe the last generations as "digital native", generation Alpha, born after 2010, is the first generation for whom the term applies 100%. According to parents, when their children reach the age of eight, they are more technologically skilled than adults around them (Yellow Communications, 2017). Brands must ask themselves if it is really necessary to launch multiple versions of a product, for children. Instead, companies could focus on launching universal products that can be used by everyone but that have scalable security settings and access levels.

Online retail is booming in The Netherlands, with an annual growth rate of 20%. 78% of all Dutch consumers buy on the internet (Thuiswinkel waarborg, 2019).

Research shows that in 2018 toddlers aged 2 and 3 spent on average more than 100 minutes a day behind a screen, and babies under 1 year already spent 40 minutes a day (Trouw, 2020).

All these factors have a significant influence on other developments, trends, and how we live our daily lives.
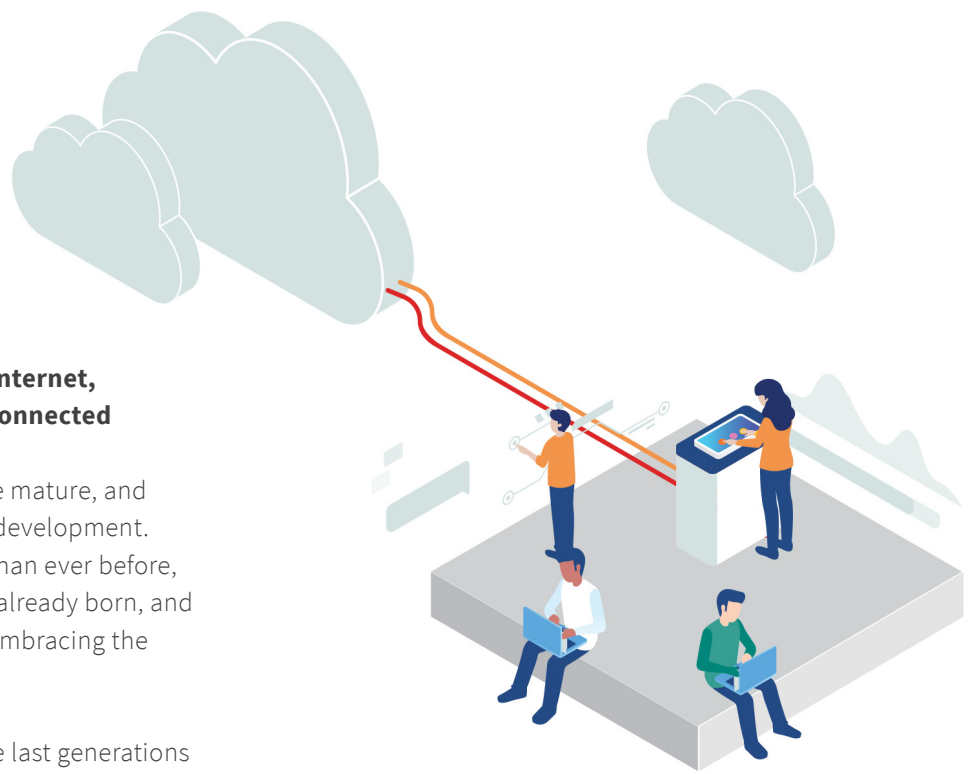
Examples of services that change the way we work and live

Slack

Slack is a cloud-based communication tool most often used for work purposes. Born out of the annoyance of email, the team behind Slack, created an internal communication tool for companies where conversations can be organised in channels. Channels can be divided up by team, project, client, or whatever else is relevant to the organization. Team members can join and leave channels as needed unlike lengthy email chains. Over the years Slack released features like cross-company communication, video calling, screen sharing and file sharing. It integrates with tools many companies already use like Dropbox, Google Drive and Trello. Currently Slack has more than 10 million active daily users from more than 600,000 organizations, located in more than 150 countries (Slack, 2019).

Key take-aways
- An innovative set of tools can change habits and the way millions of people work every day.
- In the case of Slack, an open platform integrating other products is key to its success.

Amazon

With a revenue of $232.887 billion, Amazon currently is the second-largest technology company in the world (Forbes, 2020). What started as an e-commerce business, grew to a multinational technology company focusing on cloud computing, digital streaming and artificial intelligence. Many services are bundled in the Amazon Prime subscription. By subscribing to this service, users get unlimited free two-day delivery, streaming music and video, and other benefits that would otherwise be unavailable, or cost extra. Currently Amazon Prime has more than 150 million subscribers worldwide. The world's largest online marketplace is also arriving in The Netherlands later this year and bol.com is already preparing for their arrival (Forbes, 2019).

Key take-aways
- By bundling in a wide variety of services users become accustomed to buying with Amazon and locked into their ecosystem of digital services.
- Amazon makes use of a marketplace strategy, offering sellers access to millions of customers and use og their warehouse services. This way it can earn more money and retain competitive prices.

2. We are looking for trust in each other

While trust in institutions is declining, people are
looking for trust in each other (Harvard Business
Revies, 2017). Trust among each other, a feeling
of togetherness and neighbourly assistance
has been present in The Netherlands for a
long time (Rijksoverheid, 2017). Communities
are both critical in the online, as in the
offline world. Especially, trust in traditional
media, like newspapers and television is
falling sharply among young adults of 18-35
years (Rijksoverheid, 2017). Institutions and
companies must, therefore, deal with this low
level of trust. Trust can be earned by achieving
and showcasing good results, but also by
being transparent providing openness and
accountability for its actions.

Meanwhile, people are looking for trust in each
other for example by exchanging experiences.
Next to the media, human conversations have
always been an important source of information
(Rijksoverheid, 2017). Consumers are
increasingly relying on online ratings and reviews
about products, services and organizations.
Assessments of peers create trust and enable
transactions between strangers. Consider the
success of Airbnb and BlaBlaCar, these platforms
could not have worked without building a
framework for online trust (Gebbia, 2016).

Examples of services that change the way we trust each other

AirBnb

AirBnb is an online platform where people can list their private accommodation and book homestays. The company itself does not own any of the real estate listings, it acts as a broker, receiving commissions from each booking. The company was conceived after its founders put an airbed in their living room, effectively turning their apartment into a bed and breakfast, in order to offset the high cost of rent in San Francisco. The core of this idea only works if people can trust each other and are willing to stay in each other's homes. By embedding digital trust in the design of the service, AirBnb currently facilitates an average of two million bookings every day (The Guardian, 2019). While trust in businesses, governments and media is plummeting (Edelman, 2017), AirBnb establishes trust by providing safety, connections with detailed profiles and 24/7 support in 11 languages worldwide.

Key take-aways
- Online platforms can establish a feeling of trust by safely checking ID's, providing helpful information and offering review systems.

BlaBlaCar

BlaBlaCar is an online platform which focuses on carpooling. Via their website and mobile app drivers and passengers can connect and travel together between cities. This way, drivers can earn some money by making their journey and passengers can travel cheaply. Unquestionably, the service relies on members trusting each other. Therefore, BlaBlaCar members have to set up an online identity, on which they can develop a reputation, accumulated through interactions with different people. This form of digital trust is called interpersonal trust, as it enables an interpersonal bond by providing peer-to-peer reviews (New York University Stern, 2016). Every BlaBlaCar identity is built up of six pillars: Declared, Rated, Engaged, Active, Moderated and Social. Members with a full profile are trusted more than colleagues or neighbours (BlaBlaCar, 2016).

Key take-aways
- Building online trust can be done by facilitating peer-to-peer reviews and moderated online identities of users.

3. It's all about the impact of the brand
Customers recognise brands for what they do
and the impact they make on the world around
them (KPMG, 2019). A few years ago brands were
often still believed by what they said in their
taglines and based on what they looked like.
Nowadays. It is more about their purpose and
values than their taglines, visual identity and
advertising spend. Today's brands are recognized
by their ability to consistently translate their
mission, purposes and values into the day to day
customer experiences.

Brands continue to be an extremely important
element of customer experiences. Brands
are critical in setting the right customer
expectations. Also, they are central in delivering
a consistent experience for its clients.
Organisations that are unable to translate their
brand's purpose and values throughout the
experience of the customer are often unable
to fulfill their purpose, leaving customer's
expectations unmet (KPMG, 2019).

In a crowded marketplace where consumers are
continuously bombarded with algorithm-driven
content and purchase suggestions, organizations
have to find a way to make meaningful
differences. The increasing role of social media
platforms makes brands start to explore how
their brand values might help them to transcend
the competition and build their social image to
differentiate themselves in the hearts and minds
of the customers. The presence of brands in
social networks and communities defines their
values and human interaction with customers.

Examples of services that have a clear missions and purpose

ASN Bank

ASN Bank is founded in 1960 and is, therefore, the first sustainable bank in The Netherlands. with more than 700.000 clients. ASN Bank only finances and invests in future-oriented companies, sectors and countries. With respect for people, animals and nature. Which means they invest in affordable housing, water management, education, public transport and sustainable energy. While most banks invest in oil and coal, child labor and the arms industry, they do not (Eerlijke Bankwijzer, 2018). Their values and purpose are communicated in their campaign 'That's how money can create happiness' (Zo maakt geld gelukkig). By sharing stories that showcase people's influence on the environment they make people aware of their habitual behaviour, and how it can stand in the way of sustainable progress (Selmore, 2017).

Key take-aways
- Clearly showcasing the positive social and sustainable impact of a brand makes you stand out in crowded markets and can increase your impact by attracting more customers.

Patagonia

The fashion industry is known for being unsustainable and polluting, contributing to around 10% of global greenhouse gas emissions (United Nations, 2018). Patagonia is a fashion brand originating from a small company that made tools for climbers. In 2017 Patagonia won the circular economy multinational awards at the world economic forum in Davos. It sets new industry standards to ensure ethically sourced and fully renewable materials, such as cotton, wool and down (Outside, 2016). Next to production Patagonia actively promotes garment repairment, teaming up with repair experts from iFixit to create care and repair guides. Also, it offers repair services in their own repair facility, the largest repair facility in North America. Their "Worn Wear" program celebrates the stories of apparel care, repair and recycling.

Key take-aways
- Being open and honest on how your business is trying to improve its level of sustainability throughout the entire life-cycle inspires customers to care about the products and repair them when needed. Eventually stretching the life-cycle of the products.

4. Technology providing us with superpowers

People are keen to use new technologies to use new data-driven and user-friendly technologies, that provides them with superpowers (WIRED, 2018). Things that we could not even imagine possible a few years ago are already becoming reality. In some cities, large networks of cars can be opened by anyone, with a simple app on your smartphone with ShareNow. Kids from already three years old have access to millions of videos across a huge reach of media on their iPads. And voice interfaces are becoming a big rival to the traditional interfaces on screens (Wired Consulting, 2019). Devices are increasingly using voice recognition as their primary means of control – with assistants such as Amazon Echo and Google Home leading the way.

Millennials and kids from Generation Alpha are getting addicted to the superpowers modern technology offers them (Yellow Communications, 2017). The demand for technology that is far less distracting from the things that are important is on the rise. For example, Google recently launched a handful of clever apps to help you spend less time on your phone (Welch, 2019). Also, Apple is integrating tools into all their devices to help people track their daily usage and restrict the time spent on certain apps.

New technologies, such as bots, blockchain and augmented reality, have an increasing impact on the way we live and communicate with each other. The impact of these technologies is not always visible in the foreground, because a lot is happening behind the scenes. Things and processes are moving from the physical world to the digital one. This shift makes us more vulnerable to cyber threats (Rijksoverheid, 2017).

Examples of services that provide us with superpowers

Share Now

SHARE NOW is a German car-sharing company, it is a joint venture formed by the merger of car2go (Daimler AG) and DriveNow (BMW). Operating in 31 cities around the world, users can access and use any of their 20,000 (including 3,200 electric) vehicles simply by using an app. This makes SHARE NOW the biggest car-sharing company in the world (Share Now, 2019). This provides users with the superpower to use a fancy Mercedes-Benz or a MINI cabriolet anytime, anywhere in the city. Also, it takes away hassles like insurances and parking costs. If you don't want to drive yourself the platform also offers a ride-hailing service under the name FREE NOW, all via the same smartphone app.

Key take-aways
- To provide people with superpowers accessibility and flexibility are key.
- Superpowers for users can also result in positive effects for larger groups such as municipalities or governments. Each car-sharing car replaces three to eight private cars in the city.

Deliveroo

Deliveroo is a UK-based internet service, which operates a platform that facilitates food orders and deliveries. Via their website and smartphone app users can order from partnered restaurants. These orders are eventually delivered to customers by self-employed bicycle or motorcycle couriers. In more than 200 cities around the world (Reuters, 2017), people have the superpower to order any imaginable dish and let it be delivered to them within an hour. Not only does it provide value for its customers, Deliveroo also offers jobs in the cities where it operates in. More than 20,000 self-employed couriers work for Deliveroo. Anyone with a smartphone and a bike can start earning money, without even speaking the local language. However, this advantage also comes with a dark side. Deliveroo is criticized in multiple cities for underpaying their couriers and undermining their rights (Financial Times, 2017)

Key take-aways
- Superpowers for some people can become problematic for others.

5. Doing good by creating, and sharing ourselves

Online tools enable us to create, organize and share things ourselves. Increasingly, citizens are the driving force behind social and sustainable initiatives. This social and sustainable consciousness is present in our culture and taking root on online platforms, like YouTube and Instagram.

Consumers buy more socially and environmentally conscious (Ministerie van Algemene Zaken, 2017). Increasingly, we can see a shift from ownership to usership. The number of Dutch people using sharing platforms and second-hand platforms has quadrupled in three years: from 6% of the population in 2013 to 23% in 2016 (Kaleidos, 2016).

There is an increasing need for a grip on the world around us and for doing, organizing or creating things ourselves (Ministerie van Algemene Zaken, 2017). This principle is not new but continues to grow. Increasingly, citizens are the driving force behind social initiatives, often helped by new online tools and opportunities. Consider supporting a neighbourhood school, or buying a windmill together to generate sustainable energy. This is called the do-it-yourself economy (De Volkskrant, 2017). People seem to be happy to do this, for different reasons. Sometimes because they are disappointed in the facilities, companies or institutions, sometimes out of self-interest, because they derive identity from the initiative and their contribution, or because it makes them feel belonging to a certain group.

Examples of services that enable us to share and do good

TooGoodToGo

With ⅓ of the world's food being wasted, Too Good To Go wants to reduce food waste by empowering (local) businesses to sell their food that they would otherwise have to throw away. Some examples of this unsold food is from bakeries that have to bake fresh everyday or restaurants that didn't sell all the food they had prepared. By downloading the app, users can find their favourite food and rescue it before it gets thrown away. Too Good To Go offers "Magic Bags", it is always a surprise what you get. However the company promises that everything is still delicious and perfectly edible. Also, users can leave reviews of specific locations. In three years more than 2.5 million users saved over 30 million meals using Too Good To Go.

Key take-aways

- Doing good can result in a win-win situation for everyone. Partner stores earn more with what they would otherwise throw away and users can get food at extraordinarily low prices.
- Initiatives like this empower people to do good and feel good about it. Many active Facebook groups share their TGTG experiences.

OLIO

OLIO enables the direct connection between people that want to share their food. This way, neighbours can easily connect with each other and waste less. Via the OLIO app people can share their own items or browse listings of others. OLIO is built with the philosophy that small actions can lead to big change. Currently, more than 1.5 million people use the app, and also food retailers, restaurants and corporate canteens started to donate food using the app. A large network consisting of 40,000 volunteers called "Food Waste Heroes" collect unsold/surplus food from your food business and redistribute it on OLIO. Next to neighbourly assistance, the app has become a lifeline for people who can't afford to feed themselves (Huffington Post, 2017).

Key take-aways

A service with a very positive and responsible social impact can result in a lot of very moving stories from users.

A service like OLIO empowers users to have a purpose and even team up in a large community of food sharing volunteers.
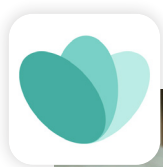
6. User data as fuel for companies

Many companies and organizations are finding ways to leverage their customer's digital footprints in order to improve their current products and services (The Economist, 2017). Almost everything we do generates data, every touch, swipe and interaction is meticulously measured and saved by the companies behind these services we use. Additionally, there are more and more possibilities to link those data sources to each other via big data analyzes (Gartner, 2018). Based on that data, computer systems are getting better and better at predicting our behaviour and influencing our decisions. This artificial intelligence accelerates the development of all kinds of new technologies (Accenture, 2020).

In this way, data can act as fuel for the companies, delivering meaningful distinctive and "magical" experiences that unlock new values for its customers every day (KPMG, 2019). The smarter the algorithm gets, the more personal the supply of information is tailored to the people. This can also cause irritation, indicated by the number of people installing ad blockers. Currently more than 615 million devices, which accounts for 11% of the world's entire internet-connected population are running ad blocking software (Google, 2017).

Examples of services that use our data as primary source of income

Instagram

Instagram started as a simple photo-sharing social network app in 2010. Users could solely upload square (1:1) photos, apply filters and share it with their "followers". The popularity of the app grew massively and currently, the app is acquired by Facebook and has more than 1 billion users, of which 500 million use the app daily. The app is free and the main source of income is ad revenue, which accounted for $20 billion in 2019 (The Verge, 2020). The app evolved from a private photo-sharing app into an algorithm-driven platform that presents users with highly-personalized ads that accounts for more than 25% of all content shown (New York Times, 2017). The addition of Instagram Shopping and in-app checkout is Instagram's last step to becoming a full-fledged commerce business.

Key take-aways
- There are no such things as free apps. Apps like Instagram are meticulously designed to influence your behaviour and to make you spend money via advertising.
- Platforms can evolve over the years, including its monetization strategy.

Weather apps

The weather has always been something we're interested in and every (digital) medium has offered us ways to get to know about it; the newspaper, the radio, the TV and nowadays apps on our smartphone. The weather forecast provided to you can be more accurate than ever before, because of the location data collected by our smartphones. While most weather apps are free, some apps appeared to secretly sell our location data, with geolocation data being sold to the highest bidder (The NextWeb, 2019). Popular apps like The Weather Channel and WeatherBug were caught by the New York times to send user's precise location data to dubious third-parties. This data is helping advertisers and even hedge funds and when being linked to other data sources, the data is far from anonymous (New York Times, 2018).

Key take-aways
- Data mining is a significant money-maker for many digital products.
- Not all companies play fair games, users should always be wary.
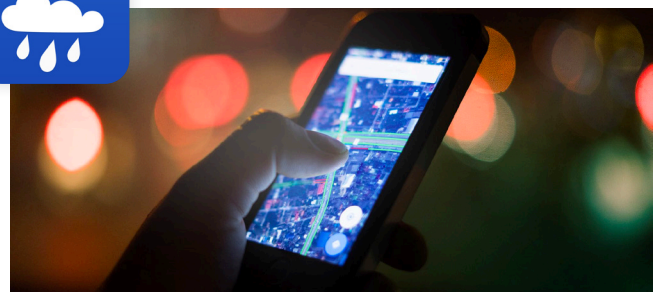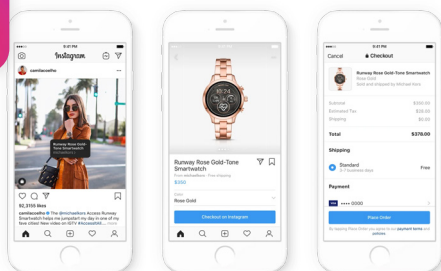
7. The need for control over technology and data

The use of personal data affects people's privacy, ethical and responsible use of data is a major challenge. The advantages of data applications are still often in the foreground, but the attention for the shadow sides is growing. There is an increasing awareness of the negative influences of smart algorithms, big data and social media. The need for insight and control over personal data is growing. As a result, the debate increasingly focuses on fundamental issues: power, market organization and autonomy. Who owns the data? Are new human rights needed? Awareness about privacy risks is increasing. More people request insight and control over their data (Ministerie van Algemene Zaken, 2017).

While AI tools and increased data collection allow for more personalised interactions, it also poses security and privacy risks. Many smart devices are connected to the internet, which means they could be vulnerable to hacking.

Millennials in particular, as major users of digital technology, are aware of the role it plays in their lives. The wish to "be off" from time to time is, therefore, the strongest among millennials (Wired Consulting, 2019).
While many of Generation Alpha don't yet have their own social-media profiles, they are beginning to experience them and are building their own digital footprint through their parents' profiles (Yellow Communications, 2017).

Brands need to be worried about the customer of the future saying, 'I'm switching it off, you can't have my data,' or, more realistically, 'You can have my data, but what are you giving me in return for it?' (Wired Consulting, 2019).

Examples of services that give us control over our data and privacy

Telegram

Telegram is a cloud-based instant messaging service, with apps available for many devices and operating systems. The app is comparable to other popular messaging apps like Whatsapp and Facebook Messenger, apart from it being the first service to offer end-to-end encryption. Which means that messages can only be accessed on the device upon which the chat was initiated. Encryption keys are periodically changed and messages can self-destruct (Rottermanner, Kieseberg, Huber, Schmiedecker & Schrittwieser, 2015). Because of this focus on privacy, Telegram is often the preferred messaging platform for demonstrators. Which resulted in countries like China, Iran and Russia completely blocking the app (CNN, 2018). Even terrorists are found to making use of Telegram, in messaging groups up to 9,000 people. Since November 2019, Telegram is collaborating with Europol to detect and remove terrorist-related channels (Europol, 2019).

Key take-aways

- Modern encryption technologies can enable full end-to-end security and identity protection for users of digital communication tools.
- High focus on privacy can attract audiences with wrong intentions as well.
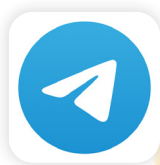
DuckDuckGo

DuckDuckGo is an internet search engine that emphasizes protecting the privacy of its users and avoiding the filter bubble of personalized search results. As an alternative to Google, DDG does not profile its users and shows the same search results for a given search term to anyone. Also, DDG does not store search history, cookies and does not track you around the internet like Google. Over the years more internet users have started to use the alternative search engine, especially after the NSA scandal, which revealed that the US's National Security Agency has direct access to the servers of the web's biggest search engines Google, Microsoft and Yahoo (The Guardian, 2013). Currently, DuckDuckGo processes more than 50 million searches a day, Google handles 3.5 billion searches a day (Google Trends, 2020).

Key take-aways

- Big technology companies build personal profiles of you when using any digital service, this includes information which you do not provide yourself.
- There are alternative online products and services that protect your privacy and that do not follow your activity around the internet.
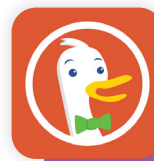
Your data shouldn't be for sale.
At DuckDuckGo we agree.

Search privately with DuckDuckGo.
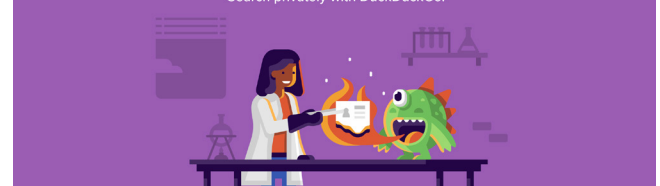
8. Parenting with digital natives

While Millenials are often referred to as digital natives, Generation Alpha, born after 2010, is the first generation for whom this term applies 100% (WIRED Consulting, 2018). While parents see the benefits of technology, they are also worried about the amount of screen time of their children.

Even though parents are concerned about the amount of screening time of their children, they are not convinced that all that screening time is bad. Parents even believe that technology helps their children to think faster and makes them more self-confident. (Yellow Communications, 2018)

Technology has a big influence on the lives of families and new parenting trends start to emerge. Parents are confronted with a jungle of apps that children use every day, from Tik Tok and YouTube to Snapchat and Instagram. In general, parents are worried about the social media and app usage of their children (Yellow Communications, 2017). In order to create a better understanding of what their kids are up to, fathers and mothers start to install these apps and create accounts themselves.

The majority (66%) of children 10 years and older have a mobile phone. Parents often make a contribution to the costs. By the time children go to high school, they all have their own smartphone (Nibud, 2018). The majority of parents have made agreements about what the child can and cannot do with the telephone (78%). Additionally kids use iPads already from very early on. Even before their first birthday, 45% of the children already use a tablet (NRC, 2015)

Examples of digital platforms that have designed kid-friendly versions of their service

Spotify Kids

Spotify is an online music streaming service headquartered in Stockholm and founded in 2006. It offers free ad-based music streaming and a premium subscription without ads and with extra functionalities. Since 2014, families can share a Spotify Premium membership at reduced costs and in 2019 Spotify added multiple family-related features to its app (The Verge, 2019). For example, "Family Mix" a personalized music playlist based on the whole family's listening habits and parental control to give parents more control over the listening habits of their children. Additionally, Spotify released a standalone Kids app. Spotify Kids includes around 6,000 tracks, all of which have been hand-picked by editors at Spotify. For "younger kids", the app will be limited to things like Disney soundtracks, songs about dinosaurs, and children's stories. If parents set the app up for an "older kid," then it will add pop hits from artists like Taylor Swift, Ariana Grande, and Bruno Mars.

Key take-aways
- Various technology companies start to focus on kids, streamlining their apps to provide safe spaces for kids of different ages to explore.

YouTube Kids

YouTube is the second most visited website of the internet, offering the biggest video sharing platform where 500 hours of video are uploaded every minute (Amazon, 2020). Since 2015, YouTube released a special version of its app, oriented towards children with curated selections of content, parental control features, and filtering of videos deemed inappropriate viewing by kids 12 and under (Wired, 2015). By doing so, it was the first Google product built from the ground up, especially for kids. Originally the app was only released for Android tablets and iPad since most kids do not have access to their own smartphone. The app features a simple and kid-friendly interface with big, bulbous icons and minimal scrolling. The YouTube Kids app also features parental control settings which allow parents to set time limits, and restrict users from accessing the search tool. Parents can use a passcode or their Google account to protect these settings, and configure profiles for multiple kids to tailor their experiences.

Key take-aways
- Tablets and iPad provide great opportunities for kid-friendly interfaces.
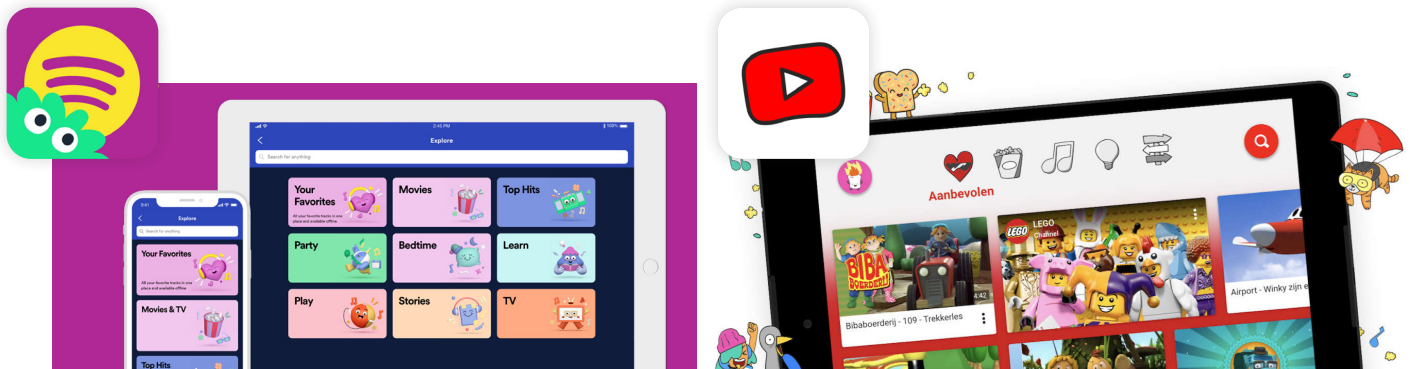
9. Kids are small, but big spenders

These kids are online from very early on. On the
internet, kids get influenced by what they see.
Online advertisements and influencers have a
significant effect on the spending behaviour of
the entire family. The principle of kids marketing
is not new, but the internet is able to significantly
increase the influx of advertising targeted at
kids. Children have an important voice in the
purchasing process of their parents. Also a
quarter of the parents find it difficult to refuse
something to their child

57% of the children want to have things they see
on the television or on the internet (Nibud, 2018).
This is higher than the influence classmates
have on the buying behaviour of children (53%).
When it comes to knowing that advertising is
aimed to let people buy something, there is a
big age difference between age groups: only
23% of 5-year-olds know this, compared to 49%
of 6 and 7-year-olds; the older the child, the
more often the child knows. This also counts
for advertisement seen in children's apps and
games. 73% of the children know that free apps
and online games can contain advertising and
61% of the children know that there can be paid
upgrades. The older the children, the more often
they know that free apps and online games can
contain advertising.

Just as before, kids often get a certain amount
of pocket money from their parents. More than
two-thirds of the children (69%) receive pocket
money at primary school, of these, 59% receive
this at a fixed time (weekly or monthly) and 10%
receive it irregularly (Nibud, 2018).

Examples of digital products earning money mostly from children

TikTok

Tiktok is a video-sharing social networking service based in Beijing and founded in 2012. In 2017 TikTok's parent company ByteDance spent $1 billion to purchase Musical.ly, an app with which users could create short lip-syncing music videos. Nowadays TikTok allows users to create a short video of themselves which often feature music in the background, can be sped up, slowed down or edited with a filter. The app has more than 500 million active users, of which 42% are aged 16-24 (Forbes, 2019), but there is evidence that many users are under 13, which is against the app's rules. The firm has already been fined $5.7m after being accused of collecting under-13s' personal details (BBC, 2019). The app lets fans send their favourite video makers "digital gifts" which can be bought with TikTok coins, with 100 coins being worth $0.99. This way kids can send pandas (5 coins), Rainbow Puke (100 coins) and Drama Queens (5000 coins).

Key take-aways
- Some apps exploit the fact that kids still have to develop their sense of money and value by offering in-app purchases.

Fortnite

Fortnite is a free battle royale online video game released in 2017 with 250 million players (Business Insider, 2019). In the case of Fortnite, a hundred players skydive onto a randomly-generated island, scavenge for gear and defend themselves from others, while the island is constantly shrinking in size. The game is available for PC, gaming consoles and mobile devices. Teachers and parents have found that the game had become popular to younger players due to the free-to-play nature, its cartoonish art style, and its social nature (The Guardian, 2018). Schools see Fortnite as a disruptive element within the classroom, affecting students' ability to complete homework assignments (Vice, 2018). While the game is free-to-play, it heavily relies on microtransactions which allow players to buy cosmetic improvements and gear for their online character. The average in-game spending is $84.67 (Fortune, 2018).

Key take-aways
- Making a service free can initially attract a large user base, eventually making even more money out of microtransactions.

Figure 37
Colleagues providing feedback on research

SECTION II | Analysis

Chapter

05

Define

After conducting research, it is time to synthesize the gained knowledge into an inspiring design statement. This design statement will function as a starting point of the design phase of the project. This chapter will dive into the formulation of the design statement.

5.1 Insight map

During the empathizing phase of this project, an extensive understanding of the context and target group is created. The knowledge on the narrow topic scope, as well as on the broader view of the project is deepened by using a variety of research methods. Now, to provide an overview of the gathered insights and their relations towards each other, an insight map is created.

The map exists of five main elements, see breakout 7.

1. On the left, the purpose of the poster can be found. Also, it introduces the four layers of insight clusters. Each layer has contains a title and a short description.
2. The majority of the poster consists of the insight tree. All insights show their title accompanied by an illustration. Also, the connections between clusters are illustrated.
3. The insights from the universal principles are linked to insights found earlier in the narrower domain of families and grocery shopping.
4. The fourth part of the poster highlights certain digital services that deliver value on certain insights. Some of these use cases are also mentioned in chapter 4.6.
5. The final part of the poster allows the reader to quickly leave notes, questions or remarks.

The creation of this insight map supports the processing of the individual insights and to discover the relations between each other. Ultimately, universal principles can be identified. These universal principles will lead to the definition of the design statement. This design statement concludes the definition phase.

Feedback loop
Not only does the insight map directly support the design process of this project. It also acts as a feedback loop towards the different stakeholders of the project. By exposing the main insights of the projects so far, different parties can easily be involved.

You can find the insight map in appendix 7.

5.2 Feedback loop workshop:
Insights and future visions

After collecting knowledge and gaining insights in the context of families, (online) grocery shopping and its overarching universal principles, a workshop was organized with different stakeholders from within Picnic.

The goal of this creative workshop is to share the gained knowledge and insights internally and to discover which insight clusters resonate most within the company and for which reasons. By facilitating this workshop, the internal stakeholders should feel part of the constant feedback loop by being informed and up-to-date about the project. Next to evaluating the insights, the workshop features a small ideation round in order to kickstart the ideation phase and to give a sneak peek on how the insights will be used later in the process. Overall, the workshop should provide an understanding of how people at Picnic experience the insights from their perspective and foster a culture of open collaboration surrounding this graduation project.

During this session, the group consisted of twelve participants, ranging from a variety of backgrounds within the company. People with a background in technology, design, growth and operations all joined the workshop to provide their input. It was especially useful to meet people outside of the design team since those people were less known to the project so far. The approach of this workshop was in twofold. Firstly all insights were quickly presented, and participants were asked to prioritize and rank these based on their own experience and expertise within the company. In order to structurize this process, a creative tool called to the how-now-wow matrix was used, see breakout 8. Which helps to organize the insights on the level of newness (inspiration) and ease of implementation (usefulness), (COCD,2018). Could these insights provide solutions that are expected to disrupt the user experience of our end users? Furthermore, what efforts would it cost from teams like tech and operations? Asking questions like these guided the participants and supported the process of revealing which insights eventually spark most creativity, while still being feasible to address.

During the second part of the session, everyone could get hands-on with the insights they were just presented with. In pairs, people could get to work with their favourite insights and develop their most amazing envisioned future for the company. During these steps, a cover story canvas was used to make these futures concrete and engaging, see breakout 8. In a three-step process, the pairs worked from a single headline in the national newspaper to a fully-featured magazine cover story for October 2020. All results of this workshop can be found in appendix 8.

Step 1
Prioritizing and ranking insights based on the how-now-wow matrix

Step 2
Future vision in form of a newspaper headline

Step 3
Future vision in form of a newspaper article

Step 4
Future vision in form of a full magazine cover story

Breakout 8:
Process and results feedback loop workshop

"Picnic should foster **a feeling of togetherness and shared responsibility** within families. The shopping process should be a **festive family ritual** and **celebrate the involvement of kids**."

Figure 38:
Design statement

5.3 Design statement

Why should Picnic take this role?

Picnic is operating is a relatively young area, on the intersection of traditional grocery shopping and e-commerce. Only Picnic can facilitate the stated interaction because they are entirely in charge of their own platform and customer experience from order to delivery. In the case of Picnic, there is no older brother to look up to. Currently, there is no service that empowers its users to collaborate in such a manner in the realm of grocery shopping.

Why is a feeling of togetherness and shared responsibility needed?

In contrast to the nature of traditional grocery shopping, Picnic offers a rather individualistic experience. There is no way for family members to be involved in the shopping process. This lack of family engagement results in one member of the family often being mainly responsible for having the right groceries at home at the right time. However, grocery shopping can generate more stress than any other form of shopping and shopping buddies are proven to improve this shopping process. By fostering a culture of togetherness and shared responsibility within families, Picnic can make sure their experience is a more pleasant one.

Why should it be like a festive family ritual?

Currently, people experience the Picnic app to be merely transactional. Opposite to a trip to the supermarket, that can often be a joyful family event with lots of signs of affection during the shopping process; the Picnic app is very goal-oriented, targeted at letting customers buying their groceries as efficient as possible. Transforming the experience into process-oriented and festive family ritual can result in a more meaningful experience. Adding elements of fun provides the opportunity of not only to being an experience that offers the value of reducing costs and avoiding hassles, but also to be an experience that facilitates family memories. Ultimately, having the chance of improving customer loyalty over generations.

Why should it celebrate the involvement of kids?

Kids are the grocery shoppers of the future. For children, a supermarket can feel like an educational playground. A place where they can learn what fresh products are, understand how to eat healthy and varied, and what the value of money is. Where currently, the situation often dictates that young kids join their parents on a trip to the supermarket, groceries on Picnic often get ordered when parents have a bit of time alone or when kids are already in bed. This way, kids miss out on the opportunity to be involved, learn and have a moment together with their parents. By celebrating the involvement of kids, Picnic can offer a true family experience and inspire children to learn about the fundamental aspects of grocery shopping.

5.4 Interaction metaphor

*The interaction should feel like preparing a
special meal with the whole family*

Figure 39:
Interaction metaphor

5.5 Interaction qualities

Social

A culture of social responsibility makes sure everyone is **contributing their part**. Naturally, responsibility can grow with people. By doing so, the interaction keeps being interesting, engaging all ages. Everyone can feel proud about their own contribution.

Chaos, control and competition

Underlying is a feeling of **excitement, surprise and uncertainty**. By fostering learning by doing, parts of the activity can fail. However, there are no significant consequences of failing. During the process, the controlled sense of **chaos is being cherished**.
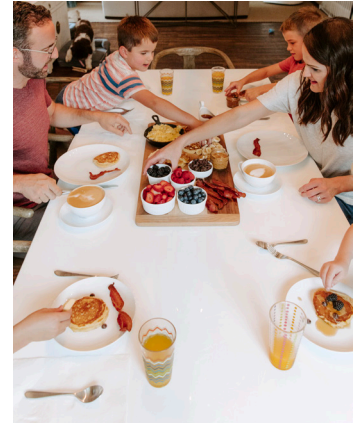
Flexible and adaptive

Meaningful family moments are enabled by providing the right **tools, time and space**. A balanced combination of these elements can act as external trigger. The interaction has an **adaptive** character and is thoughtful of existing family routines and rituals.

Key takeaways
Section II - Define

During the analysis part of this project, firstly research has been done on the context of the Picnic company from both a user, as from a users perspective. To users, Picnic the value proposition consists of a mobile app on which groceries can be ordered for the lowest price with free delivery. From the company perspective, Picnic is a technology company mainly focused on expansion, scaling and automation. Currently, Picnic operates in The Netherlands and Germany, where it serves its clients via a network of fulfilment centres and local hubs.

Secondly, research has been done by empathizing with the target group. Families, both Picnic customers and regular grocery shoppers, have been interviewed and observed. These insights helped to map the current customer experience journey.

Lastly, a broader perspective has been taken by interviewing experts and by doing literature research on the broader context around families and grocery shopping.

All of this, served to answer the first main research question and purpose of the project: Why should Picnic enable collective shopping experiences within families? Because traditional grocery shopping is inherently a shared process involving everyone in the family. Not only because of functional reasons, but also because it offers educational family communication and facilitates affectionate family moments. However, the current Picnic app does not facilitate any of this.

Afterwards, a design statement has been formulated to largely answer the second main research of how Picnic should enable this shared online shopping experience. This design statement is formulated as follows: "Picnic should foster a feeling of togetherness and shared responsibility within families. The shopping process should be a festive family ritual and celebrate the involvement of kids."

Combined with the metaphor of preparing a special family meal with the whole family, the design statement functions as a foundation for the synthesis part of this project.
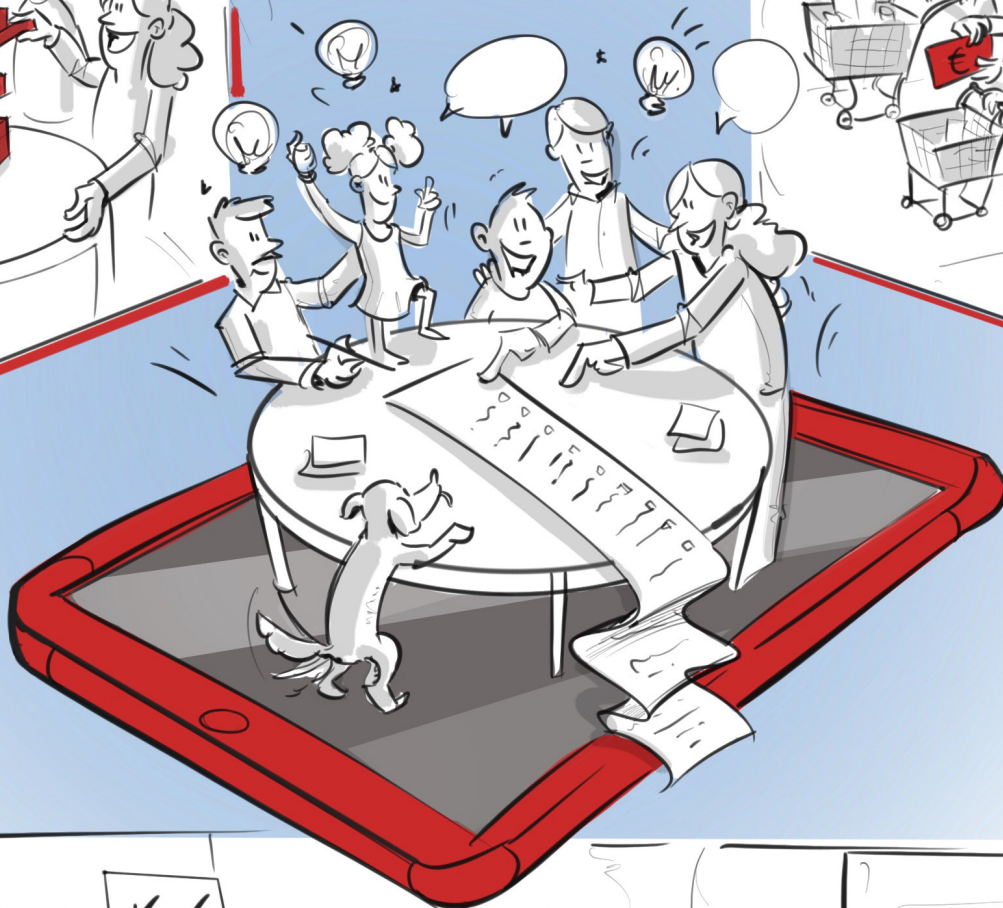
Figure 40:
Design statement poster

SECTION III
Synthesize

Figure 41
Ideation workshop at Picnic

Chapter

06

Ideate

After defining the design statement, the time has finally come to start ideating. This chapter will dive into the ideation methods that are used, provide insights from design experts that have been interviewed.

6.1 Ideation approach

After gathering an understanding of the context of families and (online) grocery shopping and insights on the broader context surrounding it, time has come to start generating ideas for possible solutions.

In order to design concepts that enable a feeling of togetherness within families while doing their online groceries, two diverging generative sessions have been organized. Generative interviews with Picnic customers, and an ideation session with design students and see figure 42-43.

Next to these two sessions, ideation will primarily happen individually. The desired outcome of the sessions is input that can be used to further generate upon, by myself.

Figure 42
Generative interviews with Picnic customers

Figure 43
Ideation workshop with students

6.2 Generative interviews with customers

Goal

The goal of the generative interviews is to enable Picnic customers to articulate their needs and wishes and to come up with possible solutions for their struggles.

Research questions
Shopping process
- What does their shopping process currently look like?
- Where are the main struggles during their shopping process?

Shopping tools
- What solutions are currently used to overcome struggles during their shopping process?
- What shopping tools or solutions could customers envision themselves using?

Involvement, influence and togetherness
- Who is currently involved in which step of the process within your family? Are there kids involved?
- What are especially individual moments and what are moments of togetherness?
- What level of involvement would be ideal in your family?

Setup

A series of six generative interviews were conducted with customers of Picnic. These interviews took place in Amersfoort, the city where Picnic first started delivering back in 2015 (Distrifood, 2016). One week prior to the interviews an email was sent out to around 50 customers. In this email, customers got explained that they could be part of our research, by providing their input, feedback and ideas, see figure 44. Also the email stated that in return for their participation, customers receive a voucher of 25 euros for doing groceries on Picnic.

For the sake of efficient test planning, I made use of Calendly to automatically plan these interviews. Calendly is an online appointment scheduling tool, which is linked to my calendar. When clicking on the green button people are linked to a website where they can select a time-slot that fits their schedule best. Automatically, these interview appointments end up in my calendar. Additionally, participants receive an reminder email one day prior to the interview and a text message with the location and my contact details on the day itself. Within less than an hour, the complete day was filled back-to-back with a series of interviews.

Finally, the interviews took place at Hoogvuur, a Cafe-Restaurant centrally located in Amersfoort, see figure 45. This location offers a cosy environment where people can easily feel homey. This way, people do not feel constraint in sharing their opinions freely, in contrast to a Picnic hub or office, where setting would be less neutral.
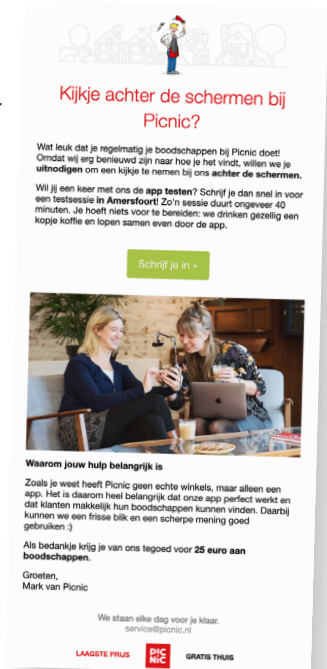
Figure 44
Interview recruitment email

Participants showed up hourly and every interview took around 40-45 minutes, which provided time to close off the interviews, summarize the main insights and prepare for the next one.

Figure 45
Hoogvuur in Amersfoort

Execution
During these interviews three different visuals "praatplaten" were used to support the customers in articulating their opinions and to guide the interview though the different research areas. These praatplaten can be found in appendix 9.

Results
After conducting the interviews a video was created in order to show the setup and communicate the findings to different stakeholders within Picnic. This video (with English subtitles) can be seen by scanning the QR code in breakout 9. The main findings will also be shared in this chapter.

Shopping process

Naturally, the overall shopping process can vary widely between families, because of varying role divisions, busy (work) schedules and dietary wishes or complications. Still, there are some key factors found which are often occurring within families.

Planning
Ordering your groceries online requires more planning skills than traditional grocery shopping. It requires families to think ahead of the weekly schedule, to plan for the right delivery moment and to decide on what to eat earlier than on the day itself. This part is mostly seen as the hardest part of the entire shopping process. A dominant reason for families to still pass by their traditional supermarket, is not because they prefer the products over the Picnic offering, but simply because they failed to plan more than one day ahead.

What do we eat?
This question is a very common one within most families. And although parents would like to provide a variety of healthy and diverse meals, they primarily choose for speed, ease and convenience. Generally, people find it very difficult to go outside their standard repertoire. Customers say to enjoy trying out new things, but they just do not take the time for it often enough. Next to trying out new products, customers are frequently not aware of which products are currently in season, but express to be aiming to eat more seasonally.

Shopping tools

Similarly to the shopping process, families have different ways of shopping and make use of a variety of tools to do so.

Digital shopping lists

While every participant is already a Picnic user, seven out of eight families still make use of external apps to make shopping lists, instead of directly adding the products directly in the Picnic basket. In most cases, these apps are general note-taking apps, like Google Tasks, Wunderlist or Microsoft OneNote, which are not specifically built with grocery shopping in mind. In the end it can be a hassle to add all the products to the Picnic basket, since multiple different apps are used and there is no direct link between those.

Inspiration sources

When looking for food inspiration or recipes online people commonly use social media, Pinterest or simply Google. Noticeably, Picnic is not experienced as a place where inspiration can be found. Where as a traditional supermarket is seen as an experiential place, where you can find out what to eat by visiting it, Picnic is seen as merely transactional.

Involvement, influence and togetherness

Overall, it is very clear that there is always someone mainly responsible for the families' groceries, sometimes this is on purpose, sometimes this is more a coincidence. However people try to find different ways to include others in the process. Also there are a lot of ways in which family members influence what is being bought.

Dietary wishes and difficulties

Kids can be difficult eaters, both for subjective reasons and out of necessity, for example when having allergies or when following a specific diet. When a family is growing larger it can be a difficult task to keep track of everyone's preferences.

Push for health and sustainability

Next to direct family members, outside actors have an influence on what ends up in the (digital) basket. For example, schools currently have an important voice in what kids can bring to school for lunch. It is often not-done anymore to bring sugar-heavy snacks for lunch or to hand out unhealthy birthday treats. Also, other social circles around family members, including kids, influence their opinion about certain types of food. A current topic of interest is primarily the influence of food on the environment. Interviewees state that, their awareness of how animal-based products impact the climate is rising and that topics like these get discussed at the dinner table.

First ideas

While interviewing the participants, they came up with lots of ideas and solutions that would help them when doing groceries on Picnic.

- A **Whatsapp service** that can be asked for recipes and inspiration

- **Themed meal boxes**, like for Christmas dinner or Easter brunch. The boxes should be on a pay-per-time basis, so people are not stuck to a subscription.

- **Food inspiration embedded in the Picnic app**, which focuses on eating along with the seasons, often customers are not aware of which products are currently in season.

- The addition of **recipe cards**, like the ones at Albert Heijn. These could be added to the delivery.

- The ability to give **kids pocket money** via the app, so they can choose a couple products of their preference. This way, kids learn how to deal with money and what the worth is of certain products.

- A **dedicated app for the iPad**, which can also be used by kids that do not have their own smartphone yet.

- A **safe digital environment for kids** where they can learn how to do online groceries. This can be similar to online banking solutions for kids. This can be good for their development, since they will have to do it themselves at some point in time.

- A way for families to collaboratively make digital **shopping lists and wish lists** in the Picnic app.

- The ability to **personalize the Picnic app**, taking into account a families' wishes, motivations and dietary constraints.

- Changing the Picnic app in a way which makes it feel more like **an actual shopping trip** / an activity (in Dutch: een uitje)

- A **Pinterest-like feature** where lots of inspiration can be found and shared with others.

- The ability to make **family profiles** including settings to limit the access for kids to certain products or features.

Discussion

Firstly, carrying out these interviews certainly functioned as a useful kickstart of the ideation phase. Talking to many end-users sparks a lot of inspiration for the project. And while this process demands a lot of energy, it also provides a great deal of positivity back.

Secondly, the prepared visuals proved to help in submerging the participants in the topic context. It felt like participants could easily understand the project context and provide useful insights and first ideas.

Lastly, while participants came up with useful ideas, this project will not solely rely on their input. This output of this session will function as a set of valuable building blocks to start ideating and prototyping further.

Scan the QR code to
watch the video

Breakout 9:
Generative interviews video
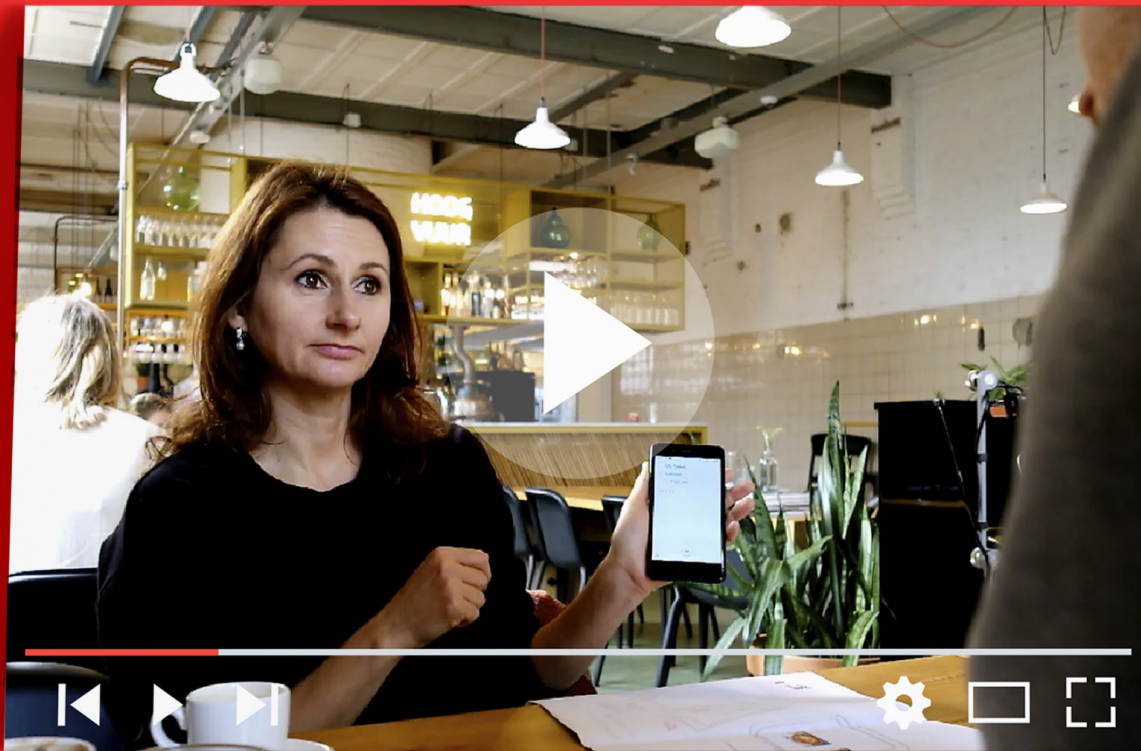
6.3 Ideation session with design students

Goal
The goal of the ideation session with design students at Picnic is to come up with many ideas quickly. The user-insights will be used as a starting point for this session.

Setup
Together with two other graduation students (DfI and IPD) ideas were generated by making use of How-to questions based on a variety of user needs. During this session the brainwriting method was used, multiple large sheets of paper containing one How-to question was passed on until everyone has had the ideate to ideate upon it for five minutes.

How-to's
• How to involve kids in the shopping process?
• How to plan on what to eat?
• How to get inspired?

Results
Within a short time we are able to come up with many ideas, see figure 46-48. The full results can be found in appendix 10.

Individual ideation
After conducting these ideation activities, ideation primarily took to place on my own.
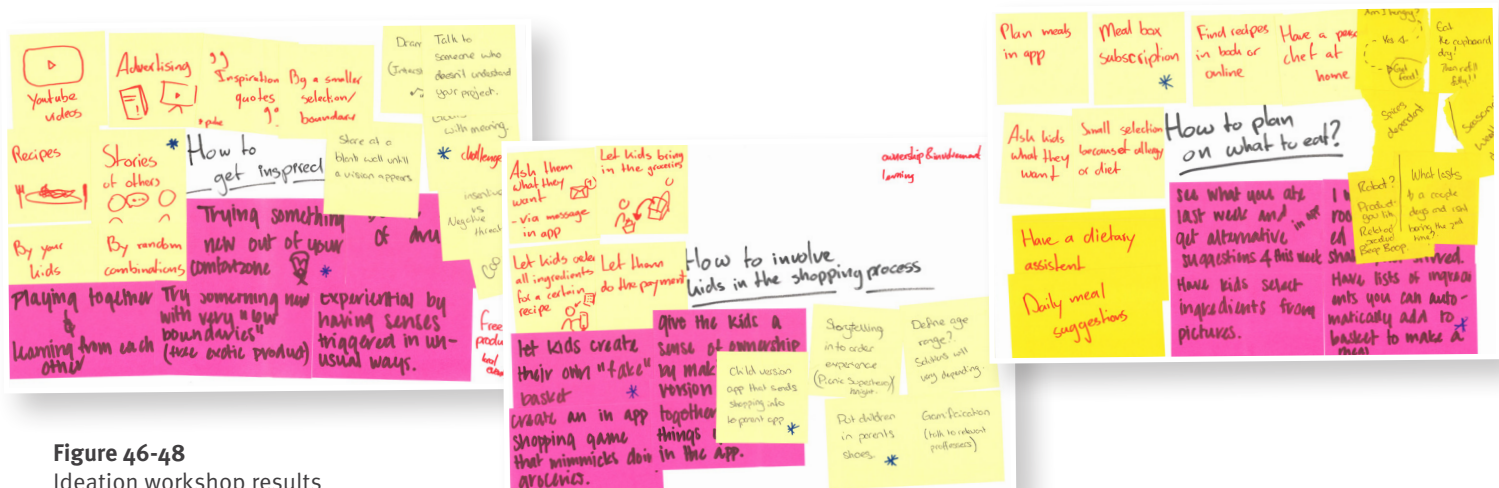
Figure 46-48
Ideation workshop results

During the ideation phase multiple experienced designers were asked for input and feedback on ideas. Their feedback helped to inspire new ideas and to refine the current ones.

"For us, successful campings for supermarkets often involve the topic of eating healthy. Playful elements enables people to spend valuable time with their families."

Daniel Thomassen
Head of Product Development - UNGA

"Think about the things kids currently learn when going to the supermarket and ask yourself which of these things you want to teach them with your experience. What do you want to convey?"

Annelies Wisse
Senior Experience and Play designer - IJsfontein

Breakout 10
Interviews with industry experts

Figure 49
Testing at people's homes

SECTION III | Synthesize

Chapter

07

Prototype and test

This chapter provides an overview of the activities
from the prototyping phase of the project. In
this chapter, every prototype will be discussed,
together with its test results.

7.1 Prototyping approach

Since this project follows a design thinking approach and one of the personal goals is to link the loops between design and research, it is essential to quickly make ideas tangible. During the prototyping phase multiple concepts will be prototyped in order to eventually test them with end-users.

During this phase it is not the goal to create the perfect solution instantly, but to foster a culture of rapid experimentation, including the chance of failure. It builds on the idea that quick failure can offer valuable learnings early on in the process, when there is still enough time and willingness to change the concept, see figure 50. This rapid prototyping method focuses on incremental iterative refinement. All prototypes will only be of the necessary fidelity in order to gather feedback from the target group. After designing and developing each prototyped it will be evaluated with actual families using Picnic. The outcomes of these prototype tests function as building blocks for the next one.
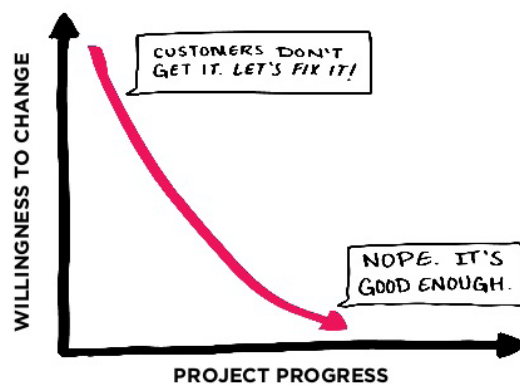
Figure 50
Rapid prototyping approach

7.2 Rapid prototyping round

The first round of prototypes are developed in a single week, in which a different prototype is made each day.

Goal
The aim of these prototypes is twofold. Firstly, the goal is to test a wide selection of different concepts quickly and to discover how these concepts resonate with families using Picnic. Eventually it should be clear what the strengths and weaknesses from each concept are and what the motivations are for people to use them or not, see figure 51.
Secondly the company perspective will be taken into account. Therefore, the prototypes will be showcased internally to a variety of stakeholders within Picnic. Together with this stakeholder the desirability, feasibility and viability will be determined. By doing so, it should become apparent what changes Picnic would have to make in order to implement such a concept, see figure 52.

Approach
During the course of a week, five ideas are made tangible by developing rapid prototypes and by making posters for each concept. These prototypes should consist of just the essential elements for people to understand and experience them. Additionally, the posters should explain the essence of every idea and should make it look like the feature is ready to be released. Eventually all concepts should be understandable and believable.

Results
The results of each concept will be discussed in the following chapters. Each concept will be explained in three steps.
1. On which user-insights the concept is based, "the why".
2. In which way the concept tries to bring value to the user, "the how".
3. The actual design of the concept, "the what".

After explaining every concept, a summary of the external and internal validation will be given. The full results of the validation can be found in Appendix 11.

Figure 51
Prototype test at users' homes

Figure 52
Prototype evaluation at Picnic

Picnic Kids
The fun app for the next generation

Why?
For kids, a visit to the supermarket can be of great educational value. Here, they can learn about the basic rational aspects of grocery shopping. What are fresh products? What's a healthy mix of products and what is the value of money? Currently, when families get their groceries on Picnic, Kids miss out on these opportunities.

How?
Creating a digital environment where kids can discover stories behind food products, experience parts of the grocery shopping process and learn how they can make the right decisions.

What?
Picnic Kids is a dedicated iPad app designed to offer kids a playful way to learn about groceries. It offers Picnic a platform to tell stories behind their products and to let the new generation of grocery shoppers acquainted with their brand. The app features a collection of content, like quizzes, videos and recipes.

User perspective
- "This would teach my kids to enjoy and appreciate their food more."
- "This would help my kids to make conscious food choices."
- "Could be useful, when you have the type of kid that doesn't like to eat anything"
- "It looks to be focused on younger kids"
- "My 11 year old daughter would love this, she is very used to using apps on the iPad"

Picnic perspective
Although we know how much work it is to make a whole new app, this has some interesting aspects. This app has the feeling of a kind of magazine and could tap into people's habit of quickly browsing the weekly flyers, looking for deals. Having a platform to tell stories could be very functional as well. We could use it to tell engaging stories in collaboration with our brands. When we would have something like this, it should also be linked with the shopping basket. Until now, Picnic has not been strong in content-creation, so maybe we would have to limit to a small set of stories per week. Just to stay interesting for people and to let them return every week.

Eén plek voor alles van Picnic, eindeloos spelen, leren en kijken.

Pssst. Stiekem ook leuk voor volwassenen!

Kay

Spelen

Leren

Kijken

Hoe kan dat? 🤔
Minder vlees eten
Advertentie

Zelf
On
Advertentie

Alles over appels 🍎

Lezen 📗
Hoe maak je kippen blij? 🐔

Quiz 🤔
Wat is

Uitlegvideo 📹
Melk zonder koeien 🐄

Fotoserie 📸
Advertentie
NESPRESSO
Waar komt koffie vandaan?

advertentie
alpro

Game 🎮
Het ontbijtspel 1

Ontdek waar je eten vandaan komt!

Leuke recepten om samen mee aan de slag te gaan

Recept
Chocladetaart maken 🎂

Op bezoek in
De koekjesfabriek

Advertentie
OREO

Neem een kijkje achter de schermen...

Vlog 🎬
Boodschappen bezorgen met Thomas
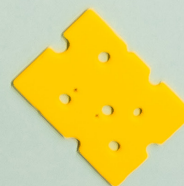
Picnic Samen
Way more "gezellig"!

Why?
Family grocery shopping is inherently a process that requires people to collaborate. The current Picnic app does not offer such functionalities, therefore some families try to make collaborative shopping lists in other apps. This results in an unnecessarily complicated shopping journey, in which customers have to go through.

How?
Facilitating collaboration between family members, during the ordering process. Enabling family accounts by changing the backend infrastructure of the app. Offering new security settings to limit the access of kids to certain features.

What?
The Picnic family account is a way to collectively fill the shopping cart with your family. By enabling multiple identities to be linked to one shared account, all family members can contribute to the process by adding certain items. The redesigned shopping basket shows who added which products. Additional security settings empower parents to limit their child's access to certain functions of the app.

User perspective
- "This function is really clear, this could be very useful for us as a family"
- "Showing who added which products could save a lot of confusion"
- "My cousin has two teenagers, for her this would be very convenient!"
- "Maybe I would use this, but I would also like stay in control myself"

Picnic perspective
This requires some work, but for us it makes total sense to do this. It strengthens the experience and is interesting for the customers as well as for us. While some digital services offer family profiles, when the use case is not that clear, the use case for Picnic is very evident. For families it is truly relevant to involve others in the shopping process. It also carries a viral aspect, considering way more people will interact with the app.

Samen is alles leuker!
Het is nu nog makkelijker
om boodschappen te doen
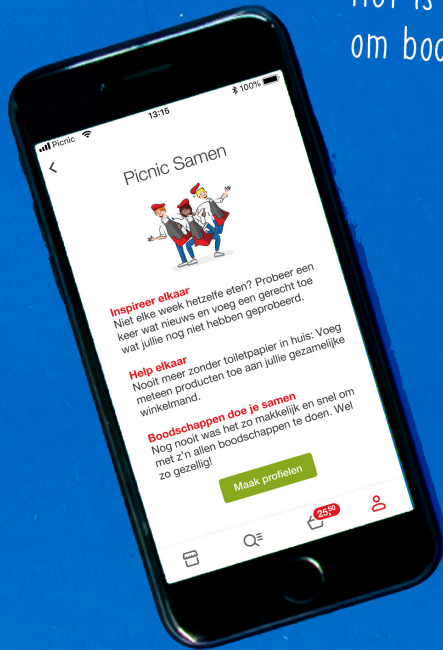
Inspireer elkaar en voeg
producten toe aan jullie
gezamelijke winkelmand.

Iedereen bij jullie thuis is
altijd op de hoogte van
wat er bestelt is en
wanneer we langskomen.
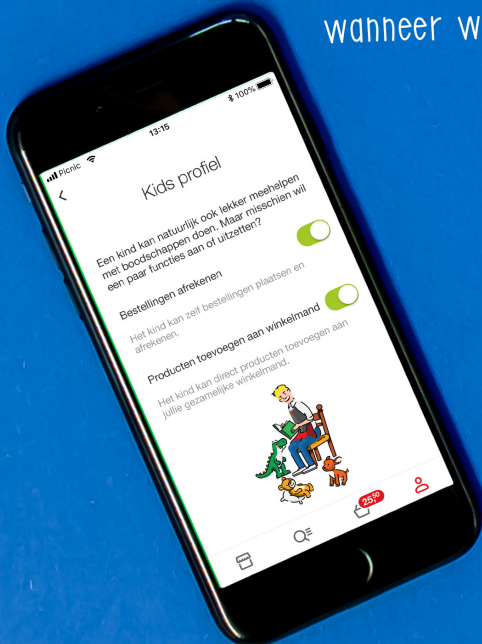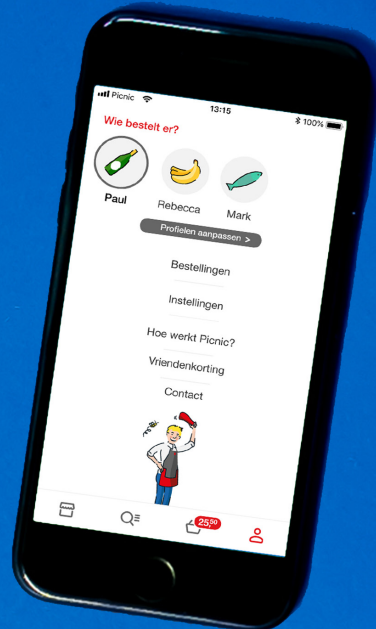
Zelfs de kinderen kunnen
meedoen, maar misschien
wil je niet de ze zelf
kunnen afrekenen ;)

Picnic Samen

Inspireer elkaar
Niet elke week hetzelfde eten? Probeer een
keer wat nieuws en voeg een gerecht toe
wat jullie nog niet hebben geprobeerd.

Help elkaar
Nooit meer zonder toiletpapier in huis: Voeg
meteen producten toe aan jullie gezamelijke
winkelmand.

Boodschappen doe je samen
Nog nooit was het zo makkelijk en snel om
met z'n allen boodschappen te doen. Wel
zo gezellig!

Maak profielen

Wie bestelt er?

Paul   Rebecca   Mark

Profielen aanpassen >

Bestellingen

Instellingen

Hoe werkt Picnic?

Vriendenkorting

Contact

Kids profiel

Een kind kan natuurlijk ook lekker meehelpen
met boodschappen doen. Maar misschien wil
een paar functies aan of uitzetten?

Bestellingen afrekenen
Het kind kan zelf bestellingen plaatsen en
afrekenen.

Producten toevoegen aan winkelmand
Het kind kan direct producten toevoegen aan
jullie gezamelijke winkelmand.

NIVEA Creme

Sun All in 1

Peter Picnic
Let's just ask the milkman

Why?

Currently, one person in the family often ends up being the only one responsible for the family groceries. When others want to request products or complain that something is missing, they end up asking the same person.

How?

Offering all family members a way to address their product requests by means of a voice user interface.

What?

A voice app built for the Google assistant which customers can use to quickly add items to the basket without having to reach for their phone. Are you cooking and noticing that the salt is finished? Just say: "Hey Google, add salt to my Picnic basket" Additionally, people can ask when their groceries are going to be delivered.

User perspective

- "I don't have a device like this and I don't need it either. I mean, just get up and do it yourself. Stuff like this makes people lazy."
- "This would be really ideal for me, so I don't have to scroll that much anymore. Can you please explain how this works?"
- "I am a bit skeptical about this, Siri never understands me either"

Picnic perspective

This is cool but there are different sides of using this technology. First of all the use case is clear for example, directly adding something to the basket while cooking. Also, these devices are becoming more common, Albert Heijn is already selling them. On the other hand, we would need two developers working on this for a year. While it might be smart to not fall behind, people will only use it if it works perfectly. While there are definitely some early adopters of this technology, the general adoption rate is quite low. Eventually we would have to take a long run, with the chance of releasing something that primarily causes PR instead of actual use by our customers.

"Hallo! Ik ben Peter, van Picnic.

Je kan me altijd vragen om producten toe te voegen aan je winkelmand.

Ook kan ik bijvoorbeeld checken wanneer je boodschappen worden gebracht.

Waarmee kan ik je helpen?"

Nieuwe vuilniszakken nodig? Laat je telefoon maar in je zak. Begin met: "Ok, Google: Praat met Peter van Picnic"

Picnic Play
Just let the kids do it themselves

Why?

Young kids like to do things that grown-ups usually do. From an early age kids start to play with little parking garages, wooden kitchens and even supermarket toys. A kids toy can connect brands with even the youngest children. Inspired by what the Postbank (nowadays ING Bank) made for their youngest customers, the "Penniemaat", see figure 53.

How?

Instead of just playing going to the supermarket, kids can actually contribute to the shopping process, by means of an interactive toy.

What?

Picnic Play is an interactive toy that enables kids to scan products, learn about them and add items to the basket. Is the peanut butter finished almost finished at the breakfast table? Simply scan it with your Picnic cash desk and it will be added to the actual Picnic basket.

Figure 53
Penniemaat

User perspective

*   "I would buy this right away, I think it's important to involve your child in such things."
*   "Wow this is insane, so cool! I think the educational aspect is also very strong, to show kids the price of products."
*   "Haha, this is not only nice for kids, I would use it myself! It solves the thing that annoys me the most: That a product that has been used does not get replaced."

Picnic perspective

This would definitely get us in the kids news "Het Jeugdjournaal".

Scan,

Is de pindkaas op? Scan het zelf met je eigen Picnic kassa!

Leer over elk product iets nieuws. Weet jij al waar bananen vandaan komen?

Leer,

Wist je dat..

Betaal

Reken de boodschappen zelf af, met je eigen Picnic pinpas. Hoe cool is dat!

Gescand

Calve Pindkaas

Land van herkomst
Polen

Prijs
€3,19

Wist je dat..
Voor 500 gram pindakaas ongeveer 1.100 pinda's nodig zijn

Scan je pas om te betalen

Totaal
€25,50

Picnic Menu
What do we eat?

Why?

The biggest hassle of the entire process is clearly deciding on what to eat. And while the question "What do we eat tonight?"is often asked, answering it is not as easy as it could be. Parents want to provide good food but struggle in balancing healthiness and variety with ease and convenience.

How?

Providing families with quick and easy recipes with every order. Enabling them to cook healthy varied meals for their family, combining tactile visibility with digital efficiency.

What?

Picnic Menu is a magnetic meal planner that can be easily attached onto the heart of every families' kitchen, the fridge. The menu is a visual reminder for all family members to think about what to eat. The recipe cards that will be added to every order, provide inspiration to break out of standard food patterns. By scanning the physical cards with the Picnic app all ingredients can easily be added to the basket.

User perspective

- "This would be fun to use together"
- "I'm not such a good cook, would I be able to use the recipes as well?"
- "Yes this is great. Every day the question is "What do we eat today" and using these tangible things could definitely help to eat varied, easy, fast, simple and healthy. But once a week I would like to eat a bit more unhealthy, haha!"
- "I'm not used to following recipes, normally I just make my own things. This looks nice, but I'm not sure if it would work for us."

Picnic perspective

Cool that it is such a simple idea. The physical elements really give Picnic more visibility and presence within families. However it stays hard to hit the right spot with recipes. The implementation in the app could already be done.

Ontvang handige receptkaartjes bij iedere bestelling, elke keer weer een verrassing!

Bedenk samen wat jullie volgende week willen eten, misschien een keer iets niews?

Pitabroodje falafel en paprikasalade

20 min
€ 3.87 p.p

Maandag

Thaise kokossoep met naanbrood

20 min
€ 2.68 p.p

Dinsdag

Rode curry met rijst en peultjes

20 min
€ 3.37 p.p

Woensdag

Geroosterde pompoen

50 min
€ 3.50 p.p

Donderdag

Vrijdag

Zaterdag

Bestel sneller dan ooit: met één foto voegt Picnic alle ingrediënten toe aan jullie mandje

Zondag

Tagliatelle met spinazie en groene pesto

15 min
€ 3.88 p.p

Wat eten we volgende week?
Bepaal het samen!

1 Verzamel de kaartjes bij elke bestelling, elke keer weer iets nieuws!

2 Bepaal samen wat je gaat eten, misschien weer eens iets anders?

3 Laat ons je maaltijden bezorgen. Zo doen jullie alleen het gezellige werk

PicNic

Pikante pasta met zalm

De lekkerste recepten

Zachte risotto met truffelboter

20 min
€ 3.68 p.p

Pssst: Het Picnic Menu is magnetisch en kan je perfect op de koelkast!

Nu met handig bewaarblikje

Vistaco's met guacamole

30 min
€ 3.93 p.p

Conclusion rapid prototyping round
Sprinting through the process of designing,
prototyping and testing enabled the efficient
gathering of many results. Within the course of
two weeks five widely different concepts have
been tested both with Picnic users and with
stakeholders within the company.

While every concept clearly showed its qualities
and provided insights into the motivations of
people to use them or not. None of the concepts,
by themselves, achieved to fully succeed in
addressing all elements of the design statement
of

- Fostering a feeling of togetherness and
  shared responsibility within families
- Making the process feel like a festive family
  ritual
- Celebrating the involvement of kids

By design, each concept tapped into just single
elements of the design statement. In order to
truly create a festive family ritual around online
grocery shopping, single-focus solutions simply
do not do the job. A truly effective solution
should take into account all steps of the process
and contain family-specific functions for a range
of different family members.

In the next prototyping round a single concept
will be developed that tries to capture all these
ingredients of an adequate solution.

Figure 54-56
Prototypes at users' homes

7.3 Second prototyping round

During the second prototyping round one concept will be designed, prototyped and tested.

Goal
The goal of this concept is to fully address all elements of the design statement and therefore offer value during the entire Picnic process for multiple members within the family.

Granular approach
Where the first prototyping round was of divergent nature, trying to test a wide variety of ideas quickly, this second round will converge into one solution. To do so, a granular approach will be used. It is essential that the outcome should focus on multiple user needs throughout the process by the creation of a range of new user touchpoints, see figure 57.

Habit-forming ritual
In order to create a true family ritual, people have to change their current behaviour of using Picnic by themselves into a habit in which the whole family gets included.
To support the change of user behaviour into this new habit, the framework of habit-forming products by Nir Eyal will be used (Eyal, 2014) In his book "Hooked" he dives into the theory of creating habit-forming digital products. "Hooked" digs into different areas of neuroscience focused on how habits are formed, how we make decisions, and what motivates. And based on these concepts, Eyal provides a practical framework for using these to your advantage: The Hook model, see figure 58. In short, the model is designed to help the creation

"hooks" within a product by considering how to trigger users, how to make it easy for them to complete an action in order to get a variable reward, and finally encouraging them to invest something that will get them to come back. The elements of triggers, actions, investments and rewards will be used in the final design.
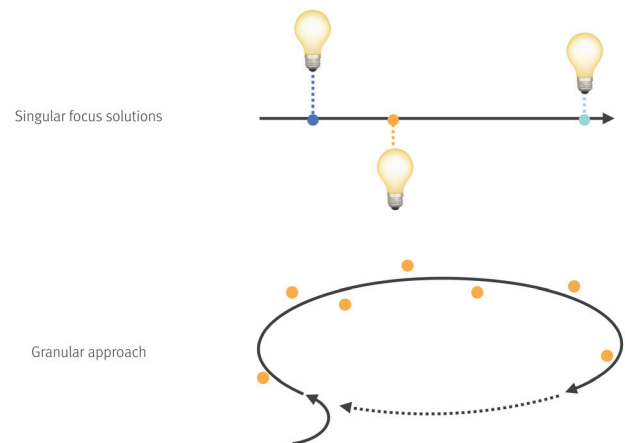
Figure 57
Granular approach
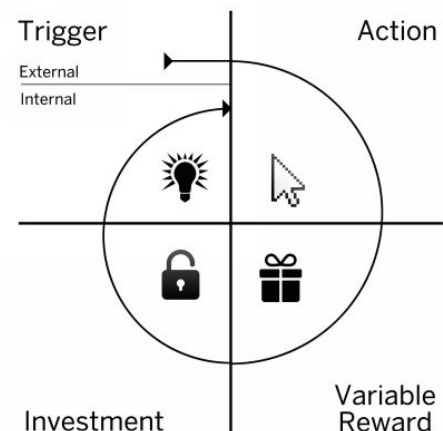
Figure 58
The Hook model (Eyal,2014)

Picnic Family 1.0
Let's team up!

Why?

Grocery shopping is an essential part of family life, involving family members from young to old. However, Picnic customers currently order their groceries by using the app mostly individually. By transforming traditional grocery shopping into a relatively standard e-commerce solution, qualities like shared responsibility, family collaboration and the involvement of kids have been lost.

How?

Providing families with a set of tools to collectively organize their online groceries. Making it feel like a festive family ritual. Empowering families to internalize the habit of involving each other in the process.

What?

Picnic Family 1.0 is a way for families to collectively experience the online shopping process. Family members can contribute by composing shopping lists, suggesting what to eat next and adding products to their shared basket. Involvement is encouraged by celebrating accomplishments and challenging people to do better. Everyone can easily like products and save certain recipes. Over time, the Picnic can offer a digital store tailored to the needs and wishes of every family.

7 producten toegevoegd door
Chris

1   Bio fairtrade bananen
5 stuks   2.09

1   Ananas
1 stuk   1.89

1   Cantaloupe meloen
1 stuk   2.69

1   Bio heel donker meergranen
brood
800 gram   2.05

1   Picnic eitjes 3 ster beter leven
10 stuks M/L   2.89

1   Optimel vanillevla 0% vet
1 liter   1.34

Besteld   Acties   Ontdek   Presto

**Nieuwe gezichten,
wat gezellig! 🎉**

Twee mensen hebben zich toegevoegd
aan jullie Picnic groep. Niks houd jullie
meer tegen om samen alle boodschappen
te gaan doen.

Laten we winkelen!

3.19   1.92

Besteld   Acties   Ontdek   Presto

Picnic Samen
Het is nu nog makkelijker om
boodschappen te doen.

Probeer Picnic Samen >

Koolrabi
1 stuk   0.75

Schepyoghurt naturel
500ml   1.29

Calvé 100% pindakaas
met nootjes
350 gram

Bio munt in pot
Hele plant

14:25

‹

**Start met
Picnic Samen**

Het delen van je account is perfect voor
families maar werkt natuurlijk ook met
huisgenoten of andere huishoudens.

Laten we beginnen!

14:25

Onze aanraders   Jullie favorieten

**Deze week
bij Picnic**

Elke week selecteren wij de
lekkerste, makkelijkste en leukste
dingen om samen te maken!

Deze week iets nieuws proberen?

**Begin 2020
zonder vlees** 🌱

Snel, gemakkelijk en lekker!

Leuk voor de hele familie!

**Zelf croissantjes
maken** 🥐

14:25

‹   Onze aanraders

**Begin 2020
zonder vlees**

Test

The Picnic Samen concept is tested by letting actual customers experience the prototype. Participants from six different families used the prototypes and could express their feelings about it afterwards.

Test video

A video (with English subtitles) is made to showcase the reactions of the participants on the prototype. This video can be seen by scanning the QR-code on breakout 11.

Results

After testing the prototype with users of Picnic it became clear which values it is able to deliver and which elements need tweaking and refinement. A summary of these results will be provided in this chapter.

Happy to collaborate

Generally, people showed positive interest while using the prototype. All participants were triggered by the banner they saw on top of the storefront and expressed to be interested in using features like this. Also all participants valued that all family members are enabled to add items to the basket themselves.

Seen as easy and useful by kids

Kids seem to understand the features of the app, even faster than their parents. Together with their parents they already start to suggest behaviour patterns that fit their needs.

A more organic process

Picnic Samen is experienced to a better and more organic way of doing groceries than the current app. Instead of one person adding products to the basket and ordering them directly, everyone is able to provide their input over a longer period of time. People also reported to enjoy the possible interactions this can cause, such as kids trying to secretly add products and less people asking to replace finished products.

Encouragement and statistics

People clearly appreciate that the app provides playful copy and feedback during the onboarding and throughout the service. Also, the addition of family statistics is enjoyed. People can already imagine what kind of results it would show in their own families. Multiple participants noted that they would appreciate seeing statistics concerning their personal values, for

example about limiting their CO2 footprint or eating less meat. This could definitely provide this feature with more meaning and depth.

Personal Picnic Store
When starting the prototype, participants oftentimes directly noticed the new whisk icon and were starting to guess about its functionality. Eventually, people liked the idea of a place where they can find and save inspiration for quick and easy recipes. Also the ability to combine that with making all kinds of personal shoppings lists is highly appreciated.

Why not for the iPad?
Also during the research phase of this project, it became clear that most families make use of iPads. These iPads are often also used by children. People could see the value of these features finding their way to an iPad app. The different nature of using an iPad also provides the opportunity for tablet-specific features.

Conclusion
Overall, the feedback from customers on the prototype was highly positive. Everyone could clearly envision themselves using the functions that it provides. Additionally, the role that kids could have in this digital grocery shopping experience was appreciated. On the other hand, people were able to express their opinion about parts of the prototype where they felt less convinced about. When making the final design this input is of great value to ensure it will be a truly effective solution. The final design is going to build upon the current concept by holding on to its qualities and by refining its weaknesses. Also, the capabilities of the iPad will be leveraged by designing a dedicated iPad app. An iPad app can complement the Picnic Samen experience by offering a way for families to collaboratively do their grocery shopping when they are physically together. The larger screen real estate and the lean back character of the device can offer interesting new design opportunities.

Scan the QR code to watch the video
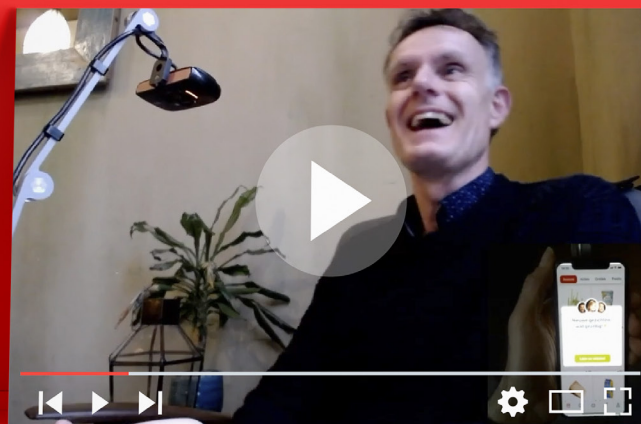
Breakout 11:
Picnic Family 1.0 Test Video

Key takeaways
Section III - Synthesize

During the synthesis phase of this project, ideas are generated prototyped and tested in various rounds.

Firstly, ideas have been generated via generative interviews with customers, via an ideation session with design students and via individual ideation. Also, various design experts have been interviewed to brainstorm about initial ideas and to learn from their expertise.

After this ideation phase, a set of five diverse ideas have been prototyped. The ideas behind all these prototypes originate from the research findings in the analysis phase. Following a rapid prototyping approach, all ideas were made into an experiential prototype within one day. All prototypes have also been visualized by making posters, highlighting their most important features.

Eventually, these prototypes have been tested with families and internally within Picnic. These tests discovered a range of insights on every prototype. More importantly, it became apparent that all the ideas had too much singular-focus. Meaning that none of the prototypes could accommodate all elements of the design statement completely.

Before starting to prototype another idea, a step has been taken backwards in order to come up with a better approach. From this moment a granular approach has been taken. With the intention that the following design should provide a systemic solution, instead of having a singular focus.

The result of this is the Picnic Family 1.0. Picnic Family aims to influence family behaviour throughout the whole grocery shopping experience and facilitate family collaboration.

Again, the design has been developed into an interactive prototype and tested with families and internal stakeholders. The promising results of this test resulted in the decision to proceed with the development of Picnic Family.

The next section presents the final design of Picnic Family. Afterwards, the concept has been validated and an implementation plan has been developed.
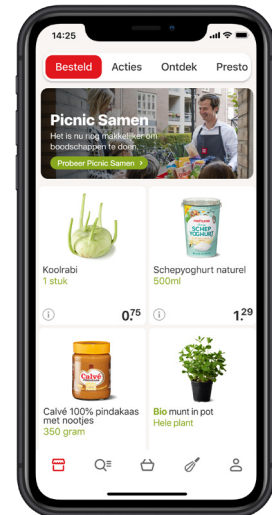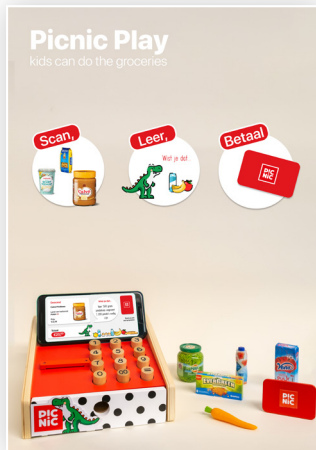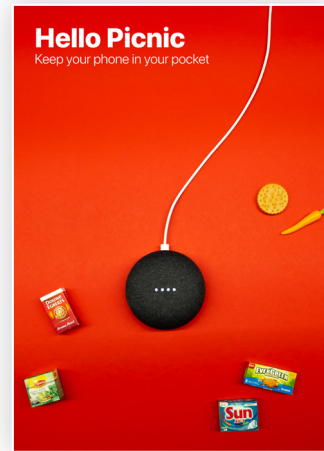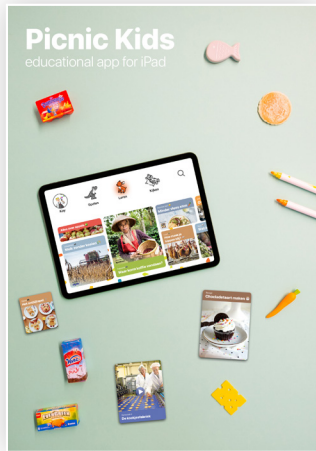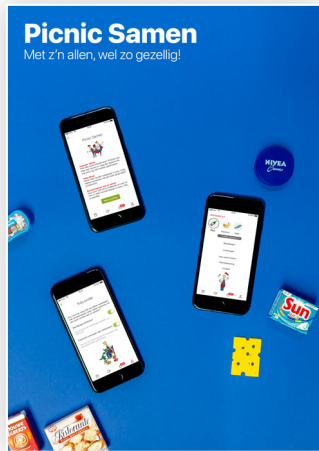
Figure 59
Prototypes

SECTION IV
Evaluate

Figure 60
Filming concept movie

SECTION IV | Evaluate

Chapter

08

Final design

After multiple rounds of prototyping and testing the final design has been made. This chapter presents Picnic Family and describes how it is designed to fit the life of families. Also, the envisioned effects on family communication and decision-making are illustrated.

8.1 Final design

Picnic Family
Let's spend a moment together

Why?
Grocery shopping is an essential part of family life, involving family members from young to old. However, Picnic customers currently order their groceries by using the app mostly individually. By transforming traditional grocery shopping into an individual e-commerce app, most collaborative qualities of grocery shopping have been lost. Additionally, the use of online supermarkets results in kids accompanying their parents less on trips to the traditional supermarkets. Because of this, they miss out on learning opportunities about healthy eating habits, affectionate parent-child interactions and educational parent-child communication.

How?
Providing families a collaborative way of organizing their online groceries. Resembling parts of the traditional grocery sho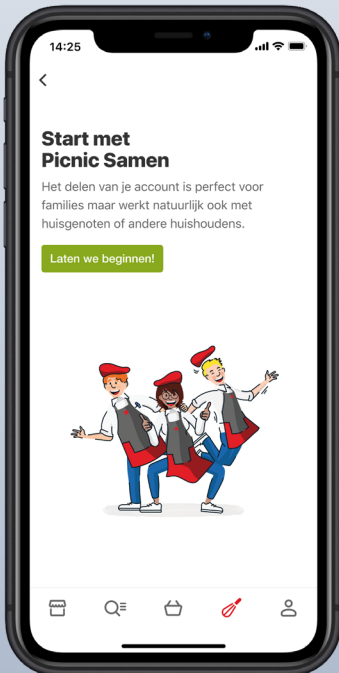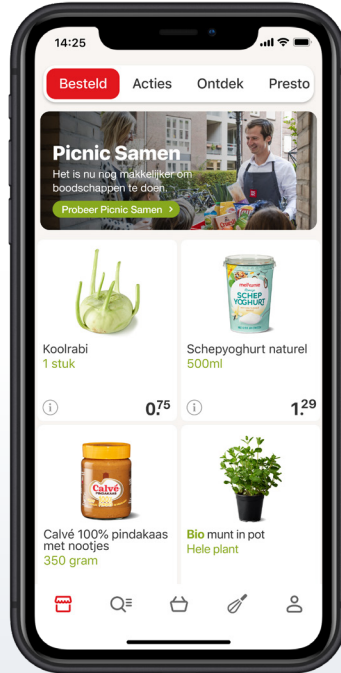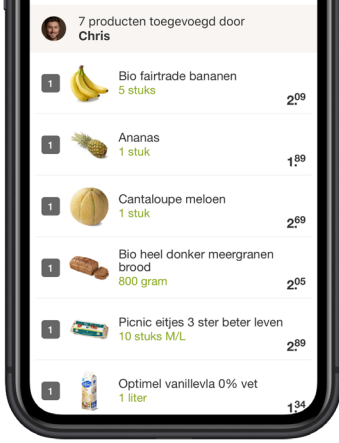pping process, combined with the ease and efficiency of online shopping. Picnic Family enables in-app family collaboration, but shines even more when being used together in-person. Tools are designed to celebrate shared responsibility and the involvement of kids. Eventually empowering families to internalize the habit of collaborative grocery shopping at Picnic.

What?
With Picnic Family, all family members can be involved in the grocery shopping process from start to finish. One shared Picnic account can be used by everyone, including children. Family members can contribute by composing shopping lists, suggesting what to eat next and adding products to the shared basket. The ideas of children are being celebrated by emphasizing their successful contributions with every order. Additionally, kids can learn about grocery shopping and healthy eating habits via in-app parent-child communication. Finally, the dedicated iPad app offers families a more shared shopping experience than ever before. Facilitating playful in-person collaboration and shared family moments.

Scan the QR-code to see Picnic Family in action!
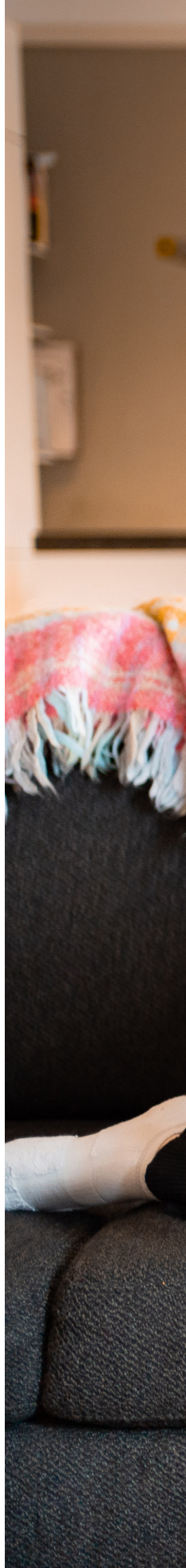
Scan the QR-code to
watch the video

Figure 61
Picnic Family concept movie

8.2 Picnic Family habit loop

Envisioned habit-forming in family life

Action
3. Check & Pay

Action / Reward
4. Delivery

Action
2. Shop

Reward
5. Personalized insights

External trigger
1. Personalized onboarding

Internal trigger
7. Habit

Investment
6. Like & Save
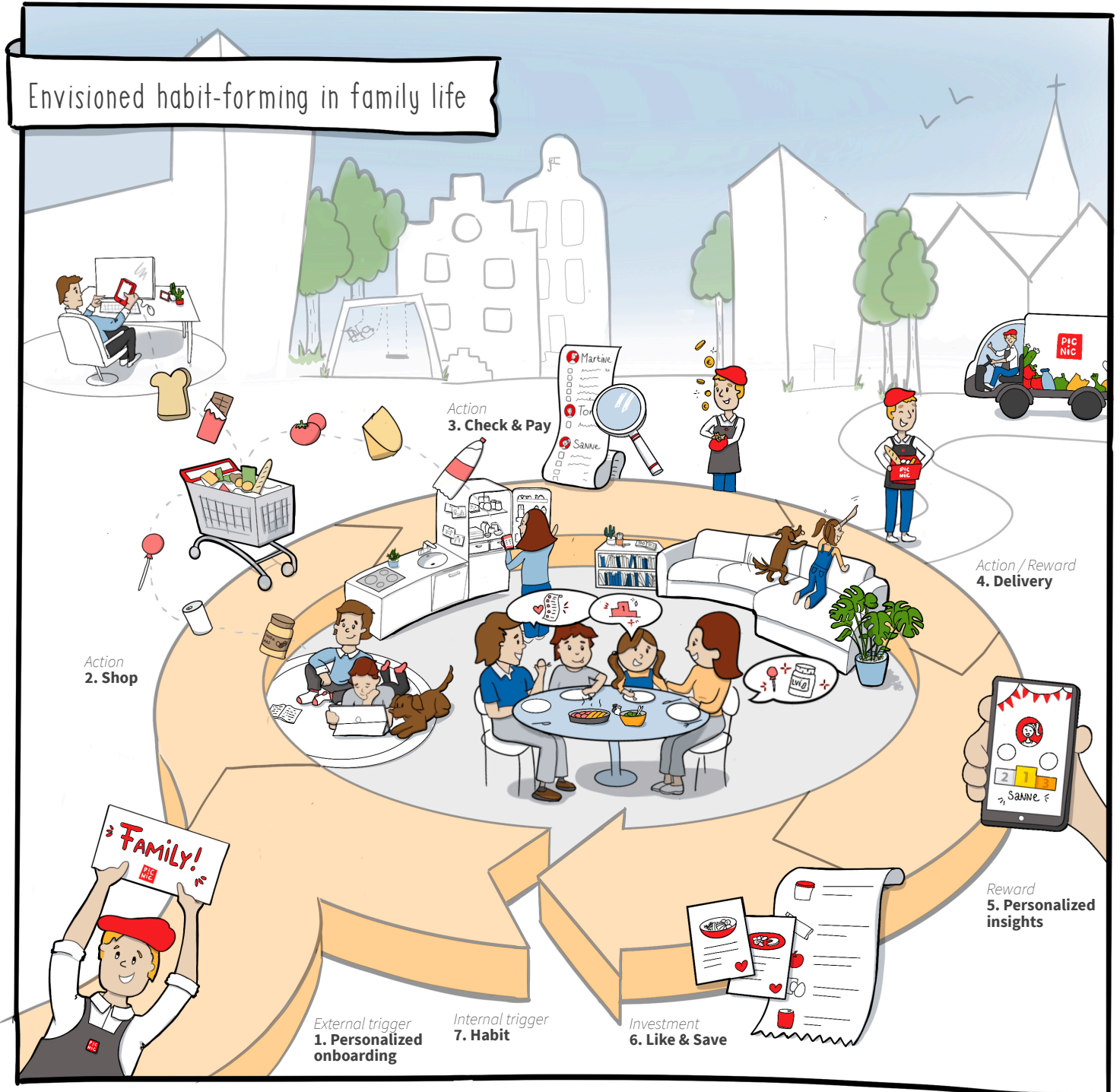
Figure 62
Illustrated Picnic Family habit loop

In order for the design to facilitate a habit-forming family ritual, as stated in chapter 7.3, the Hook model is used as a framework to define the different stages of the design, specifically; External triggers, Actions, Variable rewards, Investments and Internal triggers (Eyal, 2014). Eyal (2014) considers triggers as the actuator of certain behaviour. These triggers can either be internal and external. Habit-forming technologies start by alerting users with external triggers, like emails, push notifications or buttons. By cycling continuously through these hooks, users begin to form associations with internal triggers, which become attached to existing behaviors and emotions (Eyal, 2014). Actions resemble the intended actions of users. Variable rewards consist of elements that provide fulfilling experiences for users, making them want to come back later. By making the rewards variable, the response of the product becomes less predictable and more desirable (Eyal, 2014). The last phase of the framework consists of investments. These are small "bits of work" created to increase the likelihood of returning users.

Picnic Family

Picnic Family takes a granular approach and provides families with a variety of tools for collaborative grocery shopping, see figure 62. Each tool is specifically designed to enable family interaction and communication, directly and indirectly. All individual touchpoints work together in establishing a habit effect. However, families have the freedom to shape their own preferred shopping process, arranging the tools in a way that fits their family's life. This chapter gives an overview of the envisioned habit loop, including the designed touchpoints and family interactions.

External trigger

1. Personalized onboarding

When the app is being used by families, known to Picnic, the app will show banners and messages in the storefront, the basket and on the profile page. These banners contain CTA's that guide users to the setup of Picnic Family. During this on-boarding process, the app can be personalized by entering a family name, adding photos and selecting their personal goals. Ultimately, family members can share the access key in order to connect to the shared account from their devices.

Action

2. Shop

After setting up the family account and connecting everyone's device, family members can simply continue to use the app for their grocery shopping. In the background, the app will keep track of which identity is used to add which products and notify when duplicate products are added. Family members shop themselves on their personal devices, as well as side-by-side on the new iPad app. Additionally, the iPad app offers a memory game based on earlier bought products, which can be used to shop collaboratively with the youngest ones.

Action

3. Check & Pay

Users can easily get an overview of all that is in the shared shopping basket, all products are grouped by the person who added them. When checking the basket, family members with the right can swipe away products to delete them, just as they were used to before. When using Picnic Family, the reason for product removal can be communicated by selecting one of the presented reasons or writing your own one. This

reason will then be communicated by sending a push notification. When ready to place the order, users can safely pay. For younger kids, a child lock can be set, restricting their access to the payment environment or to delete products.

Action / Reward
4. Delivery
Once the order is placed, all family members can track it with the delivery radar. This way, it is clear for everyone at exactly what time it is going to be delivered to their doorstep. In order to celebrate the involvement of kids and to reward them for their contribution to the order, kids get to see an overview of which products they successfully added to the delivery, followed with the amount of work they saved their parents. This report focuses on the positive contribution, while also giving constructive feedback by providing the most frequent reason for product removal.

Reward
5. Personalized insight
After receiving the order, a receipt is sent to all family members. Next to the full list of ordered groceries, everyone can find their personalised insights based on their values and interests. Are users trying to eat less meat? Then they can check how they and other family members are doing and find out about more vegetarian alternatives. Is the family trying to eat a more diverse and healthy diet? Then they can find out how much new recipes you tried in the last weeks and which healthy meals they can directly add to their next order. All insights are designed

as conversation starters at the dinner table and as a way for families to stay close to their values and to reach their goals together.

Investment
6. Like & Save
In-between orders, users are presented with weekly inspiration in the new "whisk" tab. Here, they can find new recipes and "like" the ones they liked from previous orders. This way, families grow their personal library of recipes, which can be easily ordered again. Also, users are encouraged to make shopping lists of occurring groceries, such as weekly and monthly necessities or special events, like birthdays and Holidays. Over time small "bits of work" such as liking recipes and saving shopping lists reduce the cognitive load of placing a new order and therefore increase the likelihood of customers to return. The more family members are part of this habit loop, the stronger this habit effect will be.

Internal trigger
7. Habit
By going through this habit loop, again and again, users internalize their family grocery shopping more and more. Ultimately, Picnic can decrease the number of external triggers, because it can rely on the customer's built-in habit of getting their regular groceries in the app.

Selecting personal goals and values

Waar hebben jullie het over tijdens het eten?

Minder vlees eten

Minder afval veroorzaken

Meer zelf koken

Nieuwe gerechten proberen

Meer groenten en fruit eten

Gezonder eten

14:25

Besteld · Acties · Ontdek · Presto

Picnic Family
Het is nu nog makkelijker om samen boodschappen te doen.

Probeer Picnic Family ▸

Koolrabi
1 stuk

Schepyoghurt naturel
500ml

In-app banners

External trigger
1. Personalized onboarding

Grocery shopping memory game on iPad

Gevonden!

Jullie favoriete ontbijt
Zeemansboter bio pindakaas crunchy
250 gram

Jullie favoriete ontbijt
Zeemansboter bio pindakaas crunchy
250 gram

Volgende

Nieuwe gezichten, wat gezellig! 🎉

Twee mensen hebben zich toegevoegd aan jullie Picnic Family. Niks houd jullie meer tegen om samen alle boodschappen te gaan doen.

Laten we winkelen!

3.¹⁹   1.⁹²
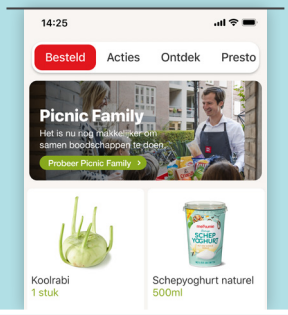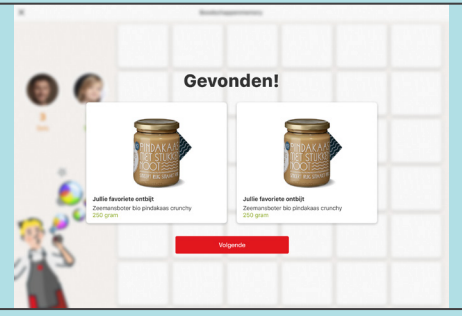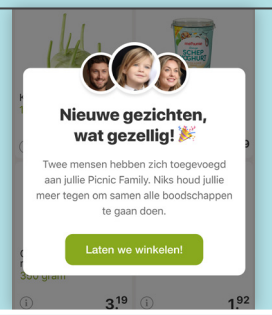
Multiple family members join the shared account

Action
2. Shop

---

4 · Vega Libre tinto Spanje
750 ml · 9.⁹⁶

1 · Bon Appetit plakken geitenkaas 50+
150 gram · 2.⁶¹

3 producten toegevoegd door **Puck**

ay's paprika chips
35 gram · 1.⁸⁷ · Verwijderen

2 · Champignons
250 gram · 2.⁰⁹

2 · Schepyoghurt naturel
500 ml · 2.⁰⁹

Ga je bijna bestellen?
Vraag **James** en **Puck** of ze nog iets missen 🛒

Stuur notificatie
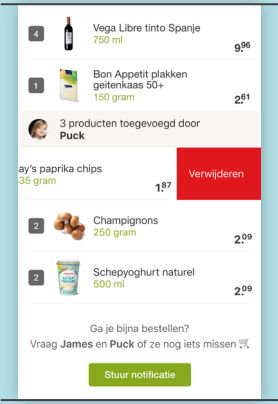
Groceries organized by family member

Deze toch maar niet?
Als je aangeeft waarom, dan geven we dat ook door aan Puck.

💰 Te duur   🤔 Niet nodig   🍩 Te ongezond

🛒 We hebben al iets soortgelijks   🏠 Past niet bij onze familie   💬 Anders, namelijk...

Parents can communicate reason for removal

Action
3. Check & Pay

Wat fijn dat je zo goed geholpen hebt!

⏱ Dankzij jouw hulp zijn de boodschappen **25% sneller** gedaan.

4/10 producten zijn niet meebesteld omdat ze **te ongezond** waren.
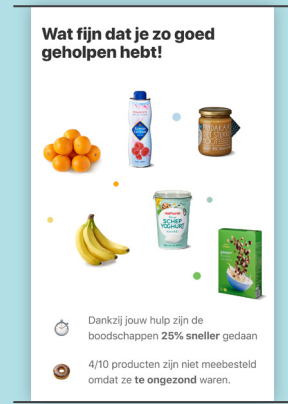
Celebrating the successful involvement of kids

✕ We zijn onderweg

Thomas is over 3 minuten bij jullie thuis
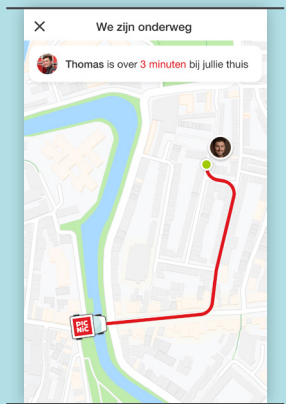
Everyone can track the delivery

Action / Reward
4. Delivery

Puck bestelt het liefst **ontbijtproducten** 🔍

Alice plaatst vaak de bestelling en meestal op **donderdag** 📅

James heeft al **6 keer** op rij meegeholpen met bestellen 🔥

Jullie persoonlijke doel
Minder vlees eten
Goed bezig! Jullie hebben al **drie weken** geen vlees meer besteld. Hebben jullie ons aanbod aan vleesvervangers al ontdekt?

Bekijk alle vleesvervangers

Jullie persoonlijke doel
Nieuwe gerechten proberen
Jullie hebben al **vier weken** geen nieuwe recepten uitgeprobeerd. Gelukkig hebben we een hoop makkelijke recpten klaar staan!

Bekijk onze recepten

A central place with personalized insights for the whole family

Reward
5. Personalized insight

14:25

Onze aanraders · Jullie favorieten

Deze week bij Picnic
Elke week selecteren wij de lekkerste, makkelijkste en leukste dingen om samen te maken!

Deze week iets nieuws proberen?

Ga samen voor minder vlees
Snel, gemakkelijk en lekker!

Weekly personalized inspiration by Picnic

‹ Onze aanraders

Ga samen voor minder vlees
Het nieuwe jaar begint met goede voornemens, zouden jullie een week zonder vlees kunnen eten?

Pita's met falafel
3 pers | 10 min · 1.⁹⁵

Vistaco's met limoen
3 pers | 15 min · 2.⁴⁵

Growing library of personal favourites

Investment
6. Like & Save

8.3 Impact on family communication and decision-making

The use of Picnic Family is supposed to have a positive impact on how families manage their daily groceries together. The concept aims to positively affect family communication, democracy and decision-making. To do so, this chapter introduces findings from a number of research studies on the behaviour and negotiation strategies of families during grocery shopping. Subsequently, prior research will be compared to the discoveries made during this project, to see how online grocery shopping impacted family decision-making. Eventually, the impact of the Picnic Family concept will be outlined and shown in comparison with traditional shopping at supermarkets and current online grocery shopping.

Rising influence of kids

Children have become a very important consumer group (McNeal, 1992). Multiple studies have shown that children constantly influence the buying behaviour of their parents, directly and indirectly. (Haselhoff, Faupel, & Holzmüller, 2014). While doing so, they display various types of behaviour and diverse negotiation tactics. In response, parents use numerous sorts of reactions. In most studies on children influencing family buying decisions, influence is conceptualised as ''children's active and passive attempts to achieve parents' permission to participate in family decision-making thereby achieving specific results'' (Mikkelsen and Nørgaard, 2006). Over the years, the influence of kids is growing and kids are becoming increasingly autonomous when buying groceries (Foxman, 1989). In modern families, openness and democracy lead to even more active communication between family members and thus foster a stronger influence of children on buying decisions (Caruana and Vassallo, 2003; Chan and McNeal, 2003). This is assumed to lead to significant changes in family buying behaviour.

Families communication styles

Family food decision making is often a joint activity, and children's active participation, among other things, determines the influence they gain (Nørgaard, Bruns, Christensen & Mikkelsen, 2007). The execution of this joint activity is largely dependent on the communication style of the family. Two types of family communication styles can be distinguished, socio-oriented and concept-oriented communication. Social-orientation is defined by the intention ''to produce obedience from the child and to cultivate agreeable and pleasant relationships at home'', concept-orientation allows the child to develop its own views and encourages the child to look for alternatives in order to weigh up the differences (Chavda et al., 2005, p. 70), see figure 63.

Socio-oriented families	Concept-oriented families
Emphasis on harmonious social relations and the feelings of others.	Emphasis on presenting and discussing ideas.
Children encouraged to get along with other family members and friends. Child advised to give way in arguments, to avoid controversy, repress anger and stay away from trouble.	Children encouraged to express ideas and challenge others' beliefs. Child exposed to more than one side of controversial issues and encouraged to discuss controversies with adults.

Source: *Fitzpatrick, M. A., & Ritchie, L. D. (2009). Communication theory and the family.*

Figure 63
Family communication styles

In cooperative (concept-oriented) families, children have more influence on the purchase decisions, than children of socio-oriented parents (Caruana and Vassallo, 2003). Moreover, concept-oriented communication styles result in children helping in grocery shopping from an earlier age than socio-oriented families.

Family food decision-making framework
The family decision-making process during grocery shopping involves multiple persons having the role of decision-makers and influencers, see figure. Nørgaard (2007) looked

into these roles of family members and adapted the family decision-making model of Jensen (1990). Based on literature research and an ethnographic study with Danish families, Jensen's family model was modified in order to contain food buying and children's influence. Resulting in an updated framework especially focused on the food buying process, see figure 64. This framework includes the different influencer roles of family members within the buying process and other influencing aspects like families' food-related lifestyle, children's consumer competences and the consumption

Family food decision-process framework

Family everyday routines

Buying process

| Idea generator | Price influent | Experience influent | Taste influent |

Initiation → General decision → Choice decision → Purchase act

| Health influent | Information collector | Convenience influent | Purchase act influence |

Consumption process

| Experience influent | Taste influent |

Cooking → Eating

| Convenience influent | Purchase act influence |

| Family food-related lifestyle | Children' consumer competences | Interest in children's influence | Demographical variables |

Source: *Nørgaard, M. K., Bruns, K., Christensen, P. H., & Mikkelsen, M. R. (2007). Children's influence on and participation in the family decision process during food buying.*

Figure 64
Family food decision-process framework

process (Haselhoff, Faupel, & Holzmüller, 2014). The framework distinguishes six decision stages, which are marked orange. The boxes around the decision stages illustrate influential factors on which the decision can be made. Subsequently, the model is used to find out where children participate and where they achieve the most influence. For each stage of the framework, the amount of children's participation, help and influence are analyzed. Below, this influence of kids on traditional grocery shopping will be described. Afterwards, this influence will be compared to the decision-making process of families using Picnic. Lastly, the envisioned decision-process of families using Picnic Family will be presented.

Family behaviour during traditional grocery shopping

During the **initiation** stage, families start to decide to shop for food. Mainly children help by expressing what kinds of food they want, carrying out the role of an initiator (Nørgaard, 2007). This means that children act as idea generators, thereby making active and direct influence attempts in the family food buying process.

The **general decisions** about what food products to choose for various meals are made jointly by children and parents; however, parents decide more than children do (Nørgaard, 2007). This means parents act as general decision-makers and children act out an influencer role rather than being co-decision makers. Children gain the most influence on the decision about in-between meals and breakfast, parents most often decide what to buy for dinner. The most influential general decision attempts by children are the attempts to buy fruit and vegetables since that is most often accepted by parents.

In the **choice** stage, specific food products are chosen among alternatives. This decision stage is again a joint process between parents and children. Still, parents decide more than children do (Nørgaard, 2007). Children gain most influence in the choice of sweets and least influence in the choice of fish and meat.

Sometimes, children participate in the **purchase act** of family food buying in the supermarket. Here children mostly participate in supportive tasks like placing items on the checkout counter, carrying bags or locating products in the shop (Nørgaard, 2007).

The role of children in the family
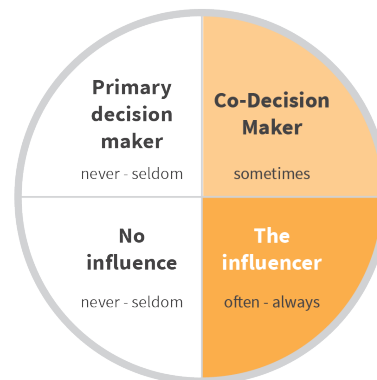
Figure 65
The role of children in the family

In summary, Nørgaard (2007) found out that children carry out an influencing role during all decision stages of the food buying process, and have the most influence during the initiation and choice decision stage. This means, they primarily execute the role of the influencer during traditional grocery shopping, sometimes children act as co-decision maker, see figure 65. During the grocery shopping process, children mostly help by acting as idea generators and by carrying out supportive tasks.

From a parents point of view, shopping for food with children is experienced as stressful and exhausting (Pettersson, Olsson & Fjellström, 2004). At the same time, many signs of affection and relaxed chatting are observed (Gram, 2015).

Family behaviour during grocery shopping with the current Picnic app
After interviewing and observing families using the Picnic app, it can be stated that the role of children in the decision-process of online grocery shopping is smaller than compared to traditional grocery shopping. Multiple factors reduce the involvement of kids in grocery shopping and thereby decrease their influence in the family food-decision making process.

First of all, children mostly enjoy accompanying their parents when shopping for groceries (Haselhoff, Faupel, & Holzmüller, 2014). Currently, there are various reasons for kids to visit a traditional supermarket. Whereas sometimes kids actively ask to join their parents, sometimes the situation simply dictates them to

come along. If families are using Picnic, there is not always one clear moment when the groceries are being done. It can be that parents briefly open the app multiple times a week, just to add some products they notice to be missing. In the framework of Nørgaard, this would account the choice stage, now being unaccessible for children. It can also be that parents prefer to order their groceries when their kids already went to bed. For these reasons alone kids are less likely to be involved in grocery shopping, compared to families that visit supermarkets regularly. Also supportive tasks like placing items on the checkout counter, carrying bags or locating products in the shop disappear.

Secondly, there are various causes for children to not use the Picnic app. This could be because they do not have access to the account, or even because they do not have their own smartphone at all. In this last case, children are dependent on their parents actively handing them their own personal devices. Without access to the Picnic app, children miss out on multiple decision phases in the decision-making process and therefore decrease their influencing role.

Additionally, when children are not involved in grocery shopping, by accompanying their parents on a trip to the supermarket or by using the current Picnic app together, they miss out on important educational parent-child communication regarding consumerism, food and healthy eating habits. In brick-and-mortar supermarkets, kids constantly learn about consumerism, the rational aspects of grocery

shopping and healthy eating (Haselhoff, Faupel, & Holzmüller, 2014; (Gram, 2015).

To summarize, children mostly enjoy grocery shopping with their parents and often act as idea generators and influencers in the family decision-making process. However, when families are using the current Picnic app, many factors prevent children from being involved in grocery shopping. With that, their influence in the decision-making process gets reduced. Also, children miss out on valuable learning opportunities and affectionate parent-child interactions.

Envisioned family behaviour during grocery shopping with Picnic Family

By using Picnic Family, families are expected to change their behaviour once again. Picnic Family aims to bring back and improve the collaborative and educational parts of traditional grocery shopping while maintaining the stress-free and efficient elements of using the Picnic app, see figure 66.

Picnic Family is envisioned to provide children with the ability to learn about the rational aspects of grocery shopping, mindful consumerism and healthy eating habits. Just as in the kids can place products on the counter in the supermarket, children are able to articulate their preferences by adding products to the shared online basket. Parents are able to either accept their request or to deny and communicate the reason why. After every order Picnic Family will celebrate the involvement of kids by emphasizing their good ideas and

contribution to the delivery.

The addition of the iPad app strives to enable affectionate family moments where parents and children can help each other with grocery shopping while having some fun at the same time.

Just as in the supermarket, parents can experiment with giving their children some supportive tasks, like looking for specific products or finding out what to eat for dinner. Subsequently, children can feel proud of their achievements. With Picnic Family this is even reinforced by tracking and showing the achievements in the app

Ultimately, Picnic Family aims at bringing the levels of involvement even closer together than before, see figure 66.

Family communication and decision-making compared

Traditional grocery shopping	Grocery shopping with the Picnic app	Grocery shopping with Picnic Family
Families using the supermarket at that primary source of groceries. Children join their parents because they actively ask to or simply because the situation dictates them to join.	Families using the current Picnic app for their primary groceries. Children do not have access to the Picnic app, unless they are old enough to have their own smartphone and access to the account.	Envisioned situation of families using Picnic Family for their groceries. Families collaborate using one shared account, accessible via smartphone or tablet. Grocery shopping can be done individually or when being together.

Involvement in decision-making process

Primary decision maker

Parents act as primary decision-makers.

Parents have the ability to take their children into the decision-making process, while still having a final say.

Co-decision maker

Parents most often act as primary decision-makers.

Children have the ability to help in grocery shopping. Facilitating shared responsibility and celebrating involvement.

The influencer

Children most often act as influencers and idea-generators. The level of influence differs per category.

No influence

Involvement of kids is minimized. Decreasing their influence on decision-making.

Elements of the family grocery shopping experience

	Traditional grocery shopping	Grocery shopping with the Picnic app	Grocery shopping with Picnic Family
Involving children in family decision-making	➕ Children are directly and indirectly involved in the family decision making	➖ Children are not directly involved in the family decision-making process	➕ Celebrating the involvement of the entire family in food decision-process
Learning opportunities via parent-child communication	➕ Children can learn about the rational aspect of grocery shopping and healthy eating	➖ No opportunity to learn about groceries through parent-child communication	➕ Proving learning opportunities via in-app communication and in-person collaboration
Facilitating affective child-parent interactions	➕ Shopping trips are observed to show plenty signs of affection and relaxed chatting	➖ No opportunity for having affective parent-child interactions while shopping	➕ Facilitating the opportunity for affective family moments via playful shopping tools
Offering a stress-free experience for parents and children	〜 Kids like to join their parents while shopping, parents can find it stressful and exhausting	〜 Offering a stress free experience for parents, but no experience for children	➕ Offering a stress free experience for parents and children

Legend

⭕ Parents   ➕ Positive

⭕ Children   〜 Neutral

           ➖ Negative

Figure 66
Family communication and decision-making compared

Figure 67
Validation test with user in Delft

SECTION IV | Evaluate

Chapter

09

Validate

After designing the final Picnic Family concept, it has been validated with both users and internal stakeholders from within Picnic. This chapter describes the validation approach, results and conclusions. Additionally, it provides further research opportunities and design recommendations.

9.1 Validation approach

To validate the functioning and purpose of the final concept, user tests have been executed with families in Delft and Amsterdam. The user test consisted of a full simulation of the Picnic Family concept, using a fully-functional digital prototype of the app.

Preparations

As described before a digital prototype of the Picnic Family concept was created. All individual screens are designed in Figma, a cloud-based design tool used by teams of many digital products, such as Twitter, Slack, Deliveroo and Dropbox (Figma, 2020). The tool allows multiple users to collaborate in real-time in one single file. Also, UI elements from the Picnic design system could be used to make the design instantly recognizable to Picnic users, see figure 68. The eventual prototype of the app is created in Principle. The Figma design files are imported into Principle, where connections between the different screens can be made to create multi-screen user flows, see figure 69. The addition of interactions and micro-animations result in a high-fidelity interactive user interface. The level

of realism provides the user with a convincing user experience, resembling the feeling of using an actual app as much as possible.

The recruitment of test participants happened in twofold. Firstly and recruitment email was sent out to families in Delft, who placed more than five orders and at least one order in the last month. This way of recruiting participants via email followed the same steps as in chapter 6.1. However, not all participants who were recruited by email showed up, even while they all received two reminder email and a text message. So secondly, participants were recruited by phone, in order to establish a higher level of commitment and a more personal connection with the participants before the actual user test.

Both in Amsterdam and in Delft, the user test and interview took place in local cafe's where participants could easily feel comfortable and give their unsalted opinion. Before the user tests, participants were able to calmly settle down and order coffee or tea.
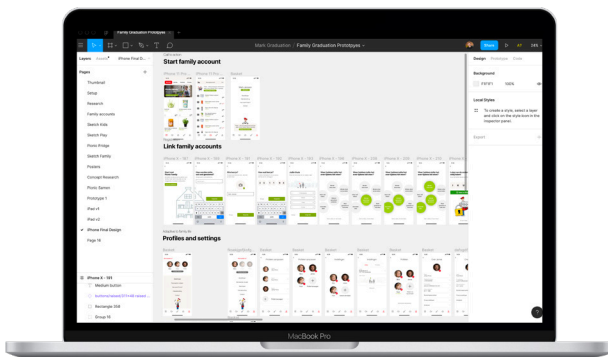
Figure 68
Designing in Figma
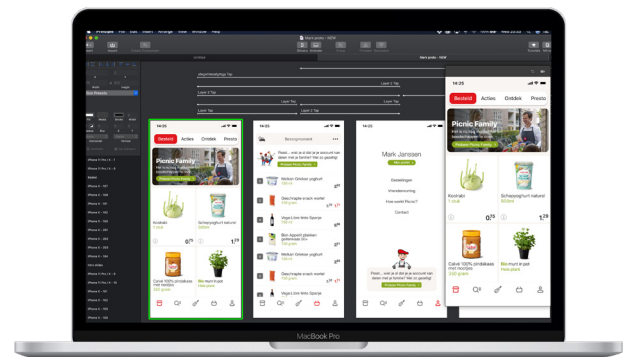
Figure 68
Prototyping in Principle

For the tests, two different forms are prepared, a consent form and a ranking questionnaire with Likert scale. The signed consent form gives the researcher permission to record audio and video material of the user test. This material is used to document and analyze the test and interview answers. To validate whether the design is perceived as a festive family experience, questions in the Likert-scale include "special", "playful" and "social". To check if the design enforces a more habitual family behaviour, it includes "in a fixed rhythm", "collaborative" and "together with my kids". All words are accompanied by an antonym and participants are asked to rate the scale before and after using the Picnic Family prototype. A more detailed description of this process will be provided in the "procedure" section.

If the consent form is signed, multiple cameras are used to document the user test. Firstly a "Mr. Tappy" camera is magnetically attached to the test device, an iPhone X, see figure 69. "Mr. Tappy" is an HD webcam fixed to a fully adjustable aluminium camera rig.

While the interactions on the screen can also be documented by making a digital screen recording, the "Mr. Tappy" is able to record the mobile device from a users's point of view, without getting in their way. This way, it can capture more interactions and reactions during testing; how users tap and swipe, hover above certain elements or hesitate before touching the screen. In order to register the emotional response of users a second camera is used, see figure 69 The "Logitech Connect" is a portable webcam with two omnidirectional microphones to capture the voice of both the interviewer and the interviewee. Since the camera has a built-in rechargeable battery and is directly connected to a computer, it eliminates the need for a tripod, SD-cards and external batteries. Furthermore, the small footprint and low-profile design make it a less intimidating experience, compared to filming with a regular DSLR-camera and tripod. Ultimately the OBS software is used to combine the footage of the two cameras in real-time, turning it into one single video file, ready to be analyzed, see figure 70).

Figure 69
Test setup from user perspective

Figure 70
Test setup from with two cameras

Research questions

The goal of the validation test is to find out if the approach of the Picnic Family concept could **enable collaborative shopping within families.**

Based on the **design statement and interaction qualities** (see chapter 5.3), subquestions for this research goal were:

• Does Picnic Family foster a feeling of togetherness and shared responsibility within families? Can everyone contribute their part?

• Does Picnic Family facilitate the creation of a festive family ritual? Is it flexible and adaptive enough to fit hectic family lives?

• Does Picnic Family celebrate the involvement of kids? Do parents feel in control?

Procedure

A series of tests were planned on Friday, February 7th in Delft and Wednesday, February 12th in Amsterdam. Tests are scheduled every hour and each test takes around 45 minutes, giving the researcher 15-minute. These breaks can be used to write down key-insights and prepare the test setup again for the following participant. A detailed overview of the test procedure can be found in figure 71.

Welcome
Walk-in and having some coffee or tea
5 minutes

Introduction
Introduce myself and the test-setup.
Sign of consent form.
5 minutes

Benchmark
Benchmark their current Picnic experience on the Likert-scale questionnaire.
2 minutes

Simulation 1
Simulate the use of Picnic Family by using the experiential prototype
10 minutes

Simulation 2
Simulate the use of Picnic Family by using the iPad app screens
5 minutes

Questionnaire
Benchmark their envisioned Picnic Family experience on the Likert-scale questionnaire.
2 minutes

Interview
Interview about their experience of simulation 1 and 2 and their answers to the questionnaire.
15 minutes

Closing
Simulate the use of Picnic Family by using the iPad app screens
5 minutes

Figure 71
Test procedure

9.2 Validation test

A video of the validation test has been made,
containing people's reactions on the prototype
for smartphone and iPad. The following chapters
present the test results and conclusions.
Eventually, opportunities for further research
and recommendations are presented.

Scan the QR code to
watch the video

Breakout 13:
Validation test video

9.3 Validation test results

The validation test of the Picnic Family concept provided insights on two different levels, these insights will be provided in this chapter. Firstly, the insights on concept-level will we be presented. This includes how users perceive the Picnic Family concept and how they envision themselves using it in their daily lives. Secondly, the insights design-level will be given. This involves the way people experience the actual design of the user interface elements. This part also entails the understandability of the design and states various usability issues.

Results on concept-level
This part provides insight into the general experience of the Picnic Family concept. Most of these insights were found by analyzing the questionnaire answers and by interviewing the test participants.

- **Cheerfulness, playfulness and innovativeness**
    In all cases, the questionnaire showed an improvement in the perceived cheerfulness, playfulness and innovativeness of the Picnic app. During various stages of the Picnic Family flow, participants notice and value the small pieces of copy and the cheerfull style those are written in. "I always find your texts so funny, this is a really nice one again!" Parents do not only value the humour in the small pieces of texts for themselves, but also the positive approach Picnic Family takes towards children. "It is good that you especially emphasize on the successful involvement of the children, that

always works best in order to keep them motivated."
Also, the app is experienced to be playful in its visual design and by the features that it offers. Especially the collaborative features and the memory game on the iPad are valued. "This is something my kids would love it and memory is even educational. This is so cool!"
Because Picnic Family provides users with new functionality, the app is considered to be even more innovative than before.

- **Ease and efficiency**
    During the benchmark, all participants evaluate the current Picnic to be very easy, fast and efficient. The new Picnic Family concept does not affect these scores, meaning that Picnic Family is not considered to lose the easy and efficient characteristics of the current Picnic app. Moreover, the addition of collaborative accounts is considered to support the efficiency of the grocery shopping process. "Now they don't have to ask me anymore to buy some peanut butter, they can simply add it themselves!"

- **Increase of collaborative shopping and involvement of kids**
    All test results indicate that the Picnic Family concept improves on the aspect of collaborative shopping and of the involvement of kids in the app. All participants rated these characteristics higher with the Picnic Family concept, in comparison with before. "With this, I can

involve my kids so everyone in the family has an equal share in grocery shopping." "This enables me to really do grocery shopping together with my kids. This way, I can make my autistic son more independent."

Results on usability-level
This part provides insight into the usability findings on the design of Picnic Family. Most of these insights were found by analyzing the footage of the participants using and by asking them about their actions during the interview.

• **Recognizable interface and Picnic style**
First of all, the Picnic Family app appears to be very recognizable for users who used the current Picnic app before. The appearance of the screens of the app is considered to match the current design. This ensures that participants can easily familiarize themselves with the app to find their way through it. Like mentioned before, the communicative style of the app is also recognizable as "being Picnic".

• **Mainly effortless onboarding**
The onboarding process of Picnic family is observed to be successful in guiding participants effortlessly through the registration process. Also, participants understand why Picnic asks for new family-specific information such as names and birthdates. "I get that you need to have this information in order to provide us with a personalized app. Also, you definitely

"This enables me to really do grocery shopping **together with my kids**. This way, I can make my autistic son **more independent**."

"With this, I can involve my kids so everyone in the family has an **equal share in grocery shopping**."

Breakout 14:
Participants during user test

already know a lot about me and our groceries, so this is not a big extra step." The only step during the onboarding process where multiple users were observed to experience a usability issue, was at the stage of choosing their own personal goals. At this screen, it was not directly apparent that the goals could actually be selected.

- **Child-lock and control of parents**
  While looking at the profile settings of their family accounts, participants successfully noticed the child-lock functionality. In most cases, participants were triggered and actively went to the specific child-lock page. On this page, participants expressed that is indeed useful for them to restrict their children access to the payment area. However, they also stated not to be interested in the second function of disabling the ability for their kids to add products to the basket. "Because the basket is so well-arranged, I can easily see who has added which products. So I don't understand why I should turn this restriction on."

- **Only previously ordered in memory game**
  While participants greatly value the memory game on the iPad, multiple people also express that they would prefer it if the game was limited to only include previously ordered products. The inclusion of other product makes some participants feel that the memory game is meant to be a

marketing thing. "When my child sees a different type of toothpaste, he would suddenly want that particular toothpaste. I find that to be distracting, it feels like marketing."

Based on these insights, recommendations are given in chapter 10.5. These recommendations are based on findings from both a concept-level and usability-level.

9.4 Validation conclusions

The goal of the validation test was to find out if the Picnic Family concept enables collaborative shopping within families. This chapter will answer that question by first answering the sub-research questions, based on the design statement and interaction qualities from chapter 5.3.

Does Picnic Family foster a feeling of togetherness and shared responsibility within families?

Yes, both on family collaboration and the involvement of kids the Picnic Family concept is rated higher than the current Picnic app. Also, users expressed to be eager to use the features for family collaboration and envisioned their kids as active participants in the online grocery shopping process.

Can everyone contribute their part?

Yes, Picnic Family enables everyone in the family to be involved and contribute to the grocery shopping process in their own way. Parents are willing to invite their kids to use Picnic and would set a child-lock for their younger kids. Children without their own phone, are able to actively join the shopping process via the iPad app.

Does Picnic Family facilitate the creation of a festive family ritual?

Seems like it. Participants actively express to use the functionalities of Picnic Family to organize their families' groceries together. During the interviews, users envision ways Picnic Family could be used in their family and how it can be used to create a new family ritual that fits their life. However, due to the set-up of the validation

test, it is difficult to estimate the true long-term effects on family life.

Is it flexible and adaptive enough to fit hectic family lives?

Seems like it. None of the participants expressed reasons why the Picnic Family concept would not fit their lifestyle. On the contrary, users expressed interest in the concept because they envision it saving time and making grocery shopping more efficient. Again, this is just based on their first impression, due to the set-up of the test. The long-term effects should be evaluated.

Does Picnic Family celebrate the involvement of kids?

Yes, it does. Parents and children showed interest in the Picnic Family concept and praised it for its positive approach to the involvement of kids. Additionally, the iPad app and its memory game are seen as opportunities to turn grocery shopping in a joyful family activity.

Do parents feel in control?

Yes, they do. Parents notice the presence of the child-lock feature and value the ability to disable their kids to order themselves. Parents would not mind their kids adding products themselves, because the shared shopping basket provides a well-organised overview of all groceries.

Conclusion

In conclusion, the Picnic Family concept shows to accommodate all elements of the design statement and its interaction qualities. Thereby it contains all ingredients to enable collaborative online grocery shopping within families. Still, the long-term effects and impact on family behaviour are to be evaluated.

9.6 Further research

The execution of this validation test carries multiple limitations that will be addressed in this section. These limitations also provides opportunities for further research.

Long-term impact
First and foremost, the setup of the user test particularly reveals people's initial reaction to the concept. While participants can envision themselves using Picnic Family in their households for a longer amount of time, it has to be investigated what actual the long-term impact will be. No matter how optimistic people's first reaction to the concept is, people cannot always be trusted by their words, no matter how good their intentions are. However, the importance of the first impression should also not be underestimated. As long as the participants indicate being interested in using Picnic Family and express that the purpose matches their family's lifestyle and personal values, it is likely for them to convert into a Picnic Family user. Once being fully onboarded, based on the habit-loop theory, the incentive and internal trigger to keep using Picnic Family should only increase. However, to create a better understanding of the long-term effects of Picnic Family a longer ongoing study is advised.

iPad app
While the smartphone version of the Picnic Family concept was fully interactive, the iPad app consisted of a limited amount of screens. While these screens were able to simulate the purpose and function of the tablet app to a great extent, an interactive prototype would have

gained a deeper understanding and revealed possible usability issues. The purpose of these iPad screens was to solely demonstrate the tablet-specific values and features, such as a larger screen real-estate while browsing and memory game for playful ordering. While the general concept of an iPad app was received enthusiastically by all participants, also during prior user tests, a separate study is encouraged to discover more extensive knowledge of tablet-specific challenges and behaviour, such as the "lean back theory", see figure 72. However, it is beyond dispute that the addition of an iPad app would be of great value for Picnic customers, especially for families with children.
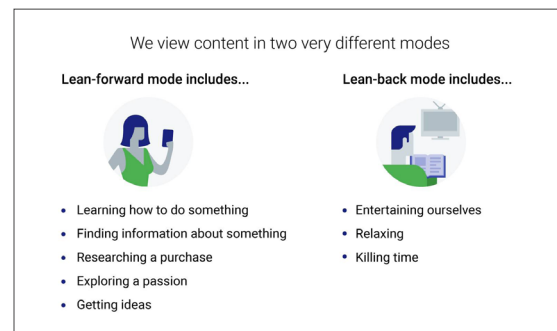
Figure 72
Lean back theory
Source: Mediavillage, 2017

Selection bias
While all participants were selected randomly, as long as they fell within the target group, there may be a chance of some selection biases. These biases are possibly distorting the representativeness of the test results. Firstly, most user tests took place during office hours. This can exclude families of two parents with

both full-time jobs. This could have an influence on how they manage their family's groceries and on how they prefer to spend their time together. It is not immediately clear how this influences the impact of Picnic Family on their specific habits. An additional study could further investigate the effect of Picnic Family on a household with full-time working parents. Secondly, during the recruitment process, participants are enticed to participate by offering them a voucher worth €25 of free groceries at Picnic. While this external motivation makes sure people with less internal motivation are also attracted, the incentive of free groceries could possibly skew the composition on the test group. The grocery voucher could encourage low-income households more than wealthier families. It is not directly apparent if this is actually the case and what the possible effect is on the test results. In later studies it could be valuable to inquire about the income of participating families however, this is often perceived as very personal information.

Testing with children
Although participants were always encouraged to bring their children to the user test, only a handful of kids were actually able to attend the user test. And although the response of children was consistently positive, often understanding the concept earlier and even exceeding the enthusiasm of their parents, further investigation is required to get a full picture of how kids experience the app on a usability level. At the same time, parents repeatedly mention that their kids are very familiar with using digital

products and services, often even more so than the parents themselves. Therefore, it is to be assumed that children face fewer usability issues than their parents.

Accuracy and richness in translation
Considering the tests were carried out in Dutch, it may be that some accuracy or richness is lost in the translation process. Particularly in the Likert-scales, where the exact choice of words is of imprtance, some words may not entail the exact meaning as in Dutch. However, during this design project, it is considered of higher importance that non-Dutch speaking stakeholders are able to understand the process and results.

Figure 72
Implementation session at Picnic

SECTION IV | Evaluate

Chapter

10

Implement

After validating the concept, both with customers and with internal stakeholders from within the company, it is time to define its implementation. The following chapter presents an implementation roadmap, as developed in collaboration with Picnic and describes the expected effects.

10.1 Implementation approach

During the creation of the implementation roadmap, multiple stakeholders from within Picnic have been consulted. In particular, the Product Owner and Tech Lead of the store team were able to provide deep insights into the required amount of work, technological change and the right people needed to carry out the work. Firstly, the key insights of these interviews are provided. Secondly, the constructed implementation roadmap will be presented, including the short- and long term effect for Picnic. Finally, a set of recommendations will be given. These recommendations include modifications to the final concept and further interesting opportunities for Picnic.

Key implementation insights

1. Slicing the fundamentals and features into bite-sized chunks
When preparing the implementation of Picnic Family, the concept should be divided into smaller pieces. This way, the Picnic Family project can be executed in parallel to other upcoming projects more easily, without occupying Picnic's entire technological workforce for a long time. Also, this ensures that smaller minimum viable products (MVP's) can be released in new versions of the app earlier (SrumOrg, 2019). These MVP's can already provide value to customers, and provide Picnic with early feedback for future product development. The first two chunks of work will consist of the fundamentals for the family collaboration to work and the iPad app. The following smaller chunks of work consist of more specific features such as personal statistics and personal inspiration. More detailed descriptions of these slices of work can be found in the final implementation roadmap in chapter 10.2.

2. Technological infrastructure and ongoing operation
Luckily, most of the technological infrastructure is already in place. There are no elements of the Picnic Family that require deeply rooted changes in the infrastructure itself, meaning that the same code-base and foundation of software and network foundations can be used. While the development of most features will not require major adjustments from a technology perspective, the eventual operation of the features will continue to demand time. For example, the constant maintenance of the iPad app and the ongoing creation of inspirational content causes Picnic to hire new people.

3. A higher level of abstraction of the digital representations of users
In order to make the Picnic Family concept work the system should be able to distinguish the actions from different users in one shared account. Currently, this distinction can not be made, therefore a higher level of abstraction should be applied to Picnic's system flow. The addition of system elements changes the internal working principle of Picnic, which can enable new features for users. An example of this is the add-to-order feature, released in 2019. A similar change could enable the features belonging to the Picnic Family concept. This principle is explained through figure 73.

Original flow
Users and deliveries

User → **Delivery**

Creating a higher level of abstraction
Adding the order element

+ **Order**

Current flow
Users, orders and deliveries

User → **Order** → **Delivery**
Order

Creating a higher level of abstraction
Splitting users into accounts and identities

User

Account   **Identity**

Splitting variables

Account
• Order history
• Delivery address
• Family name
• Household composition

Identity
• Name and photo
• Privacy settings
• Phone number and email address

Envisioned flow
Accounts, identities, order and deliveries

Account → **Identity** → **Order** → **Delivery**
Identity → **Order**
Order

Figure 73
Adding a higher level of abstraction to the digital representations of users

The original, simplified, system of Picnic mainly consisted of users and deliveries. Wherein the element of "user" gives information on the person, including home address and orders history, and wherein the element of "delivery" gives information on the ordered groceries, delivery time and date. In this system, it would be impossible to have multiple orders connected to one delivery, as ordering new groceries would always create a new "delivery" element. To overcome this the new "order" element is placed in between "user" and "deliveries". This way, users can place multiple orders, all connecting to a single delivery. Similarly, the Picnic Family concept demands the addition of an extra system element. This element should enable

the possibility of multiple users operating in one account, while still using their own identity. To achieve this, the "user" element has to be split in "account" and "identity". By means of this distinction, multiple people can operate under a single shared account the app, while their actions can still be traced back to their identity. For users, this means that they can collaborate with their family members in the Picnic app, while at the same time having an overview of who added what and having the ability to change their individual preferences. Figure 73 provides an overview of exactly how the variables of the "user" element are split between "account" and "identity".

10.2 Implementation roadmap

Based on the key implementation insights and interviews with internal stakeholders, the implementation roadmap has been created. In this plan, the main concept is divided into six building blocks, two larger fundamental blocks and four modular feature-specific building blocks, see figure 74. This chapter provides a description of the content of all blocks and how these can be implemented.

The fundamentals
Amount of work: 200 days
The first building block contains all the fundamentals needed for the core of the Picnic Family concept to work. Firstly, this includes adding the extra layer of abstraction, explained in chapter 10.1. This allows the support for shared accounts, letting families collaborate, all under their own identities. Since this requires changes in the backend systems, this work will be done by the backend developers. Secondly, the onboarding flow should be developed for both iOS and Android, requiring work to be done by Picnic's frontend developers. This onboarding flow includes the ability for families to create their shared account, set their personal values and invite each other using the access keys. Lastly, the addition of extra safety measures should be implemented. This should enable parents to restrict their children access to the payment environment and limit their ability to delete products from the shared basket. Overall, the complexity of the implementations is not too high. The tech lead of Picnic's store team has indicated that all adjustments are feasible. After the development of these fundamentals,

the first MVP of Picnic Family could be launched. This MVP assumingly carries just enough features to satisfy customers, accelerate Picnic's learning and provide feedback for further product development.

iPad app
Amount of work: 200 days
The second implementation block is the design and development of the iPad app. The design of the current user interface of the iOS app has to be adapted, to fit the larger screen size and to make use of the capabilities of the iPad. When the design is ready for development, iOS frontend developers have to translate the app into an app for iPadOS. While it is indicated that this process will not be of too high a complexity in itself, it will also add complexity to all new features ever to be released by Picnic. After releasing the iPad app, every new functionality should separately be developed for the iPad, requiring the need for an extra iOS frontend developer. When completing this building block, the fundamental parts of the Picnic Family concept will work on both smartphones and tablets.

After implementing the fundamentals of Picnic Family and developing the iPad app, the more specific features can be built on top. These features are separated in two, namely statistics and inspiration. These features can be implemented in parallel to each other or in series.

Personal values

20 days

Friendly messages to highlight acheivements on personal values

+1 fte for iPad

Family specific

20 days

Friendly messages to highlight family collaboration

+1 fte for iPad

In-app statistics

20 days

Displaying basic statistics on a centralised place in the app

+1 fte for iPad

Inspiration

20 days

Most technology is already in place, most work in operation

+1 fte for iPad

iPad app

200 days

Translate current iOS app into an iPadOS app
Extra complexity for all new features
Need for an **extra iOS frontend developer**

The fundamentals

200 days

Support for shared accounts
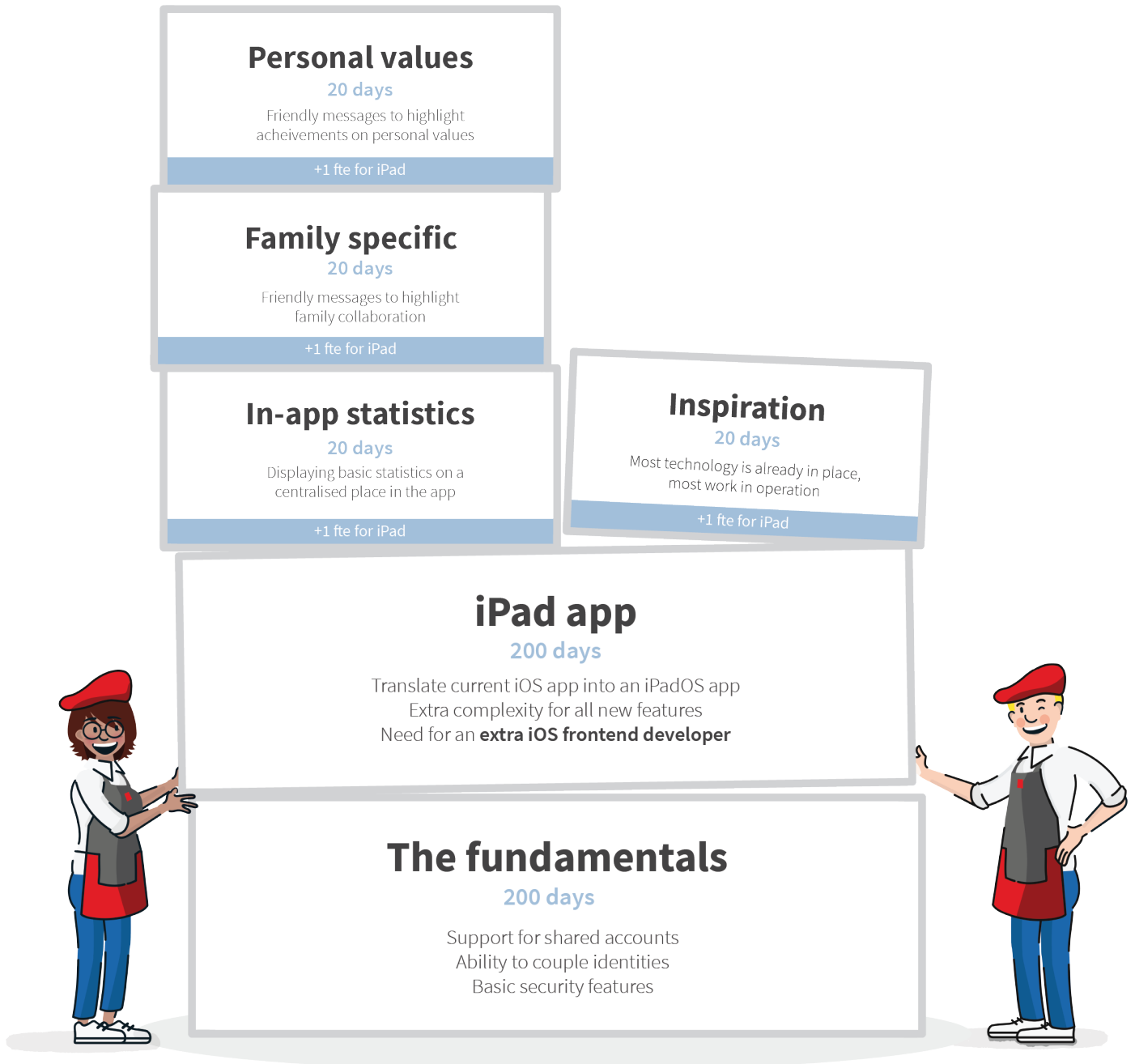Ability to couple identities
Basic security features

Figure 74
Implementation roadmap

Statistics

Amount of work: 3 x 20 days

The statistics feature of Picnic family is divided into three blocks. The first block acts as a starting point, providing the ability to display the basic statistics, which Picnic already tracks, on a centralised place in the app. These statistics only include the ones customers already receive in some newsletters or separate in-app messages. For example, the amount of time saved or the amount of rain avoided by using Picnic. The second block adds the ability to show family-specific messages corresponding to all individual identities within one shared account. In order to make this ready for development, it should be determined how many and which variables are required to be tracked. By using this selection of variables, the app should be able to always have a positive statistic ready for each identity. The third and last building block consists of the ability to provide statistics based on personal goals and values. These statistics should correspond to the values users have chosen while going through the onboarding process of the app. For every personal goal, trackable variables should be determined and an appropriate call-to-action (CTA) should be enabled. For example, when families want to adopt a vegan lifestyle, the app can keep track of the amount of animal-based products bought and guide users to more plant-based alternatives. All individual blocks contain 20 days of work, involving both frontend and backend developers.

Inspiration

Amount of work: 20 days

The inspiration feature consists of one implementation block, requiring 20 days of work. Since a recipe feature has been tested before, all technology is already in place. It should simply be adjusted to fit the Picnic Family concept, giving family members the ability to save recipes provided by Picnic and to make their one ones. Again, this building block demands work from both frontend and backend developers, from all platforms. However, the main workload of this feature will not be on development but on the ongoing content creation. In order to provide users with weekly inspiration, Picnic should hire a permanent content-creator, specifically dedicated to this feature.

After implementing all building blocks of Picnic Family, the concept is able to function completely and to bring its full value to users.

10.3 Effects

While the implementation plan of Picnic Family is mainly focused on the work that has to be done by the designers and developers in the store team, the launch will cause effects for the entire business and its customers. Multiple teams will need to adapt, internal processes will change and the users will use the Picnic app in new ways. This chapter will provide an estimation of the expected short-term effects, as well as of the long-term effects.

Short-term effects
Validation showed that both Picnic and customers value the Picnic Family concept because it facilitates family collaboration, including the involvement of kids. Because of this, the following effects are expected.

Short-term effects users
- Families currently using the Picnic app are presumed to **convert to Picnic Family users**, by presenting them with external triggers in the app. That means many users will start to make use of shared accounts and invite their family members, resulting in a **surge in the number of people downloading the app**. Eventually, this causes the app to rank higher in the app stores, making it easier to discover by even more people.

- The launch of Picnic Family is expected to cause children to use the app more. This will result in **children having a bigger influence** on the family's decision-making process. This interaction is expected to resemble the traditional grocery shopping experience more than the current Picnic app. This includes **educational opportunities** for kids, such as learning about healthy eating habits and negotiation strategies. Ultimately, expected to result in a true family experience.

Short-term effects Picnic
- With the release of the first building blocks of Picnic Family, Picnic will be able to **collect rich data on family collaboration and usage of the iPad app**. This acceleration of knowledge results in a better understanding of their customers. Having a more precise view on the behaviour of users is expected to decrease the chance of product development failures due to incorrect assumptions.

- In order to make Picnic Family work, Picnic has to **grow its workforce** by acquiring extra frontend developers and content-creators on the short term. These people are both required to launch the concept, as to maintain it afterwards.

Long-term effects
In the longer term, also broader effects can be expected. While these effects are dependent on many different factors, it is difficult to provide direct and concrete outcomes. Nevertheless, a broad view of the expected long-term effects will be described as specific as possible.

Long-term effects users
- In the long run, families using Picnic Family are expected to implement it into their daily routines. The involvement of more family members in the online grocery shopping process results in more people becoming internally triggered to stay in the habit loop. Eventually increasing the likelihood of **more families using Picnic as their primary grocery store**.

- Over time, people are expected to **experience the online grocery shopping process in a more positive way**. When using Picnic Family families are encouraged to actively work together, spreading a feeling of shared responsibility across family members. Additionally, users are expected to use personalized statistics and inspiration to improve their eating habits.

Long-term effects Picnic
- Over time, Picnic is able to collect **significantly more data** about its customers than it is able to do right now. The collection of this data is expected to lead to new user insights, which can be used as inspiration to create an even **better shopping experience** for everyone. Also, this data can be used for the development of new features or for collaborations with other brands.

- In the course of time, Picnic Family is expected to grow the user base of Picnic even faster than it is growing right now. The addition of shared accounts is expected to carry a **viral aspect by involving more people** in families of current customers, as well as attracting more people in general. Eventually resulting in an increase of revenue. Also, the involvement of extra family members of existing customers does not jeopardize the quality of the service, as since it does not cause deliveries to more households.

- Eventually, **Picnic could act as an example** of how to enable collaboration during online shopping for other e-commerce businesses.

10.5 Recommendations

This chapter provides some final recommendations. These recommendations are provided on two levels. The first part consists of recommendations on the current Picnic Family concept and design. These can be used in short-term for development of the design and eventual the launch of the concept. The second part consists of more long-term recommendations and future possibilities. These can be used as next steps after the launch of Picnic Family.

Short-term recommendations

- **Implement personalisation-specific features on-time**
  Since the Picnic Family concept demands users to provide Picnic with more personal information and preferences, Picnic should not wait long in developing personalised features into the app. The implementation roadmap firstly focuses on the fundamentals of the Picnic Family concept, before directing to more personalisation-specific features. This could affect users to not understand why they have to personal information to the service. Besides that, the element of personalization is of benefit to Picnic and its users in general. Therefore, the building of the fundamentals should quickly be followed up with the building of the personalisation elements.

- **Design for usability**
  While users have expressed and shown to understand the Picnic Family concept, extensive usability testing should be used to

further refine the visual design of the app. Important UI details such as the way buttons are placed in the onboarding process and how feedback is given to kids should be further investigated before releasing the concept to the entire customer base.

- **Limit family goals**
  In order to personalize the Picnic store, the Picnic Family concept asks families to choose certain topics that are important to them. These include subjects like eating less meat or producing less waste. In the current design, users can choose as many subjects as possible. However, it could be investigated if a maximum amount of "family goals" have a positive impact on the experience. Requiring families to think critically about their personal goals could potentially result in families being more committed to them.

Long-term recommendations

- **Focus on health and Nutriscore**
  During this research, families often expressed to be interested in health-related topics. It seems families try to have healthy eating habits on the top of their minds. However, this can be difficult and users express to be interested in services that help them eat more healthy. At the same time, the government of The Netherlands announced to obligate companies to use the Nutriscire label, see figure 75, on their food

products starting 2021 (Rijksoverheid, 2019). This provides Picnic with an opportunity to lead by example and to use the Nutriscore to inform families about their (un)healthy eating habits.

Figure 75
Nutriscore label

- **Community and sharing**
  The Picnic Family concept enables families to build their own shopping lists and in-app recipes. This feature carries a possible network effect if Picnic would enable users to share these recipes and lists across platforms. For example, parents could share their shopping lists for kids birthday parties or Instagram influencers could share their own healthy recipes as inspiration for others. This could act as a viral element of the Picnic Family service. At the same time, it decreases the need for Picnic to create all the content themselves. Resulting in a possible win-win situation.

- **More playful ways of ordering**
  Due to its playfulness, the memory game for iPad is one of the most valued elements of the Picnic Family concept. In order to keep families excited, it could be of value to start looking for other playful ways of ordering. These can include adaptions of well-known games that already exists, just like memory. This way, they are more easy to develop for Picnic and more easy for users to understand (Zichermann & Cunningham, 2011).

- **iPad to Mac**
  Via a recent software update, Apple enabled iPad apps to be easily be converted into Mac apps, see figure 76. This could enable Picnic to start building a native Mac app from their iPad app, possibly engaging with even more users.
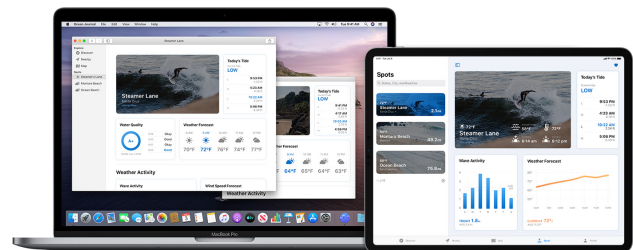

Figure 76
iPad app on Mac

Key takeaways
Section IV - Evaluate

The evaluation section of this report starts off by presenting the final design of Picnic Family, including a concept movie. With this, it answers the last main research question of this project: What should Picnic offer as solutions to families in order to enable collective organizing of family groceries.

With Picnic Family, all family members can be involved in the grocery shopping process from start to finish. One shared Picnic account can be used by everyone, including children. Family members can contribute and ideas of children are being celebrated. Additionally, kids can learn about grocery shopping and healthy eating habits via in-app parent-child communication. Finally, the dedicated iPad app offers families a more shared shopping experience than ever before. Facilitating playful in-person collaboration and shared family moments.

The granular approach of Picnic Family empowers families with a series of touchpoints throughout the entire online grocery shopping experience. These touchpoints are mapped using the habit-loop framework (Eyal, 2014). This way, Picnic Family is envisioned to facilitate the development of new family rituals around collective grocery shopping and to establish long-lasting habits.

The use of Picnic Family has an impact on the family food decision-making process. By using Picnic Family, children are able to fulfil the role of influencers and idea-generators within the family. These roles are similar to the ones occurring during traditional grocery shopping in supermarkets.
The validation test mainly showed positive results on the concept-level of Picnic Family. Participants expressed excitement and were easily able to navigate through the prototypes. On the design-level of the app, small improvements can still be made. Also, further investigation should examine the long-term effects of Picnic Family.

The implementation roadmap of Picnic Family consists of two fundamental and four smaller building blocks. The fundamentals consist of adapting the backend infrastructure and developing the iPad app. The other building blocks contain specific feature sets, such as family statistics and in-app inspiration.

Finally, this section ends with last advice for Picnic. Including short-term recommendations for the development of Picnic Family and long-term suggestions for next steps.

Process reflection

During this design project, elements of the Design Thinking and Vision in Product Design approach have been combined. This chapter reflects on the design process by describing how the combination of methods worked out during the different stages of the project. It provides information that could be used by others trying to use both ViP and Design Thinking in their projects.

Analysis

During the analysis phase of the project, the combination of ViP and Design Thinking mainly resulted in the gathering of insights on two different levels. Firstly, the user-centred mindset of the Design Thinking methodology ensured that lots of users were observed and interviewed about their experiences. Secondly, as a result of applying ViP, universal principles on the broader scope of the project's context were researched. This combination made it possible to gain an extensive picture of the entire context. In this phase, perceived the combination of methodologies to be work together smoothly. Still, I believe there are a couple of pitfalls that designers should be careful of. When interviewing it is crucial to ask the right questions, in order to reach underlying latent needs. For example, think of the famous anecdote about cars and faster horses. Here, the discoverable latent need could have have been more efficient transportation, instead of faster horses. Next to asking the right questions, it is important to listen critically. An interviewee may not always tell the complete truth, consciously or unconsciously. I would advise you to always keep listening to your inner designer and to sometimes take statements from users with a pinch of salt.

ViP lens

The formulation of the design statement proved to be an effective way of synthesizing the research finding into something that could be referred to later on in the process. Personally, I felt that the design statement, interaction metaphor and product qualities guided me in the process of divergence to a final design.

Synthesis

The synthesis phase of the project is where the two different design approached differed most. Whereas the Design Thinking approach would encourage rapid failure through rapid prototyping, the ViP approach would encourage the designer to use the design statement to come up with a precise design already. Eventually, two prototyping rounds have been carried out during this project. The first one being of a more exploratory character and the second working being of a more converging character. The first round prototypes resulted in a lot of insights but did not directly lead to a design that could accommodate all factors of the design statement. Eventually the second, more concentrated, prototyping round did lead a design that could match the design statement. Obviously, it is hard to discover what would have happened if the first round would be skipped. Potentially, the final design could have been found earlier. Still, I personally valued the addition of the exploratory prototypes since they embrace a sense of uncertainty and can lead to interesting findings. Overall, it was interesting to see these two methodologies work together and lead to the final design of the project.
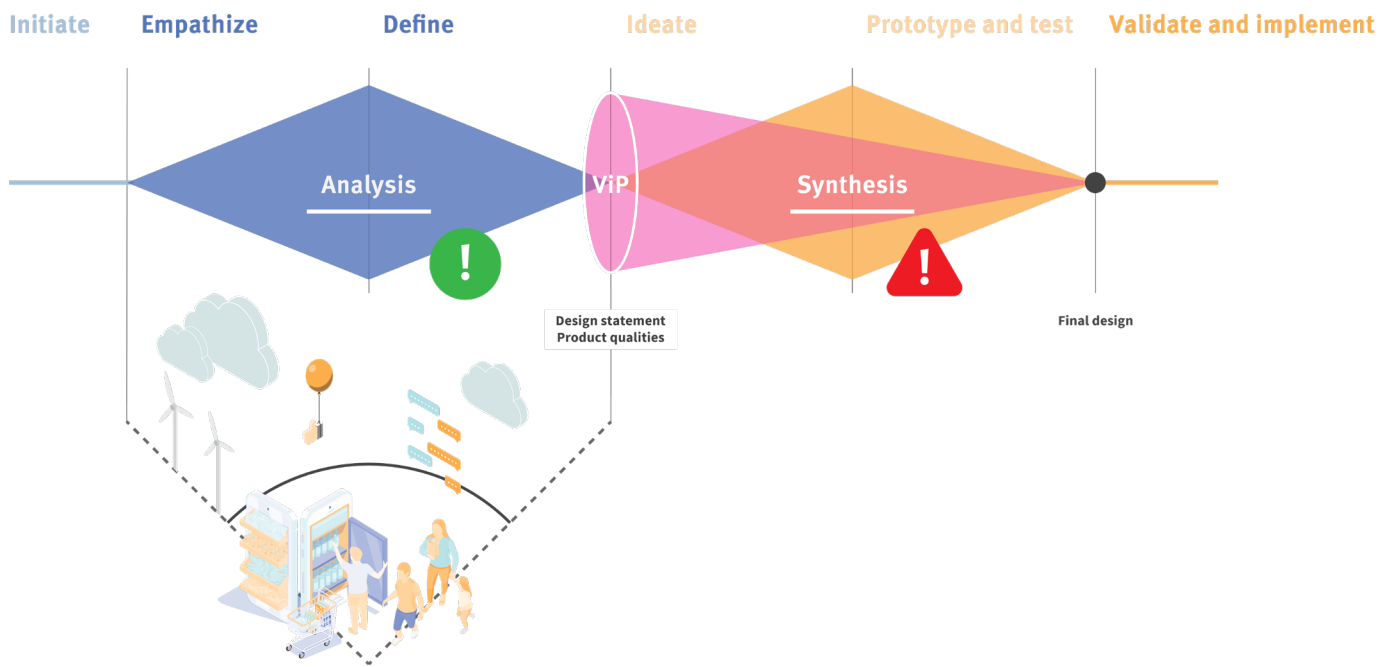
Initiate   **Empathize**   **Define**   Ideate   Prototype and test   **Validate and implement**

Analysis

ViP   Synthesis

Design statement
Product qualities

Final design

Figure 77
Design process

Personal reflection

This project was one of my favourite and most valuable experiences of my studies. I have greatly enjoyed the process, at the same time, I am very happy it is almost done. It was great to work on a design case that was more realistic, than any other design project I worked on before. The entire process provided lots of learning opportunities, where I discovered both more about design, as about myself as a designer.

Picnic environment
The environment of Picnic was a great place to do my graduation project for multiple reasons. Firstly the atmosphere was very welcoming. Starting the first week, I could already meet a lot of nice people and experience the order-picking and working as a runner myself. Secondly, I could really feel the energy from multiple people within the company to pursue this project. It was nice to keep noticing this internal drive, knowing that this project has the chance to not simply end up in a drawer. Also, many practicalities empowered me to run this project efficiently. It was relatively easy to recruit participants for user tests and I could freely contact anyone in the company for input. The amount of freedom and trust I received during this project was just great.

Team player
In advance I already expected the graduation to be way more individual than I was used to before. And surprise, surprise.., that was indeed the case. Although I enjoyed the creative freedom during the process, I always cherish collaborating with other designers and having the ability to have a quick chat with teammates.

Luckily, I was surrounded by nice colleagues with amazing design skills. Also, my friends were always ready to help. Still, I think I'm definitely more of a team player. In future projects, I will definitely keep trying to involve other designers from time to time. Also, I would like to find a UX design buddy, working at another company, with who I can casually discuss design approaches and processes.

Sandbox of techniques
During this project, I used many different design methods and created a lot of content, like posters, movies and prototypes. While not all methods or creations proved to be of equal value to the project, I still value the educational value of them. I am glad that I could use my graduation as a sandbox for using and combining different (new) techniques. I hope that I keep being able to do so in the future. However, over time I should learn from previous experiences, in order to make a better balance between efforts and gains.

Energy from customers
One of the aspects I valued most during the entire process, where the moments spent together with actual users of the app. It was always very energizing to interview families, to test new designs and to see in-person reactions. I'm very happy to keep being involved with end-users, by joining Picnic as UX Specialist.

Figure 78
Picnic vibe

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Figure 79
Aloysius O'Kelly, The Market, 1853-1936

Figure 80
Picnic Family, 2020

Design for **collective family experiences** during
online grocery shopping.

by **Mark Janssen**