



## Assignment of master's thesis

<b>Title:</b>	Design of a mobile application to support the Zero Waste lifestyle
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### Instructions

The aim of the thesis is to analyse and design a Hi-fi prototype of an application to support Zero Waste behaviour. The application will offer various ways to approach life without waste – will therefore not require a complete transition to the Zero Waste lifestyle but will offer various ways to reduce the amount of waste produced in the user's everyday life.

1. Describe the problem to be solved and specify the basic requirements for the application.
2. Examine existing solutions, if available, and analyse their advantages and disadvantages.
3. Create a business model for the project.
4. Perform a source analysis and create a business case.
5. Prepare a time schedule and risk analysis.
6. Define personas. Realize and evaluate in-depth interviews according to the Design thinking methodology.
7. Create and describe use cases based on user requirements.
8. Based on previous analyses, design wireframes for part of the application.
9. Create a hi-fi prototype of selected functionalities.



Master's thesis

**DESIGN OF A MOBILE  
APPLICATION TO  
SUPPORT THE ZERO  
WASTE LIFESTYLE**

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May 5, 2022



*I would like to thank Ing. Petra Pavlíčková, Ph.D., for supervising the process of creating this thesis, for her professional advice, and moral support whenever needed. I would also like to thank my family and friends for their continuous support during the writing of this thesis and throughout my whole studies and life.*

Czech Technical University in Prague  
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In Prague on May 5, 2022

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## Abstrakt

Práce se zabývá tématem, jak mohou technologie pomoci lidem žít šetrněji k životnímu prostředí. Hlavním cílem je navrhnout mobilní aplikaci, která lidem pomůže žít více ve stylu Zero Waste. K dosažení tohoto cíle je vytvořena důkladná analýza existujících řešení. Pro návrh řešení je zároveň vytvořen obchodní model s využitím metody Lean Canvas.

Práce obsahuje také podrobný harmonogram a finanční plán projektu. Jsou zde spočítány veškeré náklady projektu a vytvořen podrobný model příjmů pro odhad výnosů. Kombinací je vytvořený pětiletý podrobný plán ve třech verzích. Ten lze v průběhu celého projektu využít k vyhodnocení skutečného stavu ve srovnání s navrženými variantami.

Nezbytnou součástí práce a podkladem pro sestavení požadavků jsou hloubkové rozhovory vedené podle metodiky Design Thinking a jejich vyhodnocení. Z něho vycházejí wireframey a hi-fi prototyp pro část funkcí systému.

Diplomová práce byla vytvořena tak, aby bylo možné všechny její části využít pro skutečný projekt. Proto pomocí dalších kroků navržených v poslední části práce lze aplikaci realizovat a využít ji k pomoci lidem naučit se žít šetrněji k přírodě.

**Klíčová slova** Zero Waste, životní prostředí, obchodní model, mobilní aplikace, hloubkové rozhovory

## Abstract

The thesis deals with the topic of how can technology help people to live more environmental-friendly. The main goal is to design a mobile application that would support people to live their lives more in the Zero Waste style. A thorough analysis of existing solutions was created to achieve this. A business model was created using the Lean Canvas to propose a solution.

The work also contains a detailed schedule and financial plan of the project. All project costs are counted, and a detailed revenue model for estimating incomes is created. Five-year detail plan in three versions is created by combining it. During the whole project, that can be used to evaluate the actual state compared to the proposed variants.

The in-depth interviews conducted according to the Design Thinking methodology and their evaluation are an essential part of the work and the basis for compiling requirements. The wireframes and hi-fi prototype for part of the system functionalities are based on them.

The thesis was created to use all its parts for an actual project. Therefore by following the next steps proposed in the last section, the application can be realised and used to help people live more nature-friendly lives than before.

**Keywords** Zero Waste, environment, business model, mobile application, in-depth interviews



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# Introduction

Environmental topics are becoming more and more popular nowadays. People are beginning to realise the importance of nature protection. They are starting to ask what they can do to help. However, as environmental protection is an extensive and complicated topic, it is often tough to orient in the amount of information. Most of the topics have pros and cons and for an average person without any deep knowledge is hard to say what is true and what is not.

It is said that there are several stages in the transition from sweet blindness to living in harmony with nature. Furthermore, some of them can become quite an obstacle to overcome.

As people start learning about environmental pollution, they decide that they want to change. However, many of them make specific radical changes, where almost no waste can enter or, more precisely, leave their home. However, then, during the time, it is too complicated to follow, and everything slowly comes back to normal. Everything except the knowledge man has gained – now waste is everywhere.

It is essential to undergo this environmental transformation gradually step by step or, more precisely, one habit by one habit. That way, it is slowly incorporated into man's current life instead man being completely ripped off from what man knows.

The author of this thesis has chosen this topic because it is very personal to her, and she can empathise with the users. She is currently in the middle of the transition process (and will be for at least a few more years) and is constantly struggling to find even a little time to find some information and then verify them. However, she is already in the phase where she sees garbage everywhere and is very unhappy to observe people around herself and see how people do not care – or do not care enough.

Therefore, the primary motivation behind the whole idea of this system is the belief that an application that will truly motivate people to know, talk, and do more about the environment is needed.

The thesis is divided into several chapters. The first one, Theoretical background, means briefly introducing the readers to the processes used while working on the thesis. In the Business model, the basic overview of the whole project is created. The problem and its solution are stated, the targeted potential customers and the overview of costs and revenue streams too.

In the chapter Business Case, the schedule of the whole project is prepared, and the financial plan is calculated. The risk analysis is also conducted here. That is followed by the Analysis chapter, where personas are designed and based on them, and then the in-depth interviews are conducted and evaluated. The user requirements arise from this process and are the basis for the use cases.

After the Analysis comes the Design chapter, where the prototypes for part of the functionalities are created and described as well as the system architecture. The whole thesis is finished by the proposed future steps to be made.







## Chapter 1

# Goals of the Thesis

The primary goal of this thesis is to design a mobile application to support the Zero Waste lifestyle. The main goal of the theoretical part is to familiarise readers with the procedures used in this work. The main goal of the practical part is to analyse the problem domain and propose and design a solution.

The analysis's goals are to examine the problem's current solutions, create a business model, a business case containing the time and financial plan and risk analysis, and conduct in-depth interviews based on designed personas. The design should consist of created Use Cases, wireframes and Hi-fi prototype for part of the application.



# Theoretical background

## 2.1 Business model

In order to make a profit, every company needs a strategy about how to do so. This high-level profit plan is how Kopp [1] defines a company's business model. According to her, it does not matter if the company is new or already steadily established. Regularly updated, it can help businesses in various areas.

Johnson, Christensen and Kagermann [2] state that four parts create a business model:

- *customer value proposition (CVP)* - identification of our customers, their problems and mainly precise solutions to these problems,
- *profit formula* - the company's plan how to profit from delivering identified customer values,
- *key resources* - essential elements that are necessary for delivering the value proposition to the customer,
- *key processes* - processes within the company that allow the company successfully and repetitively deliver the customers' values.

### 2.1.1 Business Model Canvas

Osterwalder [3] has brought a concept for describing a business model simple enough for understanding and complex enough to not leave out important information simultaneously - Business Model Canvas. Thanks to it, it is possible to see the whole model on a single page, described by nine blocks:

- *Customer Segments* - identification of customer segments to focus on and segments to ignore,
- *Value Propositions* - description of values that the company brings to identified Customer Segments and problems it solves,
- *Channels* - decision about how is the company going to communicate with Customer Segments and how it will deliver its Value Propositions,
- *Customer Relationships* - types of relations the company creates with each Customer Segment,
- *Revenue Streams* - identification of ways of profit for the company from each Customer Segments,

- *Key Resources* - necessary assets for delivering the Value Proposition to Customer Segments,
- *Key Activities* - description of activities essential for delivering the Value Proposition to Customer Segments,
- *Key Partnerships* - definition of partners and external suppliers important for the company to produce the Value Propositions,
- *Cost Structure* - identification of all costs occurring during the creation and delivery of the Value Propositions to Customer Segments.

### 2.1.2 Lean Canvas

According to Vecsenyi [4] suits Business Model Canvas to already existing businesses. However, while creating the Business Model Canvas, several questions arise that companies without experience can not answer. For that reason, Maurya [5] created an adaptation of Business Model Canvas - Lean Canvas. It is a tool focused more on entrepreneurs, and it aims to help them plan how to establish a successful startup from the very beginning of the process.

The difference is that, as shown in Figure 2.1, four elements (Key Partners, Key Activities, Key Metrics and Customer Relationships) were replaced by four others:

- *Problem* - clear statement of the problem that the company solves,
- *Solution* - definition of solutions to stated Problems,
- *Key Metrics* - identification of the most crucial key macro metrics to follow,
- *Unfair Advantage* - advantage on competition that can be empty at the beginning and added when found in time.

## 2.2 Business case

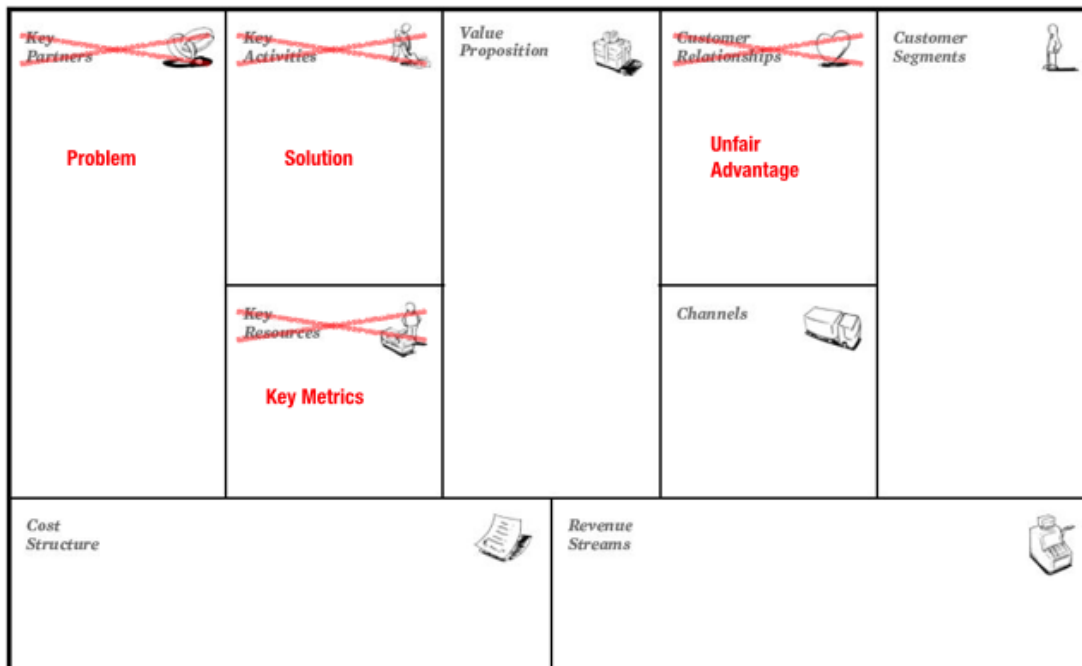
An essential part of the project is, as Juříček [6] states, a financial calculation. This calculation needs to indicate all resources needed for the project and all estimated revenues shown accurately over time. The best way to display all this information is through a financial plan. It is necessary to list all estimated costs and incomes per specific period to evaluate the financial side of the project. The difference between these two figures is the economic evaluation of the project—the higher profit (difference between incomes and costs), the better the business's economy. [7] Important parts of the financial plan creation process are described in the following subsections.

### 2.2.1 Time schedule

According to Kumar [8], project planning and scheduling are among the most common methodologies for project control. The difference between these two terms is that the project plan focuses on the time aspect as well as on the aspect of money [8], while the schedule focuses mainly on time. It shows all the project tasks with their start and end days, relations between these tasks and often also resources for the tasks needed [9].

Australian Institute of Project Management [9] states that there are three main questions to ask while scheduling the project:

1. What activities need to be done during the project?
2. When will which activity occur?



■ **Figure 2.1** The comparison of Business Model Canvas and Lean Canvas [5]

### 3. Who will perform the activity?

These questions can be gradually answered by completing six steps (described in more detail below) that lead to the final project schedule [9], [10]:

1. review project scope,
2. define activities,
3. sequence the activities and determine dependencies,
4. estimate resources,
5. determine durations,
6. develop the schedule.

### Review project scope

An essential tool for planning the scope is Work Breakdown Structure. As Frame [11] says, it shows the project decomposed into a top-down view and therefore visualises how different project parts relate.

### Define activities

Single activities are derived from Work Breakdown Structure packages. It is crucial to choose a proper depth while defining activities as either too few or too many can harm the project. During this phase, milestones and deadlines should also be identified. [10]

### Sequence activities and determine dependencies

Activities in the project rely on each other. They are connected by relations that define the restriction of starting or finishing the related tasks. According to Haugan [12], there are four types of these relations:

- *Finish-to-Start* – preceding activity needs to finish before the next activity can start.
- *Finish-to-Finish* – following activity can not finish until its predecessor finishes.
- *Start-to-Start* – succeeding activity can start only after the previous activity starts too.
- *Start-to-Finish* – the next activity’s finish is dependent on the start of the preceding activity.

### Estimate resources

There is only a limited amount of resources. Therefore, it is necessary to estimate their need for each activity to compare the resource demand and availability. [10]

### Determine durations

For finalising the schedule, it is necessary to estimate the time between the start and the end of each activity. This time is called duration. [10]

### Develop the schedule

The final schedule is created by combining all of the above and visualising it on a timeline – usually, Gantt Chart is used for this step. All the activities and dependencies are visible on a calendar-like view thanks to it. [10]

## 2.2.2 Costs

The project costs are the resources needed for completing all project activities. According to [13], these costs can be divided into direct and indirect costs. The direct costs are the ones that directly contribute to the project’s output – are part of so-called primary operations. The indirect costs do not directly participate in the primary operations but support them. As Lewis states in [14], it is crucial to not forget about this group of costs as its overlooking is often a reason for going over budget.

Another way to look at costs is by differentiating between fixed and variable expenses. Fixed expenses do not depend on project output volumes, such as office rent. On the other hand, variable costs change based on the current situation and production. An example can be hired external workers who do not have a fixed period salary but are paid based on the worked time. [13]

For a proper estimation of costs from human resources, it is necessary to correctly map the resources on activities defined during the scheduling of the project. A helpful tool to do so is the *RACI matrix*. As Miranda and Watts say, it is a table that lists all project participants and specifies their involvement in each activity by assigning one of the four letters:

- *R (responsible)* – is a person or a group of people directly working on the completion of a designated task – therefore, every task should have at least one responsible person assigned,
- *A (accountable)* – person who oversees the work of responsible people and supervises its execution – as it is a management role, every task should have exactly one accountable person,
- *C (consulted)* – person knowledgeable about the task able to provide input or feedback to the responsible person either by the position of an expert or because their work is affected by the task’s outcome,
- *I (informed)* – a person who needs to be informed about the work as it affects their work but does not provide any input.

## 2.2.3 Revenue model

Every business needs sources of revenue to cover its expenses and generate profits. These sources need to be adequately planned based on business specialisation and customer target group. For this purpose, revenue models exist.

As Genadinik [15] writes, revenue models differ from revenue streams mentioned in subsection 2.1.1. A *revenue stream* is an atomic source of income. Businesses can have more than one, but it is better to have a designated major with additional complementary sources. The strategy about what and how many revenue streams a business has is the *revenue model*. There are many different revenue models, and they differ in the area for which they are suitable. The subsections below describe the most common revenue models for startups and mobile applications, as these two areas are the main focus of this thesis.

### 2.2.3.1 Startup revenue models

Startups use various revenue models. Here are examples of some that [16] lists as the most common:

- *Advertising Revenue Model* – generating income by providing a space for others to advertise their products,
- *Affiliate Revenue Model* – promoting specific products of others and receiving commissions from their sales,
- *Transactional Revenue Model* – earning money by direct sales of services or goods,
- *Commission revenue model* – charging a commission for each successful connection of two entities that do business together thanks to this connection,
- *Subscription Revenue Model* – breaking down product costs into small amounts paid by customers regularly over a more extended period,
- *Pay per use revenue model* – charging the user per usage of the business product,
- *Freemium Model* – offering basic services for free but requiring money for additional premium services.

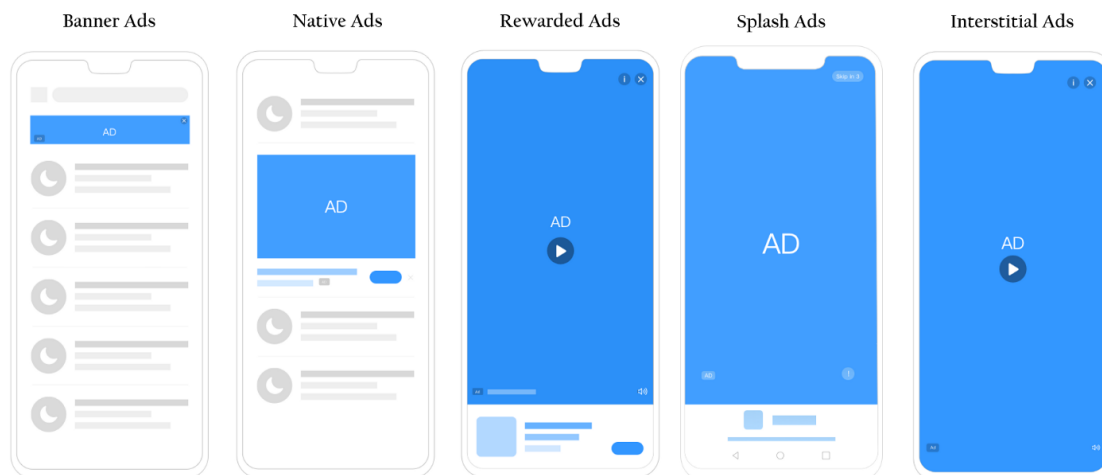
[17] also mentions *Donation Revenue Model*, where businesses receive money from donations.

### 2.2.3.2 Mobile application revenue models

Revenue models for mobile applications partially coincide with the ones for startups. Nevertheless, some differences exist as the mobile application is a more specific area than startups.

[18] lists, among other models, In-App Advertising, In-App Purchases, Data Monetization, Donations, Paid Apps and Sponsorships. As the In-App Advertising will be used in this thesis, Figure X shows its types.

Regarding the revenue model in mobile applications, Roma and Ragaglia [20] warn that not just the app category should play a role in choosing the perfect model. From their research, it is visible that the platform of distribution also plays a significant role. For example, they proved that iOS users are more willing to pay for their ad-free applications, and therefore the Freemium revenue model works there. On the contrary, Android users prefer free applications, and therefore the freemium model is not profitable as most users stay in the free version.



■ **Figure 2.2** Types of in-app advertising [19]

## 2.2.4 Net Present Value (NPV)

Net Present Value is a financial indicator that considers the cash flow of the project and the discount rate. That is a rate of how much is a money losing its value. Therefore NPV shows us the value of our investment with regard to the lost money value, and we can use it to assess the profitability of the project. [21]

## 2.2.5 Risk analysis

Chavas [22] defines risk as a situation where some aspects are not known with certainty. Doležal, Máchal and Lacko [23] specify this term more as an uncertain event with a negative impact on a project. They thus differentiate the terms risk and opportunity (uncertain event with a positive impact on a project).

It is necessary to think about those risks while planning a project. Therefore, it is essential to perform a risk analysis that results in a risk register - a tool helpful for managing risks during the whole project. As Doležal, Krátký and Cingl [24] say, it is a live document where all information about risks is recorded.

For an evaluation of the priority of managing the risks, Pavlíčková [25] offers three approaches:

- decisions trees,
- risks map,
- risks matrix.

Thanks to quantifying the risks, it is possible to decide on a defensive strategy for each risk. There are four options to choose from:

- *acceptation* – the possibility of occurrence of this risk is accepted, actions to prevent it are not planned, but correction actions can be prepared,
- *reduction* – the company is proactive in making efforts to reduce the probability of occurrence and impact of the risk,
- *elimination* – complete avoidance of the risk situation by alternating the project plans,
- *transfer* – transfer of the risk to a third party. [24]



## Problem description

This chapter aims to explain the core problem that is the main focus of the whole thesis. In section 3.1 the complex problem of environmental pollution is outlined. The following section 3.2 then presents a selection of already existing solutions at least partly focusing on this problem.

### 3.1 Problem explanation

Environmental topics are becoming more and more popular nowadays. People are starting to realise the importance of nature protection. They are starting to ask what they can do to help?

Environmental pollution is a complex problem. Nathanson, in encyclopedia Britannica [26], defines pollution as *"the addition of any substance (solid, liquid, or gas) or any form of energy (such as heat, sound, or radioactivity) to the environment at a rate faster than it can be dispersed, diluted, decomposed, recycled, or stored in some harmless form."* As can be seen, this term touches many areas. Some are more known among people than others. Betts [27] states that there are seven types of environmental pollution. Except for the three widely known (air, water and land), she also mentions radioactive, noise, light and thermal. The most discussed material causing pollution in last years – plastic – belongs to several of these types.

In 2016, the Ellen MacArthur Foundation published a report [28] that resonated worldwide. According to this report, there will be more plastic in the ocean than fish. That is just one example of scary scenarios that our future could hold. However, as says Ritchie [29], plastic has also many benefits - among economic ones, there is its help in improving food quality and preventing food waste. Furthermore, according to them, studies had proven that, for example, plastic bags could have a less negative impact on nature than other materials, even natural ones. The causes are, among others, lower consumption of water or energy and production gas emissions during their manufacture.

Just from this, it can be seen how complex topics the pollution and its reduction are. This complexity is often causing people not to engage more. Understandably not everyone has time to study all kinds of research and studies. Moreover, even when they have, the amount of different and contradicting information can be overwhelming. In these situations, people often get into a state called decision paralysis. Ludwig [30] defines this as a state when a man needs to decide between two on the first sight hardly comparable options. People tend to do something completely different or do nothing in this situation. And the more critical decision, the worse the state is.

Therefore, it is vital to give people reasonable but straightforward and trustworthy ways to help with environmental protection without putting them into decision paralysis. One possible way that has become popular in the past few years is the so-called Zero Waste lifestyle. As one

of the most famous promoters of this lifestyle, Bea Johnson [31], explains, Zero Waste is based on establishing practices to avoid as much waste as in our day-to-day life possible. It is not about strictly avoiding any waste production but about its reduction. The balance is essential for maintaining the practices in longtime period. According to Johnson, the lifestyle is based on five basic steps, which she calls 5Rs: refuse, reduce, reuse, recycle and rot.

And even though this already sounds pretty simple, there is a lot behind it. A lot of human activities produce waste without them even realising it. Moreover, sometimes even when people realise it, they do not know how to change it and do not have time to do extensive research.

This is precisely the problem this thesis aims to solve. Many people would like to do something more for the environment but do not know how and the time to obtain this knowledge on their own. By designing an app, that would give people the power of information and, thanks to charity cooperation, also the power of motivation, the author of this thesis hopes to help people painlessly learn how to live more nature-friendly.

## 3.2 Existing solution research

This chapter is meant to observe what already exists. Therefore both mobile and web applications are included. The general topic of environmental applications was researched. There were 109 apps directly tested and other 30 discovered, but mainly because of installation or compatibility problems not examined.

From the group of tested applications, some were designed and developed as environmentally focussed applications from the beginning, and some are not primarily targeting this area but still somehow matched one of the tested application groups. After conducting the research, the applications were divided into several groups described in the following subsections. From each group, a representative was chosen to be described, but not all tested applications will be listed.

### 3.2.1 Eco-habits tracker solutions

The first group of applications are those apps that have the same or similar primary goal. That is to educate their users and teach them environmental-friendly habits. They mainly work on the principle of challenges of various lengths and types. Some of them also allow users to create communities around them and fulfil the challenges as a team or compare their results against each other. Some of them are led as a game with different points per permanent habits, which user marks when they do it.

Some way of transmitting information also works in all. The bare minimum is a basic description of the challenge or habit. Still, some applications have even educative quizzes or very detailed described habits with their background solidly explained. Their main disadvantage is that they do not offer any additional motivation than the user's will and other users watching (in some cases).

As concrete examples can be:

- *JouleBug* [32] – One of the most popular environmental habit trackers, is based on gamification – users collect points for each habit they complete and compare their actions with others.
- *Ailuna* [33]– This application is based on one to two weeks long challenges that users choose to follow alone or with other users as a team.
- *For Good* [34]– This application is based on a different principle. Users do not need to mark their activities. They are evaluated by their mobile phones (travelling) or based on filling out a questionnaire at the beginning (utilities, food). Based on this information, users' ecological footprint is automatically calculated and compared to the number of planets Earth needed to cover if all people would live with the resulted footprint – scary motivation.

### 3.2.2 Reusing and reselling solutions

The second group consists of applications allowing users to sell and buy used goods. There are many different options, but a big part of them, even though popular abroad, are not suitable for the Czech Republic as there is no activity in our region. They work mostly on the same principle – users offer to sell items they do not need anymore, and other users buy them. Personal pick up can be an option (sometimes required or even the only payment – they are free, but the "buyer" needs to take care of the transfer). Some applications also allow users to purchase multiple items and pay just once and settle it among sellers. The risk in these applications is that they often get too crowded, and it is hard to find what the user really wants.

A particular group of applications is focused on lending instead of selling. There are already applications for these purposes in even Czech. It works similar to selling, but users instead offer just lending an item – for money or free.

Some examples are:

- *Vinted* [35] – This app is a trendy platform used for reselling clothes.
- *Facebook Marketplace* [36] – Part of the famous Facebook application allows users to showcase their items for sale. The huge benefit is that users do not need to leave an application they are already using. Another advantage is a big community of users.
- *Aukro* [37] – This is a reselling portal that is special by giving the seller an option to let buyers pay for their item in online auctions. Small businesses started to use it, and frauds have already happened there.
- *Půjčímto.cz* [38] – This application helps people gain money for owning an item by lending it to others. The only thing necessary is to upload the object, place where to borrow it and price per specific period.

### 3.2.3 Other

There are many different types of applications somehow focused on the environment. They cover different areas and use different approaches. Most of these do not have a solution similar to the proposed application from this thesis. The only exceptions are various maps displaying vegetarian restaurants, composters, waste sorting containers, and others.

Here are some examples of other areas it can relate to:

- Food waste
- Water waste and water refilling
- Transportation
- Waste disposal
- Product ingredients





PROBLEM	SOLUTION	UNIQUE VALUE PROPOSITION	UNFAIR ADVANTAGE	CUSTOMER SEGMENTS
<ul style="list-style-type: none"> <li>Information on how to live zero waste is scattered and therefore takes time and effort to access it.</li> <li>During the process of changing habits, it is difficult to stay motivated</li> <li>People want to help but can't afford to donate money.</li> </ul>	<ul style="list-style-type: none"> <li>Put all possible habits into one app and allow the user to track the ones they are interested in and hide the ones they are not.</li> <li>Doing targeted habits contributes to charity + social aspect - competition with other users + visualising the impact of their actions.</li> <li>Instead of money, they donate things that are no longer used, for which they can even get part of the money earned.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental protection</li> <li>Helping charities</li> <li>Giving unneeded things to those who need them</li> <li>Self-Improvement</li> </ul>	Experience with online charity auctions	<ul style="list-style-type: none"> <li>People who want to learn to live more environmentally friendly lives</li> <li>People active in online selling and/or buying used items</li> <li>People who care about protecting the environment and want to help charities</li> </ul>
EXISTING ALTERNATIVES	KEY METRICS	HIGH-LEVEL CONCEPT	CHANNELS	EARLY ADOPTERS
<ul style="list-style-type: none"> <li>JouleBug</li> <li>Ailuna</li> <li>Aukro</li> <li>Vinted</li> <li>Facebook Marketplace</li> </ul>	<ul style="list-style-type: none"> <li>Numbers of items offered and bought</li> <li>Number of points collected by users</li> <li>Number of users</li> </ul>	Vinted mixed with Habitica for helping environment and charities	<ul style="list-style-type: none"> <li>iOS, Android and web</li> <li>Social networks, YouTube</li> <li>Magazines</li> <li>Campaign at environmental events</li> <li>Cooperation with environmental associations</li> </ul>	People aged between 20 and 30, studying or newly employed, who are beginning to discover environmental protection
COST STRUCTURE		REVENUE STREAMS		
<ul style="list-style-type: none"> <li>Salary</li> <li>Marketing</li> <li>Software</li> <li>Hardware</li> <li>App store / Google Play store fees</li> <li>Rent and equipment</li> </ul>		<ul style="list-style-type: none"> <li>Advertisement</li> <li>Premium user accounts</li> <li>Grants</li> <li>Crowdfunding</li> </ul>		

■ **Figure 4.1** Lean Canvas business model for the application Zero Hero

Moreover, users will have an option to build a community around themselves to see how other users are doing in their habit challenges. Therefore they will be able to motivate each other.

### 4.3 Key metrics

As the application has two main parts that ensure its operation, the key metrics focus mainly on them:

- number of items offered and bought indicates the activity of users in the Market part of the application,
- number of points collected by users shows the activity in the second part focused on habit tracking,
- number of users shows the overall popularity of the application.

These matrices will be changed in the future when the application has a stable user base, and the business focus can shift more towards money streams.

### 4.4 Unique value proposition

The main advantage of the application is the possibility to have options on how to help with environmental protection, help various charities either with money or by donating things not in use anymore and work on users' self-improvement in one place.

#### High-level concept

To understand how the app works, we can compare it to a combination of Vinted, and Habitica apps focused on environmental protection and helping charities.

## 4.5 Unfair advantage

There is no decisive unfair advantage now except that the author of this application has experience with online charity auctions and knows part of the potential user base.

## 4.6 Channels

The application will be available for iOS and Android, and there will also be a web client available for those who prefer using computers. As it is expected that the customer segment will be active online, that is the primary communication and propagation channel of the application - mainly social networks and YouTube. Other ways are popular magazines and campaigning at environmental events to let people know about the application. Another option is also to make connections with already established environmental associations and be in contact with users through them.

## 4.7 Customer segments

There are three main customer segments to focus on:

- *People who want to learn to live more environmentally friendly lives* – the habit learning part of the application is intended mainly for this group of customers.
- *People active in online shopping for used items* – the Market section is prepared for this segment with the secret intention of gradually transferring these users into the first user segment.
- *People caring about nature protection living with the environment in mind but want to help charities* - either in some new ways or just by acting as before but with notation in the app.

### Early adopters

The first segment the application will target is people aged between 20 and 30. They still study or are newly graduated and employed. The main characteristic is that they are interested in discovering environmental protection.

## 4.8 Cost structure

There are several items necessary to count when thinking about costs. First are the salaries of the employees. As the application must get as many users as possible in a very short time, marketing will also be a big budget item. Other than that, there are also items like software, hardware and application stores' fees and office related fees. The cost structure is described in more detail in section 5.2

## 4.9 Revenue streams

The primary source of income is an in-app advertisement. That comes from the fact that, as stated in the previous section, this application needs to have a high number of users to sufficient

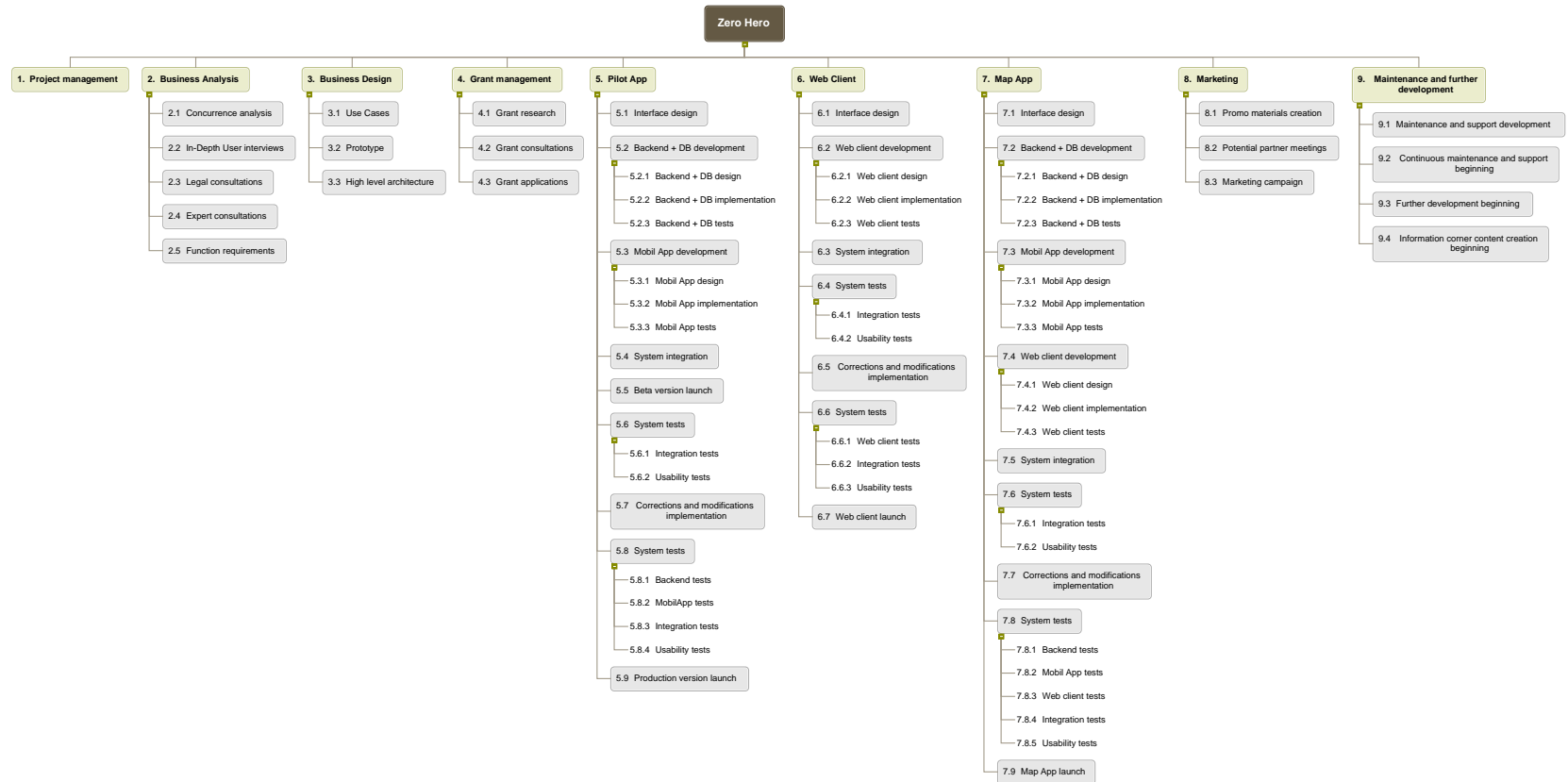
its purpose in the Market and Map sections. Therefore ads have an extensive reach, and therefore, they offer a suitable main source of income.

This model counts with a secondary source of income, a premium user account. As there is not expected to be a considerable difference from the free version, it is not expected to be that significant.

Except for these two points, there are also possibilities of getting a grant regarding environmental protection. As this topic is one of the points of interest these days, there are quite many options. The possibility of choosing some crowdfunding service for the same reason as thanks to the topic's popularity, there is a high probability that people would want to contribute. All these revenue streams are described in more detail in the revenue model of the financial part in section 5.2.







■ Figure 5.1 Work Breakdown Structure of the Zero Hero project

All these follow the same patterns, but it is possible to work in parallel on different parts of the application thanks to separating them from each other. They start with interface design to set them appropriately within the rest of the system, and then the design follows together with implementation and testing. After that, the part is integrated into the system, and system tests are performed. After correcting discovered mistakes and retesting these corrections afterwards, the package is released into production.

As the map function is not the application's primary purpose, it was set aside. It will be created separately so the rest of the application can be already released for public usage. The launch of the map app is taken as the final step of the development. Using both backend and frontend developers will enable parallelism in the development. Apart from them, a tester will participate in the testing activities process.

It is necessary to develop the maintenance and support of the system before the launch of the first production version. Moreover, there will also be an intense marketing campaign running. As there is a possibility of using crowdfunding for financial support of the development, the marketing will start almost at the beginning of the project - from creating a hi-fi prototype.

The last group of planned activities, which the project manager will perform, is grant management. Grants are not vital for the project, but the system's specialisation could allow the business to apply for environmentally-focused grants, so some research and activity in this area will occur.

From the analysing processes' start to the launch of the map app, the whole project is planned for nine and half months, with the pilot app launch scheduled eight months after the start. The project schedule is depicted using a Gantt chart and can be seen in a compressed version in Figure 5.2 or its full version on the attached electronic medium. The assigned responsibilities of individual roles mapped to the project activities are visualised in the RACI matrix in Table 5.1. There is one activity with two roles assigned as accountable there, even though section 2.2.2 mentioned that it is not advised. That activity concerns the corrections and modifications after testing and consists of two subgroups - backend and frontend corrections. Each subgroup will have its accountable role - either backend or frontend developer. Therefore the rule is followed.

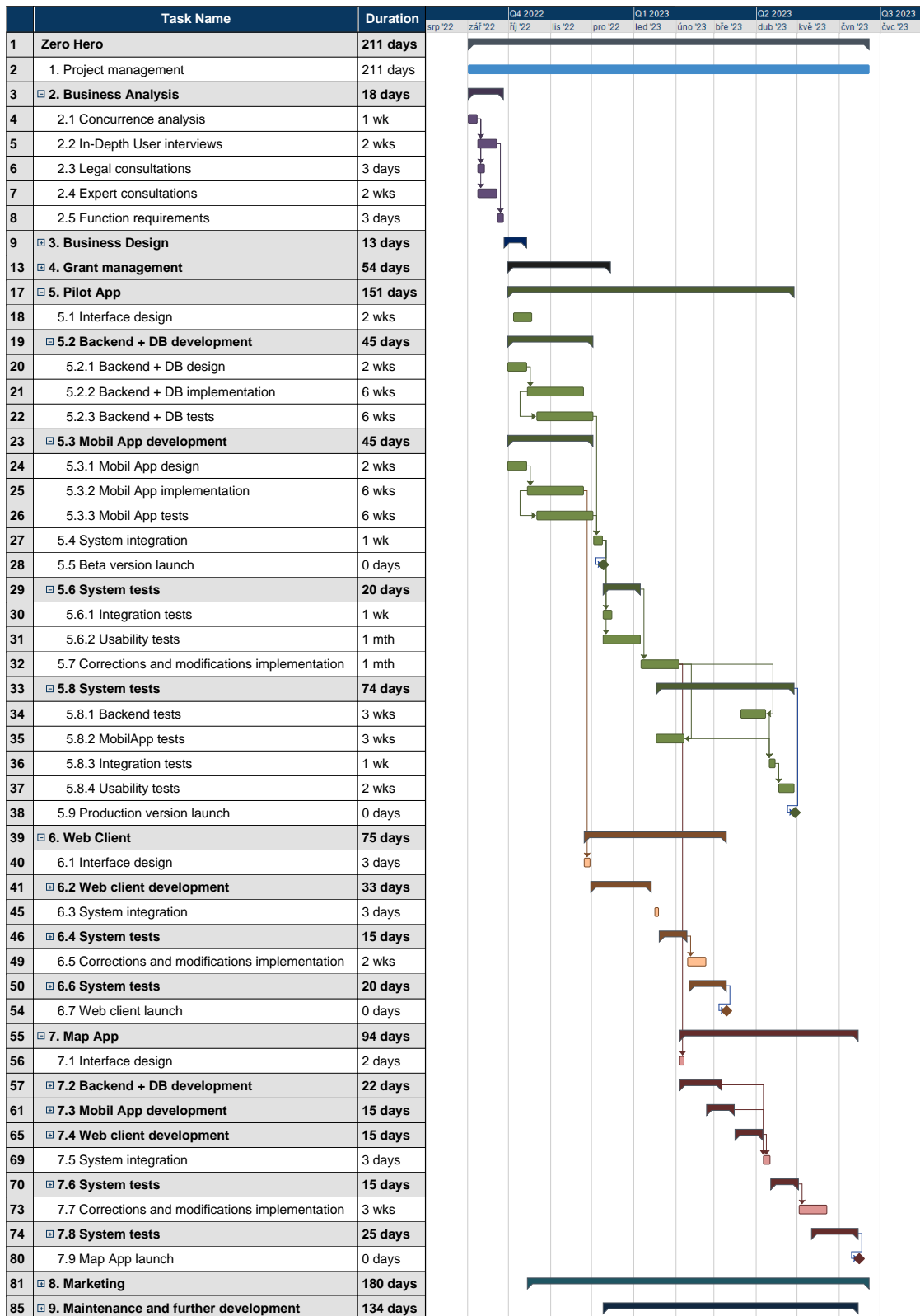
## 5.2 Financial plan

The financial plan is created to estimate the sustainability of the project. It is devised for the development period and the following first five years of its life. It consists of several parts. The costs are counted for the estimation of all potential expenses. For an approximation of the incomes, the revenue model is created. Part of it is also a User Growth model to estimate the growth of the application's user base.

After combining all this information, the profits and the Net Present Value (NPV) are counted in three variants - pessimistic, realistic and optimistic. All these parts are described in the following subsections of this section.

### 5.2.1 Costs

Cost analysis was divided into six areas - human resources, software, hardware, cloud, marketing and other services. Human resources expenses mean the salary of people working on the project. A company must pay an additional approximately 35 % of an employee's salary as taxes and insurance. Therefore, it was decided that part of the workers would not be hired as internal employees but would be part of the project as externally hired professionals. These include developers, analysts, marketing managers and environmental experts. The expected costs from salaries and a comparison with the costs of internal and external workers are all depicted in Table 5.2.



■ Figure 5.2 Gantt chart showing the overview of the Zero Hero project's schedule

■ **Table 5.1** RACI matrix assigning the responsibilities in the Zero Hero project

	Backend Dev.	Frontend Dev.	Testers	Analysts	Support	Marketing	Project Manager	Ecologist
<b>Project management</b>	-	-	-	-	-	-	R / A	-
<b>Requirements analysis</b>	C	C	-	R / A	-	-	I	C
<b>Design of the system</b>	C	C	-	R / A	-	I	I	C
<b>Backend development</b>	R / A	I	I	C	I	-	I	-
<b>Mobil App development</b>	I	R / A	I	C	I	-	I	-
<b>Web client development</b>	I	R / A	I	C	I	-	I	-
<b>Tests</b>	C	C	R / A	C	I	-	I	C
<b>Integration</b>	R / A	R	C	C	I	-	I	-
<b>Grant research</b>	-	-	-	C	-	I	R / A	-
<b>Beta version launch</b>	R	R	I	C	I	I	A	-
<b>Pilot app launch</b>	R	R	I	C	I	I	A	-
<b>Map app launch</b>	R	R	I	C	I	I	A	-
<b>Maintenance</b>	C	C	C	C	R / A	-	I	-
<b>Propagation materials creation</b>	-	-	-	C	-	R / A	I	-
<b>Potential partners meetings</b>	-	-	-	-	-	R / A	C	-
<b>Marketing campaign</b>	-	-	-	-	-	R / A	I	-
<b>Further development</b>	R	R	C	R / A	I	I	I	-
<b>Corrections and modifications</b>	R / A	R / A	C	C	I	I	I	-
<b>Maintenance and support development</b>	C	C	-	-	R / A	-	I	-
<b>Information corner content creation</b>	-	-	-	-	I	I	I	R / A

■ **Table 5.2** Estimated costs of internal and external employees, highlighted chosen variant

	External	Internal
<b>Developer</b>	70,000.00 CZK	94,500.00 CZK
<b>Analysts</b>	60,000.00 CZK	81,000.00 CZK
<b>Tester</b>	40,000.00 CZK	54,000.00 CZK
<b>Support</b>	40,000.00 CZK	54,000.00 CZK
<b>Project Manager</b>	70,000.00 CZK	94,500.00 CZK
<b>Marketing</b>	60,000.00 CZK	81,000.00 CZK
<b>Environmental expert</b>	30,000.00 CZK	40,500.00 CZK

Most software was chosen in its free version to lower the project costs. Therefore, the only expenses in this area are developer accounts in mobile application stores and programmes supporting the business's day-to-day functioning. Except for fixed monthly costs, there is also one that varies based on the purchases in the Market section. The Pay Gate from Adyen will be used. It provides the option to split payment between multiple receivers. It charges 0.1 EUR + 0.4 % per transaction. [39]

Expenses from the hardware area are partly done as an initial investment (for example, smartphones and laptops necessary for the development). The rest, such as office rent, are fixed costs that will recur monthly. As the company will procure just a development server and the production version will run in the cloud, fees are also included. It was decided to use the Google Cloud Platform [40]. With the growing number of targeted users, it is estimated that the costs will rise after launching the full version of the application.

As the application needs to have a solid user base to offer all its functionalities sufficiently (such as a good offer in the Market section), high marketing costs must also be considered. Several marketing strategies were drafted. The main marketing channel is going to be social media. There is also advertising video creation included as an initial investment, as part of the social media channel is also YouTube. Except for social media, other online platforms will also be used. In addition, there will also be physical objects created for promotion during various events. As the application focuses on supporting environmental protection, these objects will not be single-used leaflets or posters but more in the form of reusable items, such as handkerchiefs.

The last group of expected expenses are all other services necessary for the smooth operation of the business. Examples of these services are lawyer services and accounting. The overall overview of all initial investments and fixed monthly costs can be seen in Table 5.3.

## 5.2.2 Revenue model

As mentioned in Chapter 4, the primary revenue stream will be in-app advertising, followed by premium user account fees. Firstly, it is needed to create a User Growth model to estimate the number of application users. Based on this model, it is possible to determine approximate incomes from both revenue streams. All rates were determined by an expert estimation from author.

### User Growth model

The user growth model of the Zero Hero application consists of two parts. They are the number of newly acquired users and retained users per month. There are four anticipated primary sources of users' acquisitions - social media, pay-per-click advertisement, organic users and user recommendations. The Click-Through-Rate (CTR) is used to measure the first three groups. Recommendations acquisition is measured by the number of new users gained from a single current user. All four are estimated in three variants – pessimistic, realistic and optimistic – and are listed in Tables 5.4 and 5.5

■ **Table 5.3** The overall overview of all initial investments and fixed monthly costs of the project Zero Hero

Category	Initial investment	Pilot app / month	Final app / month
<b>Hardware</b>	<b>132,000.00 CZK</b>	<b>25,000.00 CZK</b>	<b>25,000.00 CZK</b>
iPhone	10,000.00 CZK	0.00 CZK	0.00 CZK
Smartphone with Android	8,000.00 CZK	0.00 CZK	0.00 CZK
Computers - development	20,000.00 CZK	0.00 CZK	0.00 CZK
Computers - business	20,000.00 CZK	0.00 CZK	0.00 CZK
Office	0.00 CZK	12,000.00 CZK	12,000.00 CZK
Utilities	0.00 CZK	8,000.00 CZK	8,000.00 CZK
Office equipment	49,000.00 CZK	5,000.00 CZK	5,000.00 CZK
Development server	25,000.00 CZK	0.00 CZK	0.00 CZK
<b>Software</b>	<b>575.00 CZK</b>	<b>1,890.75 CZK</b>	<b>1,890.75 CZK</b>
Google Dev account	575.00 CZK	0.00 CZK	0.00 CZK
Apple Dev account	0.00 CZK	189.75 CZK	189.75 CZK
GitHub	0.00 CZK	0.00 CZK	0.00 CZK
ClickUp	0.00 CZK	805.00 CZK	805.00 CZK
Visual Code	0.00 CZK	0.00 CZK	0.00 CZK
Postgre	0.00 CZK	0.00 CZK	0.00 CZK
Slack	0.00 CZK	0.00 CZK	0.00 CZK
Microsoft 365	0.00 CZK	896.00 CZK	896.00 CZK
<b>Cloud - GCP</b>	<b>0.00 CZK</b>	<b>5,000.00 CZK</b>	<b>10,000.00 CZK</b>
<b>Marketing</b>	<b>250,000.00 CZK</b>	<b>55,000.00 CZK</b>	<b>55,000.00 CZK</b>
Commercials filming	150,000.00 CZK	0.00 CZK	0.00 CZK
Apple advertisement	0.00 CZK	10,000.00 CZK	10,000.00 CZK
Google advertisement	0.00 CZK	15,000.00 CZK	15,000.00 CZK
Facebook advertisement	0.00 CZK	15,000.00 CZK	15,000.00 CZK
Eco promo merch	100,000.00 CZK	15,000.00 CZK	15,000.00 CZK
<b>Services</b>	<b>45,000.00 CZK</b>	<b>5,000.00 CZK</b>	<b>5,000.00 CZK</b>
Lawyer	45,000.00 CZK	0.00 CZK	0.00 CZK
Accountant	0.00 CZK	5,000.00 CZK	5,000.00 CZK
<b>SUM</b>	<b>427,575.00 CZK</b>	<b>91,890.75 CZK</b>	<b>96,890.75 CZK</b>

There is also necessary to count the conversion rate for the first three groups as not all reached people will install the application. The rate is the same for all variants. The rates per group and their development over time can be seen in Table 5.6

All these acquisition rates are expected to change in time. As the application awareness rises, it is expected to have increasing numbers in the first two years. Then there is a predicted slow decrease or stagnation based on fewer people who have never heard about the app before. The first year is divided into three periods – the first two months after the pilot application launch, when the map functionality is missing, the following four months as the first half a year will have a narrower targeted marketing group, and then the second half of the year with all functionalities and broader target group.

The second part of the model is the retention of current users. Three approximate rates are specified based on the length users are using the app. There are expected to be 20 % of retained users who install the app after they have used the app for one month. Of those, 90 % are expected to retain after the second month. 95 % of current users are expected to keep using the app if they have downloaded it three months ago or later.

A special part of the user base consists of premium users. The difference from a free account as planned right now is an ad-free version of the application with the option to personalise the

■ **Table 5.4** CTR per period by type of user source for all variants

Time period	CTR Type	Pessimistic	Realistic	Optimistic
<b>1st - 2nd month</b>	Social media ads	2.00%	5.00%	8.00%
	Pay-per-Click ads	1.00%	2.00%	4.00%
	Organic	0.05%	0.10%	0.25%
<b>3rd - 6th month</b>	Social media ads	4.00%	7.00%	10.00%
	Pay-per-Click ads	2.00%	3.00%	5.00%
	Organic	0.05%	0.10%	0.25%
<b>7th - 12th month</b>	Social media ads	4.00%	7.00%	10.00%
	Pay-per-Click ads	2.00%	3.00%	5.00%
	Organic	0.10%	0.25%	0.50%
<b>2nd year</b>	Social media ads	5.00%	8.00%	11.00%
	Pay-per-Click ads	2.50%	3.50%	6.00%
	Organic	0.25%	0.50%	0.75%
<b>3rd year</b>	Social media ads	4.00%	7.00%	10.00%
	Pay-per-Click ads	2.00%	3.00%	5.00%
	Organic	0.10%	0.25%	0.50%
<b>4th year</b>	Social media ads	4.00%	7.00%	10.00%
	Pay-per-Click ads	2.00%	3.00%	5.00%
	Organic	0.10%	0.25%	0.50%
<b>5th year</b>	Social media ads	4.00%	7.00%	10.00%
	Pay-per-Click ads	2.00%	3.00%	5.00%
	Organic	0.08%	0.20%	0.40%

■ **Table 5.5** Number of new users gained base on the recommendation of one current user

	Pessimistic	Realistic	Optimistic
<b>1st - 2nd month</b>	0.1	0.2	0.3
<b>3rd - 6th month</b>	0.25	0.4	0.5
<b>7th - 12th month</b>	0.25	0.4	0.5
<b>2nd year</b>	0.25	0.4	0.5
<b>3rd year</b>	0.25	0.4	0.5
<b>4th year</b>	0.2	0.35	0.4
<b>5th year</b>	0.2	0.35	0.4

application's appearance and gain access to several more widgets. There are no differences in the main functionalities, as it is not the primary source of income, and the priority is to gain as many free users as possible - both for financial and functional reasons.

Nevertheless, there needs to be a model for them too. There are two rates for the acquisition. The rate of new users, who subscribe for the premium account after a free trial month, is set to 5 % of users using the application for two months from installation. They already should have been able to test the application sufficiently and go through the free trial month.

The second rate is the number of current stable free users who decide to switch to a premium account later than two months after installing. The rate was set at 0.5 % as there are no significant differences between the two types of accounts. Since users have an option of a free trial month, the retention of paying premium users is set relatively high to 85 %.

The sizes of target groups were counted from data from the Czech Statistical Office (percentage of the population of a given age using the internet) [41] and Facebook Business Manager [42] (estimation of the target group in social media – general and with the interest of the environment, which was used as the base for the organic users). The overview of target groups can



■ **Table 5.6** User conversion of the application Zero Hero

	Social media ads	Pay-per-Click ads	Organic
<b>1st - 2nd month</b>	0.70%	2.35%	13.00%
<b>3rd - 6th month</b>	0.70%	2.35%	14.00%
<b>7th - 12th month</b>	0.70%	2.35%	15.00%
<b>2nd year</b>	0.70%	2.35%	16.00%
<b>3rd year</b>	0.65%	2.30%	16.00%
<b>4th year</b>	0.60%	2.25%	15.00%
<b>5th year</b>	0.55%	2.20%	15.00%

be seen in Table 5.7.

■ **Table 5.7** Number of people in targeted groups [social media data from [42], general internet usage data from [41]]

Age	Social media	General internet usage	Social media - environmental interests
<b>20 - 30</b>	1,200,000	1,228,201	425,000
<b>31 - 40</b>	1,000,000	1,461,714	435,000
<b>20 - 40</b>	2,200,000	2,689,916	860,000

### In-app advertisement revenue stream

The application will contain native in-app ads. The profit from this type of advertisement is based on the number of non-premium user impressions of an ad. Therefore, it depends on the number of active application users and the time spent using it. Estimation of this time was distinguished between the first-month users (it must be assumed that many of them will use the app just a few times before uninstalling it) and a stable user base. It is assumed that the user sees one impression per two minutes (or, as used in the calculations, sees half of an impression per one minute).

The data used for income calculation are visible in Table 5.8. Based on information from [43], the Cost-per-mille was set to 230 CZK (the exchange rate of 23 CZK to \$1 was considered).

■ **Table 5.8** Usage data of one user of the application Zero Hero

	Stable user	New user
<b>Open per day</b>	1	0.14
<b>Time per open (min)</b>	5	2
<b>Impression per min</b>	0.5	0.5
<b>Impression per day</b>	2.5	0.14

### Fees from premium users' accounts revenue stream

The premium account does not differ significantly from the free one. Therefore the price was set low (20 CZK per month) to look reasonable to potential subscribers. As mentioned above, interest is not expected to be very high despite the low price, and the profit from this area is not the primary revenue stream.

### 5.2.3 Profits

Combining the approximated costs and incomes from advertisements and premium accounts gives an idea of the approximate profit of the application. As the income is based on the number of users, which is provided in three variants (pessimistic, realistic and optimistic), the final calculations and overall financial plan are also created in three versions. The variants differ by the time they start to generate profit and consequently when they manage to pay for themselves (cover all the previous costs of the project). The optimistic variant counts with profit beginning to be generated fourteen months after the launch of the pilot app and reaching a balance higher than zero in two and half years. The realistic version counts with profit starting twenty months after the pilot app launch and paying itself in three years and seven months. The pessimistic variant does not seem very profitable as it reaches profit after almost three years and never manages to cover all previous costs in the five-year financial plan.

### 5.2.4 Financial summarisation

For the calculation of NPV discount rate was set to 9.64 % as calculated by the Czech National Bank for the year 2021 [44]. The NPV for each year can be seen in Table 5.9. It indicates that the pessimistic version of the project is not profitable but also indicates the change in the trend in the last two years. The realistic version depicts a promising trend in the years four and five. It looks even more favourable for the optimistic version, where we can see solid revenue in the third year already.

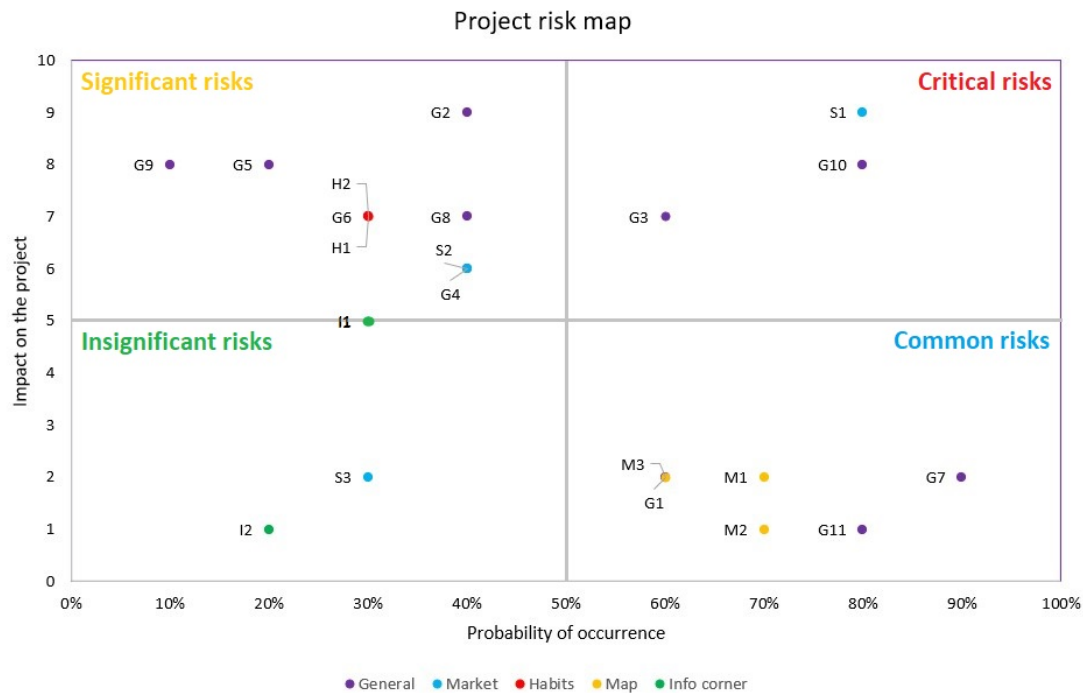
■ **Table 5.9** Yearly NPV of the Zero Hero project

	Development	1st year	2nd year	3rd year	4th year	5th year
<b>Pessimistic</b>	-3,094,076	-5,606,664	-6,866,377	-7,200,924	-7,036,938	-6,627,684
<b>Realistic</b>	-3,094,076	-5,415,946	-5,639,092	-3,570,957.70	574,449	6,561,153
<b>Optimistic</b>	-3,094,076	-5,098,942	-3,482,518	3,332,762	15,760,475	33,557,571

With the beginning of the project in September 2022, the pessimistic variant counts with 16,821 free and 808 paying users after the first five years in April 2028, with the negative balance of -690,526 CZK slowly growing closer to 0. The realistic variant expects 62,950 free users and 3,108 premium users to secure the balance to be 12,306,342 CZK, being firstly positive in November 2026. The optimistic variant suggests 163,604 free and 8,046 paying users, and therefore the balance reaching 51,801,554 CZK, positive since October 2025. An overview of costs, incomes, profits, and balance development over the first five years is listed in Table 5.10. A monthly financial plan with basic indicators in all three variants can be found in Appendix B.

■ **Table 5.10** Costs, incomes, profits and balance development and first five years overview

		Development	1st year	2nd year	3rd year	4th year	5th year
<b>Costs</b>		3,094,076 CZK	3,001,439 CZK	2,802,189 CZK	2,802,189 CZK	2,802,189 CZK	2,802,189 CZK
<b>Income</b>	<b>Pessimistic</b>	0 CZK	246,637 CZK	1,287,897 CZK	2,361,264 CZK	3,039,154 CZK	3,450,581 CZK
	<b>Realistic</b>	0 CZK	455,740 CZK	2,533,946 CZK	5,527,939 CZK	8,792,416 CZK	12,287,094 CZK
	<b>Optimistic</b>	0 CZK	803,304 CZK	4,745,280 CZK	11,784,557 CZK	20,760,576 CZK	30,998,630 CZK
<b>Profit</b>	<b>Pessimistic</b>	-3,094,076 CZK	-2,754,802 CZK	-1,514,292 CZK	-440,925 CZK	236,965 CZK	648,392 CZK
	<b>Realistic</b>	-3,094,076 CZK	-2,545,699 CZK	-268,243 CZK	2,725,750 CZK	5,990,227 CZK	9,484,905 CZK
	<b>Optimistic</b>	-3,094,076 CZK	-2,198,135 CZK	1,943,091 CZK	8,982,368 CZK	17,958,387 CZK	28,196,441 CZK
<b>Balance</b>	<b>Pessimistic</b>	-3,094,076 CZK	-5,848,878 CZK	-7,363,170 CZK	-7,804,095 CZK	-7,567,130 CZK	-6,918,738 CZK
	<b>Realistic</b>	-3,094,076 CZK	-5,639,775 CZK	-5,908,018 CZK	-3,182,268 CZK	2,807,959 CZK	12,292,864 CZK
	<b>Optimistic</b>	-3,094,076 CZK	-5,292,211 CZK	-3,349,120 CZK	5,633,248 CZK	23,591,635 CZK	51,788,076 CZK



■ Figure 5.3 Zero Hero project’s risk map

### 5.3 Risk analysis

As the last part of creating the Business Case, the risk analysis was performed. The risks were divided into five parts based on the sections of the application – Market, Habits, Map and Info Corner – plus a group of general risks that do not belong to any of the previous or relate to more than one. These risks are depicted in a risk map in Figure 5.3 based on their probability of occurrence and impact on the project. According to the sector in which they are displayed, they are categorized to show their significance. That is important for deciding on the defensive strategy for each risk. Ways to mitigate these risks and how to act if these situations occur are also outlined.

The risk map clearly shows that this project has three critical risks – inefficient marketing, attractive competition, and a low number of users in the Market section. All three are interrelated and show that the users are critical to the system. That is based on the fact that most of the income is dependent on the number of application users, as written in the previous section.

#### 5.3.1 General risks

General risks cover most business risks, such as incomes lower than expected in the financial plan or marketing and competition problems. Technical risks there mainly relate to the overall user’s experience with the application, for example, its performance. This section also covers several risks related to unpredictable human behaviour – either human mistakes or incapacities. The most important seems to be the business one which stems from the uncertainty of acceptance of the application by users. All general risks are listed in Tables 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.20 and 5.21.

■ **Table 5.11** Risk G1 - No grants recieved

<b>G1</b>	<b>No grants recieved</b>
<b>Probability of occurrence</b>	60 %
<b>Impact on the project</b>	20 %
<b>Type</b>	Business
<b>Description</b>	Failure to receive any grants to support the project
<b>Risk significance</b>	Common
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	Regular review of available grants from various institutions
<b>Crisis plan</b>	Reduce unnecessary costs to cover grant funding shortfalls.

■ **Table 5.12** Risk G2 - Cluttered app

<b>G2</b>	<b>Cluttered app</b>
<b>Probability of occurrence</b>	40 %
<b>Impact on the project</b>	90 %
<b>Type</b>	Technical
<b>Description</b>	Too many features presented to the user inappropriately make the application confusing for the user.
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Usability testing before deploying each new functionality
<b>Crisis plan</b>	Comprehensive user testing to identify unnecessary functionalities. Application redesign.

■ **Table 5.13** Risk G3 - Inefficient marketing

<b>G3</b>	<b>Inefficient marketing</b>
<b>Probability of occurrence</b>	60 %
<b>Impact on the project</b>	70 %
<b>Type</b>	Business
<b>Description</b>	Resources invested in marketing do not correspond to the number of newly engaged users.
<b>Risk significance</b>	Critical
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Regular analysis of marketing trends and the success of the current marketing strategy
<b>Crisis plan</b>	Creating a new marketing strategy from scratch.

■ **Table 5.14** Risk G4 - Low advertising revenue

<b>G4</b>	<b>Low advertising revenue</b>
<b>Probability of occurrence</b>	40 %
<b>Impact on the project</b>	60 %
<b>Type</b>	Business
<b>Description</b>	Low ad reach leading to low ad revenue
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Target advertising to users' interests
<b>Crisis plan</b>	Reduce unnecessary costs to cover advertising shortfalls and conduct user surveys to target the advertising better.

■ **Table 5.15** Risk G5 - Fake charity

<b>G5</b>	<b>Fake charity</b>
<b>Probability of occurrence</b>	20 %
<b>Impact on the project</b>	80 %
<b>Type</b>	Human
<b>Description</b>	Money raised and donated to fake or untrustworthy charities, which can lead to a loss of credibility among our users.
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	A thorough examination of the charity before its inclusion in the available charities selection options
<b>Crisis plan</b>	Immediately cease contributions to the charity in question, demand the return of donated funds, audit other charities, and make a clear public statement.

■ **Table 5.16** Risk G6 - Unattractive premium services

<b>G6</b>	<b>Unattractive premium services</b>
<b>Probability of occurrence</b>	30 %
<b>Impact on the project</b>	70 %
<b>Type</b>	Business
<b>Description</b>	Premium services will not attract the expected number of users and result in lower revenues.
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Ongoing monitoring of interest and user surveys
<b>Crisis plan</b>	Reduce unnecessary costs to cover premium users' funding shortfalls. Redesign of the premium account and its functionalities based on the new analysis.

■ **Table 5.17** Risk G7 - Unavailability of a team member

<b>G7</b>	<b>Unavailability of a team member</b>
<b>Probability of occurrence</b>	90 %
<b>Impact on the project</b>	20 %
<b>Type</b>	Human
<b>Description</b>	A team member is unavailable for various reasons - vacation, illness, termination of employment, busy on other parts of the project and similar.
<b>Risk significance</b>	Common
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	Project planning with a reserve for unexpected unavailability of a team member, planning vacations well in advance with regard to project planning
<b>Crisis plan</b>	Focus on the most acute problems and postpone lower priority tasks.

■ **Table 5.18** Risk G8 - Application performance issues

<b>G8</b>	<b>Application performance issues</b>
<b>Probability of occurrence</b>	40 %
<b>Impact on the project</b>	70 %
<b>Type</b>	Technical
<b>Description</b>	Long loading time, application jamming and the like
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Regular performance tests with an estimated number of users relative to the current situation
<b>Crisis plan</b>	Pause non-critical processes and focus on discovering and solving the problem.

■ **Table 5.19** Risk G9 - Leaking user information

<b>G9</b>	<b>Leaking user information</b>
<b>Probability of occurrence</b>	10 %
<b>Impact on the project</b>	80 %
<b>Type</b>	Technical
<b>Description</b>	Insufficient database security and subsequent leakage of user data
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Regular database updates and security checks
<b>Crisis plan</b>	Prevent further access to the database, focus on discovering and solving the problem, and make a public statement including a description of the solution.

■ **Table 5.20** Risk G10 - More attractive competition

<b>G10</b>	<b>More attractive competition</b>
<b>Probability of occurrence</b>	80 %
<b>Impact on the project</b>	80 %
<b>Type</b>	Business
<b>Description</b>	Competition with more attractive features threatens our user retention and makes it harder to attract new users.
<b>Risk significance</b>	Critical
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Monitoring of competition and demand for new functionalities and their subsequent implementation into the system
<b>Crisis plan</b>	Promotions, premium account discounts, product innovation work

■ **Table 5.21** Risk G11 - Insufficient number of environmental partners

<b>G11</b>	<b>Insufficient number of environmental partners</b>
<b>Probability of occurrence</b>	80 %
<b>Impact on the project</b>	10 %
<b>Type</b>	Business
<b>Description</b>	Lack of environmental partners to use their products in our application - to unify as many functionalities as possible and promote the application.
<b>Risk significance</b>	Common
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	Active search for potential partners and a promo campaign targeted directly at them
<b>Crisis plan</b>	Continuation of their search, adjustment of our offer to attract them

### 5.3.2 Market risks

The most critical risk in this group is the already mentioned low number of users in the Market section. A small number of users in the Market section means either too few sellers, buyers or both. In all cases, it does not offer sufficient demand and supply of items for users. That can lead to users' loss of interest due to a lack of options and even more drop in the number of users. This and also other Market related risks are described in Tables 5.22, 5.23 and 5.24.

■ **Table 5.22** Risk S1 - A low number of market users

<b>S1</b>	<b>A low number of market users</b>
<b>Probability of occurrence</b>	80 %
<b>Impact on the project</b>	90 %
<b>Type</b>	Business
<b>Description</b>	A low number of sellers and buyers, which reduces the offer for buyers and sales for sellers, which reduces the attractiveness of the service
<b>Risk significance</b>	Critical
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	An extensive marketing campaign, cooperation with well-known partners focusing on a similar target group
<b>Crisis plan</b>	Providing discounts and benefits to users to retain them and attract new ones

■ **Table 5.23** Risk S2 - Scammers in the market

<b>S2</b>	<b>Scammers in the market</b>
<b>Probability of occurrence</b>	40 %
<b>Impact on the project</b>	60 %
<b>Type</b>	Human
<b>Description</b>	The product not being delivered or being in a worse condition than stated at the time of sale (problem on the seller's side) or, on the contrary, the product not being paid for (problem on the buyer's side)
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Comments and user ratings by other users who have been in business contact with them; possibility to report a problem; money credited to the seller's account only when the buyer confirms receiving the product
<b>Crisis plan</b>	Cancel the user's account and take other appropriate legal action, refunds to affected users

■ **Table 5.24** Risk S3 - Incorrect categorisation of objects

<b>S3</b>	<b>Incorrect categorisation of objects</b>
<b>Probability of occurrence</b>	30 %
<b>Impact on the project</b>	20 %
<b>Type</b>	Human
<b>Description</b>	Products being inaccurately categorised, resulting in poorer clarity of categories and unclear and inefficient searches.
<b>Risk significance</b>	Insignificant
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	Ability to report misclassification
<b>Crisis plan</b>	Correcting the misclassification



### 5.3.3 Habits risks

Risks from the Habits section relate to the ability and willingness of the users to acquire a specific habit. They focus on the possible reasons that users could not be able or want to follow the habit. It shows that it is vital to plan habits properly and cooperate with the environmental expert. Both risks are explained in Tables 5.25 and 5.26.

■ **Table 5.25** Risk H1 - The complexity of habits to learn

H1	The complexity of habits to learn
Probability of occurrence	30 %
Impact on the project	70 %
Type	Human
Description	The habits are too complex for the user to incorporate into their lives simply, and failure to do so tends to demotivate the user, and they stop using the app.
Risk significance	Significant
Defensive strategy	Reduction
Mitigation	Breaking down habits into the smallest possible, so-called atomic, habits and increasing their difficulty gradually, possibility to rate the habits by users
Crisis plan	Redesign the habit

■ **Table 5.26** Risk H2 - The senselessness of habit

H2	The senselessness of habit
Probability of occurrence	30 %
Impact on the project	70 %
Type	Human
Description	The user does not see the point in the habits - either their impact is poorly explained, or worse, they are not based on any environmental impact.
Risk significance	Significant
Defensive strategy	Reduction
Mitigation	Already in the habits section, explain each habit briefly. Then refer to the info corner, where each habit should be explained in detail with links to expert sources supporting its meaning.
Crisis plan	Additional explanation of the habit or its removal if it proves to be groundless

### 5.3.4 Info Corner risks

During in-depth interviews conducted for this project (described in section 6.2) was mentioned several times that it is important to the users to have verified and reliable sources of information. Therefore the most significant risk in this section is to publish false or inaccurate information as that would lead to a loss of trust of the user in the application. That could potentially lead to user churn. Risks about this section are described in Tables 5.27 and 5.28.

■ **Table 5.27** Risk I1 - Publication of unverified/unreliable information

<b>I1</b>	<b>Publication of unverified/unreliable information</b>
<b>Probability of occurrence</b>	20 %
<b>Impact on the project</b>	50 %
<b>Type</b>	Human
<b>Description</b>	Publishing unverified or false information may lead to losing user confidence in the app.
<b>Risk significance</b>	Significant
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	All published information is written by an environmental expert and supported by references to the expert sources it is based on.
<b>Crisis plan</b>	Removing problematic information

■ **Table 5.28** Risk I2 - Unavailability of an environmental expert

<b>I2</b>	<b>Unavailability of an environmental expert</b>
<b>Probability of occurrence</b>	70 %
<b>Impact on the project</b>	10 %
<b>Type</b>	Human
<b>Description</b>	An environmental expert is unavailable for various reasons - vacation, illness, termination of employment, busy on other parts of the project and similar.
<b>Risk significance</b>	Insignificant
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	The environmental expert should prepare backup content in case of a lack of ability to create content. At the same time, have a contact for someone else who would be willing to step in if needed. Have more than one environmental expert.
<b>Crisis plan</b>	Publishing an explanation for the temporary absence of the posting of informative articles, active search for another expert

### 5.3.5 Map risks

All risks in the Map section relate to places displayed on the map and associated discomfort for the user. As the Map section is not the main part of the application, the risks were not evaluated as highly important, but all were marked as common. All are listed in Tables 5.29, 5.30 and 5.31.

■ **Table 5.29** Risk M1 - Incorrect/outdated information in the map

<b>M1</b>	<b>Incorrect/outdated information in the map</b>
<b>Probability of occurrence</b>	70 %
<b>Impact on the project</b>	20 %
<b>Type</b>	Human
<b>Description</b>	There is inaccurate information on the map regarding the locations - opening hours, existence of the places. This inaccuracy leads to a loss of user trust in the app.
<b>Risk significance</b>	Common
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	Users can suggest adjustments. Either the entity can confirm the changes themselves, or the application has an algorithm that will make the changes automatically after a certain number of users confirm them.
<b>Crisis plan</b>	Update or delete affected locations by administrators.

■ **Table 5.30** Risk M2 - Too few locations on the map

<b>M2</b>	<b>Too few locations on the map</b>
<b>Probability of occurrence</b>	60 %
<b>Impact on the project</b>	10 %
<b>Type</b>	Business
<b>Description</b>	There are not enough locations on the map to cover users' needs, leading users to stop using the map.
<b>Risk significance</b>	Common
<b>Defensive strategy</b>	Acceptation
<b>Mitigation</b>	Allowing users to add locations, establishing cooperation with existing projects that already have suitable places on the map, and motivating businesses with benefits to self-report
<b>Crisis plan</b>	The development team is actively looking for possible new locations.

■ **Table 5.31** Risk M3 - Too many places on the map and, therefore, a lack of clarity

<b>M3</b>	<b>Too many places on the map and, therefore, a lack of clarity</b>
<b>Probability of occurrence</b>	30 %
<b>Impact on the project</b>	20 %
<b>Type</b>	Technical
<b>Description</b>	When the map is cluttered, the user is overwhelmed and loses the ability to orient himself on the map, which causes negative feelings and leads to disuse of the map.
<b>Risk significance</b>	Common
<b>Defensive strategy</b>	Reduction
<b>Mitigation</b>	Sufficient filtering capability, memorizing user preferences
<b>Crisis plan</b>	Removal of unnecessary places, redesign of categorization

## Chapter 6

# Analysis

### 6.1 Personas

Primary, secondary and negative personas were created based on the targeted Customer Segments specified in the Business Model in Chapter 4. They cover all the segments as well as a people who would not use this application, and therefore, it is not necessary to focus on their needs. The main differences between them are their interest in environment and their relationship to technology which are two aspects that are important for determining whether the person would use the application or not.

#### 6.1.1 Primary persona - Patricie Müllerová

A person who wants to learn to live a more environmental-friendly life

**Gender:** Woman

**Age:** 23

**Education:** Studies Master's first year at Prague University of Economics and Business

**Occupation:** Student

**Technical proficiency:** Common user knowledge

**Smartphone usage:** Multiple per hour, tries to limit the smartphone usage

**Diet:** None

**Interest in the environment:** She realise the impact of pollution. She tries to do some things such as recycling (more detailed), not using single-use plastics, sometimes buying something from second-hand.

**Hobbies:** Reading, sport (yoga, cycling, climbing, running), travelling, nature

**Main goals:** Learn to live more environmentally

**Biography:** Patricie was born in a small town in Centre Bohemia, and she lived there her whole life until graduating from grammar school. She has one younger brother. He is 17 and still lives at home with their parents. All her life, they always had some animal. It is a dog named Bass and a cat called Bibi right now. They are a typical middle-class family. She used to

dance, play the piano and read a lot. She had to limit her time spent on her hobbies while she began studying at university. After graduating from grammar school, she was accepted to Prague University of Economics and Business, where she studies international relationships. Her parents can cover all costs of her studies and living expenses in Prague. Therefore she does not have to work, but she can not spend much money on what she wants. Since her first year in Prague, she has lived in dorms and met her current best friend. She successfully finished her Bachelor's degree and is currently studying for her Master's. During her first semester, she went to Spain within the ERASMUS program. There she met her boyfriend who was there also thanks to ERASMUS. She is steadily growing interested in the environment, primarily thanks to social media and her friends. She recycles and tries to avoid single-use plastics, but she does not have time to search for more options on how to help our planet.

**A typical day in a life:** Patricie wakes up at 7 am most mornings. She has some light food such as yoghurt or some fruit and then exercises for a bit - either runs or does yoga. After that, she has a full breakfast - usually oats and fruit with green tea. She prepares her snacks and drinks for the day, packs her backpack and heads to school. She spends several hours on lectures and labs and then eats lunch at the school canteen. She tries to choose as healthy a meal as possible. After all her classes are over, she heads to the school library to work on her assignment. When finished, she goes home. While on the way, she calls her parents and talks with them about their day. She stops in the grocery store and then goes to her dorms to prepare a light dinner, such as a vegetable salad. She usually spends her evening with her boyfriend or her best friend, but she always tries to get to bed by 23:00

### 6.1.2 Secondary persona - Petr Zelený

A person who cares about protecting the environment and wants to help charities

**Gender:** Man

**Age:** 35

**Education:** Master's degree

**Occupation:** Biology and chemistry secondary school teacher

**Technical proficiency:** Common user knowledge

**Smartphone usage:** As low as possible

**Diet:** Vegan

**Interest in the environment:** Very high - tries to live zero waste (recycles and composts, shops at zero waste shops and farmers' markets, does not use single-use plastics, uses public transport or walking/cycling instead of a car as much as possible, cares about what he buys ). He is also active in spreading his lifestyle among others - shares information on his social media, signs eco petitions, teaches environment in his school and goes to other schools to have lectures about ecology.

**Hobbies:** Geocaching, gardening, ornithology, reading, history

**Main goals:** Help others with what he already does.

**Biography:** Petr was born in the Šumava mountains as the youngest of four kids - he has two older sisters and one older brother. We studied grammar school in Strakonice, where he met his future wife. After graduating from secondary school, he moved with his girlfriend to Prague, where he attended the pedagogic faculty at Charles University. They moved back

to the Šumava mountains after finishing University and married at 25. He found a job as a chemistry and biology teacher at his old grammar school in Strakonice. Petr's son was born when he was 27 years old. After his son was born, Petr became more interested in the environment as he wanted to preserve the planet for future generations. He attended courses to teach environmental classes at his grammar school and joined Greenpeace Speakers. Hence, he goes around the country and lectures ecology at schools. Since then, he divorced his wife at 33 and has alternated care for their son. He has dated a few women now and then but has not found something permanent. He enjoys going on trips with his son - they do the geocaching together, and he shows his son the beauty of our country and teaches him about the ecology - his wife is not that much fun about this topic. He watches birds in his free time.

**A typical day in a life:** He wakes at half quarter to seven, prepares himself a breakfast (porridge with fruit) and heads to the school on his bicycle. He usually arrives around half-past seven, so he has enough time to prepare everything for his day classes. He teaches around five to seven classes per day with a break for lunch at the school canteen if they have a vegan meal that day or his homemade food otherwise. He usually ends around three pm. He stops at a packaging-free store for some shopping. He then heads home, where he arrives around half-past four. He works in his garden for a bit, harvesting vegetables and taking care of his flowers. He prepares dinner around six pm - usually some kind of vegetable salad. He marks his students' school work for a bit and then does his evening routine to prepare for bed. He reads for about an hour and goes to bed around ten pm.

### 6.1.3 Secondary persona - David Skrblík

A person who is active in online shopping for used items

**Gender:** Man

**Age:** 22

**Education:** Studies last year of his Bachelor's degree in the Faculty of informational technology at CTU

**Occupation:** Student, part-time job as a software tester

**Technical proficiency:** Experienced administrator

**Smartphone usage:** Multiple per hour

**Diet:** None

**Interest in the environment:** He is interested in environmental protection but thinks that some radical steps will increase his expenses, which he can not afford. He recycles and uses a bicycle as much as he can.

**Hobbies:** Football, Computer games, Movies (Sci-fi and Fantasy), Programming

**Main goals:** Buy some stuff he needs or wants for a lower price and save some money.

**Biography:** David used to live in Prague with his parents till he was twelve. Then his mother died of cancer and his father, a plumber, had to provide for both children. They moved to a smaller flat in a different and cheaper town to reduce their expenses. He has a younger sister. As there is a 10-year age difference between them, she was only two when their mother died. Therefore he helped to raise her and babysit her. He studied at the industrial secondary school, where he got the basics of programming. After graduating, he got accepted to the Faculty of information technology at CTU in Prague. He lives in Strahov dorms now but

still goes home as much as possible to help his father. His father is able to pay for his accommodation, but the rest is primarily up to David, so he needs to work to provide for himself. He was able to find a part-time job as a software tester.

**A typical day in a life:** David wakes up at 10 am, eats bread with ham and cheese for breakfast, and then goes to school to attend lectures and labs. He eats lunch in a school canteen and then attends his afternoon classes - he usually programs during lectures instead of paying attention to the lecturer. He goes home around five pm and then works on some job-related tasks. He orders a pizza for dinner and then works on his school assignments for a couple of hours. He plays computer games online with his friends before going to bed at around 3 am.

### 6.1.4 Negative persona - Bohuslav Novotný

A person with no or little interest in online shopping or the environment

**Gender:** Man

**Age:** 73

**Education:** Vocational training school - glassblower

**Occupation:** Retiree

**Technical proficiency:** Basic knowledge (knows the internet explorer, games such as cards, and office software)

**Smartphone usage:** Mostly just for calls and messages

**Diet:** None

**Interest in the environment:** None

**Hobbies:** bicycle, music (playing the piano and violin), chess, space

**Main goals:** None

**Biography:** He was born shortly after the end of the second world war to a big family - he has three older sisters and two younger brothers. His family lived in Železný Bron, so he apprenticed to a glassmaker and found a job in a glass factory when he was eighteen. He met his future wife when he was nineteen as she was one of his brother's friends from secondary school. She was three years younger. When he was 23, they married after he finished mandatory military service. They had their first daughter seven months after their marriage. Around the same time, they started to build their own house and moved there five years later by then also with their second daughter and the youngest son. He had worked very hard all his life so his children could afford to go to University, which did his older daughter and his son - she studied architecture, and he became an accountant. His younger daughter became a nurse. When all their children had moved away, his wife and he bought a dog, Bohuslav's companion till today. During the last ten years, his children have had their children - the oldest has two boys now, the younger daughter has two boys and a girl, and the son has a girl and a boy. He retired five years ago. Unfortunately, his wife died two years ago of a heart attack, so he lives alone just with his dog now. He spends most of his time helping with his grandchildren these days.

**A typical day in a life:** Bohuslav wakes up at six and has bread with ham and cheese and tea for breakfast. He then goes for an hour-long walk with his dog. After that, he works a bit around the house or in the garden. After some good lunch that he prepares for himself, he heads to kindergarten to pick up his youngest grandchildren to spend some time with them



in the playground or his house before their parents come home from work around five pm. He then goes for another walk with his dog and has dinner. He spends some time playing the piano or violin and then reads a bit. He goes to bed at around nine pm.

## 6.2 In-depth interviews

To better understand the application's potential users, in-depth interviews were conducted with people corresponding to the primary and secondary personas defined in the previous chapter. There were seven in-depth interviews held in three weeks, from 21st March to 5th April 2022. During the selection of respondents, emphasis was placed on reaching people with various backgrounds - education, family status, age and similar. Therefore, there are people with secondary and university education, students and workers, single people, ones living with their partners, and two children's parents. Most of the respondents come from the author's circle of acquaintances, but an unknown representative from an environmental NGO also participated. At least one respondent covered all types of primary and secondary personas.

The interviews were held in place of respondent's choice – most of the time, some coffee place where they felt at peace and comfortable. Respondents were informed only about a very general overview of the topic ahead of the interview, so they would not prepare themselves, and their responses were as authentic as possible.

### 6.2.1 Interview structure

Firstly, the respondent was informed about the interview process and warned that the whole discussion was monitored. He was also assured that all answers were valuable and to speak as openly as possible. The reason behind the interview was also explained in more detail. After that, they were asked several demographic questions such as age, education or with whom they live in the household.

The interview itself followed this. That was divided into five parts. The first four parts were mainly focused on the respondent's current life and habits. They were related to their relationships with environmental protection, online shopping, charities and technologies. It aimed to identify the respondent's feelings about important topics based on their experience, not imagination. Questions were asked to relate mainly to the past or present but at the same time to be somehow connected to the researched topics.

This section was followed by a description of how the application works. It was the first time the respondent heard that. After the option to ask clarifying questions and understand the principle, they were asked to voice their opinion on the application firstly and then to think about any possible improvements. That was the last part of the interview.

Even though there was a prepared structure with possible questions (and it can be seen in Appendix C), the interview was led more in a relaxed way when neither the order of questions nor the exact formulation was not followed. Some questions were omitted, and others were added based on the previous responses of the interviewee. The main goal was to make the interview feel more like a friendly discussion than an actual interview so the respondent would open up more.

The estimated time of the interview was 60 minutes, but the actual length of the interviews varied greatly. The shortest interview lasted 29 minutes, whereas the most extended one was 1 hour and 39 minutes. A very significant was whether the respondent was interested in some interview topics and whether they had any previous similar experience. An NGO worker who had conducted in-depth interviews himself was able to forward a large amount of important information concisely and in a structured way. At the same time, a university student not used to participating or leading research spoke for twice as long with the same amount of information delivered.

## 6.2.2 Interview findings

The complete respondents' answers are in a slightly polished and structured version attached in the Appendix D. They brought several essential insights into users' thoughts and habits. The application's direction was slightly changed to respond to users' needs and wants. The main requirements deduced from the interviews are described in the section 6.3. The following section highlights key findings that affected the subsequent design processes.

### Relationship to the environment

All respondents agreed that they cared about environmental protection and tried to participate as much as possible. The level of involvement varied from respondent to respondent. All stated that they thought recycling should have been automatic, but only part of them tried to recycle more than paper and plastic. Some also sorted aluminium, and a few respondents also had ways to at least partially compost, or they planned to find some in the near future. Most respondents also tried to reduce their waste by reusing things and avoiding single-use plastics.

Almost all respondents also agreed that they did not follow any strict diet – non of them were vegetarian nor vegan – but they did try to, on some level, reduce the amount of eaten meat. Reasons for that were partially environmental but partially also ethical or healthy aspects.

There were two main groups of answers regarding the source of information. The first group got them mainly passively, for example, from social media by following some influencers. That supports the marketing strategy that focuses on social media. It also opens a room for connecting the social media and the Info Corner section, building a solid follower base and improving awareness about the application. The second group, on the contrary, did not follow any influencers or anything similar. Their information came mainly from active research, mostly from articles or books reading. This group consisted mainly of secondary personas representatives.

The two groups had in common that both emphasised the importance of reliability. Several respondents directly stated that following some information and then finding it not true would strongly negatively affect them. Another shared opinion among some was that searching for such reliable sources could be time-consuming and be the reason why they did not have more information.

The other common opinion was that the habits should not severely limit their lives and, therefore, the changes needed to be gradual or that some were not possible right now. The respondents knew about other ways to participate in environmental protection. Most of them did plan to follow them in the future, but several (primarily respondents already working and with some already-established lifestyle) stated that they were happy in their current state.

### Online shopping

Experiences of the users in online and second-hand shopping varied. Most of them had shopped online before, and many started to do so more during the pandemic. Most of them agreed that they did not buy clothes as they needed to try them. They also had bought something second-hand, but the frequency was very different for all respondents. Interestingly, clothes were commonly referred to as a bought item even in online second-hand shops. None of the respondents stated that they would think that shopping from someone is somehow less worthy, but one respondent mentioned that she has a problem wearing clothes from someone she did not know. Therefore she preferred to swap with her friends. The other problem with shopping second-hand online was the uncertainty about the item's state. The most common thing for second-hand shopping, even more than clothes, was books.

Convenience was mentioned as the biggest issue with selling online. Several people noted that they like to sell books through Rekihy or Knihobot.cz as the only thing they needed to do was bring the books to them. They did not need to take pictures, publish the items, store them somewhere and then worry about transportation – own transport was mentioned as a favourite

feature. Except of Reknihy and Knihobot.cz, Vinted, followed by Facebook Marketplace or Groups, were mentioned as the most commonly used for selling and buying. Vinted's friendly interface and Facebook's all-in-one functionalities were highlighted. Aukro was mentioned more negatively as too crowded and the auction-style not preferred. Therefore, the Market section was redesigned into shopping for a fixed price instead of auctions.

## Charity

All respondents agreed that they supported some charities, mainly financially. Part of them did so regularly with preset payments, but all responded to actual topics and problems. Most did not have an experience with volunteer work or, if so, mostly more for fun and community reasons. Just as with the environmental issues, information was also needed here. It was important for respondents to know the charity's background and support its cause.

Some respondents also stated that they participated in charity events where they performed their normal activities but, by doing so, helped someone. However, in this context, one respondent mentioned a problem with greenwashing, when companies organised these events to look environmental-friendly but did much more damage in the background with their other activities.

## Technology

The most surprising and significant finding from this part was that many respondents preferred to work on their computers over smartphones. Some even tried to limit their smartphone usage to a bare minimum. One respondent directly stated that she never shopped on a smartphone for safety and comfort reasons – she always used a computer. Based on this information, the web client was added to all designs and business plans.

None of the users regularly used any habit tracker app on their smartphones as they did not want anything to organise how they learned the habits. Nevertheless, many stated that they understood that people with the less inner motivation needed these applications.

## Opinion on the application

The overall idea of the application was well received. All users liked the concept. Surprisingly the most highlighted functionality was the Map section, which was under consideration at that time of the interviews. Based on the interviews, it was added as a functionality required for the full version of the application. Another bonus seen by many was the source of information and ideas the app represents. Several respondents, mostly expected secondary personas representants, stated that they would not use the habit learning functionalities even though they could imagine downloading the application for its other features – the Map section above or the Market section.

Two aspects were mentioned as the primary motivation for using the application - the first one was the expected motivation through the support of charities. However, with almost the same importance, the other was the social aspect, where users could follow each other and see their progress. Several respondents mentioned that they would welcome the possibility of teaming up and following some challenges together. This functionality was therefore considered and added to the designs.

Several mentioned problem was that sellers, who give up their item for a lower price or even for free, could not significantly influence to which charity money from their item would go. Therefore a charity disapproved of by them could be supported with their money. An alternative way was proposed - instead of dividing money between selected charities, the points would pick the following charities that would later get all the same amount of money. However, as most of the target group did not see it as a problem and one respondent even had a positive experience, it was decided to stay with the original concept.

## 6.3 Requirements

### 6.3.1 Functional requirements

#### Online second-hand shopping

- **FR01 Buy an item for a fixed price** – Buyer knows from the beginning how much an item costs.
- **FR02 Search and filter items for interested categories** – Buyer can filter all offered items just for items in his area of interest.
- **FR03 Sell an item for a fixed price** – Seller knows from the beginning how much will he earn and how much goes to charities.
- **FR04 Get information about the purchased item's state** – Buyer can determine what state the purchasing item is in before buying it.
- **FR05 Communicate with trade partner** – The user can communicate with the other part of the trade to discuss details.
- **FR06 Rate trade partner** – The user can rate their trade partner based on their experience.
- **FR07 Personal handover option** – It is possible to offer the item for personal pick up.
- **FR08 Donate the whole received amount to charity** – The user can give up all his earnings to benefit charities.

#### Habit tracking

- **FR09 Note the user's progress on a habit** – The user can note when completing a habit.
- **FR10 Compare a user's progress with a friend** – The user can see the progress of users he marked as friends and follow their activity.
- **FR11 Follow a team challenge** – The user can be part of a team and follow a common challenge.
- **FR12 Choose what habits to follow** – user can select specific habits from his area of interest to follow.

#### Environmental protection information

- **FR13 Find new ways to protect the environment** – user can learn about new ways he can help protect the environment.
- **FR14 Get reliable information about environmental protection** – The user can get more information about environmental topics.
- **FR15 Find environmental-friendly places around** – The user can find an environmental-friendly place around him from a specific category.
- **FR16 Discover new environmental-friendly places** – The user can discover new places and types of environmental places.

#### Charities help

- **FR17 Donate money** – The user can donate money even without buying anything.

- **FR18 Suggest a new charity for donations** – user can suggest a new charity to be added to the list of possible charities.
- **FR19 Discover new charities** – user can learn about new charities he can help.
- **FR20 See concrete projects the user donates to** – user knows precisely where and to what cause he is helping.

### 6.3.2 Non-functional requirements

- **NR01 Supported platforms** – The system will be available as a mobile application for Android and iOS and also in a web browser as a web application.
- **NR02 Localisation** – The system is developed primarily for users from the Czech Republic. Therefore the application will be in Czech.
- **NR03 Availability** – The system should be available 99.5 % as it is expected to be used at any time and day.
- **NR04 Security** – All actions must be traceable to a user. All user data must be protected against outside attackers. A secured payment gate must be used for trade payments.
- **NR05 Performance** – The system will respond to two seconds in 95 % and always within a maximum of five seconds. If there is a prolonged loading time, the user must be informed about the reason and progress.

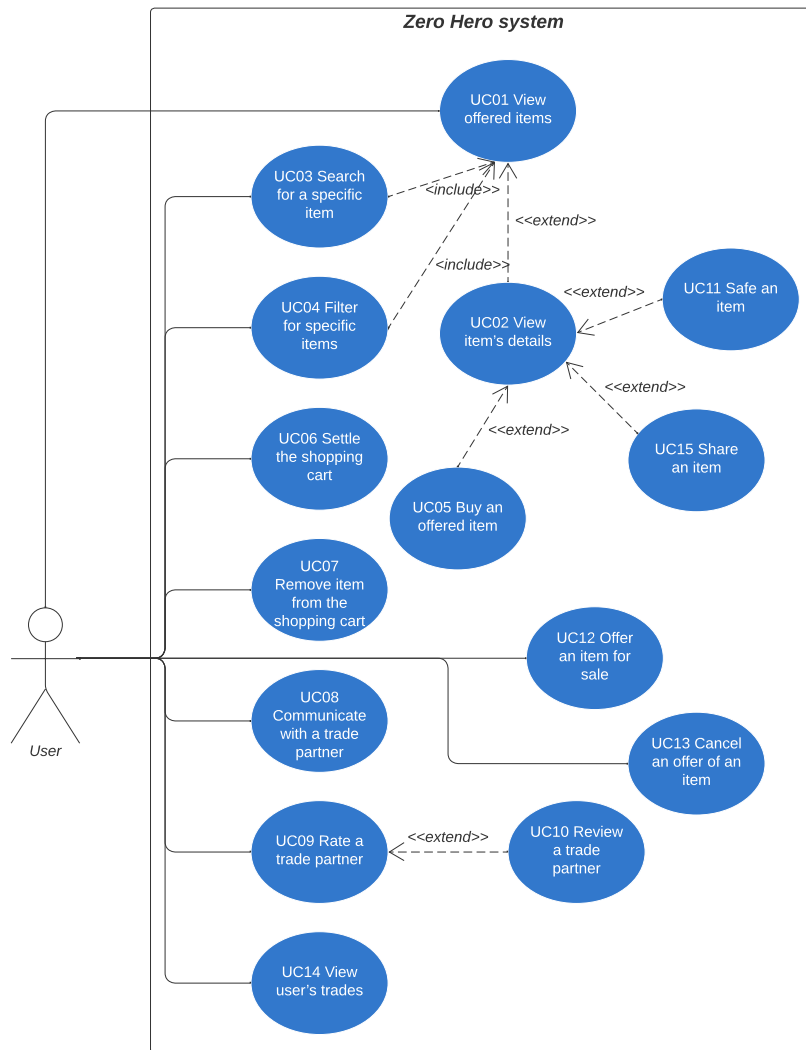
## 6.4 Use cases

Use Cases describe all the actions users can do with the system. They cover and extend all the functional requirements from the last section. They are divided for clarity into groups by the application section to which they are related. To easy control that all functional requirements are covered, they are mapped on Use Cases in Figure 6.1.

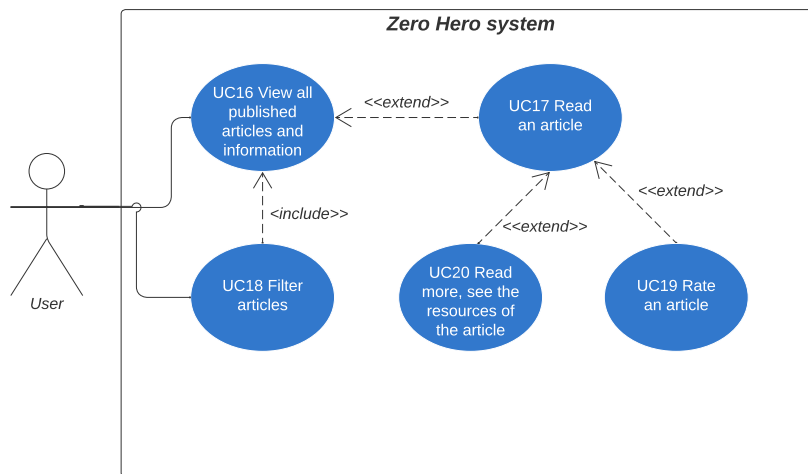
### 6.4.1 Market functionalities

Use cases covering market functionalities describe all possible actions offered to users in the section Market, which focuses on second-hand online shopping. Use Case Diagram for this group can be seen in Figure 6.1.

- **UC01 View offered items** – The system allows the user to view items offered to sell by other users.
- **UC02 View item's details** – The system allows the user to view item's details such as price, description or state.
- **UC03 Search for a specific item** – The system allows the user to search for an item.
- **UC04 Filter for specific items** – The system allows the user to filter for a specific category of items.
- **UC05 Buy an offered item** – The system allows the user to buy an available item.
- **UC06 Settle the shopping cart** – The system allows the user to finish the trade and pay for items in the cart.



■ **Figure 6.1** The Use Case Diagram of Market functionalities



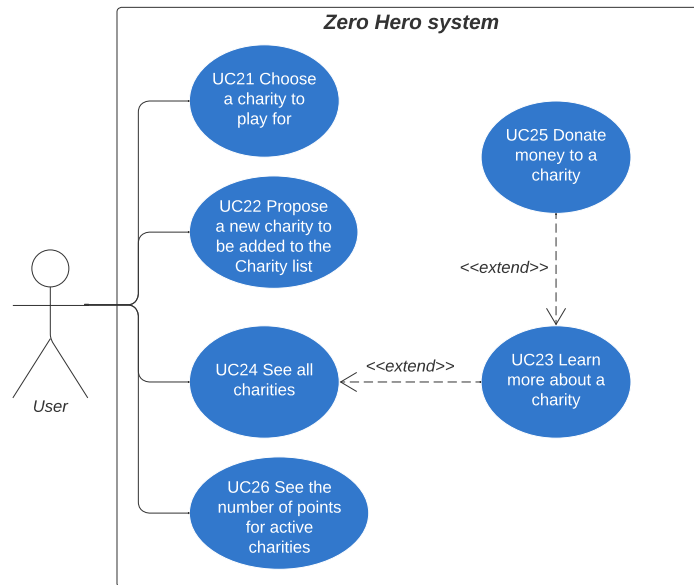
■ **Figure 6.2** The Use Case Diagram of Info Corner functionalities

- **UC07 Remove item from the shopping cart** – The system allows the user to remove an item from the cart.
- **UC08 Communicate with a trade partner** – The system allows the user to communicate with their trade partner and make clarifications.
- **UC09 Rate a trade partner** – The system allows the user to rate their experience with their trade partner.
- **UC10 Review a trade partner** – The system allows the user to review their experience with their trade partner.
- **UC11 Save an item** – The system allows the user to save an offer item for later consideration.
- **UC12 Offer an item for sale** – The system allows the user to display an item for sale for other users to see with all information about the item and its transportation.
- **UC13 Cancel an offer of an item** – The system allows the user to delete the offer, so the item is no longer available for sale.
- **UC14 View user's trades** – The system allows the user to see his past and current trades - both from the seller's and the buyer's point of view.
- **UC15 Share an item** – The system allows the user to share the item outside of the system - for example, on social media or as a private message.

### 6.4.2 Info Corner functionalities

Info corner functionalities are functionalities focused primary on user education. It offers various options for reading and going through articles written by experts from different areas connected somehow to environmental protection. Use Case Diagram for this group is shown in Figure 6.2.

- **UC16 View all published articles and information** – The system allows the user to browse through published articles in the information section.



■ **Figure 6.3** The Use Case Diagram of Charities functionalities

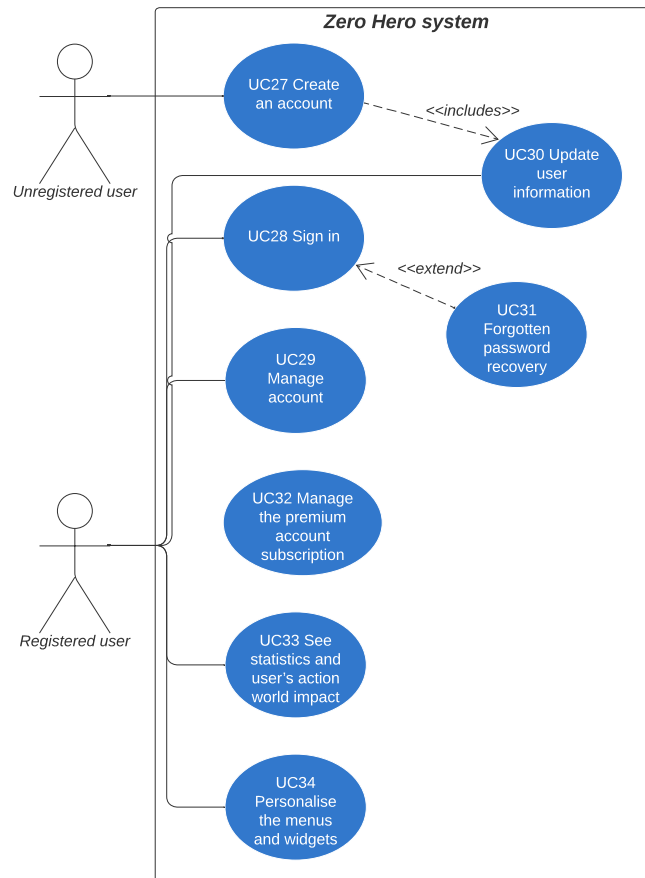
- **UC17 Read an article** – The system allows the user to read an article of his interest.
- **UC18 Filter articles** – The system allows the user to filter articles based on their preferences and areas of interest.
- **UC19 Rate an article** – The system allows the user to rate an article and thus give their opinion on it.
- **UC20 Read more, see the resources of the article** – The system allows the user to see the resources of the articles, offers links to external online sources and gives other sources to get more information about the article's topic.

### 6.4.3 Charities functionalities

This group describes actions connected to charities from both passive informative and active supporting sides. Users, therefore, can, for example, discover new charities or donate money to some. Use Case Diagram for this group is depicted in Figure 6.3.

- **UC21 Choose a charity to play for** – The system allows the user to choose the charity for which to collect points for a given period
- **UC22 Propose a new charity to be added to the Charity list** – The system allows the user to propose a charity that is not part of the system to be added so it can be targeted as one of the competing charities.
- **UC23 Learn more about a charity** – The system allows the user to get more information about a charity and its background, activities and projects.
- **UC24 See all charities** – The system allows the user to see the list of all charities participating in the system - not just currently active.





■ **Figure 6.4** The Use Case Diagram of User management functionalities

- **UC25 Donate money to a charity** – The system allows the user to give money to charities without buying goods on the Market site.
- **UC26 See the number of points for active charities** – The system allows the user to see how are the active charities standing against each other.

#### 6.4.4 User management

As the application cannot be used anonymously, a user account is needed. Therefore, this group of use cases describes activities users can do with their accounts. Use Case Diagram about user management functionalities is shown in Figure 6.4.

- **UC27 Create an account** – The system allows the user to create a user account.
- **UC28 Sign in** – The system allows the user to log into the user account.
- **UC29 Manage account** – The system allows the user to manage their account.
- **UC30 Update user information** – The system allows the user to change their user information.

- **UC31 Forgotten password recovery** – The system allows the user to create a new password when forgetting the previous one.
- **UC32 Manage the premium account subscription** – The system allows the user to subscribe to or cancel their subscription to a premium account.
- **UC33 See statistics and user's action world impact** – The system allows the user to see statistics of their system usage and impact on the world.
- **UC34 Personalise the menus and widgets** – The system allows the user to personalise which widgets will be visible on the home screen and which section will be visible in menus based on their preferences and system usage intentions.

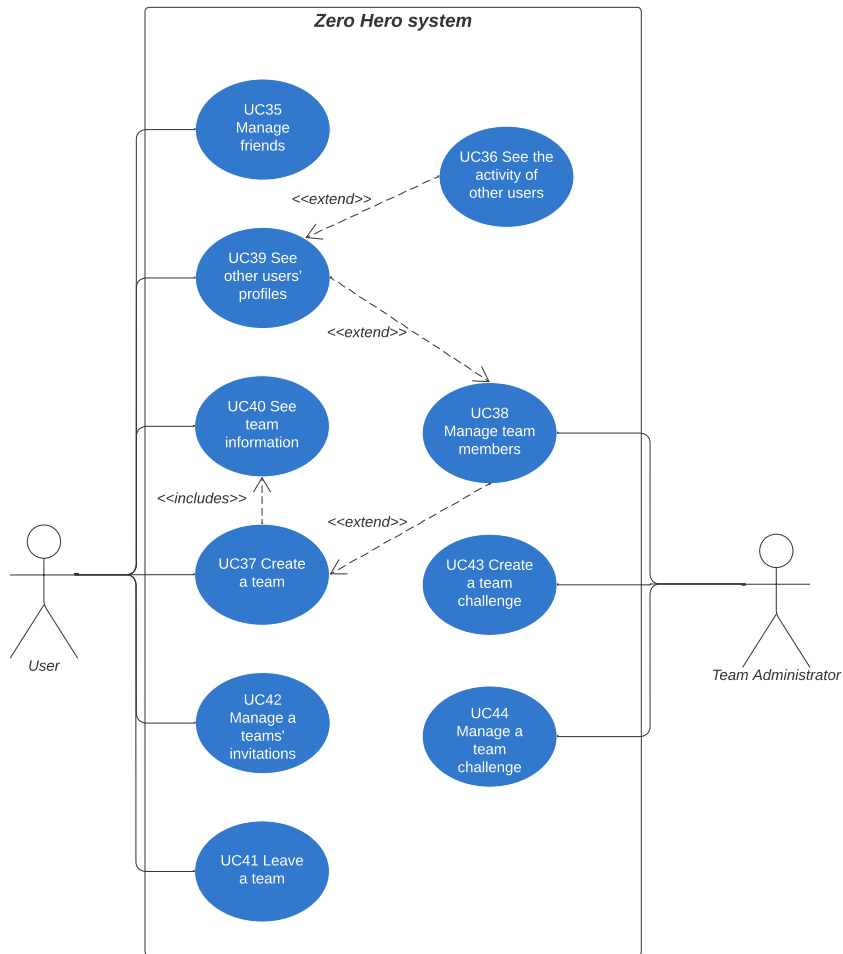
### 6.4.5 Teams and friends management

One of the highlighted and wanted functionalities from in-depth interviews was the possibility of comparing, competing, or cooperating with other users. Therefore, this group of use cases cover possible actions in this area. Use Case Diagram for this group is displayed in Figure 6.5.

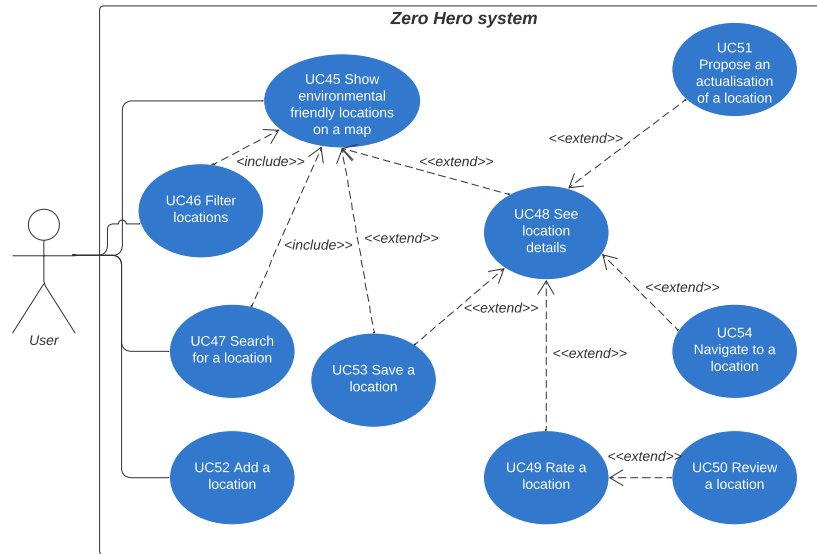
- **UC35 Manage friends** – The system allows the user to add or remove friends from the friends' list of the system.
- **UC36 See the activity of other users** – The system allows the user to see the activity of other users - friends, team members or other general users - and compare their actions with them.
- **UC37 Create a team** – The user can create a team with his friends for specific challenges or targets.
- **UC38 Manage team members** – The system allows the user to invite other users to join the team or remove them. Users also can add or revoke rights to manage the team to some team members.
- **UC39 See other users' profiles** – The system allows the user to view information about other users.
- **UC40 See team information** – The system allows the user to see team information such as members, targets, purpose, and more.
- **UC41 Leave a team** – The system allows the user to leave a team.
- **UC42 Manage a teams' invitations** – The system allows the user to accept or decline team invitations.
- **UC43 Create a team challenge** – The system allows the user to create a challenge for their team.
- **UC44 Manage a team challenge** – The system allows the user to update or change the team challenge.

### 6.4.6 Map functionalities

Another very positively accepted part of the application was the Map section. All possible actions from it are listed in this group. Use Case Diagram for Map functionalities is depicted in Figure 6.6.



■ **Figure 6.5** The Use Case Diagram of Teams and friends managements functionalities

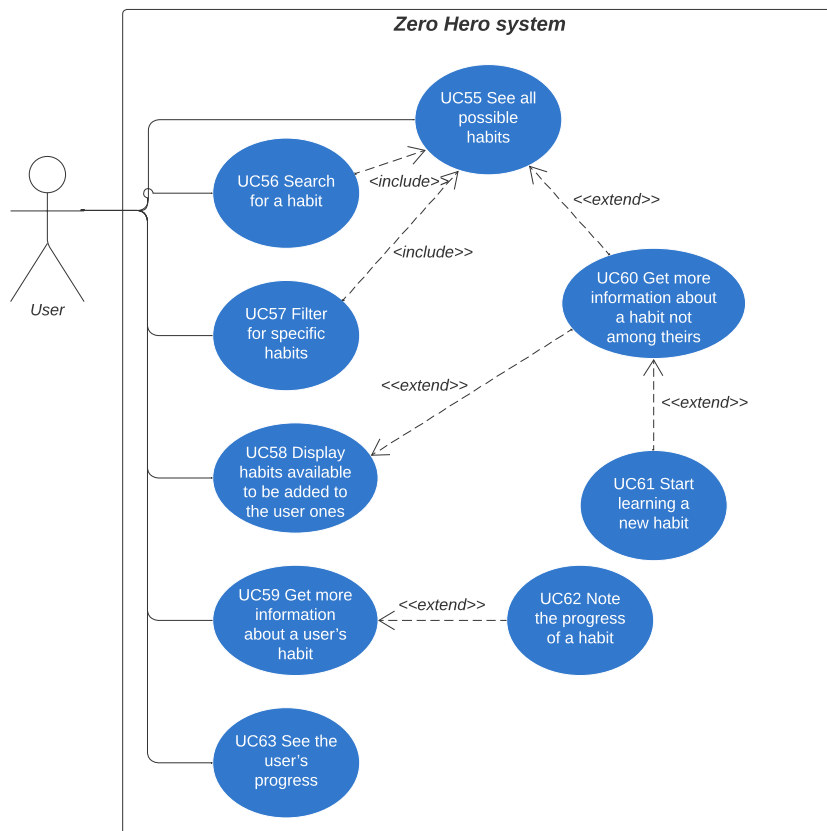


■ **Figure 6.6** The Use Case Diagram of Map functionalities

- **UC45 Show environmental friendly locations on a map** – The system allows the user to see environmental friendly locations on a map.
- **UC46 Filter locations** – The system allows the user to filter shown location based on their preferences or specific categories.
- **UC47 Search for a location** – The system allows the user to search for a specific location.
- **UC48 See location details** – The system allows the user to view location details such as type, photo, rating, comments, opening hours, description and more.
- **UC49 Rate a location** – The system allows the user to give their opinion by rating a location.
- **UC50 Review a location** – The system allows the user to give their opinion by reviewing a location.
- **UC51 Propose an actualisation of a location** – The system allows the user to propose a location update when the information on the map is not accurate.
- **UC52 Add a location** – The system allows the user to add a new location to the map.
- **UC53 Save a location** – The system allows the user to save a location.
- **UC54 Navigate to a location** – The system offers the user a way to navigate to a location.

### 6.4.7 Habits learning functionalities

This group describes use cases focused on habit learning and tracking. They describe all the possible actions in the Habit section. As teaching users environmental-friendly habits is the primary goal of the application, this group is described in more detail also using scenarios. A hi-fi prototype is also created in section X for functionalities from this group. Use Cases regarding habits learning are shown in Use Case Diagram in Figure 6.7.



■ **Figure 6.7** The Use Case Diagram of Habits learning functionalities

### UC55 See all possible habits

- **Description:** The system allows the user to view all available habits.
- **Pre-condition:** The user is logged in and is on the Home screen.
- **Scenario:**
  1. The user presses a Habit button in the main intersection navigation bar.
  2. System display My habits screen. All their habits are shown, a button to add a new habit as theirs, and the user's points chain, where the current day is highlighted. A navigation menu between My habits and All habits screens is displayed.
  3. The user presses the All habits button.
  4. The system displays All habits screen. A list of all habits with its name, points, category and short description is shown under the navigation menu instead of the user's habits and points chain. A search bar with a filter option is also displayed.

### UC56 Search for a habit

- **Description:** The system allows the user to search for a specific habit.
- **Pre-condition:** The user is logged in, and all possible habits are displayed (UC55).
- **Scenario:**
  1. The user starts filling the search bar.
  2. The system shows all possible habits searching corresponding to the search bar current input in the same format as before the user started.

### UC57 Filter for specific habits

- **Description:** The system allows the user to filter the habits based on specific criteria.
- **Pre-condition:** The user is logged in and has all possible habits displayed (UC55).
- **Scenario:**
  1. The user presses the filter icon button.
  2. The system displays a filter menu with all possible categories listed. The previous user's preferences are checked. If the user has not expressed any preferences before, all options are checked.
  3. User checks or unchecks preferred categories.
  4. The system in the background displays all habits from all checked categories.
  5. The user closes the filter menu.
  6. The system displays all habits from checked categories.

### UC58 Display habits available to be added to the user ones

- **Description:** The system displays all habits that the user currently does not have among their habits.
- **Pre-condition:** The user is logged in, and the My habits screen is displayed.
- **Scenario:**

1. The user presses the Plus button.
2. The system displays all available habits with their name, points, category and short description.

#### UC59 Get more information about a user's habit

- **Description:** The system allows the user to access information about the background of their habit.
- **Pre-condition:** The user is logged in and is on the My habits screen.
- **Scenario:**
  1. The user presses a wanted habit card.
  2. The system displays a detailed habit card with the habit's name, points, category, long description, possible external links if existing, and a button to mark the completion of the habit.

#### UC60 Get more information about a habit not among theirs

- **Description:** The system allows the user to access information about the background of a habit that does not belong among the user's habits.
- **Pre-condition:** The user is logged in and is on the My habits screen.
- **Scenario:**
  1. The user displays all his habits (UC55)  
**Alternative 1a:** Press of Plus button
  2. The user presses a wanted habit card.
  3. The system displays a detailed habit card with the habit's name, points, category, long description, possible external links if existing, and a button to add the habit to the user's ones.
- **Alternative scenario 1a:** Press of Plus button
  1. The user presses the Plus button.
  2. The system displays available habits to be added to the user ones (UC58).
  3. The user presses a wanted habit card.
  4. The system displays a detailed habit card with the habit's name, points, category, long description, possible external links if existing, and a button to add the habit to the user's ones.

#### UC61 Start learning a new habit

- **Description:** The system allows users to add a new habit to the habits they are interested in learning.
- **Pre-condition:** The user is logged in and is on the wanted habit screen (UC60).
- **Scenario:**
  1. The user presses the Plus button.
  2. The system displays the My habits screen with the habit added to the user's ones.

### UC62 Note the progress of a habit

- **Description:** The system allows the user to mark down every occurrence the user makes an action complying with the habit.
- **Pre-condition:** The user is logged in and is on the executed habit screen (UC59).
- **Scenario:**
  1. The user presses the Done button.
  2. The system displays the My habits screen with the current day's points increased by the habit's number of points.

### UC63 See the user's progress

- **Description:** The system allows the user to see the progress of all their active habits.
- **Pre-condition:** The user is logged in and is on the home screen.
- **Main scenario:**
  1. The user presses a Habit button in the main intersection navigation bar.
  2. System display My habits screen. All their habits are shown, a button to add a new habit as theirs, and the user's points chain, where the current day is highlighted. A navigation menu between My habits and All habits screens is displayed. The progress is seen in the user's points chain.









## Chapter 7

# Design

### 7.1 Wireframes

Wireframes were created for user interface design, possible future testing, and a basis for the subsequent creation of a hi-fi prototype. The wireframes cover all functionalities described in the previous section but do not focus on the fault behaviour of the application or the user (for example, error messages are not designed). In this section, the basic structure of the application is introduced. The clickable wireframes can be found on the attached electronic medium as a PDF file and a BMPR file to run it with all functionalities in the Balsamiq Cloud program in which the wireframes were created. As was already written, this thesis focuses primarily on the mobile app. Therefore the design was not done for the web client but only for the mobile application.

#### 7.1.1 Home section

The first main section of the application consists of four parts – Overview, Charities, Social and Profile. They are displayed in Figure 7.1.

The Overview is the first screen user sees after logging into the application. It is editable, so users can change what widgets they see in the profile settings. It shows the user basic information about his points of interest.

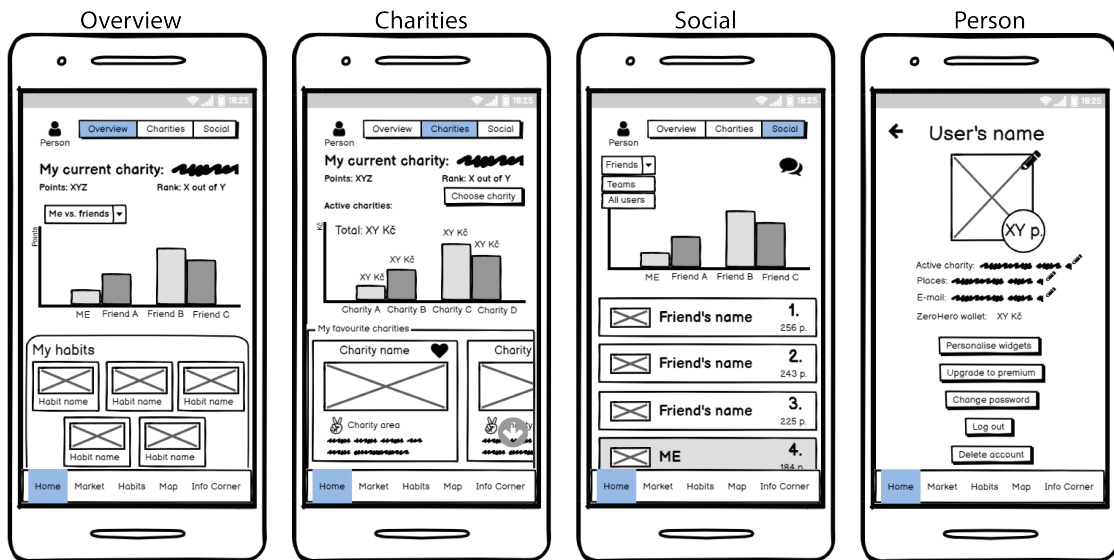
The Charities part contains all information about charities users could need. It allows them to choose their charity to represent, see their favourite charities, brows or registered ones and even propose a new charity.

The Social parts offer users to find, follow, compare themselves and chat with other users. It also allows them to be part of teams and participate in team challenges thanks to three different views - Friends, Teams, and All users.

The last part – Profile – is mainly for managing users' accounts. Users can set their preferred widgets, upgrade to or manage their premium subscription or change their information.

#### 7.1.2 Market section

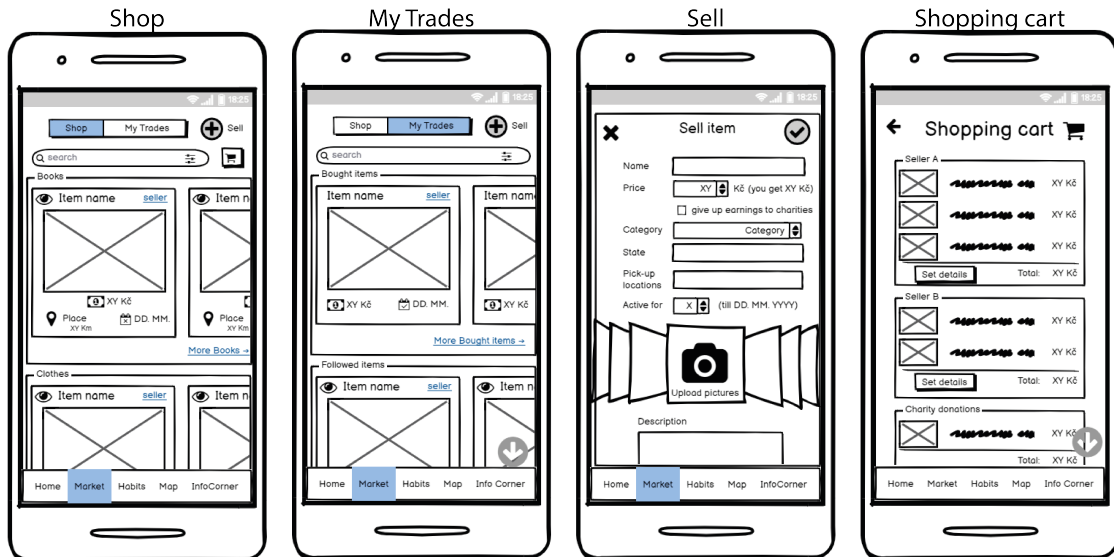
The Market section also consists of four main parts – Shop, My Trades, Sell and Shopping cart. They are shown in Figure 7.2. Users can browse through offered items, see the overview of all their trades – both from the side of sellers and buyers – and also put a new item for sale. The Shopping cart section represents the classic shopping cart known from online stores. That means



■ **Figure 7.1** Wireframes describing the Home section of the mobile application Zero Hero

users can pay for items simultaneously, even from different sellers. The only thing they need to do is select the means of transport for every seller.

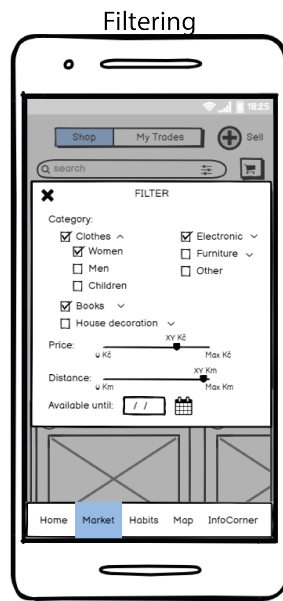
As the whole application is quite complex, it is crucial to allow users to concretise their needs as much as possible. Therefore everywhere where there are lists with multiple topics, the option for search or filtration is possible. The example from the Market section is visible in Figure 7.3.



■ **Figure 7.2** Wireframes describing the Market screens of the mobile application Zero Hero

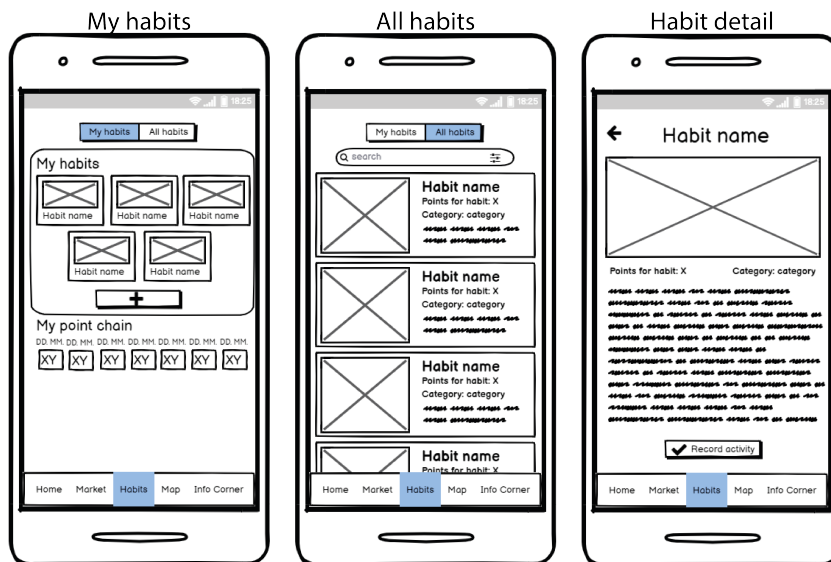
### 7.1.3 Habits section

Similarly to the Market section, this one is also divided into users' habits and an overview of all habits (Figure 7.4). The My habits section gives an overview of users' habits, so the notation of



■ **Figure 7.3** Wireframe of the filter option in the Market section in the application Zero Hero

habit execution is as simple as possible. A chain of users' collected points is also visible to keep them motivated. The All habits part is filterable and searchable, just like the Market section. To adequately explain the background of the habit to users, the habit detail is also a crucial part of the application.



■ **Figure 7.4** Wireframes describing the Habits section of the mobile application Zero Hero

### 7.1.4 Map section

The places in the Map section can be displayed in four depths of detail – only on the map, with a combination of the map and a brief overview cards, only a list of places card, or a single

place detail screen – as shown in Figure 7.5. User, therefore, can choose what information is the most important for him - position, description, or similar – and browse the places based on that. Each view also allows users to do different actions with the places, such as adding them to their favourite, proposing changes, rating it, or even adding a new place.



■ **Figure 7.5** Wireframes showing the Map screens of the mobile application Zero Hero

### 7.1.5 Info Corner section

The Info Corner section – again searchable and filterable – with articles from various experts allows users to categorise the articles. They can mark them either as bookmarked articles for further reading or favourite articles.

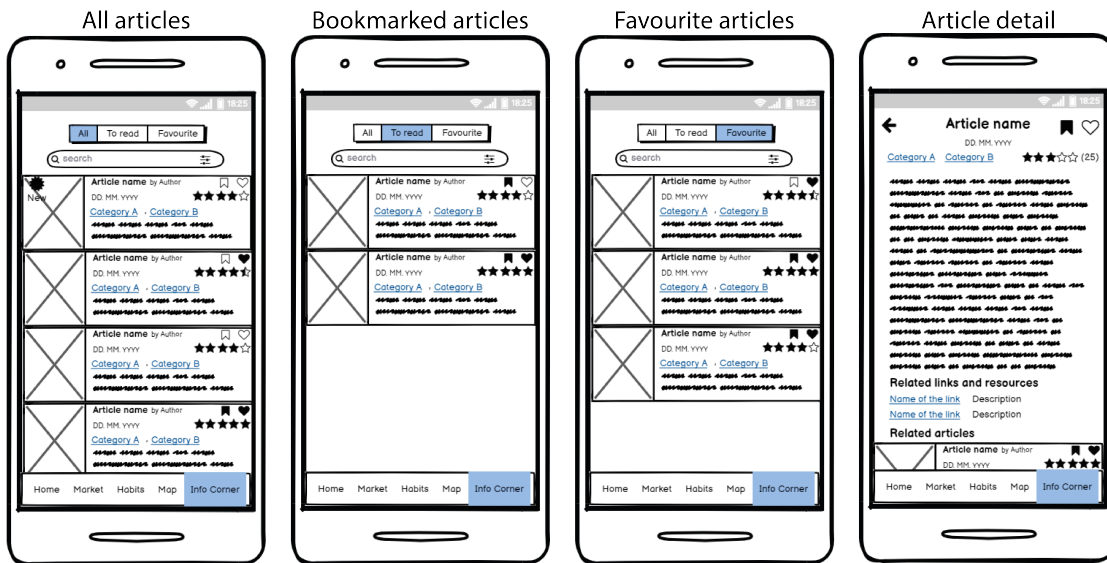
In addition to the article itself, each article offers links to related readings and resources. It also suggests other articles in the application from the same category or focused on the same topic. Wireframes displaying this section are visible in Figure 7.6.

## 7.2 Hi-fi prototype

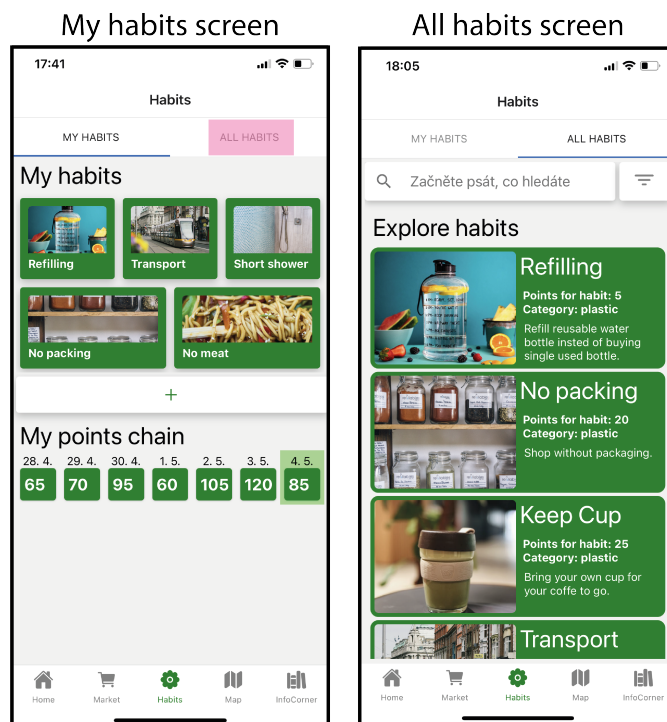
For a real-life demonstration and more realistic potential testing, a hi-fi prototype was made for a part of the mobile application. This prototyped part covers use cases from Habits learning functionalities described in subsection 6.4.7. It was created using the React Native framework in the open-source platform Snack and the mobile application Expo Go.

The source codes of the prototype can be found on the attached electronic medium. The way to run this prototype on the reader's device is described in the readme.txt file also on the attached electronic medium.

The prototype focuses on the whole Habits section. It, therefore, contains functionalities such as noting execution of habits or browsing and discovering habits. In Figure 7.7 the first use case, UC55 See all possible habits is visualised. After opening the Habits section, users can easily switch between the two screens – My habits and All habits – using the upper navigation bar. After switching to All habits screen, a list of all habits is shown with the possibility to search through or filter it.



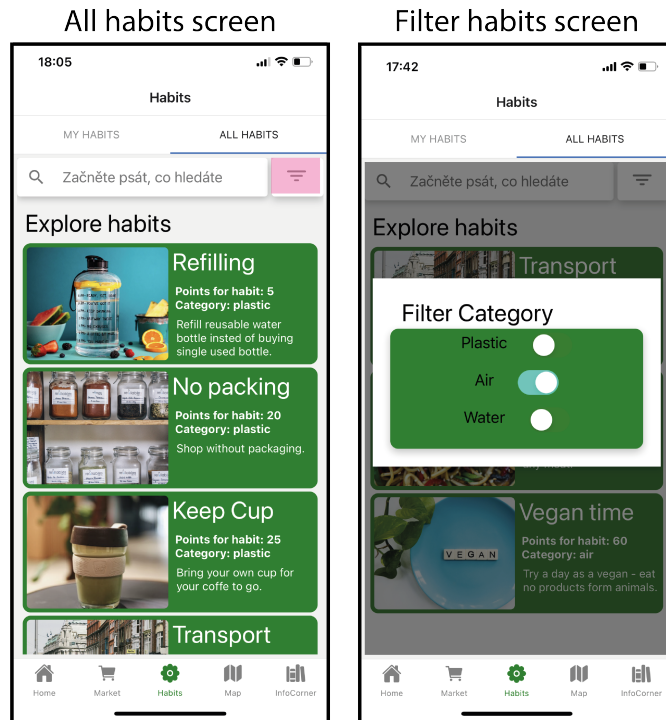
■ Figure 7.6 Wireframes showing the Info Corner screens of the mobile application Zero Hero



■ Figure 7.7 Hi-fi prototype – Seeing all possible habits

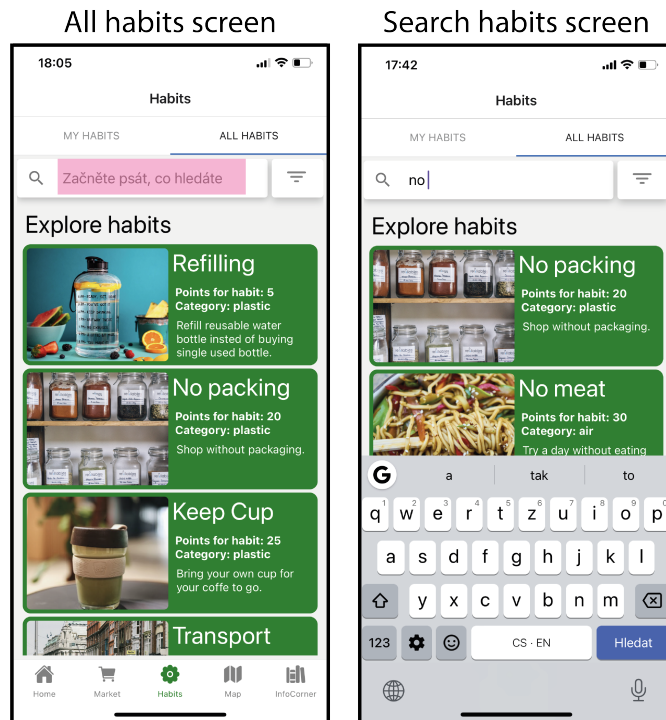
Figure 7.8 display the example of the fulfilment of UC56 Search for a habit. That is done on the All habits screen, where users only need to tap the search bar and start typing the searched word. The content of the list changes automatically as they write.

UC57 Filter for specific habits is shown in Figure 7.9. Similar to the previous use case, this one is also fulfilled in the All habits screen. Users need to press the filter icon button, and the filter menu appears. The list again changes automatically as any changes are made in the filter



■ Figure 7.8 Hi-fi prototype – Filtering habits

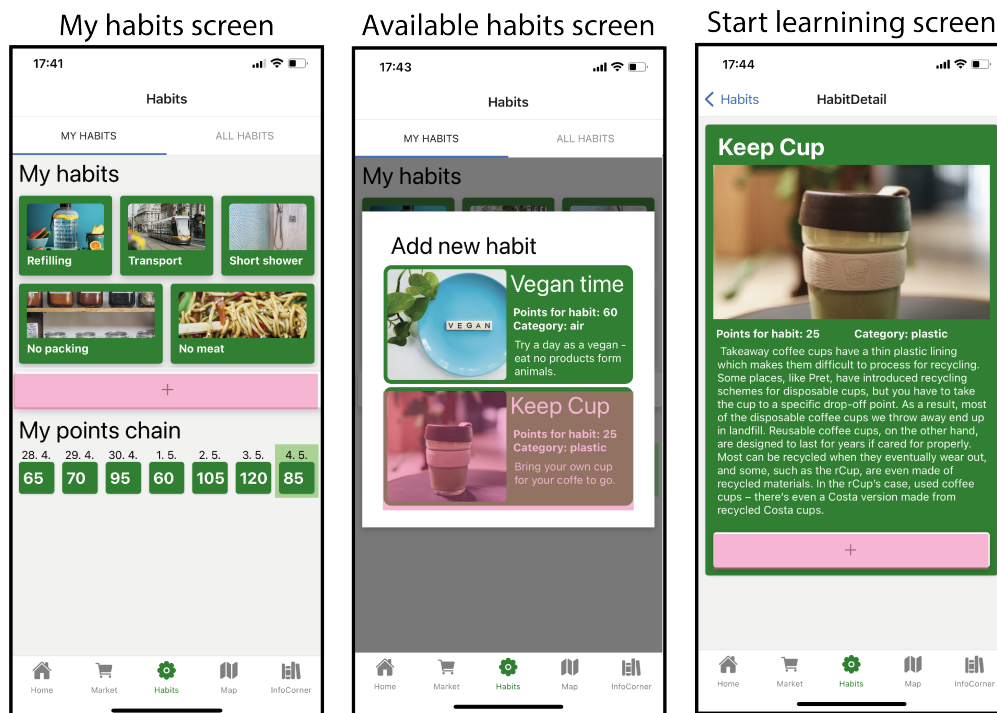
menu.



■ Figure 7.9 Hi-fi prototype – Searching habits



Figure 7.10 covers UC58 Display habits available to be added to the user ones, UC60 Get more information about a habit not among theirs, and UC61 Start learning a new habit. Users go through the available habits list to a detailed card about a habit they can and possibly want to start learning. There they press a button to start following it.



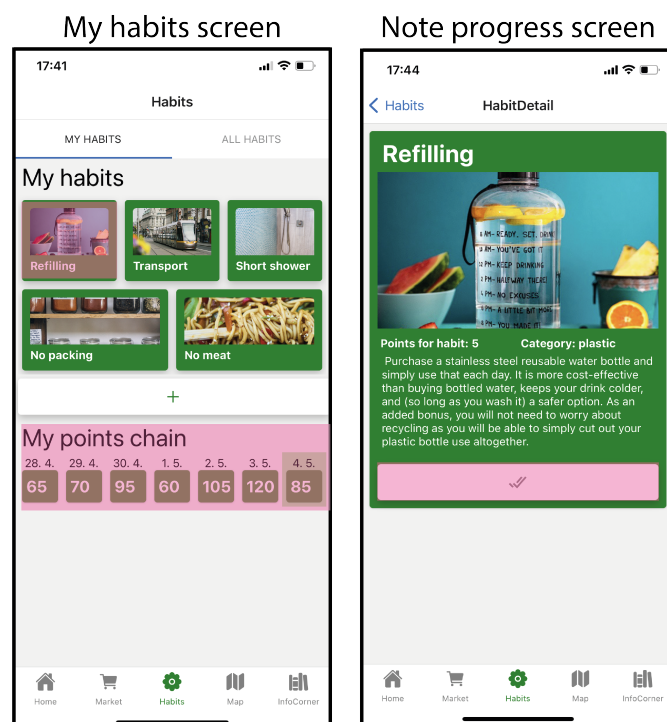
■ **Figure 7.10** Hi-fi prototype – Displaying available habits, getting more information about them and learning a new habit

Figure 7.11 also contains more than one use case. UC59 Get more information about a user's habit, UC62 Note the progress of a habit, and UC63 See the user's progress are covered by this figure. Users only press the habit card they want to notice the execution, and the details about the habit show. Users press the done button there, and the points are added to their accounts. On the main screen, there is also possible to see this points chain, where points per day are noticed.

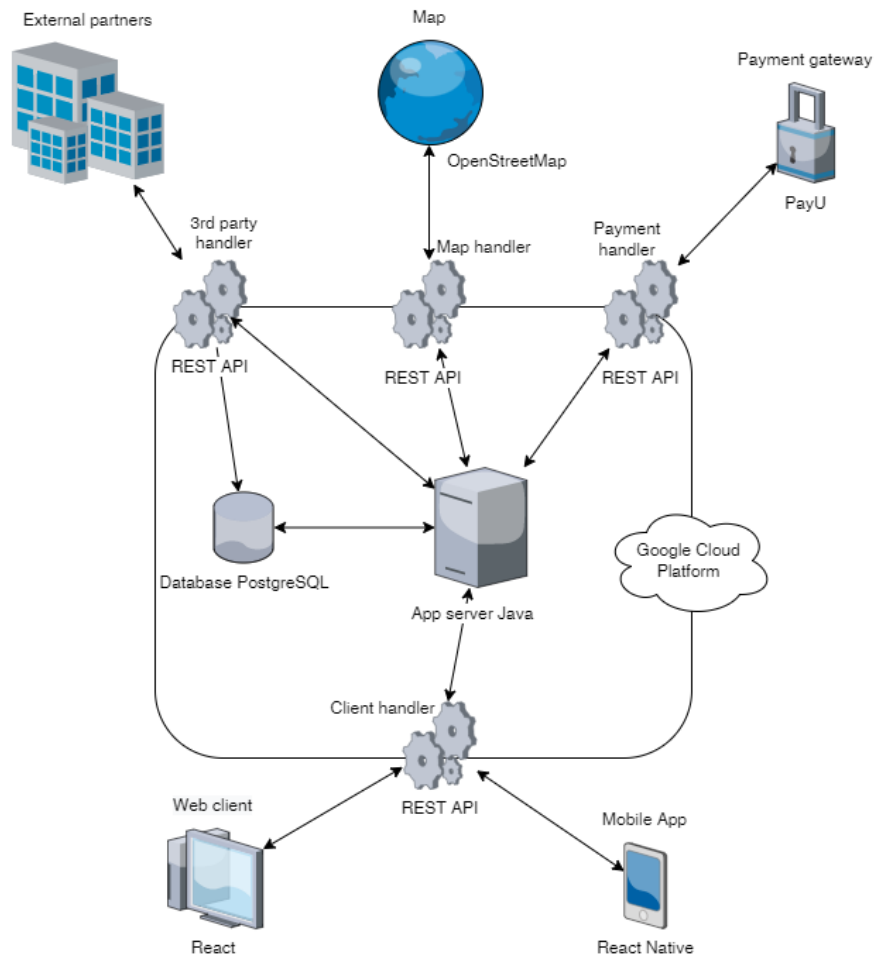
### 7.3 Architecture design

This thesis focuses mainly on the mobile application part of the system. However, one of the conclusions from the in-depth interview was a request for the application to have a web client, too, to allow users to use it on their computers. Therefore the architecture counts with two possible types of client – a mobile app or a web client. Both communicate with the backend through a client handler. Like all other handlers of the system, that uses REST API.

The backend with the database will run on a cloud - Google Cloud Platform was selected. The system needs to be connected to several external entities such as map provider, payment gate and other potential external partners (for example, providing data to display environmental places on the map). An overview of the architecture is in Figure 7.12.



■ **Figure 7.11** Hi-fi prototype – Getting more information about user’s habit, noting its progress and seeing the progress



■ **Figure 7.12** The system architecture of the system Zero Hero



## Further system development

The outcome of this work is a fully prepared business case with detailed financial and time plans that further project participants can follow during the subsequent phases of this project. The design part of this thesis focused only on selected sections of the mobile application. Therefore the first following steps need to be finalising the design process of the mobile application and creating a design for the web client. Despite the system's complexity, emphasis must be placed on the simplicity of the user interface as much as possible. Therefore the existing part of the design is created in light mode, and unnecessary elements (both functional and design) were omitted. The following work should continue in the same way to not overwhelm users.

Besides finishing the design, the first round of testing is also necessary as it was not part of this work. As the Design Thinking method states, it is needed to verify that our ideas and designs are met with users' needs. As this thesis already tested ideas during the in-depth interviews, the design and overall functionality should follow. The project should be potentially adapted more based on the testing results. The rest of the project should continue as planned in section X.

After finalising and deploying the system into production, maintenance, service, and further development are necessary to establish and support. Some possible innovations in the feature are more detailed statistics about users' impact on the world or connection with environmental partners and involving them in the system (for example, by importing their data into the system map). Useful functionality would also be combining packages related to different people according to sending and receiving areas.

Another option is implementing machine learning techniques to help with better personalisation of the application, for instance, suggesting items in Market, habits in the Habit learning section, places in the Map section or articles in Info Corner. A possibility is also automatic following the users' habits, for example, by connecting with a smartwatch.

Suppose the reality follows more the positive version of the financial plan. It offers to localise the system for other countries than just the Czech Republic – translation of the application, specific articles in Info Corner, places in the Map section and similar. On the contrary, if there is a problem with obtaining users for the Market section, establishing a partnership with already existing online second-hand stores or stone stores is an option.









 Appendix A

# List of Abbreviations

CTR	Click-through Rate
CVP	Customer Value Proposition
NPV	Net Present Value
PPC	Pay-pre-Click
UC	Use Case
WBS	Work Breakdown Structure



..... Appendix B

# Detailed financial plans

■ **Table B.1** Detailed financial plan - pessimistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms - Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Sep/22	205,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-205,088 CZK	-205,088 CZK
Oct/22	401,213 CZK	0	0	0 CZK	0 CZK	0 CZK	-401,213 CZK	-606,300 CZK
Nov/22	455,213 CZK	0	0	0 CZK	0 CZK	0 CZK	-455,213 CZK	-1,061,513 CZK
Dec/22	402,713 CZK	0	0	0 CZK	0 CZK	0 CZK	-402,713 CZK	-1,464,226 CZK
Jan/23	404,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-404,088 CZK	-1,868,313 CZK
Feb/23	439,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-439,088 CZK	-2,307,401 CZK
Mar/23	404,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-404,088 CZK	-2,711,488 CZK
Apr/23	382,588 CZK	0	0	0 CZK	0 CZK	0 CZK	-382,588 CZK	-3,094,076 CZK
May/23	364,141 CZK	0	0	0 CZK	468 CZK	468 CZK	-363,673 CZK	-3,457,749 CZK
Jun/23	302,141 CZK	0	97	0 CZK	2,148 CZK	2,148 CZK	-299,993 CZK	-3,757,742 CZK
Jul/23	233,516 CZK	5	181	97 CZK	4,080 CZK	4,177 CZK	-229,339 CZK	-3,987,081 CZK
Aug/23	233,516 CZK	9	360	189 CZK	7,213 CZK	7,402 CZK	-226,114 CZK	-4,213,194 CZK
Sep/23	233,516 CZK	19	530	375 CZK	10,178 CZK	10,553 CZK	-222,962 CZK	-4,436,157 CZK
Oct/23	233,516 CZK	28	699	558 CZK	13,138 CZK	13,696 CZK	-219,819 CZK	-4,655,976 CZK
Nov/23	233,516 CZK	37	867	739 CZK	17,123 CZK	17,861 CZK	-215,654 CZK	-4,871,631 CZK
Dec/23	233,516 CZK	46	1,249	917 CZK	23,801 CZK	24,718 CZK	-208,798 CZK	-5,080,428 CZK
Jan/24	233,516 CZK	65	1,609	1,307 CZK	30,103 CZK	31,410 CZK	-202,106 CZK	-5,282,534 CZK
Feb/24	233,516 CZK	85	1,968	1,692 CZK	36,392 CZK	38,083 CZK	-195,432 CZK	-5,477,967 CZK
Mar/24	233,516 CZK	104	2,327	2,072 CZK	42,668 CZK	44,740 CZK	-188,776 CZK	-5,666,742 CZK
Apr/24	233,516 CZK	122	2,685	2,448 CZK	48,932 CZK	51,380 CZK	-182,136 CZK	-5,848,878 CZK
May/24	233,516 CZK	141	3,042	2,820 CZK	55,844 CZK	58,664 CZK	-174,852 CZK	-6,023,730 CZK
Jun/24	233,516 CZK	159	3,535	3,189 CZK	64,477 CZK	67,666 CZK	-165,850 CZK	-6,189,580 CZK
Jul/24	233,516 CZK	185	4,014	3,693 CZK	72,858 CZK	76,550 CZK	-156,966 CZK	-6,346,546 CZK
Aug/24	233,516 CZK	210	4,492	4,191 CZK	81,220 CZK	85,411 CZK	-148,104 CZK	-6,494,650 CZK
Sep/24	233,516 CZK	234	4,968	4,686 CZK	89,564 CZK	94,250 CZK	-139,266 CZK	-6,633,916 CZK
Oct/24	233,516 CZK	259	5,444	5,176 CZK	97,890 CZK	103,066 CZK	-130,449 CZK	-6,764,365 CZK
Nov/24	233,516 CZK	283	5,919	5,663 CZK	106,197 CZK	111,860 CZK	-121,656 CZK	-6,886,021 CZK
Dec/24	233,516 CZK	307	6,392	6,147 CZK	114,484 CZK	120,631 CZK	-112,884 CZK	-6,998,905 CZK
Jan/25	233,516 CZK	331	6,864	6,628 CZK	122,752 CZK	129,381 CZK	-104,135 CZK	-7,103,040 CZK
Feb/25	233,516 CZK	355	7,336	7,107 CZK	131,001 CZK	138,108 CZK	-95,408 CZK	-7,198,448 CZK

■ **Table B.1** Detailed financial plan - pessimistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms - Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Mar/25	233,516 CZK	379	7,806	7,583 CZK	139,230 CZK	146,813 CZK	-86,703 CZK	-7,285,151 CZK
Apr/25	233,516 CZK	403	8,275	8,058 CZK	147,439 CZK	155,496 CZK	-78,020 CZK	-7,363,170 CZK
May/25	233,516 CZK	426	8,743	8,530 CZK	154,906 CZK	163,435 CZK	-70,080 CZK	-7,433,251 CZK
Jun/25	233,516 CZK	450	9,060	9,000 CZK	160,460 CZK	169,460 CZK	-64,055 CZK	-7,497,306 CZK
Jul/25	233,516 CZK	466	9,391	9,319 CZK	166,255 CZK	175,574 CZK	-57,942 CZK	-7,555,248 CZK
Aug/25	233,516 CZK	482	9,721	9,639 CZK	172,034 CZK	181,672 CZK	-51,843 CZK	-7,607,091 CZK
Sep/25	233,516 CZK	498	10,050	9,959 CZK	177,797 CZK	187,756 CZK	-45,760 CZK	-7,652,851 CZK
Oct/25	233,516 CZK	514	10,379	10,280 CZK	183,545 CZK	193,824 CZK	-39,691 CZK	-7,692,542 CZK
Nov/25	233,516 CZK	530	10,706	10,601 CZK	189,277 CZK	199,878 CZK	-33,638 CZK	-7,726,180 CZK
Dec/25	233,516 CZK	546	11,033	10,922 CZK	194,994 CZK	205,916 CZK	-27,600 CZK	-7,753,780 CZK
Jan/26	233,516 CZK	562	11,359	11,243 CZK	200,696 CZK	211,939 CZK	-21,576 CZK	-7,775,356 CZK
Feb/26	233,516 CZK	578	11,684	11,564 CZK	206,384 CZK	217,948 CZK	-15,568 CZK	-7,790,924 CZK
Mar/26	233,516 CZK	594	12,008	11,885 CZK	212,056 CZK	223,941 CZK	-9,575 CZK	-7,800,499 CZK
Apr/26	233,516 CZK	610	12,331	12,205 CZK	217,714 CZK	229,919 CZK	-3,596 CZK	-7,804,095 CZK
May/26	233,516 CZK	626	12,653	12,525 CZK	222,640 CZK	235,165 CZK	1,649 CZK	-7,802,446 CZK
Jun/26	233,516 CZK	642	12,826	12,844 CZK	225,659 CZK	238,503 CZK	4,987 CZK	-7,797,459 CZK
Jul/26	233,516 CZK	651	13,011	13,014 CZK	228,889 CZK	241,903 CZK	8,387 CZK	-7,789,072 CZK
Aug/26	233,516 CZK	659	13,194	13,184 CZK	232,078 CZK	245,263 CZK	11,747 CZK	-7,777,325 CZK
Sep/26	233,516 CZK	668	13,375	13,354 CZK	235,228 CZK	248,582 CZK	15,066 CZK	-7,762,258 CZK
Oct/26	233,516 CZK	676	13,553	13,523 CZK	238,338 CZK	251,862 CZK	18,346 CZK	-7,743,912 CZK
Nov/26	233,516 CZK	685	13,729	13,692 CZK	241,410 CZK	255,102 CZK	21,586 CZK	-7,722,326 CZK
Dec/26	233,516 CZK	693	13,903	13,859 CZK	244,445 CZK	258,304 CZK	24,788 CZK	-7,697,538 CZK
Jan/27	233,516 CZK	701	14,074	14,026 CZK	247,441 CZK	261,467 CZK	27,951 CZK	-7,669,586 CZK
Feb/27	233,516 CZK	710	14,244	14,191 CZK	250,402 CZK	264,592 CZK	31,077 CZK	-7,638,510 CZK
Mar/27	233,516 CZK	718	14,412	14,355 CZK	253,326 CZK	267,680 CZK	34,165 CZK	-7,604,345 CZK
Apr/27	233,516 CZK	726	14,577	14,517 CZK	256,214 CZK	270,731 CZK	37,215 CZK	-7,567,130 CZK
May/27	233,516 CZK	734	14,740	14,678 CZK	258,968 CZK	273,646 CZK	40,130 CZK	-7,527,000 CZK
Jun/27	233,516 CZK	742	14,881	14,837 CZK	261,426 CZK	276,264 CZK	42,748 CZK	-7,484,252 CZK
Jul/27	233,516 CZK	749	15,023	14,975 CZK	263,890 CZK	278,865 CZK	45,349 CZK	-7,438,903 CZK
Aug/27	233,516 CZK	756	15,162	15,111 CZK	266,324 CZK	281,435 CZK	47,919 CZK	-7,390,984 CZK

■ **Table B.1** Detailed financial plan - pessimistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms - Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Sep/27	233,516 CZK	762	15,300	15,246 CZK	268,728 CZK	283,974 CZK	50,458 CZK	-7,340,526 CZK
Oct/27	233,516 CZK	769	15,436	15,379 CZK	271,103 CZK	286,483 CZK	52,967 CZK	-7,287,559 CZK
Nov/27	233,516 CZK	776	15,570	15,512 CZK	273,449 CZK	288,961 CZK	55,445 CZK	-7,232,113 CZK
Dec/27	233,516 CZK	782	15,703	15,643 CZK	275,767 CZK	291,410 CZK	57,894 CZK	-7,174,219 CZK
Jan/28	233,516 CZK	789	15,834	15,773 CZK	278,056 CZK	293,829 CZK	60,314 CZK	-7,113,906 CZK
Feb/28	233,516 CZK	795	15,964	15,901 CZK	280,318 CZK	296,220 CZK	62,704 CZK	-7,051,202 CZK
Mar/28	233,516 CZK	801	16,092	16,029 CZK	282,553 CZK	298,581 CZK	65,065 CZK	-6,986,136 CZK
Apr/28	233,516 CZK	808	16,218	16,154 CZK	284,760 CZK	300,914 CZK	67,399 CZK	-6,918,738 CZK

■ **Table B.2** Detailed financial plan - realistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms - Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Sep/22	205,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-205,088 CZK	-205,088 CZK
Oct/22	401,213 CZK	0	0	0 CZK	0 CZK	0 CZK	-401,213 CZK	-606,300 CZK
Nov/22	455,213 CZK	0	0	0 CZK	0 CZK	0 CZK	-455,213 CZK	-1,061,513 CZK
Dec/22	402,713 CZK	0	0	0 CZK	0 CZK	0 CZK	-402,713 CZK	-1,464,226 CZK
Jan/23	404,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-404,088 CZK	-1,868,313 CZK
Feb/23	439,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-439,088 CZK	-2,307,401 CZK
Mar/23	404,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-404,088 CZK	-2,711,488 CZK
Apr/23	382,588 CZK	0	0	0 CZK	0 CZK	0 CZK	-382,588 CZK	-3,094,076 CZK
May/23	364,141 CZK	0	0	0 CZK	1,017 CZK	1,017 CZK	-363,124 CZK	-3,457,200 CZK
Jun/23	302,141 CZK	0	211	0 CZK	4,689 CZK	4,689 CZK	-297,452 CZK	-3,754,652 CZK
Jul/23	233,516 CZK	11	398	211 CZK	8,483 CZK	8,693 CZK	-224,823 CZK	-3,979,475 CZK
Aug/23	233,516 CZK	21	692	416 CZK	13,667 CZK	14,082 CZK	-219,433 CZK	-4,198,908 CZK
Sep/23	233,516 CZK	36	983	724 CZK	18,820 CZK	19,544 CZK	-213,972 CZK	-4,412,880 CZK
Oct/23	233,516 CZK	52	1,283	1,038 CZK	24,110 CZK	25,148 CZK	-208,368 CZK	-4,621,248 CZK
Nov/23	233,516 CZK	68	1,591	1,356 CZK	31,264 CZK	32,620 CZK	-200,896 CZK	-4,822,144 CZK
Dec/23	233,516 CZK	84	2,263	1,680 CZK	43,130 CZK	44,810 CZK	-188,706 CZK	-5,010,849 CZK
Jan/24	233,516 CZK	118	2,919	2,367 CZK	54,709 CZK	57,077 CZK	-176,439 CZK	-5,187,288 CZK
Feb/24	233,516 CZK	153	3,592	3,067 CZK	66,595 CZK	69,662 CZK	-163,854 CZK	-5,351,142 CZK
Mar/24	233,516 CZK	189	4,283	3,778 CZK	78,797 CZK	82,575 CZK	-150,941 CZK	-5,502,083 CZK
Apr/24	233,516 CZK	225	4,992	4,503 CZK	91,321 CZK	95,824 CZK	-137,692 CZK	-5,639,775 CZK
May/24	233,516 CZK	262	5,721	5,242 CZK	104,984 CZK	110,226 CZK	-123,290 CZK	-5,763,065 CZK
Jun/24	233,516 CZK	300	6,635	5,997 CZK	121,125 CZK	127,122 CZK	-106,394 CZK	-5,869,459 CZK
Jul/24	233,516 CZK	347	7,557	6,935 CZK	137,410 CZK	144,345 CZK	-89,171 CZK	-5,958,630 CZK
Aug/24	233,516 CZK	395	8,504	7,894 CZK	154,123 CZK	162,017 CZK	-71,498 CZK	-6,030,128 CZK
Sep/24	233,516 CZK	444	9,475	8,873 CZK	171,277 CZK	180,150 CZK	-53,366 CZK	-6,083,494 CZK
Oct/24	233,516 CZK	494	10,473	9,874 CZK	188,881 CZK	198,756 CZK	-34,760 CZK	-6,118,254 CZK
Nov/24	233,516 CZK	545	11,496	10,898 CZK	206,948 CZK	217,846 CZK	-15,669 CZK	-6,133,924 CZK
Dec/24	233,516 CZK	597	12,546	11,947 CZK	225,488 CZK	237,435 CZK	3,919 CZK	-6,130,004 CZK
Jan/25	233,516 CZK	651	13,624	13,020 CZK	244,515 CZK	257,535 CZK	24,019 CZK	-6,105,985 CZK
Feb/25	233,516 CZK	706	14,729	14,120 CZK	264,039 CZK	278,159 CZK	44,643 CZK	-6,061,342 CZK

■ **Table B.2** Detailed financial plan - realistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms - Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Mar/25	233,516 CZK	762	15,864	15,246 CZK	284,075 CZK	299,321 CZK	65,805 CZK	-5,995,537 CZK
Apr/25	233,516 CZK	820	17,029	16,401 CZK	304,634 CZK	321,035 CZK	87,520 CZK	-5,908,018 CZK
May/25	233,516 CZK	879	18,224	17,585 CZK	324,832 CZK	342,417 CZK	108,901 CZK	-5,799,117 CZK
Jun/25	233,516 CZK	940	19,264	18,798 CZK	343,195 CZK	361,994 CZK	128,478 CZK	-5,670,639 CZK
Jul/25	233,516 CZK	993	20,349	19,856 CZK	362,351 CZK	382,207 CZK	148,692 CZK	-5,521,947 CZK
Aug/25	233,516 CZK	1,047	21,462	20,944 CZK	382,006 CZK	402,950 CZK	169,434 CZK	-5,352,513 CZK
Sep/25	233,516 CZK	1,103	22,604	22,061 CZK	402,172 CZK	424,233 CZK	190,718 CZK	-5,161,796 CZK
Oct/25	233,516 CZK	1,160	23,776	23,209 CZK	422,864 CZK	446,073 CZK	212,557 CZK	-4,949,238 CZK
Nov/25	233,516 CZK	1,219	24,979	24,388 CZK	444,094 CZK	468,483 CZK	234,967 CZK	-4,714,271 CZK
Dec/25	233,516 CZK	1,280	26,212	25,600 CZK	465,878 CZK	491,478 CZK	257,962 CZK	-4,456,309 CZK
Jan/26	233,516 CZK	1,342	27,478	26,843 CZK	488,230 CZK	515,073 CZK	281,557 CZK	-4,174,752 CZK
Feb/26	233,516 CZK	1,406	28,777	28,120 CZK	511,164 CZK	539,284 CZK	305,769 CZK	-3,868,983 CZK
Mar/26	233,516 CZK	1,472	30,110	29,431 CZK	534,696 CZK	564,128 CZK	330,612 CZK	-3,538,371 CZK
Apr/26	233,516 CZK	1,539	31,478	30,777 CZK	558,842 CZK	589,619 CZK	356,104 CZK	-3,182,268 CZK
May/26	233,516 CZK	1,608	32,881	32,158 CZK	581,818 CZK	613,977 CZK	380,461 CZK	-2,801,807 CZK
Jun/26	233,516 CZK	1,679	33,948	33,576 CZK	600,613 CZK	634,189 CZK	400,674 CZK	-2,401,133 CZK
Jul/26	233,516 CZK	1,733	35,068	34,659 CZK	620,322 CZK	654,981 CZK	421,465 CZK	-1,979,668 CZK
Aug/26	233,516 CZK	1,788	36,206	35,762 CZK	640,355 CZK	676,117 CZK	442,602 CZK	-1,537,067 CZK
Sep/26	233,516 CZK	1,844	37,362	36,888 CZK	660,717 CZK	697,605 CZK	464,089 CZK	-1,072,978 CZK
Oct/26	233,516 CZK	1,902	38,538	38,036 CZK	681,412 CZK	719,448 CZK	485,932 CZK	-587,045 CZK
Nov/26	233,516 CZK	1,960	39,733	39,206 CZK	702,448 CZK	741,654 CZK	508,138 CZK	-78,907 CZK
Dec/26	233,516 CZK	2,020	40,948	40,397 CZK	723,830 CZK	764,227 CZK	530,712 CZK	451,804 CZK
Jan/27	233,516 CZK	2,081	42,182	41,610 CZK	745,565 CZK	787,175 CZK	553,659 CZK	1,005,463 CZK
Feb/27	233,516 CZK	2,142	43,437	42,845 CZK	767,658 CZK	810,503 CZK	576,987 CZK	1,582,450 CZK
Mar/27	233,516 CZK	2,205	44,713	44,102 CZK	790,115 CZK	834,217 CZK	600,701 CZK	2,183,151 CZK
Apr/27	233,516 CZK	2,269	46,009	45,380 CZK	812,943 CZK	858,324 CZK	624,808 CZK	2,807,959 CZK
May/27	233,516 CZK	2,334	47,328	46,681 CZK	835,973 CZK	882,654 CZK	649,139 CZK	3,457,098 CZK
Jun/27	233,516 CZK	2,400	48,631	48,005 CZK	858,922 CZK	906,927 CZK	673,411 CZK	4,130,509 CZK
Jul/27	233,516 CZK	2,466	49,960	49,314 CZK	882,312 CZK	931,626 CZK	698,110 CZK	4,828,619 CZK
Aug/27	233,516 CZK	2,532	51,310	50,646 CZK	906,088 CZK	956,734 CZK	723,219 CZK	5,551,838 CZK



■ **Table B.2** Detailed financial plan - realistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms - Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Sep/27	233,516 CZK	2,600	52,683	52,002 CZK	930,257 CZK	982,259 CZK	748,743 CZK	6,300,581 CZK
Oct/27	233,516 CZK	2,669	54,079	53,380 CZK	954,825 CZK	1,008,206 CZK	774,690 CZK	7,075,271 CZK
Nov/27	233,516 CZK	2,739	55,497	54,782 CZK	979,800 CZK	1,034,582 CZK	801,067 CZK	7,876,337 CZK
Dec/27	233,516 CZK	2,810	56,939	56,208 CZK	1,005,187 CZK	1,061,396 CZK	827,880 CZK	8,704,218 CZK
Jan/28	233,516 CZK	2,883	58,405	57,658 CZK	1,030,995 CZK	1,088,653 CZK	855,138 CZK	9,559,355 CZK
Feb/28	233,516 CZK	2,957	59,895	59,133 CZK	1,057,229 CZK	1,116,362 CZK	882,846 CZK	10,442,202 CZK
Mar/28	233,516 CZK	3,032	61,410	60,632 CZK	1,083,898 CZK	1,144,530 CZK	911,014 CZK	11,353,216 CZK
Apr/28	233,516 CZK	3,108	62,950	62,156 CZK	1,111,008 CZK	1,173,164 CZK	939,648 CZK	12,292,864 CZK

■ **Table B.3** Detailed financial plan - optimistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms-Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Sep/22	205,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-205,088 CZK	-205,088 CZK
Oct/22	401,213 CZK	0	0	0 CZK	0 CZK	0 CZK	-401,213 CZK	-606,300 CZK
Nov/22	455,213 CZK	0	0	0 CZK	0 CZK	0 CZK	-455,213 CZK	-1,061,513 CZK
Dec/22	402,713 CZK	0	0	0 CZK	0 CZK	0 CZK	-402,713 CZK	-1,464,226 CZK
Jan/23	404,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-404,088 CZK	-1,868,313 CZK
Feb/23	439,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-439,088 CZK	-2,307,401 CZK
Mar/23	404,088 CZK	0	0	0 CZK	0 CZK	0 CZK	-404,088 CZK	-2,711,488 CZK
Apr/23	382,588 CZK	0	0	0 CZK	0 CZK	0 CZK	-382,588 CZK	-3,094,076 CZK
May/23	364,141 CZK	0	0	0 CZK	1,898 CZK	1,898 CZK	-362,243 CZK	-3,456,319 CZK
Jun/23	302,141 CZK	0	393	0 CZK	8,790 CZK	8,790 CZK	-293,351 CZK	-3,749,670 CZK
Jul/23	233,516 CZK	20	750	393 CZK	15,667 CZK	16,060 CZK	-217,456 CZK	-3,967,126 CZK
Aug/23	233,516 CZK	39	1,235	784 CZK	24,268 CZK	25,052 CZK	-208,463 CZK	-4,175,589 CZK
Sep/23	233,516 CZK	65	1,731	1,297 CZK	33,081 CZK	34,378 CZK	-199,138 CZK	-4,374,727 CZK
Oct/23	233,516 CZK	91	2,250	1,828 CZK	42,296 CZK	44,124 CZK	-189,391 CZK	-4,564,118 CZK
Nov/23	233,516 CZK	119	2,793	2,378 CZK	54,747 CZK	57,125 CZK	-176,391 CZK	-4,740,509 CZK
Dec/23	233,516 CZK	147	3,943	2,949 CZK	75,156 CZK	78,105 CZK	-155,410 CZK	-4,895,919 CZK
Jan/24	233,516 CZK	206	5,090	4,125 CZK	95,521 CZK	99,647 CZK	-133,869 CZK	-5,029,788 CZK
Feb/24	233,516 CZK	267	6,289	5,346 CZK	116,813 CZK	122,159 CZK	-111,357 CZK	-5,141,145 CZK
Mar/24	233,516 CZK	331	7,543	6,612 CZK	139,075 CZK	145,687 CZK	-87,829 CZK	-5,228,974 CZK
Apr/24	233,516 CZK	396	8,853	7,927 CZK	162,352 CZK	170,278 CZK	-63,238 CZK	-5,292,211 CZK
May/24	233,516 CZK	465	10,224	9,294 CZK	187,820 CZK	197,114 CZK	-36,402 CZK	-5,328,614 CZK
Jun/24	233,516 CZK	536	11,891	10,717 CZK	217,421 CZK	228,138 CZK	-5,378 CZK	-5,333,992 CZK
Jul/24	233,516 CZK	622	13,612	12,434 CZK	247,974 CZK	260,408 CZK	26,892 CZK	-5,307,100 CZK
Aug/24	233,516 CZK	711	15,410	14,222 CZK	279,914 CZK	294,135 CZK	60,620 CZK	-5,246,480 CZK
Sep/24	233,516 CZK	804	17,291	16,084 CZK	313,303 CZK	329,387 CZK	95,871 CZK	-5,150,609 CZK
Oct/24	233,516 CZK	901	19,256	18,025 CZK	348,207 CZK	366,232 CZK	132,716 CZK	-5,017,893 CZK
Nov/24	233,516 CZK	1,002	21,311	20,048 CZK	384,694 CZK	404,742 CZK	171,227 CZK	-4,846,666 CZK
Dec/24	233,516 CZK	1,108	23,459	22,160 CZK	422,833 CZK	444,993 CZK	211,478 CZK	-4,635,189 CZK
Jan/25	233,516 CZK	1,218	25,704	24,363 CZK	462,700 CZK	487,064 CZK	253,548 CZK	-4,381,640 CZK
Feb/25	233,516 CZK	1,333	28,051	26,664 CZK	504,372 CZK	531,036 CZK	297,520 CZK	-4,084,120 CZK

■ **Table B.3** Detailed financial plan - optimistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms-Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Mar/25	233,516 CZK	1,453	30,504	29,066 CZK	547,931 CZK	576,997 CZK	343,481 CZK	-3,740,639 CZK
Apr/25	233,516 CZK	1,579	33,068	31,574 CZK	593,461 CZK	625,035 CZK	391,519 CZK	-3,349,120 CZK
May/25	233,516 CZK	1,710	35,748	34,195 CZK	639,787 CZK	673,982 CZK	440,466 CZK	-2,908,654 CZK
Jun/25	233,516 CZK	1,847	38,288	36,932 CZK	684,894 CZK	721,826 CZK	488,310 CZK	-2,420,344 CZK
Jul/25	233,516 CZK	1,977	40,968	39,530 CZK	732,476 CZK	772,006 CZK	538,490 CZK	-1,881,854 CZK
Aug/25	233,516 CZK	2,112	43,769	42,248 CZK	782,209 CZK	824,456 CZK	590,941 CZK	-1,290,913 CZK
Sep/25	233,516 CZK	2,255	46,696	45,090 CZK	834,188 CZK	879,279 CZK	645,763 CZK	-645,150 CZK
Oct/25	233,516 CZK	2,403	49,756	48,064 CZK	888,517 CZK	936,580 CZK	703,065 CZK	57,915 CZK
Nov/25	233,516 CZK	2,559	52,954	51,174 CZK	945,300 CZK	996,473 CZK	762,958 CZK	820,872 CZK
Dec/25	233,516 CZK	2,721	56,296	54,425 CZK	1,004,649 CZK	1,059,075 CZK	825,559 CZK	1,646,431 CZK
Jan/26	233,516 CZK	2,891	59,790	57,825 CZK	1,066,681 CZK	1,124,506 CZK	890,991 CZK	2,537,422 CZK
Feb/26	233,516 CZK	3,069	63,441	61,380 CZK	1,131,517 CZK	1,192,897 CZK	959,381 CZK	3,496,803 CZK
Mar/26	233,516 CZK	3,255	67,258	65,096 CZK	1,199,284 CZK	1,264,380 CZK	1,030,865 CZK	4,527,668 CZK
Apr/26	233,516 CZK	3,449	71,246	68,982 CZK	1,270,114 CZK	1,339,096 CZK	1,105,580 CZK	5,633,248 CZK
May/26	233,516 CZK	3,652	75,416	73,043 CZK	1,336,296 CZK	1,409,339 CZK	1,175,823 CZK	6,809,071 CZK
Jun/26	233,516 CZK	3,864	78,148	77,289 CZK	1,384,567 CZK	1,461,856 CZK	1,228,341 CZK	8,037,412 CZK
Jul/26	233,516 CZK	4,005	81,100	80,102 CZK	1,436,681 CZK	1,516,782 CZK	1,283,267 CZK	9,320,678 CZK
Aug/26	233,516 CZK	4,150	84,128	83,000 CZK	1,490,149 CZK	1,573,149 CZK	1,339,633 CZK	10,660,311 CZK
Sep/26	233,516 CZK	4,299	87,235	85,989 CZK	1,544,999 CZK	1,630,988 CZK	1,397,472 CZK	12,057,784 CZK
Oct/26	233,516 CZK	4,453	90,423	89,068 CZK	1,601,271 CZK	1,690,339 CZK	1,456,823 CZK	13,514,607 CZK
Nov/26	233,516 CZK	4,612	93,692	92,239 CZK	1,659,002 CZK	1,751,241 CZK	1,517,725 CZK	15,032,332 CZK
Dec/26	233,516 CZK	4,775	97,047	95,502 CZK	1,718,231 CZK	1,813,734 CZK	1,580,218 CZK	16,612,550 CZK
Jan/27	233,516 CZK	4,943	100,489	98,858 CZK	1,779,000 CZK	1,877,858 CZK	1,644,343 CZK	18,256,893 CZK
Feb/27	233,516 CZK	5,115	104,021	102,308 CZK	1,841,350 CZK	1,943,658 CZK	1,710,142 CZK	19,967,035 CZK
Mar/27	233,516 CZK	5,293	107,644	105,853 CZK	1,905,322 CZK	2,011,176 CZK	1,777,660 CZK	21,744,695 CZK
Apr/27	233,516 CZK	5,475	111,362	109,496 CZK	1,970,960 CZK	2,080,456 CZK	1,846,941 CZK	23,591,635 CZK
May/27	233,516 CZK	5,662	115,177	113,238 CZK	2,038,013 CZK	2,151,250 CZK	1,917,734 CZK	25,509,369 CZK
Jun/27	233,516 CZK	5,854	119,029	117,080 CZK	2,106,035 CZK	2,223,115 CZK	1,989,600 CZK	27,498,969 CZK
Jul/27	233,516 CZK	6,048	122,988	120,965 CZK	2,175,934 CZK	2,296,898 CZK	2,063,383 CZK	29,562,352 CZK
Aug/27	233,516 CZK	6,248	127,051	124,954 CZK	2,247,654 CZK	2,372,608 CZK	2,139,092 CZK	31,701,444 CZK

■ **Table B.3** Detailed financial plan - optimistic variant, PU = Premium Users, FU = Free Users

Month	Costs	PU	FU	Incoms-Premium	Incomes - Ads	Incomes - Sum	Profits	Balance
Sep/27	233,516 CZK	6,452	131,219	129,050 CZK	2,321,244 CZK	2,450,294 CZK	2,216,778 CZK	33,918,222 CZK
Oct/27	233,516 CZK	6,663	135,496	133,255 CZK	2,396,753 CZK	2,530,008 CZK	2,296,492 CZK	36,214,714 CZK
Nov/27	233,516 CZK	6,879	139,884	137,572 CZK	2,474,231 CZK	2,611,803 CZK	2,378,287 CZK	38,593,001 CZK
Dec/27	233,516 CZK	7,100	144,387	142,003 CZK	2,553,730 CZK	2,695,733 CZK	2,462,217 CZK	41,055,219 CZK
Jan/28	233,516 CZK	7,328	149,007	146,551 CZK	2,635,303 CZK	2,781,854 CZK	2,548,339 CZK	43,603,557 CZK
Feb/28	233,516 CZK	7,561	153,748	151,220 CZK	2,719,004 CZK	2,870,224 CZK	2,636,708 CZK	46,240,265 CZK
Mar/28	233,516 CZK	7,801	158,612	156,011 CZK	2,804,889 CZK	2,960,900 CZK	2,727,384 CZK	48,967,649 CZK
Apr/28	233,516 CZK	8,046	163,604	160,928 CZK	2,893,014 CZK	3,053,942 CZK	2,820,427 CZK	51,788,076 CZK

## In-depth interviews - structure

### Declaration

*Everything said is confidential. All answers in the final thesis will be anonymised.*

Before we start with the interview itself, I would like to inform you that the entire **interview will be recorded** for the purpose of further analysis. I also assure you that the content of this interview is **confidential** and will be used in my thesis either only in aggregate with other interviewees or **anonymised**.

*An explanation of why these interviews are happening*

I am writing my diploma thesis that focuses on whether and possibly how **mobile applications can help people learn to live more environmentally friendly**. The outcome of the thesis should be a design for that kind of application. This interview should provide me with a better understanding of users' wants and needs so I don't stray in a completely wrong direction while designing the app.

No answer is wrong, and it's merely a matter of getting an idea of how different people think and getting their perspective on the problem. It is not mandatory to answer all the questions.

**So please confirm for the record that you agree with this approach.**

### Demographic data

1. Age
2. Education
3. Employment
4. Marital status (single/married/children) - with whom you live in the household

### Relationship to the environment

1. What is your stand on environmental protection?
2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)
  - a. What are the issues that keep you from doing other things? (Note - possibly connected to housing - city/village, house/flat ?)

3. Where do you get information about what to do for the environment? Why don't you have it?
  - a. Is there anything that would help you access information about eco-living?
4. What would you like your behaviour to look like in the future?
  - a. What do you need to do to achieve this? (More information, group motivation, accessibility in the neighbourhood, ...)
5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)? For what reason do you do it? / Why not?

### Online shopping

1. What are your feelings about online shopping?
2. Do you have any experience with online selling? What kind of experience?
3. How do you feel about second-hand shopping? (Note: The idea that those who buy things second hand are poor vs the perception that it's about reusing items that would otherwise be thrown away.)
4. Have you ever bought anything second hand?
  - a. How did that work?
  - b. How do you feel about this experience?
  - c. Why not?
5. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?

### Charity

1. What is your attitude towards charities and volunteering?
  - a. In what ways have you supported charities in the past? (e.g. using applications - fill it forward, eco search engine, new browser tabs - how do you feel about this idea?)
2. What motivates you to help a charity / to get involved / to contribute?

### Technology

1. How would you rate your technical skills - working on a computer and smartphone?
2. How much time do you spend using your smartphone?
  - a. What are the typical applications you use? (Note: digital minimalism?)
3. What do you use your computer for?

### Opinion on the application

#### Description of the application:

- Sections:
  - online auction for selling and buying things
  - educational section with information and links, DIY and repairs tutorials

- habits - points collection:
  - \* refilling water
  - \* travelling
  - \* meatless day
  - \* garbage collection
  - \* DIY product/repair
  - \* one-time challenges
- map - zero packaging shops, eco restaurants, composters, containers, ...
- % of auction earnings to run the app, the rest split in half:
  - 1/2 for charity,
  - 1/2 half for the seller - they can give up this half and add it to the amount for the charity.
- A period of time is set regularly - e.g. a month, and during that time, there is one round of auctions and one group of charities (about 3 - 4).
- During that time, users collect points by performing eco-friendly habits and tasks on behalf of one of the charities selected for that round.
- At the end of the period, the amount for the charities is divided into the number of charities + 1 part - the extra part is divided among the charities proportionally according to the points collected by the users.

**Questions for the interviewee:**

1. What is your opinion on the principle of the application?
2. Can you think about any changes or improvements that could help you use the app?
3. What is your perception that the money will still go to charity even if users don't use the app to track their habits?
  - a. Proportionally distributing the entire amount to charities, providing them with no base money?





## In-depth interviews - outputs

### D.1 Sandra - type Patricie Müllerová

**Date of the interview:** 30. 3. 2022

**Length of the interview:** 45 minutes

#### Demographic data

1. **Age:** 27
2. **Education:** Bachelor's degree, Informatic
3. **Employment:** Programmer
4. **Marital status (single/married/children) - with whom you live in the household:**  
I live with my partner.

#### Relationship to the environment

##### 1. What is your stand on environmental protection?

I have a moderately active interest in it. I am interested in nature conservation. I like to go hiking, and I want it to look nice. I'm interested in it more from a local perspective than a global perspective.

##### 2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)

If I can choose between a car and a train, I prefer to take the train, if it's not too restrictive. We both try to recycle and repurpose things in our household.

We don't use straws, but cups are a big issue with us - we buy things in them but at least recycle them. We try to eliminate water bottles - we have thermoses or bottles that we use for maybe a month. If we already have some packaging, we try to reuse it.

I've shopped at a package-free store about twice, and I've bought pretty specific things regarding healthy food. I buy flour and stuff like that at the supermarket because it's cheaper. But it was a pleasant experience.

We recycle everything with bins – aluminium, paper, plastic, electronics, clothes when they're still usable. We don't have a composter in Prague, but we put our bio-waste on the compost heap at home, where I come from.

**3. Where do you get information about what to do for the environment? Why don't you have it?**

On the Internet. I have actively searched as far as recycling is concerned because it is pretty debatable there. Otherwise, I follow some user accounts on Instagram that address this.

Other than the internet, we talk about it in my family, and I have some basics from school - elementary or junior high.

**a. Is there anything that would help you access information about eco-living?**

A personal one. Maybe a workshop at work. Just like first aid is sometimes addressed, include a short workshop on this.

**4. What would you like your behaviour to look like in the future?**

It seems to me that even though we're only a two-person household, we still generate a lot of waste, so I'd like to change that, especially when it comes to plastic. Like the Re-krabičky project right now, I like that. Through the pandemic, we do a lot of lunch boxes for the home office. But a lot of restaurants don't have that yet. I could also take my boxes and wash them, but I haven't gotten there yet, and it would be cool if they offered that. I'll definitely take an active interest in it.

**5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**

I eat everything, but I try not to have excessive meat consumption. I don't think I'm somehow restricting myself out of conviction because I like meat, but I try to have less of it - like twice a week. Just not overdo it somehow.

**a. For what reason do you do it? / Why not?**

Because of the ecology. It's not like I don't care about animal suffering. There are both reasons, but ecology is more important to me.

**6. Something you would like to add?**

I'm very annoyed by people who throw garbage in the countryside. I've wanted to join the clean-up walk a couple of times, but I haven't found anyone to join me yet.

### Online shopping

**1. What are your feelings about online shopping?**

Through corona, I started shopping mostly online. We actually buy practically everything that way - not food, but everything else - clothes, cosmetics, medicines, supplements, electronics, books, etc.

**2. Do you have any experience with online selling? What kind of experience?**

Very little. I sold some stuff for the apartment and some clothes. Not just online but also among friends.

I don't sell that much because I don't have that much stuff, and when I want to get rid of it, I find it's not saleable anymore. Otherwise, I tend to keep things. I don't sell clothes because I give them to charity. I don't find the benefit in selling - for the little money I'd get for it, it's not worth the work of selling it, and I'm also not worried about getting rid of the stuff that way. Maybe at least some percentage of it will be used.

**3. Have you ever bought anything second hand?**

I mainly used online second-hand shopping for furniture for my apartment. A couple of years ago, I also used to shop for clothes, but now I do it more in person at second-hand stores. Or books - those are more online.

I look at the distance, where the object is, and what condition it's in.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Kihobot.cz for books. For furniture, I searched on the Facebook group and Facebook Marketplace. It's pretty active there.

I used to buy clothes through Aukro - I bought quite a bit of stuff through auctions there back then. At this point, I'd say it was limiting me. I haven't used that method since - I didn't find the Buy Now option profitable, and the auction was time-consuming and limiting.

## Charity

**1. What is your attitude towards charities and volunteering?**

I don't have much experience. Sometimes I donate some money to some fundraisers, like for healthcare or now for Ukraine. So it's more like humanitarian fundraisers, but otherwise, I haven't done any volunteer work.

I don't really believe in the "share this, and we'll give money" kind of thing. I'm very picky. The problem with some non-profit organisations is that it doesn't quite make sense to me that they give a lot of money for operations and stuff.

I've heard somewhere that some banks may offer a percentage of the interest to charity instead of saving, so I've heard about that, but I'm not doing that now, and I don't know if I'd find that interesting. The amount of time I'd spend on it seems like too much.

**2. What motivates you to help a charity / to get involved / to contribute?**

Most of the time, it's something that relates to me somehow. I've had experience with it, or I know it from my surroundings. Usually, the initial outreach is through a particular story, and then it depends on the organisation. I have to like what it does. So access to information about the charity is essential to me. Some just support something that doesn't make sense to me. I choose where my funds go.

## Technology

**1. How would you rate your technical skills - working on a computer and smartphone?**

It's good - above-average user

**2. How much time do you spend using your smartphone?**

An hour on the phone, eleven hours on the computer

**a. What are the typical applications you use? (Note: digital minimalism?)**

Communication, social networks; I pay by mobile; Quick search, Google Maps.

My only experience with habit learning apps is that I now have a new smart ring that tracks my sleep and tells me I should go to bed earlier. Otherwise, I know they exist, but I don't use them.

**3. What do you use your computer for?**

For work, for play, for procrastination, for information. I'm on the computer maybe 12 hours a day. I use it more than my cell phone, for sure.

## Opinion on the application

**1. What is your opinion on the principle of the application?**

I would use it or, at the very least, install it. The map feature with the different recycling containers and restaurants where they pour water into a bottle is excellent. The gamification is cool, too - you can choose which charity you play for.

It seems like a very complex system. It would be a costly project, but it certainly sounds interesting. I don't quite see the motivation for people to buy stuff on this app. But definitely, the motivation of helping a good cause could appeal to many people, but it's questionable if it's enough. It would appeal to me, but I have a more intense relationship with the cause.

**2. Can you think about any changes or improvements that could help you use the app?**

If I had a choice of 5 charities that will change after a certain period, I believe everyone there would be able to choose. And my primary concern is that the charities are real and not fake.

The idea that you load some money in there and only by fulfilling those habits do you gradually give it to one of those charities sounds interesting.

At the same time, I think it could have an educational function. Users would learn about different charities. It would be nice to be able to contribute directly.

**3. What is your perception that the money will still go to charity even if users don't use the app to track their habits?**

Purely from the gaming and habits point of view - the fact that you can influence something there is that you can give the whole amount of the sale. If there's some way to work it out so that even just by playing, you can contribute something, not just influence the redistribution, that would be great.

We have something similar at work. We have a percentage of the profits that goes to charity, and what charity it goes to is chosen by a poll of half the owner and half the employees. Plus, now we're dealing with the fact that we could put on this project that I want to give an hour of my labour to charity. I think it works for us already that it's fixed that this percentage of the profit goes to charity and we just influence which one. Now we're figuring out that it would be nice to have to be able to contribute in some way actively, but I think that's good in and of itself.

## D.2 Krystian - type Patricie Müllerová

**Date of the interview:** 21. 3. 2022

**Length of the interview:** 39 minutes

### Demographic data

1. **Age:** 22
2. **Education:** Open Informatics - Programming, CTU in Prague, 1st year of Master's
3. **Employment:** Student + part-time job in IT company
4. **Marital status (single/married/children) - with whom you live in the household:**  
With my parents or in the dormitory

### Relationship to the environment

#### 1. What is your stand on environmental protection?

I think that's crucial to focus on, despite capitalist motivations. For example, I think it's good that there are limits on coal, not only from the marketing side, that it keeps the price of coal at some level, but also from keeping the air cleaner and so on. I think it's stupid that we as a society create an awful lot of excess waste. Just by using one thing twice, for example, we reduce that waste an awful lot, and I try to practice that in my life as well, but it's hard to say how that manifests itself in my working life.

Many green efforts are about waste, but I think people should also try to cut down on unnecessary car trips. We can tell that there is some part of businesses where it's on a much larger scale than individuals. So it doesn't have that much of an impact. But the effect is because there are a lot of individuals.

#### 2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)

I try to limit my car trips, buy clothes that I won't use just once, and over all things that I won't use just once but will keep for a more extended period. I don't always pay extra for quality, but I always try to make it last as long as possible.

Of course, I recycle, and it seems like a given. Even though I know that recycling is not that strong and is used mainly for plastic bottles and glass, more or less the rest goes to the incinerator or landfill anyway, I still try to recycle, and I enforce it in my surroundings. Of course, I save water. I don't run the water all the time while I'm brushing my teeth, and I do that kind of basic stuff. But I can't say that I'm forcing myself to cut back in any way.

#### 3. Where do you get information about what to do for the environment? Why don't you have it?

I don't actively search, rather, if an environmentalist article flashes at me, I read it.

It seems to me that a lot of this information is biased. For example, I'll take the amount of water used per kilo of meat versus per kilo of grain. It seems that this particular information is very biased because we as humans eat meat but do not eat grain, and a kilo of bread continues to consume water, but that is not included. And I feel like information like that is the majority of the information in this circuit.

I'm not looking for something to do in that regard. I'm more likely to figure it out based on the information I have. For example, I realise that if I eat from plastic utensils, refusing to wash some ceramic ones, that's not good.

**a. Is there anything that would help you access information about eco-living?**

What I can think of right now as a source of information that would be good would be an influencer or someone along those lines. I'd probably look for it on some established social networks like Instagram or YouTube in the form of videos rather than articles.

Possibly a website with articles. But it should probably be an established one, and I wouldn't look for a completely new one.

**4. What would you like your behaviour to look like in the future?**

I feel like I could be doing more. I don't have that many tips on what I can do as an individual.

I would like some sort of regular news tracking like I'd get a tip every week. I would probably prefer either some kind of app that shoots me a notification or Instagram.

**5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**

No. I'm willing to accept people who follow them, but I don't.

**a. For what reason do you do it? / Why not?**

A lot of it seems to me to be based on nonsense. I find it nonsense, for example, a diet that tries to restrict carbohydrates. Since I'm a diabetic, I know that the body is forced to make those carbs anyway, either from protein, for example, and so the diet seems pointless to me, but I don't have that much information on it.

And I have a more negative attitude towards veganism than I do towards vegetarianism, and I have a particularly hostile attitude towards people who say it's more natural for the body.

### Online shopping

**1. What are your feelings about online shopping?**

Positive. I find it more comfortable to shop online.

Especially electronics. I don't buy clothes, and I don't buy food.

**2. Do you have any experience with online selling? What kind of experience?**

No. If I buy new electronics, the old ones are to be thrown away most of the time. It ties in with what I said about trying to use things while I can.

**3. Have you ever bought anything second hand?**

More out of fun than on purpose. Most of the time, it's typically something I just want to try. Or maybe the new thing is expensive, and I'm looking for an alternative rather than having any desire to save the planet.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Aukro but mostly Vinted. I think I prefer the way Vinted presents itself. I feel like there's a better community there, and I trust Vinted more than I trust Aukro. I've seen a lot of scams on Aukro, and there's not as good a way to rate. On Vinted, on the other hand, because it's pretty much for my target category, I probably have a better relationship with it, more trust.

As one can find everything on Auction, I don't find it quite so good. If I'm looking for something, I typically want something short, and on Vinted, if I take that as an example again, I know that I can only find clothes there and I know that it's very well structured and I know that it's required directly from the products to have the categories set up correctly. Which on Auction also by being so big is not so protected. So it's possible that I'm looking for clothes and I find a car there because the person who wants to sell it enters a bunch of categories.

I like the simplicity of the app's design. It doesn't feel like it forces things on me, but it's very simple and not flashy. It doesn't scream at me "Buy this, and you're doing something good because of it", and it doesn't sell this low...

## Charity

### 1. What is your attitude towards charities and volunteering?

I donate sporadically to charities I have personal experience with. An example is the Táborská Stravenka, which serves the purpose of buying a few food vouchers and donating the money to a charity in Tábor, which then somehow gives the coupons to the homeless but forces them to earn them in some basic and simple way. For example, they get a food voucher for an hour of work on something useful, and by the fact that I don't have the time to devote myself to some community service clean-up entirely, or I don't feel like it, or it doesn't fit with my social status, I know that this way I can help where I am. And then maybe this is again an extreme case, but I do surveys for Median, and then they offer to donate the reward to a charity, so there you go. And of course, I guess some volunteering is more about having fun in some clubs and organisations related to the people I spend time with. So it's typically student clubs or college clubs.

I don't have any experience with secondary charity activities. If there is some service like this, where there is just more advertisement, it's okay. I guess I'm used to having commercials in the service... If it's a university one, for example, and there are ads for things that I know won't be explicitly harmful, or they're not the typical cheap ads that maybe hook you into something that might be a scam, like dietary supplements or some beauty products that are supposed to save ageing. But if we have a university website and they're going to share companies that the university works with, and they're going to have ads on there, and they're going to have maybe a video on there, that's fine with me.

So if it's related to what I'm interested in. Probably target the ads well. So if I take an eco-project like the Vinted one, if they add ads for something related to that that I'm likely to be interested in (like some cup, other sustainable clothing stores or whatever), I probably wouldn't mind.

## Technology

### 1. How would you rate your technical skills - working on a computer and smartphone?

Above average

### 2. How much time do you spend using your smartphone?

The daily average is around three hours with peaks up to four.

#### a. What are the typical applications you use? (Note: digital minimalism?)

Typically communication apps, so Messenger, WhatsApp, Discord. And then, of course, music and then social networks - Facebook and Instagram.

I generally do not use apps for learning habits, just exercise apps. I don't find it effective to force myself to do something by an application because I know it doesn't have the same effect on me as if I convince myself to do it.

### 3. What do you use your computer for?

For work, whether it's creating content or programming, and then, of course, watching TV shows and social networking.

## Opinion on the application

### 1. What is your opinion on the principle of the application?

When you put it that way, it seems very disjointed to me. I have one part where I'm shopping, which I understand is necessary to raise that money, and another part where I'm competing. I think those two parts are hard to connect, and I feel like they don't quite go together. And I'm going to be tapping on one app that I took public transportation instead of driving, or I'm going to be walking or biking, and I'm going to be there to buy something at the same time.

What I don't like about it is that, on the one hand, it's good that I tend to compete and win as much money as possible for charity, but at the same time, by contributing, I may be contributing to a charity I don't want to. And like, it's terrible to say I don't want to donate to a charity, but if I take, like, Doctors Without Borders and Stray Paws, it seems to me that Stray Paws shouldn't get money. Because there's a charity that helps and rescues people, and then there's a charity that just, in my opinion, donates a lot of money to dogs and stuff, which I think is absolutely unnecessary.

Asi kdybych měl řadu přátel, tak by mě to bavilo dělat ty návyky, pokud bych viděl že oni je sledují, ale asi by to nebylo tím, že jsem jel MHDčkem nebo šel pěšky, protože reálně auto nepoužívám. Bylo by to třeba že jsem si nechal natočit kafe do kelímku, který použiju znova místo toho abych si vzal jednorázovej. Nebo že jsem si koupil něco v obchodě, to bych asi taky chtěl, abych sledoval.

The difference between Aukro and Vinted is that I don't like the auction on Aukro. I mean, I just want to buy something, but firstly someone else can buy it and secondly, if I really want something, I don't have an exact price. So I guess I wouldn't like to buy by auction.

### 2. Can you think about any changes or improvements that could help you use the app?

Yeah, what I think would be good is to make statistics out of the selling and buying too, and definitely not in the form of an auction. Make the price clear, make it clear how much of the price goes to charity, plus maybe the person can pay a little extra to give more to the charity.



## D.3 Barbara - type Patricie Müllerová

**Date of the interview:** 22. 3. 2022

**Length of the interview:** 1 hour 9 minutes

### Demographic data

1. **Age:** 27
2. **Education:** University degree, CTU in Prague, Faculty of Electrical Engineering
3. **Employment:** Trainee program - reports, training, whatever reps need to do to sell better, from education to process modification to reporting
4. **Marital status (single/married/children) - with whom you live in the household:**  
In my household with my partner

### Relationship to the environment

#### 1. What is your stand on environmental protection?

I picked up some original habits from home. Since I've been living on my own, this has been becoming more and more of a relevant topic for me, and more and more I feel it, so now I am getting deeper into this topic.

I have a close relationship with nature. I care about not destroying it. It's aesthetic, too, that you go to nature to calm down, and you don't want things lying around. I also care about the future. I sense that something is not right and that some things will not decompose and then where they will end up and that there must be a terrible layering somewhere. I don't know much about the technical processes because I haven't been interested in it that much, but I feel it a lot emotionally, which is actually a lot of stuff.

#### 2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)

I recycle - glass, paper, plastic, cartons, and metal waste. And we are planning on setting up a bio-waste facility. I try to reuse things. If I'm getting rid of stuff, I hate to throw them away. I try to find a second home for it - whoever could use it, whether I sell it or donate it, I don't care. We try to take our cloth bag shopping if we don't forget. When we're not downright tired, we try to have a meal at a restaurant though we prefer to have it at home with a TV show, which has intensified during covid. So when we don't take it from our favourite restaurant, the reason is more likely environmental than that we prefer it.

#### 3. Where do you get information about what to do for the environment? Why don't you have it?

As far as the sorting goes, it's some basic education. You know what a green, yellow, blue bin is for. The rest of the stuff we've started sorting now when I go to the container with plastic, I look at what's in the other bins and what I can put in it.

As for some new life for things, I either get inspiration from friends who tell me other ways I could use the items or tell me about a charity that fits what I want to support.

Of course, the internet - if I don't know what I can do with something, I get inspiration from the internet - some specialist stores usually write detailed descriptions of what to do with it, or I can find a group online that would reuse it - like a children's and youth home some old art supplies or something.

I'm not really exploring new things to do. It's still a pretty new topic for me, and since many things were first arranged on my own when I moved out, I still manage to draw from what I know. And I've repeatedly thought of adding something else to it, but so far, I've been

more concerned with specific things and not with what can be done in general for a better environment. It's been kind of a win-win solution so far. I wanted to get rid of something, sort of clean it up, and at the same time, I wanted to do it in some sensible way, so I was concerned about specific things but the general ones I haven't dealt with so much yet.

**a. Is there anything that would help you access information about eco-living?**

Ideally, there would be one internet source, a verified one, that would collect all the information I can trust to be correct. Ideally, it should start with small things that anyone can do because, after all, it takes a lot of work to get used to it and to implement it in your life. My experience is that when I force myself to do something, it usually doesn't last. If there were some beginner types - Top Ten what to start doing and yet it costs you nothing (effort or money or time). And that there would be some sort of categorisation that I could apply. Because, after all, some organic things pop up on me like Facebook ads, but I'm not ready for them yet - like Facebook ads for menstrual panties and cups pop up on me regularly, and that's something I'm not prepared for because I don't know anything about it. It's too much of a challenge for me so far.

**4. What would you like your behaviour to look like in the future?**

In the beginning, even small things make me happy, like the fact that our trash can where we throw garbage is filling up slower and slower. I don't want to overdo anything because I know that I can't work with stress. If I followed something to the point that it would limit me and then I would see my surroundings throwing away my progress by not caring about it or doing some bad things of the opposite nature, I would have a difficult time with it. My goal is to be as eco-friendly to the planet as possible but in some natural way that doesn't cost me extra effort or extra time. Of course, this effort or time evolves with time as I get used to it but not to limit my everyday life.

I know there are package-free stores. I went there out of curiosity. And I've been meaning to go there to buy something, but I haven't implemented it yet.

On the other hand, I like the markets. Just the atmosphere. I know it works like that in southern Europe because the weather is better, and I love it. So I'm open to markets. Of course, supermarkets offer the kind of anything at any time, which is, of course, an advantage when you can't plan for everything. However, I try to plan what I want to eat in the next few days so that, in theory, it could be bought at the market.

**5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**

No, I don't strictly follow a diet. However, I do realise that people eat a lot of meat, and I don't have to have that much meat - a lot of my meals are meatless. I eat salads, and I tend to put cheese in them. So I couldn't be vegan for sure. I like meat, there are some things I probably couldn't give up, but I realise that society eats too much of it, so with my new lifestyle, I'm trying to make more of my meals vegetarian. I just got a voucher for a legume cooking class for my birthday so I'm hoping that will enrich my diet and even though I just love meat and I'm not going to go out of my way to avoid it, I'd like to find more options where I don't have to eat it. I eat fish, poultry, and then some different meat products like Ikea meatballs or a burger here and there, and as for some other foods, I definitely couldn't be without animal products like cheese. Yeah, I eat a lot of dairy - milk and stuff.

## Online shopping

**1. What are your feelings about online shopping?**

Positive because I'm not a person who enjoys going to the shops. If it's something that I know I need and I can get it online, that I don't have to try on, like shoes or something like that, I'm happy to order it online. If I'm buying something I don't understand, I'll go to

a brick and mortar store for a human to give me advice. Or as I'm interested in creative things so maybe creative shops I prefer to go there in person because I get an idea while I'm doing it.

**2. Do you have any experience with online selling? What kind of experience?**

I have experience mainly with books, and the reason is that there are Reknihy where there is precise and simple instruction on how I should put the book on. I take pictures of the books in the comfort of my home, and they tell me which ones they want and which ones are worth bringing in. I don't have as much experience with the other stuff because I haven't found a simple enough way to sell them like I do the books, so if I have something, I prefer to donate it. I prefer the more straightforward way without money to the more complicated way with money. It's easier for me to donate it than find ways to sell it. Selling is an extra effort to realise the handing over of the item and the money, which is why I like the Reknihy. I just hand it in there, and they just need the basic information about my account to load it into, and whenever I want to look at my account and see that it's sold or not sold, I can see what commission I have there, and I can have it paid out at any time. I don't even worry about sending it, packaging it so it doesn't break, or going to the post office.

**3. Have you ever bought anything second hand?**

Online I would probably have a problem with it because there you don't know what exact condition the thing is in, and I have a problem with things with which most people have no problem, but if I go somewhere where I can properly see the used item, I have no problem with buying used items. On the contrary, sometimes I find it appealing because the stuff has a story. And for me, as a pretty spiritual person, it's also an added value in many cases. I've been to second-hand stores a few times. I don't go more often because when I was there, which was quite a while ago, there was no selection. I didn't like anything there, and it was entirely out of my interest. The other thing is that even though I'm a girl, I don't enjoy shopping for clothes. It's more functional than decorative for me, so the simpler it is and the quicker it can be over, the better, which is usually what the big malls offer.

Electronics, I'm worried about the used stuff. Most of the time, these electronics barely last one owner. As for books - I know there are Reknihy, I know there's Knihobot, I sell books through it myself. Still, the books I buy tend to be on specific topics. I only purchase educational books, not fiction, and it bothers me extremely if the book is damaged somehow, which is my personal emotional problem. Yes, I have antique books, but those aren't the books I'm looking for. When I need a book on a particular subject, I go to a regular store. I have books from the antique store because I'm interested in the place and am intrigued by the story it's connected to. So, like from an antique store, I usually bring books from foreign countries in a foreign language.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Knihobot, Reknihy, Facebook Groups

## Charity

**1. What is your attitude towards charities and volunteering?**

Positively, it has to do with my spiritual side. It's important to me to do things to make the world a better place, and I don't just mean having less waste but making people nicer to each other. To do things that they don't have to do, to learn that everything doesn't have to have a profit, that some things are done for pleasure and not just for their own pleasure but for the pleasure of others. I was in various volunteer organisations during college. I've now found a volunteer group at work where I do extra stuff.

I regularly try to do at least one positive thing each month, and usually, I can easily think of something I could do. I have a regular contribution set up as an outgoing payment. My focus is animals rather than people. I'm all about cat and dog shelters.

Or donating things, whether it's clothing to support seniors to have a dignified retirement, donating art supplies or books to the Home for Children and Youth, where there are various clubs. And in the future, I would like to help with other activities. My company offers me that two days a year, I can work for a non-profit instead of working for the company, and there we also have a lot of options to choose from, whether it's educating seniors or helping at the zoo or whatever.

The only secondary charities I can think of are the Reknihy. I know they send some of what they generate to save the forests. Otherwise, I can't think of much. I know there were events like let's run to help shelters instead of going for a run yourself so that you pay the entry fee for a race that you can also walk but otherwise, I don't know much about it.

So it's about trying to give it to someone, and the money is marginal to me, and it bothers me when I have to research somewhere or find out what option is the best place to sell it, and I mind the extra time it spends in my room. My primary goal is to clean my room, and if I can put it somewhere in one place and it's not in my room anymore, that's a benefit to me, whereas if I had to organise it myself, I don't actively spend that time, but I mind tripping over it in my room.

**2. What motivates you to help a charity / to get involved / to contribute?**

If I want to donate clothes to charity and know how to do it, even if it's more difficult because I'm doing something extra, but if I know how and I know where I don't mind so much. I'm more bothered by the hassle of figuring out where to put the things. For me, it's already a benefit just to get the stuff out of my room, to do the cleaning that's important to me, and I want to pass on the things I don't use, but my emotions keep me from throwing it away.

## Technology

**1. How would you rate your technical skills - working on a computer and smartphone?**

I think it's above average. I'm capable of something, but considering that I studied at a technical university and saw what other people educated in that field can do, I'm a total beginner compared to them. But otherwise, although I don't have much of a comparison, and I'm guessing, I can probably say that it's slightly above average.

For self-education and free time, I tend to use my computer when I'm at home. It has a bigger screen, it's easier to read, and it's easier to use. But when I'm on the road, of course, I don't carry a computer, but I do carry a mobile phone. That's why I started using apps a lot because I have time on the tram or when I'm waiting somewhere. So, if I want to spend some of my time on technology for an extended period in the evening, I use the computer. If I want to take advantage of those short breaks during the day, I use the mobile.

**2. How much time do you spend using your smartphone?**

Enough

**a. What are the typical applications you use? (Note: digital minimalism?)**

I'm not that kind of social media junkie. I browse them on my computer, not so much on my phone. On my phone, I check my calendar and my communication channels. Then I check the news there to see what's currently going on, and then on mobile, I use apps - again, for education, to see what kind of plant a specific flower is. I don't play games. Of course, photos, and videos.

I use self-learning apps, geography, languages, various Pinterest-type ideas, tutorials, etc. As far as some kind of tracking of my activity, I have a to-do list but habits or something

like that, I have my methods for that, and even though they are maybe on my phone, they are in my private spreadsheet, not an app because I haven't found one that fits my approach. It's very specific. I have an idea of how I want to do it, I have my system, which is specific in some way, and it changes. And this way, I can make it exactly my own and apply the changes that happen when I'm learning something.

Yeah, otherwise, I'm not opposed to education using apps.

### 3. What do you use your computer for?

Work - using Microsoft applications, basic ones or even some advanced ones, but I don't program them. As for my free time, I use the computer a lot for education - there are a lot of websites for learning vocabulary - I use it to organise my calendar, organise my todo list, organise my skills, even any interests or information I collect I write down online in a notebook and not in paper notebooks. Of course, googling, whether for gifts, tutorials or just anything - more or less for inspiration.

## Opinion on the application

### 1. What is your opinion on the principle of the application?

The map is super. Maybe it wasn't so long ago that I moved, and it took a while to find out where the sorted waste was. Of course, if I have a goal, it's handy, but I see it positively also because I don't have that goal, and it might motivate me to start doing it because someone has collected information for me that I can then use, and that's the important thing for me. I've been on my phone and my computer for too long as it is, and I'm tired of figuring it out. So if there's something where this information is processed, I'm happy to use it purposefully and also for inspiration. I think it's great. Especially if there's some sorting, ideally "Now I want second hand", "Now I want sort waste", and things like that, and I think it might inspire me to do something that I'm not doing now.

I'm not sure about splitting up the points because I don't like doing something so someone else can pick which charity gets it for me. I don't like that I can't choose which charity I decide to give my uploaded points from sales to.

I technically sell my thing, but if I don't score enough points, the money from my item goes to a charity which I don't prefer. I don't like that. I donate something, and someone else decides where the money goes. Also, I tend to support less popular charities, less well known or less played on feelings or something. I tend to pick the ones that other people don't, which breaks that pattern. That it's my own thing that I've decided in good faith to sell, and it can end up going to charity, which I've had bad experiences with.

I'd welcome something to help me sell my stuff easily. Ideally, it would be somehow linked to a map to show me people in my area who are interested in the item. Suppose I have to sell an item, and I have to choose between selling it for a hundred to someone who lives near me, where I'm pretty happy to go for a walk or selling it to someone for two hundred to whom I'd have to ship it, which is extra work for me, I find it enticing to walk to and get by with less money. Because it's a hassle. Maybe if I'd already learned to work with it somehow and then bring the stuff to the post office all at once, in the end, it's more hassle to get it to somebody, but because I'm working my brain, I'd rather get it to somebody on foot knowing that I went out and walked.

As for collecting points, that's great. Learning through games is excellent. I'm a person who has a pretty strong discipline, so I have the intrinsic motivation that I want to do it, and I have a pretty high discipline. What's important to me is the information that I can do while avoiding researching it from different sources.

The ideas, guidance, and education are most valuable to me here with the latter group. I know through my discipline how challenging it is going to be for me. Hence, I'm able to

make my own method of going step by step, so thanks to intrinsic motivation, I don't need those points, but if I believe in it, I'll just do it. But I understand that a lot of people need it. If it's motivated not by the redistribution system I don't like, but by the fact that maybe I'll suggest a charity for the next month's selection so that I can use the points to decide which charity will be the people's option for the next month. That's more valuable to me that maybe I support dog shelters, so I'll suggest a particular dog shelter. Of course, it has to go through some kind of approval simply that the organisation is not sinister in any way, and then I will play for my shelter to have the most points and get in the top four charities. That ability to influence something or get my voice heard is important to me. But doing something to get a result based on someone else's decision is directly demotivating to me. It may just be that you have some primary charities to cover all the essential topics, but I would be fine with some top 2 charities being among the others that you can choose from when you sell your stuff the following season. The fact that the charity that I chose will get more awareness, that it will be popularised, that someone will even think of volunteering and that I contributed to it is a great motivation.

I'm competitive. I learn vocabulary like this - one thing that is important for me is that I learn new vocabulary, but there is still that competitiveness, and actually, it's just competitiveness, and that's all there, so that's why I dare to say that I would enjoy it even without the charities. However, the fact that it would be for charity is an added value for me because it gives the competition a win.

The educational section is significant for me because, for example, I would like to learn first aid, but there are so many resources, and there is either conflicting information or in one resource, I learn one case, in another resource, I learn another case, but there is no resource where I can learn complete first aid. I would like to have one source that I trust is done carefully, that has the correct information, and that's what I would like to draw from. I don't need to have a lot of resources. For me, that just leads to decision paralysis and inaction. I just need one that I'll listen to if I believe it's well done. So as long as some experts back it that I can trust, the educational part is crucial to me. Because some things are obvious, we should do them like not wasting water and so on. But I, by nature, have a really strong need to understand things. So if I know why, that's a motivating element too.

## **2. Can you think about any changes or improvements that could help you use the app?**

I suppose if I were a buyer, which I'm not so keen on, however, I suppose there could be some filters, some searches and such in the future. Maybe ratings are based on not just what the thing is but other information.

Like, I'd buy a book from someone, but I need to be able to decide what condition it's in. If I have to choose a book and two books are the same, and someone offers me one for a hundred and fifty crowns, and it's undamaged in the way I take care of my books, I'll take that one rather than if someone offered me one for fifty crowns, but it had dented corners, which drives me crazy.

I wouldn't mind if there were a donation section, if there was a section on which children's homes are interested in art supplies, which libraries are interested in books, and what kind of books.

The points could be a competition between people. That's how my partner and I compete when we're learning vocabulary to see who can get the most for new words this week. But to have opportunities for teams, some interest groups compete against each other in different things.

## D.4 Tereza - type Patricie Müllerová

**Date of the interview:** 5. 4. 2022

**Length of the interview:** 1 hour 17 minutes

### Demographic data

1. **Age:** 35
2. **Education:** University - Master's degree.
3. **Employment:** Operations Manager, Administration, Marketing
4. **Marital status (single/married/children) - with whom you live in the household:**  
Husband, two children and a dog

### Relationship to the environment

#### 1. What is your stand on environmental protection?

Positive. Partly active, but I'm no lobbyist. Not everything I find significant is viable and comfortable for me. I'm driven by the natural environment, my children's future, travel - I see destinations where environmental protection isn't addressed, and you can see how it's completely dying out. Plus, I'm getting sick of consumerism lately, so I'm also seeing it as a way to reduce the consumerist lifestyle.

#### 2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)

We sort waste (paper, plastic, glass, aluminium, cans, oil, batteries, electrical waste, hazardous waste), and I try to buy things that are recycled or can be recycled. I like things that can be repaired, and then I like quality stuff that is not so frequent to buy again. I don't purchase packaging-free products, but we try to minimise our purchases as far as plastic goes. I haven't found packaging-free shopping options around. It's also less convenient as far as parking goes. At the same time, it's much more time-consuming.

We compost at home, trying to consume all the purchased food. We try to minimise plastic and if it is plastic, make it long-lasting, and don't keep disposable plastics - I hate straws. We don't keep plastic cups at home, and when we're somewhere, and the option is there, I try to buy more eco-friendly packaging.

We have Keep cups, and my daughter started school, so she has a lunch box. If we have a bag, I reuse it afterwards, for example, in the bin. As far as clothes go, for instance, if I don't like something anymore, but it's still wearable, I give it to a charity, or at the kids' to some friends who will pass it on. And when it's no longer usable, we use it for rags to make the most of them.

I'd rather pay extra if it's better quality and lasts longer. But I don't think it's still true that more expensive means better quality these days.

I don't practice that with my kids. They inherit some things, but otherwise, we shop for them at a regular store because kids grow so fast, so the clothes rotate a lot. But we don't buy that often as they get a lot of it second hand.

We don't buy many toys, and the kids inherit them from each other. I'd rather have one nice, good quality one than a bunch of knick-knacks - again, I'm happy to pay extra. My daughter rides the bus to school. We also raise our kids in this lifestyle - they sort, are used to not wasting, and eat everything they get. I prefer to bake a cake than buy them some sweets - it's not in plastic, it's not as sweet, and I know what I'm putting in it. Make sure the papers are traced on both sides when they draw, and when they cut, they start at the beginning of the paper. Make them think about everything they're doing.

**3. Where do you get information about what to do for the environment? Why don't you have it?**

Two years ago, my husband started studying landscape architecture at the University of Agriculture in Prague. He also took some courses on ecology.

We learned how to sort correctly and what can and can't be recycled. I went to a very interesting lecture on the circular economy. Since we are remodelling our house, I am interested in the ecology of construction so that it will somehow last but be affordable at the same time.

I like reading about this stuff, and I enjoy it. The internet leads the way as a resource - Ministry of the Environment, Agriculture, EU directives, radio, or government portals. Occasionally some technical and scientific articles. Also, various documentary series on waste and waste management. And also presentations from my husband's professors.

I don't follow influencers and their articles at all. I don't have much experience with books either. If anything, it's more about healthy living, herbs and that sort of thing.

**4. What would you like your behaviour to look like in the future?**

I'm comfortable with the current situation. But what I miss is making it easier for people, for individuals. Make the chains try to make it easier for us. I don't quite see the ecology in electric mobility, but if there is an electric car, it's nice that it's quieter and kind of cleaner air, but I don't quite see the ecology.

**5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**

I eat meat. I'm trying to limit it somehow, but I'm not sure that everything popular in health now is not just a trend. So I'm more likely to limit myself and eat less of it, but I like traditional Czech food, so I don't want to give it up.

I limit my meat consumption because I don't think it's entirely healthy for the body. I've also read that meat production is very energy-intensive, and I've read about how the animals are farmed - so I'd rather pay the extra money for better meat at the butcher or home eggs. I also like that kind of wastelessness because we appreciate it more when we have less of it. At the same time, cattle produce a lot of CO<sub>2</sub>.

## Online shopping

**1. What are your feelings about online shopping?**

I don't like shopping of any kind in general. I only do it out of necessity. Online and offline shopping both have some advantages for me.

We used to be accustomed to a man walking into a store and finding everything there. Now the assortment has gone down. So, for example, I try on sizes in a stone shop and then go online. Sometimes it bothers me that it's worse for fitting and the colours sometimes don't match. I don't mind buying a t-shirt online, but I need to try on pants, for example. And the same with kids, each brand has its own sizes. The cool thing is that it can be sent back - although then again, it's debatable how eco-friendly it is.

I also buy electronics and books. I love bookstores, but I buy books online. And even medicine. The only thing we don't buy online now is food.

**2. Do you have any experience with online selling? What kind of experience?**

No, I usually donate it. Either to friends or charity. If I bought it, I counted on the expense, and I don't need to sell it as I don't need to make money on it. There's always somebody who could use it, and in that case, I'd rather give it to them than sell it.

I don't think it's any less time-consuming than selling it, because I want to put it away in a nice condition, so I have to wash it, iron it, fix it. But sometimes it's also because I don't want to worry about shipping and such.



**3. Have you ever bought anything second hand?**

Yeah, but as I'm a person who buys less stuff and doesn't rotate my clothes that much, I'd rather try on clothes, touch the material and stuff, so they'll hold up for a while. So I'll buy something occasionally, but I don't go out on purpose. I don't feel comfortable wearing things from people I don't know.

Besides clothes, we've been buying a used car and bikes for the kids. I got a lot of my books from brick-and-mortar antique stores.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Votoč vohoz, Aukro in the past

**Charity****1. What is your attitude towards charities and volunteering?**

Volunteer work, I get minus points there. Like I put clothes in the donation bins, we contribute to dog training for the blind every month, and now we're donating to Ukraine, of course. And we live in a village, so sometimes we go to plant trees or do events for children.

Often it's an event that you go to because you enjoy it, and the fact that you contribute is a bonus. For example, my husband likes to run, so he participates in various charity runs. I don't enjoy running, but I go anyway. I pay the entry fee, and I just don't run afterwards. Otherwise, I have no experience with secondary charities as far as apps go. I didn't even know such things existed. But I definitely wouldn't mind using it, even if there are maybe more ads. I like it better when you can see the projects the money goes to directly.

**2. What motivates you to help a charity / to get involved / to contribute?**

Help. On the one hand, it's a given and an obligation. If you can, you should. I feel good when I give something to someone, and in doing so, I'm giving something away. If I have enough of something and donate some of it and don't feel it, I think it's more of an obligation.

**Technology****1. How would you rate your technical skills - working on a computer and smartphone?**

Necessity. Neither makes me feel like I'm relaxing. 90 % of the time, I only use them because I have to.

**2. How much time do you spend using your smartphone?**

If you include the calls, maybe three-quarters of an hour - a lot regarding work.

**a. What are the typical applications you use? (Note: digital minimalism?)**

Mail, sometimes messages, WhatsApp (I don't have FB or anything like that), apps I need to have for my daughter's school (grades and stuff), internet banking.

I have no experience with apps for learning habits. If I decide to do something, I want to learn it on my own, not have someone interfere. I have enough self-reflection, so I don't need various reminders (except for the alarm clock).

**3. What do you use your computer for?**

For work, internet banking, online shopping occasionally (definitely more comfortable on the computer), searching for information (I'm not lazy to turn on the computer when I want to find something).

## Opinion on the application

### 1. What is your opinion on the principle of the application?

If I want to help, I'll do it directly. I don't need to be mediated. I don't know if I would use this app. Then I'd probably be forcing myself to do things I don't want to do only to add to the money.

A lot of that stuff is a given thing, and perhaps if one were even helping with that, maybe that would be a bonus. But the need to record it on my phone, I have an aversion to that. I'd prefer to send the money directly.

What I like is the map. You know where to go if you want to, and you don't have to waste time looking for it.

The whole effect is nice, it's just not needed for me. And I'd probably be too lazy to type it in.

I wouldn't mind getting only part of the money or none at all the selling part. Preferably if the buyers pick up the thing away themselves. I imagine I'd download the app for that reason.

The auction thing can discourage me with some consumables. I don't have that much time to keep track of it. But then again, if I could see some benefit to it, I guess I wouldn't have a real problem.

The fact that as a seller, I can't control exactly which charity it goes to wouldn't bother me. I'd go along with it.

### 2. Can you think about any changes or improvements that could help you use the app?

Having a takeaway feature there - not worrying about how to ship it. The amount I get paid should cover the shipping for sure.

To show people where the money goes. Show them specific projects so that they have something to think about. And ideally, it should be local projects. That's even more for me.

Collecting points to influence not the distribution of money but the determination of charities in the next round seems unnecessarily complicated. I'd instead show those users who have a problem with not being able to influence where their money goes and why it is done like that. Change their minds and explain why it's done that way. You'll never please everyone.

## D.5 Dana - type Patricie Müllerová

**Date of the interview:** 21. 3. 2022

**Length of the interview:** 1 hour 39 minutes

### Demographic data

1. **Age:** 23
2. **Education:** CTU in Prague, Faculty of Architecture, 2nd year of Master's
3. **Employment:** Student
4. **Marital status (single/married/children) - with whom you live in the household:**  
With parents and in a flat with two other students

### Relationship to the environment

#### 1. What is your stand on environmental protection?

It's a present-day topic, heavily mediatised. I don't know if that's helpful. But it's somehow important to where our generation is going next. By the time our generation has an impact, we should be in tune with nature. It's important to realise that man does not have dominion over nature.

#### 2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)

I can't quite distinguish between what I do for the environment and what I do for my health. It seems to me that the two are pretty connected.

We can start with the textile industry - cleaning, dyeing, ... That's directly affecting an individual. The way it's made is not healthy for the person putting it on their body. It's already proven that there are various diseases from it. So you're harming yourself in two ways - not only by putting it on your body directly but also in the future by harming nature. So in that regard, I'm trying to find out as much as I can about it. That's important in all areas. There are a lot of influencers that aren't telling the truth. We still live in a market industry where everybody's trying to make a profit. So it's essential to understand where the truth is - which is probably the hardest thing. It's a sort of lifelong education. To keep trying to figure things out, but to know that we probably don't know everything.

And it might just come from my nature, but the moment I know about it, I know what it does to me and what it does to the world. That's what gets me to do something. What drives me to take that more environmental path or choice.

What I've started doing is I've started trying to limit the volume of what I buy - not just in clothes, but in everything. And that's what I try to stick to the most.

The other thing is that if I do buy something, I try to buy something with a smaller environmental footprint - like greener versions of things that are made in a way that doesn't hurt nature as much as the regular stuff. Since I started doing that, I've realised that it's a much more complicated path. Going and buying a t-shirt in a fast fashion store is much easier - you have more choice, and it's cheaper, which is essential for me as a student. So I try, but it doesn't always work out.

When I travel, I try to go for greener options. But I don't know when the train is more ecological, when the plane is better for what distance, etc. All I have is this idea that public transport is better than private.

As for food, I try to buy just enough to eat. I used to throw away a lot of leftovers. Now I try to plan my shopping always to eat it all. And it's kind of hard to figure that out, too.

I started making it a point to turn off the water when I shower and put on my shampoo in the very beginning. And other things involving the water too.

I'm already recycling pretty much automatically. I live in a student flat, and we recycle thoroughly - paper, glass, plastic and metal. We also separate organic at home because we can get organic, plastic, and paper bins there. So now we go with the mix once a fortnight and with the plastic once every four days. It's sometimes more complicated in the city because there are not recycling bins everywhere. Sometimes I keep it in my pocket, sometimes not.

■ **What about your relationship with single-use plastics?**

It's complicated. I know that buying four apples in a plastic bag is wrong. But I've found that the critical thing for me is not to beat myself up. If there's another option, I'll take it. I have my own bags, but I don't carry them that often. Like in Scotland, they had compostable bags instead of plastic bags, and that was great.

At least I try to use it more than once. If I bring rolls in it, I'll keep it for snacks. I've learned that it's important to take baby steps.

As far as restaurants go, I try to go to them, especially now after the pandemic, to support them. I enjoy vegetarian and vegan restaurants. I have a map where I keep a note of places like that, so I know I have some options of where to go.

My approach to disposable packaging is that I have no problem paying a few extra crowns to put it in a paper box rather than a plastic one. Instead of bags, I'd rather stuff what I can fit into a backpack. I don't particularly appreciate buying cups, but I'd have to take an awful lot if I had to carry everything. I also like the concept of drinking cups, for example, that you rent them for a deposit and then return it. I don't buy much takeaway coffee and tea, so takeaway cups aren't that big a deal for me.

■ **What about you and the packaging-free life?**

I'm trying to switch to packaging-free products, like cosmetics or something. But so far, I've been very disappointed that it hasn't been entirely suitable for my body. I'm not discouraged, but I have to take it one step at a time.

As far as food goes, I would love to, but there aren't enough of those packaging-free stores. It's far away now, so it's time-consuming, and I have to carry bags full of packaging. So it's not feasible for me at the moment.

**3. Where do you get information about what to do for the environment? Why don't you have it?**

From the books. I trust them a lot. And then a powerful platform for me is Instagram. I've already found and followed a few people there. So, in the end, the experience of people already functioning like that and used to act like that in everyday life.

I guess the sources of new things, what else I could do, are mainly people. First of all, the people that I hang out with, and then also the Instagram aspect.

**a. Is there anything that would help you access information about eco-living?**

The way I have it set up, that's the way I'm used to it. But in the end, I'm always the one with the impulse to look for it. So it's the active search that I'm really interested in. But it's more difficult for me to get an opinion on one issue from experts in different fields. If it was lined up together, I could read all their views and form some of my own opinions. And ideally have access to those experts as well, like being able to write to them.

And then the maps are great too - vegetarian or vegan places or places that are involved in some way in environmental activities. Then you go, and you know that you can sit in a café around the corner.

**4. What would you like your behaviour to look like in the future?**

The thought of late is that I would stop using paper tissues and start using cloth ones instead.

I think I'll move in the environmental direction in baby steps. An example might be the tissues - little steps like that that are easy to incorporate into life.

What would bother me is if I found I was doing something that wasn't actually useful. Otherwise, I think I can still manage to limit meat and dairy. Plus, being a student now, I can't afford many things yet. For example, buying clothes from brands that I trust to make it right. So I guess I'll be able to afford that when I'm secure in a job.

And if I build a house someday, I believe I'll go that way. In general, I think I've got the style down pretty well.

**5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**

I try to limit meat. And besides meat, I also restrict milk - but not dairy products. That's the balance. If I stopped eating cheese, I'd mess up that balance and start eating everything again. But I'm trying to eat better quality food.

**a. For what reason do you do it? / Why not?**

I was intrigued by Instagram. So I bought a book about it, and it kind of made me realise that I don't need to eat meat multiple times a day. That we eat meat a lot and you don't even realise it.

Another factor was that I was sensitive to eating animals from a young age. At home, everyone had eaten meat, so I ate it too, but I couldn't handle meat processing and the like. So I realised I didn't need to eat the meat.

Now I'm at the point where I don't eat that much meat. I cook meat for myself maybe four times a month. But it wasn't accepted very well at home, so I figured I wouldn't prepare it, but the moment someone cooks it for me, I'll have it. Sometimes the meat belongs with the meal, so why not. Now I find that I eat meat mostly when I'm with people who eat it.

And at the very least, what my family has started doing is they've started buying meat from local farms. And not just meat, but eggs too.

But the main reason I limit meat is not ecology. It's a positive side effect, but it's mainly for my health and the animals.

**Online shopping****1. What are your feelings about online shopping?**

It's very convenient when I'm swamped. But I realise that it's much easier to get more stuff than I need when I shop online. I'm buying, like, Christmas presents or books. And at home, we've been shopping online for food lately. It's great that there's a massive variety of those vegetarian and vegan substitutes that are much harder to find in a brick and mortar store. I buy clothes and shoes at the stone stores to try them out.

**2. Do you have any experience with online selling? What kind of experience?**

I've wanted to for so long. I've even sorted my stuff out, but I haven't gotten around to it yet. I also sold a friend a sweatshirt I wouldn't wear. And generally through friends. But it's been minimal, and I'd like more.

Outside of clothes, I've been giving books. But in general, I've had more experience through friends than taking it to the thrift store.

**3. Have you ever bought anything second hand?**

Yeah. Both online and offline, more often in stone shops. And especially clothes. Online, I had Vinted, where I bought a few things. There you need more faith that it will be like the

picture. But I like going to the rock shops as well, and I don't have a problem buying clothes there, I enjoy getting them. But I wouldn't have a problem buying furniture either. I can say that I have no moral problem purchasing something from another person. It's all about the condition.

And I used to buy books a lot. I like thrift stores that also help different causes. People bring something in for free, and what gets sold goes to a good cause. That's where I try to shop. I have my dad's old phone.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Vinted – they have good marketing, and it was getting to me. Plus, I knew people around me were using it. There's a lot of stuff on there. But on the other hand, they try to curate what people put on there.

When I want something, I look on Heureka, what is the lowest price, then how much it costs on Alza, as a quality but more expensive place, and then I look if someone sells it cheaper on Bazos or the Marketplace.

### Charity

**1. What is your attitude towards charities and volunteering?**

I guess I'm being hypocritical. I want to make it work, but I've never sent much of anything. I'd like to get around to it, maybe even send something regularly, but I guess I haven't made up my mind yet. I think I'll probably be sending some in the future. More monetary, people know what they need most.

I regularly donate to Jesus' grandchildren, contributing to well-known street fundraisers (if I don't know them, I do not contribute). Then also shopping at just those second-hand shops that donate to foundations. And I think, if I had the choice between traditional service and a service that helps charities, I would choose the service that helps.

But on the other hand, it has to be affordable - I'm happy to help, but it has to be within my means.

**2. What motivates you to help a charity / to get involved / to contribute?**

I think I'm close to charities that help with health issues because of personal experience.

### Technology

**1. How would you rate your technical skills - working on a computer and smartphone?**

I can learn a few things, but I'm not exactly tech-savvy. I don't really like learning new things. But I'm an architect, and I work with some programs. I guess that's why I think it's important what the application looks like. If it doesn't look good, I get discouraged.

**2. How much time do you spend using your smartphone?**

On average, 4.5 hours a day.

**a. What are the typical applications you use? (Note: digital minimalism?)**

Instagram and Pinterest (also as a source of inspiration for school). Social networks - Facebook, WhatsApp, Messenger, News, ... I do more photo editing on my phone too.

I don't use any special apps for learning habits. I prefer to write down what I'm supposed to do and what I've been up to, the old-fashioned way. I've tried apps that remind me to hydrate, but they didn't suit me. I don't even have fit bracelets. I would consider it to get a good night's sleep.

**3. What do you use your computer for?**

The school (architectural programs), photo editing, watching movies. I learned to use my phone more. Other than movies, I don't use it much for entertainment.

I do online shopping exclusively on the computer. I don't do much on my cell phone. Even the Vinted thing was on my laptop. It's reassuring that I won't accidentally click on something I don't want to.

I've been keeping track of what habits I've done every day for about a year now. I'm more comfortable recording it backwards than reminding myself to do it. I'm doing this with a friend. To motivate each other, to see what the other person is doing. We gradually adjust it to suit us, write notes on it and stuff. And I think that's cool. Plus, it gives me insight as well, which is so motivating.

If the friend wasn't there, I think it would have some effect too, but I think the friend works as a kind of Big Brother, which keeps me a little more motivated. It's interesting to see someone else who maybe has a similar approach to life to see how they're handling it.

**Opinion on the application****1. What is your opinion on the principle of the application?**

It looks good to me. I think helping a charity would motivate me - the need to make sure the charity I want to win wins. But I don't want that kind of motivation that if I don't follow through, they won't get it because then I'd be more anxious about it.

Being able to add a friend and trigger each other, or make a team and play together, seems crucial. Having maybe some public figures in there that I could see using that as well. I think that would motivate me as well.

The app helps charities, so I wouldn't mind being there with just a few people if I knew it existed. And because it has more functionality, it will draw more people.

The fact that I would only get half the money probably wouldn't bother me on many things. If you're selling something you own, you're selling it because you don't need it, and it has already lost its value. So I don't think it would deter me.

**2. Can you think about any changes or improvements that could help you use the app?**

What works for me is that it doesn't alert me to anything but that I retroactively fill it in. But I guess it might be interesting to have a choice for the individual habits that I want a reminder for or that I want to track.

The auction probably wouldn't appeal to me as much as someone giving me a price and me knowing it from the beginning. I could probably find a way to do it, but having a fixed price seems more manageable so that there's not too much game and competition.

I wouldn't need the DIY in there. To keep it clear and not cluttered. And be warned, I don't shop on my phone, so I'd like to be able to shop on my computer.

**3. What is your perception that the money will still go to charity even if users don't use the app for tracking their habits?**

It would be more negative otherwise because I'd have a guilty conscience. The fact that it's a game about which charity wins is great to me.

## D.6 Tom - type Petr Zelený

**Date of the interview:** 31. 3. 2022

**Length of the interview:** 46 minutes

### Demographic data

1. **Age:** 31
2. **Education:** Master's Degree
3. **Employment:** Environmental NGO Communication Campaigns Coordinator
4. **Marital status (single/married/children) - with whom you live in the household:**  
A two-person household

### Relationship to the environment

#### 1. What is your stand on environmental protection?

It started about eight years ago when I was travelling and saw the polluted oceans. When I came back, I was deciding what I wanted to do and also how I wanted to treat that nature. So that's how my connection to nature started.

My journey to the environmental NGO where I work now was that when I was going through this renaissance in my life, I started at Life 90 in fundraising and marketing, but I was still drawn to the environment. Then the opportunity came up to work at the environmental NGO where I work now, so I gave it a shot, and now I'm here coordinating energy- or waste-related campaigns.

#### 2. What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)

In household care: we have a vermicomposter, and we buy packaging-free at Scuk.cz website. At Lidl, we buy vegetables from baskets that would otherwise be thrown away.

We eliminate transport. We prefer trains - I haven't flown in a while, and we tend to plan holidays within driving distance.

I hardly buy clothes, and when I do, it's from Fair Trade or organic cotton shops. We've turned down the heating, and we want to insulate the house, refurbish the windows, and buy a pellet boiler (pellet is a renewable resource).

I use a variety of reusable coffee cups and water bottles. I've seen campaigns like Re-krabička, my partner, who works in a hospital, connected the hospital with this project. Now the hospital has switched to it. When we don't have our cup, we use the Re-keřímek. My partner and I regularly pick up trash in a cove near our cabin during the summer.

Both my girlfriend and I follow this lifestyle.

#### 3. Where do you get information about what to do for the environment? Why don't you have it?

I actively search 90 % of it myself on the internet. I try to get and verify them on various Czech and foreign verified portals. Since I've been working here, I use the info lists of the environmental NGO where I work now, where there are various tips on what you can do. And I also use other newsletters or portals of environmental organisations.

I don't follow influencers at all. I tend to play videos on more minor issues, but I turn to articles or even books on more significant ones. But I don't think I download any apps on my phone.



**a. Is there anything that would help you access information about eco-living?**

We don't have a TV and only listen to the radio in the car. But I'm a podcast lover, so I use that audio form a lot, and I like to read, so one of those two mediums.

**4. What would you like your behaviour to look like in the future?**

I'd still like to use green electricity. That's going to be a bargaining chip because we live with my partner's parents, and her dad is reserved about that kind of thing. We are considering getting a new car, so if it were an option and made economic sense, at least part of the drive should be hybrid.

**5. Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**

I don't eat meat during the week. I was a vegan for three years, but it was some kind of impulse that I wanted to take care of nature, but I like meat, so then I switched to this way.

**a. For what reason do you do it? / Why not?**

In the beginning, it was purely for ecology. Then the ethical aspect started to dawn on me, and maybe the health aspect as well.

**Online shopping****1. What are your feelings about online shopping?**

I don't shop much. The only thing I buy online is books. I usually go for a title and look for a reasonable price. I typically don't get it delivered but pick it up at the bookstore.

Then we also buy groceries online at the Scuk.cz website, and we try to pick local seasonal food. Also, sports equipment - again, I pick up in person. And I order wine by the larger shipment.

**2. Do you have any experience with online selling? What kind of experience?**

I wanted to sell clothes, but the app selection didn't work out. I'm active on Knihobot, where I sell books.

I have no personal experience with auctions. If I could make more money compared to the price Knihobot generates, I wouldn't mind, of course, but it wouldn't cost me any more effort.

**3. Have you ever bought anything second hand?**

I have. I buy books at Knihobot, where I also sell books. As far as clothes go, very sporadically, if I need something specific and know I'll only use it a couple of times, I check out the thrift store. But that's more sporadic.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Knihobot - he popped out at me before Reknihy did. I also saw an interview with the owner on DVTV. When I put the books on there, they sold very quickly, so I don't feel the need to change things up. I'm comfortable with just bringing the books in, and they take care of everything - take pictures, display them, ship them. So it's convenient.

I had downloaded Vinted, but at the time, it said it wasn't for the Czech market. Therefore I uninstalled it.

**Charity****1. What is your attitude towards charities and volunteering?**

Positive, of course. For the last five years, I have been working in the NGO sector - first with Doctors Without Borders, then with Life 90, and now I am with the environmental NGO where I work now. The NGO system is important because it complements the state services.

Without it, I don't know who would take care of the elderly and those who are dependent on others.

I am a regular donor to four or five organisations that make sense to me, and I want to support them. So primarily, it is financial support. I also sign various petitions and appeals when the opportunity arises. That's what the environmental NGO where I work now works on, so I know it makes sense, and it helps the organisation in its negotiations with its stakeholders.

I'm familiar with secondary charities like running for charity. I like the idea of using that energy and contributing something. But the only application I know about it is from CEZ, and they do a lot of other things that are harming the environment, so this application seems to be more like a form of greenwashing, and I don't want to be a part of that.

**2. What motivates you to help a charity / to get involved / to contribute?**

I'm sure it started somehow in parallel with the move to the environmental sector. I used to work in a completely different field. Before that, I was occasionally part of some of the trash picking in elementary school, but that was more about community participation. But it wasn't until I was travelling that I started actively seeking out charities and contributing.

### Technology

**1. How would you rate your technical skills - working on a computer and smart-phone?**

I'm somewhere between a casual and an advanced user. I can edit photos, add captions, basic excel, web editing,...

**2. How much time do you spend using your smartphone?**

An hour to an hour and a half. I aim to use it as little as possible, but it's hard.

**a. What are the typical applications you use? (Note: digital minimalism?)**

Spotify, iRozhlas, WhatsApp, Signal, bank, browser, Facebook (I cancelled Instagram), email.

I had an app that monitored to-do's, and there was gamification in it. But I went back to the paper.

**3. What do you use your computer for?**

Content consumption - audio, video, text, series, movies - on a personal level. I mainly work with marketing tools like mailers or web editors on a work level. Canva, Adobe, partial web applications, e.g. for transcribing audio into subtitles. Google Analytics, Data studio and so on.

### Opinion on the application

**1. What is your opinion on the principle of the application?**

I find it very diverse and complex, which I like, that I can realise myself in many areas. At the same time, I like the gamification there.

I can't think of anything critical. The only thing is, when I tried some sales apps before, there was a lot of stuff, and it was hard to navigate. So maybe set some regulations on what a person can upload there.

I find bidding to be something that depends a lot on culture, and I'm not sure how a Czech user would react. I would have preferred the fixed amount. Although the charity aspect suddenly makes it more interesting. It depends on how much is offered and how attractive the market is.

**2. Can you think about any changes or improvements that could help you use the app?**

I prefer to work on the computer when I can. I'm only on my cell phone when I'm travelling or can't get on the computer. I often even use WhatsApp on the computer.

It would motivate me to see what project my contribution would go to and what realistically happens with the funds. For example, the environmental NGO where I work now is looking for 150 000 CZK for Weeks for the Forest. With this amount of money, they will buy hoes, get accommodation for people and provide food. With your funds, the NGO's volunteers will plant XY trees, which will absorb XY CO2 in the following years.

I'd probably want to compete with people like me, whether they are close to me socio-demographically or values-wise.

**3. What is your perception that the money will still go to charity even if users don't use the app for tracking their habits?**

I think it will depend on whether I know any of the organisations on offer. If there are five unknown organisations, yes, but if there's a charity I know, I'll fight for it.

The possibility of the habits not being used to redistribute money but to vote on which charities to raise funds for in the next round is interesting.

## D.7 Petr - type David Skrbík

**Date of the interview:** 28. 3. 2022

**Length of the interview:** 29 minutes

### Demographic data

1. **Age:** 28
2. **Education:** Secondary education with a high school diploma
3. **Employment:** Lighting technician in a theatre
4. **Marital status (single/married/children) - with whom you live in the household:**  
I live alone

### Relationship to the environment

1. **What is your stand on environmental protection?**  
Okay. I'd like the environment to be protected as much as possible.
2. **What do you personally do to protect the environment? (e.g. recycling, using a keep cup and/or reusable water bottle, ...)**  
I recycle, try not to throw garbage on the ground, water with rainwater in the garden and don't use heat in winter, but I prefer to wear a thick sweatshirt and sweater, and I don't eat much meat.
3. **Where do you get information about what to do for the environment? Why don't you have it?**  
I feel informed. There's plenty of information on the Internet. What I see on social media is more than what I actively seek out.
  - a. **Is there anything that would help you access information about eco-living?**  
The book, except it's not that eco-friendly, so that would probably be a bit counterproductive. I think the internet is good enough for me.
4. **What would you like your behaviour to look like in the future?**  
I'm not planning any significant changes at the moment.
5. **Do you follow any particular diet (vegetarianism/ veganism/ meat reduction compared to the past, ...)?**  
I don't eat meat much.
  - a. **For what reason do you do it? / Why not?**  
I mostly feel sorry for the cows and chickens.

### Online shopping

1. **What are your feelings about online shopping?**  
Through positive. I find it easier than going to the store for rolls, so I'd instead order them. I shop online for pretty much everything except clothes. I still buy that in a brick-and-mortar store.
2. **Do you have any experience with online selling? What kind of experience?**  
A couple of times, but mostly I use things to the point where nobody wants them. When I've sold something, it's been more the online version - Marketplace or Bazos.

**3. Have you ever bought anything second hand?**

Yes, very. Online and from stone second-hand shops. I like thrift shops. I prefer to buy my clothes in brick-and-mortar stores. I think I have more second-hand stuff than new ones.

**4. What apps/platforms do you use for online shopping and/or selling (also a device - smartphone, computer)? Why?**

Facebook Marketplace or Bazoš.cz. What I like about Marketplace is that it's easy. I can contact the seller right away to see who they are, so I have more reassurance. At the same time, I'm on Facebook a lot, so I don't have to leave that platform. All the info comes to me in Messenger, and I don't have to check my email inbox.

When I want something, I look on Heureka, what is the lowest price, then how much it costs on Alza, as a quality but more expensive place, and then I look if someone sells it cheaper on Bazos or the Marketplace.

**Charity****1. What is your attitude towards charities and volunteering?**

I don't usually have time for that. I don't do that much. I occasionally send some money to charity, or we do the occasional fundraiser at work for less money than we usually would. For example, with Ukraine, we all worked for free and then sent our salary to Člověk v Tísni. So it's more financially than in any material way or activities.

I have no experience with a secondary charity. I don't use it. I don't want to install such software on my computer.

**2. What motivates you to help a charity / to get involved / to contribute?**

Some sympathy when something bad happens. I think most fundraisers make sense these days. I'm not set in any particular area.

**Technology****1. How would you rate your technical skills - working on a computer and smartphone?**

I like technology.

**2. How much time do you spend using your smartphone?**

Unfortunately, I have to use it, even though I don't want to. I spend about 3.5 times more than I need to.

**a. What are the typical applications you use? (Note: digital minimalism?)**

Social networks, Messenger, calendar, notes. Online shopping more via mobile. I don't use any apps to keep track of my habits except Google Calendar.

**3. What do you use your computer for?**

To work - instead of a light desk. In my free time, instead of TV, watching CT24.

**Opinion on the application****1. What is your opinion on the principle of the application?**

The social side is great. If the auction can get something going, I think it's an interesting idea. Everyone has something at home they can send away, even for free.

I'd probably use it more on a spur-of-the-moment basis for some cleanup when I need to get rid of something.

I like the habits part about turning it into a game, but I know I wouldn't use it. But even just the shopping part would probably be enough for me to download and use it occasionally.

The fact that as a seller, I can't control where the money goes unless I participate in the habit part is fine with me. I can influence it somehow, so that's good for me.

**2. Can you think about any changes or improvements that could help you use the app?**

It would need to be as safe as possible for both parties and as easy as possible for the seller. After all, they're already getting rid of something of value for free at the auction.

I don't like auctions, I don't bid on them, and I buy items with the price directly. And make sure it's got a nice design too.

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# Contents of enclosed CD

	readme.txt .....	brief description of the content of the media
	src	
	impl .....	source codes of the implementation
	thesis .....	source form of the thesis in $\text{\LaTeX}$
	wireframes.bmpr .....	wireframes for Balsamiq program
	text .....	text of the thesis
	thesis.pdf .....	text of the thesis in PDF
	TimeScheduleGanttChart.pdf .....	full Gantt chart of the project Zero Hero
	wireframes.pdf .....	wireframes in clickable PDF