The Volunteer App

Increasing Volunteer Engagement Through User Experience and Behavioral Design

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Abstract

Sweden is one of the countries in Europe with the largest percentage of volunteers in the population. At the same time, challenges in the society are increasing. Events such as the migration crisis 2015, the wildfires 2018 and the Covid-19 pandemic have shown an expanding interest among people to contribute to society. As a private person it can be hard to know where to start when wanting to become a volunteer.

In this thesis the needs and possibilities with a volunteer mediator app in Sweden is investigated. The aim is to lower the threshold for new volunteers to start and for experienced volunteers to continue their engagement. This is done through developing an app concept that aims to increase the motivation among new and current volunteers.

The design process is based on the double diamond methodology focusing on the user experience. The process is user centered, putting emphasis on understanding the user needs and involving behavioral design experts. Throughout the development process focus lies on behavioral design principles for user motivation and engagement.

The result of the thesis is a volunteer mediator app concept presented through a hi-fi prototype. The concept contains several features that in different ways aims to increase the user's motivation to volunteer and to facilitate the process of finding a volunteer mission.

Keywords: Behavioral Design, Design for Motivation, User Experience (UX), User Interface (UI), Volunteer Engagement

Sammanfattning

Sverige är ett av de länder i Europa där störst andel av befolkningen är volontärer. Samtidigt ökar utmaningarna i samhället. Händelser så som migrationskrisen 2015, skogsbränderna 2018 och Covid-19 har visat ett ökat intresse hos privatpersoner att bidra till samhället. Som privatperson kan det dock vara svårt att veta var man ska starta när man vill bli en volontär.

I detta examensarbete utforskas behov och möjligheter med en app för volontärförmedling i Sverige. Målet är att sänka tröskeln för nya volontärer att starta och för erfarna volontärer att fortsätta deras engagemang. Detta görs genom att utveckla ett koncept av en app vars mål är att öka motivationen hos nya och nuvarande volontärer.

Designprocessen baseras på double diamond-metoden med fokus på användarupplevelsen. Processen är användarcentrerad och stor vikt läggs på att förstå användaren och involvera experter inom beteendedesign. Genom utvecklingsprocessen ligger fokus på principer inom beteendedesign för att öka användarens motivation och engagemang.

Resultatet av detta examensarbete är ett koncept av en app för volontärförmedling som presenteras i en hi-fi-prototyp. Konceptet består av flera funktioner vars syfte är att öka användarens motivation att vara volontär samt att förenkla processen att hitta ett volontäruppdrag.

Nyckelord: Beteendedesign, design för motivation, användarupplevelse, interaktionsdesign, volontärengagemang

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Lund, June 2021

Emma Gudmunds and Lovisa Tegelberg

Table of Contents

1 Introduction	1
1.1 Background	1
1.2 Aim	2
1.3 Objective	2
1.4 Conditions and Limitations	2
2.1 Planning 2.2 Design Process Methodology 2.2.1 The Double Diamond 2.2.2 User Experience 2.2.3 User Interface	
2.1 Planning	4
2.2 Design Process Methodology	4
2.2.1 The Double Diamond	4
2.2.2 User Experience	5
2.2.3 User Interface	5
2.3 Implemented Process	6
3 Discover	8
3.1 Literature Research	9
3.1.1 Behavioral Principles	9
3.1.2 Nudging	12
3.1.3 Nudges and Behavioral Design Principles	14
3.1.4 Designing for User Motivation and Engagement	15
3.2 Competitive Analysis	19
3.2.1 Ability	19
3.2.2 Motivation	23
3.3 Research of a Volunteer Mediator	30
3.3.1 The Website Volontärbyrån.org	31
3 3 2 The Survey Volontärbarometern	31

	3.3.3 The Podcast: Ideella Samtal	32
	3.4 The User Journey	32
	3.5 User Research	34
	3.5.1 Questionnaire	34
	3.5.2 Interviews with Organizations	38
	3.6 Summary of Discover	42
4	Define	44
	4.1 The Design Challenge	45
	4.1.1 Aim and Objective	45
	4.1.2 Long Term Goals	45
	4.2 The Users	46
	4.2.1 Personas	46
	4.3 Needs and Requirements	49
5	Develop	52
	5.1 Concept Ideation	53
	5.1.1 Brainstorming Sessions	53
	5.1.2 Nudging Session	56
	5.2 Development of the First Iteration	57
	5.2.1 Low Fidelity Prototype	59
	5.2.2 UX Sitemap	62
	5.3 Evaluation of the First Iteration	63
	5.3.1 Nudging Expert	64
	5.3.2 Representative from Volontärbyrån	65
	5.4 Development of the Second Iteration	67
	5.4.1 Graphic Design and Navigation	67
	5.4.2 High Fidelity Prototype	68
	5.5 Evaluation of the Second Iteration	74
	5.5.1 Nudging Expert	74
	5.5.2 UX/UI Designers	77
	5.6 Development of the Third Iteration	79

6 Deliver	86
6.1 The Final Concept	86
6.1.1 Starting the App for the First Time	87
6.1.2 After Applying for a Mission	89
6.1.3 Accepted to a Mission	90
6.1.4 When the Mission Ends	92
6.1.5 Merits	93
6.2 Evaluation	93
7 Discussion	96
7.1 Implementation of Methods	96
7.1.1 User Research	96
7.1.2 Concept Development	97
7.1.3 Evaluation	98
7.1.4 A User Centered Design Process	98
7.2 The Final Concept	99
7.2.1 The Explore Page	99
7.2.2 The Reward System	100
7.3 Nudging	100
7.3.1 Ethics of Nudging	101
7.4 Further Development	102
7.4.1 Personalized Content	102
7.4.2 Analyze the User Mindset	102
7.4.3 Accessibility	103
7.4.4 Involve the Volunteer Organizations in the App	103
7.4.5 A Framework for Nudging?	104
8 Conclusion	105
References	107
Appendix A Work Distribution and Time Plan	111
A.1 Work Distribution	111
A.2 Project Plan and Outcome	111

Appendix B Questionnaire	113
Appendix C Interviews with Organizations	115
Appendix D Interview with Volontärbyrån	117

1 Introduction

This chapter presents the context and purpose of the thesis, as well as the aims and delimitations.

1.1 Background

Sweden is one of the countries in Europe with the largest percentage of volunteers in the population (SCB, 2018). During 2018, one third of the Swedish population were volunteers (SCB, 2018). At the same time, challenges in the society are increasing. Events such as the migration crisis 2015, wildfires 2018 and the Covid-19 pandemic have shown an expanding interest among people to contribute to society (Volontärbyrån, 2020 b).

Only in Sweden there are over 250 000 volunteer organizations (SCB, 2019) and as a private person it can be hard to know where to start when wanting to become a volunteer.

A volunteer mediator could simplify the process of finding a volunteer mission since it gathers the volunteer organizations at one platform.

This thesis will further investigate the needs and possibilities with a volunteer mediator app in Sweden. The project is made in collaboration with the digital interaction agency Tactel AB, and the results will be used as a base for further development at Tactel AB.

Throughout this report the following definition of a volunteer will be used. (Volontärbyrån, 2020 a)

"A volunteer is person who out of their own enjoyment engages in non-profit work without receiving payment"

1.2 Aim

The aim of this thesis is to investigate the needs and possibilities with a volunteer mediator app in Sweden, more specific to lower the threshold for new volunteers to start and for experienced volunteers to continue their engagement.

1.3 Objective

The objective of this thesis is to create a digital volunteer mediator app concept that helps fulfill the aim (1.2). The focus is on increasing the motivation among new and current volunteers, using user experience and behavior design principles.

The result of the thesis should be a high-fidelity (hi-fi) prototype of selected parts of the app concept.

1.4 Conditions and Limitations

Throughout this thesis the volunteer mediator organization Volontärbyrån is used as a reference, since it is the current leading volunteer mediator in Sweden. Volontärbyrån's platforms is investigated, and a representative is interviewed to better understand how a volunteer mediator organization may work. These insights are used as a base for the development of the volunteer mediator app.

In addition to this master thesis, a second master thesis group works in parallel with the concept development of a volunteer app at Tactel AB. Since this other group work with the same aim, but with a different focus, collaboration between the two groups were possible in some of the initial activities. This includes the questionnaire, interviews with organizations and interview with Volontärbyrån, as well as a discussion regarding which parts of the solution that will be the focus of development for each group.

Regarding the development of the hi-fi prototype limitations are needed due to the limited time. Only selected parts of the app will be included in the final prototype. This mainly involves function that promote volunteer motivation and continuous use of the app. Hence, functions such as the

login process and browsing of volunteer missions are excluded. Any softand hardware development is also excluded, as the focus is on concept development.

Since the result of this thesis is an app concept for the Swedish market, the prototypes are all in Swedish.

Due to the global pandemic Covid-19 all work is conducted remote, meaning that all meetings, interviews and evaluations required for the concept development are performed digitally through video call.

2 Methodology

In this chapter the methods used for planning and executing the thesis are presented. The tools and methods used in the different parts of the design process are described in detail in the part where they are implemented.

2.1 Planning

When coordinating and executing a longer project, planning is important. A method for this is the Gantt Chart, a horizontal timeline where each task is represented by a bar. This visualization makes it easy to see all the process steps and which tasks that must be performed in parallel as well as in succession. (Ulrich & Eppinger, 2012)

The Gantt chart for this project is presented in Appendix A, followed by a revised version of how the actual outcome.

2.2 Design Process Methodology

The design process methodology used in this project is based on *The Double Diamond*. This method was chosen since it is a comprehensive description of the design process. The decision is also made since both authors are familiar with this method from earlier design projects.

2.2.1 The Double Diamond

In 2004 the Design Council created *The Double Diamond* as a tool to describe the design process. This framework consists of two diamonds, where the first half of each diamond is representing an explorative approach, divergent thinking, and the second half corresponds to narrowing the focus, convergent thinking. In this method the iterative approach is

used. The four steps in *The Double Diamond* are discover, define, develop, and deliver, as shown in figure 2.1 below. (Design Council, 2021)

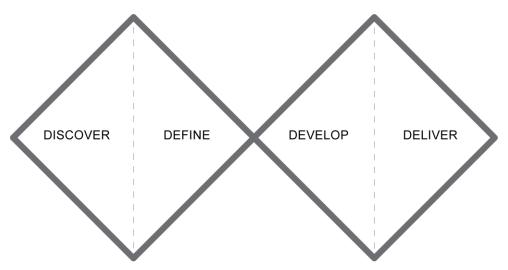


Figure 2.1 Illustration of The Double Diamond.

2.2.2 User Experience

According to the International Organization for Standardization (ISO) the definition of user experience is as follows below (ISO, 2019).

"Users' perceptions and responses include the users' emotions, beliefs, preferences, perceptions, comfort, behaviors, and accomplishments that occur before, during and after use."

User experience (UX) is a central principle when developing a mobile application (app) concept and allows the team to also include soft values such as user satisfaction. During this project a user centered design process is applied, and the user's perspective is present throughout the whole process by creating personas and a user journey map (ISO, 2019). These methods are further described in the report sections where they are used.

2.2.3 User Interface

According to ISO the definition of user interface is as follows below (ISO, 2019).

"all components of an interactive system (software or hardware) that provide information and controls for the user to accomplish specific tasks with the interactive system"

When designing a user interface, design principles could be used as guidance. The design principles used in this project are described below (Sharp, et al., 2019).

- Visibility This term is about how easy it is for the user to see possible
 actions. Included in this principle is also information about the current
 state of the device.
- Feedback The information given after an action is performed. The
 feedback tells the user the result of the performed action. For example,
 feedback can be warnings or confirmations.
- Constraints Guides the user to not make undesired or wrong actions. It
 can for example be to shade the options that are not currently available in
 grey to prevent the user to choose incorrect options.
- Consistency This principle is about using a consistent interface with similar graphical objects and operations for similar tasks. A great benefit of a consistent interface is that it is easier to learn.
- Affordance Visual attributes that guides how an object should be used.

2.3 Implemented Process

In a design process having an iterative approach is important. This results in that each individual process turns out to be different even if the same method is followed. *The Double Diamond* is used as an overall method throughout the project (Design Council, 2021). Within each of the four steps, a selection of methods are used, as seen in figure 2.2 below.

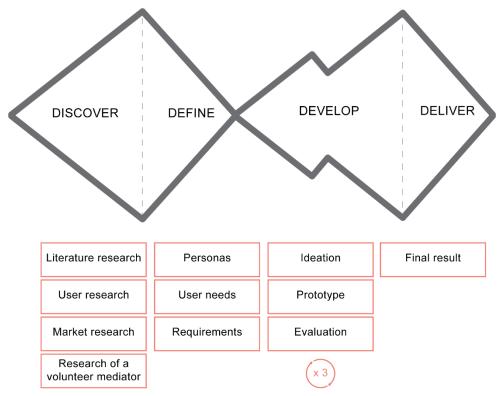


Figure 2.2 Illustration of the implemented process.

The specific methods used in each process step are thoroughly described in the report sections where they are implemented.

3 Discover

In the discover phase, shown in figure 3.1, the research and work done to understand the problem and needs are presented. This includes a literature research on behavioral design and digital interface design, research of a volunteer mediator organization and user research. Insights from the discover phase are then used as a base for the coming steps in the design process.

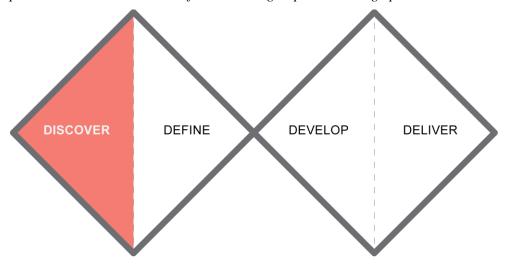


Figure 3.1 The discover phase in the double diamond.

During the discover phase, research was conducted within several areas. Methods used in the respective areas are described in the beginning of each section.

Research is done with a multidisciplinary approach, with emphasis on both behavior science and design principles. This allows for an explorative discover process with potential to develop innovative solutions.

A literature research is conducted with purpose to create an understanding of the driving factors behind human behavior, both in relation to volunteer engagement and in relation to an interactive digital product. The literature study is followed by a competitive analysis, with the aim to find examples of best practices of the design principles found during the literature research.

Research on a volunteer mediator organization is conducted to understand the context of the challenges and possibilities. After this, a user journey map is created, to further understand and investigate the user's point of view in relation to the product.

Finally, a user research is conducted to understand the target users and stakeholders, their opinions and needs concerning volunteer work.

3.1 Literature Research

To understand a topic on a deeper level, literature research can be done. One method to execute literature research is to divide the sources in different research categories (Hanington & Martin, 2012). In this thesis the categories were behavioral science, behavioral design and designing digital interfaces for user motivation.

3.1.1 Behavioral Principles

The mechanisms behind human behavior can help understanding, predicting, and affecting people's behavior (Gorman, 2004). Therefore, it is important and powerful to take factors of behavioral science into account when designing (Laninge, 2020).

As a result of thousands of years of evolution, the human brain has developed different strategies of behavior. This way, it can make use of opportunities and avoiding threats while using a minimal amount of energy. These strategies can be divided into reactive, motivated and executive behaviors (Aunger, 2021).

A reactive behavior is a completely automatic response without conscious awareness. Motivated behaviors are primitive responses based on pleasure and pain signals in the brain and body. Executive behavior is based on the ability to imagine and evaluate future scenarios, which can take the shape of hope and fear. Another behavior strategy, that is partially motivated and executive, is social behavior. This is connected to the human urge to achieve social acceptance and avoid rejection (Aunger, 2021; Fogg, 2020).

According to BJ Foggs, the components needed for a specific behavior to occur are motivation, ability and prompts (figure 3.2) (Fogg, 2020).

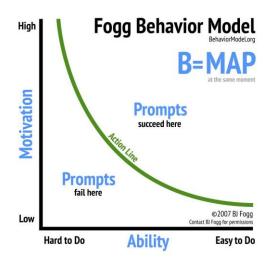


Figure 3.2 The Fogg Behaviour Model (Fogg, 2020)

A sufficient level of motivation and ability is needed for a person to perform a certain behavior, as well as a prompt that trigger the action (Fogg, 2020). Knowledge about these factors can be used in design to increase the chances that a person will perform a certain target behavior, such as participating in volunteer work.

3.1.1.1 Motivation

Psychology Behind Motivation

Motivation is affected by a combination of internal, physiological needs and external situational demands, which makes it a complex process. Ultimately, needs can be explained with Maslow's pyramid, representing the hierarchy of five levels of needs (figure 3.3). As with a pyramid, the needs of the lowest levels are required to be fulfilled before being able to reach for the ones higher up. How people behave or what motivate them, can therefor depend on where in the pyramid they are (Gorman, 2004).

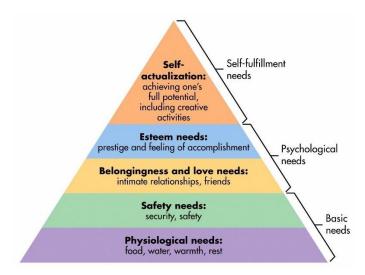


Figure 3.3 Illustration of Maslow's pyramid.1

Intrinsic and Extrinsic Motivation

Motivation can be divided into two categories; intrinsic and extrinsic. When a person is motivated to perform an action for personal rewards such as pleasure, enjoyment and self-determined autonomous actions, the behavior is driven by intrinsic motivation (Gorczyca, 2017). When the motivation is to achieve a benefit separated from the act itself, such as receiving payment, the person is instead driven by extrinsic motives (Finkelstien, 2009).

Motivation to Volunteer

There are many different reasons why people choose to volunteer. In general, the act of volunteering does not involve any tangible reward and the actions performed are primarily in benefit for others than the volunteer. Therefore, participation in volunteer work is a behavior mainly driven by intrinsic motives (Gorczyca, 2017).

Studies have shown a positive association between the motivational orientation of individuals and the nature of their volunteer commitment (Finkelstien, 2009). Individuals with high intrinsic motivation are more

11

¹ McLeod, S. A. (2020, March 20). *Maslow's hierarchy of needs*. Simply Psychology. https://www.simplypsychology.org/maslow.html

likely to develop a volunteer role identity (Finkelstien, 2009) and intrinsic motives increase when a task match the interests and skills of the individual (Gorczyca, 2017). This suggests that it would be beneficial to promote intrinsic factors of volunteering to increase the engagement. It also suggests that different strategies for recruiting and retaining volunteers could be suitable depending on the motivational orientation of the volunteer (Finkelstien, 2009).

3.1.1.2 *Ability*

As mentioned earlier ability is one of the three core components behind a desired behavior. How simple it is to perform the desired behavior will determine how likely it is that the user does it. (Laninge, 2020)

The ability to perform a desired behavior depends on the user's ability, such as knowledge and understanding, as well as the amount of friction and starting costs in the process (Laninge, 2020). In an app solution this concerns factors such as colors, font size, languages, and possibility to get the content read out.

The question of ability can also be related to practical aspects of each specific volunteer mission, for example if it requires a car or physical strength to accomplish.

3.1.1.3 *Prompts*

A person can have a high level of motivation and ability to perform a certain behavior, but without a prompt that triggers the action, no behavior will occur. A prompt is something that tells people to perform a behavior now. It can be internal, such as a growling stomach, or an external, such as a text message (Fogg, 2020).

A successful prompt is not only noticed by the person, but it is directly associated with the targeted behavior and occurs at a time when the person has sufficient level of motivation and ability (Fogg, 2020).

3.1.2 **Nudging**

Nudging is a commonly used concept in behavioral design. Behavioral design is about implementing behavioral science in design to change the behavior of people. Nudging is a method including a broad range of tools with the aim to make it easier for the user to behave in a desired way in a particular choice situation. It is about influencing behaviors, not attitude,

emotions or knowledge (Laninge, 2020). Nudging was originally defined by Thaler and Sunstein as follows:

A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior predictably without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not. (Thaler & Sunstein, 2008)

In this thesis, a method formulated by Niklas Laninge consisting of four steps was used to develop nudges (Laninge, 2020). This method was extracted from a webinar held by Laninge, based on the theory presented in the book *Digitala beteenden: en verktygslåda för kundfokuserad design* by Janson & Laninge (Janson & Laninge, 2019).

The first step is about defining desired behaviors and analyzing critical steps in the user journey.

Secondly, determine where the problem occurs, if it is the user or the process that is the main problem.

Step three is about identifying the main cause of the problem. If it was determined in the previous step that the user was where the problem occurs, the main cause can be lack of knowledge, lack of motivation or lack of understanding. If the process is where the problem occurs the main cause can be unclear choices, too high starting costs, or friction throughout the whole user process.

The fourth and last step is choosing a suitable nudge and test it. (Laninge, 2020)



Figure 3.4 Illustration of Laninge's four steps nudging method. (Laninge, 2020)

The method mentioned before is visualized in the illustration shown in figure 3.4. The center of the figure is divided in half, representing the process and the person. Looking one step further out, inside the hexagon, the different possible main causes to the problems are written. This corresponds to step 3. As the final step, outside each main cause, different nudging tools are suggested as a solution to each main cause (Laninge, 2020).

3.1.3 Nudges and Behavioral Design Principles

Since the aim of this thesis is to create a digital solution that promotes volunteering, behavior design principles can be implemented to help the user to engage in volunteering. In this report, several perspectives within nudging, behavioral design and user engagement are taken into consideration during the development. The insights regarding design principles from these perspectives are gathered and presented in figure 3.5.



Figure 3.5 Merged model of the principles of Laninge (Laninge, 2020), Coglode (Coglode, 2020) and Bottlenecks (Evans, 2017).

These principles are further explained in Designing for User Motivation and Engagement (3.1.4) as well as in Competitive Analysis (3.2), with examples of how these principles can be implemented in digital products.

3.1.4 Designing for User Motivation and Engagement

There are many factors that can influence the motivation and engagement of the user in an interactive product. Research on the relationship between the user and product has shown a couple of factors that are important to create and maintain engagement to the product; stimulation, identification, evocation, satisfaction and pleasure. This can be implemented in a digital product by following a couple of principles, described in the following sections (Hassenzahl, 2005).

3.1.4.1 Define the User Mindset

A method to ensure that an interactive product is appealing to a user and creates a positive emotional reaction is to look at the product from different usage modes. The user can be in goal mode or action mode, as illustrated in figure 3.6 (Hassenzahl, 2005).

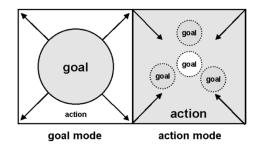


Figure 3.6 Illustration of goal mode and action mode. (Hassenzahl, 2005)

Either they have a set goal and will search to achieve that goal, or they do not have a set goal but let the possible options and the surrounding lead them to a goal, which they did not know existed at first (Hassenzahl, 2005).

3.1.4.2 Diverse Users and User Experiences

A key to creating engaging user experiences is to recognize the fact that people act and interact in different ways (Zagalo, 2020). An interaction that is intuitive for one user is necessarily not intuitive for another. In order to create a solution that meets the needs of a variety of users, the designer should therefore put effort in investigating these differences in both users and context (Geisler, 2014). The designer should expect the need to create a variety of options or systems and to test these with different user groups rather than with an assumed average user (Geisler, 2014).

3.1.4.3 Share Control and Support Interaction Among Users

An interactive product relies both on the designers and users. It is therefore important that the designer share control with the users to enable an engaging interaction. This means facilitating user freedom by maximizing user options and preferences, as well as providing resources to permit interactions between users. By creating options for users to interact between each other, the overall options of user interactions increase (Geisler, 2014).

Research on engaging web-based communication suggests that users value and seek out interactions with other users. People want to be active participants in communications, not just passive receivers of information. Some examples of how interaction between users can be supported is by text chats, audio or sharing documents (Geisler, 2014).

This can also relate to the need of identification. This is a self-expressive function, based on the human need to be seen in a specific way by others. A

person will therefore be more engaged with a product if they can communicate an identity with it (Hassenzahl, 2005).

3.1.4.4 Escalating the Commitment

One of the most crucial parts of an app is the first user sign in process. This is where the user goes from unregistered to registered, the so-called conversion flow. It is important to escalate the commitment slowly to not rush the user (Evans, 2017).

It can be tempting to have a short conversion flow, to make the process efficient and decrease the dropout rate. However, this comes with the risk of rushing the user (Evans, 2017).

If there instead are several steps, starting with presenting the free services and mentioning the value propositions before the user gives their contact information, the user is more likely to fulfill the process (Evans, 2017).

This is a behavioral pattern that is called escalating commitment. A flow with numerous smaller commitments will result in a behavioral outcome that the user would not do if they were forced to do all at one time (Evans, 2017).

When diving deeper into the conversion flow, the psychology of the approach-avoidance conflict is important to take into consideration. According to this principle, the approach mindset is steadily increasing when getting closer to the goal. However, the avoidance mindset is increasing faster. This results in that the closer the user gets to the goal, the more they are in avoidance mindset (figure 3.7) (Evans, 2017).

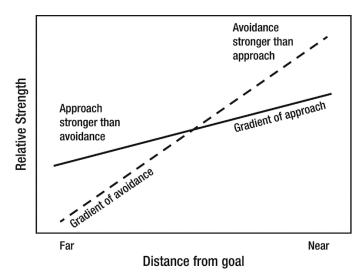


Figure 3.7 Illustration of the approach-avoidance conflict. (Evans, 2017)

This phenomenon is commonly referred to as the *Wedding curve*. When first getting engaged, the couple focus on the advantages of the other person. The closer it gets to the actual wedding the more they focus on the disadvantages, the avoidance mindset is now stronger than the approach mindset (Evans, 2017).

In connection to this project, the user is less willing to submit their application the closer they get to the submitting step. One way to minimize the disturbance of this behavior is to answer and address the users concerns and questions, instead of ignoring them (Evans, 2017).

3.1.4.5 Continue the Engagement

A straightforward way to motivate users to continue their engagement with the product is to clearly invite them to do so. Stimulation, such as new impressions, opportunities and insights, is important because people consciously and unconsciously strive for personal development (Hassenzahl, 2005). This can be done by communicating that there are more options to continue discover. Another way is to allow users to share experiences, connecting with other users, acquire more information or edit or create new content (Geisler, 2014). This connects to the principle of giving the user control, described earlier.

Another principle connected to designing for continuing the engagement is to create reinforcement. There are different categories of reinforcements; interval and ratio. With interval means the amount of time before the user gets a reward. With ratio means the number of actions required, for

example clicks, before the user gets a reward. The interval as well as ratio schedule can be either fixed or variable (Evans, 2017).

The most efficient way to keep the user engaged, is to minimize the patterns regarding the interval as well as the ratio reinforcement schedule. The designer should therefor create a solution where either variable time or actions are needed before the user gets the satisfying content (Evans, 2017).

3.1.4.6 Social Influence

Social influence is an important factor which affects the human behavior. For example, it can be decisive whether to buy a specific product or app. Even though a product is promoted, there is still one social bottleneck left – recommendation of a person with influence. Theories about social influence says that people are more likely to approach a new product if it is recommended by three persons, who all do not have a personal interest as the motive of their recommendation (Evans, 2017). The evolvement of the human cognition and social ability have set us to trigger conformity when three others are showing a specific behavior (Evans, 2017).

3.2 Competitive Analysis

A competitive analysis can provide insights into the features, functions, flows and feelings evoked by the design solutions of competitors (DaSilva, 2020). In this thesis, a variant of competitive analysis was conducted to find examples of how other companies successfully have used nudging or design principles to engage the users of their products.

Both apps and websites within volunteering and areas prominent in motivating and encouraging the user are investigated. Best practices and examples of how behavioral principles are implemented to strengthen the ability and motivation of the user are presented in the following sections.

3.2.1 Ability

3.2.1.1 Cognitive Ease and Chunking

An efficient way to improve the ability of doing a desired behavior is to work with how the information is presented. This can be done through dividing the information in smaller chunks to make it easier to comprehend

or giving the user continuous feedback to let them know they are on the right path (Laninge, 2020). This can be done by using headlines, simplify messages, using simple terms and providing small chunks of information at a time. The app Charity Miles does this when presenting the four easy steps in their app concept (figure 3.8).



Figure 3.8 Charity Miles² is presenting their concept by using chuncks of information.

3.2.1.2 Picture Superiority Effect

Humans are better to remember pictures than words, which can be explained with a phenomenon called the picture superiority effect (Coglode, 2020). The health app Fabolous use visuals frequently to communicate the different themes and actions that the user can choose between (figure 3.9).

² Charity Miles. Charity Miles, version 8.0.1 [mobile application]. New York: 2011. [cited: 2021-02-18] Available from: https://charitymiles.org/





Figure 3.9 The app Fabulous³ uses pictures to visualize the different categories.

3.2.1.3 Choice Overload

It is easier for us to make decisions if the number of choices are few (Coglode, 2020). The food rescue app Karma have helped their users to choose by presenting default alternatives (figure 3.10). The user can search or look for specific categories of food or restaurants, but at the home page they are presented a small number of default choices. Karma has also reinforced these default choices by presenting them as "popular choices", indicating what other users have chosen.

Another example is Olio, a food give-away app. They encourage their users to engage in the app by providing challenges (figure 3.10). To facilitate decision-making for the user, Olio lets the user view one challenge at a time, instead of a long list of challenges. This way, the user only has to accept or dismiss the challenge, instead having to choose between many more alternatives. Why the concept of using challenges works can also be explained by many other behavioral principles explained below, such as commitment, goal gradient effect and reward.

³ TheFabulous Inc. Fabulous, [mobile application]. Paris: 2013. [cited: 2021-02-18] Available from: https://www.thefabulous.co/

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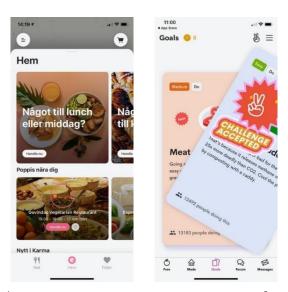


Figure 3.10 Karma⁴ presenting default choices for the user (left). Olio⁵ presenting challenges one at a time (right).

3.2.1.4 Feedback

By continuously confirming the progress, for example through visuals or notification messages, the user get feedback that they are on the right path and should continue the same way (Sharp, et al., 2019). The language app Duolingo uses both a loading bar that indicates how far in the progress the user has come and sends out affirmative messages along the way (figure 3.11). This works both as a feedback on the user's progress and as a reward for their success.

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⁴ Karmalicious AB. Karma, version 2.8.1 [mobile application]. Stockholm: 2016. [cited: 2021-02-18] Available from: https://karma.life/



Figure 3.11 Duolingo⁶ uses feedback loops.

3.2.2 Motivation

3.2.2.1 Social Influence

The humankind is a social art and strives for being a part of the community. Adding social proof in the design can attract this endeavor and make the solution more powerful (Evans, 2017).

On the first page before signing up to StickK the sentence "Join thousands of other users." is written, to attract the new user to be a part of the community (figure 3.12).

The same nudging technique is used in the Too Good to Go App, where the user after signing in gets information about how many people who are using this service (figure 3.12).

 6 Duolingo. Duolingo, version 6.104.0 [mobile application]. Pittsburgh (PA): 2011. [cited: 2021-02-18] Available from: www.duolingo.com

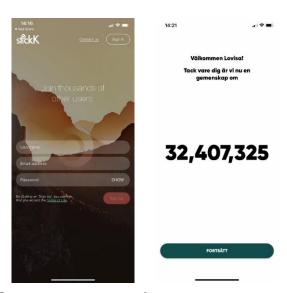


Figure 3.12 Stick K^7 (left) and Too Good To Go 8 (right) are both using social influence as a tool to attract the new user.

3.2.2.2 Public Commitment

If a promise is made public, it is more likely to be fulfilled (Coglode, 2020). This principle is used in several apps on the market today, for example StickK and RunKeeper (figure 3.13).

StickK is an app specially designated for helping the user to stick to their goals. This app is encouraging the user to add friends, in this case called supporters, to follow your journey as a way of making it public. It also requires the user to give regular reports, to make it harder to not committing to the goal.

Another app using this technique is RunKeeper where the user can create and accept challenges, create running groups and add friends who can track their process.

_4! _1-**T**Z

 $^{^7}$ stick K.com. Stick K, version 2.35 [mobile application]. Brooklyn: stick K.com; 2007. [cited 2021-02-19]. Available from: www.stickk.com

⁸ Too Good To Go International. Too Good To Go, version 21.4.0 [mobile application]. Copenhagen: 2015. [cited: 2021-02-18] Available from: https://www.thefabulous.co/

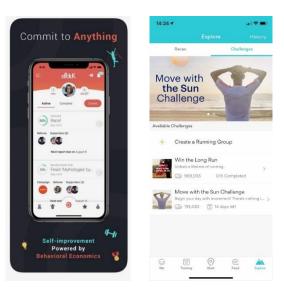


Figure 3.13 StickK⁹ is encouraging the user to add supporters (left). RunKeeper¹⁰ provides opportunities to accept challenges and join running groups (right).

3.2.2.3 Escalating Commitment

As mentioned earlier, one of the most crucial parts of the app is the first user sign in process, where it is of great importance to escalate the commitment (Evans, 2017).

Two examples of good practices of this are Be My Eyes and Fabolous (figure 3.14). When starting the Be My Eyes app for the first time the user is first informed of how many volunteers as well as blind people that are using the app, followed by a prompt that the user should join this community too. This is a way of using social proof to escalate the commitment.

In the Fabolous app a journey roadmap is used, where the user can create many goals. The app will make her start with only one of them and later on add the other goals one by one as a way of increasing the probability of actually completing the journey.

⁹ stickK.com. StickK, version 2.35 [mobile application]. Brooklyn: stickK.com; 2007. [cited 2021-02-19]. Available from: www.stickk.com

¹⁰ FitnessKeeper. RunKeeper, version 11.4 [mobile application]. Boston: FitnessKeeper Inc; 2008. [cited 2021-02-19]. Available from: www.runkeeper.com

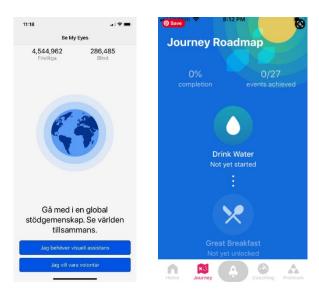


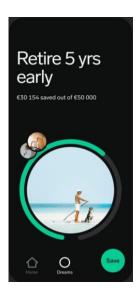
Figure 3.14 Be My Eyes¹¹ (left) and Fabulous¹² (right) are both escalating the user commitment by dividing the process into smaller steps.

3.2.2.4 The IKEA Effect

People tend to put a much higher value on products that they have, fully or partly, made themselves. This behavioral principle is called the "IKEA Effect". The name comes from the phenomena when people put disproportional value on their IKEA furniture just because they put them together by themselves (Coglode, 2020).

During the market research this tool was found in the Dreams App, where the user was given the opportunity to personalize their experience by choosing their own picture and name for each saving goal (figure 3.15). According to IKEA Effect the possibility to personalize the app will increase the probability of the user reaching her goals (Coglode, 2020).

¹¹ Be My Eyes. Be My Eyes, version 3.6.9 [mobile application]. Tranbjerg: 2015. [cited: 2021-02-18] Available from: https://www.bemyeyes.com/



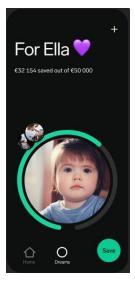


Figure 3.15 Dreams¹³ gives the user the possibility to personalize their goal page, by for example choosing their own background picture.

3.2.2.5 The Goal Gradient Effect

Another behavioral principle is called the Golden Gradient Effect which claims that the user's effort will increase the closer they get to the certain goal (Coglode, 2020).

One way of using this knowledge as an advantage for an app could be to clearly visualize the user journey and implement sub goals. This way, the user always feels like they are close to reach the goal. Duolingo does this by dividing the process into subgoals (figure 3.16).

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 $^{^{13}}$ Dreams AB. Dreams [mobile application]. Stockholm: 2014. [cited: 2021-02-18] Available from: https://www.getdreams.com



Figure 3.16 Duolingo 14 is dividing the process into sub goals to make the user always feel close to a goal.

3.2.2.6 Reward

Using rewards can make a powerful impact of the user behavior, especially if the app has high starting costs or a process filled with friction (Laninge, 2020).

A good example of how rewards can be implemented in an app is Duolingo, where the user constantly gets affirmations and gems as a reward (figure 3.17). In this app they also use streaks as a tool to increase the user's motivation to return every day.

¹⁴ Duolingo. Duolingo, version 6.104.0 [mobile application]. Pittsburgh (PA): 2011. [cited: 2021-02-18] Available from: www.duolingo.com

nom: www.adomigo.com

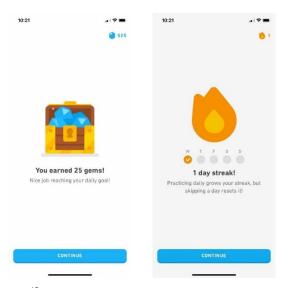


Figure 3.17 Duolingo¹⁵ is using both rewards and streaks as tools to motivate the user.

3.2.2.7 Reciprocity

Humans have the will and ability to return kindness. Research has shown that reciprocity decays with time. It is therefore important to act fast (Coglode, 2020).

The Behavioural Insights Team (BIT) created a campaign in the United Kingdom together with the Local Government Association and North Yorkshire County Council. The campaign was started during the coronavirus pandemic to encourage people to sign up as volunteers.

Several nudging techniques were used to empower the campaign. For example, reciprocity was used to motivate people to sign up. This was done by sending out short messages reminding the reader of others who are helping the society on a regular basis, for example doctors, police officers and teachers. By doing this, BIT identifies a victim, the doctors and nurses who work hard during the global pandemic, which can result in a motivational booster for the reader (figure 3.18).

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¹⁵ Duolingo. Duolingo, version 6.104.0 [mobile application]. Pittsburgh (PA): 2011. [cited: 2021-02-18] Available from: www.duolingo.com



Figure 3.18 BIT¹⁶ highlights the victims of the crisis to motivate people to volunteer.

3.3 Research of a Volunteer Mediator

To create a better understanding of how a volunteer mediator organization work the Swedish organization Volontärbyrån is investigated. This organization is chosen since it is the largest mediator of volunteer missions in Sweden. Volontärbyrån itself is a non-profit organization, with the aim to help volunteers and other non-profit organizations by offering a platform for connection, representation, and support. Volontärbyrån started its business in 2002 and is a part of the Swedish National Forum for Volunteer Organizations within the social sphere (Volontärbyrån, 2020 a), with the aim to improve opportunities for civil society to participate in the creation of a better society (Forum, 2021).

During this research the website Volontärbyrån.org is analyzed to get a better understanding of the volunteer mediator organization and the relationships between the parties involved. The podcast Ideella Samtal and the yearly survey Volontärbarometern are analyzed to get insights of volunteer engagement today and needs from volunteers and organizations. This research is also used as comparison and inspiration to the user survey conducted later in this thesis, User Research (3.5).

The results of the research are described in the following sections.

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¹⁶ Alice Farrell and Fionnuala O'Reilly, "Nudging to boost volunteer sign-ups during the coronavirus crisis", *The Behavioural Insights Team*, 2020-10-09, https://www.bi.team/blogs/nudging-to-boost-volunteer-sign-ups-during-the-coronavirus-crisis/, cited 2021-02-18.

3.3.1 The Website Volontärbyrån.org

At Volontärbyrån.org both organizations and volunteers can use the services that Volontärbyrån offers. The website contains several pages, such as a page for volunteers, for organizations, about their partners, about Volontärbyrån and about courses.

Volunteers can access information about volunteering, read volunteer stories, search, register to open missions and more. When registering to a volunteer mission, the user fills in a form with information about themselves and why they want to contribute. The application is then sent to the organization, which receive the information through email.

Organizations have the option to create an account and login to register their missions, as well as reading information about how Volontärbyrån help organizations and more. The organizations can also sign up to courses and workshops that Volontärbyrån arrange.

3.3.2 The Survey Volontärbarometern

Every year, Volontärbyrån conduct a survey called Volontärbarometern. In this survey the opinions of volunteers and organizations are investigated.

In the most recent survey, 1259 people and 246 organizations participated (Volontärbyrån, 2020 a). The key points are that a large majority (over 90%) of the respondents feel better from volunteer engagement, they feel like they contribute to society in a positive direction, that volunteering gives them a higher purpose in life, that they are connected to other people and that they want to continue their engagement in the future (Volontärbyrån, 2020 b).

Through interviews available in the survey report it is explained how people tend to inspire each other to volunteer. Through these interviews, two different driving forces that motivates volunteer to start are explained. Some people feel like their life is good and therefore want to contribute to the more vulnerable, and some have experiences from being in a vulnerable position and therefore want to give back to others.

The survey also shows what factors many volunteers value when it comes to continuing engagement. These are further investigated in the user survey of this thesis.

3.3.3 The Podcast: Ideella Samtal

Ideella Samtal is a podcast series made by Volontärbyrån (Volontärbyrån, 2020c). The series contain three episodes where a representative from Volontärbyrån talk about volunteering with a representative from a volunteer organization, a professor in volunteer engagement and with two volunteers.

In the episode with the organization Nema Problema, the main insights are that organizations tend to put much effort in recruiting new volunteers and how to reach a broader crowd, but do not have many strategies to keep the existing volunteers. It is also clear that reaching out to a younger generation is a common goal among organizations.

The main insights from the episode with Johan von Essen, professor in civil society studies, are that the rate of volunteer engagement is highly dependent on the world economy. Von Essen also proclaimed that there is a higher connection between economic class and volunteer engagement than with age, an interesting statement considering the emphasis that other organizations put on the need to attract a younger audience.

The main insights from the episode with the volunteers are that engagement in volunteer work is a matter of course for people who have started contributing to non-profit causes at a young age. It is also clear that the volunteers highly value clear communication about expectations from an organization to feel motivated to continue their engagement (Volontärbyrån, 2020 a).

3.4 The User Journey

To further understand and investigate the user's point of view a user journey is created. A user journey illustrates a user's path though the product. It supports the designers when considering the user's overall experience and can be used as a tool to analyze existing products or to explore and question the design experience (Sharp, et al., 2019).

The user journey is created based on insights from the research. It was then used as a tool to communicate user scenarios during interviews and revised many times during the project (figure 3.19).

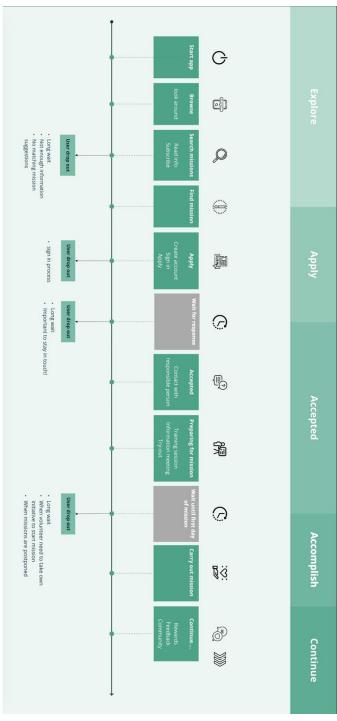


Figure 3.19 The user journey with the volunteer app, version 2. Icons from Flaticon (Freepik Company S.L, 2021).

The user journey presents the user's path through the volunteer app, from starting the app to the moment the user has finished their volunteer mission. The notes in the bottom of the user journey indicates user drop out points, which are moments when the user give up on their intention to become a volunteer. By highlighting these drop out points, they can be prevented in the design solution (Evans, 2017).

3.5 User Research

User research is conducted to gather information about the target users and stakeholders, their opinions and needs concerning volunteer work. This is done though an online questionnaire and semi-structured interviews. The methods of data collection are chosen based on the principle of triangulation, which provides collection of information from different angles, both quantitative and qualitative data (Sharp, et al., 2019).

3.5.1 Questionnaire

Questionnaires are an efficient user survey method when wanting to easily reach a large number of people in order to generate a broad collection of data (Hanington & Martin, 2012).

Convenience sampling is used when collecting the survey population (Sharp, et al., 2019). The questionnaire is conducted online, to reach a wide range of respondents (Magnusson, et al., 2009). It is distributed on social media, specifically Facebook and LinkedIn, to reach out to people with and without experience of volunteer work. Beyond that, it is also sent to various volunteer organizations to reach a wider range of people who currently are volunteers.

The data is analyzed by reviewing the statistics and drawing connections between written answers (Hanington & Martin, 2012).

The questionnaire includes both close- and open-ended questions (Hanington & Martin, 2012) and the response options vary between checkboxes and free text answers (Magnusson, et al., 2009).

The questionnaire has five sections of questions. The first section collects information about the respondent's demographics and if they have ever been a volunteer. Those answering "yes" continue to the second section

with questions about their volunteer mission and their point of view on volunteering in general. Those answering "no" continue to a section with questions about their attitude to volunteering and if they have ever considered starting volunteering.

The third section include questions about Volontärbyrån. This is added to get an insight to how many respondents are familiar with this type of volunteer mediator organization, giving an indication to how widely spread knowledge about how to engage in volunteer work in Sweden is.

At last, all respondents are asked questions about a potential new digital volunteer app, and which functions they would like to have in it.

The complete questionnaire can be found in appendix B. The result and insights from the questionnaire follow below.

3.5.1.1 Respondent Demographic

89 people responds to the questionnaire. The respondents are of ages between 16 and 66+ years old, of which two thirds are under 35 years old.

The gender distribution is even, with almost 60% women to 40% men. Two thirds of the participants with experience of volunteering are women. This is worth mentioning considering the gender distribution in Volontärbarometern being over 80% women (Volontärbyrån, 2020 b).

Around half of the respondents live in a large city and 76% have a college or university education. Half of the respondents have a full-time job, and over a third are students. The education and occupation of the respondents are important factors to take into consideration since it indicates the economic stability of the majority of the respondents.

Almost half of the respondents are not volunteers, and around half of the respondents who have volunteered answered that they are no longer doing it.

3.5.1.2 Volunteer Engagement

Among the responders who have experience of volunteer work, 51% works or worked with children and youths. Most of them chose other areas such as human rights, education, integration or economic or cultural exposure. 20% chose "hobby" as the category of their volunteer work.

They value the community around volunteering, both as a motivational factor to start and continue their engagement. Physical meetings and email are the most common way of communication between volunteers and

organizations, thereafter phone calls and texting using Facebook Messenger and Doodle.

3.5.1.3 Becoming a Volunteer

Respondents experienced with volunteering finds their volunteer missions through either a website or through suggestions from friends. Only 2 out of 52 respondents use a mobile application for signing up. A website, email or physical meeting are the most common ways.

The majority does not meet any obstacles in the starting process of becoming a volunteer. Among those who encounter obstacles, the most common reasons are unclear choices and lack of information. The respondents also highlight that there were too many steps in the application process, lack of organizing and it requires of a lot of own initiatives.

3.5.1.4 *Is Volunteer Engagement "All or Nothing"?*

There is an equal diversion between the volunteer respondents who consider themselves beginners, quite experienced or very experienced volunteers. The self-rated experience of the volunteers was in general higher if the volunteer were currently active. 8 of the 12 very experienced have had no difficulties when they started volunteering.

3.5.1.5 Motivating Factors

Most respondents answer 4-6 reasons that motivates them to keep volunteering and ways they feel that they contribute. This indicates that the volunteers recognize multiple sources of motivation and that a combination of factors work together to create motivation and a feeling of contribution.

The most common motivating factors is to feel like they contribute, the feeling of community, having fun and learning new things.

The most popular option of how to get appreciation for volunteer work is to get feedback and gratitude from the organization. The second most popular options are to get appreciation from friends, to see the result of the volunteer work with their own eyes and to become a part of a volunteer community.

The options that not many respondents choose are to get merch from the organization, statistics of their participation, having ranked levels of commitment, getting a thank you-card and to get their name on a public list to show their participation. Many of these options are connected to some type of award system or prestigious hierarchy.

3.5.1.6 Disadvantages and Reasons for Quitting

The by far most common answer of disadvantages of volunteering is that it is time consuming. The second most common answer is that the work is difficult to predict and control. Other drawbacks are to not getting anything back, dealing with heavy subjects and feeling insufficient, like stated in the quotes below. The quotes has been translated from Swedish to English.

"Very hard to spend extremely much time on something and not get anything back. There are situations where you work yourself to death and do not even get a thank you."

"You always wish you could do more. And that it takes time from other things."

The most common reasons for quitting volunteering are lack of time and that the mission ended. Two other common reasons for quitting are moving to a new city and being active as a student and quitting by the graduation.

Regarding those who answer that the mission ended, the majority express their willingness to volunteer again, for example like in the quote below. The quoteshas been translated from Swedish to English.

"My commitment had a time limit when I started - but there is really no reason not to continue. However, getting an invitation to help may be necessary sometimes."

3.5.1.7 Volontärbyrån

Over 80% of the respondents have not heard of Volontärbyrån and only 11,5% use Volontärbyrån to apply for missions. This indicates that the knowledge about a volunteer mediator is not widely spread.

The respondents who have heard of Volontärbyrån answer that the best thing is to have everything gathered in one place. Suggestions of improvements are to be able to create a profile, and to not repeat ads of the same mission in the feed.

3.5.1.8 Non-Volunteers

Among the non-volunteers, 75% answer that they have considered volunteering a few times. The majority of the non-volunteers states that "helping others" is the main reason that makes them consider volunteering. Other reasons are to be able to share knowledge, contribute to society, and to have a meaningful purpose in life.

The most common reason for not taking the step to volunteer is lack of time. Several respondents also state lack of information, and a few mention

lack of motivation or too high starting costs. Also having to handle heavy subjects, feeling of insufficiency, tough or boring tasks as well as the fact that volunteering is unpaid are other mentioned disadvantages of volunteering.

" I did not know what to do and was afraid to get "too" involved and get too many expectations from those who organize."

Half of the non-volunteer respondents choose "getting feedback and gratitude" as well as "seeing the effects with my own eyes" as the best ways to get appreciation from their work. The most uncommon alternatives are a level system, to get their name publicly displayed as a volunteer and to get statistics of their own work.

"That there is always more to do, tough having to say no."

"The responsibility. Not feeling that you do as much as others. Not feeling that you are making a difference despite the time effort."

3.5.1.9 A Digital Volunteer Solution

All respondents of the survey are asked what they think of having to log in to the application in order to use it. The majority thinks this is a good or okey function. However, in the following question, the majority answer multiple tasks that they want to do without having to login. More than half answer that they want to have access to information about the missions and be able to use the app fully except sending an application. These responses contradict, which suggest that the users really would like to be able to use the app without having to log in.

3.5.2 Interviews with Organizations

Semi-structured interviews are held with representatives from four volunteer organizations to further investigate the users and stakeholders. This method provides qualitative information on personal opinions and experiences in a conversational format. This allows for collection of nuanced answers and a flexibility around questions (Hanington & Martin, 2012).

The main goal of these interviews is to better understand the organizations point of view in the volunteering business, and to further investigate the needs of the volunteers based on the organization's experiences. Since the main target group of this study is the volunteer and not the organization,

these interviews are executed in a small scale, as a complement to the digital questionnaire.

The questions are divided into three sections: about the organization, motivation to volunteer and a future volunteer app. In the last section an illustration of a user journey (figure 3.19) is presented for the interviewee, as a tool to discuss the volunteer process. The interviews are held via video call.

The results of the interviews are analyzed by extracting user needs and collecting ideas of concepts, tasks and services. The complete list of interview questions can be found in appendix C.

3.5.2.1 *About the Organizations*

The interviewed organizations are of different size and have different purposes. Two of the interviewed organizations are working with connecting people with different backgrounds, by sharing their culture and language knowledges. Another organization work with helping children and families in need. The last organization is one of the bigger non-profit organizations in Sweden, with main focus on health and social vulnerability. Beyond that they are also collecting clothes and pieces to sell in their second hand stores to raise money to their different help initiatives.

The majority of the volunteers are either in the ages 20-35 or over 60 years. The possible types of volunteer missions differ a lot between each interviewed organization. In general, there are different levels of involvement, regarding both time and responsibility. In most organizations it is possible to choose between being involved in a shorter project for a limited time or being involved in regular activities throughout the whole year.

The most common mission for beginners is being a member of a team and be involved a few hours every week. However, some of the organizations highlights the importance of choosing a mission based on interest rather than time or level of earlier volunteer experiences.

"We try to avoid implementing a hierarchy by not using words such as volunteer or mentor. Instead we call both parts participants."

The process to become a volunteer for the first time looks different depending on the organization, but the general steps are similar.

- 1. The person (soon to be volunteer) finds the mission and fill in the application form, either on the website of volunteer mediator or the specific organization.
- 2. If the application is done on the website of the volunteer mediator the responsible person on the organization receives an email.
- 3. The responsible person usually starts by contacting the new volunteer by email, the same or next day. This is followed by an interview by phone or face to face.
- 4. The majority of the organizations then sign a contract and provide some introduction before the volunteer starts their mission.

All the four participating organizations use the same volunteer mediator as a channel to recruit new volunteers. To upload a recruitment advertisement an organization account is needed. When a person is responding to the advertisement the organization is notified by email. One of the organizations also mentioned that they participate in the courses that the volunteer mediator provides to their members.

They have varied experiences regarding the struggle to find new volunteers. Two organizations stated that they got a noticeable boost of volunteer engagement due to the pandemic and the remote work that followed. One organization stated that they had no major problem to get new volunteers, but when people show interest, it is important to act on it quickly.

"Commitment tend to wane with time, so it is important with quick feedback and to keep in touch even if there are no missions at the moment."

3.5.2.2 Motivation and Expectations

The organizations do not experience a major problem with motivating volunteers to continue their engagement. However, one organization state that people who have a passion or interest for their specific organization from start tend to stay longer.

All four organizations strive to have clear communication with volunteers and to show appreciation and attention, something they believe contribute to keeping volunteers engaged. One common way to show attention is to ways write positively about their volunteers through social media, for example through volunteer portraits. One of the organizations want better communication when and why a volunteer decided to quit.

Forms of appreciation or rewards range from providing a budget for coffee and cakes to group activities such as meetups to giving symbolic items such as a pin, diploma or inexpensive item. Meetups and symbolic awards are mentioned as extra appreciated by the volunteers.

The organizations who work with collection of money state that it would defeat the purpose of their work if they put too much money on their volunteers. The appreciation or rewards must be inexpensive so that it does not affect the end-purpose of the organization negatively.

All four organizations agrees that it is better to focus on the content of the volunteer work rather than the time spent. The most important is that people participate in work that they enjoy doing. The time spent on a mission does not necessarily say much of the effects or importance of the effort. If someone want to contribute, but do not have the time, they can instead donate or become a paying member.

3.5.2.3 A Future Volunteer App

When asking about a future volunteer app the user journey is shown (figure 3.19). All organizations think the user journey correctly represents the reality. They also agree on the drop out points but have different thoughts regarding which point is the most common.

When asking which features the organizations would like to have in a future digital solution the following answers are given:

- Information about the volunteer, their completed missions and which city or sub organization it belongs to.
- Possibility to create volunteer groups based on mission.
- Possibility to communicate with the volunteers, both one and one and in groups.
- All communication on one place from the application to last day.
- The possibility for the volunteer to self-report when they have completed a mission or training direct in our system.
- No need to log time.
- When someone is quitting their mission, possibility to get feedback on improvements.

The representants from the organizations suggested a number of features they predict will be appreciated by the volunteers:

- The possibility to create a profile.
- Possibility to share experiences and ideas with each other.
- Chat function with possibility to create groups.
- Feedback from the organization.
- Track performed trainings and download certificates.

3.6 Summary of Discover

During the discover phase a large quantity of information is collected from several different research areas. To summarize this, a compilation of the key takeaways from each research area is done (figure 3.20). This compilation is used as a base when moving forward to the define and development phase.

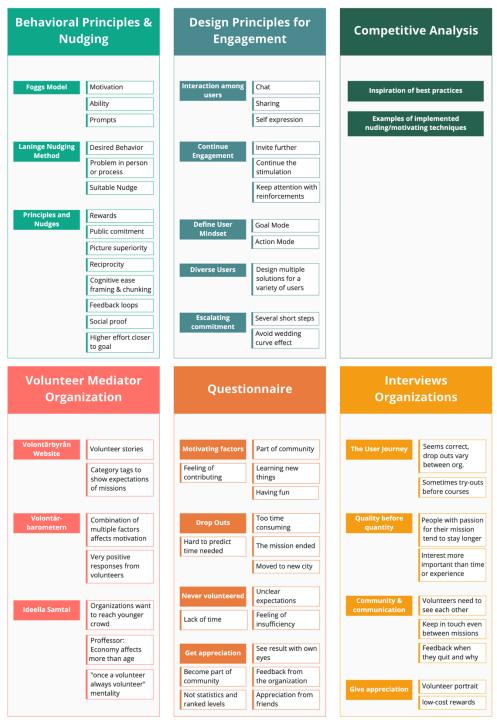


Figure 3.20 Summary of key takeaways from each research area.

4 Define

In the define phase, presented in figure 4.1, the insights and research from the discover phase are collected and narrowed down to define the design challenge of the thesis. This is done through defining the aims and objectives, the target group, the user needs and the requirements that will guide the further development.

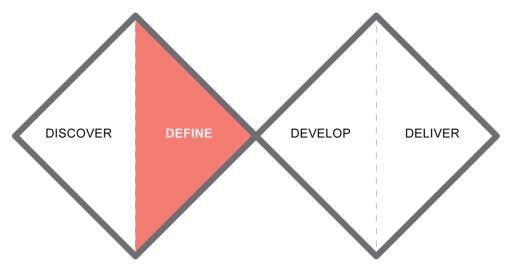


Figure 4.1 The define phase in the double diamond.

During the definition phase, the aim and objectives of the thesis are defined based on insights from the extensive research done in the discover phase. This is forming a design challenge. The project focus is further described by exploring the users of the product through the creation of personas. Finally, user needs and product requirements are stated before moving into the development phase.

The methods that are used are further described in each section.

4.1 The Design Challenge

In this section, the overall aims, objectives and long-term goals are collected to form the design challenge. These are refined versions of the aim and objective stated in the introduction, based on new insights from the discover phase. The design challenge describes the project focus when moving into the development phase.

4.1.1 Aim and Objective

The aim and objective remain as stated in the Introduction (1.2); to create a digital volunteer mediator app which aims to lower the threshold for new volunteers to start and for experienced volunteers to continue their engagement.

After a thorough research during the discover phase, many insights of the situation, the problems and needs of the users and stakeholders are gathered, together with possible principles to follow when designing a solution. This information leads to a convergent of the thesis focus, which is presented in this chapter through personas, user needs and product requirements.

4.1.2 Long Term Goals

Looking at the longer perspective of the project, the overall goal is to increase volunteer engagement in Sweden. This is complemented with a couple of further long-term goals stated below. These goals are important for the company (Tactel AB) to consider when moving forward with the project in the future but are not expected to be met in the scope of this thesis. These goals have however been present when shaping the approach to the thesis.

Long term goals:

- Increase volunteer engagement in Sweden.
- Reach a broad target group, especially younger generations.
- Add value to the member organizations.
- Have competitive advantage.
- Be a long-term solution for everyone involved.

4.2 The Users

The users of a volunteer mediator app can be divided into two major groups: people who are interested to become volunteers and volunteer organizations. Since the aim of this thesis is to increase volunteer engagement, the focus lies on the first user group: people who are interested to become volunteers. This includes both people with and without prior experience of volunteer work.

In addition to this, current volunteers are also considered users of the app. Even though they already have found their way to volunteering, they can still benefit from the app. For example, to use the volunteer community or to plan and schedule their work shifts and courses. They are however not the users in focus of this thesis.

The organizations are considered secondary users and are not included in the project scope to keep the workload on a reasonable level.

4.2.1 Personas

To concretize and communicate this spectrum of people, four personas are created. Personas are realistic descriptions of archetypal users of the product. It is a tool to remind the designers that real people will use the product, help when testing scenarios and aid design communication. (Sharp, et al., 2019; Hanington & Martin, 2012).

The four personas are based on insights from the questionnaire and interviews, and the project goals to reach a younger crowd and new users. This leads to the creation of the two main target group personas Annie and Liam, who are young adults who are not currently volunteers but are interested in becoming. In addition to this, two other personas are created to represent the most common volunteer today and the least common volunteer today.

The personas are characterized by a set of goals and attitudes related to volunteering, and descriptions of their demographics and personality attributes. For example, Annie's biggest frustration about volunteering is fear of not being able cancel her commitment, a reoccurring answer the respondents in the questionnaire.

Stock pictures of real people are used, and they are given both a first and last name, as a measure to make the personas as believable and realistic as possible (Holston, 2013).



Figure 4.2 Persona Annie Dalbäck. (Chen, 2019)

Annie Dalbäck represents the primary target group (figure 4.2). She is 25 years old, works full time and lives in Gothenburg. She has never volunteered but wants to contribute to the society, make a concrete positive difference and develop as a person. She would use a volunteer app to easily find a suitable mission, compare and verify organizations and actually start volunteering. Her biggest frustrations are to feel uncertain about trusting the organization and fear of not being able cancel her commitment.



Figure 4.3 Persona Liam Masori. (Wong, 2017)

Liam Masori also represents the primary target group (figure 4.3). He is a 17-year-old student from Växjö who used to volunteer but quit. He would like to volunteer again mainly to meet friends, have fun and contribute to the society. A volunteer app would help him find a new volunteer mission in Växjö that fits his interests and allows him to stay in touch with other volunteers. His biggest frustrations are to not know the expectations and being afraid of letting people down.



Figure 4.4 Persona Miriam Odén. (Hosseini, 2018)

Miriam Odén represents the most common volunteer today (figure 4.4). She is 32 years old, works full time and live in Malmö. She has been volunteering for many years and is currently a team leader at Röda Korset. Volunteering is an important activity to Miriam; she feels good about contributing to a good cause. Her main reasons to use a volunteer app is to keep track of her missions, to share experiences with other volunteers and to find courses and workshops. Her biggest frustrations are to feel stressed and not getting response from people.



Figure 4.5 Persona Martin Edwards. (Fernanda, 2020)

Martin Edwards represents the least common volunteer today (figure 4.5). He is 45 years old from Västerås and is currently on parental leave. He has never volunteered but believe it is a good thing to do, a way to share knowledge and contribute to the society. He would use a volunteer app to learn more about volunteering, get inspired as well as to find a mission that matches his interests, skills and fits into his life puzzle. His biggest frustration about volunteering and a volunteer app is that he does not have the time.

4.3 Needs and Requirements

User needs are extracted from the user research and categorized by problem area (figure 4.6). Primarily needs from volunteers are collected but also needs from organizations. The needs are used as a tool to guide the concept development in finding solutions, and to form the product requirements that are used to evaluate the final concept.

VOLUNTEERS		
Problem	Need	Solution
Lack of motivation to volunteer	 Inspiration about benefits of being a volunteer Information about volunteering Verification of the value of volunteer work 	 Read interview with a volunteer Recommendations of organizations and missions News feed from organizations Answers to frequently asked questions Tips of everyday things you can do to support a charity View results of volunteer work
Lack of ability to handle the volunteer engagement	 Overview of missions and documents Proof of participation 	 View status of ongoing application to mission View schedule of your upcoming and previous missions Track performed courses Download certificates
Many different platforms for communication	 Easy communication with the organization Easy communication with other volunteers within the team or organization 	 One platform for all communication regarding volunteer work Easy access to team leader or responsible person of the mission
Lack of sense of community	 To find other volunteers to collaborate with To show appreciation to other volunteers 	 Share open volunteer missions with people outside the application Enable volunteers to interact
Lack of trust	 To feel that the app is safe to use To have proof of the validity of the organizations and volunteer missions 	 Secure identification View validation of organizations and missions
ORGANIZATIONS		
Problem	Need	Solution
Lack of information and feedback	 Information about the volunteer: sub-organization, city, finished courses and missions Get feedback when a volunteer is quitting their mission and why. 	 A platform for organizations to handle volunteer applications and information about the profiles.

Figure 4.6 Problems, user needs and solutions identified from user research.

The list of product requirements, presented in figure 4.7, are defined based on the user needs and the aim of the project. They are categorized as either general requirements of the app or based on the behavior areas motivation, ability and prompt. A sufficient level of all these three components is needed to create a behavior (Fogg, 2020). Therefore the app should cover all of these areas to meet the needs of a variety of users.

The requirements are used as a tool to guide the concept development, including both ideation and decision making. They are also used to evaluate the final concept in the Evaluation (6.2).

The mobile app should		
GENERAL	 be a mediator of volunteer missions enable the volunteer community to grow be safe to use be attractive to use 	
MOTIVATION	 strengthen user's motivation to volunteer provide information about volunteer organizations provide information about volunteer missions ensure validity of volunteer organizations 	
ABILITY	 provide a low threshold for new volunteers to start volunteering facilitate the application process for the user enable users to find a mission that match their interests and ambitions enable users to easily handle their applications and missions enable easy communication 	
PROMPT	 encourage volunteer engagement assist with remembering tasks (upcoming missions, answering messages) 	

Figure 4.7 List of requirements.

5 Develop

The development phase, presented in figure 5.1, is an explorative phase where concept ideas are produced and further developed. This includes concept ideation through brainstorms, prototyping and evaluation in several iterations with increasing complexity. The result of the development phase are concept ideas that form the foundation of the final concept. (Design Council, 2021)

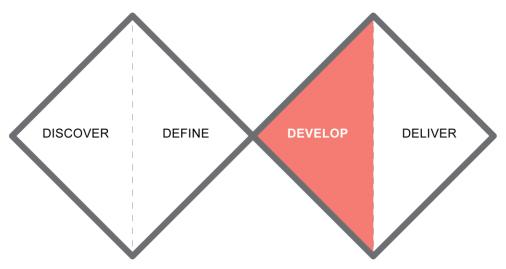


Figure 5.1 The develop phase in the double diamond.

The development phase is initiated with concept ideation, where a large quantity of ideas is developed with the insights from the research in mind. These ideas are then refined and developed with increasing complexity in three iterations. Each iteration is followed by an evaluation. The methods used in each iteration is described in the beginning of each section.

5.1 Concept Ideation

5.1.1 Brainstorming Sessions

The development phase is initiated with a series of brainstorming sessions. Brainstorming is a method for a group of people to create a high quantity of creative ideas. The intention of this method is to allow free association and build on each other's ideas in a judgment free zone. (Hanington & Martin, 2012)

In the first session, a variation of brainstorming called *Reversed Brainstorming* is used. In this method a design problem is identified and reversed, so that the focus of the brainstorm lies on how the problem could get worse. After collecting the negative ideas, they are reversed into solutions. This method takes advantage of the way humans naturally think of problems more easily than solutions (Wilson, 2011). During this session ideas of how the worst possible volunteer app would look like are written down, collected, reversed, and finally clustered into categories (figure 5.2 and 5.3).

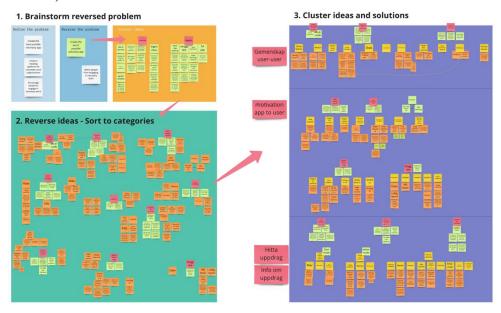


Figure 5.2 Overview of the reversed brainstorming session.

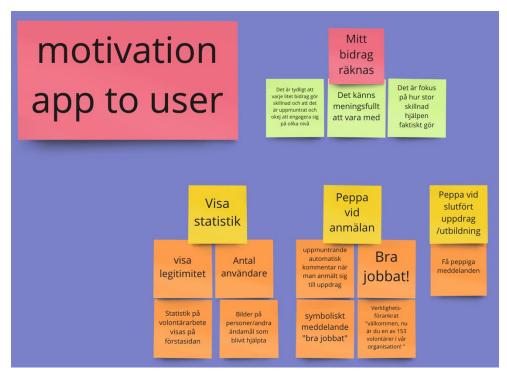


Figure 5.3 Detail from brainstorm session: clustered ideas in category "motivation, app to user".

In the second session, the concept categories from the *Reversed Brainstorm* session are used as a base for a sketch-focused brainstorming session. The aim of this session is to explore and refine the initial ideas to more realistic concepts. The method used is a variation of *Braindrawing*, where each team member sketches concept ideas for each category during a limited amount of time. The ideas are then merged and further defined before they are evaluated within the project team together with the project mentors (figure 5.4 and 5.5). The result is a large number of ideas for features and interaction flows with varying complexity.

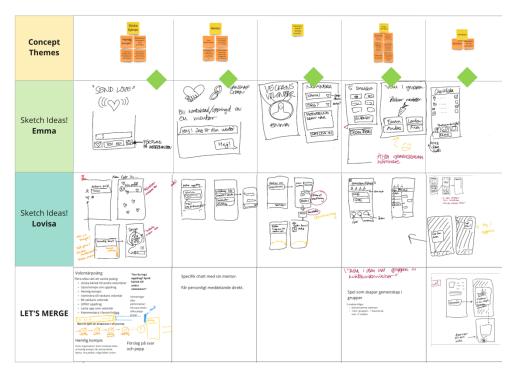


Figure 5.4 Overview of the braindrawing session. Each column represents one concept which both team members sketches ideas for. These ideas are then merged on the last row.

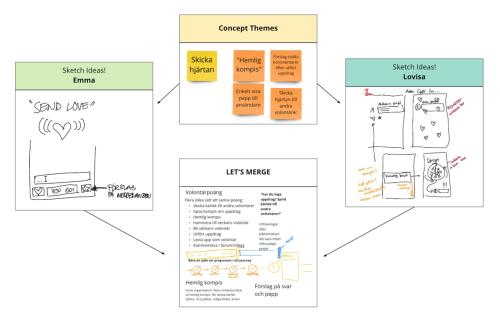


Figure 5.5 Detail from braindrawing session: concept theme "send love".

5.1.2 Nudging Session

A development session based on Niklas Laninge's method for nudging (Laninge, 2020) is conducted with the aim to find specific design solutions that help users to engage in volunteering (figure 5.6 and 5.7). The method is also described in the section Nudging (3.1.5).

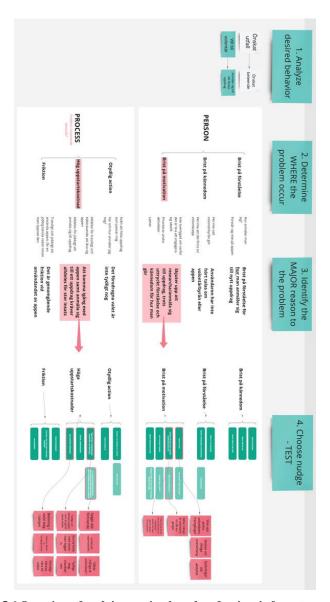


Figure 5.6 Overview of nudging session based on Laninge's four steps method.

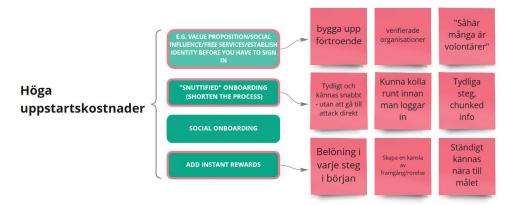


Figure 5.7 Detail from nudging session step 4: nudges to solve high starting cost.

In step one, the desired behavior is defined. The focus of this session is decided to *sign up for a volunteer mission* – a key-behavior among many sub-behaviors.

The next step is to determine where the problem occurs – if it is the user or the process that is the main problem. Since this thesis revolves around creating a new product and not improving an existing one, both problems areas are explored.

In the third step, the main cause of the problem is identified. Lack of motivation is evaluated as the main problem for the user, and high starting cost as the main problem with the process.

At last, suitable nudges are chosen and used as a base for concept ideation. Six concept ideas are developed during this nudging session.

5.2 Development of the First Iteration

The concept ideation results in many possible concept ideas and features that together can form a volunteer app concept. A list of these concept ideas and features is presented in figure 5.8. These are further explored with low fidelity (lo-fi) prototypes, to evaluate which ones to proceed with.

MOTIVATION TO VOLUNTEER

- Volunteer stories and upcoming events
- Easy access to positive information about volunteer work
- Personalized suggestions of missions "there are 5 missions that suit you"
- Badge system, show appreciation for every step taken towards becoming a volunteer
- Nominate volunteer of the week
- Pop-up cheering on after finished mission, stars and confetti
- Pop-up informing the user is close to a new reward
- Pop-up "good job" when applying to a mission
- Pop-up "Welcome and thank you for being one of XXX volunteers"
- Pop-up when mission has ended: "Continue as a volunteer?" yes / yes, but another type
 of mission / not right now, but let's stay in touch / no thank you
- Simplified application process, checklist with 3 steps

COMMUNICATION AND COMMUNITY

- Chat with mentor
- Games to get to know each other in a group chat
- Forum discussion threads
- Share videos and stories from volunteer missions
- Share missions to a friend
- Introduction of the app to new users
- Collect feedback from volunteers who want to end their mission or whose mission has

Overview of missions

· Save missions and organizations as favorite

Figure 5.8 List of concepts ideas and specific features chosen to be further explored in the lofidelity prototype.

5.2.1 Low Fidelity Prototype

The concept ideas are further explored and defined through a lo-fi prototype. Lo-fi prototypes are a useful tool to explore ideas in the early stages of development. They are simple, quick and cheap to produce and any issues with the solutions are easily modified. (Sharp, et al., 2019) The prototype is constructed digitally as wireframes, which are static representations of the page layout and structure (Babich, 2020). The following sections describe the concepts. The lo-fi prototype is exemplified in figure 5.9.

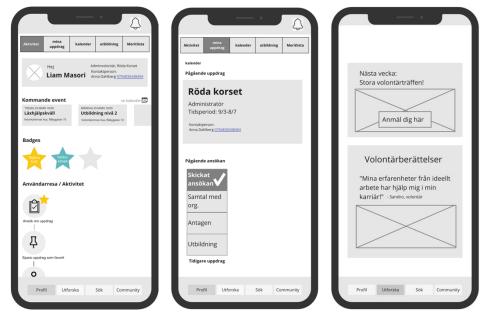


Figure 5.9 Examples of the lo-fi prototype; profile page (left), my mission (center) and explore feed (right).

The main structure of the prototype consists of a menu bar at the bottom of the page, where the user can navigate between the different pages. The pages are the profile page, the explore page, search page and the community page. The following sections describe these pages and the features that are developed in the lo-fi prototype.

5.2.1.1 The Explore Page

Many of the concept ideas are centered around increasing the user's motivation to volunteer by presenting value proposition in terms of inspirational information about volunteering. At the explore page, all this type of content is presented on clickable cards which the user can scroll

between. This includes volunteer stories, which are interviews with volunteers, upcoming events for volunteers and positive information about volunteering (figure 5.9).

Another feature is to allow volunteer organizations to upload posts about their everyday volunteer work, so that users who are looking for a volunteer mission can get inspiration and information about what the organizations do on a daily basis. By also enabling the users to react to these posts with smiley faces or hearts, a new dimension of interaction is added to the app.

5.2.1.2 Personalized Suggestions of Missions

If signed in, the user can get personalized suggestions of missions presented at the explore page. These suggestions are based on information the user fill in at their profile account, about what types of mission they are looking for. This is a way to avoid choice overload and to make it easier for the user to find and apply to a mission.

5.2.1.3 The Profile Page

At the profile page a large amount of information connected to the user is gathered, such as name and contact information, current missions and applications, calendar of upcoming events, finished courses and missions. This information is decided to be divided to sub-pages, which the user navigates between with a menu bar at the top of the page (figure 5.9).

5.2.1.4 The Reward System

The reward system is a concept with the purpose to reward the user for actions they perform in the app, and to motivate them to keep up their engagement. Both users who are very engaged and users who are trying out a volunteer mission for the first time should feel motivated and appreciated. Therefore, both big and small actions are rewarded with badges. The badge system is illustrated in the prototype on the first sub-page of the profile page (figure 5.9). It is placed on the first sub-page to ensure the user finds this feature easily.

The reward system consists of two parts, the user journey and the badges. The volunteer journey is a timeline consisting of activities the user has completed in the app, such as created an account, saved a favorite mission or applied to a mission. The badges are rewards that the user achieves by completing certain streaks, such as using the app for a week or completing 10 volunteer work shifts.

5.2.1.5 Rewarding Pop-Ups

Several concept ideas are based on using rewarding pop-ups to motivate the user. The user gets these pop-ups both when they have applied, been accepted and finished a mission.

Another similar concept idea is the welcoming pop-up, which is presented to the user when starting the app for the first time, saying "Welcome to the volunteer app. Thank you for being one of 4213 our users". There are three positive aspects with this pop-up. Firstly, it welcomes the user to the app. Secondly, it is a way to show appreciation to the user. Thirdly, it is as a way to present a value proposition to the user in terms of highlighting that other people are already using the app.

5.2.1.6 The Community Page

Features that are related to communication and strengthening the volunteer community are chosen to be gathered on the community page. This includes a chat function, group chats where volunteers from the same organization of mission can communicate and a forum where users can share videos and stories from volunteer missions.

5.2.1.7 Chat

The chat function is intended to enable the volunteer app to be the sole platform for all type of communication related to the volunteer work. It can be used during the application process as a way for the organization to get in touch with a person who have applied to a mission. It can also be used a communication tool for everyday volunteer work, for example for a team of volunteers.

A concept idea within the chat function is a game feature, with the purpose to enable the users to get to know each other and strengthen the feeling of community. Everyone in the group chat is presented with five quick questions, of which they can choose between two answers. For example "what do you prefer: a hug or a high five?". When everyone in the group chat has answered, the common answers are presented to the group.

5.2.1.8 Simplified Application Process

One of the concept ideas developed is a suggestion on how to make the mission application process simple and clear. When developing this concept idea the research about escalating the commitment, goal gradient effect, feedback and rewards are all a central parts of the ideation.

The application process is divided into three steps – reward, fill in information and confirm the application. The user is browsing through the app and finds a suitable mission, and decides to apply. In the first step the user is rewarded for taking the action to apply to a mission by an encouraging and thankful message. This is followed by the second step where the user is asked to fill in their information by signing in to their account. The last step is to confirm the application.

5.2.1.9 Pop-Up to Continue the Engagement

An insight from the user survey is that some people does not continue their volunteer engagement when their mission ends, even if they have a positive experience. They have the motivation and the ability to become volunteers but need a prompt. By presenting the user with a pop-up after their mission has ended asking them if they want to continue as a volunteer, they could potentially be intrigued to apply to a new mission.

5.2.1.10 Share Mission to a Friend

It is also possible for the user to share a mission with a friend, via a button next to the application button. This is a feature that is beneficial to increase volunteer engagement as it enables the user to spread the word of open volunteer missions.

5.2.2 UX Sitemap

A UX sitemap is created to establish the overall structure of the app. It also creates a comprehensive overview of which selected parts of the app that is going to be further developed (figure 5.10). A UX sitemap is a hierarchical diagram which visualizes how pages and function of an app or website are interconnected (Savina, 2021). Since the focus of the project brief lies on how to motivate the user to start and continue volunteering, the introduction, explore feed and profile page is decided to be further developed. This decision is taken in collaboration with the other thesis group, to divide the focus areas between the two groups.

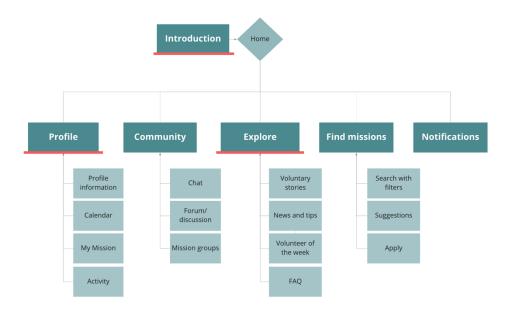


Figure 5.10 A simplified version of the UX sitemap created during the first concept iteration.

The pages selected to be further developed are marked with a red line.

5.2.2.1 Landing Page and Sign in Procedure

Based on the design principle of escalating commitment (Evans, 2017) and the goal to lower the threshold for new users, it is decided to allow the user to view the app without having to create a profile account.

The landing page of the app, which is the first page they reach when starting the app, is decided to be the explore feed. This is where the user gets information about volunteering that potentially strengthen their motivation to apply to a mission.

The user can create an account and sign in either when applying for a mission or when entering the profile page.

5.3 Evaluation of the First Iteration

Since the goal of this thesis is to create UX/UI solutions that motivates people to volunteer, the user's motivation is the key aspect to take into consideration when evaluating the concepts. This aspect is time consuming to test with real users, as a large quantity of tests is required to establish if the motivating concepts are successful. In these circumstances when it is

not practical to involve users in an evaluation other people, often referred to as *experts* or *researchers*, can provide feedback (Sharp, et al., 2019).

After the first iteration of concept development with the lo-fi prototype, an evaluation is conducted through interviews with a nudging expert and with a representative from Volontärbyrån. Insights and feedback from these meetings are presented in the following sections.

5.3.1 Nudging Expert

A feedback meeting is conducted with the psychologist and nudging expert Niklas Laninge. During this meeting the concept ideas as well as general thoughts on nudging and motives to volunteer are discussed.

5.3.1.1 Alternatives to Volunteering Are Easier

Laninge suggests that a major challenge with motivating people to volunteer is connected to the way they tend to value altruistic actions irrationally. The need to perform altruistic actions can be fulfilled with much less effort than engaging in volunteer work. As an example, a person might fulfill this need by buying ecological tomatoes, or refrain from buying new clothes one weekend. This does not mean that the real value of these actions is equal to the work one might do as a volunteer, but it is perceived as equal to the person.

5.3.1.2 Altruism Versus Egoism

Laninge also considers egoistic motives, such as gaining merits, as stronger compared to altruistic motives when the goal is to attract new volunteers. An example of this is how Amazon's "frustration free packaging" sell better than the "sustainable packaging", even though both products are identical.

When the goal is to create retention, altruistic motives can be more effective. Once the user comes in contact with the altruistic benefits of volunteering, such as the feeling of contributing to society or the feeling of community, these factors might become the main reasons why they continue volunteering.

5.3.1.3 Merits as Motivation

A suggestion on how to attract new volunteers is to highlight the meritorious advantages of volunteer work. In the user survey that is performed in this project 30% of the participants select "merits" as one of the motivating factors to volunteer. By creating a system for handling volunteer resumes and certificates, the volunteer app can offer an external value to volunteers, which can motivate new people to get involved. An important aspect of such a concept is for the volunteer app to gain credibility and reliability as a source for merits.

5.3.1.4 Nudging as a Solution

According to Laninge, nudging is a method to implement smart changes in moments of decision that makes it easy for a person to perform a certain behavior. Becoming engaged in volunteer work is a big decision and commitment, why small nudges might not be enough to create real change. Laninge therefore considers a more extensive solution to be more powerful.

On the other hand, those who downloads the app have already come a long way in the idea of becoming a volunteer. The main goal is therefore to make them stay and apply to a mission. A coin system such as the reward system is an example of a concept with this purpose.

5.3.2 Representative from Volontärbyrån

An interview is conducted with a representative from Volontärbyrån who work with their website, collaborations, and project management. During this meeting many new insights about Volontärbyrån and their approach to a volunteer app is gained.

The complete list of interview questions can be found in appendix D.

5.3.2.1 Goal and Purpose of Volontärbyrån

The primary purpose of Volontärbyrån is to help organizations assign volunteers to their open missions and to facilitate their work by providing the best conditions to work with volunteers.

Volontärbyrån is a mediator between volunteer organizations and volunteers, and they reflect the goals and needs of the organizations. They strive to connect the volunteer with the organization as soon as possible and they value a good match between volunteer and mission rather than maximizing the number of applications. A person who is genuinely passionate about their mission tend to stay longer.

Some organizations are showing an interest in reaching a younger target group, and therefore Volontärbyrån also acknowledges this need.

5.3.2.2 Volontärbyrån's Website and System

Volontärbyrån is currently working on a redesign of their website, including both graphical design and user experience. They are content with the main functions but are interested in ways to provide a more personalized user experience.

Applications that Volontärbyrån receives through their website are automatically emailed to the organization. They are also automatically saved in Volontärbyrån's database so that organizations can view their applications via their account at the website. Feedback Volontärbyrån receives regarding notifications on email and information about the process is generally positive.

Volontärbyrån values the effort they put into verifying each new organization that want to use their service. They manually check that each organization lives up to Volontärbyrån's policy with a number of criterias. They also verify each mission ad, including reoccurring ones. This includes providing help to formulate the ad information if needed.

Volontärbyrån provides courses and workshops for organizations, with the aim to aid them in their work with volunteers. The three main areas that Volontärbyrån provides courses within are *leading*, *motivating* and *including* volunteers. The courses that some organizations arrange are not connected to Volontärbyrån.

5.3.2.3 Challenges with a Volunteer App

There are 250 000 non-profit organizations in Sweden (SCB, 2019). They are all different in size and complexity of processes and systems. Some organizations have their own system for new recruitments, and some do it all manually. Similarly, the system Volontärbyrån use and how they categorize information about the applicants is not necessarily the same as how all organizations do it. In addition to this, only 7% of the organizations have paid employees. This means most of the volunteer recruitment is managed by volunteers. It is therefore difficult to a demand certain response time or quality of the recruitment process.

The large variety of organizations makes it challenging to create a system that fits all, or a solution that allows this type of variation. This includes for example how missions are presented and formulated or which amount of

information and communication that is possible to maintain between the organizations and Volontärbyrån.

An important question to ask is how big part a volunteer app could play in the ecosystem of volunteer engagement and how involved the organizations could be in the application.

5.4 Development of the Second Iteration

The final concept is developed based on the best ideas from the concept ideation. Due to time limitations, it is decided to only focus on some of the app functions. The decision on which to continue with is based on the feedback from the expert evaluation.

During the evaluation, insights are given that many nudges could be implemented in the profile section of the app. The start screen of the app is also crucial for the volunteer engagement. These insights confirm the decision to focus on the explore page and the profile page.

This first iteration of the hi-fi prototype is constructed in the digital prototyping software Figma. It is based on the lo-fi prototype, and improvements and refinements are successively added to explore the concept in increasing detail.

The prototype is complemented with the standard features required to communicate the full context of the concept, such as the profile page.

5.4.1 Graphic Design and Navigation

The graphic design and navigation of the app is not part of the main scope for the project. However, in order to present a realistic and attractive prototype, a graphic design style is chosen. The user interface is inspired by the best practices of the apps found during the competitive analysis. IOS template components and open-source icons and illustrations licensed under CC 4.0 are also used (Phosphoricons, u.d.; Creative Commons, 2020).

This results in a bottom tab bar with the four main pages *Explore*, *Search*, *Messages* and *Profile*. In the upper right corner, a hamburger menu is placed for navigation to other pages and settings. The majority of the content in the app is presented though floating clickable cards. They display a preview of the information that will be presented when clicking on the

card. The cards are categorized based on the type of information they present, including for example information about volunteering, mission ads, upcoming events etc. The navigation within a category is horizontal scroll while the overall navigation is vertical scroll.

In order to present a new, modern product a soft coral red is chosen as the primary color. This is complemented by a white, grey and dark blue color.

5.4.2 High Fidelity Prototype

A hi-fi prototype looks and feels like the intended product (Sharp , et al., 2019). The interactive hi-fi prototype is constructed in the prototyping tool Figma.

Since the aim of the project is to investigate and increase volunteer engagement in Sweden the language of the prototype is set to Swedish. The app is given the name *Volontärförmedlingen* which can be translated as *The Volunteer Mediation*. The thought behind this choice of name is that it could work as the app of an imaginary volunteer mediator organization with the same name. Throughout the section of presenting the prototype it is termed the volunteer app.

The prototype is divided into three segments, connected to different parts of the user journey. The chosen focus areas are starting the app, browse, wait for response, get accepted to mission and continue the volunteer engagement (figure 5.11). Each part of the prototype is presented in the following sections according to these focus areas.



Figure 5.11 Illustration of the user journey, version 4. The sections selected to be further developed are marked with a red line.

5.4.2.1 Start



Figure 5.12 Hi-fi prototype start page with welcoming pop-up.

When the user is starting the app for the first time a welcoming pop-up is appearing, as seen in figure 5.12. This is a way to show appreciation as well as to use social influence as a nudge. (Evans, 2017)

5.4.2.2 Explore Page

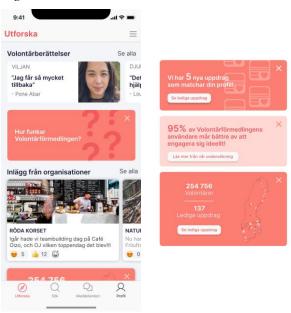


Figure 5.13 Explore page (left) and adaptable cards (right).

When starting the app, the user is directed to the explore page, with a mix of information and inspiration (figure 5.13). The aim with the explore page is to increase the motivation to volunteer and to encourage the user to apply. This is done by using behavioral principles such as social influence, highlight desired behavior and enable interaction as well as a feeling of community (Evans, 2017).

The volunteer stories as well as posts from organizations can always be found here, while the adaptable cards change content depending on if it is a first-time or signed in user. If the user is signed in the content is personalized. The adaptable cards have an X button, indicating that the card can be removed. The intention with this function is that users should be able to choose what type of information appears in the explore feed. Informative cards such as "how does the volunteer app work?" are not of interest to users who already have knowledge about this, hence they should be able to remove this card.

5.4.2.3 Profile Page

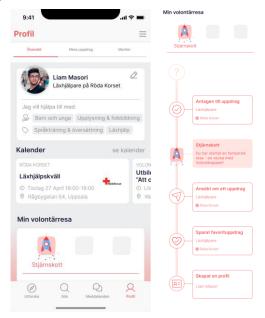


Figure 5.14 Profile page overview (left) and volunteer journey (right).

The profile page consists of three tabs; overview, my missions, and merits (figure 5.14). This page is only available when the user is signed in. On the overview tab one can find information about oneself including tags for areas of interest and types of tasks. These tags will make it possible to personalize suggestions.

Further down there is a calendar section to view upcoming events and get reminders of missions and training sessions.

Below, the volunteer journey is found. This is your personal journey where every step counts. Nudging principles such as instant rewards and goal gradient are implemented (Coglode, 2020). For some steps, a badge is received as a reward. The aim is to make the user always feel like they are close to reach their next goal, and that they are a valuable part of something good simply by using the app.

The reason the volunteer journey is placed on the overview tab is that the user shall always see it when going into the profile page. This is a way of exposing the user for the nudging principles without taking an active decision to do so.

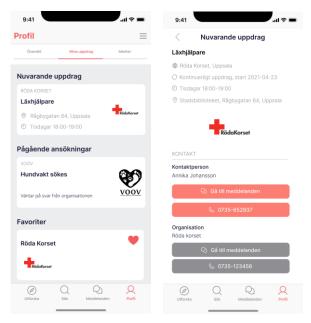


Figure 5.15 Profile page, my missions (left) and my current mission (right).

The second tab on the profile page is my missions (figure 5.15). This is where the user finds their current missions, ongoing applications, and favorites. When clicking on the current mission one will find more information about it, including contact details and possibility to inform if one cannot attend to the next event or wish to quit the mission.

The missions are presented on floating cards with the most relevant information. It was decided to not have a photo to describe the mission since it is probably not available for every mission. An alternative would be to offer the organizations a library of stock images to choose from, but that comes with a risk that the same image is used for many missions. Based on this, it was decided to only have the logotype of the organization on the card as a visual element.



Figure 5.16 Profile page, merits.

The third tab on the profile page is merits, as presented in figure 5.16. On this tab the user can see all their volunteer accomplishments, both missions and courses. This works as a volunteer resume that can be downloaded and used as a certificate when for example applying for a job. It is also possible to share it on LinkedIn or by e-mail.

This is a way to encourage the behavior of starting to volunteer, but also as a convenient way to reward current volunteers for their engagement. It is a way to add an extrinsic reward. Research on intrinsic and extrinsic motivation suggests that different strategies for recruiting and retaining volunteers could be suitable depending on the motivational orientation of the volunteer (Finkelstien, 2009). The merit system can be a suitable strategy to reach people mainly driven by extrinsic motives.

The merits tab can lead to other practical benefits as well. This compilation of earlier volunteer experiences can for example simplify the recruitment process for the volunteer mediator and the organizations.



Figure 5.17 Pop-up when a mission is about to end.

When the mission is about to end a pop-up is shown with a suggestion to continue volunteering (figure 5.17). The user can choose among three different alternatives and the desired choice is highlighted with a coral red font color.

5.5 Evaluation of the Second Iteration

After the development of the concept, a heuristic evaluation is conducted through feedback meetings with a second nudging expert and with an expert group of experienced UX/UI designers. The feedback is summarized and described for further development (see further development). Some of these improvements are then implemented as a third iteration of the final concept.

5.5.1 Nudging Expert

The hi-fi prototype is discussed with the psychologist and nudging expert Linus Olsson Collentine from Svenska Nudgingbolaget AB. He contributes with valuable suggestions of improvements on how to nudge the users to become volunteers.

5.5.1.1 Welcoming Pop-Up

The initial pop-up of the app thanks the user for using the app and highlights the large number of other people who are already engaged. Olsson considers this as a good feature, but an improvement would be to shift the focus from thanking the user for using the app to thanking the person for their engagement in volunteer work or for wanting to make the world a better place.

5.5.1.2 Call to Action

Since the main goal of the app is that a user applies to a suitable mission, Olsson requests that this action should be easily accessible on the first page of the app. In the explore feed there is a card saying "here are 5 missions that are suitable for you". An improvement that can make it even easier for the user to apply is to place suggested missions visibly in the feed, only one click away. This provides the users a clear call to action.

Placing missions in the explore feed can also make the explore feed more interesting to users who already are convinced about volunteering and whose goal when starting the app is to apply directly. The current explore feed is mainly interesting to the users who need further motivation before applying.

5.5.1.3 Personalize Suggestions

A common way to nudge people is to present them with a small number of selected options, and preferably highlight one of the options. This can be applied to missions in the volunteer app, both for the user who is looking for a first mission, to users whose mission has ended and to users who have been rejected from a mission they applied to.

A suggestion on how to personalize the options is to ask the user when their mission ends how they experienced the mission. Depending on their answer, they can be presented to either similar or completely different missions.

These types of options can also be presented when a user has been rejected from a mission they applied to. In this case, a potential way to provide the user with suitable new suggestions is to allow the organization who turned the person down to provide feedback on why the person did not get the position.

5.5.1.4 Shorten the Sign In Process

An issue with providing a personalized experience is that data from the user is needed, hence they must log in. At the same time, creating an account is a threshold that potentially can inhibit the user to proceed. A solution to this dilemma is to allow a sign in when starting the app but shorten the process as much as possible. This can be done by only requiring the most necessary information in the initial state and postpone the other information to a later state in the user journey. For example, only require name and password. Further information can be filled in later, when the user has invested time in the app content.

5.5.1.5 Badge System

Olsson is hesitant towards the extent of influence a badge system can have on the user's motivation to volunteer. Volunteering is a behavior driven by intrinsic motives. A badge system provides the user with extrinsic rewards, which might undermine the internal rewards. On the other hand, the badge system can provide a pleasant, positive atmosphere in the app.

5.5.1.6 Users Who Continue Within the Same Organization

A challenge with users who have been accepted to a mission is discussed. In the scenario when a user's mission has ended, and they want to continue within the same organization, will they still use the volunteer app or apply directly via their organization? This is relevant in regards of notifications and suggestions of new missions. These functions rely on information that the user is currently looking for a mission. In order to avoid undesired suggestions and notifications, the organizations will have to continuously provide the volunteer app with information about their volunteers.

5.5.1.7 Admin View for Organizations

One of the drop-out points in the user journey is when there is too long waiting time. As explained in the section Representative from Volontärbyrån (5.3.2) the differing waiting times are a result of the diversity of organizations and the fact that the people who handle recruitments at the organizations often are volunteers themselves. A suggestion on how to improve this situation is to involve the organizations in the app. They can be provided with an admin view of the app, with an easy access to the applications to their organization. This way, the threshold is also reduced for the recruitment volunteers, and the will be able to simply view and respond to the applications at any time.

5.5.1.8 Merits

Olsson is hesitant towards the motivating effect the merit function would have on volunteers.

5.5.2 **UX/UI Designers**

The hi-fi prototype is discussed with 9 UX/UI designers from the digital interaction agency Tactel AB. Many valuable suggestions of improvements come up during the feedback meeting.

5.5.2.1 Onboarding Experience

The introductory "thank you" pop-up is considered a valuable function. A suggestion of improvement is to add a more thorough introduction of the main functions of the app. An onboarding experience can efficiently guide the user and inform what will happen and why. This can include both information about the volunteer mediator, how to search for missions and how the badge system works.

It is also mentioned that a pop-up card could communicate negative signals since they are commonly used for forcing the user to accept cookies. One input given is to increase the size of the pop-up card, or make it a full screen, to differentiate it from the regularly used pop-ups for accepting cookies.

5.5.2.2 Adaptable Cards

The prototype provides some introductory information through the adaptable cards at the explore page. These are also considered valuable. Another suggestion is to include tips and fun facts in theses adaptable cards.

The X button that enables the user to remove the card is questioned to be counterproductive as it rather invites the user to remove the card than clicking on it to read more.

Almost every card has a button. This can be considered as a bit confusing for the user, is it possible to click wherever on the card or does the user have to point the button?

5.5.2.3 Feedback When Mission Application is Accepted or Declined

The pop-up that informs the user that their application has been accepted is considered a good function. Though, it can be highlighted so that it

becomes more than an informational pop-up. When a user is accepted, they can be both congratulated and thanked for their engagement. This can be communicated through happy illustrations, smiling faces and animated confetti that emphasize celebration and gratitude towards the user. Also, it is recommended to increase the size of the pop-up card to differentiate it from the regularly used pop-ups for accepting cookies.

When a user is rejected from a mission, they should also get a notification that shows appreciation for their effort to become a volunteer and encourage them to apply for a new mission.

5.5.2.4 When the Mission Ends

The pop-up that gives the user new mission recommendations based on their previous experience is considered a good function. One suggestion is to implement a rating gradient of the previous experience rather than having to choose between good or bad. For example by using a number of smileys or sliding a bar between good and bad.

Regarding the suggestions of missions, there is a suggestion to enable the user to save the missions as favorite.

5.5.2.5 Safety Aspects

There is a suggestion to look into how the users who sign up could be checked by the volunteer app, in a similar way as the organizations connected to Volontärbyrån are checked against Volontärbyrån's policies (Volontärbyrån, 2020 a). This can facilitate the recruitment process for the organizations in terms of ensuring that the people who apply are trustworthy, do not have any criminal records or similar. If the volunteer app checks their users as they sign up, there will be one less step in the recruitment process for the organizations.

5.5.2.6 Navigation and General UI Input

Some of the adaptable cards at the explore page contain a small button indicating that the user could click on to for example "view open missions". A suggestion to improve this function is to visually communicate that the entire card is clickable, not only the small button. There is also a suggestion to enable the user to click on the "accepted to mission" pop-up to get to the page of the mission.

It is important to ensure that the contrast is sufficient. The prototype contains many components with grey text on white background, which may

contribute to low readability. It is also recommended to ensure that the UI meets accessibility aspects, such as large text mode.

5.6 Development of the Third Iteration

The feedback from the evaluation of the second iteration is summarized and used as a base for the third iteration. This is the final iteration of the project and the changes made from the second iteration is described in the following sections.

Which of the suggestions that are implemented is decided based on the project scope and goals, and with consideration to the time limit of the project. This mean that mainly improvements related to nudging and fundamental structures of the concepts are implemented. Remaining areas of improvement are described in the section Further Development (7.4).

Even though the graphical design is not the main part of the project scope, some graphical changes are made to improve the contrast and readability of the prototype. The contrast is inspected with a plugin tool in Figma and adjustments such as choosing a darker grey color to the text and enlarge some of the text sizes are made.

The layout of the mission cards is also refined. The intention is to create a clearer hierarchy of information and a uniformity between the mission cards independent of the mission headings or shape of the different logotypes.

5.6.1.1 Start

When the user is starting the app for the first time, the start screen is followed by a welcoming screen where the user is thanked for being one of 254 756 people who want to make the world a better place by becoming a volunteer (figure 5.18). This is a way to show appreciation and highlight the fundamental purpose with the app, as well as to use social influence as a nudge (Evans, 2017).

This screen is only shown the first time the user is starting the app, and after a few seconds it goes over to the explore page.



Figure 5.18 Introduction. Welcoming pop-up.

Users can explore the app and be presented with value propositions before having to create an account. This keeps the threshold low and escalates the commitment of the user instead of rushing them into creating an account (Evans, 2017). The user is offered to create an account and log in when entering the profile page in the tab bar or when applying to a mission.

5.6.1.2 *Explore*

The explore page is the landing page of the app. At this page the user can scroll between clickable cards with different content related to inspiration and information about volunteering, such as volunteer stories, posts from organizations and more (figure 5.19). The informational cards present for example how the volunteer app work, how the volunteer app verify all organizations and answers to frequently asked questions.

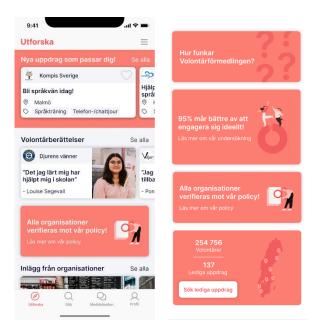


Figure 5.19 Explore page when signed in and adaptable cards with inspiration and information.

When signed in, the user is presented with a small number of suggestions on open missions – a call to action. By selecting a couple of missions from the large number of open missions, the user will be nudged to pick one of the selected one instead of being overwhelmed by choice overload (Coglode, 2020).

The user can save missions for later by clicking the heart at the top right corner of the card, if they are signed in. The mission is then available at the user profile. This feature gives the user freedom to create their own overview of selected missions they possibly want to apply to. It also enables the app to potentially collect information as a base for the personalized suggestions of missions at the explore page.

The X button on the cards is removed in the third iteration based on the feedback by the UX/UI designers. Illustrations are added on the cards in a way to communicate through both text and visual elements.

Furthermore, to improve the affordance that the whole card is clickable, a shadow is added. The small buttons are also removed, since they might falsely afford that only they are clickable instead of the whole card. When clicking anywhere on the card, an overlay page will present the information and the user will remain on the explore page. An exception is the card with information about the number of missions available. At this card, the small

button is purposely kept, since this is the only card where the user is redirected to another page in the app; the search page.

5.6.1.3 *Profile*

The main purpose of the profile page is to enable the user to have a more personalized experience of the volunteer app and to facilitate the application process. A profile account enables the user to have continuous access to their mission applications and current missions at one place. It also enables communication via the app.

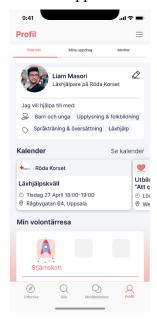


Figure 5.20 The profile page.

At the profile page, the user navigates between three pages through a menu tab at the top of the page: overview, my missions and merits (figure 5.20).

At overview, the user finds information about their account, a calendar function, and the badge system "the volunteer journey". To provide the user with personalized suggestions of missions, they get to select tags to confirm their interest in certain volunteer areas. These tags are categorized in the same way as the available filters in the search function, to create uniformity throughout the app.

The volunteer journey is a feature that both confirms progress, adds rewards and communicates that there are more to discover. It is important to support constant stimulation and enable personal development to keep the engagement (Hassenzahl, 2005).



Figure 5.21 Pop-up when the user is accepted to a volunteer mission.

When a user gets accepted to a mission they get informed by a pop-up (figure 5.21). This is a way to both provide a reward, feedback and to confirm the progress (Sharp, et al., 2019; Laninge, 2020). The pop-up both congratulates the user for being accepted to the mission and thanks the user for their engagement. The mission card is presented in the pop-up so that the user can see which mission it is and click on it to go directly to the mission. In addition to this, the pop-up is enhanced with a confetti animation, and potentially a happy sound, to further communicate a positive feeling.

After the feedback with the UX/UI designers the size of the pop-up is increased to differentiate it from the regularly used pop-ups for accepting cookies.



Figure 5.22 My current mission.

On the page where information about the current mission is presented a few changed are done in the third iteration. The role of the contact person is written to clarify that it is a person at the organization and not a contact person at Volontärförmedlingen. The action buttons are also changed to improve the contrast and readability. Based on the interviews with organizations, it is more likely that the user wants to get in contact with the contact person than the organization. Therefore, the action buttons to the contact person are highlighted and outlined in coral red, while the buttons connected to the organization is outlined with grey and dark blue (figure 5.22).

5.6.1.4 Continue the Engagement

During the user study it is discovered that many former volunteers stop volunteering after their mission ends, even if they have a positive experience. A simple way to keep the engagement in these scenarios is to invite the user to continue. This is also possible to apply to users who have a negative experience, even though it might be more complicated.

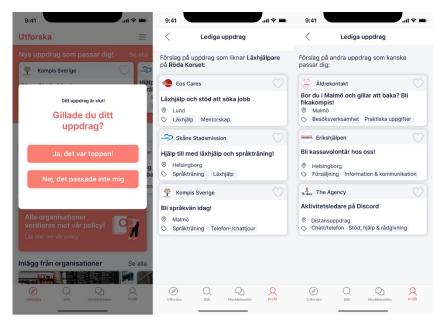


Figure 5.23 Pop-up inviting the user to continue their engagement after mission has finished. The pop-up (left), suggestions of missions based on a positive previous experience (center) and suggestions of missions based on a negative previous experience (right)

When a mission ends, a pop-up asks them how they experienced their volunteer mission (figure 5.23). Depending on their answer they are presented with three selected suggestions of missions; either similar as their previous mission or completely different ones. This way, the user is invited to act, and presented with a minimized number of choices that are matched with their personal interests and needs.

The question is rephrased in the third iteration. In the second interation the user is invited to continue as a volunteer with answers such as "yes", "no" and "remind me later". This is changed and instead the user is asked whether or not they are content with the type of mission. They can answer "yes, it was super" or "no, it didn't suit me". Based on their answer they are offered suggestions of similar missions or other types that hopefully will suit them better.

6 Deliver

In the deliver phase, as shown in figure 6.1, the final deliverables of the master thesis project are presented. The concept is presented with hi-fi prototype screens.

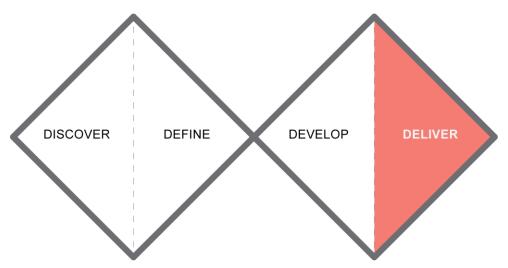


Figure 6.1 The deliver phase in the double diamond.

The result of the project is the third iteration of the prototype. This has been evaluated with the company and earlier through evaluation with experts within both nudging and UX design. In this chapter, the concept is presented and thereafter evaluated against the requirements.

6.1 The Final Concept

The final concept is presented through five user scenarios from different sections of the user journey (figure 6.2). A written scenario is an informal narrative description that can be used to make the design more explicit and concrete (Sharp, et al., 2019; Hanington & Martin, 2012).

Each scenario is described in connection to a persona, explaining their experience of the interaction.



Figure 6.2 Illustration of the user journey map, version 4, highlighting the sections that has been the focus of this thesis with a red line.

6.1.1 Starting the App for the First Time

The first part of the user journey is presented using the persona Annie Dalbäck (figure 6.3) as an example.



Figure 6.3 Persona: Annie Dalbäck

Annie is interested to become a volunteer, but do not know much about it. She downloads the app Volontärförmedlingen to find out some more. She starts the app for the first time and is welcomed by an onboarding page. She notices that far more people are active as volunteers than she expected. This gives her a good feeling about becoming a volunteer, since this many other people seem to be enjoying it!

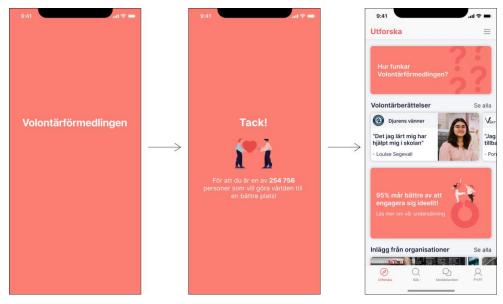


Figure 6.4 The interaction flow when starting the app for the first time.

After the onboarding, the app transitions into to the landing page of the app: the explore page (figure 6.4). This is a page where the user can explore the possibilities within volunteer work, by reading stories from the organizations and other volunteers, information about volunteering and about the mediator organization.

At the top of the explore page, Annie sees a card saying "How does the voluntary app work?". She clicks on it and the card expands to a full page where she can read more info about the app. Now she understands how it work. She goes back to the explore page and scrolls down to read more from a volunteer story. She learned that there are volunteer missions where one can work with animals, which she found interesting. Back at the explore page she also sees another card explaining that all organizations and missions are verified. She feels safer knowing that the organizations can be trusted and that the missions are legit!

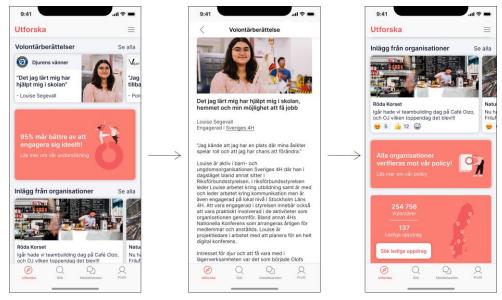


Figure 6.5 The interaction flow at the Explore page, when starting the app for the first time.

The coral-colored cards provide easy accessed information, designed based on behavior design principles such cognitive ease and chunking, value proposition, and highlight desired norms (figure 6.5). The order of the cards can be adapted based on the user status. For example, for a first time-user the top card provides information about how the volunteer mediator organization work, but for a user who have been using the app a longer time, another card can be present at the top.

6.1.2 After Applying for a Mission

The following user scenario is connected to the part of the user journey where the user has created an account and applied for a mission. It is presented using the persona Liam Masori (figure 6.6) and the interaction flow (figure 6.7).



Figure 6.6 Persona: Liam Masori

Liam has started to use the app Volontärförmedlingen to find a volunteer mission where he can help other young people, and hopefully get new friends at the same time. He has created a profile page where he has chosen several tags for volunteer areas that matches his interests.

Liam receives the badge "Shooting star" after applying to a couple of missions. This makes him feel good about himself for finally taking the step to become a volunteer. Knowing that he can follow the application process of each mission on the second tab of the profile page makes him feel in control of the situation.

After a while, Liam gets a notification at the profile page. He can see by the coralcolored icon that the notification belongs to one of his ongoing applications. The organization is waiting for Liam to respond to them, so Liam clicks on the card to do so.

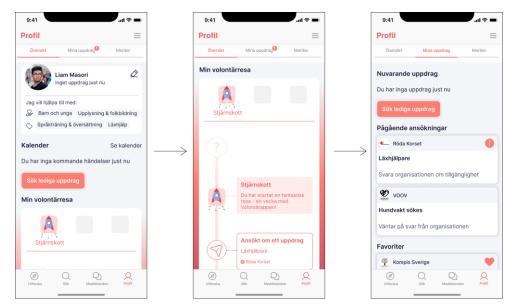


Figure 6.7 The interaction flow when looking on the profile page after applying for a mission.

6.1.3 Accepted to a Mission

This user scenario is also explained with the persona Liam Masori (figure 6.6) and the interaction flow (figure 6.8).

Liam is scrolling through the explore page to find some more inspiration to possible missions to apply to. At the top of the page, he sees a couple of suggestions of open missions that are precisely what he is looking for!

A moment later Liam is surprised by popup and confetti that turned up over the screen. It turns out he is accepted to one of the missions he applied to. This makes

him very happy, and he clicks on the mission card. This leads him to a full page with all necessary information about his mission. He clicks back to the profile page, where he can now see his mission at the top, under the header "current missions". At the first tab of the profile page, he notices that the upcoming work shift in his new mission are added to his calendar in the app. He thinks that it is very convenient to have an overview of the upcoming events.

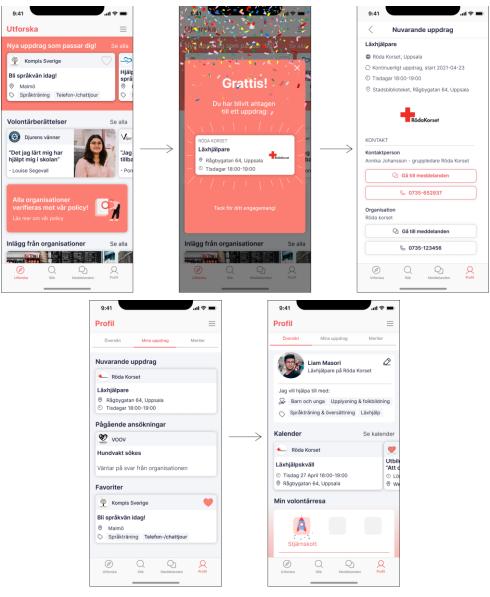


Figure 6.8 The interaction flow when getting accepted to a mission

6.1.4 When the Mission Ends

The last part of the user journey is presented using the persona Miriam Odén (figure 6.9) and the interaction flow (figure 6.10).



Figure 6.9 The interaction flow when a mission ends.

Miriam has been active as a volunteer for several years, as a team leader at the Red Cross. She enjoys it very much, but the project she's been working on has recently ended. Miriam opens the app Volontärförmedlingen where she usually have contact with new volunteers for her team.

Suddenly, she gets a popup asking her if she enjoyed her mission. She chooses the first alternative, "yes, it was great". This leads her to a page where three new open missions are presented to her. They are all very relevant to her as they are similar to the mission she just finished at the Red Cross. This makes her very content since she won't need to put much time to look around for missions. She picks one and applies at once.

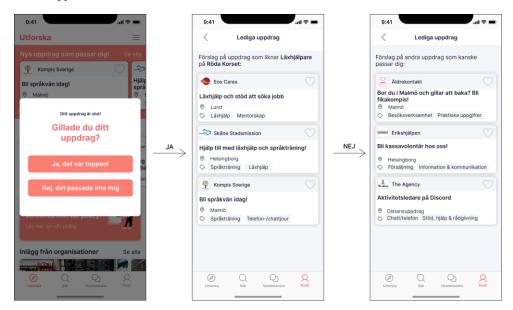


Figure 6.10 The interaction flow when a mission ends.

6.1.5 Merits

This final part of the user journey is also presented using the persona Miriam Odén (figure 6.9) and the interaction flow (figure 6.11).

A few months later Miriam is on her way to an interview for a job. She opens the app Volontärförmedlingen and goes to the Merit tab at the Profile page. She knows this is where her proof of participation from her previous volunteer engagement is stored. She downloads the document, which is certified by Volontärförmedlingen. She feels very pleased to be able to show this to the recruiter at the job interview, since her experience from volunteering is a valuable merit that could get her the job.



Figure 6.11 The merits.

6.2 Evaluation

The final concept is evaluated against the requirements that are established in the definition phase (figure 6.12). All requirements are met on a conceptual and theoretical level, except from those concerning areas that were decided to be put outside the project scope.

REQUIREMENTS "The mobile app should"	FINAL CONCEPT
General	
be a mediator of volunteer missions	The app mediates volunteer missions by providing a platform where organizations can market themselves and their missions, and people who are interested to become volunteers can find and apply to open missions.
enable the volunteer community to grow	It enables the volunteer community to grow by allowing organizations to spread the word about their work through publishing posts in the app, and by allowing users to share open missions and their merits outside the app.
be safe to use	Safety aspects of the app were discussed, for example by allowing users to log in via BankID (personal e-ID), but this area was put outside the project scope and was therefore not developed in the final concept. However, aspects of validation of organizations and missions were looked into (see below).
be attractive to use	The UI and graphical elements of the app are designed based on best practices from other successful apps. In order to evaluate the result objectively a test would be needed.
Motivation	
 increase user's motivation to volunteer provide information about volunteer organizations provide information about volunteer missions 	The app strengthens the user's motivation to volunteer by providing easy accessed information about volunteer missions, organizations, and stories from volunteers. It also offers a reward system, the volunteer journey, to strengthen the user motivation. This way the user gets positive reinforcement when making progress in the app. The ability to save and use merits is also a way to provide extrinsic motives to volunteer.
ensure validity of volunteer organizations	Just like Volontärbyrån verify all organizations and missions against their policy, a similar solution is intended to be used in the volunteer app. This information will be presented to the user through one of the informational cards on the explore page, and where information about Volontärförmedlingen is presented.
Ability	
 provide a low threshold for new volunteers to start volunteering 	There is a low threshold for new users, by allowing use of the app without demanding a profile account and by presenting an introduction with positive reinforcements. Applying to a mission is also facilitated by providing personalized suggestions and a clear overview of the

	current applications and missions on the profile page. The search and application flow are also important in regards of lowering thresholds, but these parts of the app are put outside the project scope.	
 facilitate the application process for the user enable users to easily handle their applications and missions 	The profile page enables the user to have a clear overview of their upcoming volunteer work shifts as well as ongoing applications and merits, which help the user to handle their application and facilitates the application process.	
 enable users to find a mission that match their interests and ambitions 	The user can create a profile account and enter tags that match their interest areas for volunteer missions. This way they can quickly search with these tags as a filter and get suggestions that are based on this information.	
enable easy communication	The app has a message function, but this was not part of the project scope and therefore not developed for the final concept.	
Prompt		
The mobile app should • encourage volunteer engagement	The users are encouraged to apply through suggestions of missions, both on the explore page and as a pop-up when the mission has ended. There are also shortcuts to the search function at the profile page if the user does not have any current missions, applications or upcoming events.	
 assist with remembering tasks (upcoming missions, answering messages) 	The app assists the user by providing a calendar function with possibility to get reminders of upcoming missions. The messenger function was not developed in the final concept but is intended to work similar to current available message functions, including notifications.	

Figure 6.12 Evaluation of the final concept.

7 Discussion

In this chapter the development process and the results are discussed. This includes reflections of the chosen methods, the strengths of the process as well as what could be improved in the future.

In this thesis the needs and possibilities with a volunteer mediator app in Sweden is investigated. This is done through developing an app concept that aims to increase the motivation among new and current volunteers, by applying a user centered design process.

7.1 Implementation of Methods

The design process methodology used in this project was based on *The Double Diamond*. This was combined with a focus on the user experience. The overall approach was to conduct a thorough literature research and explore behavior science principles. The aim with this was to find long term solutions rather than going for a quick one. The research resulted in many new insights that laid the base for the final concept. However, a consequence of distributing more time on research was that less time was available to iterate the concept in the development phase, and to test the concept with users. Evaluation was conducted with experts, which resulted in many valuable insights and feedback.

7.1.1 User Research

A questionnaire was sent out, which resulted in almost 90 answers with an even variation of demographics and experience of volunteer work. The survey helped identify the users and establishing needs and requirements.

Convenience sampling was used when collecting the survey population, using the team's social media to distribute the questionnaire. This likely affected the demographic of the respondents. For example, the majority were either students or full-time workers with an university degree. It would have been interesting to investigate the thoughts on volunteering of more people without a university degree.

The multiple-choice questions were hard to analyze since most of the participants chose around half of the options, rather than just a couple. If instead only one choice was allowed, the result might have been easier to analyze as it would have given an indication to which alternative they value the most.

7.1.2 Concept Development

The various brainstorming methods used during the concept ideation were proved useful and easy to implement. A limitation for this phase of the development was that the group consisted of only two people, whereas brainstorming is a method that is especially useful when conducted with a group of people with different disciplines and expertise (Sharp, et al., 2019).

Since the project was done remotely, the lo-fi prototype was done in the collaborative software Miro. This resulted in a digital lo-fi prototype with relatively high level of details, instead of basic hand-drawn wireframes. If the team would have worked at the same physical place the lo-fi prototypes would probably have been created by sketching on paper, which would have been more basic and simpler. In conclusion, a risk when prototyping digitally in the first iteration is getting ahead of the process and putting time and effort into details that later will be changed.

After the development of the lo-fi prototype two iterations of the hi-fi prototype was done. Even though it was decided the project should focus on the concept ideas and how to implement nudging in an app rather than the user interface, a lot of time was spent on the graphical elements. On the other hand, the visual interface is also important to engage the user. Since UX is about adding soft values, it makes sense to also focus on colors, shapes, and iconography. To fulfil the aim, working on the visual elements was essential. When looking back stating that there will not be focus on the user interface was incorrect.

7.1.3 Evaluation

The team decided to not test the prototype with users but instead focus on thorough discussions with experts. The reason for this decision was partly because of time limitations but also because of the difficulties to test user motivation. The risk would be to put too much attention on navigation and graphics, which was not the main focus. The expert evaluation resulted in many valuable insights and suggestions on how to improve the concept, but it would also have been of great interest to test the concept on potential users.

Looking back, phrasing concrete and measurable goals in the beginning of the process would have been of great value as a guidance. Especially when working in a team, sharing the same vision is essential for the final result. Since no measurable goals were set, it was difficult to evaluate the final result and determine whether or not the aim was reached. Instead, more general requirements were used for evaluation. If this project was to be repeated, more time would have been spent on setting the goals and evaluation method in the initiation. An example of such a goal is that the app should increase the user's motivation by 20%. This could have been evaluated by asking the user to rate their motivation to volunteer before and after using the app to see if the app increases their motivation.

7.1.4 A User Centered Design Process

A user centered design process involves the user's perspective throughout the whole process (ISO, 2019). It is therefore reasonable to question the fact that the final prototype never was evaluated or tested on potential users.

The potential user group of this app consist of a broad group of people; both existing volunteers and people who never have tried volunteering, of different ages and backgrounds. Evaluating the prototype with all different users would be extensive and time consuming, especially since the focus should lie on whether the solution increases the user's motivation. This would require studies where different users are evaluated over a long period of time, which was not possible within the scope of the project. Talking to experts was therefore considered more fruitful than performing user tests on only a few potential users. The experts provided informed opinions about how the user will perceive the behavioral design elements.

The users have been involved throughout the process through the questionnaire, user journey and personas. By reaching out to potential users with a questionnaire a broad range of insights was gained regarding the user needs and requirements of the final solution. However, looking back at the project it would be of great interest to involve the users somehow in the final evaluation, even if it would only be a small number of people. The risk with not involving the users in the later stages of the process is that the team rely only the perception of the users that was gained during the first encounter.

7.2 The Final Concept

The final concept is considered to meet the expectations of the thesis aims and objectives. It was evaluated against the concept requirements that were set in the define phase, where it was established that most of the requirements were met.

7.2.1 The Explore Page

In the final concept, the explore page was chosen to be the landing page of the app. This is the page where the user gets answers to their questions, inspirational information about volunteering and suggestions on volunteer missions. The main function of the explore page is to increase the user's motivation to apply. It is aimed towards users who are in the action mode, meaning that they look around for the possible options and let the app lead them to a goal. When a user instead is in the goal mode, they have to go to the search page and use the search function to find a volunteer mission.

Increasing the user's motivation to become a volunteer is one of the main focuses of this thesis. However, finding a mission to apply can be considered the main function of the app. With this point of view, the search function would be beneficial to have easily accessible on the landing page. It would be interesting in further development to investigate how the search page and explore page could be merged so that both users in the action mode and goal mode get prioritized.

7.2.2 The Reward System

The reward system "the volunteer journey" was based on insights about providing continuous rewards and the feeling of striving towards a goal within close reach (Coglode, 2020). Features such as providing badges and visualizing the steps can be considered as a form of gamification, which is another aspect of using behavioral design for user engagement. More specifically, gamification is when gameful elements are applied for nongame purposes (Cheng v, et al., 2019). Since gamification is commonly used in wellness apps to increase the motivation among the users, one can presume that it will give the same result in volunteer apps (Cheng v, et al., 2019).

It is worth mentioning that an award system or prestigious hierarchy was one of the least chosen options in the questionnaire conducted in this report, where the participants were asked about motivational factors. The team decided to continue with the volunteer journey since it also provided the user with feedback and overview of the actions they make in the app. The purpose of the journey was to show that every step counts, to provide feedback and reward to the user. To avoid creating ranked levels or hierarchy in the volunteer engagement, it was decided that the volunteer should be available only on the user's profile page, not to be shared with others publicly. Nevertheless, this was never evaluated with the users, which would be necessary to confirm whether this would be a motivating feature or not.

7.3 Nudging

The use of nudging and behavioral principles has been central in this report. The final concept includes several features that are developed to make it easier for the user to behave in the desired way, which is to become a volunteer. These features include for example highlighted suggestions of missions at the explore page and when their mission has ended.

After researching nudging the team came to realize that the definition of nudging is rather vague and leaves room for interpretation. It is essentially about influencing a behavior in moments of decision by making it easier for the user to behave in the desired way. Many of the features developed for the final concept is based on behavioral science principles, but it is difficult

to draw a line between which features are nudges and which are general incentives based on behavioral design.

In the development of these features Laninge's (2020) method was used, as this provided clear steps to explore possible nudges. The final step of this method was to test the nudge to verify the desired effect, however such a test was not conducted. The success rate of the nudging features in the final concept is therefore only based on theory.

The two nudging experts who took part in the evaluation of the concepts had differing opinions regarding the use of nudging in an app for volunteering. One was skeptical to whether nudging was enough to convince new users to become volunteers. He considered a merit system as a good way to motivate people who normally would not be motivated to volunteer. The other expert was skeptical to whether merits as a motivation to volunteer would be strong enough, considering that this type of mentality is not common in Sweden. He, on the other hand, considered a clear call to action on the landing page of the app a good way to nudge the user to apply. The discussions with these experts were held at different times in the project, which might affect the outcomes. One discussion was held in the first iteration and the other in the second iteration. However, the different point of views indicates that further research into these areas could be done and that there perhaps is no right answer to what strategy works best until the concept is tested.

7.3.1 Ethics of Nudging

There is reason to reflect of the ethics of the use of nudging and behavior science when designing a product, since it could be used to exploit human behavior for selfish goals, to be manipulative. For example, is it ethical to design reinforcements in an addictive ratio to keep the user's engagement in a product high?

The ethical choice when using nudging is to create win-win situations, to make it easier for people to do the right thing and to reach their own goals. In this context, nudging is used to make it easier for people to make selfless actions. This can of course be considered a very positive thing, but it will only be a win-win situation if the person actually wants to be a volunteer. By being transparent about the methods used to encourage users, perhaps the concerns about unethical methods can be reduced.

7.4 Further Development

Many valuable insights were gained during the evaluation of the concept, and unfortunately not all changes were possible to implement in the final concept. Areas that the team consider important for further development are therefore discussed in the following sections.

7.4.1 Personalized Content

The final concept includes several features that are based on personalizing the content according to the user. There is reason to further investigate this, both on a concept and system level. For example, how many suggestions are optimal to present to the user, should users who are not logged in also get suggestions and what type of data should the suggestions be based on?

Personalized content requires data from the user, which is made possible through the creation of a profile account. This leads to a dilemma, since the creation of a profile account can be considered as a threshold that may prevent some users to proceed in the app. At the same time, it would be beneficial to collect information about the user as soon as possible to best provide them with personalized content. It would be interesting to investigate solutions to this dilemma. Perhaps the user can successively create an account and enter information about their aims and interests along the way.

7.4.2 Analyze the User Mindset

It would be interesting to investigate how the search page and explore page could be merged so that both users in the action mode and goal mode get prioritized.

One way of doing that would be to analyze the real users and which mindset they have, to get information about which mindset is the most common. The content on the explore page could be adjusted and personalized based on the type of user. For example, there could be an initial question when starting the app to get to know their mindset and based on the answer the user gets different content.

7.4.3 Accessibility

The users of the volunteer app are a wide variety of people. This includes people with varying technical, visual and intellectual abilities. The accessibility of the app would therefore be of interest to further look into, to ensure that all people can benefit from this concept.

The overall contrast and font sizes are also important to control, to ensure readability. Especially the color choices of using grey text on white background, and white text on coral background. One function to look further into would be to ensure that the app will be compatible with different accessibility settings on the phone, for example the large text mode.

7.4.4 Involve the Volunteer Organizations in the App

The focus of this thesis was to create a concept with focus on the potential volunteer. The organizations are however also a crucial part of the app, as they provide the missions. The organizations need to be included in the app for it to become a useful tool for everyone involved. Realization of the product depend much on the benefits that the organizations get from it, as this will be deciding whether they will agree on collaborating with the app solution.

The organizations' involvement in the app comes with further demands and requirements on the final solution. One of the main challenges found in the evaluation of the concept was how to create a solution that works for the wide variety of organizations that are operating in Sweden. After the discussion with Volontärbyrån, the team gained more insights in the complexity of involving such a variety of organizations. One aspect of this is for example the type of information about the volunteer that is needed from the organizations. This is relevant to the design of the profile account and application process.

Another important factor to take into consideration is that most of the volunteer organizations are non-profit and are run by volunteers. This means that the app must be free or of very low cost and facilitate the work of the organizations. It would be interesting to further investigate an admin view of the app, where the organizations also are provided with a user-friendly interface where they can handle volunteer applications. The organizations could for example benefit from having access to the

candidate's merit list. The message function is also a feature that potentially can facilitate the recruitment process for the organizations, as they can reach the candidate in a quick and simple way on the same platform.

7.4.5 A Framework for Nudging?

This thesis work has the potential to serve as a foundation for developing a framework for how nudging can be implemented in digital systems. The framework could include a general methodology of how the theory of behavioral design and nudging could be applied on digital interfaces.

By developing a nudging framework based on the research and insights in this work makes this thesis going from being specific for this solution to having a more general purpose.

8 Conclusion

This chapter presents the conclusion of the thesis.

In this thesis the needs and possibilities of a volunteer mediator app in Sweden is investigated. The aim is to lower the threshold for new volunteers to start and for experienced volunteers to continue their engagement. This is done through developing an app concept that aims to increase the motivation among new and current volunteers, based on user experience and behavioral design principles.

The result is a volunteer mediator app concept, presented through a hi-fi prototype. The prototype consists of selected parts of a mobile app that aims to strengthen the user's motivation to volunteer and facilitate the application process. The main purpose of the app is to mediate volunteer missions, but it is also a platform for information, inspiration and communication which are all central aspects of volunteer work. The developed parts are the introduction, the explore page consisting of a feed to present the possibilities in volunteer work and the profile page where the user can handle their applications, missions, and merits.

The design process follows the double diamond methodology with focus on the user experience. Throughout the development focus lies on nudging and behavioral design principles for user motivation and engagement. Principles such as *creating defaults* and *highlighting desired norms* are used to develop the features in the concept. The concept is evaluated with both UX/UI designers and behavioral design experts.

The main target users are people interested in becoming volunteers. This user group is investigated through an online questionnaire and interviews with representatives from volunteer organizations.

The final app concept is developed based on behavioral design research. It is also reviewed by experts within UX/UI design as well as behavioral design. In theory, this app will increase the volunteer engagement. However, to ensure that the principles implemented in the app works in

practice a user test should be performed. This test should investigate how the app affects the user's motivation and behavior during a longer time period.

The key takeaways from this project are that even small changes in the user interface can make big difference for the user experience. This could for example be adding a thankful sentence or a reward. Many nudges and behavioral design principles can be used when implementing features in a digital solution. Taking behavioral science into consideration when designing helps understanding and predicting the user and their experience. The solution can therefore have a powerful impact on the user's behavior. However, in order to choose the most suitable principles to implement a thorough investigation of the users and situation is required. This makes it harder to implement the principles in a solution with a large target group.

Many areas could be further developed in the future, for example methods for analyzing the user mindset. Knowing the user mindset would make it possible to personalize the experience which would lower the threshold for a greater group of users. Consequently, this would give great value to the final product.

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Appendix A Work Distribution and Time Plan

A.1 Work Distribution

The authors of the thesis have collaborated in the main stages of the development and divided smaller tasks between each other. The team was working remotely throughout the entire project, which resulted in some work being divided and performed individually. Emma was absent during 3 weeks of the project, during which time Lovisa was responsible for the second evaluation with the nudging expert and implementation of the third iteration of the hi-fi prototype in Figma. This was however later discussed and reviewed by the team together.

A.2 Project Plan and Outcome

The project plan created in the beginning of the project corresponds in overall with the actual outcome. The main difference between the initial Gantt chart (figure A.1) and the actual outcome (figure A.2) is that the prototype development was initiated a week earlier than planned, which was done to better synch with the other thesis group when dividing focus areas in the app. The development process was also ended earlier than planned. This was a result of Emma unexpectedly having to be absent.



Figure A.1 Initial project plan.



Figure A.2 Actual outcome of the project.

Appendix B Questionnaire

1. Allmänt

- Ålder
- Könsidentitet
- Hemort
- Högsta utbildning
- Sysselsättning
- Har du varit engagerad och tagit uppdrag som volontär?

2. Ditt volontärengagemang (De som svarade att man är eller har varit volontär i sektion 1)

- Om du svarade "ja men jag har slutat", vad är anledningen till att du slutade?
- Hur hittar/hittade du dina volontäruppdrag? (Flera val möjliga)
- Hur anmäler/anmälde du dig till dina volontäruppdrag? Vad är det allra första steget? (Flera val möjliga)
- Hur sker/skedde kommunikationen mellan dig och organisationen gällande ditt volontäruppdrag? (Flera val möjliga)
- Inom vilket område utför/utförde du oftast volontärarbete? (Flera val möjliga)
- Vad stämmer bäst om dig som volontär?
- Hur ofta utför/utförde du volontäruppdrag?
- Vad var det som fick dig att börja vara volontär? (Flera val möjliga)
- Stötte du på något hinder när du skulle börja engagera dig som volontär?
- Vad motiverar/motiverade dig till att fortsätta vara volontär? (Flera val möjliga)
- Att känna att man bidrar tycker många är en viktig faktor för att fortsätta engagera sig ideellt. Hur känner/kände du att du bidrar som volontär? (Flera svar möjliga)
- Hur hade velat få uppskattning för ditt bidrag som volontär? (Flera val möjliga) Ge gärna egna förslag också.

- Vad är nackdelarna med att vara volontär?
- Har du ansökt om uppdrag via plattformen volontärbyrån.org?

3. Volontärbyrån (De som svarade att de ansökt om uppdrag via Volontärbyrån eller känner till den platformen i sektion 2)

- Vad tycker du är bra med volontärbyrån.org?
- Vad hade kunnat förbättrats med volontärbyrån.org?
- Finns det något du hade velat ändra på i processen för att hitta och ta uppdrag?
- Använder du dig av filtreringsfunktionen när du söker efter uppdrag?
- Om ja, hur brukar du filtrera dina sökningar?

4. Till dig som inte har varit volontär (De som svarade att de aldrig har varit volontär i sektion 1)

- Har du någon gång övervägt att vara volontär?
- Om ja, vad var det som hindrade dig från att ta steget till att bli volontär?
- Vad var det som fick dig att överväga att bli volontär? (Flera val möjliga)
- Föreställ dig att du är volontär. Hur hade du velat få uppskattning för ditt volontärarbete? (Flera val möjliga) Ge gärna egna förslag också.
- Vad tänker du är de största nackdelarna med att vara volontär?

5. En digital volontärlösning (Alla)

- Hur tror du att ditt volontärengagemang hade förändrats om det hade funnits en mobilapplikation för volontärarbete?
- Vilka funktioner hade du önskat fanns i en sådan applikation?
- Vad hade du tyckt om att applikationen krävde inloggning för att kunna användas?
- Vad hade du velat kunna göra utan att logga in?
- Om du måste logga in, vilken typ av inloggning föredrar du?
- Varför föredrar du den inloggningstypen?
- Hade du velat få notiser i mobilen när uppdrag du valt att prenumerera på dyker upp?

Appendix C Interviews with Organizations

Om er organisation

- Berätta kort om er organisation och din roll i den?
- Vilka olika uppdrag kan man ha som volontär hos er?
 - Olika nivåer av ansvar, svårighetsgrad eller tid?
 - Vad är det vanligaste/mest passande uppdraget för en nybörjare?
- Berätta om processen för en ny volontär, från hur de hittar er till hur de anmäler de sig och utför sitt första uppdrag.
 - o Hur hittar ni dem?
 - Andra organisationer inblandade?
 - Aktiv rekrytering?
 - Hur förmedlar ni förväntningar i ansvar, svårighet och tid till de som vill ansöka?
 - o Som ny volontär, får man någon generell utbildning eller beror det helt på uppdrag? När i processen sker den?
 - o Hur sker kommunikationen mellan er och en ny volontär?
 - Vilken plattform?
 - Vad fungerar bra/dåligt med er nuvarande lösning?
- Vad har ni för system för att hanterar volontärernas data, tex. deras uppgifter, vilka uppdrag de har fått osv, i er organisation? (förtydliga om det handlar om databaser/hur de sparar info och vad de använder sådan information till)
 - o Vad använder ni denna datan till?
 - o Hur loggas timmarna som era volontärer utför just nu?
 - Hur hanterar ni uppdrag tekniskt, dvs vart lägger ni in den när det kommer in, finns det något system eller en databas?

Motivation & förväntningar

- Är det ett problem för er att få in nya volontärer eller få dem att återkomma?
- Hur arbetar ni för att behålla volontärer och få dem att återkomma?

- Har ni främst nya eller återkommande volontärer i er organisation?
- Många i vår survey svarade att det är viktigt att få återkoppling och uppskattning för sitt arbete hur gör ni för att visa uppskattning till era volontärer?
 - o Tex. belöningar, stöd och samtal, statistik, att se resultatet själv med egna ögon.
 - o Hur fungerar era uppskattningstekniker? Bra/dåligt?
- Många i vår enkät svarade att den största nackdelen med att vara volontär var all tid det tar, och även största anledningen till varför de hade valt att sluta eller inte tagit steget att bli volontär. Hur motiverar ni era volontärer att lägga sin tid på er organisation?
 - Hur ger man dem belöning/uppskattning som motsvarar den tiden de lägger ner?

Volontärbyrån

- Vi såg att ni arbetar med Volontärbyrån. Vill du berätta lite om hur det samarbetet sett ut?
 - o Vad sköter Volontärbyrån och när tar ert arbete vid?

En framtida digital volontärlösning

- Vi har gjort en s.k användarresa för användandet av den framtida appen, ur volontärens perspektiv. Hade detta upplägg fungerat för era volontärer? Om inte, vad för steg saknas eller stämmer inte?
- Vad saknar du i er portal/volontärhantering idag?
 - o T.ex. verktyg för bättre kommunikation? Data, samla information?
- Vilka funktioner/verktyg/data hade ni som organisation velat ha i en framtida portal?
 - o T.ex. logga timmar/antal uppdrag per volontär etc
- Vilka funktioner tror du att volontären hade velat ha i en framtida app?
 - o T.ex Påminnelser, belöningar, gemenskap, kunna se tid de lagt eller statistik över organisationens arbete

Appendix D Interview with Volontärbyrån

Allmänt

- Hur ser er arbetsprocess ut just nu? Till exempel, när en person ansökt till ett uppdrag, hur hanteras denna ansökan från ert håll?
- Är det något speciellt som är svårt/jobbigt/tidskrävande i ert arbete?
- Sparar ni volontärernas data i systemet? (manuellt/automatiskt?)
 - Har ni någon direktkontakt med volontärer eller är ni främst medlare åt organisationer?
 - Ex när ni skickar ut volontärbarometern
- Vad finns det för för-och nackdelar med hemsidan? Saknar ni något?

Motivation

- Ni har utbildningar för organisationer om hur man motiverar volontärer, hur arbetar ni själva med denna fråga?
 - Hur arbetar ni för att behålla volontärer och få dem att återkomma?
 - Upplever ni att det är ett problem att få volontärer att återkomma?
 - o Tycker ni det är svårt att locka volontärer till er hemsida?
 - Hur arbetar ni för att komma i kontakt med nya volontärer?
- Är era utbildningar endast/främst till personer som driver ideella organisationer, eller har ni även utbildningar till volontärer?

Målgrupp

• Är det viktigt för er att få in mer "unga" och är detta något ni vill prioritera?