"VOLUNTEERING? I WOULD PREFER A PAID JOB."

A Case Study on Motivating Danish Youths to Volunteer

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TITLE PAGE

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ABSTRACT

This thesis explores the motivations and barriers for youth to volunteer and aims to create a design demonstrating volunteerism as a valuable and engaging spare-time activity for youths. The study combines a literature review, a future workshop, and a focus group analysis to gather insights and develop a human-centered design. The literature review examines motivation and key factors influencing youth engagement, including career enhancement, the desire to help others, autonomy, a supportive organizational climate, and the appeal of online volunteering.

Methodologically, the study employs a qualitative case study grounded in pragmatism and social constructivism. Data is collected through a future workshop with 17 participants, eight focus groups, and three semi-structured expert interviews, allowing for an in-depth exploration of youths' perceptions, motivations, and barriers. This integrated approach provides a comprehensive understanding and a practical framework to enhance youth volunteerism motivation.

Insights from a future workshop with university students reveal a significant lack of information about volunteering among youths, leading to various assumptions, a need for more occasions for sensemaking, and a need for the design to broaden their perception of volunteering by providing detailed information about volunteering roles and tasks.

The focus groups of gymnasium students further indicate youths' perceptions of spare time and their prioritization of activities. Social relations and skill development emerge as significant motivations to volunteer. However, participants often equate volunteering with work, and many hold assumptions or lack understanding of the concept of volunteering.

Based on these findings, five design requirements are identified: knowledge about volunteering, broadening the perception of volunteering, creating occasions for sensemaking, social integration, and emphasizing skill development. A prototype is developed featuring a contact page, informative filmstrip, search page, personalized volunteer-type test, and skill recognition badges.

In conclusion, this thesis demonstrates that youths' perceptions of volunteerism and spare time can be leveraged to create a motivational design for volunteering, encouraging youth participation in meaningful and rewarding volunteer activities.

Keywords: youth volunteerism, design requirements, spare time activities, motivations and barriers, social integration, skill development, human-centered design, sensemaking, DUF.

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Introduction

Over the past few years, Danish youths have been frequently mentioned in public media due to a noticeable decline in their well-being. A 2023 study on the overall health of Danish citizens revealed a significant decline in the well-being of youth. Specifically, the mental health of young women decreased by around 18%, while the mental health of young men decreased by 8% from 2010 to 2023 (Sundhedsstyrelsen, 2023). Youths' mental health challenges have become a national problem in Denmark. To address this, The Danish Health Authority has identified factors that can improve mental health: strong social relations, a positive self-image, belief in one's abilities, and involvement in positive communities (Sundhedsstyrelsen, 2023). Therefore, the challenge is how to enhance these factors to improve youths' mental health effectively.

Denmark has a tradition of forming and participating in associations around interests and hobbies, often referred to as "Foreningsdanmark". These associations often focus on sports, culture, and leisure and create local communities (Trap Danmark, 2022). The associations are often formed as non-governmental organizations and are managed by local volunteers who together perform and structure the activities within the association. Individuals volunteer in associations for various reasons, such as making a difference, pursuing personal interests, or building social connections. However, the main goal of these associations is to create meaningful communities for Danish citizens (Trap Danmark, 2022). These associations could potentially enhance youth well-being as they often include the aforementioned factors that can improve mental health.

Additionally, a 2023 study by Dansk Ungdoms Fællesråd (DUF) found that youths involved in such associations generally experienced better mental health than those who do not (Ungeanalysen, 2023). Given the challenges to youths' mental health, the goal of associations to create meaningful communities, and the improved well-being observed in youths who join these associations, there is potential to enhance overall mental health by encouraging youths to join an association of interest. This led to a curiosity about designing a digital product, which motivates more youths to join associations in their spare time. Existing platforms like Frivilligjob.dk and Blivfrivillignu.dk and various organizations' websites frame volunteering as a job but do not address the general benefits of volunteering or target youths specifically.

Our primary motivation for this thesis is to explore how to motivate youths to become volunteers in associations of interest, ultimately aiming to improve their mental health. Given the limitations of current platforms, we see a need to design based on youths' perceptions of volunteering and their own spare time. These factors are crucial for motivating youths to prioritize volunteering activities. To guide this investigation, we have formulated the following problem statement and research questions:

Problem formulation:

How can youths' perceptions of volunteerism and spare time act as a foundation for a design that motivates them to volunteer?

Research questions:

1. *What motivates young volunteers and what factors influence their engagement?*
2. *What are the motivations and barriers to become a volunteer as a youth?*
3. *How can a design demonstrate volunteerism as a valuable spare time activity for youths?*

Reading guide

The project follows the guidelines for referencing and citations of APA 7th edition. The first time a term is mentioned, it will appear in *italics*, and afterward, it will be used in standard text. When referencing a theory or paper, the author and date will appear with the author's last name and date, for example, "Weick, 1995". When the reference has three or more authors, it will appear as follows; "Pearce et al., 2022". To reference our gathered data, we will use the appendix number and its page or line numbers, such as "Appendix 1, p. 6-8" or "Appendix 1, l. 6-8".

In the analysis of the focus groups, we anonymized the participants. Each participant has been given a number and will be referenced by this, for example, "P1". For the participants to appear fully anonymous, we will use the pronouns they/them. We will clarify whether we refer to one or multiple participants in the sentences where the pronouns appear. To demonstrate conversations and

discussions in the focus groups, we will include more extended citations from the appendixes, for example:

> **P24:** No one really wants to do homework, right?
> **P20:** No, homework and work are just something you have to do.
> **P21:** ... Yes, you have to do it, it's not something you...
> **P22:** ... Want to do.
> **P20:** You don't enjoy it.
> **P22:** No, not in the same way.

(Appendix 19, l. 93-99).

These will be referenced in a box to ensure the excerpt's coherence. The reference will be included after the excerpt.

Field description: Volunteerism in Denmark

This project is grounded in the field of volunteerism in Denmark, as we are concerned with recruiting youths for member organizations of DUF. Therefore, it is relevant to elaborate on the field of volunteerism in Denmark, clarify what understandings the project is built upon, and position the project in the field.

The term volunteer and the concept of volunteering are used throughout the project and should, therefore, be defined. To be a volunteer is defined as performing an activity, action or effort without being physically, judicial or economically forced to the performance. The performance is unpaid and performed for people outside one's relatives, meaning that the result of the performance benefits others other than oneself and relatives. Further, the performance of the volunteer has to be formally organized and active, meaning that being a member of an organization is not volunteer. A volunteer actively performs the activity, action, or effort (Henriksen, 1995, in CFSA, 2024). This definition of volunteering is the reference when the term volunteer and the concept of volunteering are used throughout the project.

In Denmark, volunteerism is practiced throughout the country. Numerous organizations are driven by volunteers and concerned with different areas such as social work, sports, interests, and culture. The number of people volunteering is higher in rural areas of Denmark, where 34% of people over the age of 16 are volunteers, whereas in urban areas, 27% volunteer. This brings the overall percentage of volunteers to 32% of the Danish population (Danmarks statistik, 2023). Research on volunteerism in Denmark shows that Generation Z – born between 1995 and 2012 – is the generation that volunteers the least of all generations, besides the elderly, who are 77 years old or older (Ingerfair, 2022, p. 39). Further, it is concluded that the number of volunteers is decreasing based on the number of people in the generation (Ingerfair, 2022, pp. 39-40). Thus, we chose to focus on youths based in Copenhagen's urban areas through this study, as they volunteer the least.

Looking into youths who are volunteering in Denmark, the study "Ungeanalysen" is relevant. In this study, DUF researched youths aged 16 to 20 with a focus on well-being. The results of this study show that 31% of the youths agree or partly agree that they often feel lonely, 8% disagree or partly disagree that they have a good life, and 12% disagree or partly disagree that they often feel happy (Ungeanalysen, 2023, p. 4). These results imply a problem among youths, who do not all thrive in terms of feeling lonely and the perception of having a good life. Additionally, a result shows that youths who are a part of an association in their spare time, in general, feel like they have a better life than youths who are not. Of these youths, 74% agree or strongly agree that they have a good life, in contrast to 65% of youths who are not part of an association (Ungeanalysen, 2023, p. 4). Thereby, DUF's Ungeanalyse implies that the well-being of young people could be increased by becoming a part of an association. In Denmark, many associations, including DUF members, are primarily volunteer-driven, which is the focus of this project.

The positive effect of being a part of an association is also studied in other research. In a review of volunteerism as an adolescent health promotion asset, it is further concluded that volunteering has a positive effect on adolescents in terms of academic competence, confidence, relationships with other adolescents and adults, development of pro-social attitudes and political participation, and promote a caring and helping attitude against others (Hernantes et al., 2019). Volunteerism is, thereby, seen as a concept that heightens well-being in Denmark and generally promotes salutogenic health for adolescents.

To thoroughly understand volunteerism in Denmark in terms of engagement, recruitment, and well-being, Jonas Hedegaard was interviewed as an expert on the concept of volunteerism. He has volunteered for over 30 years and is now writing a PhD on paradoxes in volunteering in cooperation with the Roskilde Festival (Appendix 1, l. 5-88).

Jonas describes his perception of volunteering in Denmark as diverse but also structured in what is referred to as 'foreningsdanmark' and member-based democracy (Appendix 1, l. 192-197). 'Foreningsdanmark' is a reference to all the associations and the tradition of establishing associations in Denmark. Jonas further describes that the traditional volunteering role is evolving into a less permanent role as a volunteer, which he calls 'ad-hoc-volunteer' and location-based volunteerism (Appendix 1, l. 1998-205). From his studies of volunteering, Jonas hereby interprets that volunteering is evolving into more task-based volunteerism, which depends on location. This is an evolution which we will explore further in the project.

In terms of engaging volunteers in Denmark, Jonas describes that there are different opposite directed reasons for volunteering, but having impact is the crucial factor for one to volunteer (Appendix 1, l. 273-279). The impact is described as an effect where one finds the work more valuable when one has made it themselves. Therefore, the tasks of volunteering are seen as motivating, but Jonas believes that the social factors of volunteerism are the reason to keep volunteering (Appendix 1, 456-469). However, the binding community is also a barrier because some find it too overwhelming, but in contrast, too little responsibility would also make one stop volunteering (Appendix 1, 567-572). This is one of the paradoxes in volunteering, where the community and responsibility are both motivators for volunteering but also reasons to stop volunteering. These insights are valuable in understanding volunteers, which is argued to be driven by impact, tasks, and community, but also a chance of being overwhelmed, which makes a volunteer stop volunteering.

Jonas also reflects on the well-being of volunteers. He argues that as well-being is focused on individuals, the binding communities are disappearing, based on the individual's perception of own well-being and less on mutual well-being. This is argued as negative because feeling part of a community and obligated to that community is argued as positive for one's well-being (Appendix 1, l. 381-399). Further, Jonas argues that through volunteering, you learn that there are communities you can join throughout life that decrease the chance of loneliness (Appendix 1, l. 503-509). The

connection between well-being and volunteerism is here described as challenged by an increasing individual focus. Further, the binding community, which is connected to volunteering, is both good for one's well-being, but also the meta-realization of discovering that one can be a part of these communities throughout life.

This field description illustrates that volunteering is decreasing in Denmark and that the young generation is volunteering the least of all generations. Volunteering has been proven to promote health and the perception of having a good life among youths. Jonas Hedegaard further adds that volunteerism evolves in a more task-based and less committed direction. He argues that impact is the primary motivator for volunteering and that being overwhelmed is a reason for stopping as a volunteer. In terms of the health aspect of volunteerism, Jonas describes an understanding of well-being as challenged in volunteering by an increasing individual focus. The field description positions our project in the field, where we ask the question of how we could get youths to volunteer more, as it increases their well-being and health. From this understanding of volunteerism in Denmark, the project will focus on the factors motivating youths to start volunteering and how volunteering should be structured in order to motivate them.

Case description: Dansk Ungdoms Fællesråd

This project was conducted in collaboration with Dansk Ungdoms Fællesråd (DUF), an umbrella organization for volunteer-driven organizations in Denmark. The organization and our collaboration will be detailed in the following sections.

DUF was established in 1940 by young people and youth organizations with the purpose of informing, engaging, and teaching youths in Denmark about democracy (Vigtige årstal i DUF, n.d.). Therefore, the member organizations are all born and led by democracy. Today, the overall goal of the organization is to promote democratic communities for children and youths in the Danish association activities (Formål, mål og strategi, n.d.). Based on their overall goal, the organization is working internally with their member organizations, helping, and guiding them, but also in public debates that influence youths and children. Today, DUF has 78 member organizations, including Scouts, Student organizations, Church-driven associations, environmental- and social organizations, and political

youth parties (Om DUF, n.d.). Common for them all is that they are national, democratic, based on local activities, and work with DUF's overall goal.

We found DUF to be a suitable collaborator for the project, as they are working with and promoting voluntariness across all their member organizations and helping these recruit new volunteers. Further, DUF's organizations are all based on interests and not necessarily competition-driven activities, which we found most relevant to the project's problem field. This is the case as interest-based voluntariness does not require any specific physical skills or other demands for someone to start volunteering. Therefore, the only specific requirement for the possible volunteer is that they have an interest in the field and want to contribute, which we found to be the lowest set of requirements in the field of volunteering, making it easy to start volunteering.

During the project, we have talked with two employees at DUF in order to understand their work and vision for the organization. This was relevant as we wanted to base our project on their work with recruitment in their member organizations, and to have DUF as the future owner and promoter of our design. Therefore, the positioning of our project in the context of DUF will be elaborated on in our scope of investigation.

Scope of investigation: Positioning DUF in the project

To gain knowledge about DUF, their work, and how our project could fit into this, we interviewed Aline and Simon, who both work at DUF. Aline is an organization consultant, and Simon is a development and analysis consultant in the Department of Association Development, youth, democracy, and the Northern Countries (Appendix 2, l. 8-10, 29-32). Throughout the interview, we talked about DUF's work, the organization's role for its members, their perceptions of recruitment, and the challenges that follow. In this section, we will describe these and position our scope in the investigation based on their understanding.

One of the first subjects Aline and Simon explained was how they work with volunteerism in general in the department. Aline explained that volunteerism has always been one of their leading issues, but especially in the last few years when they have been focusing more on it (Appendix 2, l. 21-27). Additionally, Simon added, "It's about sustainable volunteering or new volunteering, or whatever we call it. And how can we support our member organizations in creating volunteer environments that

are sustainable for the individual volunteer" (Appendix 2, l. 43-47). Based on this, we see that DUF has a focus on making the volunteer environment attractive and suitable to the individual volunteer and, thereby, moving volunteerism further towards the individual. Because he calls it 'new volunteering', we interpret that DUF works towards newer ways of volunteering than it did earlier. Based on these insights, we saw a gap in information about what the individuals' every day looks like, what decisions are made, and how the individual values and manages time. Therefore, we saw an opportunity to research how the young target group of volunteers perceives their spare time, what they value, and what motivates them to do something. Further, we decided to primarily work with youths who are not volunteering at the moment, as these are the target groups for recruitment.

We asked Aline and Simon about recruitment to gain knowledge about their perceptions of the recruitment process and the possible challenges. The subject of recruitment and the challenges with recruitment in organizations were discussed many times during the interview, and they described multiple understandings. Aline describes recruitment overall as "We've always lacked volunteers. We've always struggled to recruit volunteers, you know. So, one could say, is it worse now than it used to be?" (Appendix 2, l. 855-857). This indicates that recruitment has always been a challenging aspect of volunteerism in the organizations within DUF. Therefore, we saw relevance in researching this case, as this is found to be a recurring problem, which our project might be able to optimize. Further, Aline's comment about the question of whether this problem is worse now than before implies that the problem of recruitment might have been a little neglected within both DUF and the member organizations, as it has always been a problem that might be getting worse. This positions our project as a relevant and needed study, which could help this neglected problem in the future.
Aline and Simon also mentioned multiple different perceived barriers for youths not to volunteer. One of these was the lack of information, described as the youths do not know what the volunteer role is, where to become a volunteer, and that the person should be comfortable reaching out to the organization (Appendix 2, l. 328-351). Another one was that Aline mentions that about half of the volunteers today became volunteers because someone asked them specifically to join, which acknowledges the person (Appendix 2, l. 353-364). Simon describes this as:

> "So, you know, it's that thing where you tap someone on the shoulder because in that tap, there's also recognition. I've seen you. I think you would fit really well into this

> community. I believe you could be really good at handling these tasks and all these things" (Appendix 2, l. 383-387).

The last barrier for youths, which was described, was commitment, which is perceived as something that might be challenging for youths, as they also want to spend time on a lot of other stuff (Appendix 2, l. 480-485). Based on these different barriers, we started to wonder if these were the actual barriers for young people to not volunteer or if these were perceptions built on their work with people who are already volunteers. Therefore, we chose to research what the actual barriers to volunteering are for youths who are not already volunteering. Further, problems within the organizations when recruiting, such as wanting a quick fix and not using enough time on recruiting, were mentioned (Appendix 2, l. 290-295). These are also relevant problems for the case, but we chose to focus on the young potential volunteers, as we found it hard to guide organizations towards better recruitment and research this without researching the target group for recruitment first. Further, because DUF will be the sender of the design, we want to design for the organizations but through research of the target group of recruitment.

During the interview with Aline and Simon, we asked about DUF's role for the member organizations and how they are used by the organizations. Aline explained that the department they work in primarily focuses on helping the organizations develop in different areas (Appendix 2, l. 86-90). Simon explained that he believes some organizations do not know that they can use DUF to help them with specific challenges (Appendix 2, l. 118-121). From this, we saw an opportunity to help the organizations through a design that could be used as a specific tool for the challenge of recruiting volunteers. This would both help the organizations, but also spread the awareness of DUF as helpers for the organizations. Aline also mentions that they primarily help the secretaries from the organizations and not the local departments. The process is described as: "So the idea is that the management receives as much support, networking, education, and so on, as they can get, and that hopefully, it creates that trickle-down effect, or whatever you want to call it" (Appendix 2, l. 157-160). Based on this 'trickle down effect', we saw an opportunity in designing something for the broad variation of member organizations and not focus on one. The idea here would be to somehow push the potential volunteers in the direction of an organization of interest and then let the specific

organization have the responsibility for the further process. We therefore want to design for the overall knowledge of all the organizations.

Lastly, Aline mentioned that they primarily have tools based on the retention of volunteers, but not any specific handbook for recruitment of volunteers in DUF, and that they are going to develop something about this topic (Appendix 2, l. 531-537). Further, she describes, “I believe that, or I know that tools for recruitment or things like what you want to do, are still and have always been very welcome, perhaps more now than ever” (Appendix 2, l. 946-949). This validates our scope of investigation and confirms the need for our project, highlighting the potential for optimizing the practice of volunteer recruitment in interest-based organizations.

Our overall scope of investigation, based on our interview with DUF and our chosen target group of young people, is, therefore, to investigate youths who are not already volunteering. Based on Ungeanalysen from DUF, we choose to identify youths as young people aged 16-29 years old. We will focus on finding the barriers to volunteering and also their motivations to do something in their spare time. This is done so we can design a motivational design for them to start volunteering in DUF’s member organizations. Because DUF mentions that they do not have specific tools for recruitment, and that this is welcomed by their members, we see a validated opportunity to optimize the practice of volunteering through our design.

Philosophy of science

This section of the report will present the chosen philosophy of science for the projects and the knowledge gained through it.

Pragmatism

The project’s philosophy of science is rooted in pragmatism. Accordingly, we will present the research paradigm of pragmatism and the project’s foundation in a pragmatic approach to knowledge and work processes.

At the project's outset, we chose a design research approach to not only understand the field but also improve the associated practices. Therefore, we approach the project pragmatically. The pragmatic approach originates from John Dewey, who described pragmatism in the context of education and learning. In the book Democracy and education, Dewey describes how thinking and experience are contra-dependent when one learns something. He describes how experience is an active-passive affair and not just cognitive. In addition, the value of that experience lies in the perception of the relationships and continuity that it leads up to (Dewey, 2012, p. 146). These are the fundamentals for the pragmatic approach, which is grounded in this understanding of experience in general as both action and perception of the action in relation to the surroundings of the action. Further, Dewey's work with experience developed into an understanding of reflective thought. It is described that we as humans form habits, but when these habits do not function, we run into uncertainty and crises. To fix the crises, we must investigate how and where the infunction comes from, and this is done through reflective thought (Miettinen, 2000, pp. 64-65). Reflective thought is thereby bound to action in order to understand and fix malfunctions. Based on Dewey's work, our project is grounded in reflective thought, as we have found a malfunction in the habit of recruiting volunteers. Therefore, we wish to understand and improve the case of malfunctions, by understanding the problem and acting upon them through a design.

Specifically, in the field of information systems, we include Goldkuhl (2012), who describes pragmatism in qualitative information system research. Pragmatism is described as a suitable approach because it emphasizes intervention in the world, not just observation (Goldkuhl, 2012, p. 2). Goldkuhl elaborates on pragmatist ontology, which is action and change, where humans act in a world that is in a constant state of becoming (Goldkuhl, 2012, p. 7). The state of becoming refers to the world as constantly changing and becoming something else. This change is driven by human acts, which are also constant and create change.

Researchers often operate through the concept of inquiry when approaching a project pragmatically. Inquiry is defined as; "the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituents, distinctions and relations as to convert the elements of original situation into a unified whole" (Dewey, 1938, in Goldkuhl, 2012, p. 7).

This concept shows Dewey's reflective thought in the context of research, where a problem is transformed from this indeterminate situation where something is malfunctioning into a determined situation where all the elements of the original situation are converted into a unified whole. In the context of our project, we want to understand the malfunction of the recruitment of youths for volunteering in DUF by understanding youths' perceptions and sensemaking of their spare time and the activities within. This aims to convert these elements into a recruitment process that appeals to and intrigues youth, encouraging them to prioritize volunteerism in their spare time.

Inquiry in research generates instrumental knowledge, which is used in actions aimed at change and improvement (Goldkuhl, 2012, pp. 7-8). This implies the epistemology of pragmatism in which knowledge is a 'copy' of reality constructed to better manage, exist, and take part in the world (Goldkuhl, 2012, p. 9). The pragmatic epistemology is, therefore, not only focusing on the understanding of actions in specific practices but also on creating knowledge that improves future actions in the world. Carlile (2002) describes three characteristics of knowledge that are created using a pragmatic approach. Here, practice is introduced as a keyword in pragmatic knowledge, as knowledge is localized, embedded, and invested in practice (Carlile, 2002, p. 445). The first characteristic of pragmatism is that knowledge in new product development is localized around specific problems in a given practice. However, this knowledge is not limited to one practice; it can be applicable to similar practices (Carlile, 2002, p. 445). The second characteristic of pragmatic knowledge is that it is embedded in practice. This means that knowledge must encompass not only the cognitive understanding of a problem but also the actions performed in practice as part of that knowledge (Carlile, 2002, p. 446). The last characteristic of pragmatism is, that knowledge is invested in practice, referring to the successful knowledge, is the knowledge which improves the actions in practice (Carlile, 2002, p. 446). This characteristic refers to instrumental knowledge, which must be invested in the practice to drive change and improvement.

In our project, we aim to create knowledge specific to recruiting young volunteers for DUF's member organizations, incorporating the experience of being young and balancing school, work, and spare time. Thus, the knowledge created will be invested in DUF's recruitment practices and youths' situations, aiming to improve and transform the recruitment processes in the future. However, defining the mode of inquiry for the project is necessary to specify our approach to the case, ensure transparency, and enable future projects to draw parallels to other practices.

This study is based on the malfunction in recruiting youth volunteers for DUF. However, this malfunction is not something that DUF has described themselves, and the youths whose practices' are investigated do not have a direct practice of becoming volunteers. Therefore, we include Ejsing-Duun 6 Skovbjergs' (2018) article, which focuses on three different modes of inquiry in design. The three modes are all related to Dewey's definition of inquiry but represent different types of inquiry (Ejsing-Duun & Skovbjerg, 2018, p. 448). Critical design is introduced as a mode of inquiry aimed at exposing political issues and phenomena. Its goal is to reveal issues and their origins, giving form to problematic situations (Disalvo, 2012, p. 116, in Ejsing-Duun & Skovbjerg, 2018, p. 451). By this definition, we classify our project as a critical design. It began with collecting various public problem areas – such as the Ungeanalysen report and youths' well-being issues – leading us to identify and address a specific problem. The critical design emphasizes making unsettled situations actionable. The inquiry process focuses on understanding the significance and consequences of a situation, enabling better decisions and actions (Ejsing-Duun & Skovbjerg, 2018, p. 451). In this project, we aim to understand youths' perceptions of their spare time to identify what motivates and demotivates action. This will enable us to take action on framing DUF's organizations and the volunteering jobs towards youths' motivations, which could improve the recruitment of young volunteers. Additionally, the knowledge gained about youths through the project enhances understanding of their perception of their time, which is valuable for DUF and the broader public. It should be noted that the public is constructed in relation to the issue, meaning that the issue becomes apparent as it forms in public (Ejsing-Duun & Skovbjerg, 2018, p. 451). Although the project aims to highlight the issue of recruiting young volunteers to the public, it also seeks to demonstrate how volunteering can be made interesting and relevant to youths through a design. Thus, the project aims to address the problem of youth reluctance to volunteer through innovative design solutions.

This project's overall paradigm of philosophy is pragmatism, as we research infunctions through reflective thought and act on these insights to effect change. The project employs inquiry to understand all undetermined aspects of the problem, aiming to transform them into a new, determined, unified whole. The knowledge we create is bound to the research practice, producing instrumental knowledge aimed at improving future actions within the practice. Further, the mode of inquiry in this project is critical design, as we want to make the issues apparent, understand the current situation, and, through our design, show how the issues could be solved.

Social constructivism

In describing our pragmatic approach to the project's overall problem, it is clear that understanding is fundamental to knowledge creation. Thus, we will present how we work with understanding through social constructivism. Further, social constructivism also forms the basis for how knowledge is created and analyzed. In the following section, we will present the foundation of social constructivism and explore information system developers' approaches to design within this framework. Additionally, we will discuss how our project operates within this field and our approach to data.

Initially, we aimed to create a design that motivates young people to volunteer. Discussions with DUF and internal group conversations led us to focus on youths not currently volunteering. We sought to understand their preferences, motivations, and views on spare time to create an appealing design. Thus, social constructivism, which examines how we make sense of the world through social interactions, was deemed suitable.

Social constructivism is a philosophy of science that regards social studies and is inspired by Kuhn and Wittgenstein's philosophies of science. In the 1970s, Kuhn described how he saw science as the matter of understanding a social community connected by the academic matrix (Kuhn, 1977, p. 463, in Holm, 2023, p. 152). This means that it is the social bond between scientists that decides what they see and what they argue is real science. This makes science, in general, seen as a social construction, as it is the social bond between the scientists that creates the truths and not something from an objective world. Furthermore, Wittgenstein's 1950s theories inspired later social constructivism by explaining that words and sentences get their meanings from how we use them and not from their own reference to 'reality'. Wittgenstein called this the term language game, referring to how we use words and sentences to describe different contexts (Wittgenstein 1994, p. 44, in Holm, 2023, p. 153). According to Kuhn, social constructivism posits that reality is not an objective entity existing independently of us but is socially constructed through interactions. Inspired by Wittgenstein, this construction occurs through language and the use of words and sentences (Holm, 2023, p. 153). In the 1990s, this foundation led to Gergen's four constructionist proposals in his book *An Invitation to Social Constructionism* (Gergen, 2015). The proposals are elaborated on as an expansion of critique

of the constructionist philosophy of science to get an understanding of the theories behind social constructivism. These proposals will be elaborated on and related to our approach in this project.

The first constructionist proposal is; "The ways in which we describe and explain the world are not required by "what there is"" (Gergen, 2015, p. 8). This proposal addresses the social constructivist view of the world and our understanding of it. Gergen explains that our language and descriptions make the world and its phenomena real and true. The world is not an independent entity perceived uniformly by everyone; rather, it is created and made true through our language (Gergen, 2015, pp. 8-9). Holm expands on Gergen's proposal using Wittgenstein's concept of "language games." He explains that language is metaphorical, and through various language games in social contexts, we form our assumptions, understandings, and views. This also means that recognition comes from the understanding of language's role for us (Holm, 2015, pp. 151-156). For this project, this means that we approach the world as something which is constructed through social interactions, and can, thereby, be perceived differently in different social arenas. Therefore, we chose to involve different experts and focus groups in the research to gain a different understanding of the topics.

Grounded in the decisive role of language, Gergen's second constructionist proposal is, "The ways in which we describe and explain the world are the outcomes of relationship" (Gergen, 2015, p. 9). This describes the social constructivists' understanding of how we describe the world, which is seen as the outcome of our relationship with others based on how we interact and what language games we use. Our understanding and perception of the world is thereby a constant reproduction of the world in the language we communicate with others (Holm, 2023, p. 157). Gergen's second proposal plays an important part in the project's understanding of truths. In our interviews, we understand the experts' statements as constructed perceptions of their work with others in their field. Their understandings are, therefore, their constructed truths, which we try to understand from the interaction. The same applies to the focus groups and future workshop, where participants will socially construct their opinions and understandings of the questions and tasks.

Gergen's third and fourth proposals are; "Constructions gain their significance from their social utility" (Gergen, 2015, p. 10), and; "Values are created and sustained within forms of life – including science" (Gergen, 2015, p. 13). These two proposals emphasize that we find our truths and create our values, rights, and wrongs through collective agreements and understandings. Gergen argues that

truths are not based on an objective natural world, but science and truths are established by a collective agreement in societies, and this agreement thereby makes them true (Gergen, 2015, pp. 10-11). We view participants' understandings as truths in themselves because they reflect their perceptions. These become collectively significant when multiple participants mention or agree on statements and opinions. Gergen's fourth proposal highlights the importance of acknowledging our own perspectives as researchers, which influence the knowledge we gain. Therefore, we will thoroughly justify our conclusions to provide a clear understanding of our interpretations.

Gergens' proposals overall describe the fundamental thinking in social constructivism, which we use as the approach to the knowledge we gain and create through our project. The proposals both describe how our language and interactions form our worlds but also how these constructions give us opinions about what is right and wrong. Holm describes how Gergen's third and fourth proposal is based on the thought that if we reflect and are critical about our use of words and our language games, we can change it and thereby change the world (Holm, 2023, pp. 156-157). Therefore, our social constructive approach is to analyze and reflect upon the data we gather from both experts and potential users to find the social understandings and perceptions of the problem we research. This aims to change users' understanding of volunteering and, through this change, motivate them with our design.

Paradigms of Information System Development

As we are developing a design, we find it important to elaborate on how we view the design and the users of the project. In order to position this, we include Hirschheim and Klein's four paradigms of information system development (Hirschheim & Klein, 1989). Hirschheim and Klein describe four paradigms for developing an information system, each affecting how the system interacts with users. A paradigm is defined as; "The most fundamental set of assumptions adopted by a professional community that allows its members to share similar perceptions and engage in commonly shared practices" (Hirschheim & Klein, 1989, p. 1201). Thus, paradigms are the set of assumptions adopted by developers, allowing users to share the same perceptions and engage in common practices. These practices would, in this case, be a design. Based on this, Hirschheim & Klein introduce four different paradigms: *the functionalist paradigm*, *the social relativist paradigm*, *the radical structuralist paradigm*, and *the neohumanist paradigm* (Hirschheim & Klein, 1989, p. 1201).

In system development and implementation, there are two types of assumptions for the developer: epistemological assumptions, related to how knowledge for developing the system is acquired, and ontological assumptions, related to how the social and physical world is viewed (Hirschheim & Klein, 1989, p. 1201). For each paradigm, there are different sets of related assumptions. Hirschheim and Klein provide a taxonomy to establish the different paradigms and their positions relative to each other:

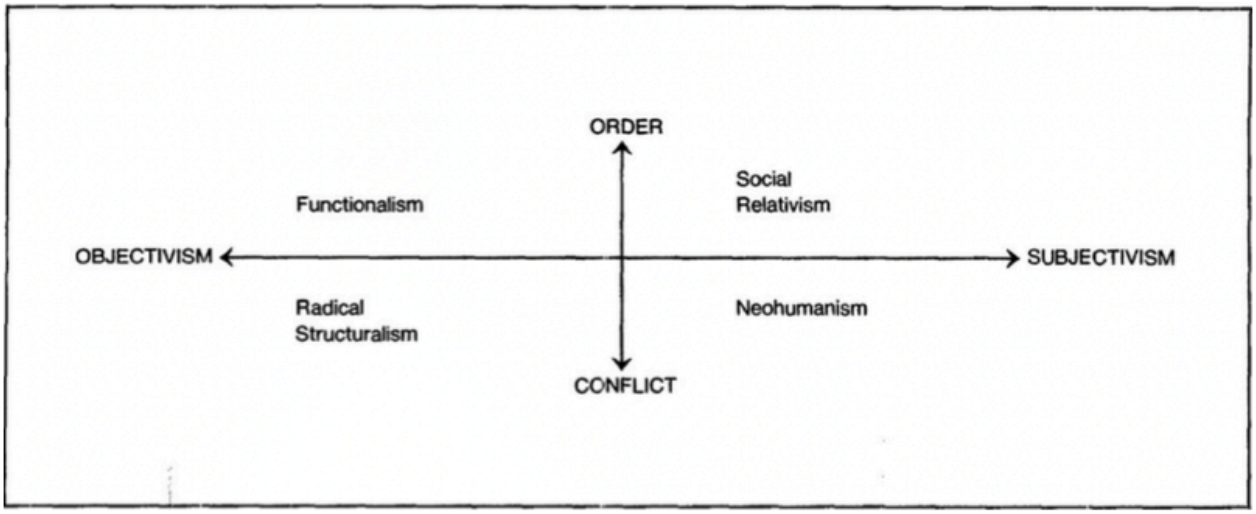


Figure 1: Information Systems Development Paradigms (Hirschheim & Klein, 1989, p. 1202; Appendix 3).

The paradigms are positioned on two axes: the order-conflict axis, representing the ontological assumptions, and the objectivism-subjectivism axis, representing the epistemological assumptions (Hirschheim & Klein, 1989, p. 1201). As this project focuses on understanding and perceptions, it falls on the subjective side of the taxonomy, which delves into the depths of individuals' subjective experiences (Hirschheim & Klein, 1989, p. 1201). Our epistemological assumptions are, therefore, to acquire knowledge through trying to gain an understanding of the subjective experiences of individuals.

The order-conflict axis has two extremes, which refer to the ontological assumptions. The order represents a social world characterized by order, stability, integration, consensus, and functional coordination, while conflict stresses change, conflict, disintegration, and coercion (Hirschheim & Klein, 1989, p. 1201). In our project, we focus on how the users order their perceptions of volunteering and spare time activities to design for them. Because we are approaching this project through social constructivism, we view their understandings as a constant negotiation between

individuals to find shared truths and consensus. Therefore, we locate our project in the subjectivism and order-corner part of the taxonomy, called social relativism.

Methods

In the following sections, we detail our methodological choices for gathering and analyzing empirical data, focusing on our qualitative research design and its application to understanding motivational factors for volunteering and how to design for these.

Research design

In what follows, we will address the project's research design, which is our framework for collecting and analyzing data (Bryman, 2016, p. 39). This project is based on a qualitative research design, through which we seek to investigate and answer the following research questions, which will support us in designing a product to motivate young people to become volunteers:

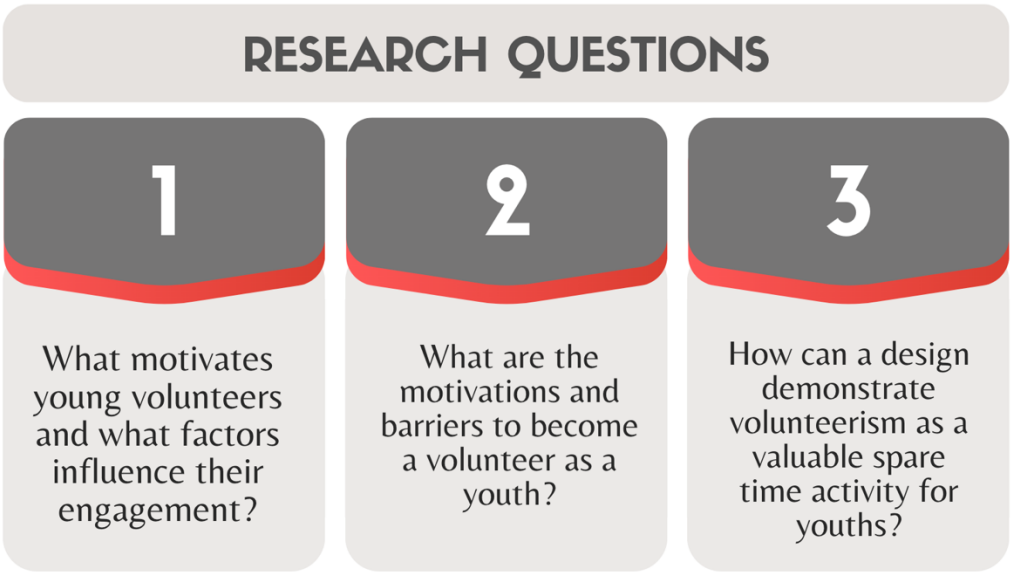


Figure 2: Research questions.

This project's fundamental framework is a qualitative case study as its objective is to investigate a specific setting, user group, and from a perspective of accommodating the objectives of the project's

collaborator, DUF (Bryman, 2016, p. 60). The study's data consists of a workshop with 17 participants, eight focus groups, and three semi-structured expert interviews with a researcher within volunteerism, as well as two informants from the project collaborator. We have worked with data collection based on a human-centered design approach (Maguire, 2001, pp. 587-588) and thus focused on integrating users' perspectives into creating a usable design.

We must be aware that using a case study as a research design generally precludes drawing implications from the findings of our analysis that deal with other contexts or bigger, more cultural or societal ideas (Bryman, 2016, p. 64). However, the specific scenario and setting can be examined in depth and the analysis results can help us identify what can motivate young people to become volunteers within DUF's organizations.

Human-centered design

In this project, we focus on how we can design for a specific user group based on a specific purpose. Therefore, the project follows a Human-Centered Design (HCD) approach as its design framework. The HCD approach puts humans at the center of the design process and focuses on understanding and meeting users' needs, wishes, and preferences (ISO 9241-210, 2019, p. 5). In this section, we will describe and reflect on the HCD approach and what it means for our project. By integrating HCD principles into our design strategy, we strive to create a product and solution that is intuitive, user-friendly, and meaningful to the users and the project's collaboration partner, DUF.

The HCD approach to product development focuses on integrating users' perspectives and needs to create a usable system. This is particularly relevant as poorly designed systems can have negative consequences for organizations, while usable systems can increase productivity, reduce errors, and improve the acceptance and reputation of the organization (Maguire, 2001, pp. 587-588). Maguire (2001) highlights the necessity of user activation, an appropriate distribution of functions between the system and the user, and design iterations. These ideas have formed the foundation for our work, as we strive to include young potential users early and continually in the design process to gain an understanding of their preferences and requirements for the digital product (Maguire, 2001, p. 588). This is because working with users in both the early and late stages of the design process is considered to improve the overall usability and user experience of the design. The HCD approach has a broad

understanding of users as people who are influenced by various factors. This includes not only end users but all relevant stakeholders. In our project, this involves employees at DUF and two groups of individuals from our target group, particularly students at gymnasium and university levels. It thus becomes an iterative design process in which the users are involved in the design and development process (ISO 9241-210, 2019, p. 5-7).

HDC has an approach to the general human-centered design process, as described in ISO 9241-210, and this project has followed this approach to a loose extent. First, we planned our process and gained insight into what the design must solve and its context through a future workshop, interviews, and focus groups. After analyzing the data, the next step in product development is to define the requirements. In product development, requirements outline what the product or service must achieve for success, bridging research and design. They range from overarching business goals to technical specifics. It is crucial to differentiate between needs in terms of the underlying challenges and solutions to how those needs are met. Additionally, requirements evolve iteratively throughout design and development (Goodwin, 2009, pp. 299-301).

Our work follows an iterative process where we continuously revise and improve design solutions based on insights from stakeholders. This enables us to create a product that not only meets the needs and expectations of users but is also easy to use and intuitively understandable (ISO 9241-210, 2019, p. 12). Overall, the HCD approach will be crucial to our success in the project, as it ensures that we can create a digital product that not only meets the technical requirements but is also meaningful and useful for the youths we want to motivate to become volunteers.

Qualitative research

As this project is based on a qualitative research design, we will explore the qualitative methods we use in this project, in the following parts. In addition, we will reflect on the decisions and ongoing considerations we have made throughout our work with this project.

In qualitative studies, emphasis is typically placed on words rather than quantification and numbers (Bryman, 2016, pp. 374-375). Within this paradigm, researchers are interested in how actions are performed, how things are expressed, how experiences arise, how they appear, or how they are

developed. It involves description, understanding, interpretation, or demonstration of the qualitative aspects of the human experience (Brinkmann & Tanggaard, 2020, p. 15) and often focuses on seeing the world through the eyes of the research participant (Bryman, 2016, p. 375). The research focuses on understanding and describing experiences as well as more abstract concepts such as learning, motivation, and happiness. With the qualitative paradigm, we explore the intricacies of motivating youth to volunteer on both individual and collective levels (Brinkmann & Tanggaard, 2020, pp. 15-16). This approach is particularly suited for our study because it allows us to delve into the nuanced motivations and experiences that influence volunteerism, which quantitative methods might overlook. Qualitative researchers believe that the social sciences differ from the natural sciences because people can attribute meaning to events, while the natural sciences cannot. This correlates well with the focus of our study and enables us to understand social phenomena by viewing them through the eyes of the people being studied and not treating them as objects without their own reflection. An important part of this approach is participating in other individuals' worlds of thought to fully understand social phenomena (Bryman, 2016, pp. 392-393). This is also a reason why we find the qualitative particularly relevant for our study, as we believe that we should understand the target group's perspective in order to be able to design something based on their situation and needs. This is thus done by striving to understand human life 'from within' life itself – in the local practices (Brinkmann & Tanggaard, 2020, p. 16).

Interviews

This part will examine the method of *interviews*. In addition, the particular interviewing techniques we employed to gather relevant information are discussed in the following sections.

Within qualitative research, the interview is one of the most commonly used methods to gain knowledge and insight into people's life situations, attitudes, and experiences (Brinkmann & Tanggaard, 2020, p. 33). The advantage of the interview is that you can provide a detailed and intensive analysis of a relatively limited number of people's experiences. A disadvantage of the interview is that it is resource-intensive in terms of conducting the interview and subsequently transcribing and coding it (Brinkmann & Tanggaard, 2020, p. 36). In addition, the amount of information depends on how quickly one reaches a saturation point in relation to the information being told; that is, whether the interview provides more relevant information or whether the informants simply repeat themselves (Brinkmann & Tanggaard, 2020, p. 37).

Interviews offer valuable insights, yet they cannot fully encapsulate the interviewee's lived experiences. Our objective is to approach as close as possible to understanding and conveying those experiences. From our social constructivist perspective, this means that we will be aware of how phenomena are expressed and thus made by people when they draw on available discursive resources and interpretation perspectives (Kvale & Brinkmann, 2015, in Brinkmann & Tanggaard, 2020, p. 36). A research interview generates knowledge socially through the interaction between the interviewer and the interviewee. The knowledge obtained by this approach is, therefore, equally dependent on the interviewer's abilities, how the questions are asked, and whether follow-up questions are asked (Kvale & Brinkmann, 2015, p. 91). We believe it is essential for our study to be able to ask questions depending on the answers we receive, thus follow-up questions take part in how we gain insight into the field of study. As a result, the *semi-structured interview*, which we will address in the following section, was an appropriate approach for us.

Semi-structured interview

In this project, we consider the interview to be relevant, especially the semi-structured interview, as we wanted to achieve a deeper understanding of the problem as well as the possibilities and limitations that there may be in a design. It is advantageous to identify what you want to learn before determining how to effectively obtain that information (Brinkmann & Tanggaard, 2020, p. 42).

For this purpose, we found it relevant to use the semi-structured interview method, where the researcher has a list of general topics or questions to be covered during the interview. These topics and questions are formulated in interview guides. During the interview itself, the interviewee has the freedom to answer the questions in their own way, and it is not necessary to follow a fixed schedule. The interviewer may also improvise additional questions based on the interviewee's responses to elaborate on or explore the topics more deeply (Bryman, 2016, p. 468). According to Brinkmann and Tanggaard (2020), it is beneficial to enable informants to express themselves in their own words and may require that you pursue the story that the interviewee is most interested in telling (Brinkmann & Tanggaard, 2020, pp. 43-44). In this type of interview, the interviewer pays particular attention to the interviewee's perspective and understanding of issues and events and lets this shape the conversation. Thus, the questions are not necessarily asked in the exact wording or order as stated in the interview guide, but all topics will still be addressed in one way or another (Bryman, 2016, p. 468). Because

we want to understand our target group's motivations, the semi-structured interview can be a good method to understand potential users' perspectives, as it allows us to let the conversation lead the way, rather than pre-defined questions in a *structured interview* (Bryman, 2016, p. 466). In this way, we avoid that it is our ideas, biases or hypotheses about their perceptions that control the findings of various interviews.

Expert interviews

In the study of volunteering and motivation for volunteering in Denmark, we interviewed individuals whom we can classify as *experts*. This was done in an effort to gain deeper insight into the field from individuals who deal with volunteering on a daily basis. According to Kvale and Brinkmann (2015), expert interviews, also referred to as elite interviews, are interviews with leaders or experts in a certain profession. Elite individuals are accustomed to being questioned about their opinions and thoughts, and they may find an interviewer who possesses a particular level of expertise in the subject matter to be an engaging conversation partner (Kvale & Brinkmann, 2015, p. 201). We base our understanding of what an expert is, on Bent Flyvbjerg's (2006) definition of experts, in which he emphasises that while a large number of people are experts in their daily tasks, very few possess a level of true expertise in a particular field (Flyvbjerg, 2006, p. 22). We have chosen our interviewees based on this definition to ensure quality data collection. In this regard, we have interviewed Aline and Simon from our collaboration partner DUF, who serve as experts on what it is like to be young in Denmark, the significance of volunteering, and their extensive understanding of the organization, as well as their needs and requirements for a design. In addition, we have interviewed researcher Jonas Hedegaard, an expert on the concept of volunteerism. We believe that these experts can provide us with valuable insight based on their extensive knowledge.

Interview guides

When a semi-structured interview is carried out, it is often based on an interview guide (Brinkmann & Tanggaard, 2020, p. 44), which is also the case in our approach. We prepare interview guides for the expert interviews and the focus groups, which we will explore in the following section.

The notion of an interview guide is less specific than the idea of a structured interview plan (Bryman, 2016, p. 469) and may be more or less controlling during the interview (Brinkmann & Tanggaard, 2020, p. 44). In preparation and the use of an interview guide, it is vital to provide the opportunity to collect participants' opinions on their social world and ensure that there is flexibility in conducting

the interviews (Bryman, 2016, p. 469). The respective interview guides can be found in appendix 4, 5 and 6.

Focus group and workshop

To achieve a deeper understanding of the target group we are designing for, we have conducted focus group interviews. The focus group method allows us to interview several participants at once and focus on a specific theme and how the participants respond to each other's opinions of the subjects (Bryman, 2016, p. 502). Two methods have been used for our focus groups: a more conventional format where participants discussed and shared their opinions and a workshop format that began with a lesson on future workshops, followed by the participants' task of creating designs to motivate youth to volunteer. As they engaged in the workshop activities, we observed and listened to their discussions and outcomes.

When utilizing focus groups, data is produced through group interaction around a topic the researcher has determined (Morgan, 1997 in Halkier, 2016, p. 10). It is this combination that makes focus groups particularly good at producing knowledge about sense-making in groups, which we will elaborate on in the theory section. (Halkier, 2016, p. 10). Focus groups allow participants to bring hidden but common perceptions and assumptions to light through interaction and discussion. This makes them suitable for collecting data on what groups agree or disagree about on societal issues (Halkier, 2016, p. 10). Finally, focus groups are good at producing data that illuminates norms for groups' practices and interpretations (Bloor et al., 2001, in Halkier, 2016, p. 11). Focus groups are thus an ideal method to understand youths' perspectives on spare time and volunteering. By creating a dynamic interaction among participants, focus groups can help us reveal hidden perceptions and assumptions, providing valuable insight into societal issues and youth cultural norms.

Halkier (2016) outlines three focus group structures: loose, tight, and funnel models. We chose the loose model to encourage participants to freely express their perspectives and interact with each other, letting the discussion shape the interview (Halkier, 2016, pp. 42-43). This method offers less control than individual interviews but can increase participants' sense of ownership (Bryman, 2016, p. 520), allowing discussions to range widely and occasionally requiring refocusing (Bryman, 2016, p. 506). As we conducted focus group interviews, the participants were given the task of picture sorting to allow them to freely discuss with each other how they prioritize their spare time. We gave the

participants 10 pictures of activities and first told the participants to sort them by what they most wanted to do and what they least wanted to do in their spare time, after which they had to sort them again based on what they actually spent the most to least time on. Through this, they had to come to an agreement and could discuss and argue about which activities were important to them. Tasks are good when you, as a researcher, are interested in hearing their reasons. The task can thus function as a good start to a discussion, which can provide an overview of what understandings the participants each have (Halkier, 2018, p. 49). After this task, we had a few questions that could turn the conversation towards volunteering.

Future workshop method

As previously mentioned, we have conducted an unconventional format of focus groups in the form of a future workshop. This approach allowed us to explore how youths believe they should be engaged in order to feel motivated to volunteer. In the following section, we will outline the purpose and process of a future workshop.

The future workshop (FW) is a method that aims to help civil groups influence decision-making processes within their fields of interest and the world they will live in in the future (Apel, 2004, p. 3). The workshop is designed to fuel social fantasy and group creativity to challenge the status quo (Vidal, 2005, p. 2). Its role of collaborative vision-building, enabling participants to create dreams for the future with great imagination and wisdom (Vidal, 2005, p. 1). Therefore, found this method relevant to give potential users the opportunity to influence the design, particularly in relation to what is important in such a design, in order to capture their attention and motivate them. We conducted the workshop with a class on the master's program Information Studies at Aalborg University, Copenhagen. Our use of this method is structured based on the approach used by Jungk and Müllert (1987), who divided the workshop into a *preparatory phase* and three workshop phases: *the critique phase*, *the fantasy phase*, and *the implementation phase* (Jungk & Müllert, 1987, p. 11).

Everything that happens before the workshop, including selecting the location, time, topic, etc., is referred to as the preparatory phase (Jungk & Müllert, 1987, pp. 116-117). However, this phase also serves as an introduction to the participants to the method, its rules, and the agenda for the workshop (Apel, 2004, p. 4). In the critique phase, the problem is thoroughly examined through group visualization brainstorming, during which criticisms are written down. The results are evaluated and

can lead to a reflective discussion and visualization of these (Apel, 2004, p. 4). In addition, ideas are organized and grouped into clusters or sub-themes (Vidal, 2006, p. 5; Jungk & Müllert, 1987, p. 118). The presentation which guided the future workshop can be found in Appendix 7.

During the fantasy phase, the participants begin by creating a utopian vision of the future, where they draw an exaggerated picture of future possibilities. Thus, after identifying the problem, the participants discuss and play creative games to transform the criticisms into idealized remedies rather than jumping right into a remedy. Regardless of their feasibility, all ideas are gathered in an idea store and subsequently transformed into practical and realizable core ideas. This encourages the participant's social imagination and fosters a creative environment wherein alternative forms of expression may be explored apart from the conventional, rational approach (Apel, 2004, pp. 4-5).

The ideas are evaluated for practicality at the end of the implementation phase, and if a solution is discovered, it is eventually documented in an action plan with the who, what, where, and how details (Apel, 2004, p. 5). Participants weigh their desired outcomes against what should be possible to carry out and develop a plan of action (Jungk & Müllert, 1987, p. 67). This served as a foundation for the future workshop we conducted as our initial focus group insights, examined in Analysis 1: The Future Workshop.

Participant observation

We observed the participants during our focus groups to gain insights into their interactions. By doing so, we were able to develop an intuitive understanding of the data (Brinkmann & Tanggaard, 2020, p. 103). During the workshop, we observed how the participants worked with the tasks given to them during the session and listened to their interactions. In this connection, it was necessary for us to create elaborate *field notes* detailing events, experiences, and behaviors, as well as our initial thoughts, comments, and reflections at the moment, to guarantee that details are not lost in the memory (Bryman, 2016, p. 440). Participant observation involves observing behavior and listening to conversations, with a particular focus on understanding the culture of the group in which the ethnographic researcher is deeply engaged. This approach often includes gathering additional data through interviews and document collection (Bryman, 2016, p. 423). In our case, our role as observers was in the form of *minimally participating observers* (Bryman, 2016, p. 436), which can also be categorized as primarily observing (Brinkmann & Tanggaard, 2020, p. 100). This means that we, as

facilitators, only participated minimally in the group's core activities, and the result of our observations is not the primary source of data in the project. Instead, interviews and the collection of documents will play a greater role in the collection of data (Bryman, 2016, p. 436).

Sampling

This study includes data from interviews with experts, a workshop, and focus groups. Therefore, we will describe how we sampled these participants in this section.

Purposive sampling is commonly used in qualitative studies, where participants are selected based on their relevance to the research question, ensuring they have a direct connection to the subject (Bryman, 2016, pp. 407-408). In our study, we selected participants based on analytical selectivity and with purposive sampling, focusing on important characteristics, such as age, in relation to the problemformulation (Halkier, 2018, p. 29). Because our project is a case study, this has affected our sampling, and we have limited the participants to those who fit the specific case. Bent Flyvbjerg calls this information-oriented selection, where the goal is to maximize information from small samples by selecting cases based on their expected information value (Flyvbjerg, 2006, p. 230). This applies to our decision to include researcher Jonas Hedegaard as an expert on the concept of volunteerism in Denmark. Similarly, two informants from our collaboration partners, Aline and Simon, purposive and information-oriented, were sampled for their expertise. We interviewed them to gain insight into DUF, its member organizations, and what aspects would be valuable in a design.

Both the workshop participants and focus group participants were selected through purposive sampling, chosen for their relevance to the problem formulation. We aimed to sample 16-29 year olds, primarily individual who do not volunteers, and did so by reaching out to gymnasiums near Copenhagen. As it proved difficult to reach this demographic, we utilized our network, ultimately gaining access to two classes through a teacher at a Taarnby Gymnasium. These participants serve as representatives of the target demographic. It is thus important to note that perceptions, activities, and experiences could vary if we had engaged with a different group of youths. Additionally, we accessed the class at Aalborg University by reaching out to the class below ours. This enabled us to conduct a teaching session and facilitate the future workshop, providing us with insights into their perceptions of motivation for volunteering, both among themselves and other young individuals. This group is special in that they were design-oriented and anticipated receiving something valuable from the

teaching session. Both the focus group and workshop participants were sampled through the purposive approach, *typical case sampling*, by which participants are sampled because it exemplifies a dimension of interest (Bryman, 2016, p. 409).

Data processing

In the following sections, we will elaborate on our work processing our data, including the transcription, coding, and analysis of the data.

After gathering data, we proceeded to transcribe all expert interviews and focus group sessions for further analysis. Because our interviews were conducted in Danish to facilitate direct expression by participants, our transcriptions will also be in Danish. However, statements referenced in the text will be translated into English, with a focus on maintaining their original meaning. Transcribing our interviews helped ensure accuracy and opened the data to readers and other researchers, contributing to transparency and allowing a more thorough examination of the data (Bryman, 2016, p. 479). In addition to translating from Danish to English, transcribing an interview involves translating from oral discourse to written discourse. This process entails a number of assessments and decisions in converting spoken language into written form (Kvale & Brinkmann, 2015, p. 236). These assessments encompass choices regarding wording, tone, pauses, and emotional nuances, all of which can shape how the data is interpreted by both the researcher and others. Therefore, it is imperative that we remain mindful of these choices and their implications for interpreting the data. For example, in transcribing our focus group interviews, capturing all interactions in writing becomes crucial. Even small affirmations such as "yes" or "m-m," along with other forms of agreement or disagreement, can hold significance in understanding the attitudes of individual participants (Halkier, 2016, p. 73). However, our use of these focus group transcriptions is not to analyze the discourse but rather the topics, themes, and feelings that can be identified within the discussions.

In the following sections, we will elaborate further on the methodological choices guiding our data processing.

Coding

After transcribing our interviews, we coded the data sets to create an overview of the data material and reduce it in a moderately systematic way. This is accomplished by providing each meaningfully

related item of data in the interview and focus group transcripts with a thematic heading, consequently compressing the extensive pieces of data (Halkier, 2016, p. 75). When coding data, the focus is on analyzing the content and actions within it, categorizing them based on common patterns, meanings, and emerging questions. This initial step is crucial in qualitative analysis, laying the groundwork for further exploration. Coding early can enhance comprehension and ease subsequent analysis, and we, therefore, coded ours directly after obtaining it (Bryman, 2016, p. 581). We coded individually to deepen understanding, then refined codes collaboratively, leveraging diverse perspectives for nuanced analysis (Bryman, 2016, p. 583).

The coding of the focus group interviews encompasses six themes, visually represented by colors directly integrated into the transcriptions (Appendix 15-22.) These themes include: yellow for Time and Money, green for Prioritizing Spare Time, red for Volunteering as a Job, blue for the Rewards of Volunteering, pink for the Definition of Spare Time, and purple for Social Media. However, the purple theme concerning social media is not included in the analysis due to its lack of relevance to the project's problem formulation and research questions.

Performing a thematic analysis

One of the most common approaches for analyzing qualitative data is a *thematic analysis*. In some cases, themes are the same as codes, which also applies to our case (Bryman, 2016, p. 584). After coding our data and arriving at a mutual understanding of the codes, we moved on to a thematic analysis based on our coding.

Thematic analysis involves identifying and comprehending patterns or themes in text-based data like observations or interviews. Once the themes had been established through coding, we examined the connections and differences between them. This involved examining relationships between themes, the circumstances shaping their occurrence, and variations across time, space, and among participants. Additionally, the themes discovered were interpreted in the context of the study and the aim of the investigation. This entailed making judgments about the themes' significance and potential for further knowledge of the issue being studied (Bryman, 2016, p. 588). In our thematic analysis, the focus was on identifying and examining differences in what motivates our participants as well as how this could affect a design. This analysis strategy was essential to our data processing as it facilitated the emergence of shared narratives across informants rather than solely individual perspectives. This

was crucial in creating a design that could accommodate multiple needs, ensuring its broad usability for the target group rather than focusing on individual requirements. However, this also means that individual patterns of change appear less clear (Brinkmann & Tanggaard, 2020, p. 251). This is something we must be aware of as we reflect on and reason our development of a design.

Prototyping

Throughout the process of this project, we created and revised prototypes. Thus, it was an iterative design process with the aim of achieving a user-friendly and intuitive design based on studies of the target group and stakeholders' needs. Prototypes are trial models or early versions of a design that are used to test and evaluate ideas before moving on to the final version of a product, service, or system. These prototypes can be physical models, digital simulations, or visuals, and they play an important role in the design process (Camburn et al., 2017, pp. 23-24). Developing prototypes is crucial for refining designs and ensuring they meet users' needs. Prototypes allow designers to identify and solve problems early, explore new ideas, and experiment with different concepts quickly. By iterating on prototypes, designers can improve performance and user experience based on feedback, enhancing creativity and innovation in the design process (Camburn et al., 2017, p. 24). Overall, prototypes are a key part of our design process as they help us improve the design, speed up the development cycle, and ensure that the final product or system meets the potential users' and stakeholders needs and expectations.

Quality criteria

To ensure the quality and relevance of our research design, it is essential to consider the validity and reliability of our study, which are important criteria within qualitative research. Quality criteria are often associated with quantitative research, but qualitative researchers also emphasize the importance of reliability and validity. However, the meaning of these terms changes in the qualitative paradigm. We will follow LeCompte and Goetz's definitions of *external reliability*, *internal reliability*, *internal validity*, and *external validity*, which Bryman describes as relevant for evaluating qualitative research (Bryman, 2016, p. 383). We will provide a brief description of the significance of these criteria and how we approached them in our process.

External reliability concerns the extent to which a study can be replicated and can thus be a difficult criterion to meet in qualitative studies, especially with case studies (Bryman, 2016, p. 383). In our case, it will be difficult for another researcher to obtain the same understanding or result from interviews, as they will probably not be able to access the same students because people's attitudes and perceptions can change over time. However, one can apply strategies, such as including an interview guide, to increase the external reliability and thus enable other researchers to adopt a similar social role to make the results comparable to the original research (Bryman, 2016, pp. 383-384). To make the process apparent, we focused on this in our descriptions of the process involved in conducting focus groups and interviews. Here, transparency has been prioritized so that others can reuse the strategies of our data approach and processing.

Internal reliability refers to whether members of a research team agree with what they have seen and heard during observations and interviews (Bryman, 2016, p. 384). In our case, we have agreed to observe and listen to the FW and the interviews we have carried out. However, we split into two when we conducted focus groups, and this criterion is, therefore, not relevant to this connection. In our team, we immediately reflected on our experiences after conducting interviews and the workshop to ensure we both had the same understanding of what insights we had gained. To ensure internal reliability, we collaboratively reviewed our data and identified codes and themes that we believed were relevant. Furthermore, when we started the project, we carried out a bias exercise, where we individually wrote down our potential predictions, biases, and ideas about volunteering and other people's perceptions of volunteering (Appendix 8). We then reviewed them together to understand each other's perspectives and perceptions of volunteers, which turned out to be congruent. This allowed us to reflect on our own bias as we assessed and analyzed data. However, the biases were not equivalent to what was found in the data, which is why we have not included the potential bias as reflections throughout the project.

Internal validity in qualitative research is about how well observations and theoretical ideas agree or are connected (Bryman, 2016, p. 384). We have worked towards meeting this criterion by assuring that our results are solid and unaffected by subjectivity or bias, and it is something that our aforementioned bias exercise has helped to ensure. We placed a strong emphasis on being explicit throughout our analysis. This was done by arguments based on citations, notes, and excerpts of conversations, after which arguments were made for the interpretations of these and then relating

them to theory or previous studies. Therefore, our conclusions have been drawn based on these arguments. The purpose of this is to describe thoroughly how the conclusions were drawn and for the reader to understand this process.

External validity concerns the extent to which a study can be generalized to other social settings (Bryman, 2016, p. 384). This criterion can be challenging to apply in case studies, but we find it relevant to consider as our project aims to design something that can motivate young people to become volunteers in DUF's organizations. While we have included some examples from DUF's organizations during the investigations, our primary focus has been on the youths' perspectives on their spare time and activities. This creates opportunities for our concepts and results to be relevant in settings other than DUF. Further, given the pragmatic approach, the conclusions that are drawn will only be applicable to the specific practice but relevant and possibly similar across comparable practices. Therefore, our analysis and understanding apply to the specific young people we have spoken to, but if the same study was carried out, for example, elsewhere in the country, it would be possible that these young people had different perceptions.

Literature review

As part of the project, we conduct a literature review. The literature review contributes to answering the first research question, 'What motivates young volunteers and what factors influence their engagement?' and positions our study in the field of research. In this section, we will first discuss the type of review that will be conducted, followed by an elaboration on how the review was carried out. The findings will be provided following the presentation of the search strategy and process. Finally, the review and findings will be discussed critically.

Grant and Booth define what to review broadly as; "to view, inspect, or examine second time or again" (Grant & Booth, 2009, p. 92). This can be done in many variations of searches with the overall goal of looking at material that has been produced previously. Further, Hart defines a literature review as an objective summary and critical analysis of the relevant available research and non-research literature (Hart, 1998, in Cronin et al., 2008, p. 38). In our project, we focus on investigating how to engage and motivate youths to volunteer. Because we want to design to motivate volunteering, we find it beneficial for the project to gain knowledge of what motivates youths to volunteer and the

influential factors of the motivation. Cronin et al. describe how a part of forming a good and focused literature review is to formulate a research question (Cronin et al., 2008, p. 39). Based on our scope for the literature review, we formulated the following research question:

What motivates young volunteers, and what factors influence their engagement?

After establishing the research question for the review, we determined the type of literature review. We decided to conduct a systematic review based on Grant and Booth's descriptions of fourteen different types of reviews (Grant & Booth, 2009, pp. 95-96). Conducting a systematic review is about systematically searching for appraisal and synthesis evidence (Grant & Booth, 2009, p. 102). The systematic review, therefore, seeks to systematically search within databases to find relevant literature in the subject area for the scope. This type of review is specifically known for its transparency in the process of finding the literature, for others to be able to replicate the search. Further, transparency about the process is important because the goal of the review is to find all relevant literature for the topic, which can change over time and by using other keywords (Grant & Booth, 2009, p. 102). Thus, the systematic review suits our study because our aim with the literature review is to investigate what research has already been done on young volunteers and motivation. We also included a focus on design in order to find previous design-focused research in the field. Further, this type of review makes it possible for us to position our project in the field of research and find out what previous research suggests should be further investigated. As a result, the systematic review will assist in directing the project in an appropriate direction, which we will discuss in the process.

Conducting the review

After specifying the scope of our review and the type of review, we will describe the process of conducting the review. This is specifically important because we are performing a systematic review characterized by transparency and exhaustion in the approach and method of searching the literature. In order to formulate a search, it is essential to find keywords associated with the question and formulate these into search strings. Therefore, we started by making a concept map, which is a conceptual framework for identifying key concepts of a search and brainstorming ideas for keywords. Specifically, relationships between the concepts and keywords are represented to get an overview of

the search and mainly to assist the researcher in developing their understanding (Rowley & Slack, 2004, pp. 36-37). Our concept map is shown in Figure 3 below:

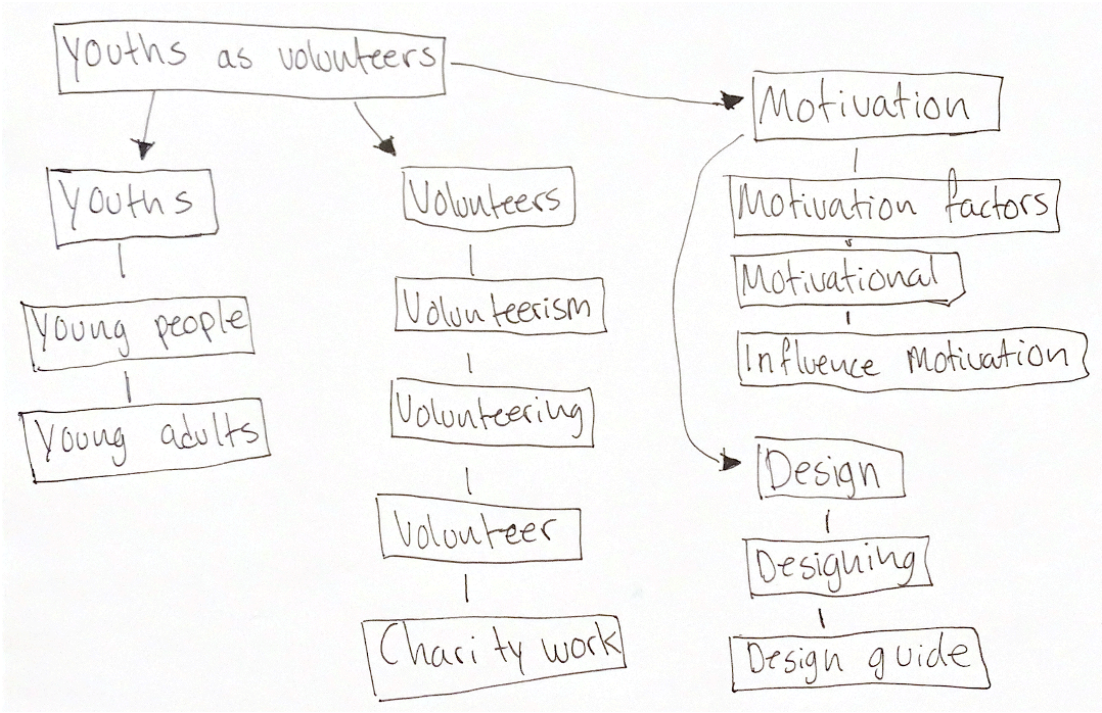


Figure 3: Concept map.

The following step in the process was to formulate a relevant search string of the keywords and concepts. Keyword search is a commonly known way of searching literature. However, it should be done thoroughly with iterations, as variations of keywords give different outcomes, and the keywords might have synonyms, which could give different results. To combine the search string, we use the Boolean operators. The most common of these are AND and OR, which are used to combine the keywords in variations (Cronin et al., 2008, p. 40). We use AND to combine the concepts of the research question in the search, and we use OR to include synonyms and related keywords of the concepts.

To conduct the search, we used databases that were found relevant to the search and themes. Looking into databases, we found it difficult to find specific databases for the field of information studies and design. The commonly used databases for informatics, such as the ACM Digital Library, are focused on data science and have more engineer-oriented themes than our investigation. Because our search focuses on both designing and social studies of volunteers, we found it suitable to use a broader

database. Therefore, we chose Scopus as our primary database because it is the largest database for peer-reviewed literature. Scopus is updated daily, which we found beneficial for the search to include the newest research (Scopus., n.d.). In Addition to Scopus, we also searched within the database; Social Science Database. This database is indexed in the larger database ProQuest, which holds research in the fields of humanities, social sciences, natural sciences, and medicine. Thus, the Social Science Database only includes studies within the social science field. We found this suitable for our literature review because we want to find relevant social studies on volunteers, youths, and motivation.

Cronin et al. describe how the reviewer should include and be transparent about the following criteria when performing a systematic review: the formulated research question, the inclusion- and exclusion criteria, the selection and access of the literature, the quality of the literature included, and the analysis and synthesis of the findings of the literature (Cronin et al., 2008, p. 39). In the following, we will elaborate on these criteria.

The literature review should consist of research relevant to the project and to the research question of the review. To secure this, we have chosen some inclusion and exclusion criteria for the literature included in the search. Because we want the search to position the project in the field of research within volunteers and designing, we want to include peer-reviewed articles. These articles describe how the research was conducted and are acknowledged by other researchers within the field. We found this criterion important to ensure the quality of the literature. This also excludes other literature that we do not find relevant for the search because they do not help position the project in the research field. As an additional inclusion criterion, we exclude articles published before 2014. This was chosen as an exclusion criterion to focus the search on research that examines social conditions that are similar or closely related to the conditions of youth today.

Based on our review question: *What motivates young volunteers, and what factors influence their engagement?* We found the suited keywords and combined them in the first search string, as shown in Table 1 below:

Search string
Motivation *OR* “Motivation factors” **AND** “Young people” *OR* Youths *OR* “Young adults” **AND** Volunteers *OR* Volunteering *OR* Volunteerism **AND** Designing ***OR*** Design

Table 1: Search string.

This search string was the starting point for both databases. However, because these gave us different outcomes, we adjusted the search to each database. To present the iterations of the search, we include the following table in Figure 4 below. The table makes the search process transparent, which is useful for a possible repetition of the search.

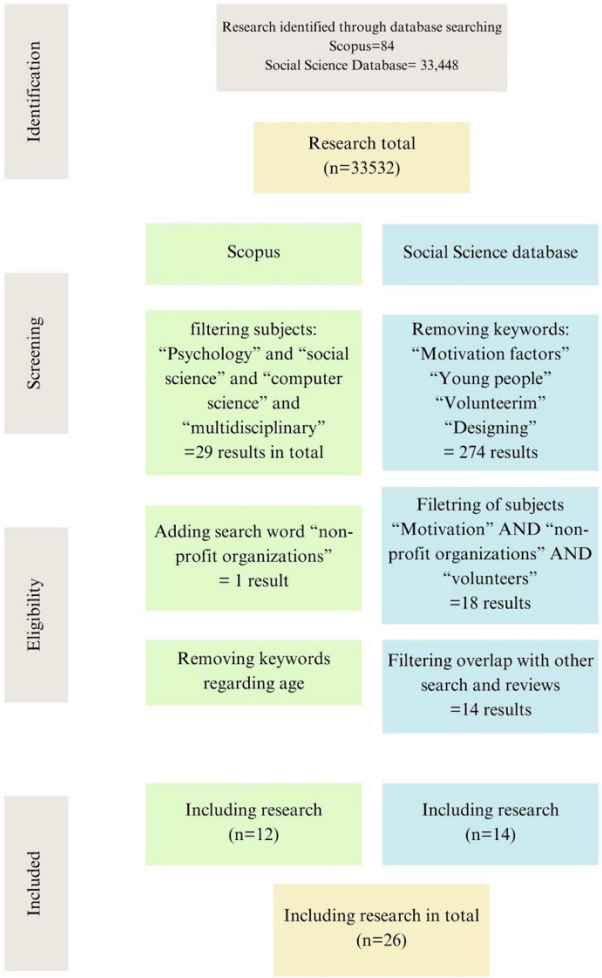


Figure 4: The search process.

The table illustrates how the search was screened, filtered, and adjusted throughout the search. For both databases, we found it relevant to filter the search based on the subject area of the research. This was done because the findings encompassed a broad range of unrelated subjects, including medicine and neuropsychology. For the Social Science Database search, we removed one alternative keyword for each keyword. This was done to narrow the search further because the initial search string generated over 30,000 results.

Upon performing the search, we found 26 peer-reviewed English publications published between 2014 and 2024. The next process was to categorize these articles into relevant themes. In the search, there were three reviews, which we have excluded from our literature review, to limit the search to only include original studies. In Table 2 below, the articles are categorized into five themes. These will be elaborated on in the literature presentation.

Theme	**Literature**
Recruitment of volunteers	(Yamashita et. al., 2017) (Okorley et. al., 2016) (Hopkins & Dowell, 2021) (McKeever et. al., 2019) (Mason, 2016) (Hu, 2021) (Knutsen & Chan, 2014)
Retention of volunteers	(Zollo et. al., 2021) (Zollo et. al., 2020) (Aydinli et. al., 2016) (Barnard & Furtak, 2021) (Kamerade & McKay, 2014) (Park & Kim, 2016) (Tiltay & Islek, 2019)
Volunteer engagement	(Nencini et. al., 2015) (Clerck et. al., 2015) (Schie et. al., 2018) (Schie et. al., 2014) (Fernandes & Matos, 2023) (Pearce et. al., 2022)
Alternative volunteering	(Hansen & Slagsvold, 2020) (Cox et. al., 2018) (Costello et. al., 2020

Table 2: Theme of literature.

In the following sections, we will present and discuss the identified texts and their central themes and findings. This presentation will contribute to gaining a greater understanding of how motivation, young volunteers, and design relate to each other, according to the literature.

Presentation of literature

The search results will be elaborated on in the following section. The conclusions and implications of the different articles will be presented thematically and discussed from our project's perspective. We have identified the following four themes throughout the literature; 'Recruitment of volunteers', 'Retention of volunteers', 'Volunteer engagement' and 'Alternative perspectives on volunteering'. Further, it will clarify how the literature will be used in the project and how our project positions itself in the field of research. Finally, we will discuss the key components of the included literature in relation to the research question and how the literature could affect our future work.

Recruitment of volunteers

The first theme which will be examined is 'Recruitment of volunteers'. This theme is based on seven different peer-reviewed articles, which have researched how to recruit volunteers for organizations across the world. This theme is relevant to our project as we want to design for the recruitment of volunteers for DUF's member organizations. The article contributes to different aspects of motivation when recruiting volunteers. Therefore, the theme could reveal valuable approaches and implications for our design approach and understanding of potential volunteers. Looking at the literature, there were three overall perspectives on the recruitment of volunteers: The volunteers' starting points, their motivations, and the representation of the organizations.

Pearce et al. (2022) investigated motivations and barriers for young volunteers, differentiating between rural and urban-living youths. Their findings showed that rural youths tend to volunteer if their friends volunteer, and urban youths volunteer if they are motivated to explore their strengths. Further, the barriers found for volunteering were the feeling of constraints of school, work, and time, the feeling of their work being unappreciated, uncertainty of the impact, and lack of motivation. Here, rural youths found it more meaningful because they could see the difference they made in their community (Pearce et al., 2022). This study of youth volunteering is found relevant for our further

investigation, as they investigated the same age group we want for this project. The study was conducted with a survey and semi-structured interviews in Canada (Pearce et al., 2022). Based on cultural similarities, we find the results relevant as both Canada and Denmark have Western cultures. However, we must be aware of potential cultural, political, social, or methodological differences between their study and ours. We will, therefore, use their results as guidance for our investigation of youths in Denmark and work further in the direction of how to motivate them based on these findings. To get a better understanding of the volunteers and how to recruit them, it is relevant to understand their starting points for volunteering. Yamashita et al. (2017) researched the underlying motivations of volunteering across life stages. The research was conducted in Nevada and includes 1046 volunteers in nonprofit organizations. Their results lead them to the conclusion that age-related life phases influence how people prioritize their time and energy. The individual's life stage impacts the person's choice in terms of how to invest time and what is valued in life (Yamashita et al., 2017). This indicates that, while recruiting volunteers, it is essential to understand the life stage of the potential volunteers to convince them to prioritize the organization. In addition, Knutsen and Chan (2014) researched staff volunteering as a phenomenon, focusing on how willing paid employees in nonprofit organizations would be to volunteer in the organization on the side of their employment. Their results show that the employees had a high level of will to volunteer in the organization and often did it as an extension of their work (Knutsen & Chan, 2014). This study is relevant to our project as it indicates that volunteers who have a connection to the organization in terms of employment would be more likely to also volunteer in the organization. It could, therefore, be relevant for us to investigate if a connection with the organization could increase the potential volunteers' motivations to become volunteers. Based on these studies we see an importance in investigating the project's target audience's life stage in order to understand how they prioritize time and energy, which is especially investigated through the focus groups. Further, it is found relevant to investigate if a connection with the organization could somehow affect the potential volunteers' motivation.

The searched literature also included studies of possible motivations to start volunteering. These studies are found relevant to our project's design as the results of the studies indicate what focus areas could help a design motivate potential volunteers. Looking through the literature, we discovered that multiple studies on volunteer recruitment indicated career enhancement as a motivation. Young people are especially found to be motivated by gaining skills that are beneficial and relevant for their future careers (Yamashita et al., 2017; Orkorley et al., 2016; Hopkins & Dowel, 2021). Hopkins and

Dowel (2021) research recruitment and retention in nonprofit organizations and conclude that it is not only that they gain a new relevant skill but also that they receive some kind of proof of their newly acquired skill, which they can use for future employment. Additionally, doing something for others was found to motivate people to start volunteering (Yamashita et al., 2017; Orkoley et al., 2016). This motivation was both based on community service, by which the volunteer contributes by doing something for the community (Yamashita et al., 2017) and on the will to understand the people being helped and acting for one's values of helping others (Orkoley et al., 2016). The studies identify motivating factors in career-enhancing tasks, as well as doing good for others. As a result, we consider it essential for this project to address these motivations in our research and engagement with the target group. Several studies have demonstrated that these particular motivations play a significant role in recruiting. Therefore, we see an opportunity to investigate if this is also the case in our instance. Although Hopkins and Dowel (2021) only express career enhancement as a motivator for volunteering, Yamashita et al. (2017) express career enhancement as the unique motivation linked to actual interest in motivation. Based on this, we see an incentive to distinguish between actual interest in volunteering and interest in the idea of volunteering – actual interest refers to something an individual wants to act on, whereas interest in the idea refers to an individual agreeing with the values and work of the volunteers but not necessarily acting on it.

Another component of motivating potential volunteers is to recruit them based on how much time and effort they are willing to contribute to the organization. Costello et al. (2020) found that managers recruiting volunteers should target different groups based on spare time, age, and public service motivation, which is delivering a service to others for the purpose of doing something good for others (Costello et al., 2020). The results showed how a volunteer's public service motivation is associated with the amount of time, frequency, and volunteering intensity (Costello et al., 2020). This is relevant for our study, as it implies how a volunteer is further engaged in a volunteering role if they are public service motivated. If this type of motivation is implicated in our results, it can be relevant for public service oriented organizations to recruit these types of motivated volunteers, as they would be engaged in their volunteering role.

In recruitment literature, the representation of the organization and the volunteering tasks has emerged as an important factor in the recruitment process. Several articles discuss how these elements influence volunteer recruitment. This topic is particularly relevant to our study as it provides insights

into whether and how a design should emphasize the organization and the tasks they need young volunteers to perform. Hu (2021) researches whether the organizer matters in volunteer involvement based on a cross-sectoral study of eldercare volunteers in Beijing. The study included 441 survey answers from volunteers, and the results showed that there were no significant differences in the perception of being a volunteer and their intent to remain in the organization. However, there was a difference in the volunteers' motivations, participation, and some satisfaction aspects (Hu, 2021). Thus, this study implies that the perception of being a volunteer is not significantly different across organizations; however, the motivations to stay and the participation level will vary from individuals volunteering. Based on this study, our design could present the role of volunteering to the target audience similarly and convince them to volunteer by different motivations. Hu's study on volunteering focused on the eldercare sector of volunteerism, which differs from DUF's diverse member organizations. However, the findings suggest that companies may be classified into sectors with comparable themes and represented similarly. These findings can thereby be related to the design, as there is no difference in the perception of volunteering across organizations. However, motivations to volunteer differ and can thereby influence further engagement.

Two articles are included because they focus on the representation of nonprofit organizations. McKeever et al. (2019) studied how the situational theory of problem-solving – in regards to communication of a world crisis – affected peoples' willingness to support organizations by volunteering, donation etc. Through a survey answered by 1275 individuals in the United States, McKeever et al. found that situational activeness can predict prosocial behavior (McKeever et al., 2019). Additionally, Mason (2015) studied the effect of image motivation in the process of encouraging individuals to participate in nonprofit organizations. The study was performed as a field experiment in the area of Los Angeles and included letters in Spanish and English with images. Image motivation is defined as being motivated to act based on seeing an image. In the experiment, it was found that image motivation did have a positive effect on participation, but primarily for the Spanish recipients. This finding indicates that image motivation could have a positive influence on recruiting volunteers. However, the results might also be influenced by culture, with Spanish residents in Los Angeles feeling more connected when addressed in their own language, thus participating more actively. Although the findings of both studies suggest that the visual presentation of the organizations plays a significant role in the recruiting process, situational activeness might, according to McKeever (2019), predict prosocial behavior, which, in connection to our project, could drive volunteers to the

organizations. Further, image motivation might have a positive effect on encouraging volunteerism, but this result is not necessarily useful in our project.

A challenge of the literature on volunteer recruitment is that many of the studies are limited to specific geographic areas, primarily Western countries such as Canada and the United States. This raises questions about how generalizable the results are when it comes to designing a recruitment-supporting product for DUF's member organizations, which operate in Denmark. We must, therefore, be aware that cultural differences and social norms can have a significant influence on volunteering patterns and motivations, which is not necessarily reflected in the studies in this literature review. This also implies the literature's broader study of different age groups than our project. This is something we must be aware of as, for example, older volunteers' motivating variables may differ significantly from younger volunteers. Thereby, our own studies of the target group become an important supplement to the understanding we gain through the literature.

Another reflection on the literature is that many studies focus on motivating factors rather than the barriers to volunteering. To create effective recruiting strategies, it is also important to understand what prevents potential volunteers from engaging or remaining involved over time. Ignoring these barriers might lead to oversimplified recruitment that does not address the genuine issues. However, this is a crucial aspect of the investigations we carry out with the target group.

Based on the recruitment theme, the literature has contributed different aspects and approaches to the recruitment of volunteers. We will work further by investigating the target audiences' stage in life to understand their starting point for volunteering because this influences the motivation for volunteering. In that regard, youths' relation to the organization could also play a role. The studies included in this review implied that the motivational factors for volunteering were career enhancement and doing good for others. These are motivators, which we will investigate further in our study of the target group. Further, the literature indicated a need for differentiation in our research of motivation for volunteering in actual interest- and the idea of interest in volunteering. Finally, the literature provided aspects of the influential factor of motivations as the representation of the organizations, where sector division, situational activeness, and image motivation were positioned as beneficial for the recruitment of volunteers. These will, therefore, play a role in our design process.

Retention of volunteers

The 'Retention of Volunteers' theme is based on the articles in which the research focuses on how to retain volunteers in organizations. In our search, multiple articles related to the retention of volunteers came up – both concerning the organizations and the volunteers. This theme is relevant for our project because the recruitment of volunteers only makes sense if the volunteering role satisfies the new volunteer and they thereby want to continue. This theme provides insights on how to portray the organization and volunteering responsibilities to entice volunteers to engage. Further, this is relevant because DUF indicates that member organizations want volunteers who stay with the organization rather than task-based volunteers (Appendix 2).

The articles focused on what volunteers gain from volunteering. As it was indicated in the theme of 'Recruitment of volunteers', there is a desire to get something in exchange for the effort put in when volunteering. This is also relevant to the issue of retention, as Furtak and Barnard (2021) identified four themes of motivation for volunteer retention in a phenomenological study of eight volunteers in South Africa's provincial health system. The four themes are Learning and growing in competence, demonstrating an engaged state of mind, exhibiting emotional well-being, and feeling socially integrated and connected (Furtak & Barnard, 2021). Because this study was conducted in South Africa and with only eight volunteers from the provincial health sector, we are aware that it differs from our project in terms of cultural references as well as the African provincial health sector being significantly different from the organizations in DUF. Therefore, we find it conflicting to relate their results alone to our project. However, other studies support Furtak and Barnard's results, making the text relevant. Their conclusion regarding learning and improving one's competence is consistent with Hopkins and Dowell's (2021) conclusion that a working method for retaining volunteers is to formally acknowledge them for their efforts and improvement of abilities. Additionally, Park and Kim (2016) found that training and development are key to leading employees' value congruence and motivation. Park and Kim (2016) studied 400 employees in nonprofit organizations, which is different from volunteering but still related to the work of nonprofit organizations (Park & Kim, 2016). Based on these findings, an influential factor of engagement in volunteering is a need for personal improvement in the function of volunteering, which should also be recognized by others within the organization. We believe that the development of abilities and skills, as well as formal recognition, are relevant to our project and design due to their connection to the recruitment aspect of career

enhancement. This suggests that the process of volunteer growth is considered important when recruiting and retaining volunteers.

The desire to help others and to make a difference is also found to be a motivating factor in connection to the retention of volunteers. Aydinli et al. (2016) studied explicit and implicit motivation for long-term volunteering, involving 1082 individuals from China, Germany, Turkey, and the United States. This study found that prosocial motivation, which is the desire to have a positive impact on others' emotions and behaviors, influences individuals' intention to keep volunteering. Specifically, Aydinli et al. found that explicit prosocial motivation and sustained volunteering were strongest when implicit prosocial motivation was also high (Aydinli et al., 2016). These results imply that the desire to have a beneficial influence on other people's lives is a motivator for sustained success across many countries – and that this motivation should not only be expressed explicitly but is strongest when the prosocial motivation is also implicit. In addition, Zollo et al. (2021) studied positive and negative reciprocity and its influence on motivation based on self- and other-oriented motives in nonprofit organizations. Zollo et al. studied 379 volunteers in Italian nonprofit organizations. The results indicated that positive reciprocity impacts motivation to continue volunteering in general (Zollo et al., 2021). However, the results also show that negative reciprocity fully mediated the relationship between self-oriented motivations – which are career enhancement, understanding, and protective motivations – and the intention to stay. In contrast, negative reciprocity does not fully mediate the relationship between other-oriented motivations – which are values and social motivations – and the intention to stay. Overall, their findings indicate that having other-oriented volunteers who tend to positively reciprocate increases commitment and desire to stay. Whereas, having other-oriented volunteers who negatively reciprocate may discourage the intent to stay (Zollo et al., 2021). This study suggests that reciprocity influences volunteers' decision to continue in the organization, and because other-oriented motivations revolve around altruistic and humanitarian concerns, as well as social motives for building relationships with others, our design should promote positive reciprocity. Based on these studies, we see potential in the motivation to do good for others and to make a difference. We also see a critical aspect of this motivation regarding negative reciprocity, which could be discouraging. However, we find the role of negative reciprocity as something that is fostered in the interpersonal relations in the organization and, therefore, more of a managerial task to hinder.

The literature search included a perspective on the retention of volunteers regarding religion. According to Zollo et al. (2020), volunteers who are motivated by religion are more likely to have a strong drive for volunteering and positive attitudes about the organization, which increases volunteer retention. Because some of DUF's member organizations are religiously based and led, we believe there is a need to communicate this, as volunteers who are motivated by religion are more likely to stay with the organization and would benefit from understanding its religious background.

Finally, two articles focus on the role of managing volunteers in organizations (Tiltay & Islek, 2019; Park & Kim, 2016). Tiltay and Islek (2019) argue that understanding volunteer management is essential for long-term volunteering. This management is concerned with human resources and ensuring the loyalty and sustainability of the volunteers (Tiltay & Islek, 2019). In addition, Park and Kim (2016) conclude that intrinsically driven volunteers increase management accountability when working with volunteers. These studies attest to the importance of volunteer management in motivating people to stay with the organization. We do not believe that the role of management is relevant to our design, as we are primarily concerned with motivating potential young volunteers to become volunteers. As a result, we will not pursue this any further. However, we realize the importance of volunteer management for volunteer retention and will thus discuss what our findings mean for volunteer management to guide future research and the member organizations.

Research on volunteer retention highlights key considerations for DUF's member organizations when designing for recruitment and retention. In this theme within the literature review, we observe a geographic variation that may influence the applicability of the studies to our research. For example, some studies focus on specific nations, such as South Africa, the United States, and Italy, making it difficult to generalize the findings to Danish conditions and DUF member organizations. Cultural variations can have a significant influence on volunteer motivation and retention, which we must be aware of. Thus, we must use the literature as a perspective for our own investigations of the target group. It is essential to note that many of the studies on volunteer retention focus on personal growth and altruism as motivators. However, motivating factors like organizational culture, social relationships, and meaningfulness in one's work could also be included, and we can, therefore, benefit from investigating this in our own research. A more nuanced approach to these elements may assist in the development of efforts that retain current volunteers while also attracting new ones. Furthermore, the research indicates the importance of volunteer management as an influential factor

for volunteer retention. Although this aspect cannot be directly incorporated into our recruitment design, it could be worth exploring how knowledge of efficient volunteer management could assist DUF's member organizations in maintaining their volunteers in the long term.

The theme of retention of volunteers contributed with three guiding motivations for our designs in order to motivate potential volunteers based on what would give them an intention to keep volunteering. The motivation for self-development and the acknowledgment of the development were found relevant to our project's work. Additionally, the motivation of making a difference for others was found to be a relevant motivation to incorporate into our design process. Religious orientation of the organization was also found relevant, and as religion was found as an positive influential factor on volunteering as a religious person. Last, the management of volunteers was positioned as crucial for the retention of volunteers; however, it is not a perspective that we find relevant to include in the design. Management of volunteers will instead be part of the project's discussion of the success of the design in practice based on our findings.

Volunteer engagement

The literature search revealed several articles on 'volunteer engagement' that were based on self-determination theory research. These articles primarily investigate the motivation of volunteers and how to engage them in the organization. These articles are relevant to the project because they suggest how to present volunteering tasks in a way that potential volunteers would be interested in. Furthermore, the literature helps position our study in the field of volunteer engagement in organizations.

The articles on the theme of 'volunteer engagement' all concluded with different perspectives on how self-determination theory affected motivation and engagement for volunteers. Their results thus all focus on the role of autonomy for volunteering. Clerk et al. (2022) investigated 40 sports clubs in Belgium and, through a questionnaire, found that high levels of autonomous motivation for volunteers had a crucial role in the volunteers' need satisfaction, job satisfaction, and work effort. In this study, intrinsic motivations were seen as the autonomous motivations (Clerck et al., 2022). Furthermore, Schie et al. (2014) conclude that autonomy supportiveness from the supervisor motivated volunteers. Schie et al. investigated the role of organizational context for motivation of volunteers and differentiated between general self-determined motivation – being the volunteers' motivation to

perform core volunteer activities – and organization focused self-determination motivation – being the volunteer's motivation for tasks primarily beneficial for the organization. In this regard, supported autonomy from supervisors in the organization motivated both general self-determination motivation and organization-focused self-determination motivation (Schie et al., 2014). These results both imply the important role of autonomy as the engaging factor for volunteers in general. The results from Clerck et al. (2022) are based on an investigation of sports clubs, which we interpret as having different motivations for volunteering, such as competition and physical development. These motivations can differentiate from interest-based organizations because these elements are not necessarily a part of the tasks and focus of the organizations. However, according to Schie et al. (2014), it is not only the volunteer-motivated tasks that autonomy motivates but also tasks that are primarily beneficial to the organization. Based on this, we view autonomy as an important motivating factor in engaging volunteers.

Nencini et al. (2015) investigated volunteer motivation and the organizational climate, which is the individuals' perception of practices, relationships, and processes, in four different nonprofit organizations. Their findings show that the organizational climate has an impact on the volunteers' autonomous motivation and satisfaction, but also on external motivation and intentions to leave. Autonomous motivation is again related to intrinsic motivations, and external motivation is when an external consequence of a task is the motivation for doing it (Nencini et al., 2015). In their research, Fernandes and Matos (2023) also showed how the organizational climate affects the engagement of volunteers. Based on a survey answered by 450 volunteers in different organizations, their findings show that perceived autonomy, competence, and relatedness impacted volunteer engagement. This impact leads to both loyalty from the volunteer and extra-role engagement (Fernandes & Matos, 2023).

These results imply that the organizational climate affects the perceptions of autonomy for the volunteers, which positions autonomy as a motivation that is related to satisfaction and is fulfilled after an individual has started volunteering. As a result, we interpret the need to convey a perception of the volunteering tasks and job as supportive of autonomous motivation for the volunteer, as this could lead to satisfaction. However, because autonomous motivation can only be fulfilled when a person acts as a volunteer, our design should provide the potential volunteer with an expectation of

autonomous motivation and a positive organizational climate, and the organization should subsequently establish a climate in which this motivation is fulfilled.

When we examine the literature on volunteer engagement, some reflections arise that may assist us in better understanding how to best present volunteer tasks and engage potential volunteers in DUF's member organizations. The literature is primarily focused on intrinsic motivation factors associated with self-determination theory, such as autonomy, competence, and relationships. While these aspects are essential in promoting engagement, attention could also be paid to other motivating factors that may be relevant to different types of volunteers or the intended age, such as extrinsic factors like organizational incentives and reward systems.

Another consideration is the distinction between general self-determination motivation and organization-focused self-determination motivation. It is essential to understand how various sorts of motivating variables influence volunteer participation in core activities as opposed to tasks that primarily benefit the organization. This might have an impact on how we design our product and communicate the value of involvement in a way that appeals to various motivational profiles. The assumption that autonomy is sufficient to encourage volunteers can be challenged. Although autonomy is vital in the long run, it is also critical to consider other organizational factors such as support, respect, and the feeling of belonging in order to maintain volunteer participation over time. It is essential to align volunteers' expectations of autonomy and support with their actual involvement and satisfaction and to build volunteer tasks and organizational practices around volunteers' needs and desires. This can thus become a focus for our studies of the target group and their views, habits, and needs.

The theme of volunteer engagement thereby positions our project as an investigation of how to motivate potential volunteers toward autonomous roles in the organization. This study is necessary because potential volunteers may be motivated by this when they start in the organization, but they may not be motivated by autonomy before they begin. We will therefore focus our investigation on how to motivate the possible volunteer towards autonomous motivation in the organization.

Alternative perspectives of volunteering

We chose to call the last theme of the literature search 'Alternative perspectives on volunteering'. This includes literature which either focused on specific target audiences, which are not the same as ours, or literature which focused on other ways of volunteering, than the organizational driven volunteering seen in DUF's member organizations. The theme contributes with inspiration for the project and its design-process.

The search revealed a kind of volunteering which we were not familiar with. Schie et al. (2018) investigated a kind of volunteering called corporate volunteering, which is when a company offers their employees to invest paid work hours in volunteering in the community. The employees are, therefore, not directly volunteering, as they are getting paid from their regular jobs, but still act as unpaid volunteers from the volunteer organization's perspective. The findings show that the quality of the motivation is the most important factor in getting the employees to do the program. The quality lies in the projects, organizational support and causes, and if the volunteer experiences this quality of motivation, they are more likely to internalize a volunteer identity (Schie et al., 2018). This study of corporate volunteering adds a perspective on volunteering, which is relevant to our study. As DUF mentions, their experience has shown that many young people do not feel they have enough time to volunteer (Appendix 2, l. 708-711)**.** These results could imply that volunteering might benefit from being supported by schools or workplaces. If youth experience volunteering as a part of what they are already doing, they might internalize a volunteer identity and be motivated to continue in their spare time. Additionally, Kamerade and McKay (2014) investigated voluntary sector employees and found that employees working in the voluntary sector generally had higher levels of subjective well-being (Kamerade & McKay, 2014). This contributes to the perspective of integrating volunteerism into the institutions where young people already spend their time, as this may make them internalize a volunteering identity and has the potential to increase their overall well-being. However, we recognize that these implications are not directly relevant to our design; instead, because we base our design on the current realities of young people, we can evaluate and iterate the design based on what the youths are experiencing. As a result, we will not incorporate these findings as perspectives that are directly relevant to our project. The perspective may, however, be relevant to our consideration of the organization's role in recruiting and retaining young volunteers, which will be covered below. Another perspective of volunteerism and motivation within the literature search is the motivation of other generations. Hansen and Slagsvold (2020) investigated engagement, motivation, and barriers to

volunteering among baby boomers aged 53-71 years. Because this age group is not part of our scope, we do not find the results directly relevant to our project. However, their findings show that in order to mobilize baby boomers, organizations need to accommodate flexible forms of involvement (Hansen & Slagsvold, 2020). The need for flexibility in the forms of involvement as volunteers was also seen as a need in the young age group in Pearce et al.'s (2022) study, as described in the theme of Recruitment of volunteers. Consequently, there appears to be a general need for greater flexibility in the volunteer position, which might assist organizations in recruiting more volunteers in general. Based on these implications, we see a need for further investigation of flexibility in volunteerism and how our target audience views this factor in their motivation to volunteer.

Flexibility has also been studied in relation to online volunteering and motivation. Cox et al. (2018) researched a voluntary online research base in which the users voluntarily answer questionnaires for research. Their findings showed that online volunteering had a positive influence on the motivation of values and of understanding those you help. Further, online volunteering had a negative influence on motivations concerning social relations and careers (Cox et al., 2018). This study is based on a form of online volunteering, where the volunteers do not communicate with each other or get anything career-enhancing out of the volunteering job. As a result, it is found that this sort of volunteering is solely motivated by the volunteer's understanding and values. However, online volunteering is a simple way of enhancing flexibility for volunteering tasks. We will position online volunteering in our project as a way of motivating potential volunteers if their argument for not volunteering is time. Therefore, we will investigate how online volunteering is viewed by the target audience. Though our design should be based on current volunteering conditions, the objective of online volunteering would be to examine if and how this type of volunteering should be presented to young potential volunteers. As this theme's literature does not apply directly to our specific project area, we must reflect upon our use of their findings. For example, several of the studies focus on volunteering categories such as corporate volunteering and online volunteering, which differs from the organizational volunteering found in DUF's member organizations today. This presses the question of whether the discovered perspectives and results can be generalized to our target audience and project. At the same time, the findings may offer light on new ideas that the organizations could consider implementing in the future.

Furthermore, while considering online volunteering, it is important to understand how it varies from more traditional kinds of volunteer activity. Although online volunteering might be flexible, it does have limitations, particularly when it comes to meeting specific motivating criteria like relationships and career-enhancing benefits (Cox et al., 2018). It becomes essential to evaluate how and if we should include online volunteering in our design in order to fulfill the demands and motivating characteristics of the target audience.

Finally, our research must examine the notion that alternate ways of volunteering result in improved volunteer engagement and satisfaction. It is important to our project that the design is based on our own investigations to understand the target group's perspectives and preferences, with concepts from this literature review and these alternative voluntary forms serving as supporting perspectives.

The theme 'Alternatives perspectives on volunteering' revealed inspiration and alternative insights on volunteering. Incorporating volunteerism into schooling or extracurricular activities may offer the potential to increase youth volunteering in general. This perspective on volunteerism will not be investigated further in the project. Furthermore, the significance of flexibility in volunteering jobs was positioned as important not just for young volunteers but also for volunteers of other age groups. As a result, this factor was identified as significant in the overall encouragement of volunteering. Finally, online volunteering was described as motivating by values and understanding those you help. Therefore, online volunteering was identified as a potential way of enhancing flexibility within volunteering, which we want to investigate further in our project.

Further work based on the literature review

Through this literature review, we have gained new insights into recruitment, retention, engagement, and alternative perspectives on volunteering. These insights have contributed to the first research question of what motivates young volunteers and what factors influence their engagement. A central reflection is the need to contextualize and generalize the results to our specific project area within DUF's member organizations in Denmark. Within the recruitment theme, motivational factors such as career enhancement and the desire to do good for others were identified. It is crucial to understand if and how these factors influence and motivate this project's target audience of young potential

volunteers in Denmark, as well as how the Danish culture and organizational structures might influence volunteer engagement.

The retention theme highlighted the importance of autonomy and organizational climate in maintaining volunteer engagement. The examination of this theme indicated the importance of creating a supportive environment and offering personal development opportunities that meet volunteers' needs for autonomy and competence. However, the establishment of a positive environment cannot necessarily be created in a digital design, and will more likely be something for the organizations to consider.

The literature on volunteer engagement highlights that autonomy is a key motivator. Studies show that high levels of autonomy lead to greater satisfaction and effort. A supportive organizational climate further enhances this motivation. Research also emphasizes the importance of a positive organizational climate, which affects perceptions of autonomy, competence, and relatedness. This climate boosts satisfaction and reduces turnover intentions. For DUF's member organizations, creating a supportive environment that emphasizes autonomy, competence, and relatedness is crucial as influential factors for engaging volunteers. We will, therefore, work further with these through the project in terms of motivational factors for becoming.

As we consider the alternative perspectives, it is important to assess which elements from company volunteering, online volunteering, and other forms of volunteering can be transferred into DUF's context and integrated into our design process. This will necessitate an objective approach to converting conceptual ideas into practical solutions and design decisions through an analytical approach and targeted empirical studies. We will focus on motivations and barriers for young potential volunteers in urban areas as well as organizations' representation in order to develop effective volunteering initiatives for DUF's member organizations.

Theory

In the following sections, we establish the theoretical foundation for our analysis and design development. First, *sensemaking theory* will be included to analyze participants' perceptions of volunteering and spare time activities. Further, We examine relevant theories on motivation and their

implications for our design. Last, we explore elements of *gamification*, design patterns, and aesthetics. Theory will be used to examine and analyze the data and further to create a meaningful and engaging design.

Sensemaking

In this project, we investigate youths' relation to volunteerism in order to understand the motivations and barriers to becoming a volunteer. To investigate this, we introduce sensemaking theory, which will be the foundation for how we analyze the collected data. We will use sensemaking theory to analyze our data in order to find relevant requirements for our design and understand the target group of the project. Through sensemaking theory, we will be able to analyze how the participants describe and imply their senses of both volunteerism and their spare time. Sensemaking theory is often used within organizations, which is not the context of our use of the theory. Therefore, we will argue for the relevance of sensemaking in this project.

Weick's sensemaking theory

The work with sensemaking is thereby about how people make sense of themselves, others, and the world. Weick introduces sensemaking in the book 'Sensemaking in organizations' as what the literal word implies: the making of sense. People who are interested in sensemaking are, therefore, working with how one constructs what they construct, why, and with what effects (Weick, 1995, p. 4). Sensemaking is both an individual and social activity, which Weick describes as potentially not separable, as sense is individual, but individuals vote, and the majority rules (Weick, 1995, p. 6). Because sensemaking is viewed as a social activity and is described as something that is negotiated between people, the theory is relevant for our social constructive work with understanding and knowledge through the project. As described, we see the truth as constructed between people, which is also the case in sensemaking theory.

Weick describes the nature of sensemaking as the talk of reality as an ongoing accomplishment, which takes place when people make retrospective sense of the situations which they find themselves and their creations in (Weick, 1995, p. 15). The understandings of the process of sensemaking are collected into seven characteristics of sensemaking. These will be introduced in order to understand sensemaking theory in depth.

The first property is that sensemaking is grounded in identity construction. This refers to how one is a sensemaker, but one does not act like a singular sensemaker (Weick, 1995, pp. 18-19). One's identity is constructed in the process of interaction, where selves are created as an ongoing puzzle undergoing continual redefinition, trying to find the appropriate self in situations. Therefore, the more self one knows, the less surprised they are in shifting situations, but could instead be confused by the overabundance of possibilities (Weick, 1995, pp. 20-24). This means that the process of sensemaking is grounded in the ongoing construction of identity, where this construction is both a negotiation and interaction with others. As an example, when participants in the FW describe volunteerism as "it is not cool", they view volunteering in light of their own selves and, in the interaction, agree that the identity of being a volunteer is not found appropriate for being perceived as cool.

The second property of the sensemaking process is that sensemaking is retrospective. This refers to how we can only know what we have done when we have done it and how we act on our previous experience (Weick, 1995, pp. 24-25). In the process of making sense of something, we synthesize previous meanings in order to figure out a way to find meaning in a new occurring situation (Weick, 1995, p. 27). This reflects how we use what we already know to act and then make sense of that action in retrospect. For example, when we asked participants what volunteering is, they used their previous experiences to make sense of the concept of volunteering.

The third property, sensemaking, is active in sensible environments. Weick defines *enactment* as how people produce part of the environment they face, meaning that there is no set environment out there for us to grasp (Weick, 1995, pp. 30-31). The enactment term illustrates how action plays a crucial role in sensemaking, where action can be inhibited, abandoned, checked, or redirected, as well as expressed. For that reason, action affects meaning not only by visible consequences but also within one's making of sense (Weick, 1995, p. 37). When the participants choose not to volunteer, it is thereby an action reflecting their perception of the volunteering identity as something they do not want to identify as.

The fourth property is that sensemaking is a social process. We have to take into account what others are doing to be able to grasp a situation, so to understand sensemaking is to pay more attention to sufficient cues of coordination, such as stereotypes, prototypes, and roles (Weick, 1995, pp. 40-42).

It is noted that social sensemaking is not only shared understanding but also alignment of understandings. Alignment refers to the negotiation of understandings and actions, where one aligns with others in compromise to achieve their respective ends (Weick, 1995, pp. 42-43). Through our work with the focus group, we analyze the discussions within the focus groups in order to understand how they create and align senses of the concept of volunteering and their spare time.

The fifth property of sensemaking is that it is always ongoing and never starts. Weick describes that to understand sensemaking is to be sensitive about the ways people chop moments out of continuous flows and extract cues from those moments (Weick, 1995, p. 43). Situations of thrownness are described as situations where you cannot avoid acting, cannot reflect the actions, and do not have a stable representation of the situation; every representation is an interpretation, and language is an action that changes the situation (Weick, 1995, p. 44). This is the case in the focus groups, where we ask them what volunteering means to them, and some of them do not know what to answer but still start articulating their senses of the word and the concept of doing something voluntary. In these situations, and in general sensemaking, emotions are what drives the meaning (Weick, 1995, pp. 48-49).

The sixth property is that sensemaking is focused on and by *extracted cues*. This is important when working with sensemaking because we are more likely to see products than processes (Weick, 1995, p. 49). This means that we are more likely to see what senses are already made than the ones that are in the making. Extracted cues are defined as judgments that focus on the future path. They are simple, familiar structures that are seeds for a larger sense of what may be occurring (Weick, 1996, p. 50). Extracted cues depend on the context, and the processes of sensemaking are forgiving, which means that we extract cues and make sense of any point of reference (Weick, 1995, pp. 51-54). An example is when volunteering is referred to as work, and the participants extract cues of volunteering being the same concept as a paid job.

The last property of sensemaking is that sensemaking is driven by plausibility rather than accuracy. Plausible reasoning is used for sensemaking rather than accuracy (Weick, 1995, p. 55). Because only one participant was an active volunteer in the FW, the other participants interpret plausible rewards of volunteering, as they have not experienced it themselves.

Situations that cause sensemaking

To give an understanding of how sensemaking is used in the project, situations that give occasion for sensemaking must be articulated. Hammer and Høpner (2019) describe that some situations where we are surprised or meet unfamiliar cues are specific situations that provoke sensemaking. These shock the usual continuous flow we are familiar with (Hammer & Høpner, 2019, pp. 126-127). Such situations cause stress, which we are forced to make sense of, which in short periods of time is ideal for making sense, but over time can become meaningless (Hammer & Høpner, 2019, pp. 127-128). When we collected data, we exposed the participants to situations that were different from their everyday flow. By asking them questions and making them perform tasks, we tried to get them to articulate their thoughts and understandings through these unknown situations. It is further described that complex and multiplicity of meanings are also special occasions for sensemaking, as these force a need for making sense of the many possible interpretations (Hammer & Høpner, 2019, pp. 128-129). When we exposed the participants to the questions, multiple participants asked; what do you mean? To which we often answered; what do you think? These situations are clearly difficult to make sense of for the participant, who experiences a significant need for sensemaking.

Sensemaking outside organizations

As Weick's book 'Sensemaking in organisations' (1995) and Hammer and Høpners' book 'Sensemaking, Organization, and Leadership' (2019) both state, they are concerned with sensemaking in the context of organizations. Because our project is made in collaboration with an organization, but is not concerned with the internal sensemaking within the organization, the relevance of sensemaking theory in the project will be clarified.

In Weick's sensemaking theory, he presents the process and seven properties of sensemaking before relating them to the context of organizations. He further describes the word sensemaking: "Although the word sensemaking may have an informal, poetic flavor, that should not mask the fact that it is literally just what it says it is" (Weick, 1995, p. 16). This description implies that sensemaking is not to be understood as anything else other than humans making sense of everything. We, therefore, see sensemaking as a relevant theory to use in other contexts. The theory of sensemaking has been used in other contexts in previous studies. Paull et al. (2013) researched how to use sensemaking as a diagnostic tool in the analysis of qualitative data. They describe the purpose as "The purpose of this paper is to demonstrate how researchers can use sensemaking to diagnose and explain phenomena in

ordinary situations" (Paull et al., 2013, p. 1). Sensemaking is used here in what they call ordinary situations, which refers to situations in general. They argue that the use of sensemaking theory stimulated researcher sensemaking, deeper data interpretation, and an important finding relating to the phenomenon that was investigated (Paull et al., 2013). Based on these findings, we argue that sensemaking theory is relevant to performing deeper data interpretation and relevant findings. Further, we argue that the use of sensemaking theory might benefit our understanding and qualify our interpretations. Sensemaking theory has also been used in contexts similar to this project. In a study, sensemaking processes of how Italian youths experience lockdown measures during the first months of COVID-19 are researched (Procentese et al., 2021). Their study was conducted using a grounded theory method, where they studied sensemaking through diaries from the youths. Their findings showed that sensemaking was a strategy used by the youths to adapt to the circumstances (Gatti et al., 2021). This study thereby used sensemaking theory to gain knowledge about the youths' everyday lives in the new situation of the pandemic. Therefore, this aligns with our approach, as we use the theory to gain an understanding of youths' sensemaking in the context of volunteerism and spare time.

How we work with sensemaking

Through our project we use sensemaking theory as a framework to build an understanding of the participants. We wish to understand the structures and processes of how they make sense and the senses they already have. In the FW, we investigate how they make sense of the barriers and possibilities for a design in the context of understanding what would motivate them to become volunteers. In the analysis of the FW, we will therefore interpret cues from their statements and conversations, as well as their causes for designing how they did. For the focus group, we will also interpret the groups' different cues of sensemaking to be able to gain knowledge of how they make sense of their spare time and volunteering. This will let us interpret what motivates them to do something in their spare time and how they prioritize, value, and understand their time in general. The senses analyzed in the FW and the focus group will be the foundation for understanding their perceived motivations and barriers to becoming a volunteer.

Motivation

The theory of motivation is fundamental for the problem formulation, as we want to motivate youths to become volunteers through the design. In this section, we will explore the theory of motivation based on Ryan and Deci's descriptions of *intrinsic* and *extrinsic motivations*. Ryan and Deci define motivation as being driven or moved to act. If you do not feel inspired to act, you are therefore termed unmotivated. In addition, Ryan and Deci believe that motivation is not uniform as it is not just about how motivated you are but also what motivates you and why you act the way you do. Motivation is thereby connected to one's basic attitudes and goals that underlie one's actions (Ryan & Deci, 2000, p. 54). Additionally, we will explore Atkinson's theory of *achievement motivation*. This theory is relevant in a volunteer context and helps analyze motivational processes and strategies to increase volunteer engagement (Maehr & Sjogren, 1971, p. 143).

Intrinsic and extrinsic motivation

Ryan and Deci describe *self-determination theory*, which distinguishes between intrinsic and extrinsic motivation. Intrinsic motivation stems from internal interest or enjoyment, while extrinsic motivation results from external rewards or results. Based on this, we have created Figure 5 below to illustrate the two key concepts:

Figure 5: The two overall types of motivation (Ryan & Deci, 2000, p. 55).

The types of motivations are relevant for understanding the participants' motivations through the analyses. Intrinsic motivation leads to high-quality learning and creativity and is based on people's inner values. Extrinsic motivation can be both positive and negative, depending on whether it is autonomous or externally controlled (Ryan & Deci, 2000, p. 55). The two aspects of motivation will

be used to understand what the participants' senses and statements imply about motivations. Further, the found motivations will be communicated through the design, where the understanding of what drives and enhances motivation will be crucial for the development.

Intrinsic motivation

Intrinsic motivation is defined as the doing of an activity for its intrinsic satisfaction rather than any separate consequence. People who are intrinsically motivated act for the fun or challenge rather than because of external influences, pressures, or rewards. It was first recognized in experimental studies of animal behavior, where it was discovered that many organisms engage in exploratory, playful, and curiosity-driven behaviors even without reinforcement or rewards. Intrinsic motivation drives individuals to gain knowledge and learning skills by acting on one's interests. This motivation affects performance, persistence, and well-being throughout life (Ryan & Deci, 2000, p. 56). Intrinsic motivation occurs in two ways: Inside individuals as an inherent driving force or in the relationship between individuals and activities (Ryan & Deci, 2000, p. 56).

Extrinsic motivation

Although intrinsic motivation is important, most activities are not intrinsically motivated and instead extrinsically motivated. Extrinsic motivation is about performing activities to achieve a separable consequence, as opposed to intrinsic motivation, where the activity is performed for one's own satisfaction. Furthermore, external motivation varies in the degree of autonomy, with some being more autonomous than others (Ryan & Deci, 2000, p. 60). Extrinsic motivation often occurs when behavior is not naturally interesting and requires external encouragement and different forms of extrinsic motivations here drive motivation. The primary extrinsic motivation that makes people willing to perform such behavior is that it is valued by others to whom they feel connected. To facilitate the internalization of motivation, it is relevant to create a sense of belonging and support of competence. Autonomy support is also important as it promotes the integration of rules and makes behavior more self-determined. (Ryan & Deci, 2000, p. 64). Understanding these forms of motivation is important, as many activities are not naturally interesting, and it may be necessary to motivate people to perform them.

Within self-determination theory, *organismic integration theory* is introduced to describe different forms of external motivation and the factors that influence how behavior is regulated (Deci & Ryan,

1985, in Ryan & Deci, 2000, p. 62). Ryan and Deci include a taxonomy of different forms of human motivation as illustrated in the following Figure 6:

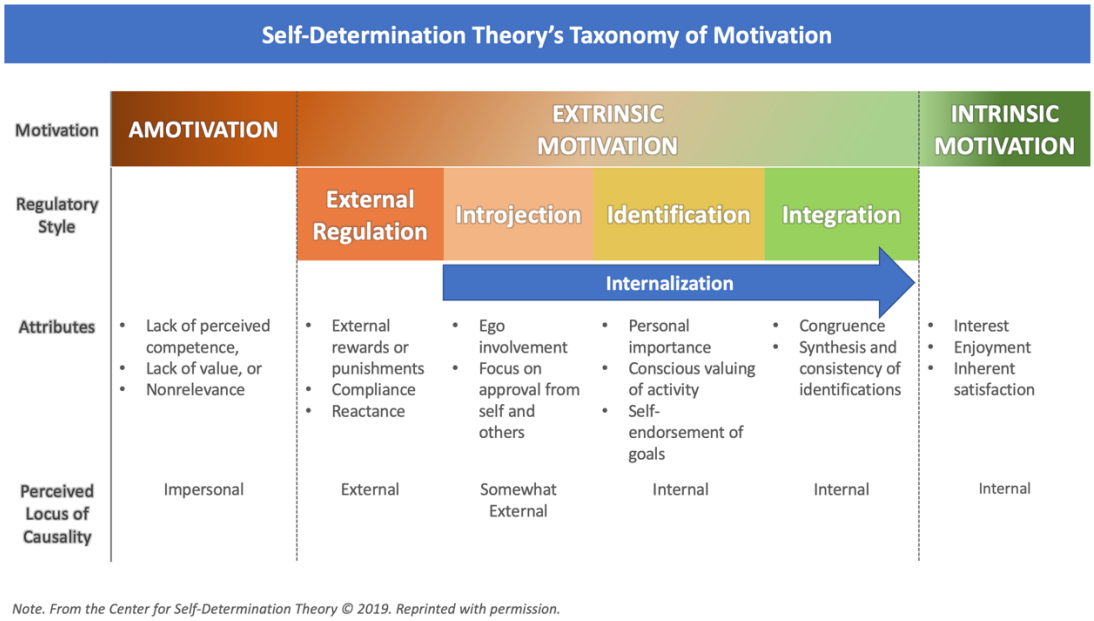


Figure 6: Types of human motivation (Appendix 9).

Here, motivation is ranked from external to internal in relation to how much the motivation originates from within. *Amotivation* is depicted on the far left, which is a state in which there is a lack of intention and personal causality to act. It can occur when a person does not appreciate the activity, feels incompetent to perform it, or doubts its worth (Ryan & Deci, 2000, p. 61). Further, the taxonomy shows four different types of extrinsic motivation: *external regulation*, *introjection*, *identification*, and *integration*.

External regulation describes behavior that is performed to meet external demands or obtain external rewards. Individuals often perceive this type of behavior as controlled or alienated, where the actions are seen as motivated by external causes or incentives (EPLOC; deCharms, 1968 in Ryan & Deci, 2000, pp. 61-62). Introjection is a form of intrinsic motivation that is controlling. Individuals perform actions during introjection with the feeling of pressure to avoid guilt or anxiety or to achieve ego enhancements. This represents regulation based on contingent self-esteem. Regulation through identification is a self-determined form of extrinsic motivation, where a person accepts and values a behavior based on its personal meaning and relevance to their life goals. Integrated regulation is the most self-determined form of external motivation, where identified rules become a natural part of

oneself through adaptation to personal values and needs. This is similar to intrinsic motivation in that it is autonomous and harmonious, but the behavior is still performed with a view to a separate outcome, even if it is voluntary and valued by the person (Ryan & Deci, 2000, p. 62).

The ranks of motivation will be used in the analyses to determine the participants' motivations and motivations for volunteering. The ranks of motivations that are found will guide the development of design features in order to motivate youths successfully through design.

Achievement motivation

To understand what could motivate young people to engage in voluntary work, it is useful to look at achievement motivation theories and their relevance in a volunteering context. Achievement motivation theories, such as Atkinson's theory, focus on individuals' behavior and motivation in situations where their performance is judged against expert standards (Maehr & Sjogren, 1971, p. 143). Although achievement motivation theories were developed primarily for educational purposes, their basic principles of motivation and behavior may still be relevant in other contexts, such as volunteering. These theories provide a framework for analyzing and understanding motivation in relation to the actions that follow the motivation. These thereby identify strategies to increase motivation among volunteers.

Based on John W. Atkinson's theory of achievement motivation, we have created Figure 7 below to illustrate the two key concepts that Atkinson uses to describe the drive to overcome challenges and achieve goals.

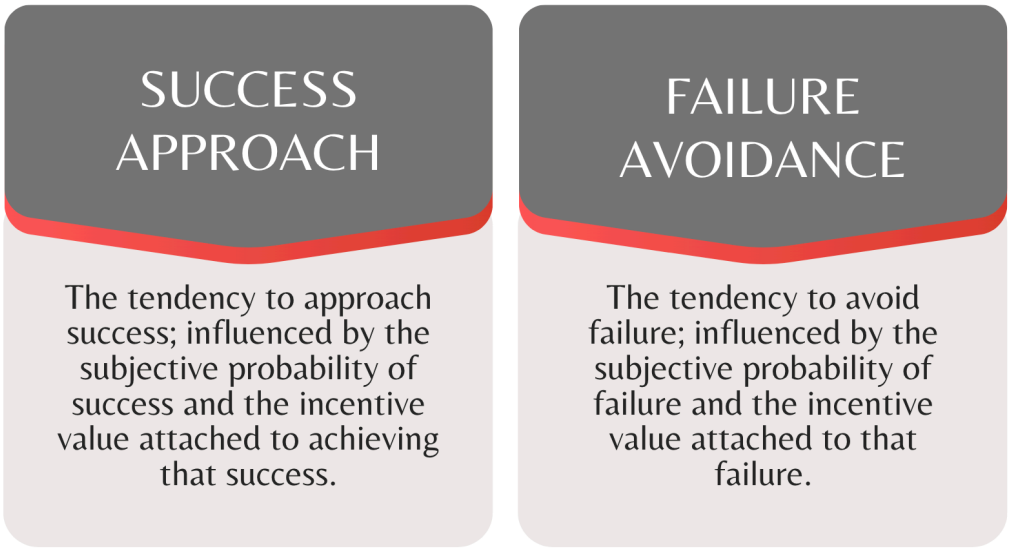


Figure 7: Atkinson's theory of achievement motivation (Maehr & Sjogren, 1971, p. 144).

A central idea in achievement motivation theories is the existence of conflicting motives in individuals. On the one hand, people want to achieve success, while on the other hand, they fear failure. These conflicting motives are an integral part of the individual's personal orientation and differ from person to person (Maehr & Sjogren, 1971, pp. 143-144). Atkinson's theory accurately predicts that individuals with an achievement-oriented approach will have a more moderate approach to levels of success, while individuals with a fear of failure will either avoid moderate levels or prefer extreme levels of success (Maehr & Sjogren, 1971, p. 147). It is also important that achievement motivation theories take into account individual differences and personality traits. This means that motivation is affected not only by situational factors but also by personal characteristics that can influence how a person responds to performance demands (Maehr & Sjogren, 1971, p. 145).

Although the model does not only apply in social competition situations, it is worth noting that studies suggest some form of social competition in performance contexts. However, in a specific independent study predicted effects were not found, which suggests limitations or variations in the validity of the theory (Maehr & Sjogren, 1971, p. 148).

Based on this theoretical framework, specific predictions can be made about what motivates youths to volunteer. For example, one might expect that youths with an achievement-oriented approach would be more motivated when the probability of success is moderate. In contrast, those who fear failure might have lower motivation when extreme probabilities of success or failure. The theory of

achievement motivation will be hereby used to understand how the motivations of the participants in the analyses promote actions driven by either avoiding failure or approaching success. These will also be used to guide the designs' features, which should motivate youths to become volunteers.

Gamification

We seek to create a deeper and more engaging user experience that can motivate users to actively interact with the design. Therefore, theories of gamification are introduced, which involves the application of game elements and techniques in non-game contexts to increase user engagement and motivation.

We choose to base our understanding of gamification on Zichermann & Cunningham's definition, which reads, "The process of game-thinking and game mechanics to engage users and solve problems" (Zichermann & Cunningham, 2011, p. xiv). Zichermann and Cunningham work from the idea that everything has the potential to be fun and that making the product fun is what is most important. They argue that it is the mechanisms in the game that make it fun and not the theme it may have (Zichermann & Cunningham, 2011, pp. 2-3). In our case, this would mean that in a gamified view of volunteering, it would not necessarily be the topic of volunteering that would make our design fun for users but rather the game mechanisms that may be built around it. Additionally, in her book Reality is Broken: Why Games Make Us Better and How They Can Change the World, Jane McGonigal (2011) covers a wide range of games and gamification in relation to how they can influence people. McGonigal describes, among other things, that when we play well and avoid unnecessary obstacles, we create positive feelings and deep commitment. Through gameplay, all of our neurological and physiological systems are activated for happiness, motivation, memory, and attention (McGonigal, 2011, p. 28). By using gamification, we can thus create positive feelings in young people, which can help make them more likely to engage with the design and ultimately volunteer.

Zichermann and Cunningham divide reward elements within gamification into four types of systems of reward: status, access, power, and stuff. Status benefits and rewards offer users the opportunity to work their way up and, in social contexts, to work their way up above others. Gamification can be in the form of *badges* that can symbolize status and be given physically or virtually, *levels, and*

leaderboards, which are another way of indicating achievements and status in relation to other users. According to Zichermann & Cunningham, these work well as engaging elements (Zichermann & Cunningham, 2011, pp. 10-11). Access can be seen as a loyalty program that gives the user access to things, such as early access, VIP seating, and getting ahead in the queue for appointments (Zichermann & Cunningham, 2011, p. 11). Power gives the user some kind of power over other users, for example, acting as a moderator, which can give the user a positive feeling of having influence. Finally, stuff refers to physical or material rewards or prizes offered to users as an incentive. This can include free items, gifts, or other physical rewards. However, these types of rewards are also said to have a limited duration as an incentive, as interest often wanes after the reward is received or redeemed. According to Zichermann and Cunningham, gamification designers, therefore, often focus more on creating rewards such as status, access, or power, as these do not have a direct monetary value and can be more valuable to the users while being cheaper and more engaging for the design (Zichermann & Cunningham, 2011, p. 12).

This claim is further acknowledged by McGonigal, who explains, "We've considered how points, levels, and achievements can motivate us to get through the toughest situations and inspire us to work harder to excel at things we already love" (McGonigal, 2011, p. 347). With this, McGonigal argues that game elements do not necessarily solve all problems, but they can be relevant elements in making something fun and inspiring (McGonigal, 2011, p. 347). Especially the younger generations who have a lot of experience with games and, according to McGonigal, have an average of 10,000 hours in games by the time they turn 21, and this, McGonigal argues, means that young people have practiced their skills within; "[...] cooperating, coordinating, and creating something together" (McGonigal, 2011, p. 348). It is, therefore, something we can keep in mind when designing for this target group.
Gamification can be done in many ways. In the following, we will thus go through some of the game mechanics that gamified systems are made of to create an understanding of the possibilities that exist and how they may enhance a design.

Collecting is a deep-seated behavior in which people collect objects of various kinds for many reasons, including the desire for knowledge, relaxation, social interaction, competition, recognition, control, nostalgia, and the accumulation of wealth. This instinct is also used in gamified design through mechanisms such as virtual collectibles, scarcity, and rewards (Zichermann & Cunningham, 2011, pp. 83-84). This can also be in the form of badges. Badges are visual symbols or marks that

signal status or achievement. They can be powerful drivers for people to assemble or participate in gamified systems. Badges are also used by game designers to encourage social promotion and celebrate in-game goals and progress (Zichermann & Cunningham, 2011, p. 55). In addition, recognition for achievement is a core factor in gamification, where users seek rewards and recognition for their success. This affects all users and can be expressed through badges, trophies, contests, and kudos systems that encourage engagement and progress in the game (Zichermann & Cunningham, 2011, pp. 88-89). Finally, customization in gamification allows users to personalize their experience by choosing avatars, images, or fonts that can increase their engagement. For example, users can customize their profiles, showing their engagement (Zichermann & Cunningham, 2011, p. 70). However, too many choices can lead to choice overwhelm and decrease satisfaction, so it is important to offer adequate choices without overwhelming users (Zichermann & Cunningham, 2011, p. 71).

While gamification is a good tool for creating meaningful and engaging experiences for users, some considerations must be made (Goethe, 2019, pp. 25-26). A significant challenge with gamification can be the danger of superficial design, where the focus is exclusively on visible game mechanics (Goethe, 2019, p. 28). Consequently, instead of making gamification the main focus, we will seek to incorporate certain aspects that might enhance the user experience or serve as a source of motivation. In addition, ethical design can be decisive in gamification. It is important to avoid manipulating or controlling users through game elements, as this can undermine trust and lead to a negative user experience (Goethe, 2019, pp. 32-33). Real-time feedback is also a key factor in effective gamification. By providing users with immediate feedback and personal goals, one can improve performance management and increase user engagement (Goethe, 2019, pp. 33-34). Gamification is, therefore, not a universal solution. A successful implementation requires realistic expectations, a focus on in-depth game design, and an ethical approach to ensure an engaging and meaningful user experience (Goethe, 2019, p. 34).

Design theory

The objective of this project is to design a prototype that can motivate and engage young people based on the theoretical foundation defined above, as well as investigate the target demographic and context of use. The more design-specific elements will thus be covered in the following parts of the theory section. These elements include a mobile-first approach, design patterns, and aesthetics.

Mobile-first approach

Often, people rely primarily on their mobile devices for many things in their daily lives, including entertainment, communication, transportation, and navigation. Mobile interfaces are simple and intuitive because of the touchscreens on smartphones and tablets. In order to make digital products perform well across a variety of screen sizes, mobile-first or responsive design is now frequently prioritized in the design process. Furthermore, according to Tidwell et al., many individuals prefer to use their mobile devices for their internet access, which is one of the reasons why we choose to design for this (Tidwell et al., 2020, p. 295).

We have reflected on what type of interface would be ideal for our design in terms of an app, website, program, etc. These reflections and arguments will also appear in the presentation of prototype 1. Because we would like to motivate young people who are not already interested in or have knowledge of voluntary work, we do not expect them to be motivated enough to download an app. Additionally, studies indicate that people use their phones more and more, especially younger generations. Further, they also indicate that it can be advantageous to choose a web-based solution rather than developing an app, as users do not need to download them from app stores, which can make them more accessible and user-friendly for some target groups. This may be a factor that makes mobile-first more attractive, especially for those who prefer not to download or install additional applications on their devices (Turner-McGrievy et al., 2016; Koetsier, 2022). Therefore, in this section, we will focus on theory regarding the design of an interface that can work well on the phone but does not need to be downloaded; thus, a web-based mobile-first design.

Designing an Interface

In this theory section, we will explore important elements and design choices that are significant in creating an intuitive design that can engage our target audience. Thus, we will explore the components and design decisions that can be crucial in creating a useful and intuitive design. Our primary source for this section will be the book Designing Interfaces: Patterns for Effective Interaction Design by Tidwell et al. (2020), supplemented by relevant studies on the subject.

Tidwell et al. introduce design patterns, which are specific sets of components and functions that improve the software's usability and utility (Tidwell et al., 2020, p. xv). Patterns are based on human

perception and software usage, take into account the tasks and needs of users, and form the basis for intuitive and effective user interfaces on all screens (Tidwell et al., 2020, p. xii). Therefore, we will explore the patterns below that we believe are relevant to our design.

Layout

Tidwell et al. describe *visual hierarchy* as an important principle to follow when designing a clean layout in your interface. Visual hierarchy means that the most important content or element in one's design should stand out, while less important elements should be less prominent. A good user interface must thus support the user in, based on the page's layout, being able to easily identify the most important elements and functions, the relationships between the elements, and what to do next (Tidwell et al., 2020, pp. 209-210). In this connection, focusing on the *visual framework* can be essential in the design process. Visual framework means that all pages on an app or site share the same characteristic features, such as the same color coding, set-up of elements, and other stylistic choices. This helps the platform to have a coherent and continuous appearance and can support making the design easy to navigate. In addition, a strong visual expression, which is repeated across the site's pages, can help make the individual page's content stand out (Tidwell et al., 2020, p. 228). Due to this project's focus on motivating young people, we find it important to create a consistent look – both for aesthetic reasons that can support the product's relevance among the target group but also to make it clear which element is the focus of the layout, and thus to ensure that it is the motivating features that are noticed.

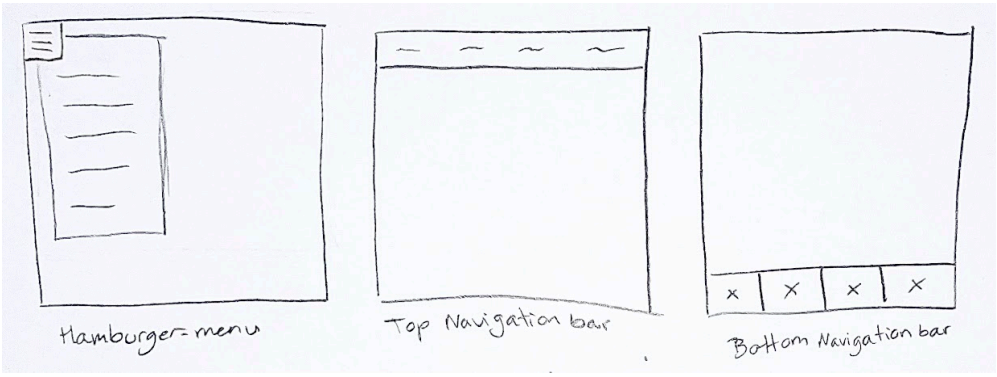
In addition, Tidwell et al. include considerations about the layout of the page's visual hierarchy, in which *center stage* and *grid of equals* are described. With center stage, the focus is on letting the most important element or function be the most highlighted or largest subsection on the page and placing other less important elements on the periphery in smaller panels. This type of layout aims to guide the user's eye to the most important information or content immediately when they open the page (Tidwell et al., 2020, p. 231). Whereas, a grid of equals arranges different items in a grid or matrix, giving each element the same significance and attention. This arrangement works well when you have a lot of content in the same style or importance, such as news articles or blog posts, as users will have a variety of options to preview and select from (Tidwell et al., 2020, p. 235). In our design, it may be relevant to consider a balance in making the motivating elements most noticeable and also giving the

different organizations equal attention. We will dive deeper into reflections about this in our presentation of prototype 1.

Navigation

Based on our mobile-first approach, we find it necessary to have an intuitive menu that can make it easy and clear for the user to navigate between the site's pages. It must therefore be a menu that can work well on phones and computers. Navigation on a page can be created in many different ways and we will, therefore, describe some of the types of menus that we can use to let the user navigate the website.

Tidwell et al. describe two menu types that are most often used in designs accessed through mobile devices. These are a *hamburger-menu* and a *navigation bar* at the bottom of the page, as shown in Figure 8 below:



Figur 8: Sketch of hamburger-menu and navigation bars.

The hamburger-menu gets its name from the icon, which is most often visualized with three horizontal lines on top of each other and can resemble a hamburger. This type of menu consists of a button that, when pressed, opens a panel with the necessary navigation options. The other most commonly used for mobiles devices is a navigation bar at the bottom of the screen. This menu remains in the same place while the user moves around the system or, for example, scrolls and lets the user access the navigation at all times (Tidwell et al., 2020, p. 132).

Additionally, other types of menus or panels are *accordion* and *collapsible panels*, as shown in Figure 9 below:

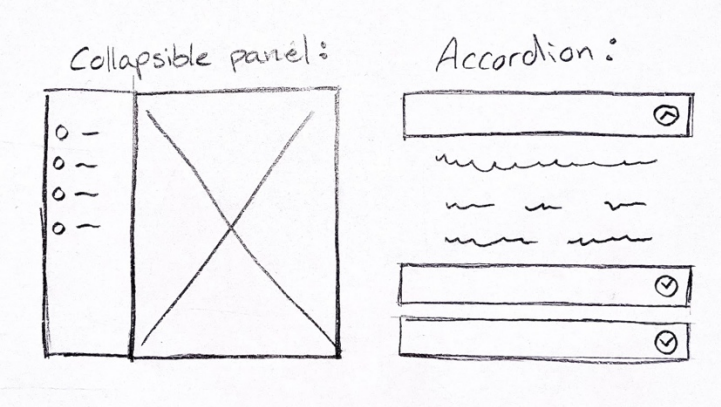


Figure 9: Sketch of collapsible panel and accordion.

Accordion involves setting up the content of the page in a stack of panels that can be opened and closed independently of each other. This makes it easier for the user to navigate large amounts of content and access only the information they want, thus decluttering the interface (Tidwell et al., 2020, pp. 245-246). Collapsible panels are modules with secondary or optional content that the user can open and close. They are used to group and hide non-critical content or features on a page, keeping the interface simple and uncluttered. They are useful when there is a lot of heterogeneous content on a page and when certain modules may be more relevant or interesting to some users than to others (Tidwell et al., 2020, p. 249).

Visual and interactive elements or features

In addition, we will describe several interface patterns that include visual and interactive elements or functions, particularly *mobile direct access, stream and feeds, filmstrip, infinity list, scroll bar, progress indicator* and *icons*. These patterns have different purposes and can influence user's perception of the platform and its functions.

Tidwell et al. describe mobile direct access as a function where the screen displays usable content without requiring input from the user. The app uses location and time to infer the user's needs and instantly provides relevant output. This is used to engage users immediately by reducing the need for manual entry or configuration (Tidwell et al., 2020, p. 51). In our design, this can, for instance, take the form of recommendations of organizations based on the users' physical location.

Streams and feeds are continuously updated series of images, news stories, web articles, comments, or other content presented in a scrollable, vertical, or sometimes horizontal strip or ribbon. They are used when a website or app has frequently updated content that users check regularly. It is useful for news publishers, social media, and enterprise collaboration, where users need to view and interact with dynamic content in real time. It allows for ongoing engagement and interaction from users (Tidwell et al., 2020, p. 53). Additionally, a filmstrip is a navigation pattern often seen in social media that allows users to swipe back and forth to view different content one screen at a time. This is useful when users do not mind swiping through multiple screens as they are all potentially interesting. The advantage of the filmstrip is that each element fills the entire screen, and no space is required for tabs or other navigational components. It encourages browsing and serendipity as users swipe through the content (Tidwell et al., 2020, pp. 310-311). Furthermore, this can also be described as an infinite list, which is an interface that continuously loads more content as the user scrolls down a long list. It is used to display endless lists such as email messages, search results, or articles and lets users endlessly scroll through content (Tidwell et al., 2020, pp. 322-323).

In this connection, a scroll bar can be useful. A scroll bar is a graphic element that shows your current position in a document or list and is used to navigate through content. As you scroll, the scroll bar moves, providing visual feedback on how far you are from the start or end of the document (Tidwell et al., 2020, p. 199). Another way to give the user an indication of how far they are is a progress indicator, which is a visual element that shows the user's location and progress in a linear process. It is used to guide the user through steps or pages by showing how far they have come and how many steps are left. Such an element can include a map of all the steps next to important navigation buttons such as "Back" and "Next" and each page may be numbered to indicate the user's location (Tidwell et al., 2020, p. 189).

Another interface pattern that can support the user in intuitively navigating the system is icons. Icons are graphical representations used in place of text to express ideas or indicate functionality in a user interface. They provide the user with a quick visual reference to an action or concept. It is important to create icons that are recognizable and follow a consistent visual design to ensure clarity and ease of use. While icons are useful, they should not be the only method of conveying information; supplementary text labels can improve user understanding (Tidwell et al., 2020, pp. 278-279).

These patterns have different purposes, can create visual flow, and influence the user's perception of the platform and its functions. By examining Tidwell's graphical user interface patterns, we can choose the ones that best suit our mobile-first web design and its purpose, which is to appeal to user expectations and create an intuitive design. The choice of user interface patterns and their implementation will be elaborated on in the sections presenting our first and second prototypes.

Aesthetic design

Visual design is more than just 'dressing up a user interface'; visual design and expression, if done well, can make a digital product stand out. The visual language used in a given interface conveys the brand's attitude and spirit and acts as its avatar at various touch points (Tidwell et al., 2020, p. 255). Therefore, in this part, we will delve into aesthetics and its impact on a design.

According to several studies, visual design plays a decisive role in whether a product is user-friendly and whether users trust the brand. Professional design and the appearance of the website thus create more trust, even when other factors are less convincing. The studies indicated that users tend to believe that designs that are aesthetically pleasing would also be easy to use. Even after using the design, users expressed the possibility that their perceptions of how simple it was were influenced more by its appearance than by their actual interaction with it (Tidwell et al., 2020, p. 255; Silvennoinen, 2021; Tractinsky et al., 2000, p. 142; Tractinsky & Hassenzahl, 2005, p. 67). The product looking good is important, as true beauty occurs when form and function in digital design work together in harmony (Tidwell et al., 2020, p. 255). However, as designers/developers, we recognize that aesthetics alone does not guarantee usability. While visual appearance can shape people's opinions, it does not necessarily reflect the actual ease of use. Therefore, it has been crucial for us to prioritize functionality initially and then introduce visual improvements.

Analysis 1: The Future Workshop

The aim of the FW was to gain an understanding of the participants' comprehension of volunteerism and, from this, interpret motivations and barriers to becoming a volunteer as a youth. As described in the method section, a FW is a process of three phases: the critique phase, the fantasy phase, and the implementation phase. Therefore, the FW analysis that follows will be divided into these three phases,

with each phase subsequently undergoing a thematic analysis. The themes were formed based on the four groups' notes and descriptions of their ideas and understandings, which are illustrated in Appendix 10. Further, our field notes and observations during the FW will also be included in the analysis and can be found in Appendix 11. Requirements for the design are identified based on the motivations and barriers that imply how the participants could find volunteerism to be a valuable spare time activity. Sensemaking theory, motivation theory, and the literature review are used to interpret the participants' understandings and motivations.

The critique phase

In the critique phase, the participants had to individually write down what it means to be a volunteer and why they believe the majority of youths are not becoming volunteers. After they had reflected upon this, they had to cluster their critiques together. At last, they had to pick one of the clusters to work further with and were asked to argue why this cluster was chosen and why the other clusters were not. Within the data we collected for this phase, we coded three themes of critiques from the notes and elaborations of the participants: Knowledge about volunteerism, assumptions about volunteerism, and rewards from volunteering.

Knowledge about volunteerism

From the participants' work with critiques, all four groups had clusters based on the knowledge about volunteerism. Here, they all criticize the lack of information about volunteerism and ask questions about volunteerism in general. Group one described a cluster with the question "What can I volunteer for?". In this cluster, there were post-its with comments such as "Not aware of different ways of volunteering" and "Haven't heard of any volunteering jobs" (Appendix 10, p. 1). The group here describes that they are not aware of the possibilities of volunteering in general. They differentiate between the activities as a volunteer, described as a way of volunteering, and the role as a volunteer, described as a volunteering job. Based on this, we interpret that group one is aware of volunteering as a concept but not what the concept of volunteering contains of activities. Group four also describes a lack of knowledge about volunteering as "Lack of knowledge of doing volunteering things" (Appendix 10, p. 6). This further implies an understanding of volunteering as a concept, but not specifically what volunteers do. This is interpreted by the phrase' volunteering things', which implies a cue of knowing that volunteers do things, but not a sense of what these things actually consist of.

Group three further described a barrier as “Lacking information about how to start volunteering” (Appendix 10, p. 5). This implies that the group is aware of the possibility of volunteering but does not know how to start in an organization. Group two describes a similar barrier as “People don’t know the correct way to volunteer” (Appendix 10, p. 3) and adds that they think that this problem could be solved by providing some kind of guide. Group two’s description implies a sense of volunteering as something that should be done in a specific way and that there is a correct and, therefore, also an incorrect way to volunteer, which is perceived as a barrier. Overall, all these descriptions from all four groups imply that the participants are aware of the concept of volunteering but not what this concept involves in terms of activities and where and how to start volunteering. As all groups seem to lack information about volunteerism in general, we interpret that they are not confronted or interrupted in their everyday life by the possibility of volunteering. This implies that the possibility of becoming a volunteer is not considered by the participants, as the concept of volunteering does not create an occasion for sensemaking, and they, therefore, do not make particular sense of volunteering in general. Group one also describes that there is a lack of marketing and “Find the right ‘fit’ organization” (Appendix 10, p. 1). They here critique their experience of missing visible advertisements for the opportunity to become a volunteer and to guide one to find a relevant organization. Their critique of the marketing of volunteerism implies a sense that if youths see advertisements for volunteerism, there is an increased probability of them becoming volunteers. This emphasizes how group one has not been interrupted in their everyday life by volunteerism as an opportunity, which here makes them critique their awareness of the possibility.

Overall, the participants’ lack of information and the missing occasion for sensemaking of the concept of volunteerism are therefore interpreted as barriers to becoming a volunteer. When the participants do not get interrupted and create an occasion for sensemaking, they are not motivated or unmotivated to become volunteers because they do not relate to volunteerism at all. Based on this, we interpret a need for the design to introduce the concept of volunteering and create an occasion for sensemaking for the users.

Assumptions about volunteering

Given that the participants perceive these critiques in terms of knowledge about volunteering, we infer that they themselves may also have limited senses of the concepts of volunteering, as their critiques are based on their own senses. Additionally, only one participant was an active volunteer

when we performed the FW. Therefore, we interpret the other clusters of critiques as assumptions from the groups, as they do not have thorough senses of what volunteerism is. The theme of assumptions about volunteering is based on the participants' descriptions of what volunteering is and what critics they have of the concept in general.

In the coding of the FW, it became clear that time was mentioned by all the groups as a factor. Group one explained that flexibility in volunteering was seen as a barrier to becoming one, as they find volunteering time-consuming. On a post-it, they describe "people are already stressed and don't want more things on their plate" (Appendix 10, p. 2). Group two and three both describe that people do not have enough time, and group three also relates the factor of time to the feeling of stress (Appendix 10, pp. 3-4). The participants describe perceptions of their own time based on what they experience without volunteering. Therefore, we interpret that they have senses of their lives as already filled up. Based on that, they find cues in the concept of volunteerism that make them conclude volunteerism as either time-consuming or as activities that take time. Group one's description further implies that the factor of time is already problematic in their lives, without mentioning volunteerism, as they describe that people are 'already stressed'. Based on the sense that people are already stressed, there could be a barrier in introducing any new activity to them as an option because the stress could make them reject this option immediately. However, group one chose to work further with this perceived barrier, which we interpret as an act upon the sense that the factor of stress is possible to break. Group two and three's conclusion of people not having time and that this is a barrier that is not fixable is interpreted as an assumption from which the groups make sense of volunteering as not an option. Further, their conclusion of time as a factor that barriers the option of volunteering, we interpret a sense of volunteering as not prioritized as important in all available options.

Related to volunteering and prioritizing, group four also describes a cluster of time. They describe a barrier of "FOMO", short for fear of missing out, and describe "time spent on volunteer work is time away from friends and sports" (Appendix 10 p. 6). This implies that the participants perceive a feeling of missing out on their other social activities if they choose to become volunteers. The participants further disconnect their social life from volunteering. The disconnection could be a barrier to volunteerism, as their descriptions imply that they are more motivated to spend time on their social activities. Group four further describes that; "They prefer to work where they get paid" (Appendix 10, p. 6). The description shows a prioritization in the word 'prefer' whereafter a paying job is

mentioned as the priority. Based on the assumed feeling of missing out and the perforation of a paying job, we interpret that the participants make a reference between a paying job, their social life, and volunteering. From the comparison between a paying job and volunteerism, there is a similarity in the sense of a job and volunteering, where they prefer the paying job. This implies that they are more motivated to perform a paying job than volunteering. Overall, the participants seem to not prioritize volunteerism as they have a sense of volunteerism as disconnected from their social activities and volunteering as similar to the concept of a paying job, but without the payment. They describe preferring the paying job, which could be grounded in the extrinsic motivation of getting paid.

Another assumption, which could be connected to why the participants would not prioritize volunteering, was also coded. Group four describes, "They don't feel there is any need of doing volunteering things" (Appendix 10, p. 6). Group four criticizes volunteering for being a concept that is not needed, which implies a sense of volunteering as an activity that does not matter. If youths have a sense of volunteering as an activity that does not matter, this is interpreted as a barrier to youths becoming volunteers.

Group two wrote an assumption of volunteering as old fashioned on a Post-it and elaborated that it "Haven't evolved into the digital world", "you can also volunteer through the internet now", and "Other organizations than traditional ones" (Appendix 10, p. 3). They describe a sensemaking process where 'traditional' organizations are stated as old-fashioned as they believe it is not an option to volunteer online. The group chose to work further with this because they found it interesting and easy to change. This is interpreted as a motivation grounded in the sense that online volunteering would be better suited for youths than physical volunteering. The sense of volunteering as an old-fashioned activity where one has to physically be somewhere specific is therefore interpreted as a reason for not becoming a volunteer.

The last assumption was expressed by group four, who described volunteering as "It is not cool" (Appendix 10, p. 6). The group did not elaborate on this critique any further, but they did not choose to work further with it, as it was found too complex. We interpret the critique of volunteerism as not being 'cool' as grounded in the participants' own senses of the concept of volunteerism, where they here assume that youths would not volunteer based on this sense. This refers to the social element of sensemaking and that sensemaking is the building of identity. When volunteering is described as 'not

cool', this cues a sensemaking process where the participants interpret their social lives and the common senses within these and try to align their senses of volunteering to these. Therefore, when they classify volunteering as 'not cool', it indicates they do not see it aligning with their social values, leading them to view it as socially insignificant. This perception is a barrier to volunteering, as youths prioritize their social status and shape their identities to align with the common sense in their social lives.

Overall, the participants' negative assumptions of volunteering being time-consuming, not needed, old school, and not cool are interpreted as barriers to volunteering, as these are described as reasons for either not prioritizing volunteering or perceiving it as an option to do. Based on this theme, we therefore interpret a need for the design to invalidate these negative assumptions about volunteering. If these assumptions were invalidated, youths would have to create new senses about volunteering, which could make them act differently.

Rewards in volunteering

The theme about rewards in volunteering is based on the clusters from the FW which involved rewards, which group one, three and four had. This theme consists of the participants' perceptions of what the rewards from being a volunteer are, and how these affect youth volunteering.

In the critique phase of the FW, group one and four mention community as a reward of volunteering. Group one made a cluster called "Rewards," where one of the post-its says, "Become part of a community" (Appendix 10, p. 1). Additionally, group four also noted "Meeting new people" (Appendix 10, p. 6) on a post-it note placed apart from all the clusters. As group one's note is clustered with other perceived rewards, we interpret that group one sees the possibility of becoming a part of a community as a reward from volunteering. This is grounded in a sense of communities as valuable because it is positioned as a reward. The community in organizations is therefore interpreted as a motivating factor for becoming a volunteer, according to group one. Group four's note about meeting new people is not in any cluster but is just placed on the poster alone. Therefore, it can not be interpreted whether they perceive the aspect of meeting new people as either a positive or negative aspect of volunteering. However, it is clear that it is an aspect that they associate with volunteerism when making sense of volunteering. Although we interpret becoming part of a community as

something the participants make a positive sense of in relation to volunteerism, it is not clear if meeting new people is perceived as a positive or negative aspect of volunteering.

As described in the literature review, the results from Pearce et al. (2022) showed that rural youths volunteered if their friends did it too. Our analysis implies that these participants are also motivated by becoming a part of a community but not specifically related to their friends. Further, Yamashita et al. (2017) found that a motivating factor for becoming a volunteer is doing something for the community. This also positions the factor of community as a positive factor in the decision to become a volunteer. However, based on group four's note of meeting new people as either a positive or negative aspect of volunteering, there could be a barrier in the starting phase of volunteering, where one is not part of the community yet. Here, the other volunteers would be new people who, as interpreted, could be sensed as either a positive or negative aspect of becoming a volunteer. The reward of becoming a part of the community is thereby a result of a process that could be a barrier to starting as a volunteer.

In contrast to the community aspect of volunteering, both group one and three mentions individual-oriented rewards in volunteering. In group one's cluster of rewards, they wrote "Learning about yourself" (Appendix 10, p. 1) on a note. Because this note is clustered with other rewards, we also interpret this as a perceived reward from volunteering. Additionally, Group three has a cluster named "Motivation" with a note saying "Intrinsic motivation - volunteering because you want to" (Appendix 10, p. 4). From the name of this cluster and the description, it is interpreted that the group has a sense of volunteering as a concept one should be motivated to do based on one's own values and desires. Further, we interpret the term intrinsic motivation as a reference to Ryan and Deci's term, which implies that the group believes that motivation should be driven by one's own satisfaction and not a separable consequence. The intrinsic motivation could, for example, be group one's note of learning about yourself through the activity of volunteering. We interpret this as a sense of motivation driven by values and self-development. This would thereby be a way of motivating the youths, as motivating factors of self-development and values potentially could help the barrier of meeting new people, as it would not only be the community that motivated the youths.

Other motivating factors are also described in the groups' clusters. In group three's cluster of motivation, they also describe, "The activity can be beneficial for your future and can help build a

career" (Appendix 10, p. 4). They describe that volunteering can benefit one's future and help build a career. From this, we interpret that group three has a sense of volunteering activities as activities that enhance one's competencies, as they describe it, to help build a career. As seen in the literature review, Hopkins and Dowells' (2021) results showed that gaining skills and gaining approval for the gained skill motivated them to volunteer, as this was perceived as beneficial for future employment (Hopkins & Dowel, 2021). We see a resemblance between these results and group three's sense of volunteering as rewarding for a future career, as the gained skill that would come through the activity could possibly benefit one's CV. This is an extrinsic motivation because the volunteer achieves a separable consequence in the form of new skills and an improved CV. We see a potential in communicating this motivation further in a design. Group four describes another motivation as "Free festival tickets" (Appendix 10, p. 6). Through this, the group made a sense of a reward for volunteering as gaining something material from volunteering. This is an extrinsic motivation, where the separable consequence of a reward is something material, for example, festival tickets, food, or merchandise. These descriptions of extrinsic motivations for volunteering are only mentioned by two of the groups. We, therefore, see a potential in motivating youths through these extrinsic motivations, as these could be communicated clearly through a design and are not clear for all participants and, therefore, not all youths. We further interpret these motivations as occasions for sensemaking for the youths if they were aware of them, as they might find such rewards motivating.

Despite the participants' perceptions of the rewards of being a volunteer, only one participant was an active volunteer. We interpret this fact as important for the understanding of the participants' sense of volunteering, because they do have senses of what is rewarding about being volunteers. However, these rewards did not motivate the rest of the participants to volunteer. Based on this, the need to invalidate the negative assumptions about volunteering becomes more significant, as the participants of the groups could be acting on these by not volunteering in spite of the perceived rewards. The perceived rewards are primarily individual, but they do not act upon them. This could imply that the perceived negative common senses of volunteering are found more plausible for the participants, which is interpreted as a significant barrier to volunteering.

Based on this analysis, the critique phase showed that the participants perceived a lack of information about volunteering in general. From the lack of knowledge, we interpreted several negative assumptions about volunteering. These assumptions were senses of volunteering, which were

perceived as reasons not to volunteer. Based on this, we see an importance in invalidating these assumptions in order to motivate youths to become volunteers. Lastly, the assumed rewards from volunteering were analyzed, which consisted of becoming part of a community, intrinsic motivations, and extrinsic motivations of career-enhancing activities and material rewards. However, we argued that because only one participant was a volunteer, these rewards were senses which made the participants act in contrast to the assumptions. Based on this, the assumptions about volunteering were argued as a significant barrier to volunteering.

The fantasy phase

In the fantasy phase, the participants were encouraged to imagine and create a utopian vision for the future and, in this context, to come up with different solutions in the form of digital ideas to motivate young people to volunteer. Through discussion and creative exercises, they had to think big and exaggerate the possibilities without limitations such as budget or time. All ideas were gathered in an "idea shop" where critiques were transformed into realizable core ideas (Appendix 10, pp. 17-21). We have identified four themes that categorize types of ideas: information-based ideas, flexibility in volunteering, society-based ideas, and reward-based ideas. The analysis of the fantasy phase will elaborate on how the participants worked further with the chosen clusters of critiques and barriers to the concept of volunteering.

Information based ideas

This theme emerges from the aspects of the participants' ideas that deal with information. As we saw in the section on 'knowledge about volunteering' in the critique phase, there was a tendency for the participants to lack knowledge about volunteering. Group three and four chose to work further with their clusters regarding lack of information about volunteering. Both groups had two focal points, respectively: gathering information in one place and ways of advertising volunteering.

Group three described an idea of a "Massive information bank" (Appendix 10, p. 1), while Group 4 described something similar in the form of "One app for volunteering – with all the information" (Appendix 10, p. 11). From these descriptions, there are interpreted ideas of gathering information about volunteering in one place where users can get an overview of the possibilities and learn about volunteering in general. As analyzed from the critique phase, the participants have a sense of youths

lacking information about the concept of volunteering and the possibilities within. This is reflected in their ideas for developing a design that motivates youths to become volunteers. Their sense of youths' lack of information thus becomes a framing in the design idea, where they make sense of information as the crucial factor for motivating youths to become volunteers. When the participants realize that they do not know enough themselves, their sensemaking process moves towards knowledge as a requirement to motivate youths in general to volunteer.

Additionally, the two groups also had ideas about how to promote or advertise volunteering. Specifically, Group three described "Advertisements: All around the city" (Appendix 10, p. 10), and Group four described several ideas for advertisements, such as banners and motion pictures asking for volunteers (Appendix 10, p. 11). This may be another indication of the groups' sensemaking process regarding their lack of knowledge. It reflects the sense of volunteering as not needed, which as a barrier would be reduced through these ideas as the need would be communicated through the advertisements. Furthermore, Group 4 describes that it must appeal to people's emotions, and "They have to know it is not always about raising money" (Appendix 10, p. 11). This indicates a sense of volunteering as usually portrayed as a concept of raising money, as they describe that youths should become aware of volunteering as not only about raising money. Based on the sense discovered in the critique phase of volunteering not being needed, the portrayal of volunteerism as raising money is here perceived as a barrier for anticipating as a youth. This supports the need of communicating the different possibilities of volunteering through a design, as the groups perceive this as motivating.

Flexibility in volunteering

This topic stems from ideas from group one and two, who both focused on making a design that adapts volunteerism into youths' everyday lives. Group one's idea was formulated as a calendar solution. Within the design, users should be able to synchronize their own calendar with a calendar of volunteering activities and, through that, fit volunteering into their existing habits and tasks (Appendix 10, p. 8). Through this idea, group one focuses on the barrier of time, which was found in the critique phase. The design idea articulates a sense of volunteering tasks as both individual and flexible because they would be fitted to the user's own schedule. By using a calendar, the group operates under the premise that an individual cannot successfully integrate volunteering into their daily routine, which they make a sense of as a barrier being reduced through this design. As a result, they appear to be impacted by the failure's subjective probability and associated incentive value.

Thus, rather than being motivated by the performance of volunteering, the user should here be motivated by the chance of avoiding the failure of not being able to fit volunteering into their lives. Group one hereby articulates a sense of the largest barrier as time management and flexibility in terms of volunteering and their spare time.

Group two had a cluster of ideas that regarded fitting volunteering into the environments where youths already find themselves, namely online (Appendix 10, p. 9). In the critique phase, it was found that group two had a sense of volunteering as old school. Based on that, they formulated the idea of fitting volunteering into online social environments such as social media, forums, and other online activities. Group two here wanted to take away geographical- and time-specific volunteering by digitalizing volunteering. This resulted in a "volunteering on demand" idea, where an individual can contribute online independent of time and location, for example, by creating videos to teach others football or guitar (Appendix 11, p. 1). By proposing to integrate volunteering into an online social platform, the group makes volunteering more accessible for youths. As they made this design, group two implies a sense of this type of volunteering as attractive, based on their assumptions of digitalized communities as more relevant for youths. Through this design idea, group two reduces their perceived barrier of volunteering being old school and thereby irrelevant for youths. Furthermore, this design also implies a sense of volunteering as individual tasks, which one should be able to fit into one's own schedule.

Furthermore, we saw a tendency for task-based ideas to motivate through an overview of tasks and thus also be supportive in adapting volunteering to the individual. These ideas were formed into designs described as job banks, which will be elaborated on in the implementation phase, as these were the ideas group one, three and four focused on here.

Finally, we also saw proposals from Groups two and four to integrate "Recommendation", "Ranking" and "Reviews and testimonies from people's volunteer experiences" (Appendix 10, pp. 9-11). This indicates the groups' desire to adapt the volunteering experience to individual perforations. The proposed system of displaying reviews of voluntary tasks or organizations reflects a striving to spend their time only on the commonly found best volunteering place or tasks. Their proposal of integrating ranking and reviews can, therefore, be seen as confirmation of their desire for individualization and adaptation to their own lives. However, it also implies a skepticism towards investing their time and

energy in volunteering, as they only want to do the most valuable and rewarding voluntary activities. This can be considered as motivated by failure avoidance as the design ideas articulate a preference for avoiding tasks that others did not find rewarding. Additionally, it can be discussed whether this is a cue of the participants' uncertainty about what it is to volunteer, as these features could be perceived as help to find the right place to volunteer.

Society-based ideas

This theme is based on ideas from the groups, which consist of ideas that are interpreted to require societal action or changes. Group three's ideas stem from a main concept of either making "money free for all" or making volunteering "mandatory - so instead of military service, you could pick volunteering as an alternative" (Appendix 10, p. 1). This implies a sense of a utopia for volunteering, as either making all work volunteering or forcing youths to volunteer. The utopia of all work being volunteering implies a sense of paid jobs as the barrier to volunteering, and the idea of forcing youths to volunteer implies a sense of volunteering as a concept that is not motivating in itself. These ideas are thereby interpreted as exaggerations of a sense that youths are not motivated to volunteer, which is formulated in extremes here. Group 4 has a similar idea of creating "a system at the workplace - that could create the volunteering" (Appendix 10, p. 11). This can thus also give credence to the idea that young people will not necessarily choose to volunteer themselves, here motivated by transferring time from work to volunteering. Similar senses are interpreted from group three, who suggested making volunteering a part of educational institutes (Appendix 10, p. 1). These ideas can reflect a belief that youths are not intrinsically motivated to engage in volunteering. They, therefore, propose extrinsic incentives such as making volunteering mandatory or removing financial barriers to encourage volunteering. This suggests that they believe that most young people would not choose to volunteer unless there is external pressure or reward involved.

Reward-based ideas

The last theme we have identified is based on the participants' ideas that involve rewards. In the fantasy phase of FW, it was primarily group one that focused on rewards in the form of a system in which users could earn "[...] points by volunteering for benefits" (Appendix 10, p. 8). However, Group 4 also described a "Volunteer program: good on CV like in USA" (Appendix 10, p. 11). Group 4's point could also fit under the theme of society-based ideas in that it requires society to recognize and appreciate volunteering on an individual's CV. However, based on our understanding from the

literature review's section on 'Recruitment of volunteers', it appears that CV-building and career-enhancing tasks are already central driving forces behind voluntary work, where volunteers seek to acquire new skills and want documentation of these skills for the benefit of their future career. Therefore, we find it relevant to incorporate this idea in this section of the analysis.

We can view these two ideas as a sense of the need of getting something out of volunteering. From Group one and Group four's ideas for systems that are rewarded, we see an aspect of their sensemaking of what motivates youth to do something. Whether it is points that can be exchanged for benefits such as physical things and experiences or career-promoting and recognition benefits, it seems to be a significant aspect of the two groups' sensemaking about motivation in volunteering. This is further corroborated by group one's elaboration of their idea that points will be deducted if the user does not keep their commitments (Appendix 10, p. 8). It can be interpreted that the group considers getting rewards to be very important in motivating them to volunteer, as they have seen a need to also create consequences. This can also be considered an appeal to a competitive aspect, where one wants to achieve points or advance one's career. This competitive approach can be related to the theory of achievement motivation, which may thus indicate a tendency to seek success and strive for the value attached to achieving this success.

Furthermore, these ideas appeal primarily to extrinsic motivation as it is driven by the desire to achieve separable consequences, such as approval, meeting demands, obtaining rewards, or enhancing the ego based on life goals. The groups are thereby here articulating a sense of youths as motivated to volunteer by these extrinsic motivations. In addition, the idea of making CV enhancement through voluntary work relevant may indicate a sense of improving oneself as well as gaining acknowledgment from others as a significant element to motivate youths. Thus, we can argue that introjection regulation, which is driven by ego involvement and focuses on obtaining approval from oneself and others, relates to this idea. Furthermore, if an individual's goal is to build on their experiences and competencies, identification regulation can also accommodate group four's CV-enhancing idea. Identification regulation is part of extrinsic motivation but is based on conscious valuing of activity and self-endorsement of goals.

On the basis of analysis of the participants' work within the fantasy phase, it appears that the participants formed ideas based on their senses and critiques formed in the critique phase. Their ideas

involved information-based ideas related to the sense of youths being motivated to volunteer through information. Next, there were ideas focused on flexibility in volunteering, based on the sense of volunteering as individual tasks motivated by flexibility, and then society-based ideas, reflecting the sense of youths not being motivated to volunteer. Last, reward-based ideas were analyzed, based on the sense of volunteering as motivating through a competitive approach, as well as enhancement of competencies and career.

The implementation phase

In the implementation phase, the groups implemented the ideas they had found as the best ones in the fantasy phase. The groups all focused on finding the right platform and the suitable features in a design that would benefit the purposes they had found. In the following we will introduce the groups features and designs through their descriptions, and analyze what we interpret from these.

As described in the fantasy phase, all the groups brainstormed different design concepts, which would help overcome the barriers to volunteering that they identified in the critique phase. In the implementation phase, they focused on the concept which they found most valuable in terms of motivating youths and developed prototypes of design features. Through this analysis, we will thematically analyze the groups' descriptions of their implementations.

The job banks

Group one, three, and four all developed concepts of job banks of different kinds in the fantasy phase. They all chose this concept for the implementation phase and developed designs to accommodate the different purposes of the job banks. Group one developed a design that contained a calendar feature and a point system. The calendar feature allowed the user to upload their own schedule, and then volunteer tasks that fit into their schedule would be visible with a description and points given for the task. These points could afterward be used for some kind of reward found in a list in the design (Appendix 10, p. 12). In the presentation of their design, they elaborate that the user can filter based on interests and that one earns points, which can be exchanged for rewards in a marketplace feature. This is described as to buy your benefits (Appendix 12, l. 317-329). From group one's design, it is clear that they have a focus on flexibility in volunteering, as the feature of the calendar makes it possible to fit volunteering tasks into the individual's life. Further, as stated in the fantasy phase, the

use of a reward system is a way of extrinsically motivating youths in the form of external regulations, where the rewards can be bought as something material from a marketplace. Based on this, we interpret that group one, in their sensemaking process, has not found volunteering tasks motivational, which created the need for material rewards from the work. However, this changes later in their presentation, where a group member describes:

> "The initial idea is that we felt like people don't really have time to incorporate these volunteering jobs in their overall schedule. So we thought if I do this volunteering Job, you can kind of get points that will in a way go back to your working place where you get some points to deduct your hours. So people should still be interested in the actual volunteering job where the point system is kind of a time management tool." (Appendix 12, l. 372-381).

Here, the focus of the points switches from a material reward to the society-based idea of spending paid work hours on volunteering. They argue that this should be motivating for one to start volunteering, as the excuse of not having time to volunteer is hereby invalidated. This could, therefore, be an occasion for sensemaking if one has a sense of not having the time to volunteer.

Group three also introduced a job bank design but with a focus on information about volunteering and volunteering jobs. They describe that the design should be a platform where the user gathers information about volunteering, view job descriptions, and what requirements one should have in order to volunteer (Appendix 10, p. 14). Furthermore, they describe the importance of the application system, which should be easy to use. The ranking system, which was introduced in the fantasy phase, is also incorporated in the design, where user profiles expose job ratings. These ratings are described as related to a similar feature on the platform Jobindex. However, the group notes that the organizations might not like this feature (Appendix 12, l. 117-122). In contrast to group one, group three does not present a feature regarding the rewards of volunteering. Instead, they introduce different aspects of information as motivational factors in their design. The information here consists of the organizations' descriptions of jobs and requirements and also users on the platforms' rankings of previously performed volunteering. From this, we interpret a sensemaking process where group

three has made the sense that information about the volunteering jobs is crucial when deciding to become a volunteer. Further, they value experiences from the users as important information when reviewing volunteering jobs. However, this could, as introduced, be an expression of uncertainty about volunteering, where the rankings could guide one's choices.

Notifications are introduced as a feature where the user gets a notification when a relevant volunteer job is uploaded on the platform (Appendix 12, p. 112-115). This feature switches the roles of organizations and youths, as on the other platforms, it is the youths who contact the organizations. Through this feature, the group is interpreted to have a sense of youths being motivated by the knowledge of new relevant volunteering jobs. This could be linked to an intrinsic motivation of interest, where this information about a new job makes youths curious to know more. This also implies that group three finds volunteering motivational as a concept in itself, and if youths knew more about it and were notified when relevant jobs were uploaded, they would volunteer.

Group four also developed a job bank design and described that their platform should have everything in one place. They wrote, "I can easily find all volunteering job opportunities" and "I can choose the areas I am interested in" (Appendix 10, p. 15). As well as group one and three, this is interpreted as a need for an overview of what is possible in volunteering, formed as a form of job bank. In the presentation of their design, the motivating features were described as the ability to choose between charity experiences, events, or one-to-one experiences (Appendix 12, l. 31-35). Charity experiences were defined as organization-based volunteering, events as examples of festivals, and one-to-one experiences such as walking a private person's dog. Group four hereby divides volunteering into different levels of volunteering, which discloses a sense of volunteering as the broader concept of doing something voluntarily and not just organizational volunteering. From this, we interpret that group four, as well as group three, make a sense of information as motivating youths to volunteer. The information is here based on the different levels of volunteering, which they see as motivating for youths to know. Group four further describes the information on the platform as "And then volunteer job details where you can see if it is unpaid, what you get in exchange, what are the time slots, and you can apply for the job" (Appendix 12, l. 38-41). They here also describe the rewards from doing the volunteer task as a feature that should be visible to the user of the platform. Therefore, we interpret that group four also perceives rewards in terms of external regulations of money or things

one can get in exchange as the motivations for volunteering. When the group was asked if there would be any difference in youths' motivations based on the level of volunteering, the group answered: "We should investigate the target group, maybe, and based on that, decide, okay, no, let's do it only for festival tickets at the beginning because it's what youngsters want [...] if the app has success, we can go to different levels"(Appendix 12, l. 80-85).

With this, they elaborate on their assumption about youths being especially motivated by the external regulation of festival tickets. We interpret this conclusion as a sense made based on their interpretations of other youths and their own experience. Based on this, group four makes sense of the type of volunteering as relevant and the external regulations as the best motivations for youths. These three job bank designs were all made for youths who are interested in volunteering and are, therefore, searching for a volunteering job through these designs. Based on this, we interpret that youths using these designs would be interested in finding a volunteering job. Through this, they would already be motivated to volunteer. Therefore, we interpret that these designs may not accommodate the overall purpose of the designs, which is to motivate youths to become volunteers. We further interpret that there could be three reasons for them to design for already motivated youths. The first could be that we were not clear about the overall purpose of the design they should make, which could have made them change their focus during the FW. When we asked group three if they would volunteer if their design existed, one member said yes, but another answered "probably not" (Appendix 12, l. 175). It is, therefore, not clear if they actually find this design motivational, which could be a sign that they forgot or were not fully aware of the overall purpose. Another reason for them to design for already motivated youths could be that they do not believe the premise of the case, and all have a sense of youths as already motivated to become volunteers. However, they did not mention this in their presentations of the designs, and group four and one both had features focusing on the rewards of volunteering. Therefore, we interpret a third reason for this as the sensemaking process of why youths should want to volunteer, which is something they could not make a plausible sense of. In the critique phase, all groups described a lack of knowledge of different aspects of volunteering. Therefore, in their process of making sense of volunteering, they cue that more information is needed in order to find sense in the motivational factors of volunteerism. This reason is found to be the most plausible, based on the groups' work in the FW, which supports the overall need for information about the general concept of volunteering.

Online volunteering

Group two's design was a different concept than the three others and focused on an online format of volunteering as a result of their critique of volunteerism as old school. They describe on-demand activities as the concept of the design, and an example of these is a function called "activities today" with a list of activities, times for the activities, and with whom (Appendix 10, p. 13). They further describe their design in a list form, where different sortings of the content in concepts such as time, location, and age. Here, it is also mentioned that the user should be able to join communities, ask for help, and have a function where you can reach out to organizations (Appendix 10, p. 13). In the presentation of the design, it becomes clear that the premise for the design is that the user should be able to find an organization based on an interest in an activity. Group two describes that they believe that youths already commit to communities today but that they do it online and not physically in organizations (Appendix 12, l. 282-293). Here, they question the premise of the case we presented to them, as we encouraged them to design to motivate youths to volunteer. They here describe a sense of youths as already volunteering through online communities. From group two's design, we see how they make sense of communities as something that already exists online, which organizations would benefit from in a design. The online communities are described here as forums for sharing experiences as described in the fantasy phase.

Further, the word volunteering is not used in their design. Instead, they use the word activities. We interpret the use of the word activity as a cue for their sensemaking process, where they have not found the word volunteering motivational for youths. This is also perceived in their description of volunteering as interest-borne, which we interpret as why they choose to focus on activities of interest instead of volunteering. Further, the concept of the activities as on-demand is interpreted as a way of motivating users to upload these videos, as it is communicated to the user that they are needed and valuable to the organization. This is a way of doing something for others and for a community, which Yamashita et al. (2017) found to be a way of motivating volunteers when recruiting. This online aspect of the design makes these activities flexible for the user to do, which was found to be a barrier for youths volunteering. Their design further creates a relationship between organizations and the user online. In the literature review, it was found that when a person has a relation to the organization, they are more likely to volunteer in the organization (Knutzen & Chan, 2017). Based on this, there is an opportunity in group two's design for the volunteer to create a relation to an organization by

contributing online. This could possibly motivate youths to join the organization physically as well. Therefore, we interpret an opportunity to give the users a relation to organizations online as a way of motivating youths to volunteer.

From the implementation phase, the participants implemented design ideas into concepts, which they articulate here. Group one, three, and four all made designs of job banks for the motivation of fitting volunteering to the individual, providing information, making it easy to apply, and informing about rewards. These designs were interpreted as made for youths who are already motivated to volunteer, which was interpreted as based on the participants' difficulty in finding sense in the motivations for becoming a volunteer. In contrast, group two questioned the premise of youth not volunteering by designing an online platform for online volunteering. Through this design, they demonstrate a sense of youths already being motivated to volunteer, but the physical framework of volunteering is the barrier.

Perceived requirements for the design

Based on our analysis of FW, we identify design requirements that we consider essential to address. These requirements are based on what we have perceived from the participants' sensemaking about volunteering and motivations and barriers for becoming a volunteer, and consist of the three requirements visualized in Figure 10 below:

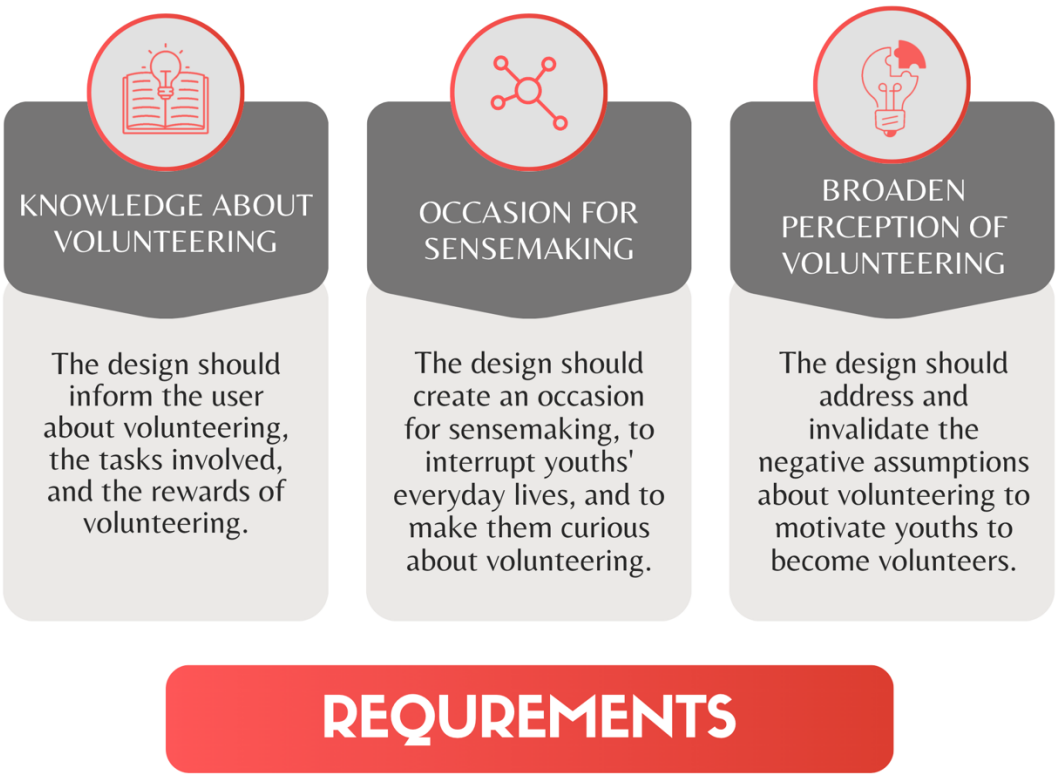


Figure 10: Visualization of design requirements based on FW.

In the critique phase, the participants found several barriers to volunteering related to needing more knowledge and information about volunteerism. This was also evident in the fantasy phase, where the groups generated several ideas centered around providing information about volunteerism to youths, finding it a motivational factor for becoming a volunteer. In the implementation phase, three groups designed features focused on providing information about volunteering and the tasks that they deemed relevant for those interested in volunteering. Based on this, we interpret a requirement for the design to inform the users about the concept of volunteering, the tasks, and the different rewards of volunteering.

Due to the participants' diverse information needs, particularly regarding the types of volunteering jobs available and how to get started, we interpret that they have not had adequate opportunities for sensemaking about becoming volunteers. This interpretation was also drawn from the implementation phase, where three groups designed for youths who are already interested in volunteering. Therefore, we identify a requirement for the design to create an occasion for sensemaking, to interrupt youths' everyday lives, and to make them curious about volunteering. Based on group two's insights in the

implementation phase, we perceive a potential for motivating volunteerism through activities and online solutions.

In the critique phase, we identified several perceived assumptions about volunteering stemming from participants' lack of knowledge. Moreover, it was contended that despite having an understanding of the rewards of volunteering, they were not deemed valuable enough to motivate the participants to volunteer. In the fantasy phase, several ideas aimed at motivating youths through rewards and customization to the individual were proposed, suggesting underlying assumptions about volunteering. Three groups worked with these assumptions in the implementation phase, designing features that accommodated the individual and focused on rewards. Based on these findings, we interpret a requirement for the design to address and invalidate the negative assumptions about volunteering. The participants anticipate challenges in integrating volunteering into their lives. Therefore, the design must effectively communicate the perceived rewards linked to volunteering, such as community engagement and making a difference, while emphasizing the possibility of doing it with friends. The aim is to challenge negative assumptions by illustrating the rewards of volunteering, thereby expanding users' perceptions of voluntourism and its value. Thus, it can help create an occasion for sensemaking, provide information about volunteering, and motivate youths to become volunteers.

Presentation of Prototype 1

Based on the aforementioned inquiries and requirements for the design, we have developed the first iteration of our prototype. Our design consists of a web-based solution which is mainly intended to be used on mobile devices. Therefore, we have primarily taken a mobile-first approach to the prototype.

We have given considerable thought to what type of digital design would be ideal, particularly whether the design would work best for the intended target group as an app or as a website. The majority of individuals primarily use phones for communication and entertainment, as stated in the theory section. Furthermore, studies showed that phone use, especially among young people, has increased significantly and that a web-based solution rather than an app can be more accessible and user-friendly, as it does not require a download. This is particularly relevant for our younger target

audience, causing us to believe that mobile devices will be the main way users will access our design. Tidwell et al. state that people generally prefer to access the internet through their mobile devices, which supports designing primarily for mobile devices. Consequently, the choice was between designing an app or a website. As the purpose of our design is to motivate volunteering, we argue that the act of downloading an app calls for motivation in itself, based on knowledge about the app and the concept of volunteering. However, based on the requirement of providing knowledge and information about volunteering, the target user is assumed not to possess the motivation to download an app. In contrast, a website could be accessed quickly, easily, and without any obligations. As a result, there would not be a barrier to downloading or signing up for anything before one has even become interested in the subject.

As requirement 2 indicates, it is crucial to create an occasion for sensemaking. To accomplish this, we anticipate a need to draw in the target audience where they are already present, for example, on social media, and then pique their curiosity by guiding them into a test that speaks to their ego. Based on these reflections and insights, we have decided to build a website using a mobile-first approach to provide the best user experience possible.

The following low-fidelity prototype was created as simple diagrams to demonstrate the design concepts and main functions integrated into the design. Therefore, rather than focusing on aesthetic appeal, the first iteration of our design is based on concepts and functions and seeks to visualize these.

The initial meeting with the design

The first component of the design is the concept of a user test. In the test, the user indicates whether they agree or disagree with statements shown in the white box by swiping left or right. The questions will consist of declarations regarding interests, activities, and values, such as; I enjoy talking about my opinions. This feature is illustrated in illustration 1 to the right. The user will receive a personal profile based on their response, which provides them with an understanding of their own interests and habits and how these can be connected to volunteering. The objectives of this test are to motivate the user to use the design, based on customization, which was found motivating in the FW, and to provide background knowledge on volunteering from a tailored perspective.

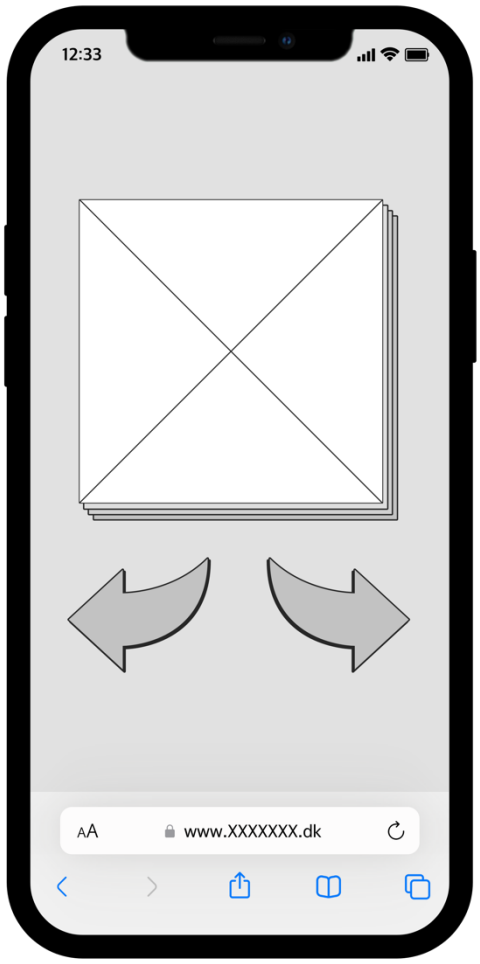


Illustration 1: Test of prototype 1.

The test is the first page that a user approaches on the website, and it allows them to identify their volunteer type by agreeing or disagreeing with statements based on interests. The swipe function is designed so the user can select their response by swiping to the right to agree or to the left to disagree. This feature, which users may recognize from apps such as Tinder (Appendix 13, p. 1), aims to increase interest and make information access more enjoyable and engaging. Based on the user's choices, the website will categorize the user in the field of volunteering organizations. Therefore, each of these questions is meant to personalize the user's profile and indicate the kind of volunteer work that would be most appropriate for them.

We have chosen to call this individualization volunteer-types, and the users are thus assigned a volunteer-type, such as 'Nature lover' for people who are interested in nature and climate and 'Heart worker' for people who are interested in helping others in need. This concept is inspired by a Gamer Motivation Model, which explains the various motivations that drive players of video games and the relationships between these motivations. It is a test that gamers can complete to identify their gamer

type (Yee, 2015). We believe that this type of gamification, where the user is assigned a role, creates an occasion for sensemaking for the user, as the user has to reflect on their own interests and values and will gain new information about themselves in the context of volunteering. Furthermore, the test is designed to engage youths in the design based on curiosity about themselves and volunteering, which should motivate the continuous use of the design. After the user has completed their test and received their volunteer-type, they will be directed to the home page of the website. From there, they can now access all the website's pages through a menu.

The menu

We explored different options to find an effective navigation system for the design. The navigation system should be optimized for website mobile use and compatible with desktop users. For this, the location of the menu and the approach used by the user to access the menu were considered. Our initial prototype sketch, shown in illustration 2, had a bottom navigation bar menu, as one may recognize from other apps such as Instagram.

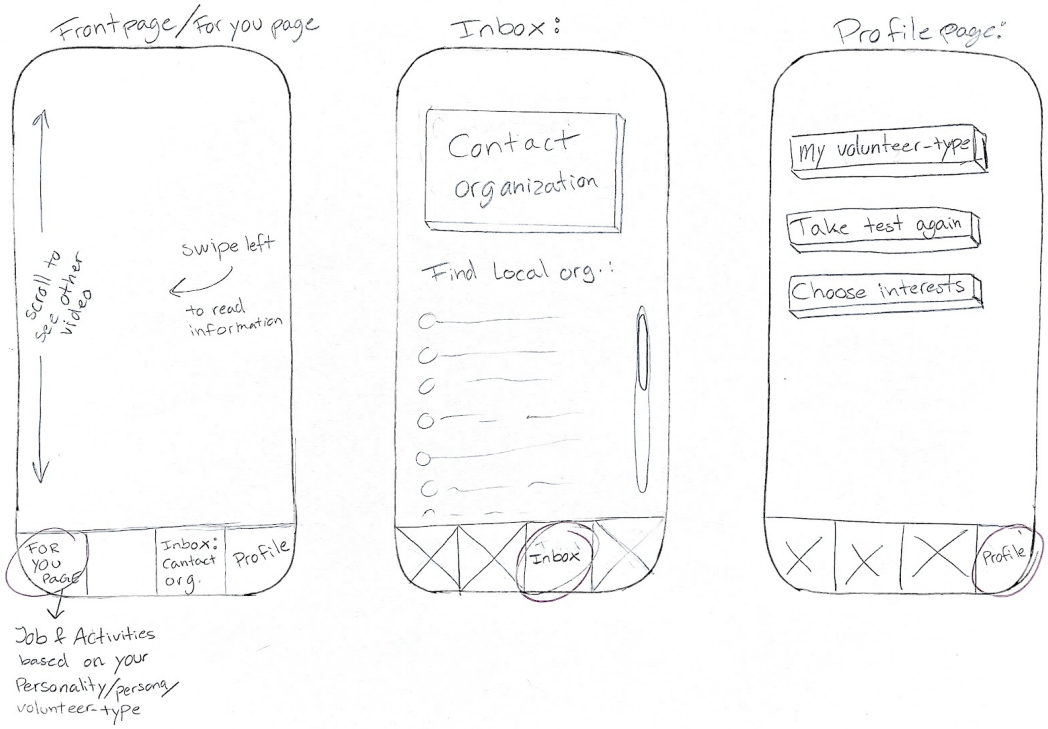


Illustration 2: Initial sketch of prototype 1.

However, as we created a website, it is essential how the navigation functions on a desktop version as well. In this regard, a hamburger-menu was considered, but as we do not anticipate the website to

have a large number of pages, and the design should be simple and intuitive, it was not selected. As a result, a top navigation bar was chosen. In illustration 3, the top navigation bar for users accessing the page from a computer and a bottom navigation bar for users accessing the page from a phone are illustrated:

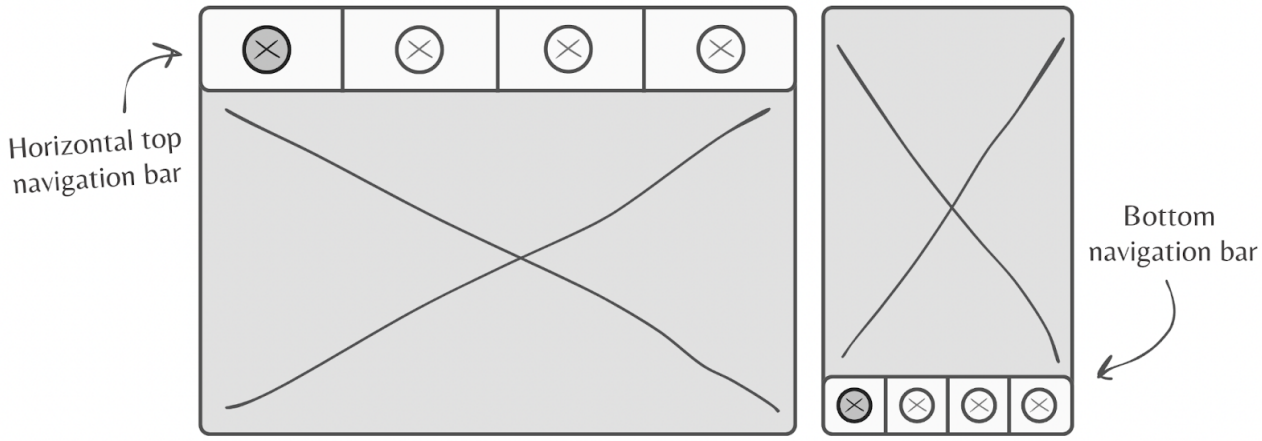


Illustration 3: Initial menu of prototype 1.

Thus, it is a navigation bar in a horizontal layout. However, after creating this design, we decided that it looked too much like an app for what was appropriate for our design, and consequently revised the menu of prototype 1 as shown in illustration 4:

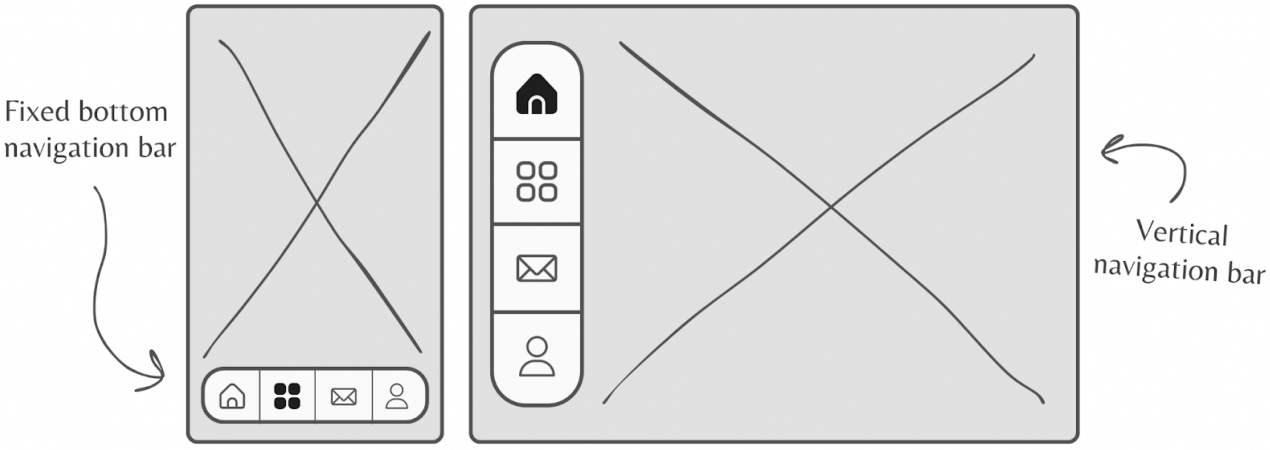


Illustration 4: Revised menu of prototype 1.

The final menu in Prototype 1 is designed as a navigation bar that appears to float over the content and stays in place as the user scrolls. For mobile users, it will appear at the bottom of the screen, while it will appear on the left side of the desktop screen. This design choice was motivated by our

desire to offer users a visually simple and always accessible overview of their options as well as to create a menu that does not require actions to access it. This ensures an intuitive and user-friendly experience, where necessary tools and settings are always available. In the desktop version, the menu is designed to be vertical for several reasons, all focusing on usability and aesthetics. First of all, a vertical menu gives a better visual expression when we want to use icons in the menu, and we believe this is most common in the vertical version on desktops. Aesthetically, the vertical menu adds a visual dynamism to the design of the website. It can help break up the layout and create a more modern feel that fits well with a desktop-based user experience and allows a visual hierarchy where we can make the most important content stand out.

The menu can lead the user to four different pages, respectively; a home page, a browse page, a contact page and a profile page.

The home page

The website home page is shown in illustration 5 and can be accessed through the navigation bar by an icon of a house. On the home page, the user can access videos that serve as small samples from various organizations. It will work as an infinite list that allows the user to navigate through a filmstrip-based feed. This filmstrip will consist of short videos that quickly and simply give insight into specific tasks that you can do, what they mean, what influence you can have, and more. On this page, the user can scroll up and down to see another video and thus learn more about volunteering in different organizations. In addition, it is possible to swipe left to read more about the organization, task, or role that the video gives a taste of, as well as access the organization's page, contact, or save the organization for later by clicking on the flag icon. As a result, the website is designed from a center-of-stage visual hierarchy approach, with videos taking up the

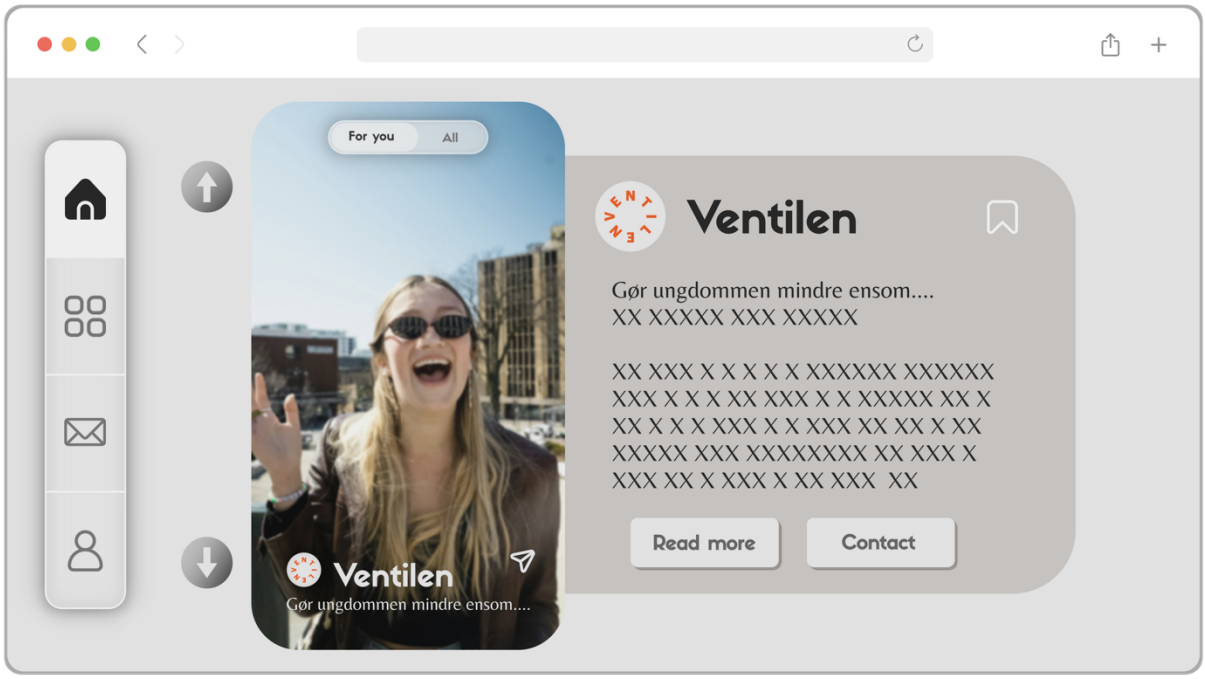
Illustration 5: Home page of prototype 1.

whole screen and additional reading material remaining hidden until the user chooses to swipe over and access it, as shown in illustration 6 and 7 below:

Illustrations 6 and 7: Prototype 1: Home page swipe and scroll features.

This part of the design seeks to meet all requirements with this page by providing users with inspirational videos that challenge the assumptions about volunteering. Through the videos, descriptions, and options for contacting organizations, the design meets the requirement of providing the user with information about the volunteering tasks and the organizations and makes applying for volunteering easy. Further, the design should create an occasion for sensemaking because scrolling through the videos should inspire and teach the user about different ways of volunteering. The infinity list is designed to be familiar to youths, as it is built around inspiration from TikTok's For You page, Instagram's Reels function, YouTube's Shorts function, and YouTube Music's Samples function (Appendix 13, pp. 2-5). We also create an opportunity for sensemaking, which can help to strengthen the understanding of volunteering and motivate young people to see themselves in it.

Lastly, the user has the option to select an ‘all’ or ‘for you’ feed. The ‘for you’ feed will consist of videos that are suited to their volunteer-type. Additionally, they can choose to view all the available videos, which will appear in an arbitrary sequence in the ‘all’ feed. This function is based on the ability to choose between all organizations if the tailored videos are not found relevant. The desktop version of this page is visualized in illustration 8 below:



Illustrations 8: Prototype 1: Desktop version of home page.

The desktop version of this page performs the same functions. However, as the swipen effect might not be possible on all computer touchpads or mouses, we have included a button to go down or up to the next video – and to open or close the information box with a dropdown collapsible panel.

The browse page

The browse page is represented in the navigation bar with an icon consisting of four squares, and is shown in illustration 9.

Illustration 9: Browse page of prototype 1.

On this page, the user will find an overview of the organizations structured in interests, inspired by group two in the FW's sense of activities as a way of structuring the organizations. Interests were found to be suitable, based on the test, as this creates coherence in the design. Further, based on the requirement of providing knowledge about volunteering, we assume some youths will not know the organizations based on the logos. The page is built of collapsible panels to ensure a simple and clean design that does not overwhelm users with information. This way, the user can select an area of interest – such as helping someone in need – and only see organizations that work within this interest. In order to tag interests to organizations, these topics must be customized based on the specific organizations and the inputs from each organization regarding their areas of interest and the kinds of tasks they offer. Furthermore, if the user clicks in to read more about one of them, they will also have the option to save the organization by clicking the flag icon.

Additionally, a search feature allows users to look up organizations they are already familiar with, as well as a scroll bar that indicates to the user that they can scroll down the page.

The contact page

On the contact page, communication between users and the organizations can take place. As shown in illustration 10, the user can here access an inbox and contact organizations.

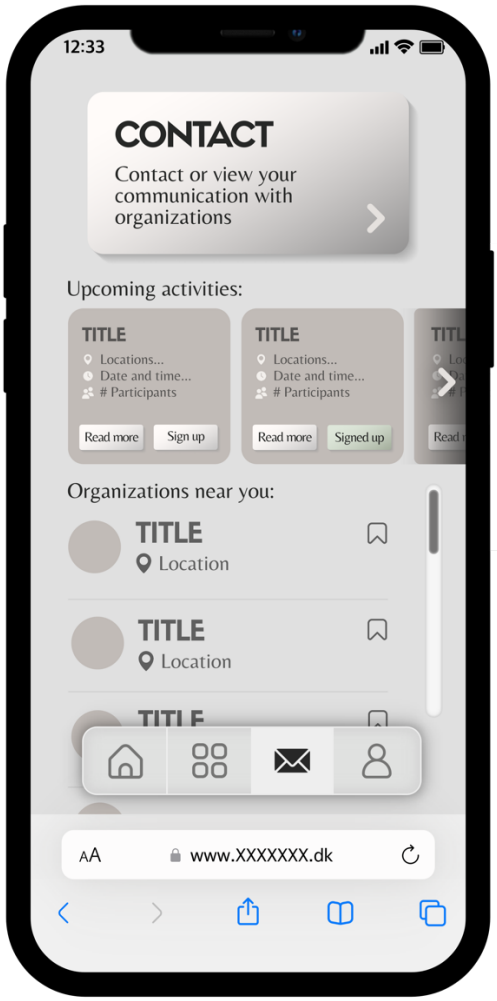


Illustration 10: Contact page of prototype 1.

Furthermore, the user can see which activities are happening near them or see the activities they have or can sign up for. This function is, therefore, based on mobile direct access and utilizes the user's location to give them suggestions for activities nearby. Additionally, mobile direct access is also used to show the user a list of organizations nearby and contact or save it for later. This page hereby reflects the requirement of providing information about volunteering, as it makes the contact to organizations easy to access.

The profile page

On the profile page, the user can access their profile, as shown in illustration 11 and 12. Here, the user can view their profile, change or add relevant information about themselves, as well as see and read about their volunteer-type. In addition, they can retake the test or add interests if the user does

not find their volunteer-type sufficient. Further, the saved organizations and videos can be changed and accessed here.

Illustrations 11 and 12: Prototype 1: Profile page.

Lastly, there is a small element of gamification on this page, in that the user can choose between some simple predefined avatars as their profile picture. This is, therefore, a minor element of customization as the user can personalize their experience by choosing avatars, which can increase their engagement.

Overall, prototype 1 reflects the three requirements found based on the FW by creating an occasion for sensemaking, providing the user information about the concept of volunteering, contact to organizations, and the roles of volunteering. Lastly, the videos of the design and the descriptions of the organizations should make the user interested and curious about volunteering, and thereby meet the requirement of broadening the perception of volunteering.

Analysis 2: The focus groups

We conducted eight focus groups to gain an understanding of what youths are doing in their spare time, how they prioritize their time, and what they understand as spare time. This is essential for understanding potential motivations and barriers to volunteering, as well as how the design could demonstrate the value of volunteering as something they can do in their spare time. In the following sections, the focus group transcriptions and picture sortings will be analyzed. As we coded the focus groups, we found four themes, which we color-coded through all the transcriptions (Appendix 15-22). These themes will guide the analysis, which will focus on the participant interactions and the implications they make regarding their sense-making processes and potential reasons for volunteering. This analysis includes a large amount of data to be studied because it includes eight focus groups. As a result, while examples of senses we interpret from each of the eight focus groups will be included, not all groups will appear in every part.

Prioritizing spare time

The first theme is centered around how the participants prioritize their time. We initiated the focus group interviews by having participants rank ten spare time activities in a picture sorting task. They first ranked the activities by preference, then by the actual time spent on each. This theme includes the conversations and discussions about these rankings, and the outcomes of the task.

When reviewing all the focus groups, there are both similarities and differences in how the participants discuss and rank the activities. We will first elaborate on the top three and bottom three rankings. These rankings reflect what the groups most and least want to do. In all eight groups, Hanging out with friends and Family time were in the top three and, therefore, what all groups agreed they would want to do the most (Appendix 14, pp. 2-16). The groups debated whether family or friends should come first rather than why these activities were in the top three. When we asked Group 7 why they placed family and friends as the two activities they want to spend the most time on, they said:

P30: Well, I think it's nice to hang out with friends, and I also think it's important to remember to do so to maintain social relationships.
P34: Yes.
P32: And then family, it's also important. It's your family after all. It's important to spend time with your family. They're the ones who love you, I think.
P34: And sometimes you need some alone time, so you can sit and relax and stuff.
P31: And also because school takes up so much time in the third grade. So. Maybe we prioritize these social...
P30: Yes.
P31: ... events a bit more, if I may say so.
P30: Yes.

(Appendix 21, l. 104-117).

Here, P30 describes their top activity of hanging out with their friends as ‘nice’ and something that is important to do in order to maintain social relationships. This was later agreed upon by P34 and supported by P31, who argued they prioritize social events because they spend much time on school. Additionally, P32 emphasized the importance of Family time, rooted in a sense of love as important. P34 explained their third priority, Alone time, by a need for relaxation. During this conversation, the whole group either agreed or did not disagree, which we interpret as a cue that the group members all found an agreeing sense in these arguments. Based on Group 7’s descriptions, we interpret a sensemaking process in which the participants position social relations as important in their spare time. Because P30 first describes Hanging with friends as nice, and P31 reasons the importance of social relations in how much time they spend on school, we also interpret a sense of maintaining social relations and school as contradicted. This implies that past experiences of neglecting social relationships now make sense as negative, leading the group to prioritize family and friends in their spare time. Because all groups placed these same two activities in the top three, we interpret that they all value maintaining social relationships and find them enjoyable.

However, the focus groups differed in their third choice in their top three. Group 8 had Sport and exercise as their highest ranked, group 3 had Cultural interests, and groups 1, 4, 5, and 6 had Partying

as one of their top three activities. What connects these three activities is that the participants found these activities appealing based on the perceived social element. In an account of what they thought Hanging with friends involves, participants in Group 6 described that they found this activity very broad and that it also involved partying, relaxing, sports, and creativity for the participants, who all agreed on this (Appendix 20, l. 169-181). Group 2 also discussed this matter, after they had finished the task, they expressed how they see the activity of Hanging with friends as a premise for many of the other activities:

> **P8:** Hanging out with friends. Because it could easily be sports too. Because... If I meet... Every Monday, and play basketball with some of my friends, I play basketball with the younger ones. And then we party on the weekend, so it's with my friends. As I see it.
> If I then play computer games, I only do it because I know my friends are on. Because I want to play with my friends, you know. Um... So I think in general, this can encapsulate it very well.
> **P9:** And social media is also something you check to see what your friends are up to. Yes.

(Appendix 16, l. 346-357)

With this, P8 described that the social relation of friends is seen as an encapsulation of a lot of the activities they do. P9 added that when they check social media it is to see what their friends are doing, and thereby agreed with P8. None of the other participants argue against this, which is interpreted as an agreement. Based on both Group 6 and Group 2's descriptions, we interpret that the three activities of Sports and Exercise, Partying, and Cultural interests are all seen as social activities that are done with one's social relations. This implies a sensemaking process, where the participants together find sense in these activities as social. Based on this, we interpret that the participants have a sense of their social lives with friends and family as the most important and prioritized aspects of their spare time. Further, because all groups agreed, we interpret that participants construct their appropriate selves around valuing social life. They prioritize social relations and want others to know they have friends, positioning their identities as appropriate to others.

Alone time was also chosen as the third priority by groups 2 and 7. Group 7 did not explain their reasoning for this ranking. However, all participants in the group were quick to agree on its ranking as an activity they wanted to spend time on (Appendix 21, l. 78-83). Group 2 discussed the ranking of Family time, Hanging with friends and Alone time for a longer period. In this discussion, P9 argued:

> One could say that you need to be able to endure being with your friends and family a lot, and then you also need to be alone. At least, that's how I feel.

(Appendix 16, l. 265-268).

P9 argued that Alone time is necessary to gain energy for social gatherings, and the others agreed. P8 added that while being alone is always an option, being with friends is preferred because it is not always available (Appendix 16, l. 281-286). Based on group 2's discussion, we interpret that Alone time is ranked high because it is needed for relaxation and energy. However, it is seen more as a necessity than a preference, with social relationships being the true preference. Thus, Alone time is not a motivator but a prerequisite for enjoying their preferred social activities.

We asked all the groups to define spare time to understand how they describe time spent not doing obligatory or less preferred activities. All the groups agreed that spare time is when you can do whatever you would like to do. Participants from groups 6 and 2 described that it is when you do not feel pressured to do something (Appendix 16, l. 692-694, & Appendix 20, l. 368-370), and participants from groups 5 and 7 described that it is time where you can relax and have free space (Appendix 19, l. 223-224, & Appendix 21, l. 243). These descriptions reflect the participants' senses of their spare time as individualistic and a time to please one's own pleasure. Because all groups ranked social activities as their top preference and view spare time as doing what they like, this supports our interpretation that participants prefer spending their spare time with family and friends – with friends ranked highest. Their sensemaking ties spare time to enjoyable past experiences with social relations, making these relationships fundamental to their spare time preferences.

None of the groups explained why they ranked the two broad social activities as the ones they preferred the most. An example is here from group 6:

> **P30:** Well, I think that it's cozy to hang out with your friends, and I think that it's also something very important to remember to do in order to maintain your social relationships.
> **P34:** Yes.
> **P32:** And then the family, that's important too. It's your family. It's important to spend time with your family. They are the ones who love you. I think.

(Appendix 21, l. 104-110).

In this citation, P30 explains their high ranking of Hanging with friends as cozy and Family time as motivated by love. The group's agreement, without extensive discussion, indicates these are the most preferred activities. As participants cite love and coziness rather than specific benefits, we interpret social relations as an intrinsic motivation for their spare time activities. The intrinsic factor is that the participants do not see any regulator for doing the activity, but it implies a sense that spending time with your social relations in itself is found relaxing in contrast to being pressured to do something.

We view this intrinsic motivation as valuable to incorporate in our design, aiming to motivate youth to volunteer. Therefore, it is vital to integrate the motivation of social relations, as it inherently encourages youths to volunteer, especially if they can engage with friends. Moreover, because groups associate their friendships with various activities such as sports and parties, we interpret that social relations also drive participation in these activities. Thus, we see an opportunity to use the factor of social relations to intrinsically motivate youths to do volunteering activities of their common interests with their friends. Consequently, as a requirement for the design, we identify that volunteering should be presented as an activity that individuals can engage in with their social circles.

The role of work and money

The second theme we identified, the role of work and money, stemmed from interesting discussions among participants regarding their perspectives on these topics. Exploring this theme will provide insight into the participants' sensemaking of work as a part of their time spent away from school, shaping their understanding of spare time. Our analysis will delve into discussions and diverse perspectives on work's role in participants' spare time.

In the picture sorting task, all focus groups placed the activity Homework as the activity they wanted to spend the least amount of time on (Appendix 14, pp. 2-16). Further, three groups placed Work as the second least wanted activity, and all groups placed Work in the lowest five of all activities. The group discussed this placement of Homework and Work. For example, group 5 immediately agreed in the following excerpt:

P24: No one really wants to do homework, right?
P20: No, homework and work are just something you have to do.
P21: ... Yes, you have to do it, it's not something you...
P22: ... Want to do.
P20: You don't enjoy it.
P22: No, not in the same way.

(Appendix 19, l. 93-99).

In this, P24 and P20 conclude that Homework and Work are not something that one wants to do but something that one has to do, while P21 and P22 both agree with this. P24 starts by using the pronoun 'one' instead of 'I', and the others afterward use the pronoun 'you'. The use of these pronouns implies that they are not only talking about their own opinions based on themselves, but instead, they are addressing what they believe is the common sense between themselves and the others in the group. Therefore, we interpret this situation as an example of the social process of sensemaking, where the participants agree that Homework and Work are activities that they all have to do but do not want to do. Similar conversations are seen through the other focus groups. However, group 4 argued for ranking Work higher by:

P19: Shouldn't we take work down a bit?
P17: Yes.
P16: But it's still good to earn money, you know.
P18: Yes, we all like that.

(Appendix 18, l. 77-83).

Similar to Group 5, Group 4 agrees with P16 that it is good to earn money and likewise uses the pronoun 'we'. This shared opinion implies that their preference for work is driven by outside motivation – money. However, no group gave work a high ranking, suggesting it is not a strong motivation. Unlike spare time, work is viewed as required rather than enjoyable. As a result, youths associate work and homework more with obligation than with fun. Even though the groups positioned Work as an activity they did not enjoy, all groups – except for Group 1 – ranked Work as the fifth or higher in terms of time spent on activities. For example, Group 3 places work as their top time-consuming activity after Social media (Appendix 14, p. 7), while Group 8 ranks it third after Sports and Hanging with friends (Appendix 14, p. 17). The other groups place work as the third, fourth, or fifth activity, mainly exceeded by the activities related to their social relations (Appendix 14). This tendency suggests they spend more time on work than they express a desire to.

In a conversation about work, group 2 discussed why they found it necessary to have a job. P8 elaborated on his process of making sense of work, in which work was first described as a voluntary decision to make. However, it was elaborated that in order to do things with their friends, they needed money. Therefore, P8 argued that it was not voluntary to have a job (Appendix 16, l. 760-769). Group 1 also explains a similar understanding of work:

P5: I mean, there's kind of a hustle culture that has emerged. You have to make money and stuff, right?
P4: Yes, that's right. That's how it is.
P5: Yes, I would say so. Yes. Yes.
P3: I feel that it's important to have a job and earn money when you're young. To be able to do things with your friends and stuff. Yes.

P4: Just to be able to keep up in general. Yes.

(Appendix 21, l. 831-842).

P5 references the ‘hustle culture’, indicating a shared understanding of the necessity to work, as agreed upon by P4 and P5. This implies a perception of work as a constant pursuit of success, often equated with financial gain. The hustle culture is a narrative that has been discussed for several years in the business world. In an article from BBC, it is described as “The hustle-culture narrative promotes the idea that there’s always more to strive for: more money to make, a bigger title or promotion to secure and a higher ceiling to smash” (Carnegie, 2023). P3 explains, similarly to P8 in group 2, that earning money is essential for social activities with friends, a sentiment expanded by P4 to encompass a broader need to ‘keep up’ in general. These insights suggest a collective recognition of money as vital, intertwined with participants’ social lives. Moreover, it emphasizes the social significance of work in facilitating spare time activities, which are closely linked to social relationships. Group 4 discussed the role of society in shaping in their sense of work:

P18: I think it's more about living in a performance-oriented society, where you know you'll simply get further if you also have the money, right? So, you know, there's something about wanting all of this, isn't there? Yes, but to some extent. Because we want to show something, and then you just need money for that.
P17: It may also be about one's worth, but one believes they're worth more than working for free.

(Appendix 18, l. 568-576).

P18 elaborated on a sense of societal pressure of living in a 'performance-oriented society', using 'you', which implies that this feeling is shared by everyone, not just themselves. P18 stated that having money helps you get further in life and expressed a desire to have 'all of this', linking it to the idea of wanting to 'show something', for which money is necessary. We interpret this to mean that P18 views money as equivalent to success, a view they believe is widely shared. P17 added that one's worth is connected to work, implying that people value themselves based on how much money they earn. This

supports P18's view of money as tied to success, extending it to include personal self-worth, not just the desire to display success to others.

Based on this analysis, we can examine the overall sensemaking process across the groups. Participants expressed through the picture sorting and discussions that they do not want to work but see it as necessary for the external regulation reward of money. They view money as essential for socializing with friends, which gives them a sense of work as a non-voluntary activity. The groups also elaborated on their understanding of being in a hustle culture and a performance-oriented society, where they view money as equivalent to success. Specifically, group 4 noted that success is tied not only to external approval but also to self-worth. From this analysis, we interpret that the focus groups make a social sense of money as a key to success and as a key to enjoying their spare time by unlocking the possibilities to spend money with and on their social relations. This social sense is also interpreted as a part of their identity creation in which they view work as important and time-consuming. This is thus interpreted as cues for their identity creation as individuals with money or who value earning money. Furthermore, we observe an enactment within each group, creating an environment where money is essential for a social life. Because social activities are their top priority, work and money become critical factors in their lives.

Regarding their motivations, we identified money as the external regulation that extrinsically motivates them. We interpret work as an introjected extrinsic motivation, with participants seeking approval and success through their work. In some cases, work also becomes an identified intrinsic motivation, aligning with their values of earning money and being seen as hard workers. However, the picture sorting exercise shows that participants do not want to spend time on work and dislike it. This suggests their work is not about job success but avoiding failure in their social life. Because they view money and work as keys to their social life and self-worth, yet as activities they do not enjoy, we interpret that they make sense of their work primarily in social contexts. They aim to avoid failure in social relations, where money is essential for activities. Thus, their motivation is more about maintaining social standing than succeeding at work.

We can identify design opportunities related to participants' sensemaking about work and its motivations. Because work is viewed as necessary for social life and self-worth, presenting volunteering as an enjoyable and interesting alternative with friends could be appealing. This could replace the disliked work with activities they enjoy. Additionally, we can highlight other success

parameters beyond money. The organizations within DUF offer various skills and experiences, which can be communicated as success indicators. Previous studies, as described in the literature review, have shown that gaining new skills and improving future employability motivate people to start volunteering. Participants value the worth and approval of work, suggesting that skill acquisition could spark interest in volunteering, though not necessarily as the primary motivation. Therefore, it is essential to integrate the requirement outlined in theme 1, which emphasizes presenting volunteering as an activity individuals can undertake with their social relations. Additionally, it is essential to emphasize the organizations' offerings for skill development, as this can potentially motivate youths to become volunteers.

The perceptions of volunteerism

We asked all the focus groups what they believed volunteering was and whether they had volunteered before. This revealed a theme of answers where the participants related to volunteerism, which we will examine in the following.

When conducting the focus groups, we asked what volunteerism was for the participants. The groups then discussed their senses of the word volunteerism and what they believe the word refers to. Group 2 was silent for a longer period, and then P6 said that they did not know what volunteerism was and asked the Interviewer what it was. After describing the referral to organizational volunteerism and naming some examples of volunteerism, P8 asks P10 if they know anything about volunteering, and P10 answers, “Is it not just something you do if you want to? And use your spare time on whatever you want?” (Appendix 16, l. 805-806). With this it becomes clear that group 2 did not have any senses about the word volunteerism. P10 tried to answer P8’s question, but when they answered with two new questions, we interpreted that P10’s answer was a guess and not specific senses.

Some of the other groups also have discussions of the word volunteerism and what they understand by it; for example, group 1:

P4: Yes. I would say that volunteerism is just something you do of your own will.
P2: You're not obligated to do it.
P3: No. No one tells you that you have to do it. No.
P4: It's also something you do for yourself, for your own sake.
P3: Yes.

(Appendix 15, l. 754-763).

Group 1 described volunteerism as an activity done voluntarily, for one's own sake, and individually, a view echoed in groups 3 and 8, however, with some variation. In Group 8, one participant mentioned volunteering work specifically, while others shared their general understanding of volunteerism (Appendix 22, l. 486-493). From group 1's descriptions, we interpret an alignment in the sense of volunteerism and their understanding of spare time, as explored in theme 1. This could imply that the participants extract cues from what they associate with the concept of spare time and relate these to the word volunteerism. Notably, questions about volunteering followed discussions on spare time, indicating a sequential and logical sensemaking process linking volunteerism to spare time. Because these groups primarily described their understanding of volunteerism without reference to organizational volunteerism, we interpret that they lack a sense of the concept of volunteering by joining organizations. Their descriptions did not associate volunteerism with organizations or the act of volunteering within an organization, which implies that the participants do not know that these are connected. An exception occurred in group 8, where one participant used the term' volunteering job'. This participant thereby connects the word volunteerism to the work of volunteering and not the act of doing something voluntarily.

Focus groups 6 and 4 also discussed what volunteerism is. In the following, group 6 discussed volunteerism as an activity:

P28: Something you don't earn money doing?
P26: Yes, well, of course, you usually get a meal or something, but that shouldn't be the main point. That's just what I think.
P29: I don't know. When we were collecting donations, we didn't get a meal. We just did it, it's pure...

P26: Oh yes.

P29: I feel you should do something without getting anything in return, right?

(Appendix 20, l. 504-511).

In this discussion, participants initially focused on the rewards of volunteerism, with P28 describing it as an activity done without monetary compensation. P26 suggests that there may be other benefits besides money, but this idea is dismissed by P29, a sentiment later agreed upon by P26. Ultimately, P29 concludes that volunteerism entails doing something without expecting anything in return. This exchange illustrates how participants rely on each other to try to make sense of the concept of volunteerism. P29 draws on previous volunteer experiences to conceptualize volunteerism as doing 'something' without getting anything in return. We interpret their use of the word 'something' as an uncertainty about specific volunteering activities. Although P29 mentions collecting donations as an example of volunteerism, all three participants ultimately make a sense of volunteering as a selfless activity without expecting any rewards. This sense is reinforced by P26's assertion that even receiving a meal should not be a motivation for volunteering, though they do not further elaborate on their reasoning.

Group 4 similarly described volunteerism as unpaid work, with P19 suggesting volunteering is something one would do if they find a good case. However, P18 suggested that volunteering can be rewarded with personal satisfaction or acknowledgment from others. P17 responded by concluding, "Work you do not get paid for" (Appendix 18, l. 476-487). While Group 4 acknowledges the potential for non-monetary rewards from volunteering more than Group 6, they ultimately concluded that volunteerism is unpaid work. Based on groups 6 and 4, we interpret a sense of volunteerism as revolving around the rewards from doing 'something' more than the actual activities. Further, group 4's conversation implies they have extracted cues of volunteering which they connect to what they sense as work, and thereby conclude volunteering to be work.

In the focus groups, participants discussed their volunteering experiences. Across all groups, one or more participants mentioned their involvement in volunteering, revealing two predominant types of experiences. Participants mentioned volunteering at events like Ironman, local running events, or the Roskilde Festival, as well as fundraising for various organizations or causes. Only in groups 4 and 6 did participants mention other types of volunteering activities. Participants who had volunteered at

the Roskilde festival mentioned doing so to obtain tickets for the festival. In group 6, P29 expressed that volunteering primarily for the purpose of getting tickets did not feel like genuine volunteering (Appendix 20, l. 497-499). Similar sentiments were concluded by participants in Group 1 (Appendix 15, l. 879-892). This reflects the aforementioned sense of volunteerism as something one performs without getting anything in return. Additionally, in group 2, P9 described the main motivation for volunteering at the Roskilde festival by obtaining tickets without payment (Appendix 16, l. 810-817). Whether this was seen as volunteering was not explicitly mentioned, highlighting the ticket's importance as the primary incentive. Based on these senses of volunteering at a festival, we interpret that participants are primarily motivated by the personal benefits derived from volunteering, particularly the festival ticket. This motivation represents an external regulation. Their discussions of volunteerism indicate that they have a sense of volunteerism as an activity from which they do not gain anything, which suggests a sense that this type of volunteerism is not truly volunteerism.

None of the participants in any of the groups were volunteering regularly or at the moment. When we asked them why they believe youths do not volunteer, they discussed the matter collectively. In group 7, they argued:

> **P30:** I definitely think it's about the fact that when you're a volunteer, you don't really get anything out of it. You just do it, it's like a good deed, right? And I think maybe we've become a bit worse at doing that because we tend to think more about what we get out of it rather than what others get out of it.
> **P34:** I also think it's because we have less time now, so we don't want to spend it on something we don't get a benefit from.
> **P32:** Yes.

(Appendix 21, l. 313-321).

P30 explained that youth today may avoid volunteering due to a focus on rewards rather than the good deed itself. P34 added that time is a factor, as they would prioritize activities that provide tangible ‘benefits’, which P32 agreed with. Similar opinions are expressed in other groups. In group

4, P16 explained, “I think it’s about not wanting to spend your time. I mean, you don’t waste your time just doing something you don’t even get paid for.” (Appendix 18, l. 592-594). P16 directly states that volunteering is a waste of time because it is unpaid, and other participants agreed. Based on these discussions, we interpret that many participants have a sense of volunteering as equivalent to work. They express a preference for paid work, which they associate with success, money, approval, and alignment with personal values. Therefore, we argue that in the groups’ sensemaking processes, they equate volunteering with work by extracting cues from their perceptions of both activities. Because work motivates them extrinsically with money, approval, and value identification, they clearly understand the benefits of performing work. Thus, their comparison between paid work and volunteer work indicates a lack of intrinsic or identification-based motivation in volunteering – making it less appealing compared to paid work. This sense of volunteering as a waste of time is a common sentiment across the groups, evidenced by the fact that none of the participants currently volunteer.

Based on this theme, we interpret that the common motivation for youths to volunteer is extrinsic, primarily through external regulation in the form of festival tickets or other material benefits. They see these as payment for volunteering, equating it to work. This aligns with Hu’s (2021) findings, described in the literature review, which showed that the motivation to start volunteering is not different across individuals. We interpret that youths’ motivation to volunteer depends on their perceived external rewards. Thus, it is crucial for the design to clearly articulate the rewards to avoid amotivation.

This theme also contrasts with Yamashita et al.’s (2017) and Orklet et al.’s (2016) findings, as outlined in the literature review, which highlighted selfless motivations like helping others and the community. These discussions indicate that while youths are aware of these motivations, they do not value them as highly as external rewards, leading them to deprioritize volunteering.

The rewards of volunteering

The final theme emerged from the interviews’ concluding segment, where groups discussed why youths do not volunteer today. These conversations revealed a theme around the perceived rewards and the senses of volunteering tied to these perceptions. This theme will be examined in the following section.

In the previous theme, we examined how several groups viewed volunteerism as work, which diminished their motivation to volunteer. However, the groups also discussed the potential rewards of volunteerism, identifying three types: social relations, skills, and moral rewards. In group 4, one participant shared their experience of volunteering with their grandfather at a thrift store for a summer. When asked why, P9 answered:

> "Because I wanted to. It was nice to spend time with my grandfather, whom I don't see very often. So yes, that's why. I don't think it was so much about doing a good deed, but more about spending time with family." (Appendix 18, l. 645-649).

P9's statement reveals that their volunteering was influenced by their grandfather's involvement, with the reward being time spent with family. However, P9 did not elaborate on the organization's goals or what the thrift store's proceeds go to. This suggests that P9 makes sense of his volunteering as a social activity detached from the organization and its goals and values. Additionally, it highlights how social relations can motivate volunteering across any activity, as long as it involves personal social relations. In group 5, participants agreed that volunteering fosters a sense of community (Appendix 19, l. 260). This is agreed upon by group 1, who implied that the community will be stronger in volunteering, as they are not there to gain money from the activity (Appendix 15, l. 904-912). This adds to the understanding of social relations as a reward from volunteering. Although the participants of groups 1 and 5 were not currently volunteering, they saw community as a potential reward based on the extracted cues from what they had heard about volunteering. P9 volunteered based on social connections, whereas groups 1 and 5 speculated about a sense of strong communities as a motivating factor. This suggests social rewards are most effective when volunteers have pre-existing connections. Therefore, we perceive that social rewards are most effective in motivating to volunteer when individuals have connections with other volunteers, enhancing their willingness to participate. This aligns with Fernandes & Matos' (2023) findings, as outlined in the literature review, indicating that relatedness plays a crucial role in organizational engagement, fostering volunteer loyalty and extra-role engagement. In this case, relatedness serves as a recruitment tool, motivating individuals to engage in activities to spend with friends or family, regardless of organization involvement.

In focus group 8, P36 expressed the reward of skills gained from previous volunteering experiences as a soccer coach, highlighting the appeal of opportunities and relevant education options over monetary compensation (Appendix 22, l. 522-528). P36 indicates these opportunities as an external regulation of an extrinsic motivation and as a substitute for money. This mirrors findings by Hopkins & Dowell (2021), as described in the literature review, indicating that skill acquisition and recognition of these skills are key motivators for volunteering, as it could be relevant for future employment. Further, P36's perspective aligns with Pearce et al.'s (2022) research, suggesting urban-living youths volunteer to explore their strengths. However, P36's past tense reference to volunteering as a coach implies a decreasing motivation, suggesting that while skill development can attract volunteers initially, it may not sustain motivation over time.

The moral rewards encompass the sense of feeling better about oneself, doing something for others, and making a difference, as discussed by the groups, for example, by group 2 in:

> You would get that feeling that, in some way, even though you can also get it at work, you would feel in some way that you are making a difference, which you weren't obligated to make. You would get some kind of boost to your self-perception, but also just a way of feeling (...)
> I also think that volunteering would give something, like you would get something out of it, knowing that you have a positive impact on others (...)

(Appendix 16, l. 964-981).

Here, P9 suggests that volunteering provides a sense of making a difference, which P8 elaborated on by emphasizing the positive impact on others. P9 also explains that one can achieve this feeling of doing good for others in a paid job but notes that volunteering carries a sense of freedom from obligation. This suggests that participants have a sense of volunteering as rewarding in terms of personal fulfillment, linking these feelings to their moral values. We interpret this reward as an internal motivation of identification, which includes self-endorsement of one's goals. P9 and P8's conversation illustrates their evolving sensemaking process during the focus groups as they express

and interpret these rewards. Participating in the focus group interrupts their daily routine, providing an opportunity for sensemaking. This process allows them to understand both volunteering and its rewards, suggesting that exposure to information about volunteering could motivate youth to volunteer. The motivation of identification through getting a feeling of having an impact on others and making a difference aligns with the results of the literature review, which showed these factors as the primary motivation for becoming a volunteer. However, it is evident from the conversation that participants lack clarity on how they would enact change and for whom. This presents an opportunity in the design to clarify these aspects, potentially enhancing youth motivation to volunteer, as indicated by previous studies.

Beyond these three perceived rewards, many participants in the groups either do not mention any benefits from volunteering or fail to elaborate on the rewards they mention. For instance, during a discussion about why youths do not volunteer, participants in group 7 converse:

> **I:** So you're not a volunteer because you have the opportunity to...
> **P30:** To do something else.
> **I:** To do something else?
> **P30:** Yes. And you don't get anything out of it yourself, really.
> **P32:** Yes, I really think that it's about...
> **P30:** But maybe it's also that we, as young people, aren't really told what we actually get out of volunteering.

(Appendix 21, l. 346-356).

In this exchange, participants initially concluded that they do not volunteer because they have other options, rooted in the belief that volunteering offers no rewards. However, P30 questions this conclusion, indicating a lack of information about volunteering rewards. This suggests that the group cannot extract any cues from previous volunteering experiences to understand the benefits, leading to a sense of apathy towards volunteering. Similar doubts about their reasoning arise in other groups, indicating that lack of knowledge influences their perceptions of volunteering. An example of this is P17, who argued that those who are recruiting volunteers, do not communicate clearly about the time commitment expected from volunteers (Appendix 18, l. 600-602). We interpret these doubts as

opportunities to alter their perspectives through informative design interventions. Therefore, it is a requirement for the design to effectively articulate the rewards and time commitments associated with volunteering.

The theme of perceived rewards of volunteering revealed three primary motivations: time with social relations, skill development, and moral rewards. However, the moral rewards need clearer communication, as participants struggled to articulate how they were gained. Some participants did not perceive any rewards from volunteering, yet they expressed doubts about their own conclusions, suggesting openness to being proven wrong. Therefore, a design requirement emerged to communicate the rewards and extent of volunteering more effectively.

Revised perceived requirements for the design

The motivations and barriers for youth to volunteer, which were found in the focus groups, have provided valuable insights into effective design requirements for engaging youths in volunteer activities. In the following, we will outline these requirements and examine how our understanding has evolved from the initial prototype. Based on this, we revise the initial design requirements, shown below:

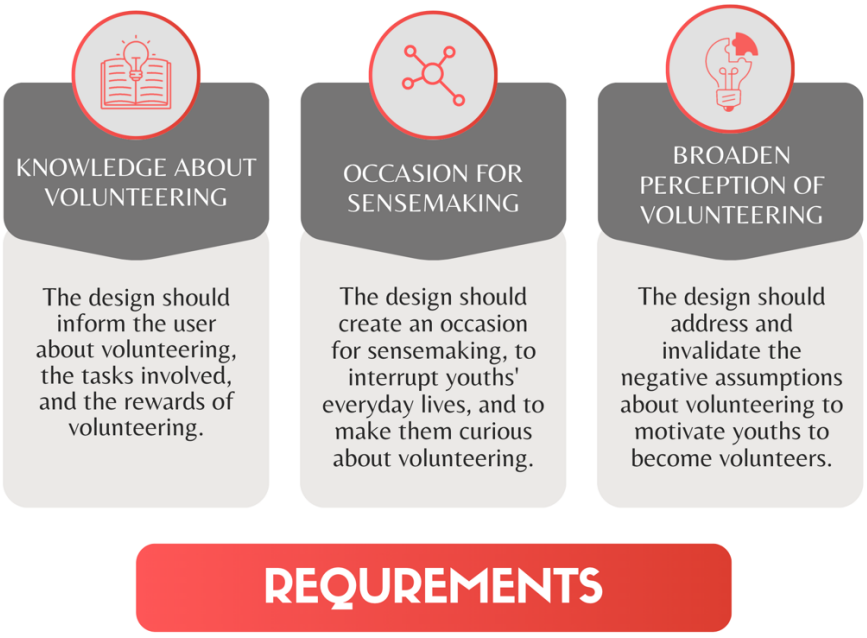


Figure 10: Visualization of design requirements based on FW.

Based on the analysis of the first theme in analysis 2, Prioritizing spare time, we argue that youth are intrinsically motivated by social relationships. This can be leveraged by presenting volunteering as a social activity they can enjoy with friends. Thus, the design has to frame volunteering as a group activity, allowing youths to engage in meaningful activities alongside their peers. Therefore, this introduced a new requirement for the design: Social Integration. This requirement concerns that the design must present volunteering as an activity that can be enjoyed with friends, integrating social features to encourage group participation and highlight the social experience of volunteering.

Furthermore, the analysis of the second theme, The role of work and money, has clarified that volunteering should be portrayed as an enjoyable and valuable alternative to traditional work, offering new skills and enhancing future employability. Highlighting these opportunities aligns with literature that identifies skill development as a key motivator. Therefore, the design should communicate the benefit of developing skills provided by volunteer organizations, aligning with youths' values of work, self-worth, and need for approval. This identifies a new requirement for the design: Emphasizing Skill Development. The design should highlight the opportunities for developing skills and communicate how these skills can benefit participants in their personal and professional lives.

The analysis of the third theme, The perceptions of volunteerism, gave us insight into youths' views on volunteering through the lens of extrinsic motivation, valuing tangible rewards such as festival tickets. This equates volunteering to compensated work. Therefore, the design must clearly articulate these external rewards, highlighting the immediate benefits to align with youths' expectations. The focus groups confirmed the need for detailed information about the concept of volunteering, the time commitment required, specific tasks, and the rewards involved. This confirms the requirement of Knowledge About Volunteering, as the design must communicate detailed information about volunteering, including the concept, time commitments, specific tasks, and tangible rewards to meet youths' expectations.

Finally, the analysis of the fourth theme, The rewards of volunteering, has accentuated a significant barrier to youth volunteering: a lack of clear information about rewards and commitments. Participants often concluded that volunteering offers no tangible benefits due to insufficient knowledge. Therefore, the design has to communicate rewards such as social engagement, skill development, and moral benefits, clearly outlining the benefits and time commitments to change this

perception. This aligns with the requirements to Broaden the Perception of Volunteering and create Occasions for Sensemaking by highlighting its benefits and opportunities through an engaging design; it can address negative assumptions and motivate youths to volunteer by broadening their perception and creating occasions for sensemaking.

This resulted in the following revised design requirements, including the two new requirements of Social Integration and Emphasizing Skill Development:

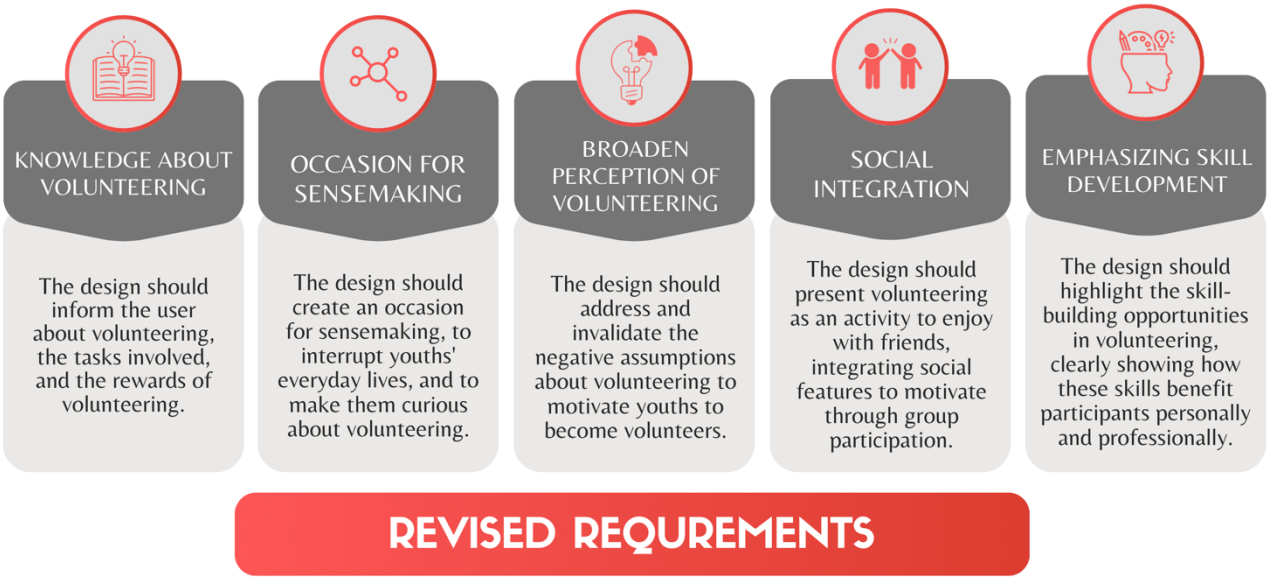


Figure 11: Visualization of revised design requirements based on focus groups.

By integrating these design requirements, we can create a more appealing and motivating environment for youths to engage in volunteering, addressing both intrinsic and extrinsic motivators while overcoming informational barriers.

Prototype 2

In this section, we will present our revised prototype, prototype 2, based on the analysis of the eight focus groups and the requirements formed hereof. Thus, this is our second iteration of the design, and it will be focused on aesthetics and usability. We will emphasize the newly added features and the

aesthetic changes implemented to emphasize the new requirements of social integration and skill development. The prototype further enhances user functionality and experience.

Visual framework

A general change from prototype 1 to prototype 2 is the visual appearance of the design. In this iteration, we have focused on creating a visual framework that connects the different pages, gives a coherent and continuous appearance, and can also align with DUF's existing visual expression and red logo. This has resulted in prototype 2 shown in illustration 13 below:

Illustration 13: Visual framework of Prototype 2.

With this revision of the design's aesthetic appearance, we have created consistency with the same characteristic features in terms of the same color coding, set-up of elements, and buttons and icons, which have a similar expression to make the design easy to navigate. In addition, we have given careful consideration to a variety of design decisions, including the font and color palette in the design. It was also found relevant to create an aesthetically clean and modern look, which aligns with styles that the youths otherwise encounter. As a result, we chose the color palette seen in illustration 14 below:

Illustration 14: Colour palette and fonts.

We found it essential to choose colors that had a neutral appearance; however, with a single, more vibrant color that could stand out. This makes it more aesthetically pleasing, highlights buttons, and thus makes the design easy to navigate. The choice of red shade is based on DUF's red logo. In addition, the remaining beige and grey colors were chosen because the design should be able to suit different purposes in the form of the various organizations connected to DUF. Therefore, it would not be suitable to, for example, create a green or blue design, which could reflect some organizations better than others.

Furthermore, the navigation bar has been revised to make it appealing and intuitive, as seen in illustration 15. One of the icons in this menu has been changed due to internal confusion about the page's purpose, which is the former 'browse page'. It was realized that as we were unsure whether it was a browsing page or a catalog page, the name and icon needed improvement.

Illustration 15: The search page of prototype 2.

Therefore, we changed the name of this page to the search page and added an icon in the navigation bar that illustrates the purpose of the page. Hereby, the ability to search and find various organizations on this site is indicated to the user.

The aesthetic redesign is the most significant change to prototype 2's test page – where users can determine their volunteer type – as seen in illustration 16:

Illustration 16: The test in prototype 2.

This revision utilizes the selected color palette and highlights significant elements with the vibrant red. Furthermore, the two fonts we have selected are also used throughout the design. These two fonts were selected based on their readability and simple yet modern and aesthetically pleasing style.

Furthermore, there are two new additions to this part of the design: a 'skip' button and a progress bar. The button in the top right corner enables the user to skip the test if they already have a profile or do not find the test relevant. The progress indicator is the visual element at the bottom of the page, indicating the user's progress in a linear process. It is used to guide the user through the test by showing how far they have come to prevent the users from finding the test unmanageable. This is based on our understanding of youths' focus on prioritizing their time, which we identified with both the FW participants and the focus groups.

Motivational design elements

In the analysis of the focus groups, we identified factors that we believe can help support the design in motivating youth. In the analysis, it appeared that the participants did not know much about volunteering, what you can volunteer for, how you volunteer, and how much time you have to spend on it. These perceptions thus support our design choice to create a design that can motivate through autonomy, as described in the literature review. In this part of the literature review, arguments are presented that autonomy is crucial for motivation and engagement among volunteers. It is described that high autonomous motivation improves need satisfaction, job satisfaction, and work effort. Therefore, we seek to support the youth's need to understand volunteering and thereby motivate them through autonomy by giving them insight into the influence they can have through various organizations. This is especially the aim of the design's home page, where the user can scroll between short informative videos that inform about these aspects. The homepage is shown in illustration 17:

Illustration 17: The home page of prototype 2.

This idea is further supported by ideas from the literature review that image motivation is important for recruiting volunteers to nonprofit organizations. Situational activity and visual presentation was found to play a significant role in attracting volunteers by influencing their motivation and participation, which is the aim for this part of the design.

Furthermore, the focus group analysis revealed a requirement for social integration based on the participants' perceptions of social relations as valuable. However, there was also a need to spend money on social activities, which they found problematic and related to the performance-oriented society. This supports the idea of adding a 'share' button in the form of a small paper airplane icon to the page, which enables users to share the content with friends, as shown in illustrations 17 and 18:

Illustrations 17 & 18: The home page & the contact page of prototype 2.

As we identified the requirement of social integration, the button was added in several places in the design, such as on the contact page, where the user can share events with a friend. Furthermore, the organizations should be encouraged to emphasize the opportunities for friends to participate in their events and activities together in their texts and videos because of this inclination to value spending time with friends and the issue of having to spend money to do so.

Emphasizing skill development

Based on our analysis, the main motivations for volunteering are time spent with social relations, skill development, and moral rewards. Therefore, to improve the design, the rewards of volunteering must be communicated, particularly highlighting the development of skills and moral benefits. By accommodating this requirement to the design, the assumption of volunteering lacking rewards will be addressed by showing how volunteering is beneficial. Based on this understanding, we seek to create an engaging user experience by adding a gamification element, which demonstrates the benefits, abilities, and personal rewards that individuals can gain from volunteerism.

As described in the theory section, rewards within games and gamification can be divided into four categories: status, access, power, and stuff. Therefore, we find it relevant to consider how we can incorporate reward systems into our design to clarify the rewards of volunteering. We chose to create a feature of badge collecting in order to motivate youths through rewards. Badges, as visual symbols of achievement, can demonstrate the rewards of volunteering, such as skill development and moral satisfaction. Badges on a volunteer information website harness the core principle of gamification: recognition for achievement. Users are motivated by rewards and acknowledgment of their success, which can be effectively expressed through badges. This system not only encourages engagement but also drives progress by making the experience interactive and rewarding. This taps into the human instinct to collect, providing recognition and a sense of accomplishment. Badges can thus allow the design to showcase potential skills and personal experiences that can be achieved. Further, badges both function to motivate by informing and giving the user a better overview of what the individual organization can offer. The badges will be visible when a user accesses an organization or specific activity – on the home page, search page, or contact page. This will enable the user to see which badges, i.e., skills or moral rewards, they can obtain from joining the organization. It can thus, for example, be in the form of a skill they can use for their CV, as shown in illustration 19:

Illustration 19: The profile page of prototype 2.

As shown in illustration 19, it will be possible for the user to access their badges on the profile page. Here, the badges that were achieved can be viewed and shared on the career-focused platform Linkedin. This feature gives the users the opportunity to prove their achieved competences, which can contribute to achieving recognition and accommodate achievement motivation. This change is based on the need to understand what you get out of being a volunteer, which is also supported by several studies mentioned in the literature review. Several studies indicate that career enhancement is a major motivating factor in volunteer recruitment, especially among young people who are often motivated by gaining skills that are beneficial and relevant for their future careers. Furthermore, a

study indicated a need to provide proof of their newly acquired skill, which they can use for future employment. This is also relevant to retention, based on Furtak and Barnard's (2021) identification of four motivation themes for volunteer retention: competence growth, engaged mindset, emotional well-being, and social integration. The badge feature can showcase these potential rewards in a visual and understandable way.

Discussion

This study aims to gain an understanding of the motivations for volunteering youths and the motivations and barriers to becoming a volunteer in order to create a design that demonstrates volunteerism as a valuable spare time activity for youths. After having studied this and created a design, it is relevant to discuss how the design would function in the practice of DUF and its member organizations. This is relevant because DUF and its member organizations have a crucial role in the future success of the design, as DUF would be the owner and distributor of the design. Therefore, we will discuss how the design would function in practice based on an intervention with DUF, the findings from the research, and the literature review.

After designing the website based on our findings, we now find it relevant to discuss how the design would function in practice. The intervention with DUF is included because they would be the future owners and distributors of the design, and they have an understanding of their member organizations, which is valuable in evaluating the design. By having this position, DUF is an important component in the future success of the design. Barab (2015) defines an ecological model of impact, where the outcome obtainment of innovation is a distributed accomplishment spread across multiple interacting components. The components are categorized as the designed product, an active participant, skilled facilitators, and an enabling ecosystem, and these have to be functionally united in order to reach outcome obtainment (Barab, 2015). This relates to the outcome obtainment from this project, which depends not only on the design’s success in motivating active youth participants but also on the role of skilled facilitators at DUF and an enabling ecosystem, including member organizations. This discussion is, therefore, crucial for the future use and success of the unified innovation and components.

We presented the design to our two informants within DUF and intervened on each page of the website. Through the presentation of the design, both Simon and Aline expressed positive thoughts about the concepts of the design. Simon described, "[...] but I think those are some brilliant features you have considered. Regardless of what happens afterward, I definitely believe that this is the way to go. Again, it's about removing as many barriers as possible" (Appendix 23, l. 478-482). The overall concepts that the design includes are described as 'brilliant' features, and Simon elaborates on how he believes these concepts remove barriers for youths, which he describes as the right purpose of the design. Aline agreed to this, and they both expressed multiple times how they find the design overall very exciting and engaging. Specifically, the feature of the test is described as fun, and that relates well to the tendency of youths wanting to understand themselves (Appendix 23, l. 31-41), as well as the contact page, which is intended to remove the barrier of not knowing how to start or contact organizations (Appendix 23, l. 309-344). Overall, the two DUF employees were positive and optimistic about the design we presented.

However, Aline and Simon reflected on how the member organizations would experience the design and the features within. In a conversation about how the organizations are represented through videos, Aline elaborates on a possible critique of this type of representation, as she believes some organizations might find the video format is insufficiently detailed for recruiting volunteers. She elaborates that; "There is definitely something about some of our member organizations, perhaps many of them, being quite focused on getting the right volunteers" (Appendix 23, l. 114-117). With this, Aline describes how some organizations want to recruit specific volunteers to find the 'right' volunteers. If this is the case, then a barrier for the design would appear, as the current prototype of the design allows all users to contact any organization they find an interesting role description. If the organizations only want specific users to be able to contact them, then the premise of this part of the design would be challenged. Aline specifies that the problematic aspect of the filmstrip is connected to the desire from some organizations to be contacted by potential volunteers who have read more thoroughly about the organization, the role, and the details of what it takes to be a volunteer. The 'right' volunteer is thereby described as a volunteer who is motivated to read longer specifications about the role, which conflicts with the format in the current design. However, we argue that the motivation based on accessing information about these aspects of the role could be experienced through the use of the developed design.

In contrast to Aline's concern, Simon contributes with a positive view on the presentation of the volunteer roles:

> "[...] there's something about having a video presentation because it just becomes more lively and easier to understand what this is actually about. So, I think that part definitely has something to offer, but that's true. Mm. But maybe it's okay that it also attracts different types of people than those you might usually attract." (Appendix 23, l. 166-174).

With this expression, Simon adds a positive perspective of using the filmstrip, as he finds it attractive for presenting volunteerism in a lively and easy way to the user. In addition, he adds that this visual format of the video might attract new types of potential volunteers, which is found to be a positive outcome. Thereby, Simon identifies a positive outcome of the design's functions as the member organizations have an opportunity to attract new types of individuals, which could increase their number and diversity of volunteers.

Despite Simon's positive view on the filmstrip, it can be argued that Aline's statement that some organizations want to recruit specific youths could have negative consequences for the design, the potential volunteers, and the member organization in practice. If a potential volunteer contacts a member organization that wants specific youths, it could possibly affect the experience of the user if the organization does not think they are the right kind of volunteer. Thus, ultimately influence the user's experience with the design negatively. This could cause an organizational climate where one does not feel useful, welcome, or needed because the organization could be hesitant to grant the volunteer responsibility, tasks, and a sense of relatedness. As stated in the literature review, Nencini et al. (2015) found organizational climate as influential to one's intention to leave. Further, the results of Fernandes and Matos' (2023) study showed organizational climate as the gateway to engagement in terms of autonomy, competence, and relatedness. If the organization does not think the volunteer is the right fit, this could cause a decrease in these three factors, which would lead volunteers to disengage from the organization. This discrepancy between the communicated role in the design and the actual volunteering experience would undermine the design's success, discouraging future use. It would further affect the organization's experience with the design because it would not have recruited the right kind of volunteers, which could affect their future use of the design. As a result, Aline's

concern about some organizations recruiting specific volunteers could thereby be crucial for the design's function in practice for these organizations. However, if the organizations need volunteers or find it hard to recruit volunteers, the design is an opportunity to attract new types of volunteers into the organization.

Simon and Aline were also skeptical about the badge feature within the design. After presenting the concept of gaining badges, the possibility of transferring badges to one's LinkedIn, and thereby adding skills to one's CV, Simon described an overall skepticism about the motivation based on enhancing one's career. Specifically, Simon describes the idea of someone being motivated to volunteer based on a desire to enhance one's CV as "terrible" (Appendix 23, l. 531-536). Simon is, therefore, critical of the feature, but he also acknowledges that the feature could be a motivating feature in the design. Aline is also critical about the feature and adds, "As long as people don't think they have to shuffle between all sorts of organizations. Because the important thing is to find one and stay there, and get the democratic education that comes from being in one place" (Appendix 23, l. 615-620). From Aline's statement it is clear that she has an understanding of moving from one organization to the other as a wrong kind of volunteering. She believes that it is important that one finds an organization that fits and stays there, as this gives the volunteer a 'democratic education'. Conversely, our expert interview with Jonas Hedegaard revealed a shift in the nature of volunteering towards 'ad-hoc volunteering' (Appendix 1, l. 198-205). He interpreted this as a move towards more task-based and location-dependent volunteerism. This raises the question of whether DUF's emphasis on finding and staying with one organization is outdated compared to recent research.

From Simon and Alines' views on the badge feature, there could be a barrier to the future use of the design, as they, as representatives of DUF, express strong opinions of how youths would ideally be motivated to volunteer. Although we represented the findings of the FW and focus groups, where the motivation of gaining skills and enhancing one's CV is expressed, they are still skeptical about this type of motivation and the consequences of it. Aline further adds that she believes that many organizations do not want to talk about enhancing CVs as they do not want volunteerism to be connected to this type of motivation (Appendix 23, l. 556-562). This creates a discrepancy between what motivates youths and what the organizations want the volunteers to be motivated by, as they do not want Danish volunteerism to be linked to career and competence enhancement but to the democratic development of the individual. This discrepancy could be crucial for the function of the

design, as the feature of the badges would motivate some youths to become volunteers and, therefore, use the design. However, if the organizations are skeptical about the feature of the badges, there is a chance they would be critical of the youths who contacted them through the design. The organization could have an assumption of the youths as being motivated by gaining skills for their CV, which, according to Aline, could make them deselect the volunteers or, as a larger consequence, not use the design. However, the motivation of enhancing CV, gaining skills, and being acknowledged for these skills are found as a motivation in the analysis. Therefore, the organizations would miss the opportunity of getting this type of motivated volunteers.

Based on these two barriers, there is an overall discrepancy between the assumed attitudes towards volunteers from the organizations, as the described attitude desires a specific type of volunteer. This type of volunteer is motivated in advance for the volunteer role, as it is expected they read longer descriptions of the role and are motivated for only one organization where they should want to stay. If this is the case for the organizations, then there would be a large barrier to the developed design, as the purpose of this design is to get youths motivated to volunteer in general and based on their interests. However, this intervention was with DUF, who represented the member organizations. There is, therefore, a possibility that these assumptions are based on Aline and Simon's own opinions or previous experiences. The obtained outcome of the design's function might, therefore, be different after interventions with the actual member organizations.

Apart from these two barriers, there is an overall worry about the amount of resources it would take from the member organizations to use and maintain their content and requests on the platform. Specifically, the contact-page in the design was discussed thoroughly through the intervention. Aline and Simon described that it would differ from each organization whether there were many different local divisions of the organization, or one head office. Further, it would differ if the organizations have volunteers in charge of recruitment or an employee with full-time employment to manage enquiries (Appendix 23, l. 373-384). An overall barrier of resources is described as connected to the handling of the enquiries which is received by potential volunteers. Because the organizations would receive messages through the website, it would take some resources from the organizations to answer these. Based on the size of the organization, there could be a difference in the period of time a potential volunteer had to wait for an answer. This is because organizations with an employee hired to recruit volunteers would presumably answer faster or more often than a volunteer in the same role. This

could, in the future use of the design, lead to an unequal relation between the organizations, as the potential volunteer would prefer an organization that answers fast and often. Again, this could be a potential reason for some organizations to not want to use the design for recruitment. However, the contact page is also perceived by Simon and Aline as a way of breaking down the barrier of not knowing how to contact or start as a potential volunteer, which is described as one of the pages they were particularly excited about. The inequality in this concept might, therefore, just be a premise for the organizations, where fewer enquiries would be better than none.

As a part of this worry about the resources it would take from the organizations to use the design, there is a future responsibility for the organizations in welcoming the recruited volunteers. Aline describes this in the intervention where she expresses how every time someone enquires the organization, they need to handle that enquiry, which is seen as demanding for the organization. She follows up by adding that she believes some organizations are taking care of their volunteers by letting them do activities and have fun instead of having to welcome and train new volunteers (Appendix 23, l. 392-403). With this, Aline describes the worry of resources as connected to the current volunteers, who should not be bothered by the introduction of new volunteers. However, we argue for a much broader responsibility of the organizations, as they have to give the new volunteers a nice welcome and an elaborate introduction. This is argued based on the literature review, where Tiltay and Iseks' (2019) results show how volunteer management is a key to long-term volunteering, and Park and Kims' (2016) findings that showed training and development are key to leading value congruence and motivation for volunteers. Further, the study by Zollo et al. (2021) showed that values and social motivations, and positive reciprocity make volunteers want to stay. Based on these findings, the success of the design in practice over time is not only determined by the motivation of youths to become volunteers but also by the organizations to be able to live up to the expectations of the youths. Therefore, the organizations both have to live up to the role based expectations through management, as well as the social expectations of feeling included and welcome in the organization. The success of the design could, thereby, be challenged if the organizations do not have or allocate enough resources to the new volunteers' journey after entering the organization, as the chance of them being demotivated by not meeting their expectations would make them stop volunteering again.

The possible barriers of specific recruitment, volunteerism as career enhancing and the amount of resources needed indicate that DUF does not find the design suitable for all of their member

organizations. Although they do find the design suited for motivating youths based on the results we presented to them, they see multiple barriers and challenges for the design to work for some of their member organizations. Therefore, we interpret that as the design is not found suitable for all the organizations, DUF may not realize the design in practice. If they distributed the design, and the organizations experienced it as unequal in terms of resources, or if youths only applied for some organizations, they may get criticized by the member organizations. This could be a challenging factor for the design in the practice of DUF's work with the organizations. However, the design was positively received and viewed as suitable for motivating youths, which was the purpose of the project. Therefore, if DUF wants to improve the recruitment of youths for their member organizations, the design is an evident solution, despite the organization's possible negative attitudes and approaches to the methods for recruiting.

Conclusion

This study aimed to understand how youths' perceptions of volunteerism and spare time can be a foundation for a design that motivates them to volunteer. Based on the findings from the literature review, the FW, and focus groups, five requirements were established to guide the design. These requirements are intended to motivate youths to become volunteers.

The literature review identified key motivations and factors influencing youth volunteer engagement. Career enhancement and the desire to help others were primary motivators. Autonomy, a supportive organizational climate, and formal recognition of efforts significantly boost engagement and retention. Flexibility in volunteering opportunities and online volunteering, which motivates through values, were also important. These insights guide our research in developing designs that motivate youths to volunteer.

From the FW it was concluded that participants perceived a lack of information about the concept of volunteering, leading to various assumptions about it. Further, it was found that the design should create an occasion for sensemaking and broaden the perception of volunteering, as a result of these findings. Based on these three interpreted requirements from the FW, a prototype was developed.

The analysis of the focus groups revealed participants' perceptions of spare time and their prioritization of activities, which served as the foundation for developing new requirements. These requirements were based on findings that identified the social element and skill development as significant motivations for becoming a volunteer. Additionally, as the participants perceived volunteering as equivalent to work, and several participants had specific assumptions or non-existent senses of the concept of volunteering, the previously formed requirements were confirmed.

To address these insights, we developed a design accommodating the specific requirements aimed at motivating youths to volunteer. The design emphasizes making information accessible and relevant to the individual through the feature to contact organizations, the filmstrip, and the search page. Further, it meets the requirement of creating an occasion for sensemaking by appealing to the users' curiosity about themselves and volunteering. The requirement of broadening the youths' perception of volunteering is accommodated through the test and filmstrip, which articulates the rewards of volunteering. Additionally, the opportunity to send content to others and view nearby activities meets the requirement of social integration, while the badge feature accommodates the motivation of skill development and informs users about volunteering.

The intervention revealed that DUF was optimistic about the design's potential to motivate youths and remove barriers. However, concerns were raised about resource demands and the suitability of the design for all member organizations based on their perceived need for specific volunteers. This implies a possibility that the design's implementation could be challenged, as DUF might hesitate to adopt it due to these contradictions.

In conclusion, youths' perceptions of volunteerism and spare time act as the foundation for the design, which motivates them to volunteer. The design meets the requirements based on the motivations and barriers to becoming a volunteer, with perceptions of volunteerism and spare time serving as the foundation for the motivational design. By integrating detailed information about volunteering, emphasizing tangible and social rewards, and creating an engaging, user-friendly platform, the design can encourage youths to participate in volunteer activities, ultimately contributing to their well-being.

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Appendix

Appendix 1: Transcription of interview with Jonas Hedegaard

Appendix 2: Transcription of interview with DUF

Appendix 3: Permission to use model from Hirchheim and Klein

Appendix 4: Interview guide Jonas Hedegaard

Appendix 5: Interview guide DUF

Appendix 6: Interview guide focus groups

Appendix 7: Presentation from future workshop

Appendix 8: Bias exercise

Appendix 9: Permission to use SDT models

Appendix 10: Notes and descriptions from future workshop

Appendix 11: Field notes from future workshop

Appendix 12: Transcription of implementation phase of Future workshop

Appendix 13: Screenshots of apps that have inspired our design

Appendix 14: Picture sorting from focus groups

Appendix 15: Focus group 1

Appendix 16: Focus group 2

Appendix 17: Focus group 3

Appendix 18: Focus group 4

Appendix 19: Focus group 5

Appendix 20: Focus group 6

Appendix 21: Focus group 7

Appendix 22: Focus group 8

Appendix 23: Transcription of intervention with DUF

Appendix 24: Literature approval