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Digital sharing platforms:

A study on potential barriers for successful establishment

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Abstract

The rising trend of over consumption has led to threatening environmental consequences. A solution to this would be collaborative consumption, as it promotes environmentally friendly sharing behaviors. Collaborative consumption can be enabled with digital tools, such as digital sharing platforms. The purpose of this study is to generate knowledge about how digital sharing platforms can be successfully established in order to build a good foundation for collaborative consumption. This qualitative research, influenced by grounded theory as a method, aims to explore the question “what are the barriers for establishing a digital sharing platform?”. Based on related research and by investigating a digital sharing platform called Umigo, we conducted six semi-structured interviews based on three technological frames and identified multiple barriers. With this research we make two main contributions. Our first contribution is that digital sharing platforms are unique in comparison to other platform types and should therefore be studied further. We also found an overview of the barriers that could prevent the successful establishment of digital sharing platforms.

Keywords: digital sharing platforms, digital platforms, technological frames, collaborative consumption, sharing economy

1. Introduction

Consumerism has led to severe consequences for the environment. Since 1980 a third of the earth's resources have been consumed by humans. During the 1900's people's behavior has changed from reusing and thrifting products, into throwaway habits and the pursuit of buying more. When the plastic bag was invented in 1907, there was no one that could foresee that Americans would yearly dispose of 100 billion plastic bags, and that most of them were only used once. Consumerism is now often an unconscious act, and we are rarely aware of its future consequences, as we only see the temporary instant gain for ourselves. Examples of this are buying bottles of water or using electricity for personal computers. The individual impact is not vital but combining the millions of people's daily consumerism adds up to unimaginable statistics and severe consequences. These behaviors have led to a society that is addicted to consumerism behavior and throwaway habits. A great deal of the resources that are used every day ends up in landfill rather than being reused or recycled (Botsman and Rogers, 2011). Sopor.nu (2020) presents that in 2019 in Sweden, a total amount of 4,8 million tons of waste were collected from household use. That equals 467 kilograms per person. However, even more waste is coming from businesses, which in 2018 resulted in a total amount of 35,2 million tons. Botsman and Rogers (2011) says that this has led to the need for more environmentally friendly behavior, like collaborative consumption.

The increasing concern for the environment has led to more consumers seeing collaborative

consumption as an alternative to their usual methods (Zalega, 2018). There has been a rise in platforms that enable users to participate in collaborative consumption. Two of the most famous and spoken of digital sharing platforms are Airbnb, with their 150 million users (Bustamante, 2021), and Uber which has 93 million users (Dean, 2021). These popular platforms have led to great enthusiasm regarding the sharing economy. However, this boom of enthusiasm and popularity does not mean automatic success for establishing these types of platforms. Most of today's research and literature is focused on these successfully established platforms. This means that there are a great number of failed attempts to create these platforms that we do not know of, since they never reached the public.

May, Königsson and Holmström (2017) conducted research in which they explored which barriers are present for the sharing economy and digital sharing platforms within a city context. The authors mention examples of digital sharing platforms that have been successfully established in Sweden, including Uber, Airbnb, Car2Go and Kickstarter. However, even though there are a lot of examples of when digital sharing platforms have succeeded, a lot of cities have had difficulties reaching a sustainable sharing economy because of its failure. A reason for this is that there are barriers that prohibit the sharing economy and digital sharing platforms from emerging in some contexts. The authors found a number of said barriers for cities initiating investments for the sharing economy and digital sharing platforms. Some of these barriers include restrictions and laws prohibiting implementation and growth, politician's stand on changes or new initiatives, a lack of awareness regarding the sharing economy which prevents sharing behavior from spreading, requirement of a network with active users, that people are reluctant to sharing their personal belongings, and that they are hesitant towards changes replacing their current methods.

As mentioned above, current research almost exclusively focuses on contexts in which digital sharing platforms have succeeded. Because of this, there is a lack of research that points towards what makes certain digital sharing platforms succeed, and what makes others fail. We argue that it is important to fill the research gap in regard to what makes digital sharing platforms fail, in order to enable more communities to use digital sharing platforms, thus introducing them to the sharing economy and its previously mentioned benefits. Because of this, we aim to explore the following research question:

“What are the barriers for establishing a digital sharing platform?”

The study's purpose is generating knowledge regarding digital sharing platforms successful establishment, to achieve a good foundation for collaborative consumption. In relation to this we do semi-structured interviews with different actors that see digital platforms as the solution for realizing collaborative consumption and the sharing economy. By doing these interviews we are investigating potential obstacles that can prevent digital sharing platforms from being successfully established. Our research question is explored within three different frames: strategy, technical, and usage. In order to do so we build on the notion of technological frames described in chapter 3.0. With our research we make two main contributions. The first one is showing how and why digital sharing platforms are so unique and valuable, which provides

arguments for why they should be more present in the research field. The other contribution is presenting which barriers that might be present when trying to establish digital sharing platforms. Our findings can therefore help fill the current gap in research, where both digital sharing platforms as a concept and the barriers of establishing them are rarely mentioned or discussed. Our results can also be of value to those working with digital sharing platforms, as it can be used as a guide to which barriers they should take into consideration and thus manage or avoid them.

2. Related Research

In this chapter we provide an overview of what research has been done within the fields of collaborative consumption, the sharing economy, and digital platforms.

2.1 Collaborative Consumption and the Sharing Economy

Sharing behaviors has played a great part in human societies historically. Million years ago, during the stone age, our ancestors were hunting animals and gathering plants in groups. This collaborative behavior increased the chances of getting food and was therefore essential for survival. After acquiring food, it was shared and distributed evenly through the camp. These behaviors have then continued and developed in future societies as well, leading to more advanced economic systems of buying and sharing products with other products or currencies. Anthropologists argue that these sharing behaviors and reciprocity make up the foundation for human cooperation and are a central part of our existence (Botsman and Rogers, 2011). Tomasello (2009) conducted research that shows that children as young as fourteen months will try to help an adult with tasks such as opening a door. Furthermore, when adults drop objects one year old children will alert them by pointing at it, and two-year old's are likely to hand you items that you have dropped. Empathy and cooperation are not learned behavior, but rather biological. When children are around three years old, they start to change their behavior as they conform to societal norms. This means that they can either be more or less likely to participate in these sharing behaviors depending on their surroundings. For example, children are more likely to share items with children that have been nice to them.

Belk (2014) talks a lot about collaborative consumption and defines it as follows: *“Collaborative consumption is people coordinating the acquisition and distribution of a resource for a fee or other compensation”*. The last part about other compensation he says is added there for the purpose of letting this definition include bartering, swapping, and trading. This is the definition we will be using in this thesis when talking about collaborative consumption. According to Botsman and Rogers (2011), after the year 1960 less collaborative consumption and more egocentric tendencies have taken place. An example of a common object that is rarely used is the power drill. The average person only uses it for a total of six to thirteen minutes. But approximately half the households in the US have one. This means that there are around 50 million power drills that are barely being used. Apart from the money that was spent on buying it, they also require maintenance, spare parts and from time to time an upgrade to a newer model. The thing is, what most people want is actually the hole that the

drill creates, and not the drill itself. Therefore, it is unnecessary that so many power drills are currently collecting dust in every other home. Other resources that are not used to its full potential are cars, spare rooms, clothing, facilities, or objects that are sitting in storage units. In the UK and US, it is believed that 80 percent of all objects that the population owns are not even used every month. In other words, there is great potential for people to both distribute and find resources in their area. This has recently taken a turn in relation to changes in cultural, political, and economic systems.

Value is created from shared or open resources, in order to continue fulfilling personal needs and wishes while still benefiting the larger community. This can be partially explained by a change in generations' attitudes towards sharing, as well as the environmental impact. Most of us have rented a hotel room, used a shared laundry space, or rented objects. There has also recently been a shift in how we own our resources. You used to buy a CD, but now you can listen to music digitally. You are also no longer required to buy DVDs to watch movies, since you can access it through a streaming service such as Netflix. Microsoft and Intel conducted a study that showed that by purchasing your music digitally instead of buying a CD, you could reduce your carbon footprint and energy usage by 40 to 80 percent. We are therefore not as required to buy and use physical objects, and this has led to a shift on how we view ownership. The latest generation seem to have less interest in actually owning all the objects they need and are more willing to share it with their community. There are different factors that can motivate individuals to participate in sharing behaviors. These include saving money, being time efficient, gaining better service, being more environmentally friendly or building social relationships. Peer-to-peer sharing, and rating has exploded, and led to an entire sharing economy. Lexico (2021) defines the sharing economy as an economic system in which private individuals are sharing resources or services with each other, typically over the internet, and it can be done both for free and be charged with a fee. Dalberg (2015) further defines digital sharing economy as individuals using a digital platform for sharing assets such as physical, financial, or human capital, without shifting ownership, and the requirement that it creates value for a minimum of two parties.

2.2 Digital Platforms

Digital platform is a term that can be looked at both as a technical artefact as well as a sociotechnical assemblage that encompasses the technical elements and associated organizational processes and standards (de Reuver, Sørensen and Basole, 2018). In this thesis we will use the definition of digital platforms as follows: “*An external platform consisting of the extensible codebase of a software-based system that provides core functionality shared by the modules that interoperate with it and the interfaces through which they interoperate*” (Ghazawneh and Henfridsson, 2015). The following table, Table 1, provides an overview of different types of digital platforms, as well as descriptions and examples of each platform type.

Platform Type	Description	Example	Illustrative research

Service platform	Provides services	Microsoft Azure	Taylor (2018)
Product marketplace platform	Provides physical products	Blocket	Li, Fang, Lim, Wang (2019)
Payment platform	Provides monetary payments	PayPal	Youssefzadeh (2014)
Investment platform	Provides investment/financial instruments	FirstChoice	Bogdanov, Degtyarev, Uteshev, Shchegoleva, Khvatov and Zvyagintsev (2020)
Social networking platform	Provides a double-opt-in (friending) mode of social interaction	Facebook	Demiraslan Çevik, Çelik and Haşlaman (2014)
Communication platform	Provides direct social communication (e.g., messaging)	Facebook Messenger	Abram (2016)
Social gaming platform	Provides gaming interaction involving multiple users	Game Foundry, Steam, Origin	Oliveira, Santos, Aguiar and Sousa (2014)
Content platform	Provides a place to produce content	YouTube, Twitch	Susarla, Oh and Tan (2011)
Development platform	Provides opportunities to develop software applications	Visual LANSA	Weissman and Bobrowski (2009)

Table 1. Different types of digital platforms.

Digital platforms today are an omnipresent phenomenon that has changed the way of how we provide and consume digital services and products (Hein et al. 2020). As you can see in table 1 there are many different types of digital platforms mentioned and exemplified and that the concepts of these widely differ from one another. However, digital sharing platforms are not included among these examples. Digital sharing platforms are rarely mentioned among different types of platforms and are therefore somewhat forgotten or overlooked within this

topic. Something that we find disturbing since we argue that it has become a well-established type of platform that is still growing in popularity. These types of platforms possess characteristics that are essential for future platform establishment since they allow for hidden resources to come to light. Digital sharing platforms have emerged as a result of the need of the previously described collaborative consumption. As Sutherland and Jarrahi (2018) mentions, sharing behaviors has been around for a long time, digital platforms have not. There used to be limitations for how and where sharing behaviors could develop. Historically it has been common to share within your everyday communities, such as with family, friends or your neighborhood. The development of digital tools that enables sharing has led to the possibilities to share outside of these communities by letting you get in touch with strangers. Examples of how people have been sharing and helping each other is by borrowing a car or home, carpooling, sharing a meal, lending money, or receiving help with home renovations. These historical behaviors have gotten a rise because of the digital sharing platforms that enables peers to participate in different kinds of sharing behaviors (Sundararajan, 2016). As earlier mentioned, a digital platform is required for individuals to participate in the digital sharing economy (Dalberg, 2015).

When we talk about digital sharing platforms in this thesis, we refer to the different digital platforms that are used by individuals to participate in sharing behaviors and the digital sharing economy. What makes digital sharing platforms unique is their focus on resources and how they encourage sharing activities and collaborative consumption for their users. As mentioned in our introduction by May, Königsson and Holmström (2017), examples of digital sharing platforms that have had success in Sweden are Uber, Airbnb, Car2Go and Kickstarter. Garud et al. (2020) talks about the digital sharing platform Uber, which connects riders to drivers with their smartphone application. Uber was one of the first sharing economy companies which offered a smartphone solution. They revolutionized the taxi situation in San Francisco where the citizens could now request a ride with their smartphone, match with a driver and then track the driver's route to their location. This solution was in contrast to the taxi companies which had much stricter regulations to follow and could not offer as flexible services as Uber. The platform enables transactions instantly, makes it easy for drivers and riders to find each other, as well as enabling a more cost-efficient alternative for transactions. The author further explains that sharing platforms have transformed entire business landscapes. Uber wanted to stand alone and differentiate themselves from existing taxi companies and regulations since adapting to it would affect their business model's core values. These include being convenient for their users, offering both fast and efficient rides and that these rides are bookable on demand when using their phone application. Uber has often been in court to defend themselves towards regulations for taxi companies, which they do by referring to themselves as a technology company rather than taxi company. Their ongoing court battles and refusal to give up has led to them increasing value for both their riders and drivers and has led to the company being one of the most well-known examples of a successful digital sharing platform.

Sutherland and Jarrahi (2018) mentions the digital platforms as a major reason behind the

sudden rise of collaborative consumption since the sharing economy relies on digital technologies. The sharing platforms are usually designed with efficiency and scalability in mind, which enables communities to come closer together and share resources. Even if there are other platforms that enforce closeness within communities and a focus on resources, what makes digital sharing platforms so unique is the combination of the two. As presented in Table 1 there are social platforms like Facebook, and resources centered platforms such as product marketplace platforms like Blocket. But what digital sharing platforms do is enforcing both the social values and the resource perspective to enforce the rapidly growing sharing economy.

3. Research Methodology

In this part of the thesis, we will describe our methodology for conducting the research, as well as provide arguments for why we made these decisions.

3.0 Theoretical Framework: Technological Frames

Orlikowski and Gash (1994) describes technological frames as the way to identify the organizational members' underlying assumptions, knowledge, and expectations that they use when trying to understand the technology in an organization. This does not just include the role and nature of the technology but also the specific applications, conditions, and consequences of said technology in a specific context. They go on by saying that the effects of the technological frames are very powerful in the sense that people's expectations, assumptions, and knowledge about the technology's importance, context, purpose, and role will influence the design and use of said technologies in a major way. Guenduez, Mettler and Schedler (2020) suggests that in this approach technology is embedded cognitively and that these cognitive patterns do influence an individual's acceptance of a technology. However, the idea of technological frames is that people experience technology in different ways and even though this concept provides a useful analytical lens one must be aware of the risk of incongruence between key stakeholders if the interpretation of the frames differs (Davidson, 2002). Inspired by Orlikowski and Gash we are using this definition of technological frames to uncover different stakeholders, i.e., the respondents, underlying assumptions, knowledge, and expectations they have in relation to the digital sharing platform Umigo. This we do using three different frames.

The frames we use are technical, usage, and strategic. Within these frames, or perspectives, we explore our research question. We have chosen these frames because they, together, give a rich picture of the organizational view as a whole regarding Umigo. Our first frame, technical, is defined and used in two ways. The first one is in relation to practical skills and methods used in a particular activity. The other one is in relation to the knowledge and methods of a particular subject (Cambridge Dictionary, 2021). This means that we, for this thesis, are using this definition to include all types of practical activities that take place on Umigo as well as all the surrounding knowledge and methods in relation to Umigo. To clarify further, we also include technical entities such as hardware and software as well as the structure and content of Umigo as a whole. Our second frame, usage, is defined by Oxford Learner's Dictionaries

(2021) as both the act of using something, as well as how and to which extent it is used. That means that, in this thesis, the definition of usage includes the stakeholder's interplay with each other on Umigo and in relation to it as well as any other type of usage that is presented in this thesis. The third frame is strategy. Here, strategy is defined as a plan for achieving one or several goals under uncertain conditions (Freedman, 2013). This means that our third frame, strategy, will represent the way in which the stakeholders think in regard to coming up with plans to achieve different goals. These three frames are a central part of our research since we have created our interview questions and structured parts of our thesis based on them.

3.1 Research Perspective and Method

Qualitative research is based on the researcher's interpretation of reality, rather than a statistically countable reality that is analyzed within quantitative research (Fejes and Thornberg, 2015). This research is qualitative. We chose to conduct qualitative research rather than quantitative since we are not interested in measuring or counting any statistical relationships, but rather examine our respondent's perceived reality in relation to digital sharing platforms. In other words, we conduct this research with a focus on our interpreted reality in relation to our research subject and our respondent's experiences. Myers (2013) explains that there are different types of philosophical perspectives and assumptions that qualitative research can be based on. One of these is interpretive research, for which the author explains that the view on reality is that it is a social construct. This social construct can be accessed via language, consciousness, common beliefs or other instruments. The author further explains that, therefore, the research object is studied from a human perception, and not by doing objective research such as observations. Walsam (2006) says that for interpretive research it is common for the researcher to choose a theory to base the research on, and that this theory should be chosen based on a motivation for how it relates to the research object. According to the author, the available research methods are flexible for interpretive studies, as there are no clear guidelines for how they should be conducted. Our research is conducted via the interpretive perspective. This means that we are viewing reality from our perception, which is connected to our earlier statement as to why we chose to conduct qualitative research. As stated above, for interpretive studies there should be a theory that stands as ground for the following research conducted. The theory that this research is based on is presented in section 3.0, and as earlier mentioned this research is based on our three frames.

Since there are no strict guidelines for the research methods within interpretive research, we have a lot of freedom when it comes to choosing one. The one we find most suitable is grounded theory. Fejes and Thornberg (2015) explains this research approach and says that it has a focus on social events and interactions. It is well suited to use when the researcher wants to base their research on empirical material rather than a theory. The empirical data can then be used to develop theoretical models. According to Myers (2013) grounded theory is used when the researcher wants to generate theories rather than test hypotheses. This means that the researcher will interpret the collected data and form new theories based on their findings. The author further explains that grounded theory allows for the researcher to develop an original and rich understanding of the phenomena in close relation to the observations that are

made. This means that the researcher can form a theory and point to several instances in which the theory was present in the results. We see grounded theory as a suitable method since we are not testing a hypothesis, but rather aim to generate knowledge and assumptions based on our results. We also see it as beneficial that grounded theory as a method lets us closely gain an understanding of our empirical data. As mentioned earlier, since we are doing interpretive research, we are basing our research on a theory. We are conducting our research in relation to the frames that we present in chapter 3.0. This stands in contrast to the ways of grounded theory, where a theory should not be included. Therefore, we are not following grounded theory strictly, but are rather inspired by it and have extracted parts that we saw as beneficial in order to create a custom method. Myers (2013) argues that it is suitable to extract certain parts, such as the data analysis part, of grounded theory and combine it with another framework for studies. The author says that for all qualitative research it is essential for the researcher to be creative and critical, and that grounded theory is not an exception to this. In other words, our decision to combine grounded theory with our theoretical framework can be motivated by this statement.

An alternative method that we could have used is following a well-known research method strictly, such as grounded theory, phenomenological research, or ethnography. However, we argue that by taking parts of grounded theory and creating our own custom method, we are able to extract the most appropriate and fitting parts to achieve a method as optimal as possible.

3.2 Data Collection and Analysis

In this section we will present and argue for our decisions regarding data collection and data analysis.

3.2.1 Data Collection

Eriksson and Hultman (2014) defines interview as the act of when a researcher orally asks the respondent questions. These questions can be more or less structured. A structured interview means that the researcher has a pre-set of questions that will be asked, and therefore only documents the answers. An unstructured interview is more informal without pre-decided questions and is therefore more like a regular conversation between the respondent and researcher. There are also semi-structured interviews, which contain elements of both types. The more unstructured an interview is, the harder it is to conduct as it requires greater efforts from the researcher both while conducting the interview and when interpreting the answers. One of the main strengths of using interviews as a data collection method is the ability to make adjustments and clarification during the collection. This means that the researcher can further explain the questions, and make the respondents develop their answers by asking follow-up questions. Further benefits include that the researcher has a better potential to read the respondent's answers by more than their words, such as their reactions and body language. These non-verbal answers can help the researcher gain a better understanding of the respondent's answers. Interviews have the potential to achieve a greater variation and a

broader spectrum of answers, than other data collection methods such as surveys. Interviews will usually have a greater response rate than surveys.

In this study we use interviews as the data collection method. The reason for this is that we are interested in analyzing a depth of answers, rather than a great number of answers. Walsam (2006) also argues that for interpretive research, the data collection is commonly done via interviews. We interview a total of six respondents. These respondents were suggested to us by those working with developing the platform at the university, and our selection is based on their suggestions. Therefore, the respondents represent different organizations that in some way work with the digital sharing platform Umigo. We believe that these respondents can provide reliable firsthand information regarding the platform, since they are both using it and are involved in its development. During one of the interviews, we interview two respondents at the same time, respondent 5 and 6, on request by the respondents. These respondents work together and can therefore answer the questions together. The interviews are conducted online as video meetings, because of the current pandemic situation. We are recording the interviews so that we can transcribe them. The reason for why we transcribe the interviews is that it will be easier to conduct the data analysis, which will be described in section 3.2.2. The interviews are semi-structured since we want benefits from both the structured and unstructured interviews. The benefits we want to acquire from structured interviews is the ability to compare the respondents' answers, as well as ensure that we get enough information from the answers. Therefore, we created a questionnaire that was used during the interviews (Appendix 1). This questionnaire was structured according to our three frames presented in section 3.0. Our respondents were sent this questionnaire before the interview so that they could take the time to think about their answers beforehand. As previously mentioned, it is also easier to conduct structured interviews as it reduces the risk of the researcher impairing during the interview or the interpreting. However, conducting completely structured interviews can lead to the questions not being answered to our satisfaction, for example if a respondent answers unclearly or if they do not understand the question. Therefore, we think that some unstructured elements can be beneficial, and combine the structured questionnaire with the ability to add some unstructured dialogue when needed. Examples of such unstructured dialogue is to ask our respondents questions regarding clarification of their answers, or to explain our interview questions when the respondents have questions about them.

All interviews are conducted in Swedish and are therefore translated into English when we write our results. This is to ensure that our respondents are comfortable when talking about the subject and not restricted by the language barrier, and this can hopefully lead to them giving longer and richer answers.

3.2.2 Data Analysis

We used coding and categorizing as a way of analyzing our data. Myers (2013) mentions that since grounded theory is focused on the empirical data, the outcome of analyzing the data by coding is usually particularly rewarding. Grounded theory is an especially useful method if the objective is to create theories in close relation to the empirical phenomena. There are two different types of grounded theory. The one that we have gathered inspiration from is the one

provided by Glaser in 1992. There are some differences in how these are conducted, especially during the data analysis process. We chose to follow Glaser's version as it was this one that was present in the guide for data analysis by Myers (2013). Myers explains that when using grounded theory as a method, there are some guidelines for how the data analysis is done. After transcribing the collected data, the first step is to do open coding. This means that you create codes that describe the phenomena in the data. This means that you should mark parts, such as sentences or paragraphs, that are of interest for the research phenomena. While doing this you should compare the codes in their similarities, differences, and relations so that they can be further clustered into categories.

The next step is called selective coding. During this stage, the formed categories are being analyzed in terms of relation, to see how the empirical data has recurring instances. The object of this step is to explain these relations. The third and last stage is called theoretical coding. This stage is where the theory is formed. This is done by creating predictions, such as a hypothesis, for the research phenomena. These predictions are formed by reviewing the previously found correlations within the analyzed material. We made the decision to follow the guides for data analysis according to grounded theory, as it is a well-tested method and as mentioned above, very suitable to use as the outcome of the analysis is commonly of great value. Examples of codes that were created are "thoughts about the platform's structure" and "techniques or functions that are used on the platform". These codes were then further combined into categories. The data analysis is done in relation to the previously established research theory for interpretive studies (Walsham, 2006). In relation to this, our data analysis was influenced by our research theory. This means that our three frames were present in the data analysis, for example by serving as parts of the categories. For example, we could structure our identified barriers into categories such as "barriers for usage" and "barriers for strategy". Since our interview questions were formed in correlation to the research theory, it was already present in the data set before the analysis had begun. The earlier mentioned codes "thoughts about the platform's structure" and "techniques or functions that are used on the platform" could also be structured within a category called "technical aspects" since both of these codes regarded our first frame, technical. Our codes and categories were further used for structuring our results section with subcategories.

3.3 Method Criticism

In this section we talk about the disadvantages of our method choices and explain how we dealt with these.

3.3.1 Research Perspective and Method

Interpretive research is what is called double hermeneutic. What this means is that it is both affected by the research object, as well as it is affecting the research object. This is something that can affect the results of interpretive research, as it is impossible to ensure that the observed reality does not differ from the actual reality during the observation (Myers, 2013). Because of this, we cannot be sure that our respondents were not affected by us, nor we affected by them,

during the interviews. However, this is the case with all studies that are based on human perception, as it is impossible to know if there is an objective truth in the observed reality.

As earlier mentioned, we are not following any method strictly. This means that we cannot rely on any research regarding potential risks of well-known methods, for our method. However, since we are selecting parts from methods such as grounded theory, we can read about the potential risks of this method to ensure that we avoid them. As mentioned above we have also evaluated with our other choices regarding our research perspective and method, such as those regarding qualitative or interpretive research. Myers (2013) argues that by extracting parts of grounded theory and not using it strictly, might lead to it not being used to its full potential. The author says that the aim of generating a new theory that is well grounded in the empirical data might be lost. However, the author also mentions that if the researcher makes an original contribution of knowledge and presents valuable findings, the restricted use of the method can be justified. It is therefore a risk for us to use parts of grounded theory, and not follow it strictly. However, we argue that since we can make an original contribution and present valuable findings, our approach is reasonable.

3.3.2 Data Collection and Analysis

Interviews are a demanding data collection method as it requires a lot of time. The aim of interviews is to gain a deeper understanding of the researched phenomena, rather than achieving a great number of answers (Eriksson and Hultman, 2014). As earlier mentioned, interviews take more time to conduct, in comparison with other methods such as surveys. This is something we took into consideration and argue that the benefits of broader and deeper answers make interviews the most suitable option even though they are more time consuming. We also see the importance of a high response rate, since our number of potential respondents are somewhat limited because it is difficult to find and reach potential respondents working with this type of platform. A benefit of conducting interviews that we mentioned earlier is that the researcher can read non-verbal cues such as body language or reactions. Eriksson and Hultman (2014) also explains that there are ten common mistakes done by researchers when planning and conducting interviews. These include asking several questions at the same time, including values in the questions, involving unspoken conditions in the questions, asking overloaded questions, using negations in the questions, using buzzwords, not explaining indistinct terms, mixing words for events with words for states, being too abstract in the questions, and talking rather than listening to the respondent. These are all things that we took into consideration while constructing our questionnaire and during the interviews. Examples for how this was done is that during the interviews we only talked when asking the questions or answering the respondents question. We also tried to formulate the questions as simply as possible so that there were no particularly difficult, or indistinct, terms that the respondents would misinterpret. We made sure that our questions were short and straight forward to ensure that our respondents understood and could answer them to our satisfaction. We focused on creating open ended and objective questions such as “what are your experiences so far?” rather than asking for more subjective experiences, such as positive or negative ones, to avoid any leading questions or values being communicated from us. Since our interviews are

conducted as a video meeting, the potential to analyze social behavior is somewhat restricted. Therefore, it is possible that some social cues might go unnoticed, meaning that our potential to read the non-verbal part of the answers is affected. This might affect our results since some data might be lost. However, the fact that we are using video calls instead of voice calls increases the ability to read such cues, even if physical meetings would have been the optimal solution. Since we are conducting our interviews in Swedish, there is also a risk that depths or details in the answers could be lost in translation. This is something that is inevitable when translating any text. However, we argue that the benefits of longer and richer answers from our respondents are of greater value than reducing this potential loss.

Eriksson and Hultman (2014) mention three potential phenomenon that might occur during interviews. The first one is called the interviewer effect. This effect occurs when the researcher is interacting with the respondent, which can have an undesirable impact on the results. The halo effect is another phenomenon that might occur during interviews. This effect regards how the researcher can be affected by factors that are not of interest for the research. An example of this is if the research object has a high status because of fame, or his or her title. The third phenomenon that a researcher should take into consideration when conducting interviews is the central tendency. The central tendency refers to how respondents tend to avoid making broad statements, meaning that they rather give more neutral answers or in the middle of a scale. The interviewer effect, the halo effect and the central tendency are three potential risks that could occur during our data collection. However, by being aware of these effects we have reduced the risk of them affecting our data collection and results. The halo effect is something that mainly affects the researcher, meaning that it is our responsibility to be aware and counteract it. The interviewer effect occurs within the interaction between the researcher and respondent, meaning that it is difficult to ensure that we are not affecting them, and vice versa. However, since we are using a structured questionnaire during the interviews this risk is somewhat reduced, as the interaction regarding the questions has been planned for beforehand with this in consideration. During the unstructured parts of the dialogue the risk for this is greater. Therefore, our ambition is to be as objective as possible during this dialogue, however it is impossible to ensure that the interviewer effect does not occur. This is something we take into consideration during our analysis of the results. The central tendency occurs when respondents answer our question and is therefore difficult for us to prevent. To reduce the risk of the central tendency we took it into consideration when constructing the interview questions. However, broad statements are an important part of the data set as it indicates our respondents' feelings. Therefore, the interview questions are constructed with consideration that they should not be intimidating to answer truthfully and with more extreme tendencies. Our respondents' anonymity is another way that the central tendency is counteracted since the respondents will not have to defend their answers to anyone.

Critique that Myers (2013) mentions for grounded theory is that it can be difficult, especially for inexperienced researchers, to do the analysis part. It can be difficult to see the big picture as well as avoiding getting stuck in the details, meaning that you will not be able to identify the essential parts of the big phenomena. This is a risk that is present during our research, as we

are inexperienced researchers. With this to our knowledge however, we believe that we can reduce the risk of falling in said pits.

3.4 Ethical Considerations

During this research we follow the four ethical principles by Vetenskapsrådet (2002). The first requirement is the information requirement. This includes that all respondents must be informed about the purpose of the research and given all information that could affect their will to participate. This means factors such as who is conducting the research, how the research is conducted, what knowledge the research aims to achieve, that their participation is voluntary and that they are free to end their participation at any time. The second requirement, the consent requirement, means that all respondents have the right to make the decision regarding their participation. This means that the researcher has to ask the respondents for consent to participate in the study. This requirement also involves rules regarding that the respondents have the right to decide if and for how long they want to participate in the research, and that they can stop participating without consequences. Lastly there cannot be any form of pressure or impact regarding the respondent's participation, and there should be no conditions of dependencies between the researcher and respondents. The confidentiality requirement regards the safety and anonymity of the respondents. Personal and sensitive information about the participants should be treated with confidentiality and must be stored in such ways that unauthorized people cannot access them. To ensure this everyone involved in conducting the study should sign a form of professional secrecy. The fourth and last principle is called the usage requirement. It aims to ensure that the information that is collected from the respondents, should only be used for the research purpose. This means that the collected information cannot be used for commercial or non-scientific purposes, or to make decisions that will directly affect the individual. All of these requirements are included in our research, and we follow the instructions provided above for how each requirement should be handled. Another ethical consideration we have made regards our recording of the interviews. To ensure that the recording is done ethically we ask each participant before the interview if they consent to us recording the meeting. We also inform them about the purpose of recording, which is to ensure that no information is lost and enable the transcription. We also store the recordings in such a way that no one unauthorized is able to access it.

4. Results

The results are a summarization of the data we gathered from the interviews. This section is structured by our three frames: technical, usage and strategy. We have also included an additional first section called personnel, where we present information regarding the respondents and a short introduction for how and why they use the platform.

4.0 Investigative Context

The focal concern for this thesis is a digital sharing platform called Umigo. This platform was developed at Umeå University in collaboration with several outside organizations and

partners. We chose to do our research in relation to this platform because of connections and availability. This meant that we could get access to a variety of respondents. All of our respondents have some sort of connection to this platform, meaning that they are either taking part in its development or acting as partners to it. As of now, these types of partners and developers are the only ones mainly using it. However, the ambition is to include individual users later on. The platform is still being developed and has not been publicly launched yet. This means that it is still a work in progress and not a final product. It also means that it is not accessible to everyone at the moment, so our respondents have a limited view of the platform. The platform works as a main page, but there is a possibility to create smaller platforms within it. Therefore, different actors can set up their own individual platforms for their personal usage, which is the case for several of our respondents. The purpose of the platform differs in the specifics as it can be designed accordingly to meet your preferences, but overall, it should be used to encourage sharing within different communities. The platform is primarily available as a web application, meaning that it can be accessed through a browser. However, there is a mobile application version, but since the platform is still not fully launched, it is not accessible for everyone. The platform Umigo can be reached via the following link: <https://pilot.umigo.se>.

4.1 Personnel

Respondent 1 works as a business developer at an ecological strategy firm. The respondent describes the company's employees more specifically as sustainability consultants with a focus on biodiversity. The firm helps other companies understand the business benefits of biodiversity and help them establish strategies for this purpose. The respondent also runs a store that sells locally produced groceries. Therefore, the respondent has used the digital sharing platform for both of these purposes. The respondent has worked with the digital sharing platform for a year. The platform has primarily been used as a test for a sales tool, with the purpose of showing their local competencies. This test had the purpose of exploring if and how the company could take part in the wind farms usage of the platform. The respondent says that they as a company saw potential within the platform for their ambition to increase the biodiversity in correlation to the entire ecosystem regarding wind farms, whether it is regarding building, planning, or operating them. The respondent further mentions that they work a lot with permit processes for wind farms.

Our second respondent, respondent 2, works as a business- and project manager for a cooperative organization for rural development. The respondent describes its role as focused on promoting positive processes and driving development forward for the designated local area. The second respondent has been in touch with the platform for two years but has been using it actively for one year. The respondent explains that they have a collaboration with the university and digital sharing platform developers, where they explore circular economy and sustainability, to achieve a development for managing their resources better.

Respondent 3 is a senior analyst that works with mapping the wind power industry and its business opportunities connected to climate- and environmental change. This is done by working both by developing the industry and working with the public sector to achieve greater exchange in the future within these sectors. The third respondent started working with

designing the idea for the digital sharing platform two and a half years ago. The platform that they are using is an interactive platform, where local companies can publish their offers and get direct matches from companies that are looking for their services. The respondent claims that this can open up possibilities for vulnerable companies to enter a new industry.

The fourth respondent is a civil engineer that works at a wind power planning company, that works with projects regarding wind farms/that projects wind farms. This includes seeking/applying for permissions, purchasing services from companies, inventories and so on. This respondent has been using the platform that was designed and operated by respondent 3. Respondent 4 describes the platform as an investment to market wind farm projects and make it easier to find entrepreneurs. The respondent further explains that companies can publish their offers and services, as well as find these from other companies. The respondent says that their purpose of using the platform is to find entrepreneurs.

Respondent 5 and 6 work with developing the digital sharing platform at the university, as well as working with their own IT consulting company. Respondent 5 has worked with the platform for three years, and respondent 6 has worked with it close to one and a half years. Respondent 5 describes the digital sharing platform as a tool with multiple purposes. It can be used as a framework for digital platforms, meaning that it can be used in different ways to build and operate digital platforms. It is a tool that is designed so that anyone can use it and create their own platform, as well as use and create offers with it. The respondent also mentions communities and users as a key factor, and that the purpose of the digital tool is to be limitless and enable creation of platforms for any sort of exchange in any sort of environment. Respondent 6 adds that it can be used as a tool for building web pages where individuals can create their own peer-to-peer platforms. The respondent further mentions that it has similarities to Shopify and WordPress when it comes to creating webpages and e-commerce stores, but it can further be used as a tool for peer-to-peer platforms and marketplaces. Their work involves developing the digital sharing platform, as well as conducting research in relation to digital platforms. For the IT consulting firm, the respondents work with a digital sharing platform and other IT tools for launching ideas based on platforms and peer-to-peer services for different consulting cases. Respondent 6 says that during their work both at the university and the consulting company they are mainly using the platform for building platforms for others, and not as a user themselves. This involves creating new platforms from scratch, but also developing and testing new prototypes in cooperation with the customers. Respondent 5 adds that a lot of the usage has been within the purpose of research. The respondent further claims that it has been a way for understanding both the possibilities and conditions for digital sharing platforms, for example in relation to rural areas, to reach a broad target group, or develop more sustainable communities. The research became the base for how the technology was developed, which meant that it could be used to explore questions in relation to the sharing economy, platform economy, digital divides, and circular business models.

4.2 Technical

This section contains our results in regard to our first frame, technical.

4.2.1 Technical Experience

Respondent 5 mentions that the platform has a focus on resources, and that the functions developed have a correlation to this.

“I am still surprised by the possibilities that exists with a tool like this that in some ways can be seen as simple, but when you have that combination of modules, design, organization of users and presentation of information and resources, the sum of the equation is multiplied and the possibilities feels endless and it feels very exciting.” - Respondent 5

Functions mentioned by the respondent are modules, design tools, organization of users, and presentation of both information and resources. The respondent says that all of these functions combined creates the possibilities and potential that still surprises them to this day, even though they have worked with the platform for years. Respondent 6 mentions that the platform resembles webpage building tools such as WordPress, but has the distinction of functions such as profiles, chat, the web page editor, calendar, and the ability for users to create offers, and groups. According to the respondent this combination of functions is what makes the platform unique. Close to all respondents have used the chat function on the platform. Several respondents have used the notification system for emails or text messages, and the booking function on offers. Respondent 1 also mentions that they have created a profile, created offers such as sales and services that their company provides, and downloaded the mobile application.

The structure differs between the different platforms, says respondent 5. There is a main platform that is supposed to be open to the public, where everyone can participate and share with each other. On this platform the structure is flatter, as anyone should be able to create their own group or community and start sharing their resources how they want, both publicly and privately. But when it comes to other platforms, this may differ. The respondent mentions that factors such as how users register, what they can and cannot do, which exchanges they can do, and other types of structures are flexible and can be altered for different platforms depending on their needs. Respondent 6 agrees and says that there are almost as many different types of structures as there are platforms, since you can design them in different ways. The respondent also mentions that there are different settings for user accessibility that can be altered so that different users will see different things. According to the respondent this flexibility is one of the platform's strengths.

Respondent 1 claims that the structure of the platform is quite pedagogical. The respondent further claims that it is difficult to know how much of a tough critic you should be when working with a system that is still in development but says that it is not the best platform they have worked with. Several respondents say that the structure is quite messy, especially for new users. A number of respondents also mention that it can be difficult to understand both where to find information, and where your published information is visible. Respondent 4 explains

that information is sometimes not visible where you want it to. The respondent mentions as an example that the name of the company should always be visible when you see their offer, as of now you will only see a description of the offer and nothing about the company. According to the respondent, this makes parts of the platform difficult to understand. Respondent 1 says that this messiness can make it difficult for customers to find what they need. The respondent argues that it is of great importance that customers will see the offers and services whenever they need it, and that they should not be required to search for it. Respondent 2 explains that their individual platform is currently quite empty and should therefore not be difficult to navigate. However, the layout of the platform's front page can be difficult to grasp if no one explains it for you. There should be some sort of overview to improve this according to respondent 4. Respondent 3 says that they built their individual platform in relation to infrastructure objects. The respondent further explains that this means that they tried to create scalable networks, both locally and regionally, that correlates to other local and regional wind farm projects. In other words, it does not matter which project it is or who the participating actor is, the platform's structure allows for different kinds of businesses to connect to each other in a larger context, both locally and regionally.

4.2.2 Technical Barriers

A technical barrier according to respondent 3 is that a lot of small business owners might not have the possibility to participate in the new technical world. This means that they are still using their old Nokia phones to send text messages, and when it comes to email, they might also use an outdated version that they only read through once a week. Respondent 2 also says that it is a barrier that users lack technical competence. With these differences in technical competence and access to digital tools, there is a need for help pages and technical support. However, respondent 2 argues that as long as the users are somewhat computer knowledgeable and not afraid to click around and potentially make mistakes, this should not be a problem.

“If you are normally computer knowledgeable and not afraid to click and test your way a little then I do not think there are any [technical barriers], it is not advanced technology or complicated, so it is as easy as creating an account on Facebook.” - Respondent 2

The respondent further explains that since the technology is not difficult compared to other social media platforms, like Facebook, it should not be particularly difficult for any user. According to the respondent the users need to have some basic technical awareness, and if they lack it, it is usually because of mental barriers that makes them afraid of clicking around or making a mistake. However, respondent 3 mentions that they regularly help companies with tasks such as registering an account. Another technical barrier that respondent 3 mentions, is that you want to achieve an intuitive user environment, which they claim they have not fully done. The respondent explains that there can be a lack of balance between those who create the platform and the users. Those who work at the university are typically living in an IT environment, and therefore cannot understand the perspective of small local business owners and their relation to computers and technology. The respondent mentions that he or she can

therefore work as a bridge in between these two sides and therefore avoid this barrier. Respondent 4 says that a technical barrier is that there are some limitations regarding the functions on the platforms. For example, in the chat there is no possibility to send pictures or files, which creates limitations.

“And the messaging function, you may also want to send files [...]. Here you can only send messages, so it is very limiting if you have to send a quotation document, it is a PDF on a few pages. It cannot be sent via the platform. The purpose is the simplicity, [...] to step into something so that it works well and improves one’s normal working method. I think that is important with a new platform.” - Respondent 4

According to the respondent a lot of their work includes sending an offer basis which usually consists of a PDF file. The respondent mentions that this can be done with other systems, but that the platform should improve current work methods and enforce simplicity, which is prohibited by the lack of functions. When asked about technical barriers respondent 6 says that you can always ask for more, and the more you work with the system the more access you might want. A barrier that the respondent mentions is that there should be more possibilities for integration to all types of systems, for example different payment systems. However, the respondent says that there are already several integrated systems, but that it would be beneficial to include more. The respondent also mentioned that they want to see more tools available on the platform. According to the respondent this would give the users a better chance of using the platform in a sufficient way, thus making more people join the platform. Another barrier that the respondent brings up is that even though the platform is a wide system, it has its limitations when it comes to the users' access. This is elaborated by respondent 5 who says that there is a balance between openness, adaptation and moldability in comparison to standardization. The respondent mentions the smartphone market as an example of this, with the current division between Android and iPhone. iPhone is more standardized which creates more barriers, while Android is moving towards more openness. The respondent mentions that this creates a paradox in which the openness of Android can be exclusive, and the barriers of iPhone has almost become a feature of itself. The respondent further mentions that this is probably why there are so many more iPhone users than Linux users. As the respondent mentions, the platform is still a work in progress, and they are still making decisions regarding the openness, moldability, closedness and standardization. Respondent 6 says that the view on these factors varies between different target groups. Respondent 5 summarizes it by saying that they want a tool that is as limitless as possible, so that they are able to build unique solutions for their different customers. This is something that will be continuously developed in the future.

4.3 Usage

This section contains our results in regard to our second frame, usage. Respondent 1 and 4 have only used the platform occasionally, respondent 1 mentions that it is only a couple of

times per year. Respondent 2 uses the platform several times each week. Some of the respondents use the platform every day, these are respondents 3, 5 and 6.

4.3.1 Usage Experience

A usage experience that respondent 2 has of the platform is that it works really well, and the respondent is especially satisfied with how smooth the booking system is.

“Even a person who’s never used the platform before will still understand how to use it without instruction.” - Respondent 2

The respondent says that it is a user-friendly platform and exemplifies it by saying the quotation above. However, this was contradictory to other things being said by this and other respondents during the interviews. The request function on the platform worked particularly well according to respondent 4. The respondent has used the platform to buy services which turned out to work really well. Another experience that the respondent has is that you reach other companies quickly, and that you get a lot of replies. Respondent 5 likes the fact that the platform has many functionalities to offer and that it feels like a platform that has combined different types of developing tools into one. The platform lacks intuitively in regard to usage of the platform, according to respondent 3. There are several areas of improvement that need to be done to simplify the platform so that inexperienced users want to use it. Another respondent that mentions new or inexperienced users is respondent 6, who says that even though they have learned every nook and cranny of how to use the platform, it might not be optimal for new users at the moment.

Respondent 1 argues that it needs to be more obvious regarding what information needs to be provided when setting up different types of accounts and groups. According to the respondent it is more important to get access to the right information rather than having it going fast and thus risking getting the wrong information. Respondent 3 mentions that it would be beneficial if the platform's explanation could be done with a pedagogical AI design and a presentation. According to respondent 2 the platform is not particularly difficult to use but says that it is missing an x-function to close windows on the platform. At the moment the platform uses a button with that functionality but uses a different icon which is a bit confusing at first. The respondent thinks it should be changed into a standardized icon. Respondent 4 explicitly says that the looks and navigation part of the platform needs to be changed for improvement. Respondents 5 and 6 feels that the platform is both easy and difficult to use and that their job is to focus on the difficult things in order to improve them. Respondent 5 says that there are functions on the platform that might not have optimal names for the users to understand at the moment. However, the respondent also says that this is expected in the early stages of developing a platform and that these flaws will disappear over time. Another thing that the respondent thinks could be improved is divided into two perspectives.

“As a user it should be as simple as possible, and as a developer as many opportunities as possible.” - Respondent 5

The first perspective is the one of the developers and that more adaptation possibilities would be preferable. The second perspective, the one of the users, would be a more intuitive and easier to use platform, for example by improving the UX. A majority of the respondents mentions that the platform's intuitively and ease of use needs to be improved.

Respondent 3 sees value in this platform and thinks it is beneficial that in one end you can have people offering products or services and in the other end, but still on the same platform, you have people that want to make use of those offers. Respondent 5 says by looking at what is possible to do on the platform without having any particular developing or programming skills, its technology is very forgiving and allows for non-programmers to use it. The respondent continues to say that it might be ambitious that the goal is to build a platform on which a user could develop their own platform without having to write a single line of code. Another thing that is said is that the platform has a whole other depth than other social media and trading platforms. This is exemplified by saying that those platforms' depth ends at the inventory management system, which is not the case with this platform. The respondent ends by saying that the possibilities seem endless and that that is very exciting. An example of this is mentioned by respondent 3 who says that a consequence of using the platform could be that people who deliver products, services or other things also can request things that they need. This could then lead to better business networks and making use of hidden local resources, and in doing so benefit all parties.

4.3.2 Usage Barriers

Respondent 1 thinks that there is a barrier in usage when it comes to the options regarding how you get information, which can be done via notifications on email or text messages. The respondent argues that the platform should be more direct and clearer, for example by asking “how would you want your information?” to the users. According to the respondent, users have to enable the notifications on the platform themselves, which makes it easy to miss, and therefore might lead to unnoticed information. When asked about usage barriers, respondent 3 remarks those that involve inexperienced users. It can feel cumbersome for them to keep track of verification mails and other things that can be related to using a platform of this type. The respondent also thinks that the platform users might not have patience for this, since they need to be visible on the platform before they are actually needed there.

“So, you might have to register, put up a bunch of offers, work on showing good and clear information about it, and then have to wait for maybe a year to get potential business.” -

Respondent 3

This is explained by how the different actors that are looking to share a product or service needs to set everything up and post their offers before anyone can request it, which is a barrier. The respondent also talks about how they are not calling it an interactive digital business platform since it might confuse stakeholders within their field. The field has been very analogous in their past methods, and the respondent says that therefore they call it a “delivery

database” or something similar, while explaining it in layman's terms. Respondent 4 believes that usage barriers could, and will, come from the difficulty to understand the platform's structure and how it looks. The respondent says that it would take time for new users to understand the platform.

“You do not have to program it, but you just have to understand what these “requests”, “groups”, “profiles”, “offers” and all that means.” - Respondent 4

The respondent goes on by saying that you do not have to program anything on your own, but it is essential to understand the request function, groups, profiles, and offers. According to the respondent, it is not that intuitive and simple at the moment. A usage barrier that respondent 6 explains is that the platform can be overwhelming for new users in the beginning. The respondent also says that processes regarding onboarding are not smooth as of now, which makes it more difficult for new users to get started. Respondent 5 further elaborates this by saying that the methods for registering an account are still restricted, as the only way to do so is by email. The respondent says that a lot of users are used to being able to log in with their Apple-ID, Google account or BankID. This is not something that can be altered for each individual platform, as it is decided upon on a system level. The respondent also talks about the fact that a lot of users wish to use mobile applications. Umigo is primarily available as a web application, meaning that it is easy to access for everyone with a web browser. However, mobile applications make it easier for some target users to access the platforms. This can be connected to a barrier that is mentioned by respondent 5, that it can be difficult to use the platform in scenarios where there are things that a user wants to do, but the tool does not allow for it yet. According to respondent 6, to offer Umigo as a mobile application can be seen both as a barrier and a possibility that can be elaborated in the future. A final barrier that is mentioned by respondent 6 is that the platform is not easy to find.

“[...] it is probably to know that it exists which is the biggest barrier today.” - Respondent 6

The respondent further explains that the fact that the platform is difficult to find, might be the biggest usage barrier of them all. It goes without saying that if users are not able to find the platform, they will not be able to use it.

4.4 Strategy

This section contains our results in regard to our third frame, strategy.

4.4.1 Strategic Experience

When asked about potential actors or stakeholders for the platform, several respondents answered different businesses, companies, or organizations of both national and foreign nature. A majority of the respondents also mention the state, municipalities, regions or other government authorities. Other actors that are mentioned are local communities and the platforms developing team by respondent 1. Respondent 2 says that everyone who buys, sells

or trades could be actors or stakeholders for this type of platform. Actors that are mentioned by respondent 3 are the citizens and investors. Respondent 4 further adds people who are looking for jobs, subcontractors, and clients as potential actors or stakeholders.

An improvement that is wished by respondent 3 is to get a better flow of users to start the interactivity between stakeholders of local and regional businesses. Respondent 1 thinks it would be beneficial for the creators of the platform to invest more time into the partnering actors by keeping them in the loop and use them as a resource to faster improve the platform.

Respondent 1 believes that some of the value this type of platform brings is the possibility to create small ecosystems with ease. The respondent also finds value in the scalability and possibility to bring different actors together. Another respondent that sees this as is respondent 4 who mentions that you can find other actors such as entrepreneurs on the platform. Respondent 1 says that this can lead to users offering the right things at the right time and therefore reducing new consumption. This was concluded by saying the following quotation:

*“This is the value of the platform, the fact that it can create so many new values.” -
Respondent 1*

Value that respondent 2 says that the platform brings is the possibility to share resources with one another. The respondent further explains that the intention behind the idea of the platform brings value in itself.

“This is where we saw the benefit of this as there is someone with needs at one end and there is someone who can deliver at the other end, and so we can get them to match with each other.” - Respondent 3

The answer from respondent 3 also relates to what respondent 2 said, as the first mentioned respondent says that the platform holds much potential for value creation and collaboration. The respondent also elaborates their answer by saying that their primary benefit is to match different actors to each other. Respondent 6 believes that the platform brings value by taking digitalization to people that have lived a more analogue life in general.

*“[...] I think that this has been the vision when the platform has been developed, being able to build a platform without writing any code and democratize the digitalization.” -
Respondent 6*

The respondent says that this will create value for the whole community since the platform can deliver so many different things, which will help local businesses to be more visible to clients. This is something that respondent 3 also mentions. More specifically the respondent says that the platform will create opportunities for business development and give more jobs in rural areas since you can make small local businesses more visible. Respondent 6 says that this type of platform brings social value, as well as a good foundation to start building a more sustainable community with focus on circularity. When asked about if there are different kinds

of value for different actors, respondent 4 answered that there are several potential actors and different values for these. When talking about values that could be enhanced for different agencies, such as municipalities, the respondent said the following:

“Here we have invested in society.” - Respondent 4

The respondent further explains that these investments could lead to improvements for society and mentions an increased employment rate as an example for how. These improvements and statistics are beneficial municipalities and could therefore be used to motivate investments in, and usage, of this type of platform.

4.4.2 Strategic Barriers

Respondent 1 believes a strategic barrier could be that the platform must be able to show its business value.

“So far I have not felt that “I at [name of the company] have to start my own platform”. And maybe it is because I did not really understand how I could use this platform to increase the benefits that we do at the company, or that it could improve a system or similar.” -

Respondent 1

The respondent mentions that they feel like they are not contributing with anything of importance for the platform. This has led to the respondent feeling that they have nothing motivating their usage of the platform. The respondent further explains that they have not fully understood how they can use the platform to increase their business value, improve a system or make some other improvement. Strategic barriers that might occur according to respondent 2 regards what happens when this platform is fully launched. The respondent goes on by wondering how it will survive, who will maintain it, who will support it and who will own it. Other questions that emerge are “what will it cost?” and “from where the platform is going to get its money?”. The platform has to get an economical flow to survive in the long run. Another thing this respondent sees as a barrier is the fact that you have to encourage people to move over to the platform and out of their comfort zone. The respondent further wonders how the platform will go about to convince people to do this and where to start. Another respondent that talks about this is respondent 6. The respondent believes it is a strategic barrier to ensure the landing of the platform as a product and to make it spread nationally, and later on internationally. This is not easy since it would demand financial aid, cooperation between many different actors and stakeholders to promote the platform. Another respondent that mentions financing as a strategic barrier is respondent 3.

5. Analysis

In this chapter we analyze our results in relation to our related research. The analysis is structured within two main headlines, digital sharing platforms and barriers.

5.1 Digital Sharing Platforms

In this section of the analysis, we will present the identified characteristics of what makes a digital sharing platform unique and why they are important.

5.1.1 What Makes it Unique

During the interviews it became quite clear that digital sharing platforms have some unique features that are beneficial. The respondents mention that the platform focuses on making resources more visible and that this type of platform can develop functions that correlates to it. They say that what makes the platform unique is the combination of so many modules, designs, users and ways to present information and resources and that the sum of all that leaves you with almost endless possibilities. The important part to underline here is the combination. Each of these modules or functions on their own can be found in other platform types that we showed in the related research and in Table 1. For example, a communication platform like Facebook Messenger has a chat function while a payment platform like PayPal has a pay and wallet function. However, a digital sharing platform can have it all which makes it very flexible and filled with possibilities. Some of these possibilities is pointed out by the respondents who say that the very accommodating structure of the platform lets the user tailor their own platform on Umigo to make their resources as visible as possible. This opens up for the possibility to much more smoothly bring different actors together to share resources with one another. This correlates very well with what our related research (Garud et al., 2020) says about how digital sharing platforms' unique feature is their focus on resources and how they encourage sharing activities and collaborative consumption for their users.

5.1.2 Why it is Important

When looking at what the respondents said about digital sharing platforms it became clear what was deemed important. Some of them mention how this platform's very inclusive structure allows the creation of business networks independent of the size of the stakeholder which makes sharing resources much more effortless and available. This since you have all the stakeholders gathered in the same place and everyone can use the platform to both provide resources as well as request them. The respondents say that this platform's value is that it brings new value, meaning that it sheds light on hidden resources which could create more opportunities and give more jobs in rural areas since local businesses become digitally visible in a much more efficient way.

Another thing that the respondents mention is how this type of platform makes use of social value and is a very good foundation to start building a more sustainable and circular community. This is exemplified by how the right offer at the right time can reduce new consumption which is good for the sharing economy. This correlates well with what is said in the related research by Sutherland and Jarrahi (2018) about how the sharing economy relies on digital technologies and that the sharing platforms are designed to enable communities to more easily come closer together and start sharing resources.

5.2 Barriers

In this section of the analysis, we will present the identified barriers for establishing digital sharing platforms.

5.2.1 Technical

Two technical barriers that are mentioned by the respondents are lacking technical competence and a limitation of functions on the platform. These barriers are not unique for digital sharing platforms, as all types of platforms require somewhat technically knowledgeable users and a variety of functions. However, what might be of importance especially for the digital sharing platforms is that its functions differ from other types of platforms and might therefore have other minimum requirements for their limitations. While platforms such as social networking platforms, payment platforms or communication platforms require functions only for their primary function, digital sharing platforms have more than one primary function and therefore more requirements. For example, Umigo combines the social networking functions such as a chat, with payment functions for the published offers. Speaking of offers, this is another type of function that can be found for example on social media platforms, which there would be called published posts. Because of this, the barrier of limitations regarding functions is especially important to consider when developing a digital sharing platform. Furthermore, as we mentioned earlier, digital sharing platforms' strength is within the combination of tools and functions. If there is a limitation of these, the platform loses one of its main strengths.

An additional barrier that was mentioned is that the platform needs to provide an intuitive user environment. This is of course something that might occur for every type of digital platform but might also have a unique relation to digital sharing platforms. As we mentioned in our related research section, digital sharing platforms is an unexplored area of research as it is a relatively new phenomenon. Because of this, there is no research to rely on regarding how to create intuitive user environments for digital sharing platforms. Content platforms like YouTube that have been around for years have masses of user data and research to rely on when making decisions regarding structure, organization, and presentation of the platform. This means that this barrier is particularly present for digital sharing platforms in comparison with other platform types.

A barrier that surfaced during the interview was being able to establish a balance between the developers and end users, as they seem to have differences in their experience and competence. In other words, it might be difficult for developers to anticipate what their users might find either functional or malfunctioning. As mentioned above, developers do not have a lot of research to rely on when creating digital sharing platforms, meaning that it is especially important to find other ways to get to know and understand their users. This makes it even more important to remain in contact with partnering actors that might have insights to the users. This can be connected to our technical frames, strategic and technical. The strategic decisions that are made both within the developing team and partnering actors, needs to have a focus on the users. These two parties must also understand how these strategic decisions relate to the technical factors of the platform. For example, if there is a function that a majority

of the users cannot figure out, it is of great importance that this information reaches the developing team so that they can adjust it. Therefore, the parties need to establish strategies for how this information from the users will reach the developing team. It is a potential barrier that they are not able to do this, thus not achieving the balance between the developer's vision and users' experiences.

Another barrier mentioned is the integration to other systems, such as payment systems or being able to log in with an Apple-ID, Google account or BankID. This is especially important for digital sharing platforms, in comparison with other platform types, since they are resource focused and a lot of the exchanges that are made are relying on a payment for rentals, services or sales. If the platform is not able to fit into the users existing ways and needs, there might be a lack of motivation for them to use it. Trying to fit in with the user's everyday life is relevant for developers of all types of platforms, but since digital sharing platforms usually involve so many different functions it might be especially difficult. More functions mean that there are more things that need to fit in with the users. It might be difficult to ensure that factors such as payment systems, inlog opportunities, social functions and the interface aligns with the users' expectations. When developing a digital sharing platform, it is therefore important to be aware of this barrier and make strategic decisions regarding which systems are especially important to include.

The respondents also mentioned that it is a barrier to achieve a balance between the openness, adaption and moldability in contrast to standardization. This barrier regarding technical features and their potential, might be difficult to manage for the developing team. It would therefore once again be beneficial to involve the partnering firms to understand the customer base and their needs. The need for communication and collaboration between these actors will be further elaborated in the following sections of the analysis.

5.2.2 Usage

Since digital sharing platforms are so unique and relatively unknown, it is especially important to ensure that new users can be attracted and that they understand the platform's value. Since they might not know of any other platforms of this kind, it is possible that they cannot understand its value if it is not presented directly to them. The respondents mention that it is both difficult to find the platform, and once users have found it, the onboarding is not smooth. These are two additional factors that make it more difficult to attract and maintain new users. The fact that the platform is difficult to find is even further increased by the lack of a public accessible mobile application, since this means that an entire target group is excluded. The respondents further mention that it is essential to understand the platform's functions in order to see its value. This is partly true for all types of platforms, but once again more crucial for digital sharing platforms because of their uniqueness. This uniqueness means that both the functions, and unique combination of otherwise well-known functions, creates an environment that users might not understand at first. This creates a need for some sort of presentation of the functions, which might be difficult to include smoothly for every new user. To summarize, when establishing digital sharing platforms, it is a barrier that new users are difficult to attract, maintain and inform.

According to the respondents it can be difficult to understand the platform's structure and interface, especially for new users. The inexperienced users can get overwhelmed, and lack the patience needed to set up their profile on the platform. As the respondents mentioned, to extract value from the platform you need to offer some time in the beginning to set up your profile and publish your offers. If the platform fails to communicate this, new users will not see any of its benefits and therefore not continue to use it. In addition to this, the respondents say that information is not always direct or clear. An example of this is that the users can get notifications on text message or email, but that they have to set this up themselves. This increases the potential that users miss any happenings related to their usage of the platform, meaning that they might not be able to extract the values of usage. These barriers also lead to the previously mentioned barrier that new users are difficult to attract, as well as inform and maintain.

Something that was mentioned as a barrier by the respondents is that the name of the platform might scare people if it sounds too complicated or foreign. A respondent mentions that they worked around this by calling it a delivery database instead. However, this could create another barrier - that the users do not see the platform for what it is, how it is unique and what value it brings. If you are calling it a delivery database, the users might ask why they should use this wide system for this, when there are other systems that are custom made, and therefore probably more functional, for this purpose. Therefore, it is important for both those developing the platform and the partnering companies that meet the users, to ensure that the presentation of the platform is sufficient. This means that it should be both easy to understand so that the users are not scared, while still not excluding the core functions and values. If this cannot be done, the platform is not likely to achieve a high amount of usage and therefore not survive. Another barrier that the respondents mention is that some things are decided upon on a system level and cannot be altered for each individual platform. Therefore, it might be difficult for the developing team to ensure that the decisions will work on every level and platform. This is also something that the developing team needs to decide in collaboration with their partners. Because of how many factors depend on this, insufficient communication between these two actors is another barrier that might occur when establishing digital sharing platforms.

5.2.3 Strategy

A strategic barrier mentioned is that the platform might not be able to successfully show its business value. This barrier has led to respondents feeling like they cannot contribute to the platform and its users as of now, since they do not know what potential value, they could both contribute to others or achieve themselves. Another barrier that could be connected to this is that it can be difficult to move users into this new unknown system. Where and how do you start? To motivate these users, the business value needs to be presented in an obvious and direct manner. As mentioned earlier, digital sharing platforms are not well known, and therefore their values are not either. This creates an additional barrier and need for how the business value can be presented, which is an important factor to reflect on.

Concerns regarding how the platform will survive, who will own it, who supports it, what it

costs and how it is financed has also created a barrier regarding the uncertainty of the platform's future. This is especially crucial during the development of the platform and might not be as relevant when the platform is publicly launched. However, a barrier that will occur then is how the platform will become widespread both nationally and internationally. For this to happen, there is a need for financing, cooperation, and promotion. If this cannot be achieved the platform is not likely to survive, since it will have some requirement for an active user base. When developing digital sharing platforms, it is therefore crucial to consider the strategy for how the platform will survive in the future.

There is a lack of consensus between the respondents that are part of the developing team and the other respondents. This is a barrier connected to our technological frames, strategy and technical. If the developing team is not able to communicate their visions and expected values, and the partners are not able to communicate their wishes and needs, the project will not be able to succeed. The platform is of no use for the users if their needs are not met, and it is no use for the developing team to launch a platform that will not be used.

An additional barrier is what we discussed in chapter 5.1, that digital sharing platforms are not a researched area. This makes any attempt to establish them more difficult and risky. Even though research has been made regarding other types of platforms, it would be foolish to assume that their findings can be applied on digital sharing platforms as well, without any proof.

6. Conclusion

In this thesis we set out to answer the research question “what are the barriers for establishing a digital sharing platform?”. In our study of Umigo we identified what makes digital sharing platforms unique and valuable, as well as barriers within three different technological frames, i.e., dimensions. We also found that the dimensions need to converge with each other in order to establish a digital sharing platform in a more efficient way. These dimensions are important to uncover different stakeholders underlying knowledge, expectations, and assumptions they have in relation to Umigo.

With this research we argue that we provide two main contributions. The first one is that digital sharing platforms are a unique platform type and should therefore be more present in research, to further examine their traits and possibilities. The second contribution we make is a summary of which barriers could prevent them from being successfully established. We argue that it is of importance to overcome these barriers, to achieve the benefits of digital sharing platforms, such as environmentally friendly, cost efficient and social behaviors.

We would like to conclude this thesis by providing a suggestion for future research. We conducted interviews with respondents that are involved in the development of a digital sharing platform. Therefore, we got a great insight towards the creating and implementing parts of the platform, but our results included uncertainty and questions regarding the end users and their experience. By end users we mean those that have no involvement in the platform's development, and that their only insight and experience is their personal usage of

it. We believe that it would be both interesting and valuable to explore the potential barriers from an end user's perspective, to gain a wider understanding of barriers that could occur.

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8. Appendix

Interview Questions

Personliga/teknikfrågor

Kan du berätta om dig själv och vad du gör?
Hur skulle du beskriva plattformen?
I vilket syfte använder du plattformen?
Hur länge har du arbetat med den här plattformen?
Vad är dina upplevelser än så länge?
Kan du beskriva vilka tekniker som används på plattformen?
Hur är strukturen på plattformen?
Finns det några tekniska barriärer enligt din åsikt?

Användningsfrågor

Vad tycker du om att använda plattformen?
Hur ofta använder du plattformen?
Är den svår att använda?
Inom vilka områden kan plattformen förbättras?
Finns det några barriärer när det gäller användning av plattformen enligt din åsikt?

Strategifrågor

Vilka värdeskapande dimensioner finns på plattformen?
Finns det olika värden för olika intressenter?
Vilka typer av intressenter finns det för plattformen?
Vilka värdeskapande dimensioner skulle du vilja se på plattformen? Finns det några strategiska barriärer enligt din åsikt?

Student Contributions

In the thesis, we have done some work individually and some together. We created and defined the research question and aim together. We also wrote the abstract, introduction, and conclusion together. Finally, after the thesis was written, we did a thorough read-through together where we adjusted the language and structure according to the format criteria. When writing the related research section, we divided the work between us. Both of us searched for literature and wrote their designated parts. The method section was also divided between us when it comes to writing it. However, all of the decisions made in regard to the method were discussed and decided together. All interviews were done together, and after each interview we took turns on transcribing them. We also divided the coding and categorizing (data analysis), where we each did half of the interviews. We also divided the writing of the results- and analysis sections between us. However, we analyzed the results together before writing it separately.