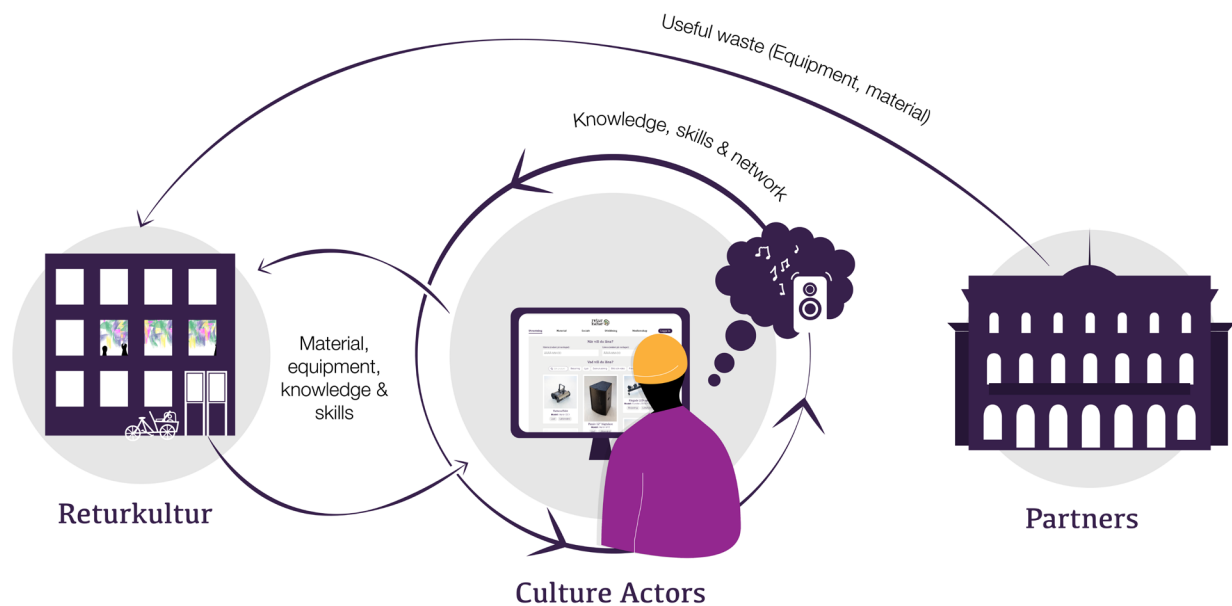




CHALMERS
UNIVERSITY OF TECHNOLOGY



A digital platform for sharing assets within the culture sector

Requirements for and design of a digital platform for sharing equipment and acquiring reusable material within the cultural scene of Västra Götaland.

Master's Thesis in the Master Program Industrial Design Engineering

SARA LINDGREN

OLLE TRENS

Master of Science Thesis

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Sara Lindgren & Olle Trens

Abstract

The sharing economy is on the rise and often promoted as a more sustainable alternative to existing linear consuming patterns. However, the sharing economy in Sweden is currently very small, and even though there are many small initiatives taken around the country, many of them are struggling with attracting users. One of them is the environmental organisation Returkultur, for which this study has been conducted. In this thesis, the design of a sharing service for the cultural sector in region Västra Götaland, and a digital platform facilitating it, is described. The aim of the study has been to understand how to encourage and increase the sharing of equipment and material within the cultural scene of Västra Götaland through a digital platform.

The first part of the project, the pre-study, focuses on gathering data on the specific users and stakeholders. For qualitative data on the situation for cultural practitioners and organisations, 14 interviews have been conducted. For quantitative data on general attitudes and user patterns, surveys have been sent out to a large number of cultural practitioners, of which 35 responded. In order to relate requirements and requests to a digital platform specifically, workshops have been executed using a circular consumption design tool called “User experience exploration pack”, developed by researchers at the Department of Human Factors at Chalmers University of Technology. The tool help workshop participants to map and create circular user journeys, and foresee potential problematic areas. Based on the findings in the pre-study, design concepts were created and evaluated both theoretically and through user tests. Three concepts - one structured, one pedagogical and one social concept - were chosen for user testing and one final concept is described in the thesis.

The study shows that informal sharing is already very common within the cultural sector. However, it also showed that sharing is a very complex social act where the willingness to share is dependent on things such as the situation, which product should be shared and the relation between the peers. Furthermore, all of these aspects are constantly shifting, which makes it hard to create a peer to peer service that would live up to the expectations of all stakeholders - borrowers, lenders, Returkultur and partners. Users were more interested in organised ways for sharing where they would not have to make as many travels, and where they would not have to feel guilt towards lenders. Thus, the proposed service is therefore a sharing hub with many similarities to a rental business, where the equipment and material is acquired through partnerships with big cultural institutions.

For the digital platform, resemblance with similar types of platforms was also very important. The final design can be seen as a combination of a webshop and a hotel booking site - two concepts that many users are familiar with. The users also need a warm welcome, and plenty of information along the way as many users felt uncertain whether they were allowed to use the service. Together the service design and the design of the platform generated a pleasant user experience where users felt confident and inspired, hence encouraging and potentially increasing sharing in region Västra Götaland.

Terminology

Cultural actor, cultural practitioner

A person or group of people producing culture.

Cultural institution

The biggest and most established cultural actors in a city.

Digital platform

An online marketplace matching supply and demand for a service or product, as well as connecting users.

myTurn

A tool providing digital libraries. During this thesis myTurn was tested to act as digital platform by Returkultur.

Peer to peer sharing

A sharing system where every user is a potential lender and a potential borrower.

Sharing hub

A facility in which all the sharing activities start and end.

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1. Introduction

This chapter presents the background, aim and objectives of the project as well as a description of the report structure.

1.1 Background

Returkultur is a network of environmentalists working with recycling and sharing of both physical assets and knowledge in the field of culture. It started out as a collaboration between two small music festivals in Sweden which both had the intention of leaving minimal environmental impact with their events. Sharing of equipment and knowledge became a crucial activity in that effort, and they currently store a lot of equipment as a start for what they hope will be an even bigger sharing pool in the future.

Having been part of western Sweden's cultural scene for several years they have detected informal sharing platforms for both material, services and equipment. Returkultur is aiming at making these sharing platforms more official, open and inclusive. Big actors such as the Gothenburg Opera has shown interest in the project and opportunities for partnerships or collaborations will be explored. Currently big cultural institutions like Gothenburg Opera, in contrast to their missions and environmental policies, throw away a lot of material and equipment that could have been saved and reused. Returkultur claims that the thrown away material and equipment could have had big value to smaller cultural organisations or individuals. Thus, their mission to engage in the smaller cultural scene and work sustainably leaves a lot of space for improvement.

This project started the spring of 2019 with a pilot project funded by Naturvårdsverket and was based on the idea of a system for sharing material and equipment in the cultural sector. The pilot project had two purposes. The first purpose was to investigate ways and systems for acquiring, maintaining and repairing useful waste together with potential partners such as the Gothenburg Opera, theatres and concert halls that are funded by tax money. This also included investigating legal aspects of sharing public property, insurance solutions and similar aspects. The other part is where this master thesis comes in. This part of the pilot project concerned designing a digital platform for sharing and distributing equipment and material that supports the system. This part of the project also included user studies.

Together the two parts worked towards the sharing system idea proposed to Naturvårdsverket and which granted the funding. Within this system the different actors have different roles and relations with each other, see Figure 1.1. The partners (bigger institutions, larger cultural actors, light and sound firms etcetera) provide Returkultur with useful waste that Returkultur then can store, repair and modify and later make available via their digital sharing platform. The cultural actors can then lend equipment, acquire materials as well as learn new skills and share knowledge from Returkultur as well as other cultural actors. If the partners have resources that are available for sharing they can provide the cultural actors with these directly via the digital sharing platform. For the early stages of the pilot project, Returkultur has used the internet service myTurn to act as a digital platform for sharing equipment. MyTurn provides library functionality, a booking system and allows for users to add their own equipment to the service.

Increased re-use of products, including governmentally and municipality owned products, is one of the main actions proposed in an inquiry by the Swedish Government to achieve a more resource

effective, circular and sustainable economy (SOU 2017:22). As it looks now less than 1 % of the money spent on consumer products in the Swedish households are spent on repairing products, and the spending on rental and second-hand products are small as well. This indicates that the Swedish citizens is mainly part of a linear economy and a throw-away culture. Developing user friendly circular services is a necessary step towards a more environmentally and economically sustainable society.

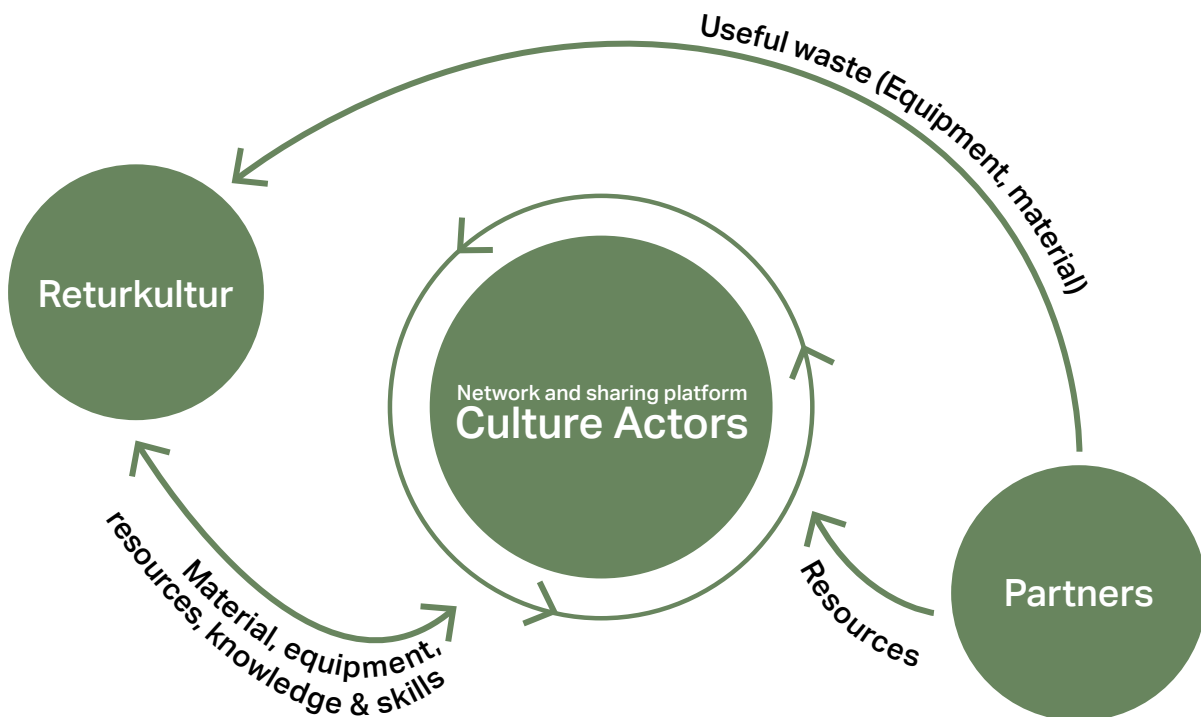


Figure 1.1

Actors and resource flow within Returkultur's pilot project for collecting and distributing useful waste.

The inquiry presented by the Swedish government have investigated what obstacles that hinder re-use and increases utilization of products. These are price relations, repairs, time-consuming processes of renting/borrowing, rules regarding waste holding back the market for second-hand goods and repair services, that circular design hasn't yet impacted the production of new products and that consumers have limited demand of these products as they prefer new products (SOU 2017:22).

Another aspect of the obstacles for sharing can be found within the field of ethnology. Swedish researcher Karin Salomonsson claims that in order to establish a successful sharing economy, we need to examine and take the complex cultural and social practices surrounding sharing more in to account (Salomonsson, 2018). Her studies show that borrowing something is much more than a logistic solution to a problem, but a complex social act where pride, shame and other powerful emotions are at stake. The concept of ownership is rooted deep within our society and people are having a hard time knowing how to act in situations where ownership is being blurred or challenged. These situations have led to negative experiences from sharing for many people, making them sceptical of large scale sharing and thus threatens sharing as a phenomenon (Salomonsson, 2018).

1.1.1 Environmental aspects

With Returkultur's sharing platform cultural actors will be able to acquire equipment and material. The equipment could as mentioned above be donated to Returkultur due to it being broken, unmodern or no longer useful for a partner, and with Returkultur's help become useful for someone else, its product life is prolonged and environmental impact decreased. Material (such as textile, wood and sheet metal) donated to Returkultur from its partners would be given to cultural actors for free instead of being thrown away, thus prolonging the material life and therefore decreasing the environmental impact of the material.

However, when people are given the opportunity to borrow or get equipment for free or at a very low cost one must consider the possibility that it results in users being willing to travel longer distances to get the product compared to when renting it. This could then lead to the sharing service being a worse alternative compared to the renting service when it comes to CO₂ emissions. In a study on clothing libraries by Zamani et al (2017) it was shown that there is risk for increased customer transportations offsetting the benefits gained from reduced production when comparing renting clothes to buying them new. Zamani et al (2017) did not mention the impact of the product price on type and length of transportation chosen to pick up the product, and thus not the environmental effects depending on the price picture of the renting/sharing service. However, emissions from transporting big and heavy electronic equipment is hard to compare to a small and light textile product. Nevertheless, Returkultur aim to create an environmental friendly service, why attitudes and patterns regarding transportation among users must be taken into account in order to evaluate the service from this point of view.

1.1.2 Social, ethical and legal aspects

In Returkultur's vision, cultural organisations should be able to borrow and share equipment at a very low cost - possibly for free. This means at least two things:

1. Less equipment will be bought or rented by culture producers.
2. More cultural events will be enabled at a lower cost for the culture producers and hopefully also the audience.

If this services become widely used it can lead to both good and bad things. One problematic aspect is the ethical and potentially legal problems with the free market and competition. If this service becomes very successful it could mean that rental services get less orders. Since Returkultur is a non profit organisation which currently is funded with tax money, it would not be fair to put sound and light rental companies out of business. Another advantage that Returkultur has in relation to other businesses is that volunteers are running the workshops where they service and repair donated equipment that later might end up in the sharing service. Given the potential value this service can produce for its users, this could be seen as an exploitation of labour and good will as well as a competitive advantage. Defenders, however, could argue that the sharing service would enable more cultural events, making more cultural organisations more professional and that such a development generally would benefit everyone engaged in the cultural economy. The service would also have big social sustainability impact. By enabling events that otherwise would not have taken place at all due to lack of monetary resources or connections, the service would create a flourishing scene for culture in region Västra Götaland. The values that such a situation would create are close to impossible to measure, but culture of all sorts are often considered to have big positive impact on general health, well being and social inclusion (World Cities Culture Forum, 2018). Since culture also is a powerful way to carry out ideas and messages, more culture creates more socially sustainable cities and regions (World Cities Culture Forum, 2018). This sharing

service has the potential of giving a voice to artists who would not otherwise be able to afford it, adding value from a democracy perspective as well.

A non competing service which still empowers struggling cultural practitioners to create a more socially sustainable region Västra Götaland is still possible if the design is made with the right target group in mind. This group is the small actors with little monetary resources who needs the service the most in order to be able to produce culture, and furthermore does not contribute very much to the rental firms businesses.

1.2 Aim and objectives

The aim of the study was to get an understanding of how to encourage and increase the sharing of equipment and material within the cultural scene of Västra Götaland through a digital platform.

The project aimed to result in:

- A wide understanding of big cultural institutions' and small cultural actors' (including individual creators) thoughts on sharing of equipment and material within the cultural scene.
- The development of requirements set on digital sharing platforms for the cultural sector.
- An evaluation of the currently used digital platform's usability and expression.
- The development and visualisation of a final concept, communicated through a project report.

1.3 Demarcations

This project focuses on service design and design of a digital platform. Although they are crucial aspects of starting a service, a few aspects have been left out of the scope.

1. **Business model** - No business models will be analysed or developed.
2. **Juridical documents and agreements** - Returkultur has their own lawyers and ongoing dialog with insurance companies. Therefore, this study will not examine these issues further.
3. **Logistical solutions** - Although transportation and logistics are important factors for sharing services, it has been left out of the scope. The study gathers some data on the subject that act as guidance for Returkultur in choosing either existing methods of transportation, or in developing their own logistical system in the future.

1.4 Structure of the report

A chapter presenting the theoretical foundation of the project will begin this report and following this, three parts will be presented sequentially followed by a discussion and a conclusion.

This project has been run over three phases where methods for the latter phases has adapted to and built on findings in the previous ones. To help the reader understand the processes, this report has been split into three parts as well.

Part 1 covers methods and insights from the pre-study including conclusions on how to define the service, and a requirement list for the digital platform. In part 2, the concept creation phase is

described - including methods - and three concepts are described together with results from user tests and evaluations also performed during this phase. The results end up in a combination of the best parts from the different concepts. In the last part, part 3, the final concept is visualised and described.

2. Theory

This chapter presents theory about design for exchange, social barriers for sharing and how to change user behaviour as well as theory and guidelines relevant when designing digital user interfaces.

2.1 What products can be shared?

Hagman and Wendt (2018) have in their master thesis “Design for Exchange” at Chalmers University of Technology put together a list of product characteristics suitable for sharing, renting and other alternative ways to obtain products other than buying new. It is based on analysis of surveys and interviews.

According to them the product should be experienced as:

- Expensive to buy new
- Have high quality
- Have a long life
- Seldom be used by one user
- Not be used spontaneously, planned use is preferred
- Not be a highly personal product

It is stated that some of the characteristics are subjective, how expensive is too expensive for example? It also claims that not all characteristics have to be fulfilled, but that it helps, and that context is important. The definition of a highly personal product for instance is not only subjective. It also depends on the context. This is supported by Swedish ethnologist Karin Salomonsson in an example of a sleepover where even a toothbrush by some can be socially accepted to borrow. The same person would never call from another apartment asking to borrow the same toothbrush (Salomonsson, 2018).

2.2 Social barriers for sharing

The advantages and possibilities of a sharing society are undeniable. Cities and states as well as the private sector encourage more sharing in the process of becoming more economically, socially and environmentally friendly. Ordinary people also view sharing as a virtue and many claim that they are willing to share - yet very few actually do (SOU 2017:22).

Karin Salomonsson tries to explain the restraint by exposing the complex cultural and social mechanisms involved in the act of sharing (Salomonsson, 2018). Conducting sharing activities in a world where the concept of ownership is so deeply rooted leads to people getting confused in situations when the ownership is blurred. The confusion often leads to misunderstandings regarding expectations on the different parts, which in turn generates hard feelings and eventually bad experiences from sharing.

The act of sharing has two very different connotations associated with it. In the past where brand new items were considered the most desirable, borrowing things were mostly a demonstration of power relations, poverty and failure (Salomonsson, 2018). People needed to borrow things they could not afford by someone who had plenty. In recent times a norm have emerged which more connects the act of sharing to solidarity, environmental awareness and sustainability, as seen in

the action plan from the Swedish government towards a more circular economy (SOU 2017:22). However, the old view of sharing is hard to get away from. Salomonsson uses an article from Swedish newspaper *Norran* as an example. The article describes an initiative to share old prom dresses for the upcoming graduations and states that “the decision to go to the prom should not be depending on whether or not you can afford to buy a dress. In that case it is a good thing to share” (Eriksson, 2016). This quote shows how economic value and ideological values are intertwined and that we can not look past the power relations still associated with sharing. People expect things in return for lending whether it is gratitude, acknowledgement, favours or money.

The combination of economic value and ideological values involved in sharing results in a feeling of being disrespected twice when a product is not treated the way the lender expects. Treating something poorly is considered offensive both towards the product and its owner. On the other end of the same equation it is hard to know what is expected of you as a borrower. When borrowing something it can be hard to know if it should be returned in perfect condition, together with a symbolic gift, promises of future favours, money or all of the above.

These aspects may explain the mixed emotions people have towards sharing. Taking social and economical expectations in consideration when developing the platform and service as such can prevent negative experiences from sharing.

2.3 Changing user behaviour

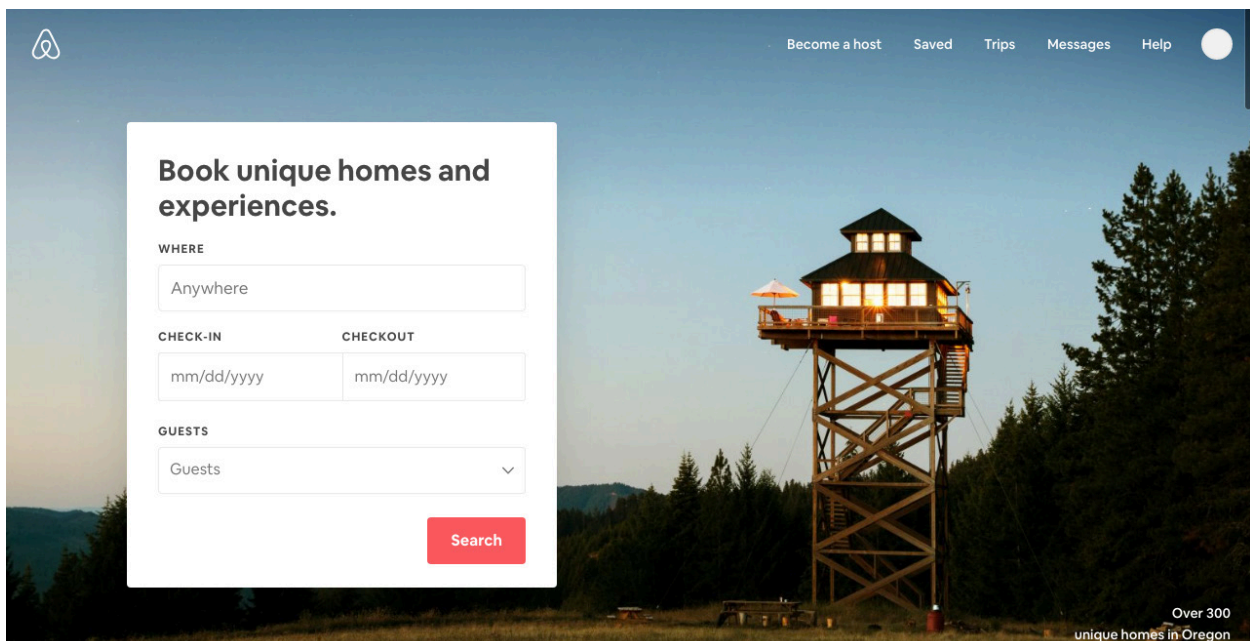
The agenda for *Returkultur* is sustainability. However the sustainability of a service may not necessarily be the reason that users change the way they consume. In this section three different approaches and theories will be introduced that addresses ways of stimulating a change in behaviour.

In the book “When coffee and kale compete” Alan Klement (2018) describes the “job to be done” thinking. It stresses how every product or service, rather than having a value in itself, has to do a job and that the job to be done is not always very obvious (Klement, 2018). The title refers to an example of a coffee shop that is put out of business by a bar serving smoothies made out of kale. The argument is that the job to be done was not to drink the coffee in it self but that the customers rather wanted a refreshing stop on their way to work and that they wanted to feel like a modern urban person. For those purposes a kale smoothie and coffee did the same job and were therefore competitors (Klement, 2018). Klement argues that in order to change user behaviour you need to study the complex relations that users have towards the solutions you expect them to abandon, as your solution has to be better at getting that job done.

Trust is a topic that often comes up when discussing sharing. Rachel Botsman claims that in order to change user behaviour towards more sharing, there are ways to address trust issues which can be boiled down into three questions asked by the user when encountering a new product - “What is it?”, “What do I gain?” and “Who else is using it?” (Botsman, 2017). The first question - “What is it?” - implies that it is important to design a product or service in a familiar and accessible way. Users trust products they recognise. For the second question - “What do I gain?” - Airbnb is used as an example of how even the most intimate products, such as your bed and pillows, can be shared if it is made clear what the users gain - in this case money and cheap housing. If trust was the only factor affecting sharing, the landing page of Airbnb would be full of legal aspects and insurance policies. Instead users are today asked one question on the landing page - “Where?” - and Airbnb indicates that the user can travel anywhere by writing “Anywhere” in the field’s example text, see Picture 2.1. This apparently provides enough inspiration and opportunities in order for millions of users to employ the service. Botsman argues that an efficient way of winning over doubters is trust

influencers (Botsman, 2017). These are described as a group of users that are not expected to take a risk and by using a product or service induces trust in the system. It would for example be easy for someone in doubt to dismiss the recommendation of a new startup from a young person with the newest iPhone, as you would expect that kind person to jump on a new trend. In the context of Returkultur with their background and branding, the expected user could for example be a young man engaged in the environmental movement arranging a seminar in sustainable house building. According to Botsman's research, a trust influencer would rather be someone unexpected such as an old woman arranging a brass concert during a pensioners' national union meeting.

There are no straight answers on how to design and develop a good product or service. Both job to be done theory, Salomonsson's ethnological theories and Rachel Botsman's research support the idea that thorough user studies can help in understanding the important mechanisms in the user-system relation, but even then designers will have to make assumptions and interpretations that might be wrong. A way to handle problems like these are addressed by the, in recent years, very popular Lean Startup program (Klein, 2013). A vital part of the Lean Startup process is the minimal viable product (MVP). Finding and defining the MVP is the search for the core activity and the core value of the system or service, which then should be implemented, tested, evaluated and re-designed in several iterations (Klein, 2013). The key is to gain insight in what is appreciated - your core value - and build your product or service in small steps instead of building big systems with a lot of functionality that turns out not being used or appreciated. These thoughts are highly relevant in this case where the system is untested and the future funding for implementation is unclear.



Picture 2.1

A screenshot of Airbnb's landing page in April 2019, asking the user to type in where and when they want to book a home. ©2019 Airbnb. Retrieved April 17, 2019, from <https://airbnb.co.uk/>. Screenshot by author.

2.4 Designing inclusive and user friendly digital user interfaces

In this section two important qualities of user friendly digital user interfaces, usability and web accessibility, will be presented and further described. The theory in this section aim at providing a good overview of the two qualities and how to design with them in mind.

2.4.1 Usability

The concept of usability is defined as the “extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use” (International Organization for Standardization [ISO], 2018). With the effectiveness corresponding to what degree the goal is successfully achieved, efficiency indicating how much resources that are used by the users to do so and the satisfaction meaning to what extent the users’ cognitive, emotional and physical response to the system, product och service met the users’ needs and expectations (ISO, 2018). Danish usability expert Jakob Nielsen (2012) means that usability is a necessity for survival on the web as people leave websites that are difficult to use and that do not communicate their offers as well as functions clearly.

Nielsen (1994) have developed 10 heuristics for user interface design to help when creating or further developing user interfaces with usability in mind. These heuristics are presented and described below:

- **Visibility of system status**
The system should show the users what is going on within the system. This allows the users to feel control, take the right actions and trust the system (Harley, 2018).
- **Match between system and the real world**
The system should communicate in a way that is familiar to the user as well as follow known conventions. This means using a language that is familiar to the users as well understandable and not too advanced and technical. Designing the interface and its interactions in a way that matches how the user expects them look and function, also known as matching the mental models of the users, is very important as well (Kaley, 2018).
- **User control and freedom**
The users need to be able to leave unwanted states of the system in an easy and efficient way (Nielsen, 1994).
- **Consistency and standards**
By using standards in the design of an interface it is easier for the users to understand individual elements of the interface as well as where certain functions and features can be found. This consistency is important both within the system but also towards similar services as users expect similar websites to all work in the same way (Nielsen, 1999).
- **Error prevention**
User interfaces should be designed in a way so that errors to the biggest extent is avoided. This could be done by eliminating conditions where errors easily occur or by making the user confirm that actions ending in potential errors are intended and correct (Nielsen, 1994).
- **Recognition rather than recall**
The need for the users to remember information from different parts of the system should be minimized by always having the needed information, object, action or option visible or easy to locate (Nielsen, 1994).
- **Flexibility and efficiency of use**
A system should be designed to facilitate the interaction for users of different experience levels, such as providing more experienced users with functions that speed up their interaction without interfering with the interaction of novice users, so called accelerators (Nielsen, 1994).

- **Aesthetic and minimalist design**
The information and content presented in the system should be relevant (Nielsen, 1994).
- **Help users recognize, diagnose, and recover from errors**
If errors occur the users should be provided with error messages expressed in common language, indicating the exact error and that suggest a solution to specific error (Nielsen, 1994).
- **Help and documentation**
If the users need help and/or documentation to use the system this information should be focused on the task of the users, presented in steps, easy to search and not too extensive (Nielsen, 1994).

2.4.2 Web accessibility

Accessibility means “how easily and effectively a product or service can be accessed and used” and good accessibility is designed with people of different capabilities and different types of circumstances in mind (Horton & Quesenbery, 2013). When something is designed with good accessibility we rarely notice it while bad accessibility makes us stop and think as well as creates barriers that exclude people whose capabilities were not considered during the design of the product or service (Funka, n.d.)(Horton & Quesenbery, 2013).

By designing with everyone in mind design can be inclusive and eliminate barriers, meaning that the product and service can be used by people with many different capabilities, needs and aspirations (Engineering Design Centre at the University of Cambridge, n.d).

When it comes to accessibility on the web a few different standards such as those developed by the W3C Web Accessibility Initiative (WAI) exists and are mainly created for web and software developers. WAI (2019) have developed four principles for accessible web design which are:

- **Perceivable information and user interface**
This means that content should be understandable by everyone including users that cannot see or hear. This could be done by providing text alternatives for non-text content (images, graphics, site components, tables, charts, illustrations, audio and video descriptions and labels for controls, input fields and other components of the interface) or by creating captions or descriptions for those who can not hear audio or see video. In addition to this content needs to be dynamic and adaptable so that the user can customise it to their needs and presented in a visually clear and audibly way.
- **Operable user interface and navigation**
The website and its functions need to be accessible for users who use a keyboard to navigate the site. The content on the site should allow the users to take time reading and using it, which for example could mean that the user is allowed to stop or extend time limits if that exists. The user should also be able to easily navigate the page, locate content as well as where they are, this could be done by using clear titles and descriptive headings, multiple ways to find content, indicating on which page the user is located as well as conveying the purpose of links when they are in focus.
- **Understandable information and user interface**
The broadest audience possible should be able to read and understand the content presented on the website, including when its read by a screen reader. This means identifying which language that is used on the web page, using clean and simple language and providing descriptions of more advanced words and phrases. The content

should also appear and operate as predicted by the user, meaning that consistency is key and that repeated components should have the same label each time and that repeated navigation mechanisms should keep their placement throughout the website. The content should also help the users in avoiding errors and if they do happen, help correct them.

- **Robust content and reliable interpretation**

The website and its content should be compatible with different user agents such as different browsers and assistive technologies.

PART ONE

Pre-study

The aim of the pre-study was to get a wide understanding of the cultural actors thoughts on sharing of equipment and material, to evaluate the current digital platform and to create requirements suitable for a digital platform used for sharing these types of resources. This part contains the methods, insights and requirements of the pre-study.

3. Method - Pre-study

In the early stages of the project, the work focused on gaining insight about the general user behaviour and attitudes surrounding sharing, and for what purposes users were willing to share material and equipment. Interviews were used to understand what solutions were used today, how they worked and what could become better by using Returkultur's services. The interviews were combined with a survey, covering what the general main struggles cultural actors have to deal with, to get quantitative data on what should be the main focus for the platform. In order to transform these insights into requirements on a platform, workshops were executed where users were able to contribute with their thoughts on what support and information they would like the platform to contain in different stages of the sharing process.

3.1 Interviews

In order to get qualitative data about the intended users, semi-structured interviews have been executed with ten cultural practitioners and four employees within cultural institutions. Two different interview templates were used. One for small cultural actors and one for big institutions that were considered as potential partners. The distinction between big and small actors was defined by whether the person or organisation had enough useful waste to become a large scale provider of material and equipment or if they could act as a partner sharing hub. The biggest small actor was a dance company with three employees and their own production managers, but still almost had no useful waste or equipment suitable for sharing.

The interview template for smaller cultural practitioners (see Appendix A) first and foremost focused on how the need for material or equipment emerges and how user currently go about reaching their goals. The interviews ended up being about one hour each and covered their cultural practices, current systems for acquiring material and equipment, and the logistics surrounding it.

The template for bigger cultural actors and institutions (see Appendix B) focused more on present and future waste management and what ways and to which organisations they lend and share equipment today. These interviews lasted about 45 minutes each. All interviewees, small and big actors, were also asked what they considered as the biggest threat towards organized sharing as proposed by Returkultur and what traits or personality a sharing platform should have in order to appeal to them.

3.1.1 Selection - smaller cultural practitioners

The platform should enable all sorts of cultural practitioners to produce culture. Therefore the selection of interviewees contained actors within different cultural fields, level of experience and establishments as described in Table 3.1. Covering the experiences for users with less monetary resources and abilities to produce culture was crucial from the ethical points of view mentioned in section 1.1.3, why a weight towards less established cultural practitioners can be seen. All interviewees live and work in Gothenburg, which was a little problematic when studying travels. These potential users have access to well functioning public transport why it can be assumed that they are less likely to use a car for transporting products.

Table 3.1

Interviewees in chronological order by cultural field, age and level of establishment.

Interviewee number	Cultural field	Age span	Level of establishment
1	Musician and DJ	31-40	No education within the field. No funding.
2	Dancer, DJ and organiser	26-30	Established teacher in dance. No funding.
3	Dancer and artistic director for a dance company	41-50	Educated in dance. Has funding from region Västra Götaland covering production costs and three employees.
4	Artist and gallery owner	26-30	Educated in fine arts. No funding for facilities or gallery activities
5	Artist and workshop technician	31-40	Masters degree in fine arts. Partly living of scholarships and work as a technician in a student workshop
6	Event organizer and DJ	31 - 40	Hosting parties for extra income.
7	Bass player	26 - 30	No education within the field. No funding.
8	Drummer	26 - 30	No education within the field. No funding.
9	Dancer and singer	18-25	Educated show and musical artist.
10	Furniture designer	26-30	Master student in design. Working extra as a freelance designer

3.1.2 Selection - bigger cultural actors

In the contact with bigger cultural institutions it was stated by Returkultur that technical managers were the people best suited for the questions mentioned in the interview templates. They take most of the decisions regarding what equipment can be lent, what can be donated and what should be thrown away as they have insight in the waste management systems within the organisations. The title varied a little between the organisations, and at one specific theatre there was a specific position dedicated to waste management. However, the people interviewed in this study generally had the same competence and area of responsibility. They are all listed in Table 3.2.

3.1.3 Documentation

All interviews were recorded and transcribed. In two cases the recordings failed but notes were then taken during the interviews and added to directly afterwards. The analysis of the interviews is described in section 3.5.

Table 3.2

Interviewed employees on bigger institutions by type of stage and position.

Interviewee number	Type of stage	Position
1	Opera house	Technical manager
2	Theatre	Technical manager
3	Theatre	Environmental coordinator
4	Opera house	Stage and light manager

3.2 Survey

In order to get quantitative data about general considerations and behaviour regarding sharing within the cultural field, a survey was conducted. It will be described here with topics and the execution.

3.2.1 Topics and design of the survey

General topics in the survey were:

- Attitudes towards sharing
- Channels for obtaining material and equipment
- Important aspects when sharing
- Transportation of equipment and material

3.2.2 How and to whom was the survey distributed?

The survey was distributed mainly through three channels. The first was Returkultur's social media accounts. The second was the creative network ADA Sweden which shared the survey on their platform/dashboard for creators within region Västra Götaland. The third channel was region Västra Götaland's sharing of the survey in a mailing list going out all cultural actors that receives some kind of funding from the region, including municipality culture centers and concert halls, as well as smaller groups of cultural practitioners. The fact that the survey was distributed to cultural practitioners in many different municipalities aside from Gothenburg was important for analysing travel and transportation patterns among potential users. In total 35 cultural practitioners participated in the survey.

3.2.3 Analysis of the survey data

As the people who participated in the survey did not match the intended user group perfectly regarding age, level of establishment and monetary resources, it got complicated analysing the data. Instead of seeing the data as general for the entire cultural sector in region Västra Götaland, it was analysed based on similarities and differences in relation to the data from the interview studies where the selection better matched the intended user group. Instead of studying individual answers and draw conclusions based on that users specific situation, typical answers were used as if they

represented the opinion of the general survey answerer - who is a bit older, a bit more established and have better economy than the participants in the interview study. On some areas for example, conclusions could be drawn that opinions differed between cultural practitioners in remote parts of region Västra Götaland and cultural practitioners in Gothenburg. In other cases location, age or monetary resources did not really affect the opinion of a user - and could therefore be used as general for all users.

The data was collected and summarized in diagrams (presented throughout chapter 4) and written answers made by the survey participants were compiled and analysed using affinity diagram analysis. The affinity diagram analysis is presented further in section 3.5.

3.3 Workshops - understanding the circular user journey

The workshops carried out in groups aimed at discussing and evaluating the circular user journey of borrowing equipment or acquiring material, as well as sorting out what type of information the user needs throughout the process.

3.3.1 The user experience exploration pack and how it works

A research team at the Division of Design and Human Factors at Chalmers University of Technology have developed a tool to support workshops and analysis for circular design called “User experience exploration pack - a tool for charting circular consumption journeys” (“Use2Use - Circularity from a user perspective”, 2019) which is a part of their research project Use2Use (Selvefors et. al, 2019). The tool contains hexagonal cards marked with different user phases which form a user journey when put in a sequence. For each stage complementary cards with actions and considerations can be added to the journey for a more complete picture of user patterns. A list of verbs is provided to the testers as inspiration and examples of what types of actions might be needed in different stages. The phases defined within Use2Use are:

- 1. Obtainment phase**
 - Consider needs
 - Explore offers
 - Consider specific offer
 - Exchange product
- 2. Use phase**
 - Initiate use
 - Utilise product
 - Manage and store product
- 3. Riddance phase**
 - Select riddance path
 - Offer product
 - Prepare for exchange
 - Exchange product
 - Post riddance activities

The tool was suitable for this project first and foremost due to its circular character, but was also considered an efficient and structured way to collect data on what information the user needs in the different stages of the sharing process. Instead of having a long list of requirements for the

service or platform as a whole, the user experience exploration pack generates smaller clusters of requirements for a more specific part of the process.

3.3.2 How the workshops were carried out

The workshop lasted for two hours in Returkultur's facilities. As the participants showed up they were asked to make a short user test of the existing digital platform. This user test is described in Section 3.4. When all participants were in place a short introduction was performed covering the background of Returkultur and the project. The schedule for the day was presented together with the purpose of the workshop and the results it hoped to provide. All participants also introduced themselves to each other with their background and expectations on the service.

The participants in the workshop were then divided into two groups depending on whether they were more interested in the services concerning material or equipment. The cards forming the user journeys - one for obtaining material and one for borrowing equipment - had been laid out beforehand on separate tables in different rooms by the test administrators. Patterns discovered throughout the interview study had given a clear picture of how cultural actors went about obtaining equipment and material. Thus the overall process was considered known and the order can be seen in Figure 3.1 and 3.2.

For the first 35 minutes each participant were given a piece of paper on which they, separately and in silence, wrote actions and considerations for each stage of the sharing process as seen in Picture 3.1. Note that some stages mainly concern the digital platform, but that other stages, such as exchange of product, concern the physical aspects of the service. To help and guide them they had questions for each phase proposing actions, considerations and problematic areas (see Appendix C). At the different tables the users were asked to prioritise different phases as some were assumed to be more and less relevant in relation to the platform. For the material workshop the user phase was less relevant as the idea is not to return the material after use. For the equipment table the selection of riddance path was left out since the service assumed that all products should be returned to Returkultur directly after use. After the time ran out and a short break for coffee they read their thoughts out loud and discussed them in the group for another 20 minutes. The discussion was recorded and test administrators took additional notes. The last 20 minutes were meant to focus on the general order of the user journey. The participants were encouraged to rearrange the order and discuss possible changes. In reality no changes were proposed and the discussion mostly continued to process the notes from the papers.

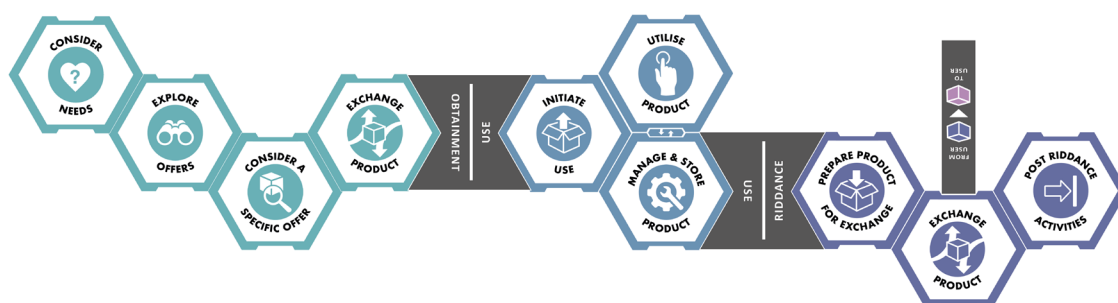


Figure 3.1

The proposed user journey when sharing equipment. No proposed changes came from the participants in the workshop.

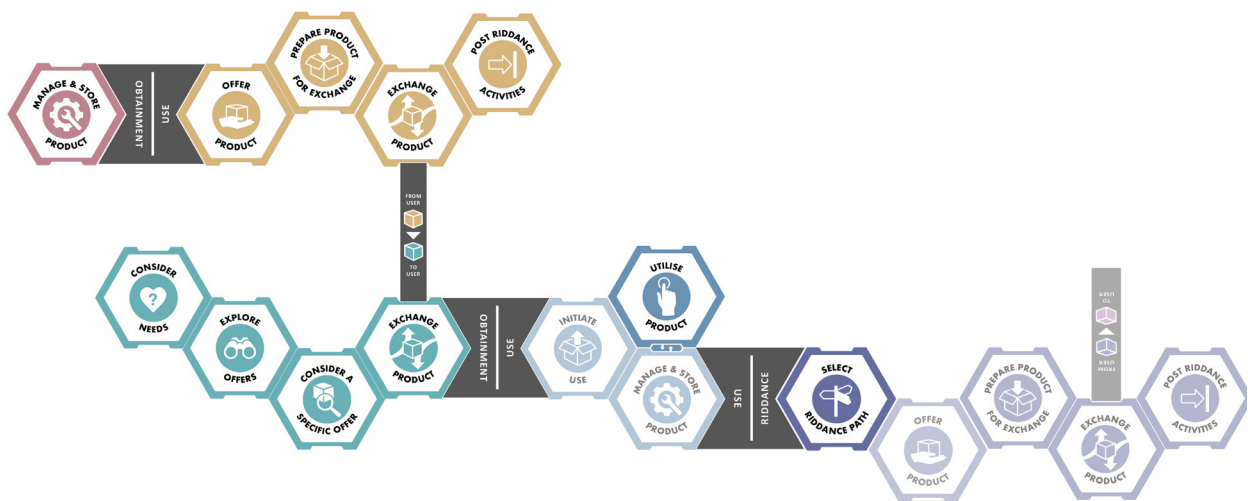


Figure 3.2

The proposed user journey when sharing material. The faded phases were not prioritised since they had little to do with the actual platform. Users were encouraged to reflect on them if they got time over.



Picture 3.1

Users reflecting on actions and considerations for each user phase during the workshop. A computer showing action proposals can be seen in the upper right corner.

3.3.3 Selection - workshop

All participants in the workshop had experience of producing culture of some sort. Their experience differed in terms of technical experience, but all that took part in the equipment workshop had hosted cultural events before, including obtaining necessary equipment. The participants at the material workshop had experience of construction or sculpturing art. All the participants can be seen in Table 3.3. Furthermore, Returkultur representatives were included to get insight on requirements on the administrative side of the service.

Table 3.3

The selection for the workshops and testers of existing platform.

Interviewee number	Cultural field	Age span	Material or equipment workshop	Participated in the user test
1	DJ and club manager	26-30	Equipment	Yes
2	Sound technician in a church	18-25	Equipment	Yes
3	Musical artist and actor	26-30	Equipment	No
4	Managing a choir	26-30	Equipment	Yes
5	Designer and woodworker	18-25	Material	Yes
6	Artist and musician	31-40	Material	Yes
7	Artist	31-40	Material	Yes
8	Returkultur representative	26-30	Material	No
9	Returkultur representative	31-40	Material	No

3.4 User evaluation of the current digital platform

The existing digital platform used by Returkultur called myTurn was tested and evaluated by users. The aim was to investigate how well the platform met the user needs and considerations. Focus was on the experience of the interaction rather than usability as the biggest challenge for Returkultur is to attract users and make them change their behaviour. The minimalist design of the test also allowed for the results to be compared to future concepts in a way that a proper usability test would not. Early concept models would not be comparable to an up and running fully implemented and interactive service.

No user tests were carried out for the administrative part of the platform. This due to its functionalities and design being closely tied to that specific platform design.

3.4.1 Execution of the user test

The testers were provided with a note containing a unique task. The tasks all in some way asked the tester to book an object during a specific period of time. The object was not always described exactly as the text on the digital platform. For example one tester were supposed to book a 12" speaker which was listed as Martin Audio WT2 on the website. The size information was provided in its explaining text on the product page which required the tester to click and inspect different speakers. This was done as a way to get insight in what information can be considered enough for a certain user. The note with the task also contained username and password for a test account. The sequence started with the testers logged out and there were no instructions when to log in. This

was because the library wasn't accessible for someone not logged in. As several statements had come up during previous interviews about the importance of transparency and openness, it was interesting to investigate how the testers perceived this lockout. The test was over when the test leader received a confirmation email for the reservation.

Afterwards, the testers were given a form where they were to evaluate eleven parameters and their general perceived experience of myTurn on a scale from 1-6. The parameters were chosen based on what the interviewees had stated were desirable qualities for a digital sharing platform and can be seen in Table 3.4. Lastly they were asked to rank their general experience on a scale from 1-6.

Table 3.4

The adjectives that the existing platform was ranked by (translated from swedish). The empty column in the middle symbolises the place where the ranking should be written on a scale from 1-6.

	1	to	6
1	Cumbersome		Neat
2	Complicated		Simple
3	Excluding		Inviting
4	Unsafe		Safe
5	Dull		Inspiring
6	Ugly		Beautiful
7	Empty		Well filled
8	Vague		Clear
9	Closed		Open
10	Cheap		Generous
11	Playful		Serious

3.4.2 Documentation

The screens of the test computers were recorded in order for the test leaders to be able to derive trends in the evaluation to actual functionality. However, there was trouble with the screen recordings why some of the conclusions are based on observations and notes taken by the test leaders.

3.4.3 Selection - user tests of current platform

The user test was executed during the same occasion as the workshops and the participants came from the same selection. However, not everyone who took part in the workshops also performed

the user test. For example, the Returkultur representatives were already familiar with the digital platform and had already in the project brief pointed out what problematic areas they had found. Workshop participant number 3 was supposed to do the user test, but it turned out there was not enough time. In Table 3.3 you can see which of the participants in the workshops who also performed the user test.

3.5 Affinity diagram analysis

In order to analyse the data from the workshops and interviews, the method of affinity diagramming was used (Pernice, 2018). Interesting quotes from the interviews were grouped in different categories, and if the categories became too general or diverse, new smaller categories were created. Affinity diagrams are generally done physically with post-its, but as all the data were stored digitally, this analysis was made with the help of Trello - an online tool usually used for kanban boards. However, it allows all the needed functionality for an affinity diagram such as categorisation, sub-categorisation, easy moving of quotes and tagging. The categories found by using the affinity diagram analysis are presented in Appendix D.

4. Insights - Sharing in the cultural sector

This chapter will present the insights gathered from the interviews, survey, workshops and user tests conducted during the pre-study. These cover the users of the service; existing platforms for sharing; partners and their relation to waste management, sharing of usable waste and the service; usability problems in the current digital platform myTurn; important considerations and actions in the product cycle; and finally traits suitable for a digital sharing platform within the cultural sector.

4.1 The user group specified

In this section the potential users of the sharing service and digital platform will be described in relation to their cultural practises, including what prerequisites and obstacles that exists within them. In addition to this the their views on equipment sharing, acquisition of reusable material, knowledge sharing, transportation, storage and social aspects of culture will be presented.

4.1.1 Economic situation

The survey in combination with the interviews showed that the user group often have another job on the side. 63 % of the participants in the survey can not live of their cultural activities alone, and even for the ones who can - money and time are considered the biggest barriers (see Figure 4.1.). Most of the people in the survey that can live of their cultural activities are administrative staff living in smaller municipalities. The striving for cheap and time flexible solutions can be recognised throughout the entire pre-study.

Cultural practitioners rarely own a lot of equipment or material by themselves. 91 % of the cultural activities are performed in groups such as bands, theatre, DJ or art collectives, according to the survey. It is common that material and equipment is purchased by the group where the cost is split between the members or taken from money earned from previous common events. Some exceptions are artists who buy their material for a specific purpose and musicians who often own their own equipment.

4.1.2 Frequently borrowed equipment

There are obvious trends in what equipment is popular to borrow, see Figure 4.2 for the percentage distribution between the categories. The first category is sound, including speakers, microphones, mixers, amplifiers and DJ equipment. Sound systems are used in a wide variety of contexts spanning from performing arts such as music, dance and theatre to exhibitions, sound installations and lectures - not to mention parties. The sound systems owned by cultural actors are often proportional to the spaces they usually practice their activities. This means that the requirements on the sound systems change if the space change - for example when performing outside the regular space.

Light is another category of equipment that is popular to borrow. It as well has a wide range of uses. Good lighting have the ability to really enhance performing arts and according to one artist “the lighting, if done right, can often make the whole exhibition”. In relation to sound systems, owning light equipment is much more rare which is a contributing factor to why it is common to borrow or rent.

Projection is the third big category requested in the survey and interview study. Many types of events incorporate picture or video projection. One more contributing factor is that good projectors are expensive and sensitive at the same time, making many people cautious lending it. This increases the demand even more.

Rate the biggest obstacles for your creative practise where 7 is the biggest obstacle and 1 the smallest

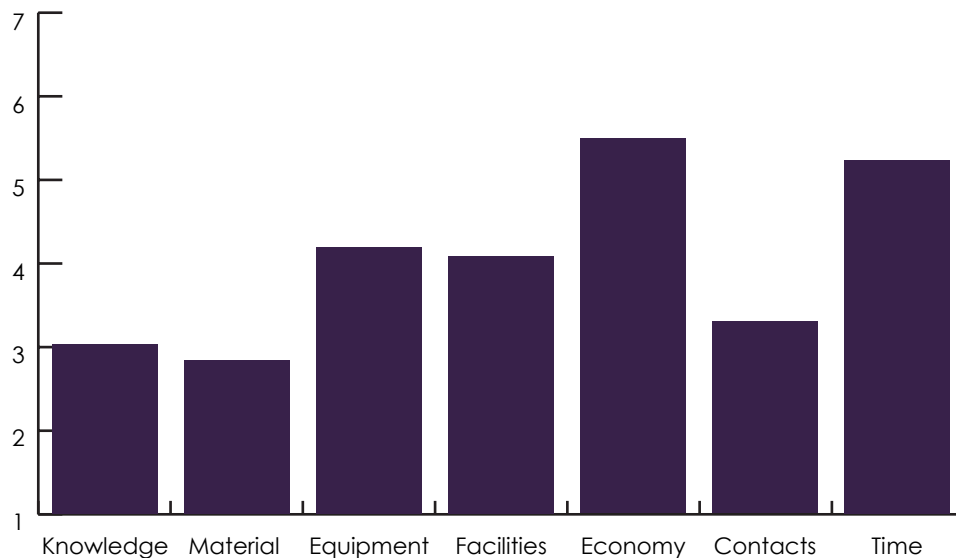


Figure 4.1
Obstacles for cultural practise.

4.1.3 Transportation

Although lack of money hampers the user group in one way it makes many of them extraordinary flexible in other areas. Years of struggling have made them used to a lot of hassle, especially when it comes to compromising comfort during transportation of material and equipment. This applies to users regardless of level of establishment. Even bigger collectives with funding and several people employed can be found carrying loads of equipment on trolleys, bikes and by hand.

The answers differ quite drastically between the interviews and the survey. In the survey nearly a quarter answer that they use an owned car for picking up and dropping off material and equipment, see Figure 4.3. In the interviews only one out of ten small practitioners even own a car, and that cultural practitioners rarely use it as a first option. The average age in the survey is way older than in the interviews and nearly half of the practitioners in the survey are located in smaller cities and societies compared to the interviewees who all are located in Gothenburg. This might explain the differences in answers.

The user group is positive towards different delivery solutions. Arranging an event, however, often mean several travels with the equipment: One from the pick up point to the venue, one from the venue to a storage space where it is placed over night, and then back to the drop off point. If the delivery solution does not cover all the required travels, it is more interesting with solutions that make transportation easier, such as wheelers or trolleys allowing one or two people to bring it with public transport or better facilitates transportation with a borrowed car.

Users see first of all price but also comfort as the two biggest factors when choosing way for pick up and drop off. When asked how far users were willing to travel to borrow a sound system for

free that usually cost 999 swedish kronor, only 14 % claimed to be willing to travel more than one hour to pick it up. This indicated that there is only limited risks of having users that make unnecessary travels by car to pick up or drop off material and equipment. For many users living in remote areas of Västra Götaland, Gothenburg is still the hub for cultural equipment rentals, and the travels would have been made anyway. Some found the idea of a decentralised service, with several sharing hubs, appealing if that resulted in shorter travels for their part.

Which type of equipment would you like to borrow?

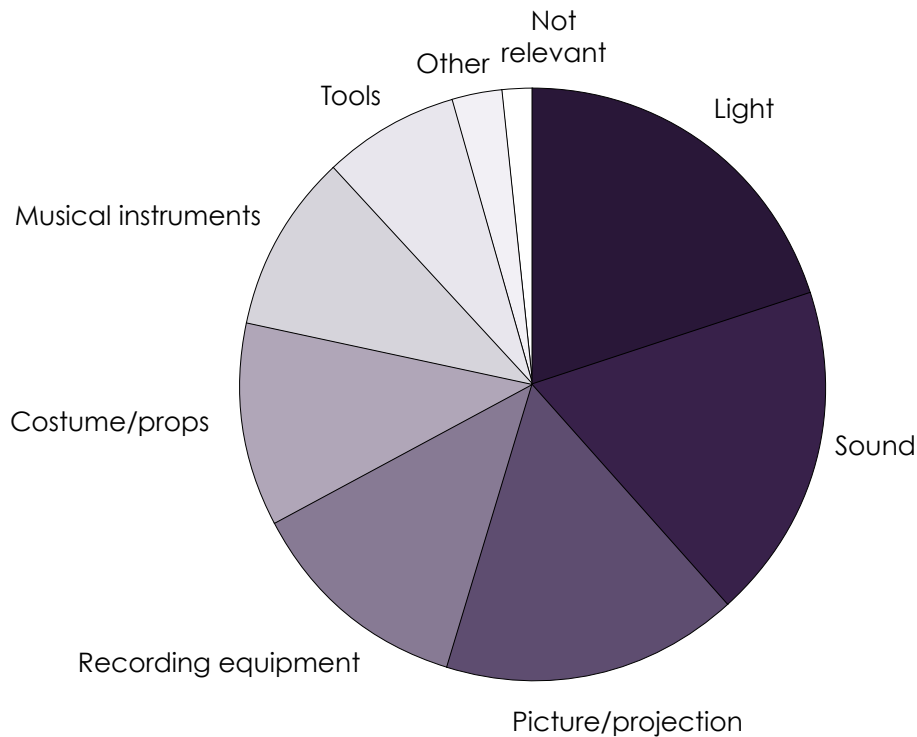


Figure 4.2
Interesting areas of equipment to borrow.

4.1.4 Storage and timing - a big barrier for material sharing

Storage space and timing is a big problem for sharing and distributing material and equipment. Storage space is often a big reason for donating or selling something in the first place. Many cultural actors apparently need free space more than material and equipment, and when they do they often need it fast - or it will go in the trash. The study shows many examples of frustrating situations where cultural actors are offered material or equipment that they can not take care of in the given time frame. A common reason is that their day jobs prevent them from picking it up in time. Another one is that they do not see the use of the product right now, but that they know they will need it in the future and that they do not have the ability to store it until then. Especially when it comes to material, interviewees saw a great opportunity for Returkultur becoming that missing link in the sharing process.

4.1.5. Knowledge more desirable than material

The outspoken mission from Returkultur for this project was a platform for primarily distributing material and equipment. However, Returkultur also share knowledge through workshops and other types of events. Both the survey and the interview study made it clear that the interest for knowledge sharing is much more interesting for the intended user group. When asked which of

Returkultur's activities that are most interesting for them, less than 5% chose material even though you could choose several options. When ranking the biggest holdbacks, material was the smallest holdback (see Figure 4.1). Material was also considered the least important factor in their practice, see Figure 7 below. At the same time 34.1% said that knowledge sharing would be interesting for them. Knowledge was also considered the most important factor allowing them to practice their cultural activities, these factors are presented in Figure 4.4. In order to attract users and make a name for themselves, the knowledge sharing part of Returkulturs could be brought forward.

What mean of transportation do you most often chose when you acquire, borrow or rent equipment and material?

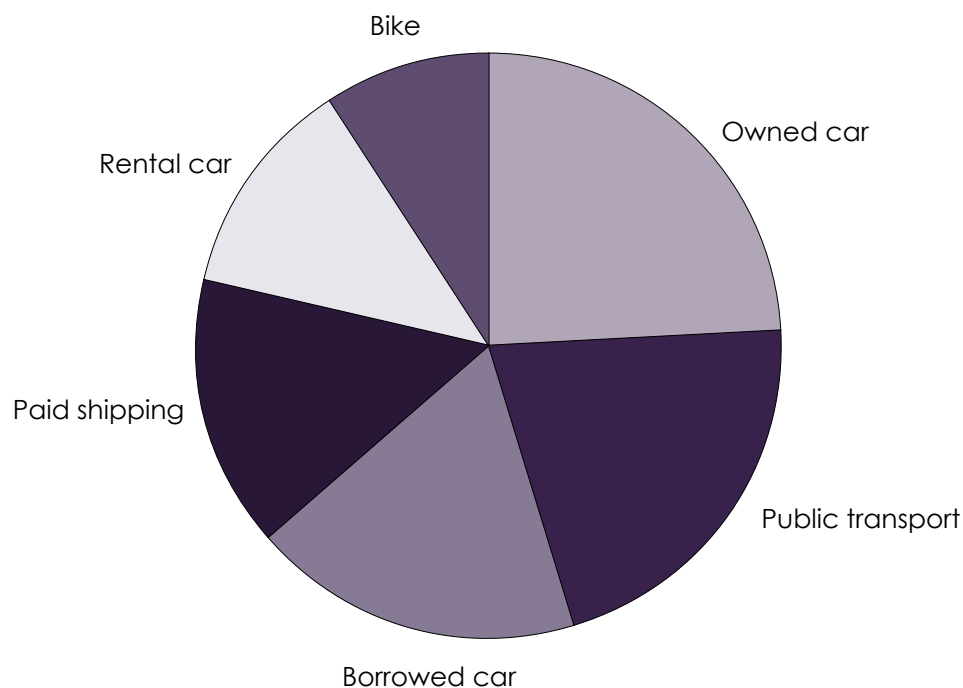


Figure 4.3
Common means of transportation.

4.1.6 Popular material

Although only few cultural practitioners were actively interested in material they had a clear opinion on what types of material that could be interesting. Sound dampening och light shutting fabrics such as molton is widely used and desired in large quantities. Construction material - sheet materials in wood or plaster together with bars - was interesting. Among artists and designers material libraries was mentioned several times as something interesting although they often wanted to buy the material new. A material library would work as inspiration in the early process of a project and would save them from buying material just to test out a certain material combination visually.

4.1.7 Contacts and social aspects

Sharing within the cultural community is already very common. Social connections are key to sharing of equipment but is also a way to get access to certain rooms, both literally and figuratively. The users therefore feel an urge to constantly expand their social network. However, they feel that

many cultural actors keep to themselves. Especially in the interviews, cultural practitioners see Returkultur as a way of forming a community that could be used for more than formal sharing. Being part of the same community is seen as a possibility to exchange equipment, knowledge, experiences and contacts both formally and informally.

Although people are curious about each other there are social barriers that are not crossed today. One interviewee took Returkultur as an example, highlighting both the existing problem and the opportunity that Returkultur has. “I have heard about Returkultur and it sounds really interesting, but I feel like they are just a group of cool friends and I don’t dare asking them what they actually do or if I am welcome. It feels like they are doing whatever they are doing for themselves and for their friends. [/] It’s a shame that they don’t mobilise all the cultural actors in the area. There is so much culture going on right here and it would be so nice just to get together sometime and talk about how we can help each other”. Returkultur, if becoming more accessible and inviting, has the potential of becoming a well needed social bridge in the cultural sector that boost sharing.

Rate the prerequisites needed for your creative practise
where 7 is the most important and 1 the least important

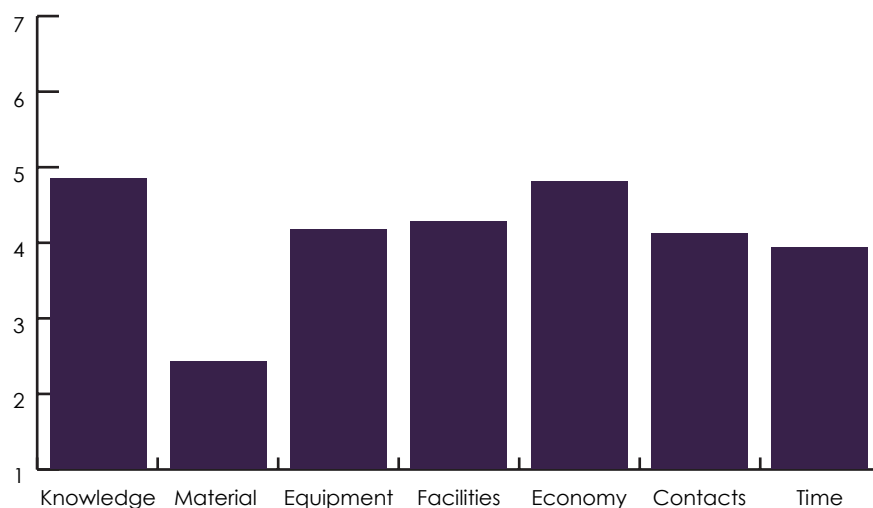


Figure 4.4
Prerequisites for the actors’ cultural practises.

4.1.8 The biggest advantages perceived by the users

Much in line with the biggest perceived barriers, two main advantages are seen from the users point of view - economy and time. The users see big advantages with knowing where to turn when a need emerges. Today, much time is spent on calling around looking for friends who might have what the cultural actor needs. For a cultural event many things often need to be borrowed, which means several phone calls and travels. It is not only the time that is a factor. Calling all these people and taking up their time makes them feel a lot of guilt. The users visualise a future where they only need one phone call and only one pick up and drop off where they do not get a bad conscience. This type of convenience is what they pay for at a rental firm, but with Returkultur it would be at a much lower price.

For the material part, the main advantage is considered the opportunity to delay the use of material by knowing that a material can be taken care of for future use without having to store it yourself. Storage space also costs money, so in that sense time and money is the key factor here as well.

4.1.9 Fear of mixing professionals and amateurs

It was stated by some in the interview study that there is anxiousness around mixing professionals and amateurs - mostly from the professional's side. Professionals like to collaborate with other professionals as their cultural activities start to look more like businesses as they grow, and different rules apply when you do something professionally compared to when doing it as a hobby. It is possible that professionals will not be interested in using the same service as small actors. That is also partly true the other way around. Smaller cultural actors rarely believe that they are welcome to visit certain cultural events. Even if it is for cultural actors some can wonder "am I really a cultural actor? This is probably only for professionals". In that sense the cultural life in Gothenburg is pretty segregated and excluding.

4.2 Existing sharing in the cultural sector

This section will describe existing platforms for sharing and sharing patterns detected in this study.

4.2.1 Sharing hubs

Most of the interviewees are in their late twenties or thirties and have established channels for getting access to certain material and equipment over the years. For designers and artists Konstnärernas Kollektivverkstad, a workshop with cheap access to well functioning and often expensive equipment, is widely used. The big majority of the user group are performing their culture in some sort of context which often already works as a hub for sharing. A band can borrow a sound system or musical instruments from their rehearsal space even if it is not theirs, and an artist can often borrow material samples, tools or knowledge from coworkers in a studio etcetera. This type of sharing is very appreciated due to logistics. They already have access to the facility making them independent and flexible regarding time of pick up. They can also pick up multiple things in one spot which minimises time spent on travels. Many schools also work as sharing hubs even for students that are no longer in that school. This is often due to them being familiar with the equipment since that was where they first learned how to use it.

4.2.2 Informal peer to peer sharing

Informal sharing among friends and peers is also very common among people in the user group. 42% from the survey (see Figure 4.5) and a big majority of the interviewees turned to friends and peers as their first option when needing to borrow equipment. The main argument for borrowing from friends is that it is the cheapest alternative. Borrowing from friends is also very appreciated since it offers a lot of flexibility. You can call whenever you want, you can be flexible regarding pick up and drop off. You can renegotiate the period of borrowing along the process. In many cases it also means that your peer can offer you guidance, knowledge and competence along with the equipment. Asking a friend if he or she can lend you a camera often means that the friend will also provide you with support or even help with the actual footage.

Compared to rental, peer to peer sharing often means more hassle. It often includes several pick up points if you are borrowing many things. If it's big equipment that also means several travels by car - a car that in turn often also has to be borrowed. Lending equipment also require several travels as most cultural actors store their equipment in a rehearsal space or studio. And since most cultural actors in this study only work part time with their creative activities, it is rare that they are in their facility naturally at the time for exchange. Since lack of time is considered to be among the top barriers for the user group in achieving their goals (see Figure 4.1), these travels to give others

access to equipment are often considered a waste of time that could have been used to produce culture. Cultural actors who borrow equipment are well aware of these feelings making peer to peer sharing connected with a lot of guilt.

Where do you acquire equipment today?

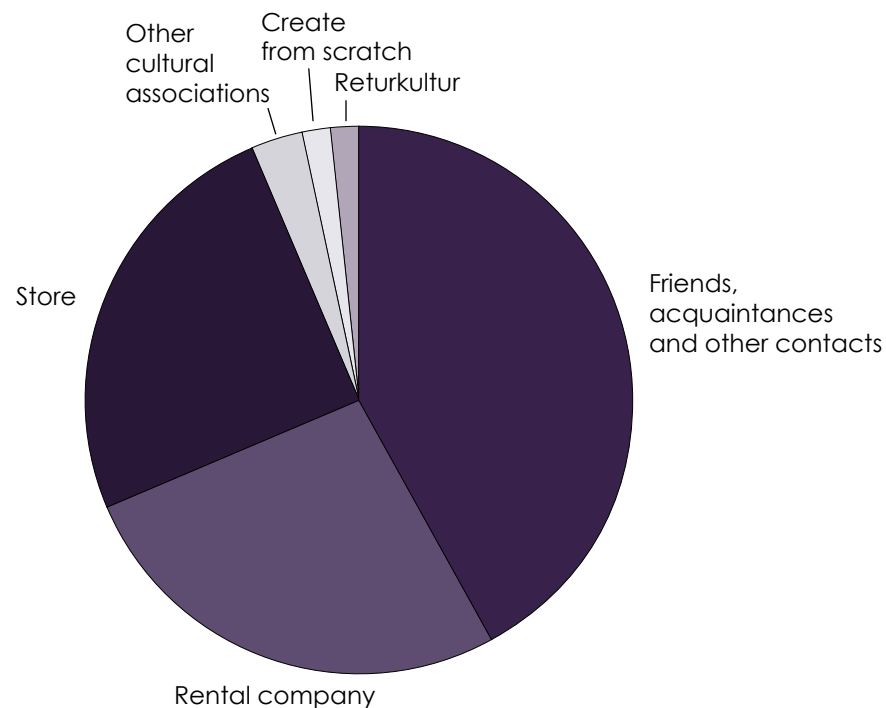


Figure 4.5
Means of acquiring equipment today

Peer to peer sharing require that the connections are already established. Not everyone has these connections or at least know they have them. The hassle it takes to call around asking if people have this or that is regarded as one of the top concerns of peer to peer sharing. Another concern is the economic agreement. On the one hand you have to be very clear what will happen if something is stolen or breaks. You don't want a friendship to break over money trouble. On the other hand you want to be cool about things and don't want to think of that scenario.

4.2.3 Rental firms

Rental services can also be seen as a form of sharing which is fairly popular within the user group. 25% from the survey claimed they used rental firms as a way to obtain equipment, see Figure 4.5 above. The main argument for renting is the comfort and time spent. You do not have to pack anything yourself and you can pick up all the equipment at one place. For bigger events that require a lot of equipment it is worth the money to rent since it is considered too time consuming to arrange several peer to peer accommodations. Storage space is also an important factor when it comes to renting. Economically it would benefit some organisations in a long perspective to own their own equipment. However, lack of storage space makes it impossible to buy.

4.2.4 What can be shared - specific requirements in the cultural sector

Looking at the list of sharing friendly characteristics compiled by Hagman and Wendt (2018), there is a lot of equipment in the cultural community that is suitable for sharing. The equipment

is often expensive to buy new, it has a long life and it is often high quality products. The use patterns, however, differs a lot. In rehearsal spaces, equipment is often used both frequently and spontaneously, but it is also common that culture groups have fixed weekly times when they rehearse - making the use planned and therefore making the product more suitable for sharing.

Studying the specific user group of cultural practitioners, more points can be added to the list of characteristics suitable for sharing compiled by Hagman and Wendt (2018). The first aspect that is not explicitly mentioned in the list is brought up by Salomonsson (2018) and is - the sentimental value of products. Seemingly ordinary things can be extremely valuable to a person, which in turn can lead to misunderstanding and hurt feelings if something happens. A dancer and aspiring DJ in the interview study said: “My turntables aren’t in perfect shape, but the scratches are my scratches. If I lend it to someone, the smallest scratch would make me want to kill the person who did it. I would hate him”. The turntable in question had a backstory important to the owner and was worth more to him emotionally than it was worth money wise. The same relationship was noted between musicians and their instruments. This made them sceptical toward lending and borrowing this type of equipment.

Mastering the technical equipment supporting culture often take knowledge and experience. This leads to a second aspect that needs to be added to the list. The users see a risk of misuse, both lenders and borrowers, leading to big complications in terms of sharing. Especially when it comes to tools for art, design or crafts, they want to make sure that the one borrowing it have the right competence. Preferably the ones lending a tool want to teach the borrower themselves, just to be sure. One artist said “You get to know your machines. [//] They work so well when you put just the right load on them, and use them just like you do”. The same artist also claimed that she would be happy to teach, but for many artist, crafters and designers there is another problem with that. Private studios are rare. Most artists share spaces, and as they also share the cost for rent - inviting strangers into their shared space for free would feel like pushing the limit for what is acceptable towards the rest of the residents.

Therefore two more points should be added to the list of sharing friendly product characteristics. The product should:

- Not have high sentimental value to the owner
- Not require extraordinary skills to be managed

4.2.5 Who do you lend and borrow equipment from?

The requirements on lenders and borrowers differ a lot between users, much depending on previous experiences from sharing. One interesting finding is that requirements go both ways. One would expect that a person who gets access to a product by borrowing it would not care who lent it to you, but that is very much the case. People are very cautious regarding who they ask to borrow from. From the interviews, one can see that this has a lot to do with self respect - you feel poor and annoying if you push the social limits of who to ask. Generally people feel more comfortable sharing when a lender and borrower live and work under the same conditions. The other main factor is the character of the relationship. The big majority wanted a close professional relation between organisations based on reciprocal exchange. Old classmates were a good example of people who share the same conditions and in a professional way would lend you material or equipment without judging, even if the personal relation is not very close. In the personal sphere, family and very close friends were considered best fitted for sharing.

One interesting thing, that could be a big problem for peer-to-peer sharing via the digital platform, is that the big majority in the interviews claimed they would not hesitate one second to borrow something if it was listed as available on a digital platform. It was put as “If they say they can lend it, why couldn’t I borrow it?” by one user, indicating that the usual concerns regarding who to borrow from goes out the window. This does not work the other way around. If someone, a group or an individual, was to list their equipment as available for sharing, they would still have the same expectations on the borrower. Considering that sharing is already very complex in terms of social relations and expectations, this new dynamic must be considered a big threat to peer-to-peer sharing on the digital platform.

4.2.6 Donating vs. lending

“I’m a strong believer of donating and receiving, but it’s much more complicated with sharing. Owning your stuff gives you security”. This quote from an administrator and artistic director of a dancing company summarises a very common standpoint among the interviewees. There is a lot of stuff that could be given to Returkultur and distributed by them, rather than by the members, as it would feel much more convenient. You would still have access to the equipment if you ever need it again, but you do not need to manage the administrative parts connected to sharing it yourself. As seen in the quote below, time is again a big problem for the user group, even when there is a will to share resources.

“Theoretically I’m all for sharing the equipment I don’t need anymore, but I wouldn’t want to put any time on it or have all the hassle”

- ARTIST AND GALLERY OWNER

4.3 Waste management in cultural institutions

The waste in cultural institutions are created in two ways, day to day activities from staff and restaurants as well as more sporadically from productions. The production waste are the focus for this project as it contains usable waste that could be given to Returkultur and then distributed to the cultural actors of the region. This waste could be electronics that are outdated or broken, equipment in the form of dance mats and/or material from torn down scenographies.

4.3.1 Current systems for waste management

The current systems of taking care of the production waste differ between the cultural institutions, but could mainly be divided into the categories of ***incineration, recycling, internal reuse*** and ***external reuse***.

Incineration and recycling are the main waste management methods when it comes to scenography. As the scenography often contains large amounts of permanently fastened components and materials such as fabrics and stuffing glued to wooden boards these can’t be recycled and are thus incinerated. Material that doesn’t have anything permanently fastened to it will most often be placed in a container and later recycled by the waste management company tied to the cultural institution.

Some actions are taken to minimize the amount of waste, such as using modular systems and frames that could be reused in different productions as a foundation for other constructions. Very few actions seem to be taken to design the more artistic parts of the scenography more suitable for disassembly and material reuse though, as it is perceived as time consuming as well as hindering creativity for the scenographers.

In addition to the modular systems and frames used during the production some parts of the scenography and production equipment can be reused. This could be things such as furniture, fabrics, dance flooring, electronics, chemical agents and more aesthetically interesting pieces of the scenography. These are then stored at the cultural institutions own storage spaces for internal reuse or distributed to other external cultural actors.

In some cases the whole production is reused by another cultural institution somewhere else in the world, and thus the whole scenography is reused as a unit. This sale is done via branch specific platforms such as conventions and meetings.

4.3.2 Channels for distributing material and equipment to small cultural actors

Many of the cultural institutions use Facebook groups, for example the group Kulturutbyte Miljö (n.d) used in Västra Götaland, where they post the available material or equipment. When someone has shown interest in the available resource they will then contact each other via Facebook, email or telephone to decide on how the exchange will happen. This way is appreciated but requires a lot of personal effort from the staff at the cultural institutions as it is time consuming as well as require the staff to post on Facebook using their own account instead of one created specifically for the cultural institution which some feel negative towards. Some also express concerns regarding who the members of these groups are and that they aren't sure that their resources end up in the intended hands.

Some distribution of material and equipment is made on demand when the institution is contacted directly by a cultural actor, and they then decide based on the inquiry if they can or can not provide the cultural actor with the resource for rent, lending or by giving it to them.

4.3.3 Involvement of Returkultur in the waste management system

When discussing the role of Returkultur with the cultural institutions their reaction was mainly positive, as they felt it would facilitate their current sharing of material and equipment. Having one specific platform for this instead of using current platforms such as Facebook was preferred as it would make it easier to ensure that the resources end up in the right hands as well as taking the focus of the specific staff member. The use of Returkultur as an additional service for better waste management was also perceived as a positive driving force.

Time was the biggest concern regarding the involvement of Returkultur in the waste management. It was frequently mentioned that the institutions did not have any extra resources to involve in this collaboration, and therefore would not be able to administer such a digital platform themselves. Instead they all would like to involve Returkultur in the disassembly phase of the production, and let Returkultur collect and later administer the resources.

4.4 The current digital platform

This section will present the results from the user tests of Returkultur's current platform myTurn and in what ways the current platform hinders user-friendly interaction during the booking process, thus providing insights around areas of improvement.

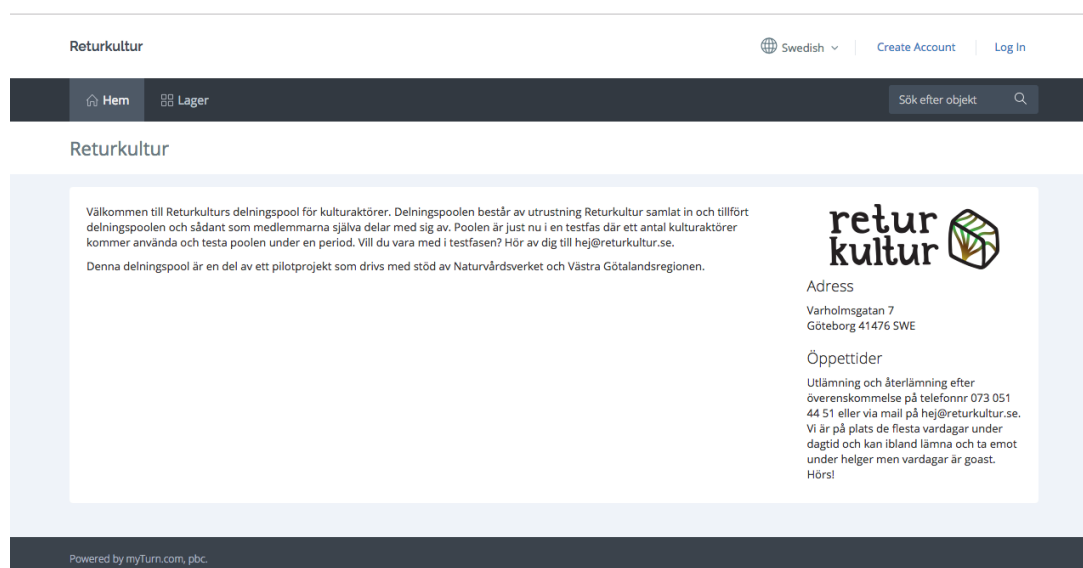
4.4.1 Entering the platform and exploration of offers

When entering the digital platform the user is welcomed by a home page explaining the service, Returkultur's location, email address as well as opening hours (see Picture 4.1). As the users' task was to look for a specific type of equipment all then pressed the link to the library (named Lager on the page) presented in the page's navigation bar at the top of the page. When this is pressed the user will enter a page saying "Please log in to view our inventory", thus not allowing the user to explore Returkultur's digital platform without being a member or logged in. This indicates that the users' model of the system and the actual system model are not the same, thus presenting the user with a usability problem in the form of a mismatch between the system and the real world (Nielsen, 1994). In addition, this membership/log in barrier hinders the user in their exploration of Returkultur's offer and its potential individual value to the user themselves.

4.4.2 Reservation of equipment

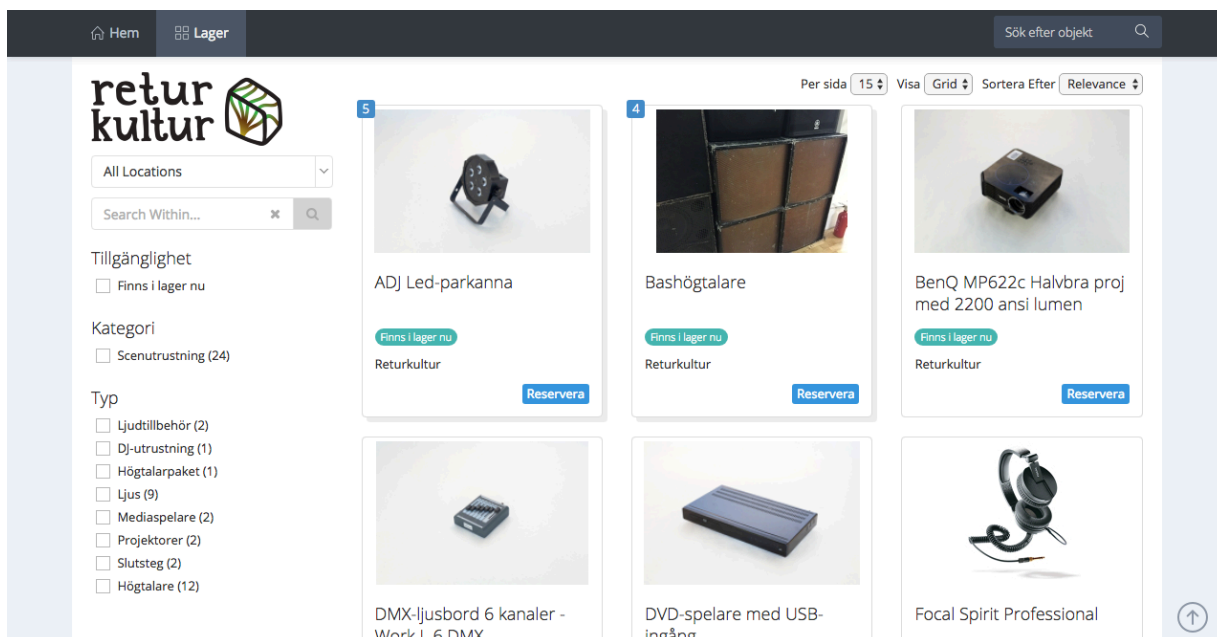
When entering the library after creating an account, getting accepted and logging in the user can scroll the library to see if they can find what they are looking for (see Picture 4.2). When deciding on a product to consider further the user will enter a separate product page (see Picture 4.3). On the product page the user will be presented with a picture of the product, the product name, a product description, an availability calendar presenting the current and planned reservations of the product and technical specifications such as location, manufacturer, model, replacement cost and size. In addition to this, the user will find a reservation button close to the product picture and sometimes attached files such as a product manual.

During the test of the digital platform many users interacted with the availability calendar presented on the product page as an effort to reserve the product. This did not evoke any reaction from the system and the users proceeded to scan the page for a way to reserve the product, and later found the reservation button. This again indicates a mismatch between the system and the real world (cf. Nielsen, 1994), as the user due to previous experience thought that they could mark dates directly in the availability calendar and later reserve them. The graphic similarity between all interactive parts of the product page (reserve button, category and reserved time slots in the calendar) could have made it harder to locate the reserve button. Judging from the user behaviour the reserve button belongs more to the calendar than the picture of the product, and should therefore be located near the calendar.

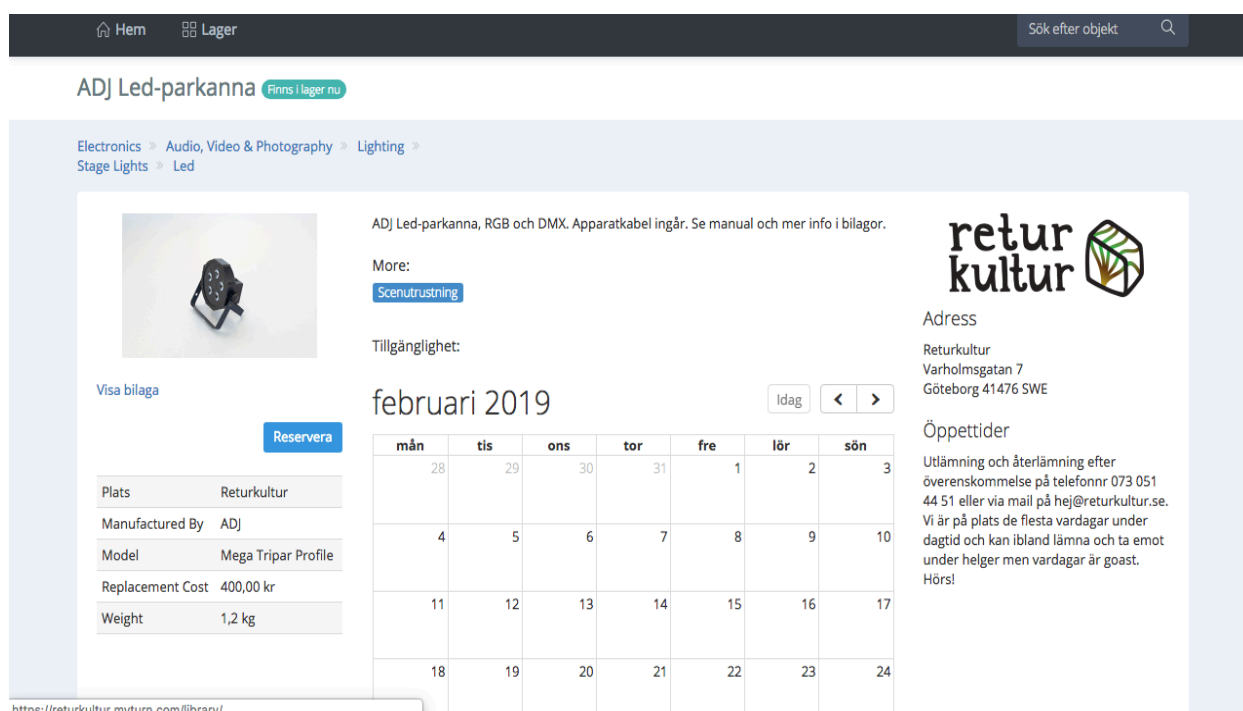


Picture 4.1

The home page of Returkultur's current digital platform.



Picture 4.2
The equipment library.



Picture 4.3
A typical product page including a product picture, information about the product, a calendar and information about the process. The user can reserve the product from this page using the button named “Reservera”.

4.4.3 Information on the product pages

The users testing the current platform had different levels of experience with cultural equipment. This led to some having more problems than others when it came to finding specific types of equipment. One user was asked to reserve colored stage lighting but had problems finding it as it was described as “LED lighting - RGB” on the platform which was technical terms they

did not understand or connected to colored stage light. This user instead ended the test with the explanation that they could not find the colored stage light and did no further investigations to find out more about available equipment. Even though this is only one user's experience it indicates the need for clear and easily understandable information on the platform which is also mentioned in the Accessibility Principles from the World Wide Web Consortium Web Accessibility Initiative (2019).

4.4.4 The experience of using the current platform

The general experience of using the current platform was rated 3,4 points on a scale from very bad (1) to very good (6), indicating that the experience was in the middle of the experience spectra, neither good nor bad. The experience based on different attributes are presented in Figure 4.6, and as a conclusion one can say that the experience was quite simple, aesthetically good looking and serious but less safe and clear. On the other hand no result was placed far out to the positive side of the scales indicating that there is a large room for improvement here.

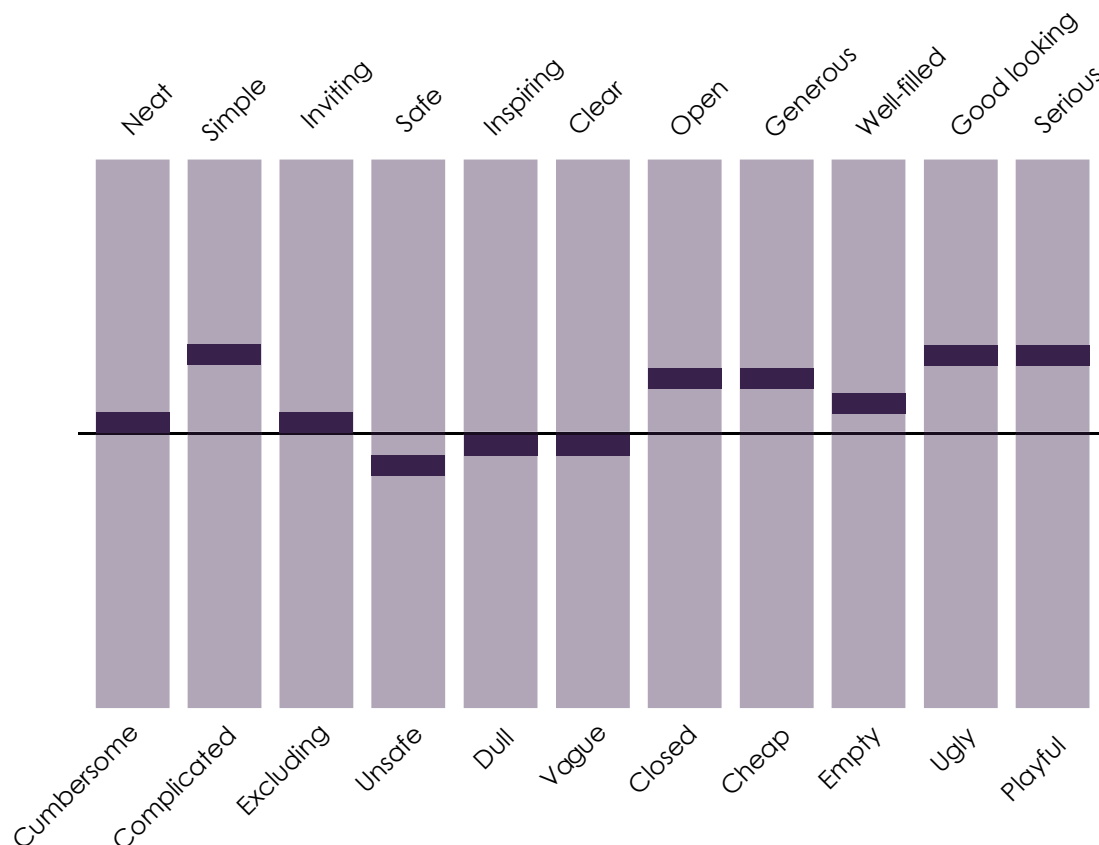


Figure 4.6

The mean placements on the 11 different parameter scales used to rate the current digital platform.

4.5 Important considerations and actions throughout the product cycle

Both the user and Returkultur will need to make considerations and take actions during the product cycle of borrowing equipment or acquiring reusable material for cultural creation. These are further described together with the ways needs for equipment and material emerge in figure 4.7. In this figure considerations and actions are gathered under each Use2Use phase and by following the

three different lines the separate product cycles can be followed for each situation - borrowing equipment, acquiring material for reuse and administration of the system by Returkultur. These act as a foundation for the requirement list presented in section 4.7 and provide guidance regarding the content and functions of the digital platform.

4.6 Traits and personality of a sharing platform

During the interviews, users were asked what traits or personality they would like a digital platform to have in order to appeal to them. Four themes dominated the answers. They wanted it to be open and inviting, structured and efficient, clear and pedagogic, and social.

Open and inviting

Generally people were positive towards the concept of the sharing platform, but still felt uncertain whether they would abandon their existing ways of lending and borrowing. Others were uncertain whether they were allowed to use the service or not. Some thought they were not established enough and doubted that they would be trusted to borrow. Others believed they were too established - if they had a paying audience or some sort of funding, why would they be allowed to borrow equipment for free? To these users it is very important that the service encourages them to use the service and by this overcoming their doubts. An open library was also important to the majority of the potential users in order to make it clear exactly what they can get and gain from using the service.

Structured and efficient

Many users wanted the service to be structured as they currently go through a lot of trouble finding the equipment they need within their community. This takes time which they generally do not have.

Clear and pedagogical

As many cultural actors need equipment in situations where they venture outside their core activity, even experienced cultural actors want a pedagogical service. Although they are familiar with their own equipment they can feel uncomfortable handling other equipment and need rigid information about how it is used.

The need for a pedagogical and clear approach is also connected to the whole process. People want clear information about how the service works and where they are in the process of using the service. If a membership registration is necessary they want to know that early on in the process in order not to waste time browsing equipment they are not allowed to borrow or can not access in time for the event.

Social

Many cultural actors see sharing equipment and material as a form of networking. It is a virtue to be a part of and keep track of the community. The study detected a fear of losing the social aspect of sharing if the service became too clinical. The informal sharing within the cultural community will not end. Bringing in the social aspects of sharing into the platform is seen as a way for cultural actors to broaden their network and enable not only an increased sharing through the platform but also informal peer to peer sharing in the long run.

Obtainment

Ways that needs emerge:

Moving out of core activity
(i.e. recording a record)

Scaling up core activity
(i.e. bigger soundsystem)

Unexpected event
(i.e. break-in)

Inspiration from
available equipment

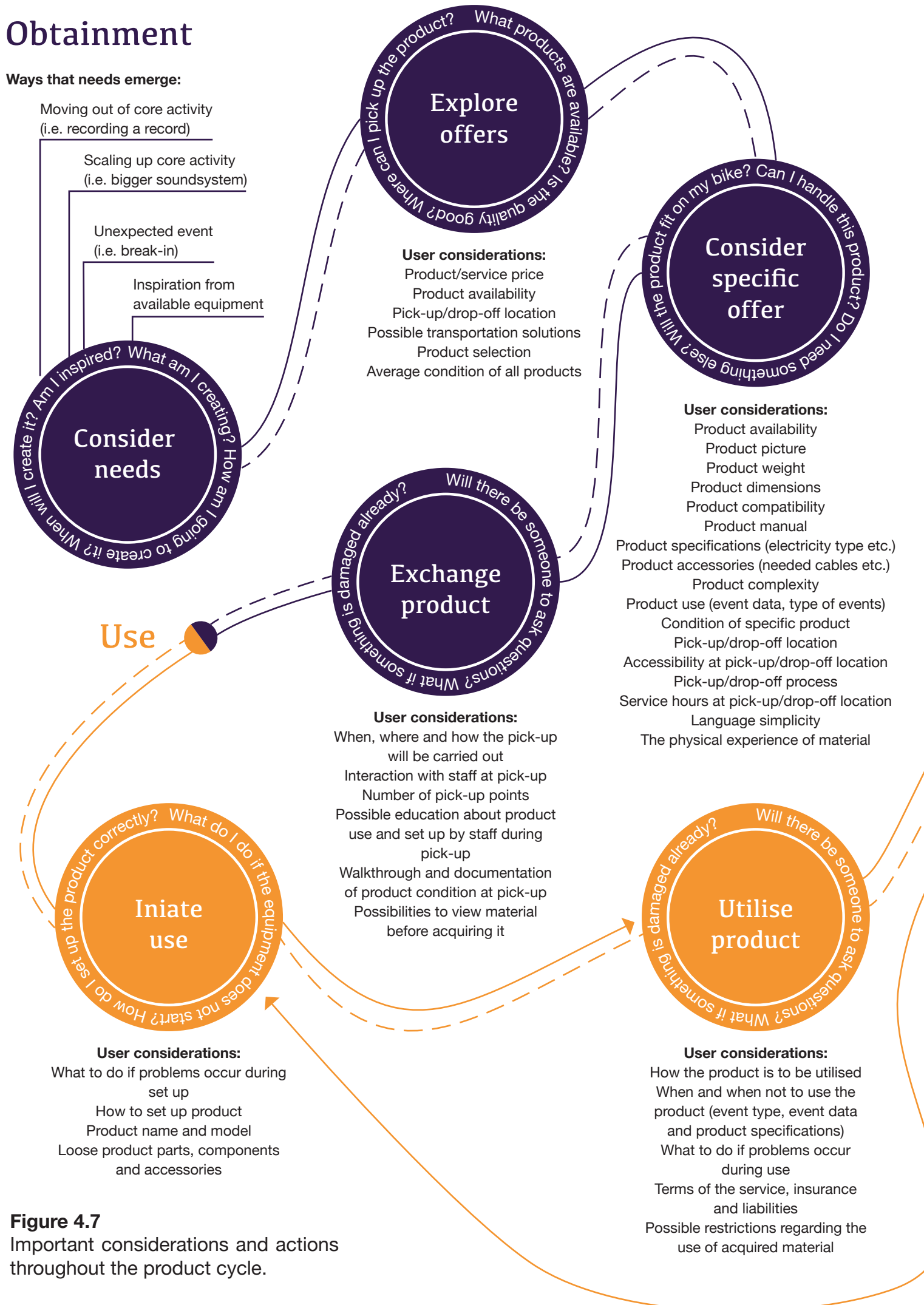
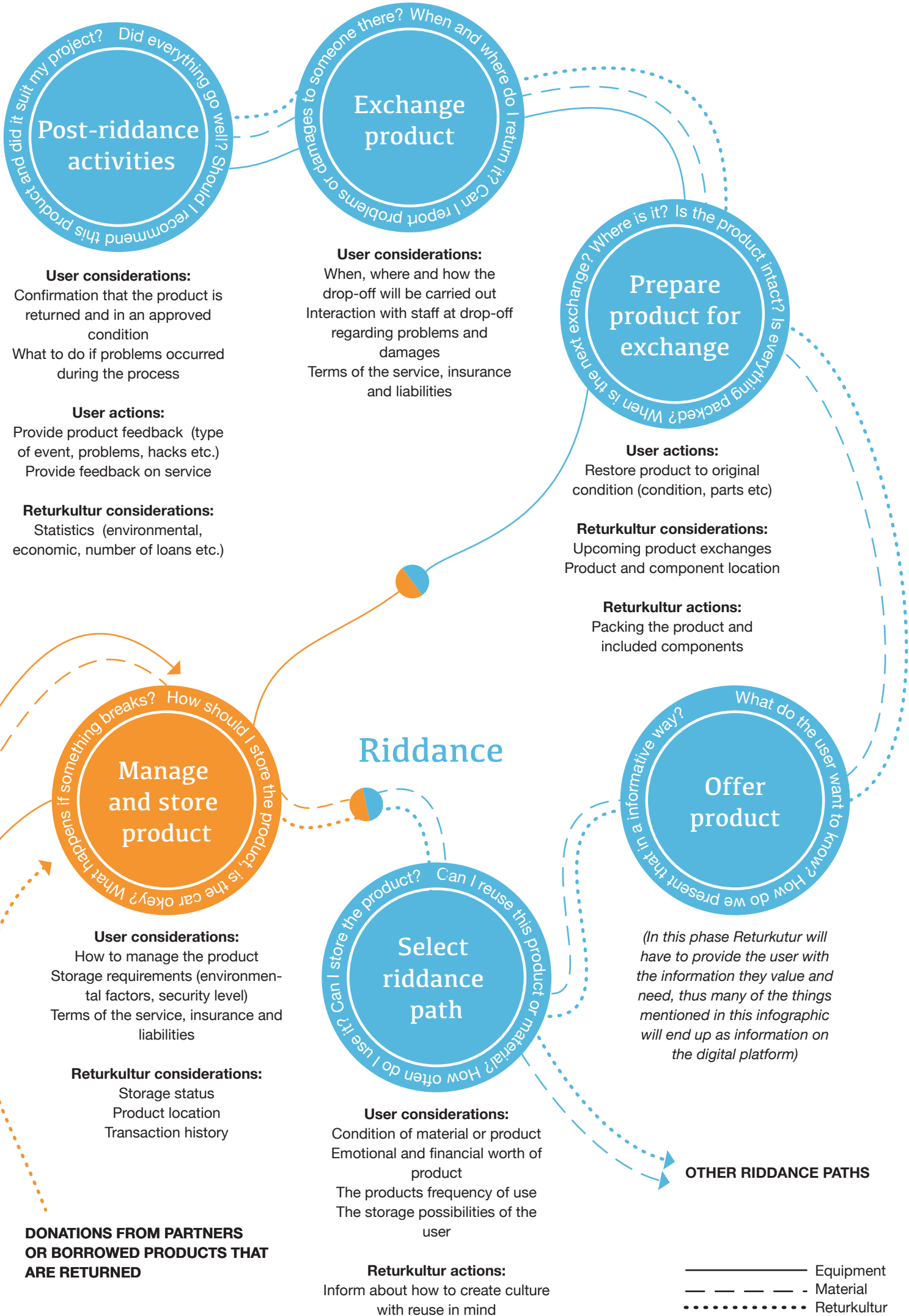


Figure 4.7

Important considerations and actions throughout the product cycle.



5. Defining the service

This chapter presents the insights of the pre-study and how they affect the design of the digital platform. It will address both demarcations and strategies for the service design as well as specific requirements for the digital platform.

5.1 Demarcations and strategies

This section will cover demarcations of the service as such. The conclusion is that for an untested service, peer-to-peer functionality will not live up to the many requirements that the users have on a new and unfamiliar service. This also leads to a modified strategy towards the partners in the project.

5.1.1 No peer-to-peer sharing - yet

There will be no peer-to-peer sharing functionalities on the digital platform in this version. As can be seen on the long list of considerations users have, there are high demands and expectations on Returkultur's digital platform. Looking at what the partners say, it is quite obvious that they do not have the same amount of time and dedication in order to administer this sharing activity in a satisfactory way from the user's point of view. Leaving part of the administration to other partners, Returkultur leave the control of the user's experience in the hands of people who clearly does not have the same incentives to provide a good user centered experience.

The users see two big problems with sharing that they expect Returkultur's service to solve for them - that it is time consuming finding equipment to borrow and that it is inconvenient to pick up material and equipment in different locations. These problems can effectively be solved if Returkultur use their space as the major sharing hub. Availability, information, pick up and drop off procedures will then be much easier to communicate in a consistent way. The research of Karin Salomonsson (2018) supports the idea that it is inconsistencies regarding expectations that cause misunderstandings and bad experiences from lending and borrowing.

5.1.2 Material want to be seen and touched

The material should be displayed but not distributed digitally on the platform. The users need too much information about single pieces of material for Returkultur to be able to administer it on the platform. Size and pictures would be very time consuming to provide for individual pieces of wood and textile. Furthermore it is common to get inspired by seeing, touching and feeling material physically. Therefore the online platform has to be combined with a physical "store".

5.1.3 The partnership and how it should work

Although partners were hesitant when it came to sharing their equipment, they were all enthusiastic towards donating equipment and material. There were obvious incentives donating useful waste to Returkultur as they pay for their waste management based on weight. By donating useful waste they lower their cost and add to their environmental work. However, the same problem persists regarding time. Administration, especially through a digital platform, was not popular. There is not one person at every place who handles this activity and they already experienced problems with having several accounts and passwords and lacking internal communication. Instead they preferred occasional contact with Returkultur in conjunction with tear downs of decor or when equipment

was about to be thrown away. The platform should provide information about how to become a partner, but the administrative work distributing material and equipment should be handled by Returkultur. The proposed changes from section 5.1.1-5.1.3 are described as a flowchart seen in Figure 5.1.

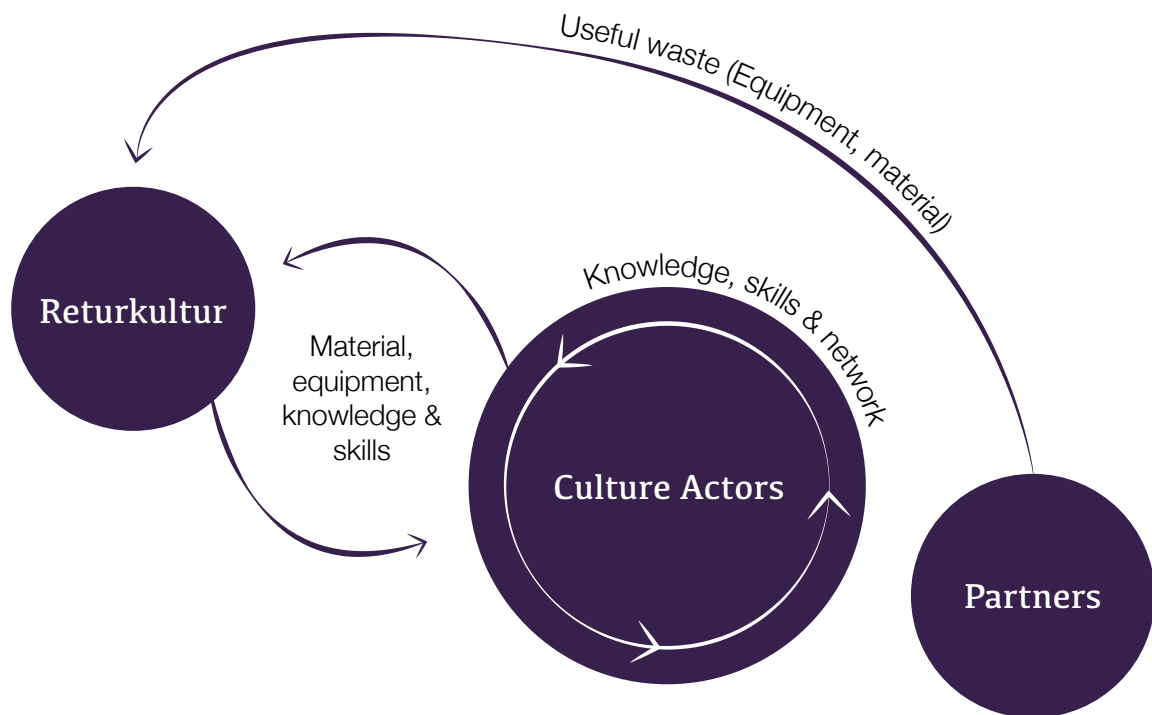


Figure 5.1

The proposed flow of the service based on insights from the pre-study.

5.1.4 No delivery service or car rental

A car rental or delivery service will not be part of the digital platform. One assumption going in to the pre-study was that transportation of equipment and material was a problem for the users. This turned out to be valid, but maybe not in the way expected. Although transportation was considered problematic, a delivery service would not facilitate a solution for all the travels needed. More stops than pick up and drop off was common when borrowing equipment why additional cars would have to be used anyway. Instead sufficient size information, pictures and proposed means of transportation will be used to guide the users in choosing the best possible way to transport the gear. However, it would be very appreciated if Returkultur could offer wheelers or trolleys that could be used for making transportation via public transport easier.

5.1.5 Be careful when defining the target group

Returkultur needs to be careful when defining their target group. Professionals have more money to spend on their cultural activities, and hence less use of Returkultur's services. On top of that they are hesitant to the idea of mixing professionals and amateurs even if it is just that they are using the same service. Smaller or less established cultural actors on the other hand have a much bigger use of Returkultur's services and no opinions regarding who else is using it. However, limiting the intended user group to only one of the groups will hamper the impact of the service as such. In Returkultur's branding they should probably encourage both groups to use the service, but expect mostly amateurs and less established cultural actors to use their services.

5.2 Requirements and requests

The combined findings from the pre-study has been compiled into a list of requirements and requests. The requirements and requests are tagged in regards to Use2Use phase, resource type (equipment, material and knowledge) and stakeholders (users, Returkultur, partners). Lastly they are assigned a value where a higher number implies greater importance.

The requirements and requests can be found in Appendix E and are organised under the following categories:

- General requirements on the digital platform
- Content on the digital platform
- Administration of the digital platform
- Information about terms and conditions
- Information about pick up and drop off
- Guidance for the cultural actor
- Requirements for each product

5.3 Ethical aspects evaluated

Two major ethical aspects were taken into account going in to this project: the possibility of rising emissions from car transport and the risk of competing with rental firms with a service funded by tax money which is problematic both from a legal and ethical perspective.

The possibility that transportation of material and equipment, and the emissions that might cause, stood in relation to the potential ecological benefits of a more circular economy and the social sustainability benefits that more culture have the ability to create. The interviews and the survey showed that for some equipment a car was always necessary due to weight and size, but that user behaviour differed between users in cities and users in more remote areas when it came to picking up and dropping off smaller things. Users in the city were much more likely to walk, ride a bike or use public transportation while remote users to a greater extent used cars. Users were very aware of economy, and the decision what service to use was mainly based on price, meaning that if it was cheaper to pick something up by car than it was to rent at a place nearby they would do so as long as the travel did not take more than one hour. This proves that there is no proportional relation between money saved from this service and the cost you are willing to spend on transportation. On the one hand this is very satisfying for this study as there only is a limited risk of having users travel far distances and by that eliminating the environmental benefits of prolonging product life through the service. On the other hand, a new ethical problem occurs - the one about exclusion. If users living more than one hour from Gothenburg are not willing to use the service, one could claim that they are excluded from the service, although it is funded by tax money from the region they live in. This new problem has not been further investigated as most qualitative data came from users living in Gothenburg, and there were no time for making another interview study. The existing design is therefore mostly targeting cultural actors living in and around Gothenburg.

There was also an inherent paradox in the fact that the service want more travels to be made by users if that means more cultural events and activities are being possible, but on the other hand want less travels to be made in order to minimise emissions. In an effort to make users choose more sustainable ways to travel and transport products from Returkultur, suggested means of transportation are displayed. By knowing the size of a piece of material or equipment, users are

able to make informed decisions about what way to transport them, and hopefully use proposed ways such as walking, biking and public transport when possible.

The legal aspect of the competition regulations have been investigated by Returkultur in parallel with this project, but has not resulted in any clear answers. From the design side, this ethical problem is compensated for in different ways. First off, the rigid information provided to the users during the process is chosen in a way that first and foremost will support and appeal to inexperienced users. More professional testers and users have consistently preferred the more technical and simple solutions created along the process. Choosing a design for less experienced and established cultural practitioners minimises the risk of Returkultur being a competitor with rental firms.

Furthermore, a control system has been integrated in the design. First off you apply for membership - you do not simply join. The main purpose for the first control is to verify that the users are not big profit-driven companies, which would be a problem. When borrowing equipment it is also phrased as an application rather than booking, and you will have to specify the activity you are planning to use the equipment for. This also give Returkultur the power to question each request and in dialogue with the user decide whether the purpose is in conflict with Returkultur's mission.

PART TWO

Concept creation

The aim of the concept creation phase was to transform the insights from the pre-study into platform design concepts. This part contains the methods used for concept creation and evaluation as well as a presentation of the concepts and insights from their evaluation.

6. Methods - concept creation

In this section, the methods used for ideation, concept creation and evaluation of the concepts will be listed and explained. Although requirements on an admin page had been gathered and compiled in the requirement list, no concepts for the administrative part was designed during this phase of the project. It was considered that the main purpose of an admin page is to support functions that provide cultural actors with a pleasant experience, and as the final functions and content of the digital platform were not yet decided upon in this phase of the project no design suggestions for the admin page were created at this stage of the project.

6.1 Brainstorming for each requirement

A brainstorming session was conducted with the goal to provide at least one solution for each requirement. Five minutes of brainstorming on the topic - “In what different ways can this information or requirement be represented?” - was conducted for each requirement. The wished for personalities and traits of the platform, mentioned in section 4.6, were used as inspiration. For the main functions, necessary for the platform, another round of brainstorming was conducted, using extremes as a creativity booster i.e. questioning what would be the easiest, hardest, simplest, most complicated, obvious or subtle way to represent the given requirement.

6.2 Modified morphological matrix

In order to combine solutions and create concepts, a form of morphological matrix was used with the aim of creating five concepts, inspired by the wished for traits and personalities in section 4.6. A grid was created where one axis was the requirements and the other was possible solutions described in text. In many cases the morphological matrix is used to randomly find interesting combinations of solutions for different functions (Wikberg-Nilsson et al, 2015). In this case, however, it was mainly a structured way of displaying possible combinations in order to come up with concepts fitting the aimed for expressions. The idea from the start was to come up with 5 concepts inspired by the wished for traits and personalities found in the pre-study. These were:

- One structured concept
- One social concept
- One pedagogic concept
- One sustainable concept
- One inspiring concept

Thus, each proposed solution from the brainstorm was analysed, and for every requirement the solution best matching the trait and personality of the concept was chosen. For the social concept, the most social solutions were chosen just as the most pedagogical solutions were chosen for the pedagogic concept etcetera. The concepts and the morphological matrix can be explored further within the modified PUGH matrix described below.

6.3 Modified PUGH matrix

The early theoretical concepts were evaluated in a PUGH matrix (Burge, 2009) in order to choose three for further development, this matrix can be seen in Appendix F. The platform used and evaluated during the pre-study was used as a reference (baseline). The solutions from the morphological matrix was compared to the solution in the existing platform, and given either

a plus (+), minus (-) or zero (0) depending on if it was considered better, worse or equal to the existing solution.

When summing up the points, two additional parameters were added. As the requirement list was weighed between 1-5 after importance, the pluses and minuses corresponded to the weight number of the requirement from which it originated. This meant that if a concept had a better solution for a very important function, it got +5, and if it had a worse solution but for a less important function it only got -1.

Furthermore, there is a problem with this type of evaluation that had to be compensated for. Especially in a digital product where there are strict conventions in order to create good usability and user experience - more functions are not always better. On the contrary, a packed concept can be perceived as messy and hard to understand. Nevertheless a function which the reference concept has no solution for will result in an advantage for all concepts that have - hence promoting more functions as something better. To compensate for potentially lacking usability in the concepts with several new features, they were given a punishment of - 5 each.

6.4 Tools and softwares

For the design and prototyping of the concepts, two very similar softwares were used - Figma and Adobe XD. They were both well fitted for this project's digital design and were furthermore able to be used for interactive prototyping, since they allow you to link buttons and actions to new pages. This creates a feeling of interacting with a real website without having to code it. These features were crucial for being able to test the concepts on users.

One benefit of Figma is that it is cloud based so that more than one person can work on a project simultaneously without having to save and send different versions back and forth within the team, allowing for fast co-creation. Adobe XD on the other hand saves all the data internally, thus making the prototypes faster responding. Within the team of this project, the members had varying experience from the two softwares, thus since the differences were small, the team used the software they were most comfortable with.

6.5 User tests

Three of the concepts created in this project were tested in a very similar way to how the existing platform was tested in the pre-study. This in order to be able to compare the new concepts and evaluate whether they were considered better or worse than the existing platform. The user test also aimed at providing answers to which concepts and design solutions the users prefer as well as providing insights about what features could be combined to create the best possible user experience.

6.5.1 Selection for the user tests

All participants in the user tests had previous experience of hosting events, but several came from a background of arranging parties and events for students rather than within the independent cultural scene of music and arts (which was the case in the test of the existing platform in the pre-study). However, the same type of equipment was frequently rented or borrowed for these events and the test participants also felt occasional need for material in their practices. The testers and their background can be seen in Table 6.1.

Table 6.1

User test participants in chronological order.

Number	User description	Age span
1	Musician occasionally arranging concerts	26-30
2	Sound technician	18-25
3	Manager for a creative space hosting all sorts of culture	31-40
4	Technical manager in a student organisation	18-25
5	Running a sound and light rental service for students	18-25
6	Technical manager in a student organisation	18-25
7	Technical manager in a student organisation	18-25

6.5.2 Execution of the user tests

Each participant was introduced to the project, its history and what the purpose of the test was. They were informed that it was the concepts that were tested, not them, and that any problems or flaws they found was of great value to the project and its future. Three interactable concepts were tested on computers provided by the test leaders.

First off, the equipment page was introduced. The user got a task to borrow a certain piece of equipment and was encouraged to talk about what they did and why along the process. It was stressed that they should treat the interface and information as if they were really to use the service for the first time. When the tester had finished the task, he or she filled out a form ranking 10 different properties of the concept. The form finished with asking the tester to grade the general experience of using the concept on a scale from 1-6 where 1 was very bad and 6 was very good. This was repeated three times until the tester had completed one task for each concept and filled out one form for each concept.

Next up, three critical features were compared between the concepts. The sorting/filtering system, the product page and the booking system. The testers were asked which design they liked the best and why. This discussion lasted for between 8-20 minutes depending on how much the tester talked when completing their tasks.

Lastly the material page was introduced. Since that section is only for displaying material and Returkultur's activities, no tasks were given when evaluating it. Instead, the test only compared and discussed the different layouts and concepts. For the social concept the specific features of a member catalogue and user profiles were introduced and discussed here. After this the test leaders thanked the tester for their participation. In total the test lasted for between 45-70 minutes.

6.5.3 The ranking form

One of the purposes of the test was to examine whether the concepts better met the expectations and requirements of the users than the existing digital platform. Therefore the form evaluating the concepts were very similar to the form given in the first test in the pre-study. Two parameters, however, were changed. It was considered irrelevant to ask whether the concepts were ugly vs. beautiful and empty vs. well filled. Appearance had not been prioritised when creating them (most of it being only in grayscale) and the inventory did not reflect the actual inventory of Returkultur's service.

The form also contained one new parameter: messy vs. structured. This issue had come up when evaluating the concepts theoretically through a PUGH matrix. Although a potential messiness had been compensated for (read section 6.3) it was considered interesting to investigate whether these concepts was considered too packed with information since they had still passed the evaluation. The complete list of parameters for evaluation can be seen in Table 6.2.

Table 6.2

The parameters evaluated for each concept in the user test. “How was your experience from using this concept?”

	1	to	6
1	Cumbersome		Neat
2	Complicated		Simple
3	Excluding		Inviting
4	Unsafe		Safe
5	Dull		Inspiring
6	Vague		Clear
7	Closed		Open
8	Cheap		Generous
9	Messy		Structured
10	Playful		Serious

6.5.4 The order of the concepts

The order in which the concepts were tested varied, for several reasons. Since the concepts and the tasks were very similar there was a risk that the testers learned the system of the service as the test went on. In that case the experience using the last concept would be more positive than the first interaction. Because of the differences in the concepts you would naturally compare the experience to the previous one. By varying the order the rankings would not be colored by previous experiences in the same way.

7. Concept design and evaluation

In this section the critical features of the concepts will be presented together with the feedback from the user tests. Since the material and equipment is distributed through two entirely different systems, they have been divided into different sections both in this report and on the platform.

7.1 Choosing concepts for further development

Three concepts were supposed to be chosen for further development. The PUGH-matrix (see Appendix F) did not provide any unambiguous guidance to which ones. As mentioned in section 6.1.2 the concepts packed with the most functionality became the ones with the highest scores although that contradicts general usability and accessibility guidelines where less often is considered more. To evaluate this, the most minimalistic concept in the PUGH-matrix was decided to be developed further together with the two concepts who scored the highest (and had many functions). These were:

Concept 1 - The Structured concept (minimalistic)

Concept 2 - The Pedagogical concept

Concept 3 - The Social concept

7.2 Digital platform concepts - presentation and user test insights

In this chapter the three platform concepts will be presented together with insights from the user tests. This will be done in a step by step manner based on type of content and functionality.

7.2.1 Equipment

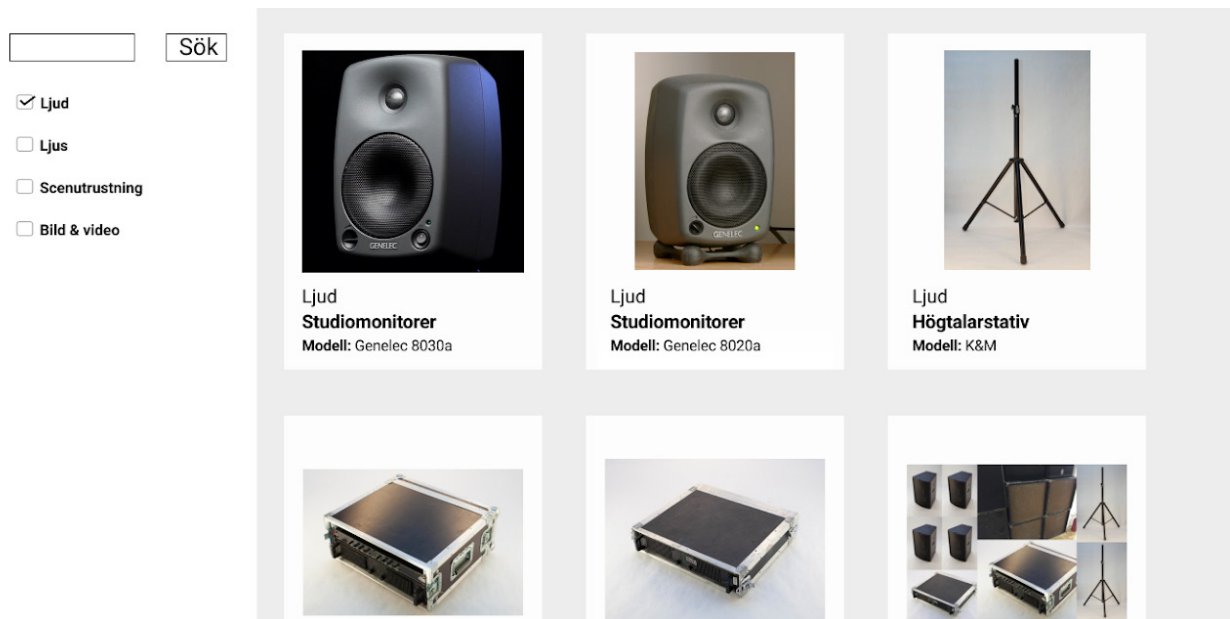
Here, vital functionality and features for the sharing of equipment will be presented and explained together with feedback from the user tests.

Filtering systems

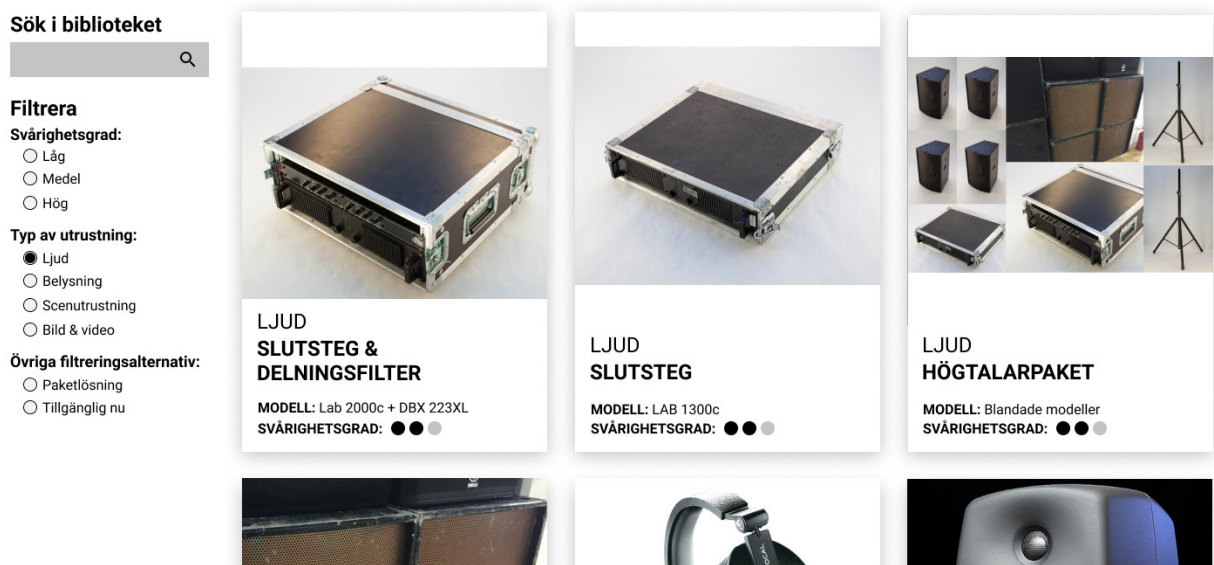
The filtering system of the structured concept can be seen in Picture 7.1, and resembles the folder system handling files in computers. The more technically experienced users liked this filtering system much because it allowed easy and structured navigation through big numbers of items. They expected several levels under each category. However, in this case they claimed that the items were so few that only one level was necessary and ultimately that this type of navigation was unnecessary. The less technically oriented users meant that this type of filtering was clear and structured, but also dull and boring. Especially if there should not be that many products, the benefits of a structured filtering system does not override the need for good appearance.

The filtering system for the pedagogical concept can be seen in Picture 7.2. Its purpose is to empower the less experienced user in choosing the right equipment, enabling them to filter products by category and difficulty level. Furthermore, the user had the option to filter out package solutions, as

they are preferred by less experienced users, and present available products to support the scenario where something unexpected has lead to urgent need for equipment. Unfortunately this interface was confusing to many users. Some found it too complicated to choose a combination of filters. Although they were not forced to choose more than one, several users perceived it as if they had to. Furthermore, sorting equipment by difficulty level was not appreciated and the difficulty levels were not clear enough to the users. They simply did not know how complicated the complicated equipment was or how easy the easy equipment was. Ultimately that means that they don't know what they are filtering out, and therefore they don't want to use it.



Picture 7.1
Filtering system of the structured concept.



Picture 7.2
Filtering system of the pedagogical concept.

The filtering system of the social concept can be seen in Picture 7.3. It has no sidebar and is based on filter chips rather than menus. But the biggest difference compared to the other concepts is that availability is a filter in it self. You are able to fill in the dates over which you need to borrow equipment, and see what equipment that is available. This type of filtering supports the user case where a user get inspired by what is available rather than realising a vision decided beforehand. This filter system was the most popular, basically because it felt the most welcoming. Instead of a structured list of checkboxes you are met with one question - what do you need, and when do you need it. No testers actually used the availability filter but it was still important for their general experience where they felt that their needs were in focus. The chip system was also perceived as inviting and transparent which was much appreciated by the testers.

The screenshot shows a web interface for borrowing equipment. At the top, it asks "När vill du låna?" (When do you want to borrow?). Below this are two input fields: "Hämta:" (Pick up) and "Lämna:" (Return), both with placeholder text "ÅÅÅÅ-MM-DD". Below the input fields is a section titled "Kategorier/filter" (Categories/filter) with several buttons: "Belysning" (Lighting), "Ljud" (Sound), "Scenutrustning" (Stage equipment), "Bild och video" (Image and video), "Paket" (Package), and "Lättanvänd" (Easy to use). Below the buttons are three product images. The first image shows a small black and gold device. The second image shows a black speaker. The third image shows a long black bar with several small lights attached, with the caption "Färgade LED-spotar" (Colored LED spotlights) below it.

Picture 7.3

The filtering system in the social concept with options to filter based on time and through filtering chips such as light, sound or projection (circled).

Product pages

The product page of the structured concept can be seen in Picture 7.4. It is characterised by being very simplistic, but also very similar to the existing platform. The product is described in text and any information that might be hard to understand, like types of connections, is linked to a Wikipedia page for further understanding. A replacement cost and suitable way of transportation together with measurements are displayed underneath. The users did not feel as if they missed any information, but the way it was presented was not perceived as very accessible, pedagogic or inspiring. However, some of the more technically oriented testers generally liked the formal tone of this concept, including the product page. This user group is already used to finding information through different channels such as forums and sites for comparison of equipment. Therefore they were happy to see information specific for this site, such as the replacement cost, as other information is easy to find elsewhere.

As seen in Picture 7.5, the pedagogical concept presented the information a little differently. It is basically the same information but presented on different cards. The size information is illustrated with a scale model and the resources as well as proposed means of transportation are illustrated with symbols. The difficulty level is also displayed on the product page. According to the users it filled its purpose of being very pedagogical. Both experienced and inexperienced culture producers appreciated the link to the video examples since Youtube is already a common source for information and tutorials. However, several users thought that it was too much unnecessary information. For example, the proposed means of transportation became increasingly unnecessary

when the size information was so descriptive. A common statement was that this type of very detailed information is probably good for someone, but not for me.

[← Tillbaka till utrustningsbibliotek](#)



Studiomonitor
Genelec 8030a

★★★★★
(5 recensioner)

Går att tilta på gummifot eller skruvas på mikrofonstativ. [IEC-kontakt](#) för el och [XLR](#) för ljud in och ut. Apparatkabel ingår.

Mått: 40x30x30

Lämpligt transportsätt: Till fots

Ersättningskostnad: 800 kr

[Manual](#)

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Antal

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All upphämtning och återlämning sker vardagar mellan 09.00-18.00 efter överenskommelse vid Returkulturs lager på Varholmsgatan 7 i Sandarna i Göteborg. Tel. 0730 - 51 44 51

Picture 7.4

The product page of the structured concept.



PRODUKTBESKRIVNING

Vatteneffektampa som projicerar vågor. Kan växla mellan olika färger eller stå stilla på en färg. Passar bra på shower, klubbbar och andra fester.

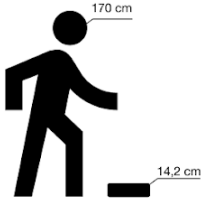
BELYSNING
VATTENEFFKT

MODELL: Martin DC1
SVÄRHETSGRAD: ● ● ●

RESURSER

- Originalmanual
- Kopplingsschema
- Videoexempel

STORLEK OCH VIKT



Mått: 31,2 x 25 x 14,2
Vikt: 6,3 kg

TRANSPORTFÖRSLAG

- Kollektivtrafik
- Cykel

STATISTIK

Denna produkt har blivit lånad **8** gånger.

LÅNEFÖRFRÅGAN

◀ April 2019 ▶

1	2	3	4	5	6	7
Sara Lindgren						
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Hämtas:

Lämnas:

Antal:

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FEEDBACK

20 februari 2019
Test Testsson
Konstnär - Alingsås

KVALITET ★ ★ ★ ★ ★

Picture 7.5

The product page of the pedagogical concept.

For the social concept, the idea is that basic information should be complemented by information provided by previous borrowers. This means that the user reviews get a more central role in the design, see Picture 7.6. The product information is identical to the one in the structured concept. This product page was considered the best by the testers. The information other users can provide is more valuable than pedagogically communicated technical information. This information includes what type of event the equipment was used at, pictures of the result, the area in which the previous borrower usually works and similar. Together, the basic product information and user reviews gave a good insight in the big picture, although it was pointed out that it can be problematic to rely on user activity. In order to be willing to give feedback, it would have to be fast and convenient.

[< Tillbaka till biblioteket](#)



Projektor
Modell: BenQ MP622c
DLP-Projektor med några döda pixlar. OBS ingen HDMI, endast VGA, S-Video och Video
Mått: 23,9 cm x 10,6 cm x 25,1 cm
Transportförslag: Till fots eller med kollektivtrafik.
Ersättningskostad: 4000 kr
Bilagor: [Manual](#)

[Bild och video](#) [Lättanvänd](#)

Vill du lära dig mer om utrustning? Kolla då in våra aktuella kurser på sidan [utbildning](#).

< April 2019 >

1	2	3	4	5	6	7
Olle Trens på Malmö Antenn						
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Antal: [Lägg till i varukorgen](#)

Läs mer om låneprocessen i avsnittet [Att låna utrustning](#)

Användningshistorik



Sara Lindgren
Designer - Göteborg

Betyg:
★★★★★

Eventbeskrivning:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent vel metus massa. Fusce et orci vel odio facilisis pulvinar sit amet nec ligula. Phasellus semper velit vel ex porta, semper porttitor arcu ultricies. Sed molestie, lectus vel ornare fermentum, massa velit sollicitudin eros, eu finibus ante nibh nec nulla. Fusce consectetur iaculis nisi viverra hendrerit. Sed venenatis nisi pellentesque elit faucibus, at aliquet lectus vestibulum. Donec nulla orci, eleifend



Anders Olsson
Konstnär - Alingsås

Betyg:
★★★★★

Eventbeskrivning:
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Hanna Lo
Fotograf - Göteborg

Betyg:
★★★★★

Eventbeskrivning:
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Paolo Berg
Konstnär - Aling

Betyg:
★★★★★

Eventbeskrivning:
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Picture 7.6

The product page of the social concept.

Booking systems and checkouts

In the structured concept, as seen in Picture 7.7, the calendar is hidden until you want to choose a date for either pick up or drop off. Then the calendar is shown and different information can be found, such as availability (bookings by others are shown as red lines over occupied dates) and opening hours (dates on weekends are crossed over, and the opening hours are also described in text in every state). There was a problem with the way the opening hours were represented visually in the design. Some testers interpreted this as if the equipment was booked over the

crossed over weekends as well. When confused, they looked for further information, and the fact that the information was supported by text close to the action buttons was the most appreciated feature of this booking system. It should also be said that even though representing the opening hours visually brought some problems, the other concepts did not address this complication at all. There, opening hours were found on separate pages and pop ups with error messages would have to be used for helping users not to book pick up or drop off on weekends. The design of the structured concept were not the best, but it showed that users need much of the information that this concept attempt to provide. The final concept have to contain a solution for describing what dates are available and possible to book over.

For the pedagogical concept, as seen in Picture 7.7, the calendar is visible and interactable directly on the product page. This was highly appreciated as the availability is among the most important aspects of weather a piece of equipment is suitable or not for a user. Seeing that the item is available over the relevant days directly says that it can be suitable and worth the time to further investigate. The users could pick dates in the calendar or use the date picker by typing the dates in the field for pick up or drop off. All testers used the calendar for picking the right dates, but many also said that they would want to type the dates as well, especially if they were to borrow something a long time ahead. They simply do not want to click five times in order to reach the right month, and providing the possibility to type dates also supports visually impaired users, making the design more accessible. Therefore, in the final concept, users should be given the possibility to type the wished for dates.

Lastly the social concept, seen in Picture 7.7, only had the calendar for choosing dates. This also gave it more room and the calendar is bigger in this concept than in the other two. Although it did not give any information about pick up times, opening hours or provided the possibility of choosing dates by typing them, it was much appreciated due to its visual clarity. Testers found it visually appealing due to its simplicity, and therefore experienced it as simple. The final concept should therefore strive for a similar slightly bigger, light and airy design.

Välkommen att låna hos Returkultur!

Hämtas: Återlämnas:

År: Maj

må	ti	on	to	fr	lö	sö
		1	2	3	4	5
6	7	Fredrik på Teater teateressen				
14	15	16	17	18	19	
20	21	22	23	24	25	26
27	28	29	30	31		

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LÄNEFÖRFRÅGAN

April 2019

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29	30	1	2	3	4	5

Hämtas: Återlämnas:

Antal:

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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Antal:

LÄGG TILL I VARUKORGEN

Läs mer om låneprocessen i avsnittet **Att låna utrustning**

Picture 7.7

The booking systems. From the left: structured concept, pedagogical concept, social concept.

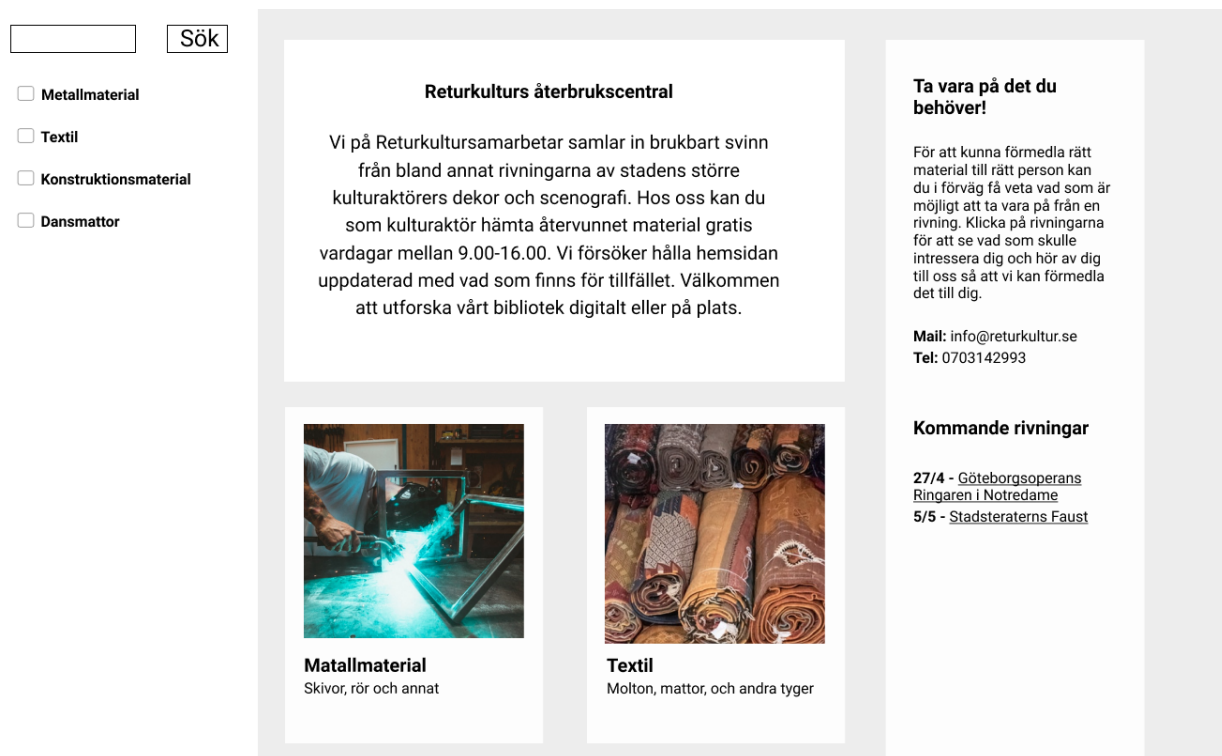
7.2.2 Material concepts

In relation to each concept a corresponding material page was designed. All of these pages aimed at providing the user with information about how to acquire material and information about the current content of the physical material library.

Structured concept: Webshop-like navigation

In the structured concept, the material was presented in a webshop-like manner. Here the user could pick a category of material and then be redirected to a page of product types within this category. Each product type had a page describing the available material within that product type, see Picture 7.8. The product type page is similar to a blog post (containing a header, pictures and body text) and aim at presenting the available material within that type in a general way with a general text and picture. A date stamp indicated how recently the information was provided.

The testers thought that this type of design was frustrating, this as it was too similar to a webshop while not actually being one. They expected that the information provided about the material would be more specific and found it irritating that the lowest level of the categorisation system only provided a general description and picture of the material type and not specific material information. In addition to this, many testers mentioned that this type of concept is more suited for a large material library with a big inventory and flow of material.



Picture 7.8

The material page of the structured concept.

Pedagogical concept: Feed of blog posts

In the pedagogical concept each addition to the material library is presented in a blog post with text and photo, see Picture 7.9. This information could be general or specific depending on how big the addition is, but in the user tests the information presented was general. By using a feed instead of categories the content presented could be of different kinds and not only regarding specific

material additions. Upcoming events, such as scenography teardowns, or other information could be communicated to the users and give them a chance to influence what material that is added to the material library.

By presenting the information in a feed of blog posts the test participants did not have any problems with the level of information, and did not expect the same level of detail as they expected in the webshop format. On the other hand, the users perceived the blog format as unmodern and many mentioned that they would not visit the page that frequently and therefore not get updated when new activities were posted.



Reglar och plankor

Post uppdaterat 19-04-04

Idag tog vi emot en anseelig mängd reglar och plankor från rivningen av Carmen på Göteborgsoperan. De längsta är 3.5 meter men vi fick även en den kortare på omkring 1 meter. Det mesta träet är fint och rent, men vissa bitar har mindre fläckar, kvistar eller spår av såg och borr.

Så här ser vårt bräd- och regelsortiment ut idag. Allt finns i vår lokal på Varholmsgatan 7 i Kungstens industriområde.

Välkommen att hämta material hos oss!

Returkultur samarbetar med Göteborgs större kulturaktörer genom att ge deras brukbara svinn ett längre liv. Hos oss kan du gratis få material till ditt kulturutövande oavsett om det är byggmaterial till lokalen, konst eller design.

Öppettider och process

Vardagar mellan 9.00-16.00 kan du inspektera vårt materiallager på plats. Håll dig gärna uppdaterad om vad som finns via vår feed.

Maillista

Inför scenrivningar på stadens stora scener är det bra för oss att veta vad våra medlemmar är ute efter. Skriv gärna upp dig på vår maillista för att veta när nytt material är på ingång. Berätta vad du behöver så försöker vi ordna det åt dig!

[Prenumerera på nyheter](#)



Metallrör och profiler

Post uppdaterat 19-03-29

Idag tog vi emot mängder med rör och profiler från ett bygge. De är av kraftigt varierande länd, storlek och visuellt skick. Välkommen

Picture 7.9

The material page of the pedagogical concept.

Social concept: Using social media

The social concept contain a material page which is a combination of social media feeds (Instagram) and a webpage, see Picture 7.10. Two Instagram feeds are presented on the material page, one where Returkultur posts updates about the physical material library and one where use examples are collected and presented under an Instagram hashtag. The latter is an effort to inspire the user, and the first a way to present the content of the library and other information such as teardowns. The social media feeds are complemented with information about how, when and where to acquire material.

This social concept was most popular among the test participants. This as it was perceived as modern and that the users could get updates via social media, thus minimising the need to visit the platform frequently. Regarding the collection of user examples under a hashtag the users felt it was nice but that it relies heavily on user contributions and therefore could be sparsely used, and if very sparsely used indicated inactivity of the service. The same was mentioned about the Instagram account, that frequent posting is needed to help ensure users that the service is active and frequently used.

Välkommen att hämta material för återbruk hos oss!

På Returkulturs lager i Sandarna i Göteborg kan du som kulturaktör hitta material att återbruka. Vi har trä, metall, textil och annat smått och gott. För att se hela utbudet och för upphämtning av material är du välkommen till vårt lager och materialbibliotek mellan 09:00 till 16:00 på vardagar, annars kan du se nytillskott till materialbanken och användarexempel i instagramflödena nedan.

Har du specifika frågor så är du självklart välkommen att skicka oss ett mail på hej@returkultur.se eller att ringa oss på 0730 - 51 44 51 under våra öppettider.

Returkulturs lager hittar du på adressen:

Varholmsgatan 7
414 76 Göteborg

Öppettider för besök och upphämtning av material:

Måndag till fredag
09:00 - 16:00

Finns inte materialet du vill ha?

Om du letar efter något specifikt material som vi inte har tveka inte att maila till hej@returkultur.se så ska vi hålla utkik efter det åt dig!

@Returkulturs materialbibliotek (@returkulturmaterial)

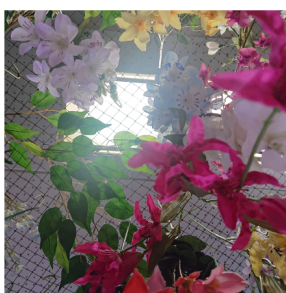


@returkulturmaterial 25 gilla-markeringar

Nu har vi fått in massa träreglar från Göteborgsoperan.

Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.

#återbruk #returkultur #cirkulärekonomi #delaärdetnyasvarta



@returkulturmaterial 35 gilla-markeringar

Visste du att vi har enorma mängder tygblommor som du som kulturaktör kan få återbruka eller låna? De finns i alla möjliga sorter och regnbågens alla färger.

Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.

#återbruk #returkultur #cirkulärekonomi #delaärdetnyasvarta #flowerpower



@returkulturmaterial 8 gilla-markeringar

Färgade papper i A2-format redo att omvandlas till något coolt!

Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.

#återbruk #returkultur #cirkulärekonomi #delaärdetnyasvarta

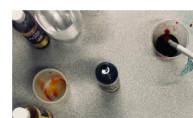


@returkulturmaterial 25 gilla-markeringar

Vi har stora mängder träskivor återbrukast! Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.

#återbruk #returkultur #cirkulärekonomi #delaärdetnyasvarta

#returkulturmaterial



Picture 7.10

The material page of the social concept.

7.2.3 Landing page

Both the social and pedagogical concept had landing pages, i.e a first page explaining the service before entering the actual library. The pedagogical concept's landing page basically described the three areas Returkultur work within, sharing equipment, sharing of knowledge and distribution of material - each with a link to the right section of the platform. The social concept's landing page were more extensive with pictures from public events and a section about Returkultur's work and goals.

Generally, having a landing page was considered much more inviting and pedagogic as you were guided to the right section of the page right away. Many testers claimed that a landing page describing the service made them much more comfortable using the service because it helped them understand if the service was meant for them. However, when they had gotten that information

they saw a risk of getting irritated if it appeared every time you entered the website. If there is a way of programming the site so that the landing page only appears the first time you enter the platform, that would be the best solution.

7.2.4 Social functions

In the social concept additional functionality was added to create a more social experience - a member catalog and personal profiles. With the member catalog, the user can find other cultural actors that also use Returkultur's digital platform, and filter these based on cultural activity and location. From the catalog and user reviews, presented on the product pages, a specific user's profile can be reached. With the profile the user has the ability to share a picture of themselves, their contact information and a short description.

During the user tests the social functions were experienced as nice to have, but they were not a necessity to the users that participated in the user tests. However, social connections are an important prerequisite for cultural creation so keeping them in the final design could be valuable.

7.3 User evaluation of the concept experience

The three concepts were evaluated against the parameters mentioned in Table 6.2 during the user tests. The mean values for each parameter were calculated within the concepts, these are presented in Figure 7.1 together with the corresponding value from the user test of the current platform myTurn.

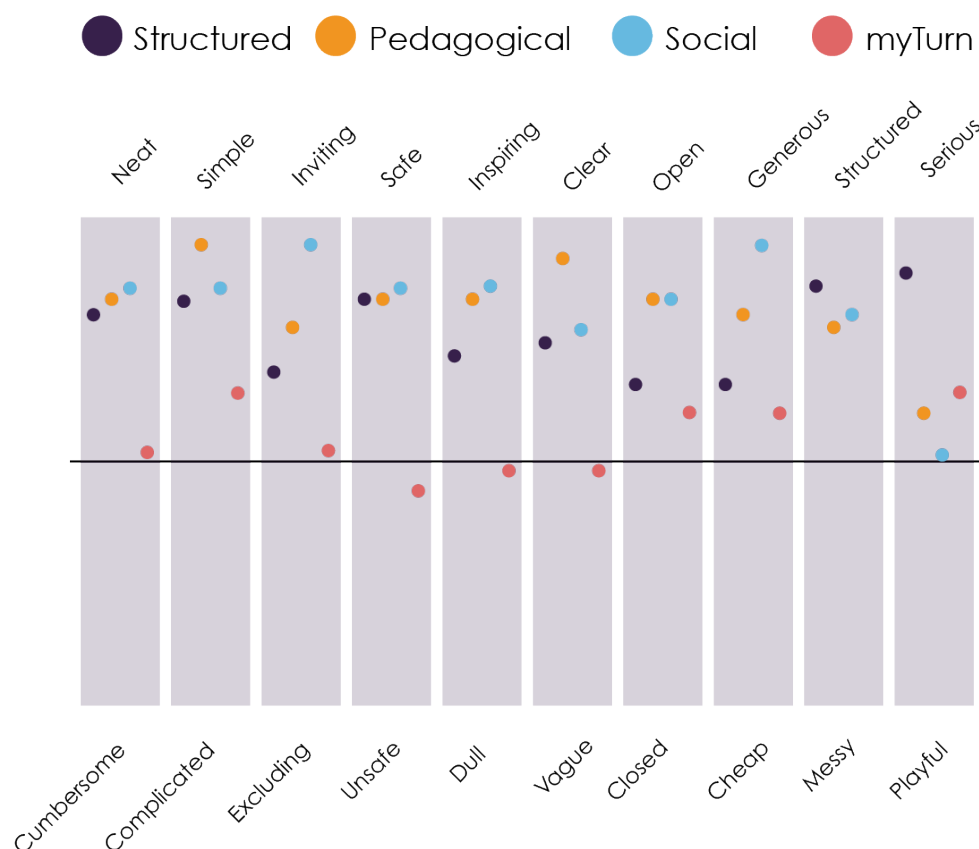


Figure 7.1

The mean placements on the 10 different parameter scales for the three design concepts and the current platform myTurn. myTurn was not evaluated with the parameter scale structured/messy.

In general, all of the three concepts rate higher on the positive/negative parameters (all parameters except serious/playful) than the currently used platform myTurn. In addition to this all of the three design concepts rate four or higher on all positive/negative parameters indicating that all of them provided the users with a generally positive experience leaning towards the intended one.

When looking closer at the specific concepts one can see that the structured concept got the lowest ratings. It only rated highest in structure and seriousness, which was expected, but it did so while improving the overall experience compared to the current system that it was quite similar to. The pedagogical concept was the simplest and clearest concept and was also perceived equally as open as the social concept and just as safe as the structured concept. The social concept was experienced as the most neat, inviting, safe, inspiring, generous and playful concept.

All of the three concepts perform better compared to the current system, see Figure 7.2, when looking at the overall experience. They all have a mean overall positive experience over 5 and the pedagogical concept was rated to have the highest overall experience at 5,7.

7.4 Decision of final concept

Even though the pedagogical concept got the highest rating based on the total experience (5,7) the social concept was experienced as more inspiring, including, generous and safe. As these aspects were very important traits mentioned in the pre-study and as the difference in the total experience was very small (0,14) the social concept was chosen as the foundation of the final concept. The social concept also contained the most appreciated way of showing the material library and can potentially act as a stepping stone towards expanding the cultural actors' social networks and future peer-to-peer sharing.

Some changes will be made to the social concept in its finalised version:

- The calendar from the pedagogical concept (Picture 7.7) will be used as it allows the user to both enter dates with values as well as pick them by clicking in the interactive calendar. This helps users when the borrowing period is far into the future as well as it allows users using keyboard navigation to put in values in a simpler way. The calendar will also be redesigned to better indicate to the user that no pick-up or drop-off can happen on the weekend.
- More iconography will be used as the users more easily found resources such as manuals and tutorial when icons were used.
- A search box will be added to the product filtering, as this was appreciated by the users both in the structured and pedagogical concepts.
- An administrative part of the platform will be added to support the public platforms functionalities.

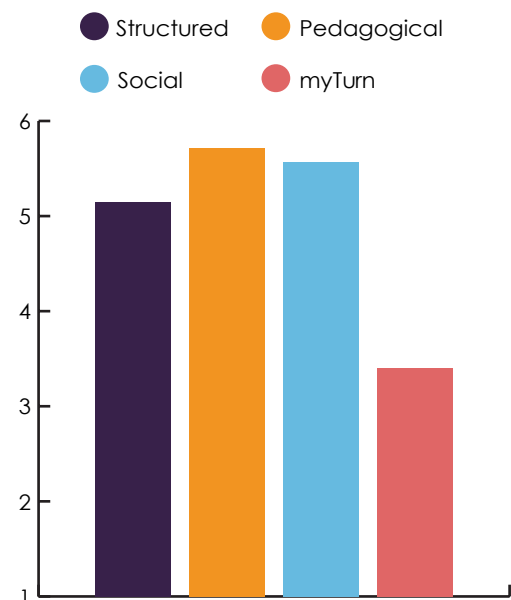


Figure 7.2

The mean overall experience rating for the three concepts and the current platform myTurn. 6 being a very positive experience, 1 being a very negative experience.

PART THREE

Final design

In this part the final design, including both the public and administrative platform, will be presented as well as the result from its theoretical evaluation.

8. Methods - Finalisation

Although all functions and features designed for cultural actors had been tested separately in earlier stages, the final concept was never tested by users. To make sure that no new problems were built into the final concept, it was considered necessary to do a theoretical evaluation. This consisted of a so called Cognitive Walkthrough (Bligård and Osvalder, 2013) and an evaluation using usability and accessibility principles. The evaluation was executed continuously during the design and prototyping phase. An additional test of the booking calendar was carried out to get insight in what way to best communicate that no pick-up and drop-off can happen on weekends.

8.1 User tests of the booking calendar

The user test of the design concepts provided answers to most questions, but one problematic thing in all concepts was the way the opening hours was presented. The users were allowed to book over a weekend, but since Returkultur is not open during the weekend, the users were not allowed to book pick up or drop off on a Saturday or Sunday, and this information was not communicated clear enough in any concept. Eight new designs for the calendar were produced and introduced to five random students at Chalmers University of Technology. The students were briefly told about the project and the service. All designs were then presented next to each other and the students were asked if they could figure out what everything represented in the mock-ups. If they were correct they were asked why and if they did not, they had the purpose explained to them whereupon they were to decide which mockup that better presented the information.

8.2 Theoretical evaluation of the final concept

This section describes the methods used in the theoretical evaluation of the final concept.

8.2.1 Cognitive Walkthrough

For the theoretical evaluation of the final concept, what Bligård and Osvalder call a third generation Cognitive Walkthrough was performed (2013). A full sequence from landing page to booked, returned and reviewed product was performed and analysed. For each required action four questions were asked.

The questions asked in the cognitive walkthrough were (Bligård and Osvalder, 2013):

1. Will the user be trying to achieve the right effect?
2. Will the user discover that the correct action is available?
3. Will the user associate the correct action with the desired effect?
4. If the correct action is performed, will the user see that progress is being made?

For each question the evaluator answered three sub questions. First, simply yes or no, which is pretty straight forward. Then the question why - what in the visual representation is unclear misleading or in other ways lacking? Furthermore the underlying problem was defined, in this case often in relation to the usability guidelines described in section 2.4.1. In some cases this data was enough for suggesting specific changes in the design.

The method was used for evaluating the following user flows:

- Entering the public platform from the landing page
- Using the filtering system of the equipment library
- Making a reservation request for a specific product
- The processes of approving and denying a reservation or membership request as an administrator
- Adding a product to the product library as an administrator

8.2.2 Usability and accessibility evaluation

Nielsen's 10 Heuristics for User Interface Design (1994) and WAI's four accessibility principles, described in section 2.4.1 and 2.4.2, were used to evaluate and describe design decisions and potential problems in the final concept. The evaluation was conducted both continuously during the design process and after its finalisation, leaving some potential errors left for improvement.

9. Final concept

The final concept involves two digital platforms. The first platform is created for cultural actors and the second is an administrative platform created for Returkultur. In this chapter these will be presented and described.

9.1 The experience of the platforms

The digital platform designs are derived from the previously mentioned social concept, further described in chapter 7. This concept was rated as inspiring, including, generous and safe. As these traits were valued in the pre-study and the overall experience of the concept was very positive the overall interface design of the concept was kept in the final concept.

To help choose color and expression for the final concept an expression board was created to communicate an honest, clear, inviting, structured, pedagogical and social experience. In picture 9.1 you can see one of the pictures used in the expression board and the color guide created from it which was used throughout both platforms.



Picture 9.1

One of the photos used in the expression board and the color guide it inspired. The photo is "Loving life" by Rachel available at <https://unsplash.com/photos/GGIz-QSvL38> under the Unsplash License <https://unsplash.com/license>

9.2 Digital platform for cultural actors

This digital platform contains functions and information whose goals are to increase sharing of equipment and reuse of material while being inspiring, help expanding social networks and educate. The following section will walk you through the platform design and functions.

9.2.1 Landing page

When entering the digital platform the user will be met by a landing page presenting information about the service, the organisation behind it and its partners. Its goal is to encourage first time users to explore the platform, therefore an additional header have been added to the design presented in the social concept. It contains a selling point with a descriptive headline placed over an inspiring picture, see Picture 9.2. This addition aims to communicate which job the cultural actor can get done (cf. section 2.3) by using this platform, and who the service is for.



Picture 9.2

Top part of the landing page saying "You want to create culture - we want to give you the prerequisites!".

9.2.2 Borrowing equipment

The process of borrowing equipment requires the most steps and interaction within the interface. Therefore the process and its corresponding platform pages will be divided into three parts - finding equipment, reserving equipment and equipment check out. These will be described separately below.

Finding equipment

To find a specific product the user have to interact with the equipment library presented in Picture 9.3. The library contains three main components - the availability filter, the equipment filter and the product cards.

The availability filter

This component lets the user filter products based on their availability during a specific time period. The dates can be entered both in writing and by clicking in the interactive calendar that appears when one of the date fields are activated. This component is mainly designed for two of the ways needs for equipment emerge - the user with an unexpected event and the user that gets inspired by available equipment - but its function can also be used by anyone wanting to filter based on date specific availability.

När vill du låna?

Hämta (endast på vardagar):

ÅÅÅÅ-MM-DD

Lämna (endast på vardagar):

ÅÅÅÅ-MM-DD

Vad vill du låna?

Sök produkt

Belysning

Ljud

Scenutrustning

Bild och video

Paket

Lättanvänd



Vatteneffekt

Modell: Martin DC1

Ljud

Lättanvänd



Passiv 12" högtalare

Modell: Martin WT2

Ljud

Lättanvänd



Färgade LED-spotar

Modell: Eurolite LED SCY-Bar TCL

Belysning

Lättanvänd



DVD med USB-ingång

Modell: ON 2.1

Bild och video

Lättanvänd



Parkanna LED

Modell: ADJ Mega Tripar Profile

Belysning

Lättanvänd

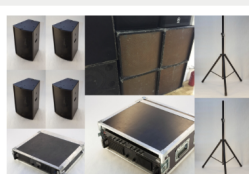


Projektor

Modell: BenQ MP622c

Bild och video

Lättanvänd

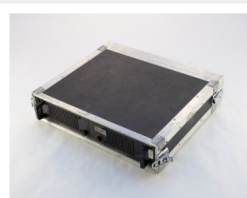


Högtalarpaket

Modell: Blandade

Ljud

Paket



Slutsteg

Modell: Lab 1300C

Ljud



Rökmaskin

Modell: HAZEBASE Base*Cap

Scenutrustning

Lättanvänd

Sida 1 av 2 ►

Picture 9.3

The equipment library with the availability filter, the equipment filter and the product cards.

The filtered dates follow the user into the product page if activated, and can later be used when reserving the equipment.

The equipment filter

By interacting with the equipment filter the user can narrow down the product selection into categories or subcategories. In addition to this the user has the possibility to be even more specific by using the search bar located next to the filter chips.

In addition to filter chips representing equipment types two additional ones can be found. One is used to find equipment tagged as easy to use and another to find packages of equipment. These filtering options are aimed at facilitating the use for users that feel less confident using or choosing equipment as well as those who value simplicity.

The product cards

Each product is presented by a product card which are stacked in a 9 x 9 grid. The card contains a picture of the product, the product name, the product model and its corresponding filter chips. If the card is clicked the user will enter that specific equipment's product page which will be further described in the next section.

Reserving equipment

When entering the product page, presented in Picture 9.4, the user will see three different components - the product specific information and resources, the user feedback feed and the reservation calendar.

Product specific information and resources

The goal of this component is to provide the user with information about the product (picture, name, model, description, measurements, transportation recommendations, origin and replacement cost) that helps the user in deciding if the product suits their project or event. In addition to this the user can find available resources such as manuals, circuit diagrams and tutorials beneath the product information box, which are represented with both resource type specific icons and text to make them easier to locate.

The filter chips from the product library is used again to aid the user in understanding which type the specific equipment is and if it is easy to use and/or a package solution. This minimise the risk that the user have to interpret the product information and/or go back to the product library to get this information.

The provided resources aim at aiding the user both in the understanding of the product before borrowing it as well as during the use and riddance phase.

Feed of user feedback

To help the user understand the equipments condition and what type of events that it suit or does not suit the users that have previously borrowed the equipment are asked to review the product. These reviews are then presented on the product page. By presenting the event type potential borrowers can see what other users have used the product for, and with an event description, product function rating and experience description they can make conclusions about whether the product will or will not suit them and their specific event or project.

Some users were concerned that the reviews would be too demanding and that the product page therefore would lack reviews. Therefore the decision was made to only make two out of four

When the user starts the process of making a reservation request they can be both logged in and logged out. The first step is to choose a pick-up date, this is done either by clicking on the date in the calendar or by entering it into the pick-up field with a keyboard. Then the user will repeat the process once again for the drop-off date, and a bar will appear that marks the chosen period. After this the user will have the possibility to confirm the chosen dates or if they are incorrect change them. The number of products can also be chosen here. The whole process can be seen in Picture 9.5.

To add this reservation request into the cart the user either have to log in - via the calendar's login button or the regular login button placed in the upper left corner of the page - or if already logged in click the "Add to cart"-button. When the user has done this the request will end up in the cart and the user can continue adding other equipment to it or go to straight to the cart. The cart can be reached from the main menu or from the reservation calendar. If the reservation request is incorrect the user can change it via the edit button that appears in the calendar after a product has been added to the cart.

To make it more clear to the users that weekends cannot be chosen for pick-up or drop-off some design changes have been done compared to the social concept. This has been done by fading out the weekend fields in the calendar, writing "Closed" above them as well as adding a descriptive text to the bottom of the calendar (see Picture 9.5 above). The descriptive text is also there to remind the users briefly of how the process of borrowing equipment works and direct them to more information if needed.

The image displays four sequential screenshots of a reservation calendar for April 2019, illustrating the process of making a reservation request. Each calendar shows days from 1 to 31, with weekends (1-2, 8-9, 15-16, 22-23, 29-30) faded out and labeled "Stängt*" (Closed). The equipment being reserved is "Malmö Antenn".

- Calendar 1 (Unactive):** Shows the initial state with no dates selected. Below the calendar, the "Hämta:" (Pick-up) and "Lämna:" (Drop-off) fields are empty, and the "Antal:" (Quantity) is set to 1. A "Lägg till i varukorgen" (Add to cart) button is visible.
- Calendar 2 (Pick-up date chosen):** The date 12 is selected in the "Hämta:" field. The "Lämna:" field remains empty.
- Calendar 3 (Drop-off date chosen):** The date 19 is selected in the "Lämna:" field. An orange bar highlights the period from April 12 to April 19.
- Calendar 4 (Added to cart):** The reservation is confirmed. The "Hämta:" field shows "2019-04-19" and the "Lämna:" field shows "2019-04-25". The orange bar highlights the period from April 19 to April 25. The "Antal:" field is set to 1, and the "Lägg till i varukorgen" button is replaced by "Ändra" (Edit) and "Gå till varukorgen" (Go to cart) buttons.

Below each calendar, there is a note: "*All upphämtning och återlämning sker vardagar mellan 09.00-18.00 efter överenskommelse vid Returkulturs lager på Varholmogatan 7 i Sandarna i Göteborg. Läs mer under [Att låna utrustning](#)."

Picture 9.5

The reservation calendar's different states - unactive, pick-up date chosen, drop-off date chosen and added to cart.

Equipment check-out

To complete the reservation request the user will have to send the reservation request to Returkultur, this is done via the cart. In the cart, presented in Picture 9.6, the user will see an overview of what equipment the request contains as well as their corresponding quantity, pick-up date and drop-off date. The product can be deleted from the request as well as edited.

To finalise the request the user is required to enter what they are going to use the equipment for. This will help Returkultur decide if its a suitable request, and if not let them guide the user towards

a better solution. If the user wants to add other information such as questions and preferred pick-up/drop-off times etcetera they can do that in the field below named “Additional comments”.

When the request is sent to Returkultur the user is redirected to a confirmation page with additional information about how the request will be processed before the request is confirmed or denied. Here, the user is also encouraged to contact Returkultur if needed.

returkultur

UtrustningMaterialSocialtUtbildningTest Testsson ▾Varukorg (1)

Varukorgen (1)

Produkt:	Modell:	Antal:	Hämtas:	Lämnas	
Projektor	BenQ MP622c	1	2019-04-09	2019-04-12	ÄndraTa bort

Vänligen beskriv ditt evenemang (Obligatorisk uppgift):

Behövs för att vi ska kunna avgöra om utrustningen passar evenemanget

Jag ska projicera en installation med projektorn, kommer projiceras mot tak.

Övriga kommentarer:

Hämtar och lämnar gärna kl.12,

All upphämtning och återlämning sker vardagar mellan 09.00-18.00 efter överenskommelse vid Returkulturs lager på Varholmsgatan 7 i Sandarna i Göteborg. Har du några frågor kan du kontakta oss på hej@returkultur.se eller på telefonnummer 0703 -14 29 93.

Läs mer om låneprocessen under avsnittet [Att låna utrustning](#).

Avbryt låneförfråganSkicka låneförfrågan

Picture 9.6

The cart.

9.2.3 Acquiring material

The material page has the goal to provide the user with information about how to acquire material and the current content of the physical material library. In addition to this it aims to inspire the user to create culture with reusable material.

The page is based on the one used in the social concept and contains four components - a introduction to the page, an Instagram feed where the new additions to the library and etcetera is posted, information about the library and a Instagram feed of user examples made with reusable material from Returkultur. The page as a whole and its components can be seen in Picture 9.7.

The introduction welcomes the user to the page and briefly describes the purpose and content of the library. Below it the user can scroll through the Instagram feed belonging to the material library. Via this Instagram Returkultur can share new additions to the library as well as information, requests and events with its users. As the content is published via an established social media platform the user can get this information both via it and the digital platform allowing the user more flexibility and increasing the possibility that the post is seen.

Below the first Instagram feed information about the material library is presented in three boxes. The biggest box describes the material library - where the material comes from; how, when and where to view and pick-up the material; and who to contact for questions. The next box (upper

right) encourages the user to contact Returkultur if there is some specific type of material that they want and that Returkultur should look for. The last of the boxes (lower right) asks the user to share their creation under a specific hashtag.

The last component of this page is the Instagram feed containing all posts marked with the hashtag, aiming at inspiring users to create using reusable material.

Välkommen till Returkulturs materialbibliotek!

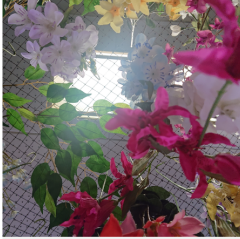
På Returkulturs lager i Sandarna i Göteborg kan du som kulturaktör hitta material att återbruka. Vi har trä, metall, textil och annat smått och gott. Nyttillskott till biblioteket kan du se i instagramflödet nedan!

Mer information om hur det funkar att återbruka material från oss finns längre ner på sidan.

Returkulturs materialbibliotek (@returkulturmaterial)



@returkulturmaterial
25 gilla-markeringar
Nu har vi fått in massa träreglar från Göteborgsoperan.
Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.
#återbruk #returkultur #cirkulärekonomi #deladärdenysavarta



@returkulturmaterial
35 gilla-markeringar
Väste du att vi har enorma mängder tygblommor som du som kulturaktör kan få återbruka eller låna? De finns i alla möjliga sorter och regnbågens alla färger.
Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.
#återbruk #returkultur #cirkulärekonomi #deladärdenysavarta #flowerpower



@returkulturmaterial
8 gilla-markeringar
Färgade papper i A2-format redo att omvandlas till något coolt!
Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.
#återbruk #returkultur #cirkulärekonomi #deladärdenysavarta



@returkulturmaterial
25 gilla-markeringar
Vi har stora mängder träskivor återbrukast! Kom förbi Varholmsgatan 7 på vardagar mellan 9-16 om du vill titta på materialet eller hämta det för återbruk.
#återbruk #returkultur #cirkulärekonomi #deladärdenysavarta

Hur går det till att återbruka material från Returkultur?

Materialet som finns i biblioteket är återbrukat och kommer från våra [partners](#). Detta innebär att det tidigare har använts i t.ex. scenografier och utställningar, och att du som kulturutövare har chans att förlänga dess liv genom att skapa ny kultur med materialet.

Om du sett ett material du är intresserad av eller vill se hela utbudet i materialbiblioteket är du välkommen till vårt lager mellan 09:00 och 18:00 på vardagar.

Har du specifika frågor så är du självklart välkommen att skicka oss ett mail på hej@returkultur.se eller att ringa oss på 0730 - 51 44 51 under våra öppettider.

Returkulturs lager hittar du på adressen:
Varholmsgatan 7
414 76 Göteborg

Öppettider för besök och upphämtning av material:
Måndag till fredag
09:00 - 16:00

Finns inte materialet du vill ha, eller vill du att vi håller utkik efter något?

Om du letar efter något specifikt material som vi inte har tveka inte att maila till hej@returkultur.se så ska vi hålla utkik efter det åt dig!

Har du skapat kultur med återbrukat material från Returkultur?

Dela gärna bilder eller filmer på det du skapat med oss genom att använda hashtaggen **#returkulturmaterial** på Instagram.

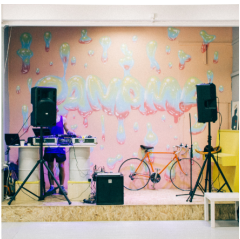
#returkulturmaterial



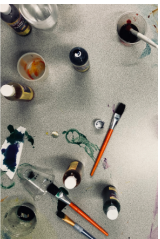
@artbyeldh
100 gilla-markeringar
Testade mina nya färger från Returkultur och så här blev det! Som en sommarmorgon.
#acrylicart #returkulturmaterial #cirkulärekonomi #howfeeltoday



@gbgrastudio
35 gilla-markeringar
🌱 - nya projekt på gång!
#woodwork #returkulturmaterial #reuse



@panamamusic
409 gilla-markeringar
Bra musik kräver bra setup!
#panamafestival #returkulturmaterial



@paintmelikeoneofyou
25 gilla-markeringar
#inkpaint #returkulturmaterial

Picture 9.7

The material page containing the material library's Instagram feed, information about the library and an inspirational Instagram feed collected under a specific hashtag.

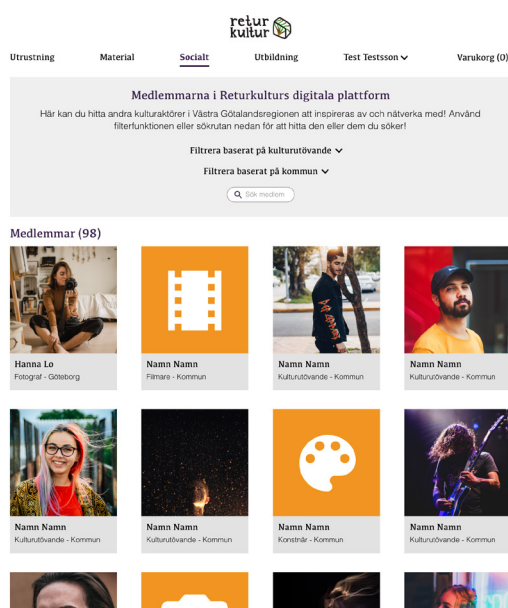
9.2.4 Social functions

The social functions of the digital platform, the member catalog and profiles, have the ambition to help expand the social network of the cultural actors.

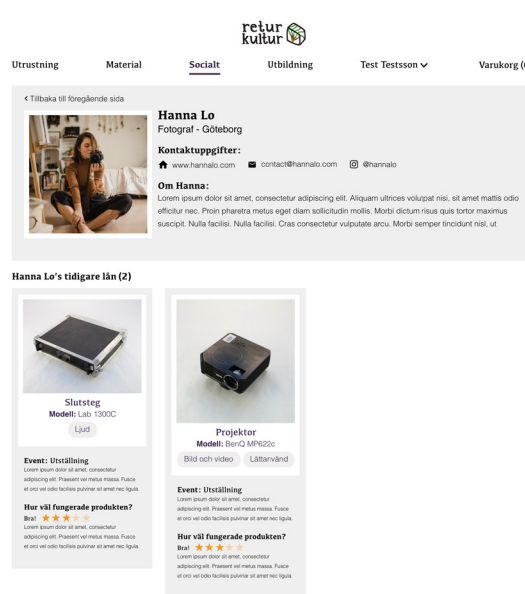
As mentioned in Section 7.2.4 the member catalog, seen in Picture 9.8, lets the user find other cultural actors that use the platform. These can be filtered based on location or type of cultural activity, as well as searched using the search box. Each member is presented by a card with their profile picture, name, cultural activity and location. If no profile picture is provided an icon representing their cultural activity will be displayed.

By pressing a card in the member catalog or a review on a product page the user will be redirected to that specific member's profile. The profile, presented in Picture 9.9, contains a profile picture, name, cultural activity, location, contact information and a short description. The profile picture, contact information and description are optional. Below these the member's loans and reviews are presented with the goal to inspire and guide the visiting user in their own decision to borrow equipment.

The profiles and the member catalog should only be possible to view by a logged in user due to privacy reasons.



Picture 9.8
The member catalogue.



Picture 9.9
The user profile.

9.2.5 Education and knowledge sharing

As indicated in the pre-study many cultural actors are very interested in increasing their knowledge and skills with the help of Returkultur. In addition to this knowledge was the most important prerequisite for the cultural actors in their cultural practises. Therefore, a separate section for education is included in the final design of the digital platform.

This section should display existing educational activities as well as potential digital guides. These digital guides could cover areas such as specific equipment, reparation and circular design. However, since the activities and content of this page is yet to decide upon by Returkultur - the page will be left as a placeholder for now and no further design has been made.

9.2.6 Membership registration

As the platform membership have requirements such as the user being a cultural actor the membership registration process and page is an important aspect of the platform. On this page the user is informed about the benefits of the membership, what requirements the user have to meet to become a member and where the resources in the sharing pool come from.

If deciding to apply for a membership the user needs to fill out a membership application, which information should be enough for Returkultur to base their decision on. This decision could be based on required information only (name and type of cultural activity) but is facilitated by information about specific organisations, websites and social media.

9.2.7 Additional features and content of the digital platform

In addition to the pages and features described above the digital platform will have to contain additional features and content to facilitate the journey of the user. These are presented below.

- **Log in**
Can be done from the top menu of the page or while making a reservation request of equipment. Should be accompanied with a page to request a new password.
- **Account menu (drop down menu in top navigation bar represented by the users name)**
Should let the user view their profile, view reservation requests (pending, current, archived), edit their account details and log out.
- **Information about terms, conditions and insurance**
This page's information should help the users understand their and Returkultur's responsibilities and what happens if something goes wrong. The page should be linked in the footer and referred to when relevant - for example in relation to information describing the process of borrowing equipment. The information presented on this page should be understandable - meaning it being categorised using descriptive headings and written in simple language.
- **Information about and for partners**
This page should be available via the landing page as well as in the footer. This page should present information about what it means to be a partner, current partners and how to become a partner.
- **Information about how to borrow equipment**
A process oriented page which should describe the process of borrowing equipment in a step to step manner.
- **Information about how to acquire material**
This information is found on the material page but an additional link to it can be found in the footer in close relation to the link leading to the similar type of information about equipment.
- **Information about Returkultur and their vision**
A page which should describe the service (why it exists and how it works) and the organisation (vision, history, members/staff).
- **Email communication**
The user should get email confirmations as they apply for membership; when a membership is confirmed or denied; when a reservation request is approved or denied; and when a product is not returned in time. The emails that involve a denial should be complemented with a case specific motivation entered by using the administrative platform.

9.3 Administrative platform

To complement the public platform an administrative platform is included in the final concept. Its goal is to provide Returkultur with the possibility to administrate the equipment library, reservations and memberships as well as to view statistics about the service.

9.3.1 Administrative overview

The first page of this platform is an overview where the administrator can view three modules, see Picture 9.10. The first module contains a planning list where upcoming pick-ups and drop-offs are listed, its goal is to help the administrator easily plan their day and find orders when preparing them or meeting the customer. The next one contains the reservation requests, current and recent, and allows the administrator to efficiently approve or deny the requests as well as view request history. Lastly the overview contains a module where membership requests can be viewed, and then approved or denied. All of these modules belong to specific sections of the administrative platform and can therefore be seen in these sections as well. When a request is approved or denied the user it belongs to will be informed via email.

retur kultur

Översikt Produkter Lån Medlemmar Feedback Statistik Publik plattform Logga ut

Planering

Upphämtning Återlämning

#10372919	Sara Lindgren	25 april (Idag)
Produkt:	Antal:	Lagerplats:
Projektor	1	H12S2
Slutsteg	1	H01S6
Studiomonitor	2	H09S24

Gå till order >

#10372920	Olle Trens	25 april (Idag)
Produkt:	Antal:	Lagerplats:
DVD-spelare	1	H12S4
Slutsteg	1	H01S6

Gå till order >

#10372921	Hanna Lo	27 april
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Aktuella låneförfrågningar

Nya (2) Historik

Sara Lindgren
Designer - Göteborg

Produkt:	Antal:	Hämtas:	Lämnas:	Lagerplats:
Projektor	1	2019-05-21	2019-05-22	H12S2
Slutsteg	1	2019-05-21	2019-05-22	H01S6
Studiomonitor	2	2019-05-21	2019-05-22	H09S24

Evenemangsbeskrivning:
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Övriga kommentarer:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent vel metus massa. Fusce et orci vel

Neka Godkänn

Hanna Lo
Fotograf - Göteborg

Aktuella medlemsförfrågningar

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Neka Godkänn

Picture 9.10

The overview showing the planning list, the reservation requests and the membership requests.

9.3.2 Products

This section of the platform handles the product inventory and is a replica of the public equipment library, see Picture 9.11. From this the administrator can add products and product categories to the library. As an addition the product cards are marked with color and text to indicate if the equipment is borrowed (orange) or not been returned in time (red).

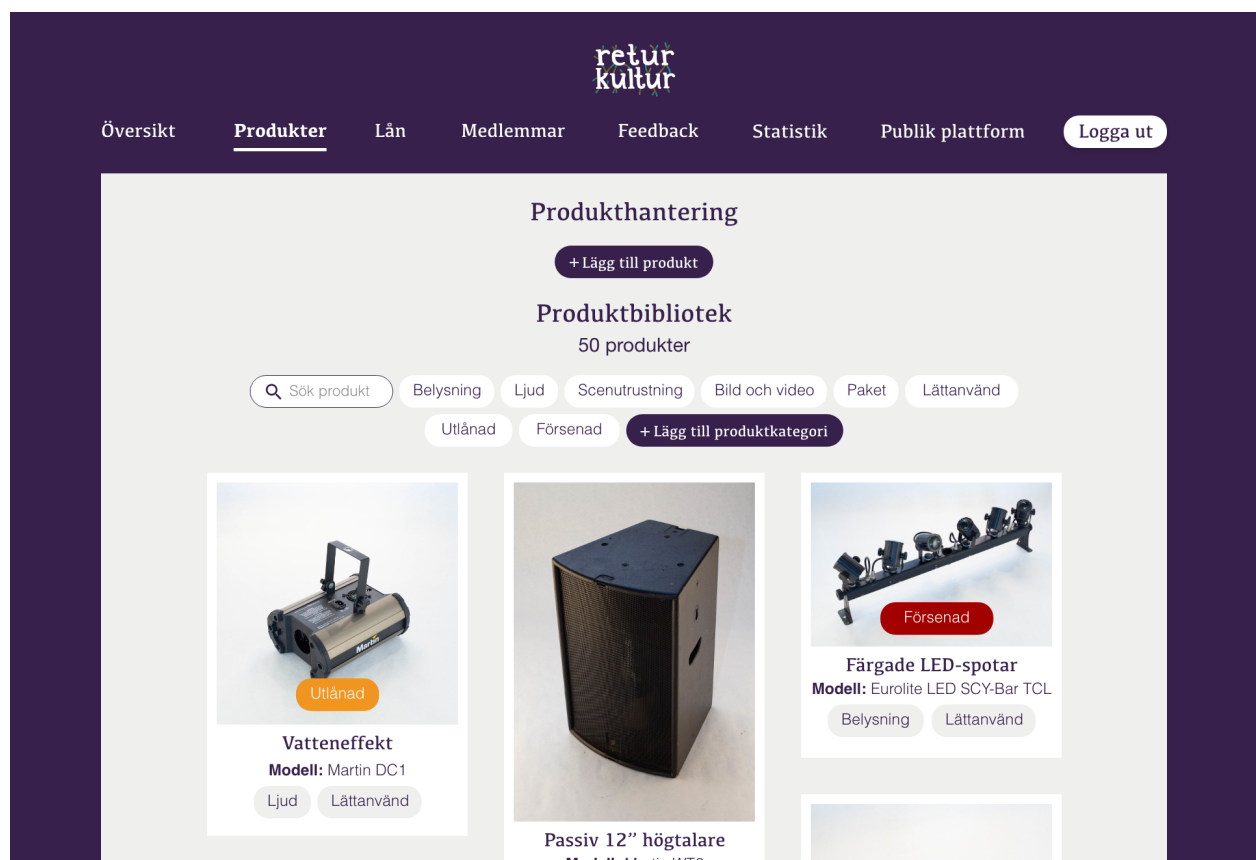
When entering a product page the administrator can edit or delete the product, view its availability calendar, do a product check in or check out. This page can be seen in Picture 9.12.

9.3.3 Reservations

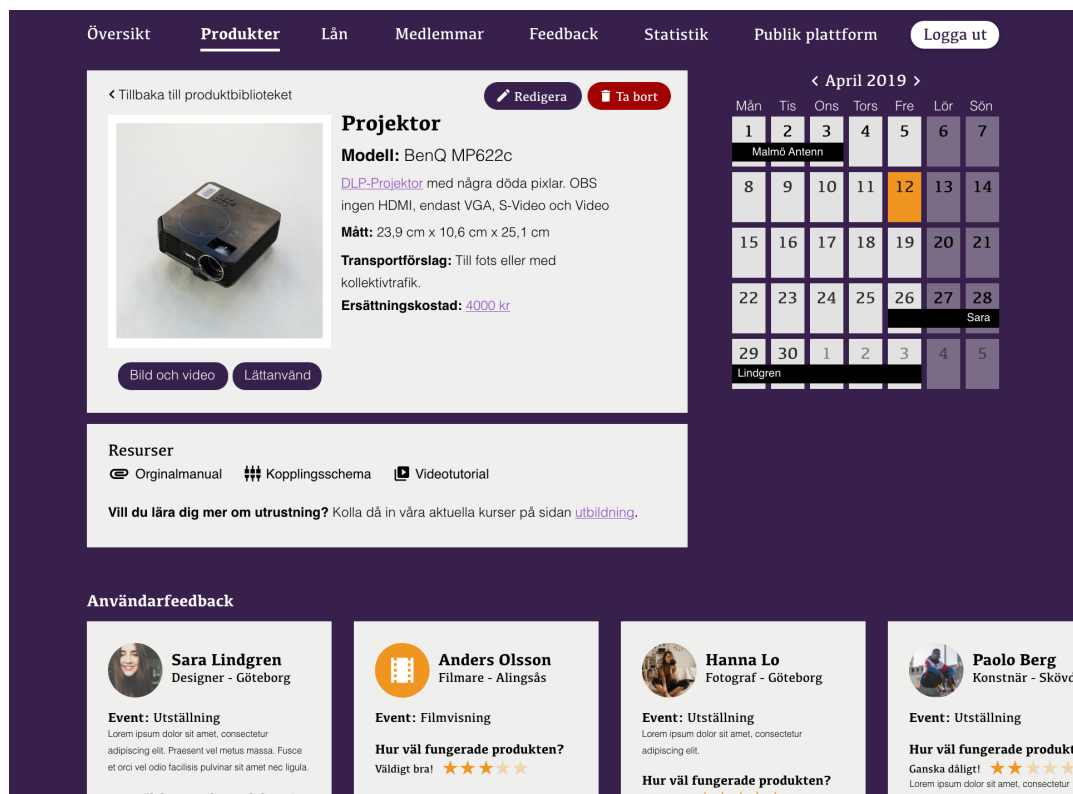
In the next section the administrator can once again view the planning and reservation request modules from the overview page but with an additional module showing reservations that are delayed. This section is presented in Picture 9.13.

9.3.4 Members

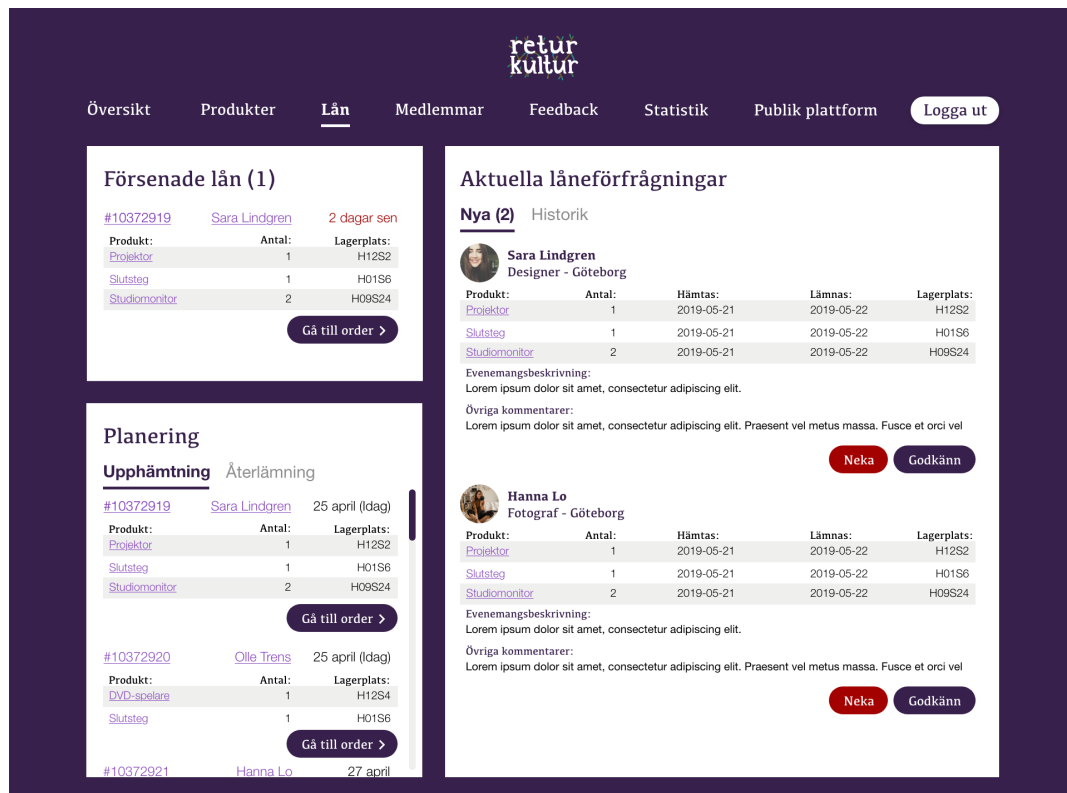
Here the membership request are shown together with the member catalog present in the public platform, see Picture 9.14. This section lets the administrator view the members of the platform as well as remove them from the platform if needed.



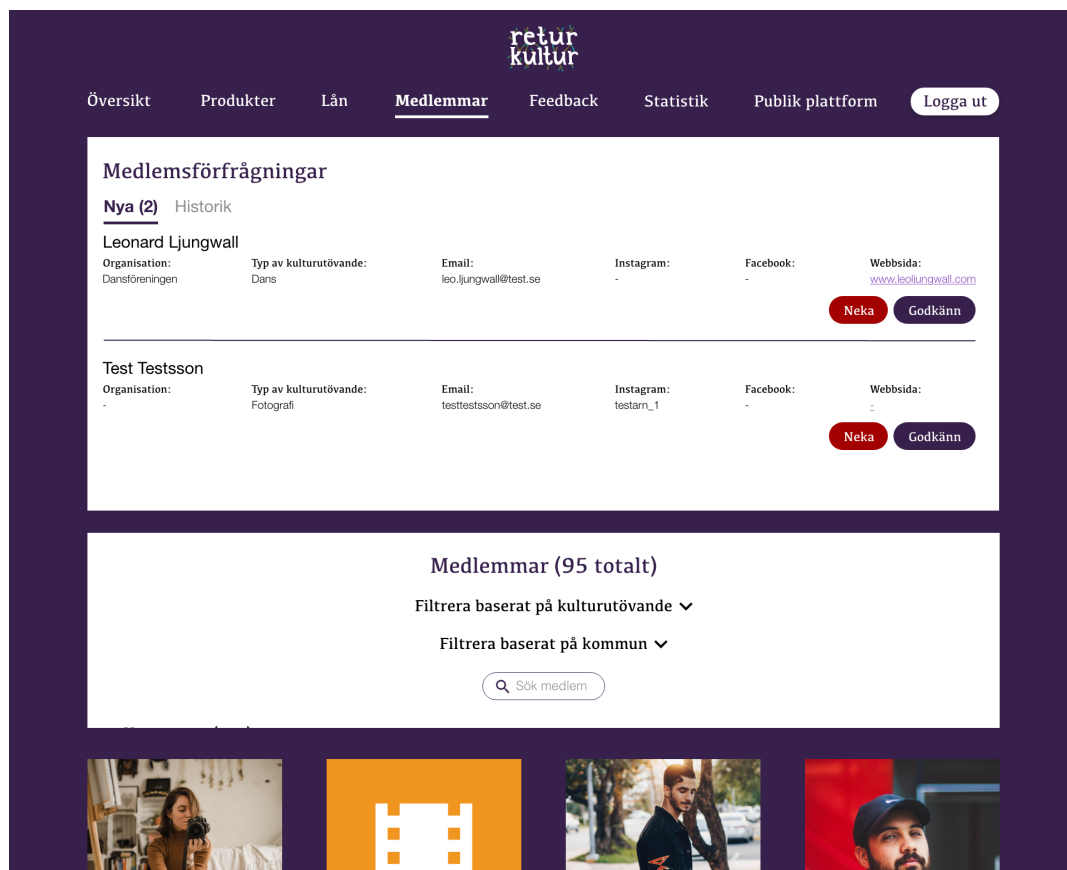
Picture 9.11
Adminstrative version of the equipment library.



Picture 9.12
Administrative version of the product page.



Picture 9.13
The reservation page with delayed product loans, reservation requests and the planning list.



Picture 9.14

The member page with membership requests and the member catalog.

9.3.5 Feedback and statistics

The last two sections have the common goal to provide the administrator with a good overview of the service and the users' experience. By providing a section where the user reviews can be seen in chronological order the administrator can scroll through them and get an understanding both of the users' experience with the products and what projects or events the products have been used for.

Within the statistics section data relevant for Returkultur and its partners will have to be presented. This could be a number of loans, number of members, popular products, environmental and economic statistics.

10. Evaluation of final concept

In this chapter usability and accessibility considerations and concerns found in the theoretical evaluation of the final concept will be presented.

10.1 Findings from the cognitive walkthrough

Below the main usability concerns found with the cognitive walkthrough will be presented and discussed. Each type of concern will be discussed separately below. The complete cognitive walkthrough can be found in Appendix G.

Sectioning of the public platform

When entering the platform the user is first met with a landing page redirecting them to the actual platform and the equipment library. One concern is that some users might try to find material within the equipment library instead of navigating to the material page. If they search for material in the equipment library they will not get any matches and could draw the conclusion that the material is not available at all - leading to them possibly missing out on material that actually exists.

Information and input marked as required

In many of the analysed processes the user will have to fill in required information or add required resources (i.e. picture of the product). This could create confusion and frustration as it might not be noticed until the user tries to finish the task using a greyed out button.

Communicating days where pick-up and drop-off can not be done

Many efforts have been made to design a reservation calendar that is intuitive in its use. Despite this some users might have problems to understand that they can not pick-up or drop-off equipment during weekends but that they can borrow it over the weekend. This could lead to some users falsely thinking that a product already have been reserved during the time period they want to borrow it. An additional concern is how to communicate closed days and periods that do not happen on a weekend, as the design solutions that communicate this are weekend specific.

10.2 Living up to usability guidelines

Here follows a checklist of Nielsen's 10 Heuristics for User Interface Design (1994), and what parts of the platforms that have designed to meet the requirements for each one. Each heuristic is written in bold letters.

Visibility of product status.

The status of the orders during the user tests were clear to the users, especially in the booking system from the pedagogical concept that was chosen for further implementation in the final concept. A notification appearing next to the shopping cart in combination with the text on the action button changing from "add to cart" to "go to cart" was enough for everyone to understand that progress had been made. The checkout process was so short that no progress bar was needed. The obligatory fields worked as an overview over what steps were necessary before filing the request. The few cases where users did not understand which fields were obligatory, they were provided with proper error messages indicating what had to be done in order to be able to proceed. In the administrative platform processes for approval or denial of user submitted requests are accompanied with confirmation dialogues to hinder errors. By incorporating these solutions users were **helped to recognize, diagnose, and recover from errors.**

Match between the system and the real world

The system used in the final concept is somewhat new to many users, but have many similarities with a combination of two very familiar digital environments - a web shop and a hotel booking site. This is clear enough for users to understand what to do and how to do it, which was made clear in the user tests. Another important aspect of this heuristic is how accessible the language is. The proposed copywriting in the final concept is written with inexperienced users in mind, and was clear to all testers. However, the final texts, especially on the product pages, will lay in the hands of employees on Returkultur to write in an accessible way as they add products to the system.

User control and freedom

The top menu never changes, hence allowing users to at any point in the process abort and instead go to either the start page for equipment, material, education, social page or their own profile. On the profile page, throughout the booking process and in the administrative platform, users are also always able to step backwards or abort orders. Provided with these options for changing plan or aborting a process, the design provides good user control and freedom.

Consistency and standards

As mentioned earlier, the design, although being a bit unique, follows conventions for other slightly similar sites like web shops and hotel booking sites. Consistency can also be seen internally as buttons taking you forward in the process have the same color and typeface, and that action buttons for removing something also have the same color and typeface. All links have a certain styling as well and icons throughout the interface are used in a consistent way, meaning that an icon means the same thing even if it appears in different places.

Error prevention

The most critical area is the opening hour that has been mentioned several times throughout this report. It has been developed through three iterations and is here as good as it can be right now. Errors are prevented in the sense that the given dates are faded out, but not entirely prevented. However, this is taken into account through error messages **help users recognize, diagnose, and recover from errors**, which is another usability guideline.

Another step taken towards error prevention is taken in the booking system after the cognitive walkthrough. Existing bookings will now only be shown when the product is entirely out of stock - for example all speakers of that model has been booked for the given dates. This might not make people feel as connected to the cultural network, as the social concept aspired to make them, but will certainly make users more likely to try to book the remaining products.

Recognition rather than recall

In terms of recognition the fact that the chip based filtering system chosen for the final concept is very sufficient. The properties of the product, category and other tags, are shown in close relation to the product on the product page instead of showing a hierarchy in the top. Even in cases where the picture does not provide much guidance to what type of equipment it is, the tags shown next to it can help the user understand what they are watching. The product picture, however, often work as a red thread throughout the process, where you for each step can assess which product you are dealing with. A potential problem is that there is no picture of the product when overviewing your order in the shopping cart, which for some might cause problems in recognising the product name or model number when assessing the order.

Flexibility and efficiency of use

The design, as well as the service, is brand new and can expect many first time users. Furthermore, it has shown in the pre-study that borrowing equipment is a rare activity only made a couple of

times a year, and it is unlikely that any one person will be a very frequent user - except for the administrators of the service. Therefore, few functions are in place for returning users in order to further make the service more efficient. The one example there is, is that users can view their history in their profile page and from there place orders on the same equipment they have borrowed before.

In the administrative platform an overview page has been added to provide the user with the most important information and functions at first glance, with the goal to provide efficient interaction.

Aesthetic and minimal design

Considering all the proposed functionality going into this project, and all the ones that have been chosen not to be included, it can be claimed that the design of the service is minimalistic. The same goes for the visual appearance, if you study the results from the user tests of the concepts.

Help and documentation

In the user tests, the users did not look for further information about the processes, insurance policies or terms and conditions although links to it was clearly presented in close relation to the action buttons throughout the process. One interpretation is that this information was ignored due to the design of the user test, meaning that the loan was only imaginary. Another interpretation could be that the system was self explanatory and trustworthy as it was, and for the ones in need of further help - there are sufficient information for them along the way which can be verified by looking at the final concept and the information requirements described in the infographic (Figure 4.7).

10.3 Accessibility

Based on the standards mentioned in section 2.4.2, this section evaluates how well the design meets the accessibility guidelines.

Perceivable information and user interface

A few design decisions have been made to facilitate a perceivable interface both from a visual and cognitive point of view. First of all, text sizes and contrast levels between text and background have been chosen so that a visually impaired user would have a better chance of reading it. The consistency of the action buttons mentioned in section 10.2 also helps users detect the right action buttons even if the text is hard to read. The language used is, as also mentioned in 10.2, written for inexperienced users. Avoidance of complicated words and technical terms facilitate users with cognitive impairments to a better understanding.

Operable user interface and navigation

Choosing the booking system from the pedagogical concept was a way to better facilitate the use of the service for people navigating through the interface with a keyboard. Although all test users only used the interactable calendar for choosing the dates in their booking, implying that the booking system from the social concept would be the best fitting solution - providing the user with the possibility of typing the wished for dates was considered important from the accessibility point of view. This also require a structure of the website suitable for a screen reader, which will be discussed next.

Understandable information and user interface

In order to create understandable information and user interface, a combination of the two previously mentioned guidelines are necessary. The screen reader is tying the other two aspects together as accessible language and page structure has no value to the visually impaired users if they can not

navigate with their keypad and hear what the text says. Unfortunately for this project, most this work is up to the programmers implementing the design to solve. However, a few elements in the design are there to facilitate the job for the programmers. Headlines aim at being as descriptive as possible and text on buttons always tell what will happen if clicking it - for example “log in” or “go to shopping cart” - instead of commonly used links in flowing text like “click here to log in”, where only “here” is the link, hence saying nothing of value to the user when navigating with a keyboard and screen reader.

Robust content and reliable interpretation

The platform is as mentioned above designed with assistive technologies in mind. Regarding the adaptability to different browser types and screens no design examples have been created, but are by all means necessary if the platform is to be developed and published.

11. Discussion

The final design is presented, but there is still work left for Returkultur implementing and maintaining the digital platform. Returkultur also plan on expanding the service in the future, and this chapter will discuss remaining obstacles and opportunities. The dependance on user activity for a good user experience, the dependance on programmers to implement an accessible site and ways to grow the service are discussed. Lastly, the design is evaluated in relation to the ethical aspects that was brought up in the background, and the methods used are discussed in relation to the result.

11.1 Dependence on user activity

The final concept is to a great extent based on what in chapter 7 is called the social concept, where basic information is given in text, and user cases and inspiration comes from reviews provided by other users. Making the service dependent on user activity can be seen as a risky move, especially for a new service which naturally will start out with very few users. Nevertheless the general given information is the same as the users were provided on the product pages of the structured concept - and there it was considered enough, but presented in a boring way. One way of filling up the empty review spaces is to force returning users to review their last order to be able to use the service again. If this is hard to get done through coding, Returkultur still have the opportunity to make contact with the user as they apply for another booking to ask for reviews. Starting up the service, encouraging users to review their experience will have to be a crucial activity for Returkultur both in order to evaluate their work and the platform, but also to provide future users with better experiences.

One can assume that a social page displaying only a few users rather make the service less than more attractive for others. If possible from a coding point of view, Returkultur should keep the social page hidden until they have attracted a good amount of users.

11.2 Further accessibility is now up to Returkultur

As mentioned before (section 10.3), efforts have been made in order to create an accessible digital platform design wise. However much of the work for implementing the service in an accessible way is still left to do, since most important information naturally is coded into the system and components of the site. It is a lot of responsibility to hand over to Returkultur. Implementing the site in an accessible way is likely to be more expensive than for example leaving speech synthesis support out of it, and as Returkultur is economically limited by grants on half year basis there is a risk that they will not afford the extra cost that this will require.

Another responsibility that is now handed over to Returkultur is the product information. It will have to be provided and written by Returkultur employees as products are added to the service over time. This report, especially the infographic (figure 4.7) in combination with the mockups, offer guidelines to what information that should be present in the design, but the actual work to provide easily understood product descriptions will from now on be up to Returkultur to manage. Interesting further work would be to create guidelines regarding how this information should be written in an accessible way, easy to understand.

11.3 Decentralised hubs can in the future minimise emissions from transports

The possible problem of excluding cultural actors in remote areas of region Västra Götaland was discovered when analysing transport behaviour within the user group. Users living far from Gothenburg are less likely to be willing to use the service, which is good from the emission point of view, but less satisfying when considering the fact that Returkultur want to create an inclusive service for all cultural actors in region Västra Götaland - and also have to do it since it is funded by tax money.

Returkultur have big ambitions and want to expand their service over time. In the future they want to introduce peer to peer sharing in the system, and they see their idea as possible to expand or apply to other cities and areas as well. One way to both expand the service, make it more environmentally sustainable and include more users is to decentralise it by starting up more sharing hubs around region Västra Götaland. This way the service would reach more cultural practitioners, and if starting them in strategic cities traveling distances can be decreased as well.

11.4 Further expansion

A lot of the functionality that Returkultur envisioned to incorporate in the system when the pilot project was introduced was set aside. Mainly this included peer to peer sharing and transportation solutions. The reason for leaving it out of the service at this point was not because of lack of interest from the users but rather that it was too complicated to satisfy different user's needs and expectations. Many users were curious about peer to peer sharing and also delivery options.

Starting off small with a core activity that appeal to a big group of users was considered wise at this point. However, by gradually introducing more functionality and expanding, Returkultur can reach their vision over time. The user input on these areas can be analysed further by Returkultur in the raw data gathered during the pre-study.

One finding that has not been used in the design is that users appreciated the flexibility of existing sharing hubs like rehearsals. The fact that they had access whenever they wanted made rehearsals very popular to use as sharing hubs. Returkultur is investigating a model where users can check in and out equipment by themselves with QR codes and well organised storage with dedicated places for all equipment. This study supports the idea that users would appreciate such a solution if Returkultur can come up with a safe way of organising it, as time flexibility was one of the most appreciated aspects when practicing sharing. This would be a great compliment to the design of the service and the digital platform.

11.5 Admin platform not as far developed as the platform for cultural actors

All user tests have been made on the public platform only. The only analysis of the admin platform that has been done is a theoretical analysis. Furthermore, the admin page is far more complicated than the interface that ordinary users are presented to. On the other hand, Returkultur employees will work more closely and frequently with the platform why you can expect them to learn and get familiar with the interface over time.

11.6 Ethical aspects evaluated

Two major ethical aspects were taken into account going in to this project: the possibility of rising emissions from car transport and the risk of competing with rental firms with a service funded by tax money which is problematic both from a legal and ethical perspective.

The possibility that transportation of material and equipment, and the emissions that might cause, stood in relation to the potential ecological benefits of a more circular economy and the social sustainability benefits that more culture have the ability to create. The interviews and the survey showed that for some equipment a car was always necessary due to weight and size, but that user behaviour differed between users in cities and users in more remote areas when it came to picking up and dropping off smaller things. Users in the city were much more likely to walk, ride a bike or use public transportation while remote users to a greater extent used cars. Users were very aware of economy, and the decision what service to use was mainly based on price, meaning that if it was cheaper to pick something up by car than it was to rent at a place nearby they would do so as long as the travel did not take more than one hour. This proves that there is no proportional relation between money saved from this service and the cost you are willing to spend on transportation. On the one hand this is very satisfying for this study as there only is a limited risk of having users travel far distances and by that eliminating the environmental benefits of prolonging product life through the service. On the other hand, a new ethical problem occurs - the one about exclusion. If users living more than one hour from Gothenburg are not willing to use the service, one could claim that they are excluded from the service, although it is funded by tax money from the region they live in. This new problem has not been further investigated as most qualitative data came from users living in Gothenburg, and there were no time for making another interview study. The existing design is therefore mostly targeting cultural actors living in and around Gothenburg.

There was also an inherent paradox in the fact that the service want more travels to be made by users if that means more cultural events and activities are being possible, but on the other hand want less travels to be made in order to minimise emissions. In an effort to make users choose more sustainable ways to travel and transport products from Returkultur, suggested means of transportation are displayed. By knowing the size of a piece of material or equipment, users are able to make informed decisions about what way to transport them, and hopefully use proposed ways such as walking, biking and public transport when possible.

The legal aspect of the competition regulations have been investigated by Returkultur in parallel with this project, but has not resulted in any clear answers. From the design side, this ethical problem is compensated for in different ways. First off, the rigid information provided to the users during the process is chosen in a way that first and foremost will support and appeal to inexperienced users. More professional testers and users have consistently preferred the more technical and simple solutions created along the process. Choosing a design for less experienced and established cultural practitioners minimises the risk of Returkultur being a competitor with rental firms.

Furthermore, a control system has been integrated in the design. First off you apply for membership - you do not simply join. The main purpose for the first control is to verify that the users are not big profit-driven companies, which would be a problem. When borrowing equipment it is also phrased as an application rather than booking, and you will have to specify the activity you are planning to use the equipment for. This also give Returkultur the power to question each request and in dialogue with the user decide whether the purpose is in conflict with Returkultur's mission.

11.7 Methods and their impact on the result

Going in to the project, the target group was decided upon in relation to the ethical aspects described in 11.6, and the concept demarcations as well as design solutions were made with this user group in mind. The results in this thesis is therefore specific to the general user group and context described throughout the thesis, although it can probably be translated to cultural actors in other Swedish cities or regions as well. However, different opinions and attitudes have been noted in groups that were not considered part of the target group. For instance people at region Västra Götaland found the idea of an internal peer to peer sharing service appealing, which could have been an interesting area of investigation in itself. Such a solution would potentially have greater environmental impact as this would include institutions that produce or facilitate a lot of culture, and own a lot of equipment that is rarely used today. In short, more equipment could be used more efficiently. On the other hand many of these solutions would have excluded other types of users such as the ones designed for in this case. This would have undermined some of the social sustainability aspects of the project. For future research, it would therefore be very interesting to investigate the possibilities of sharing services for the more established cultural scenes funded by tax money in Gothenburg and other cities.

Although the target group was clear, it was hard to control what people that took part in the survey since there was no obvious distributing channel that would reach the specific target group, or at least only the target group. As discussed in section 4.1.3 the survey was dominated by older cultural practitioners who mainly work with administration. This group of users are assumed to have gotten the survey through region Västra Götaland's mailing list. It was great to receive data on users living outside of Gothenburg, but broadening the user scope it also complicated the analysis of the data. In the end, this made the survey less relevant and was only used for a few purposes where it acted as support for statements in the interview study. In short it did not represent the general opinion of the intended user group. There is a possibility that the results would have been different if the survey had been able to reach younger and less established cultural practitioners in smaller communities outside of Gothenburg.

The design and user tests have only touched the digital world, although the interviews and the service as a whole is grounded in both the digital and the physical world. The pick up and drop off as well as the treatment on site by Returkultur staff are important aspects of the service which have been hard to test as the pilot project has been slow started and the pre-study was already finished when the sharing activities started to take off. This can be considered problematic. However, the workshops took place in Returkultur's combined office and storage space. They also covered requirements on the physical dimension of the sharing service, and as the participants were in the facility that would act as sharing hub, and all the material and equipment were there to see and feel - this surely added the physical dimension to the workshops. Looking at the physical requirements listed by the participants, it is obvious that they took the physical dimension in consideration. Nevertheless there is a possibility that more requirements would have been found if the whole sharing process had been tested and observed more thoroughly.

11.8 How can the result of this thesis be applied outside of the cultural sector?

Although a very specific user group and context has been analysed in this thesis, it can hopefully be of value to others working with design and the sharing economy. First of all, it must be said that much cultural equipment is very well suited for sharing. In order to further build on this work, the intended sector of application should check off several of the wished for traits suitable for sharing

described in section 2.1 and 4.2.4. Furthermore, much of the insights presented under theory and in the pre-study can act as inspiration and guidance for other sharing service designs, even though much of the information is detailed and very specific to the user group and ever specific equipment. It seems as if a sharing service benefits from being tailormade for a specific user group. Looking at the evaluation of myTurn (section 4.4), which aim at being a non specific library/sharing service, the concepts produced in this thesis was considered much better although one could say they are very similar. Small changes towards a more user centered design apparently have big impact, and although the results in this thesis is specific to small cultural actors, it can act as an example of how to work in order to successfully design a digital platform for a sharing service.

12. Conclusion

During this project a better understanding of how to design a service for increased sharing and reuse of cultural assets and a platform facilitating the service has been gained. The end result is a system and digital platform facilitating and encouraging increased sharing within the cultural sector of the region Västra Götaland.

A few conclusions can be drawn from the prestudy. Much cultural equipment is very suitable for sharing since it is often expensive to buy new, is often not frequently used, is often robust high quality products and have a long product life. Distributing material is much more complicated and the interest for such a service is much smaller. It should be considered by Returkultur to focus more on their knowledge sharing activities, since that would be much more useful and interesting from the user's point of view.

A lot of sharing is already going on within the cultural community. It is hard, however, to adapt to and mimic the complex sharing patterns that already exist within the cultural sector, as much of it is built on existing relations, trust and reciprocal expectations that a service can not guarantee. The user group feel more comfortable using a service resembling existing rental firms as it is considered more convenient, saves time and is not connected to feelings of guilt in the same way that peer to peer sharing is. The final concept therefore have many similarities to a user friendly rental business except there is no payment involved, and it also, through text and expression, encourages users to use the service in an effort to not evoke feelings of guilt.

Although one could imagine that free material and equipment would attract almost any cultural actor, the study showed that the target group was somewhat hesitant and suspicious. This was partly because they did not know if the service was meant for them. The less experienced cultural practitioners expected the service to be for professionals, and the professionals figured it was probably for less experienced cultural practitioners. Another reason was that different cultural actors put very different demands on the material and equipment they use, and many simply did not expect a sharing service to provide the exact type of material or equipment that they were interested in obtaining och borrowing. A service of this kind have to be very open, transparent and welcoming in order to attract customers. An assumption from Returkultur's side was that it would be a challenge keeping unauthorised organisations and companies out of the service, but the challenge detected was rather to attract users at all. The final concept is a refined mix of functions from earlier concepts that has proven to be the most inviting, encouraging and clear so far. By visually resembling a rental business, cultural practitioners with high demands on the equipment they use can feel more confident that the equipment they are interested in might be provided. Compared to the platform provided by myTurn that Returkultur uses today, the final concept is considered better on every single area that users find important.

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Appendix A

Interview template small cultural actors

Cultural practiontion.

Kan du berätta lite om ditt kulturutövande? Genre, fritid/jobb, individ eller organisation, hur länge?

Om du ingår i en organisation - vilken typ? Vinstdrivande? Mål och mening?

Hur når du ut med det du skapar? Publika evenemang, internet?

Vilka förutsättningar behöver du för att kunna skapa? (Kunskap, material, utrustning, lokal, ekonomi, kontakter)

Finns det något som hindrar ditt kulturella skapande? (Kunskap, material, utrustning, lokal, ekonomi, kontakter)

Med beskrivningen du fått, ser du att Returkulturs verksamhet på något sätt skulle kunna hjälpa dig? Stort som smått!

Vad skulle du säga är det största vinsten med delning som fenomen?

(Om du fick fri tillgång till material och utrustning, vad hade du velat ha tillgång till?)

Reuse of material

I vilka situationer skulle du känna behov av att införskaffa material? Återbrukar du något idag?

Hur hade du gått/går du till väga idag?

Vilka kriterier har du när du väljer vilket material du ska införskaffa?

Vad har du för möjligheter att ta emot och lagra saker, vilka saker och över hur lång tid?

Skulle materialet du använder kunna återbrukas? Och i så fall hade du kunna tänka dig att ge det till andra?

När anser du/ni att ett material är förbrukat?

Sharing of equipment

I vilka situationer skulle du känna behov av utrustning du i nuläget inte äger eller har tillgång till?

Hur hade du gått/går du till väga idag? Köpa, hyra, låna, reparera, vilken utrustning ingår i lokal-hyra etc.

Vilka kriterier har du när du väljer vilken utrustning du behöver? Tekniska kriterier, storlek, kompatibilitet.

Vem skulle du vara bekväm att låna av? Varför?

Brukar du/ni reparera utrustning? Eller lämna in? Varför?

Vem sköter utrustningen? Vilken kunskap finns? Om du/ni ej har kunskap kring att sköta utrustning, vad gör du/ni?

När anser du/ni att utrustning ej är användbar längre?

Skulle du/ni kunna tänka er ge bort utrustning som på något sätt är trasig?

Skulle du/ni kunna tänka er att låna eller hyra ut utrustning mot att få låna annan utrustning av andra? Låna ut i tredje hand?

Logistics

Hur hade du hämtat utrustning eller material? Färdmedel, bärkapacitet etc. Hur avgör du vilket färdmedel som är lämpligt?

Var hade du kunnat tänka dig att hämta material? Hur långt hade du kunnat tänka dig att åka och hur långt hade du haft möjlighet att bära något?

Vad hade du varit beredd att hämta via kollektivtrafik? storlek, tyngd, bärsätt etc.

Vad hade du hämtat med bil? storlek, tyngd, bärsätt etc.

Om frakt av utrustningen eller materialet fanns erbjudet, hade du kunnat tänka dig att betala för den tjänsten?

Om du lånat saker, hur och när har du då lämnat tillbaka dem? Hade din typ av event krävt att du mellanlagrade saker innan återlämning? (tex om de är klara på natten osv)

Vilka aspekter är viktiga när det gäller återlämning av utrustning?

Expression and payment

Beskriv 3 stycken egenskaper som du tycker en delningsplattform på nätet ska ha för att passa dig.

Om Returkultur i någon form hade behövt ta betalt, vad hade du då föredragit? Leksaksbiblioteket t. ex. har 300 kr i medlemsavgift per år eller 3h arbete.

Appendix B

Interview template big cultural actors

Introduction

Hur ser ert miljöarbete ut idag? Berätta.

Gör ni något för att gynna och hjälpa små kulturaktörer?

Material waste from cultural productions

Har ni idag något sätt att förmedla ert avfall till någon som skulle kunna se det som brukbart? (skivor och ribbor i trä, textil, rekvisita, metall av olika slag)

Om ja, hur går detta till i dagsläget? (plattformar, kontakter, logistik, ansvar)

Vilka får möjlighet att ta del av detta brukbara avfall?

Om nej, varför inte och ser ni några problem med att göra detta? Vilka?

Ser ni några möjligheter med att göra detta?

Vilka ser ni som potentiella mottagare av brukbart svinn?

När ni bygger scenografi tänker ni då på att det ska vara lätt att riva den?

Har ni strategier för att kunna ta till vara på så mycket material som möjligt från scenografin?

Vid bygge?

Vid rivning?

När i rivningsprocessen vet ni vilket material från scenografin som skulle kunna tas om hand och användas igen?

Ser ni någon vinst med att hitta folk som är villiga att återbruka ert avfall? Ser ni risker?

Unused or discarded equipment

Hur mycket av ert avfall består av elektronisk utrustning?

Kan man säga något generellt om vad för elektronisk utrustning ni slänger och varför?

Lagar ni saker när det går sönder?

Vad lagas och vad anses förbrukat?

Skillnad på ljud och ljus?

Sharing equipment

Vi vill ju på ett konceptplan just nu starta en delningstjänst för elektronisk utrustning. Sker utlåning av utrustning i nuläget och hur administreras det i så fall?. Vi är inte här för att sätta dit er på något sätt om det sker inofficiellt utan vill helt enkelt veta hur nätverkandet inom kultursektorn fungerar i nuläget.

Vilka typer av aktörer har ni förtroende för och varför lånar ni just till dem?

Vem/vilka är med och beslutar?

Hur stor del av er totala utrustning, ungefär, används under en normal månad?

Threats

Vad ser du som de största hoten mot en delningstjänst där ni ska ingå?

Appendix C

Workshop material

The material presented below was used as guides during the workshops.

Workshop material for cultural actors (Equipment)

Product:

	How does the need for new equipment arise? Which area of equipment is most often needed?
	How do you decide how to acquire these resources (buy, rent, borrow etc.)? What would make you use a sharing service?
	Let's now imagine that you found Returkultur's sharing service. You find it interesting and want to use it. In this scenario, what would be considered important to you while evaluating specific product offers? (i.e. what information do you need to be sure that the offer matches your specific needs?) Are there any aspects you can't evaluate via a digital platform? What would you do then?
	What actions and aspects are important to you when exchanging a product, regarding delivery, pick up, social interaction or something else?
	Which information or knowledge do you need when setting up the borrowed equipment? When and how would you like to acquire it? Which actions do you take to initiate use?

	Which information or knowledge do you need in order to handle and use the equipment?
	Where will you use the product and where will you store it before returning it? What actions or preparation does this require?
	Which actions do you take when preparing the product for its return to Returkultur?
	Which actions do you need to take in order to return the product? Which information do you need to plan the exchange?
	What actions could you see would be required to take after returning the product (for example regarding controversies or appreciation)?

Workshop material for cultural actors (Material)

Product:

	How does the need for new material arise? Which area of equipment/material is most often needed?
	How do you decide how to acquire these resources (buy, rent, borrow, reuse other people's leftover material)? What would make you use a sharing service?
	Let's now imagine that you found Returkultur's sharing service. You find it interesting and want to use it. In this scenario, what would be considered important to you while evaluating specific product offers? (I.e. what information do you need to be sure that the offer matches your specific needs?) Are there any aspects you can't evaluate via a digital platform?
	What aspects are important to you when exchanging a product? What actions does the exchange require from you?
	
	What will you use the material for?
	
	
	What aspects determine what you do with the product after use? (Selling, renting, giving, recycling or throwing away)
	
	
	
	

Workshop material for Returkultur (Material)

Product:

	Which actions could be needed in order to manage and store material?
	Which actions could be needed when offering the material to the customer?
	Which actions do you need to take when preparing the material for exchange?
	Which actions do you need to take in order to exchange the material? Which information do you need to plan the exchange?
	What actions could you see would be required to take after the material has been given away?

Appendix D

Affinity diagram analysis

Categorisation of themes mentioned during the pre-study made by using the affinity diagram method.

General:

- Payment alternatives
- Traits of a digital platform for sharing
- Social aspects of the service
- Pushes and pulls with the service

About cultural equipment:

- Flexibility
- Pushes and pulls regarding equipment sharing
- Guidance based on individual needs
- Obstacles for peer-to-peer sharing
- Who do you lend equipment to?
- Who do you borrow equipment from?
- What do you do if the equipment doesn't work?
- Reusable waste
- Why borrow?
- Why not borrow?
- Suitable equipment for a sharing platform
- Knowledge exchange
- Information needs

About cultural material:

- Requirements on material (suitability based on project and material condition)
- Idea creation
- How do you choose material?
- How do you acquire material today?
- Pushes and pulls regarding material reuse
- Reusability

About logistics:

- Aspects regarding transport
- Aspects regarding storage
- Product pick-up
- Product drop-off
- Flexibility

About partners:

- Current environmental work
- Obstacles for sharing
- Who can borrow?
- Storage

Appendix E

Requirement list

Job To Be Done							
Cultural actors	Partners	Returkultur					
Be able to produce culture under a unique set of circumstances (economy, social network, time)	Minimize waste, minimize cost for waste handling, policy upkeep, Climate goals 2030	Make it more accessible and easy to create culture with a small environmental impact by creating better opportunities for reuse and sharing within the cultural sector.					
Requirements on the digital platform							
Type of requirement	Requirement	Description	Use2Use phase	Resource type	Source	Stakeholder	Value of importance (1 = Supportive, 3 = Valuable, 5 = Necessary)
General requirements on the digital platform	Provide a service for borrowing equipment and obtaining second hand material within the cultural sector		Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, select riddance path, offer product, prepare for exchange, exchange product, post riddance activities	Equipment, knowledge, material	Workshop, interview	Cultural actor, partner and Returkultur	5
	Follow accessibility guidelines for the web	<i>As far as possible, will be evaluated during analysis 2 and 3</i>	Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, select riddance path, offer product, prepare for exchange, exchange product, post riddance activities	Equipment, knowledge, material	Interviews, https://www.w3.org/WAI/fundamentals/accessibility-principles	Cultural actor	5
	Follow usability guidelines	<i>As far as possible, will be evaluated during analysis 2 and 3</i>	Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, select riddance path, offer product, prepare for exchange, exchange product, post riddance activities	Equipment, knowledge, material	https://www.nngroup.com/articles/ten-usability-heuristics/	Cultural actor	5
	Enable exploration of offers for everyone	Provide accessibility to the library without being logged in.	Explore offers	Equipment, knowledge, material	User test, literature study	Cultural actor	3
	Provide an honest, clear and inviting experience		Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, select riddance path, offer product, prepare for exchange, exchange product, post riddance activities	Equipment, knowledge, material	Interviews, survey	Cultural actor	3
	Present the content in a structured and pedagogical way		Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, select riddance path, offer product, prepare for exchange, exchange product, post riddance activities	Equipment, knowledge, material	Interviews	Cultural actor	3
	Provide a social experience		Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, select riddance path, offer product, prepare for exchange, exchange product, post riddance activities	Equipment, knowledge, material	Interviews, workshop	Cultural actor	1
Content on the digital platform	Provide information about Returkultur as an organisation	Vision and history	Explore offers, consider specific offer, select riddance path, exchange	Equipment, knowledge, material	Interview, workshop	Cultural actor and partner	1
	Provide information about where the funding comes from		Explore offers, consider specific offer	Equipment, knowledge, material	Interview, workshop	Cultural actor and partner	1
	Provide information about the intended user of the service		Explore offers	Equipment, knowledge, material	Interview, workshop	Cultural actor and partner	5
			Consider needs, explore offers, consider specific offer, exchange, initiate use, use, manage and store, prepare for exchange, exchange product, post riddance activities	Equipment, material	Interview, workshop	Cultural actor	3
	Provide channels for support		Explore offers, consider specific offer	Equipment, material	Interview	Cultural actor, partners, Returkultur	1
	Provide information about partners		Explore offers, consider specific offer, select riddance path	Equipment, material	Interview	Partners, Returkultur	3
	Provide information for potential partners						
Administration of the digital platform	Provide an easy way to add resources to the platform		Offer product	Equipment, material	Workshop	Returkultur	5
	Provide information about upcoming pick-ups and drop-offs		Prepare for exchange	Equipment, material	Workshop	Returkultur	3
	Provide information about storage status		Offer product	Equipment, material	Workshop	Returkultur	1
	Provide information about previous events (exchanges etc)		Offer product, manage and store product	Equipment, material	Workshop	Returkultur	3
			Offer product, manage and store product	Equipment, material	Workshop	Returkultur	3
	View feedback from users						
Information about terms and conditions	Provide information about terms and conditions		Explore offers, consider specific offer, select riddance path	Material, equipment, knowledge	Workshop, interview, survey	Cultural actor, Partners	5
	Provide information about insurance - what happens if something breaks, is destroyed or stolen.		Explore offers, consider specific offer, prepare for exchange, exchange of product (riddance), post riddance activities	Equipment	Workshop, interviews, survey	Cultural actors	5

Information about pick up and drop off	Provide information about time for pick up and drop off		Explore offers, consider specific offer, exchange product, prepare for exchange, select riddance path	Equipment, material	Workshop, interviews, survey	Cultural actors, partners	5
	Provide information about location for pick up and drop off		Explore offers, consider specific offer, exchange product, prepare for exchange, select riddance path	Equipment, material	Workshop, interviews, survey	Cultural actors, partners	5
	Provide information about available transportation solutions		Explore offers, consider specific offer, exchange product, prepare for exchange	Equipment, material	Workshop, Interviews	Cultural actors	1
	Provide information about the pick up and drop off procedure		Explore offers, consider specific offer, exchange product, prepare for exchange, select riddance path	Equipment, material	Workshop, interviews, survey	Cultural actors, partners	1
	Provide information about accessibility at the pick up and drop off location		Explore offers, consider specific offer, exchange product, prepare for exchange	Equipment, material, knowledge	Interviews	Cultural actors, partners	3
	Collect user feedback		Consider specific offer, post riddance activities	Equipment	Workshop	Cultural actors, Returkultur	3
	Provide the user with feedback after product return		Post riddance activities	Equipment	Workshop	Cultural actors	3
Guidance for the cultural actor	Provide suitable categorisation of resources		Explore offers	Equipment, material	Interviews, workshop	Cultural actors	5
	Provide support to the cultural actor		Consider specific offer, initiate use, use, manage and store, prepare for exchange, exchange product (riddance)	Equipment, material	Interviews, workshop	Cultural actors	3
	Facilitate reuse of handed out material	Provide guidance on how to use and design products in a circular way	Consider specific offer, initiate use, use, manage and store, prepare for exchange, exchange product (riddance)	Material, knowledge	Workshop	Cultural actors	1
Requirements for each product	Provide information about size		Consider needs, consider specific offer	Equipment, material	Workshop, survey	Cultural actors	3
	Provide information about intended use		Consider needs, consider specific offer	Equipment	Workshop, interviews, http://publications.lib.chalmers.se/records/fulltext/255408/255408.pdf	Cultural actors	1
	Provide information about compatibility with other equipment	If not a package solution. Provide information about what cables and connections that should be used.	Consider needs, consider specific offer, initiate use, utilise product	Equipment	Workshop, interviews	Cultural actors	3
	Provide information about recommended skill level		Consider needs, explore offers, consider specific offer, initiate use	Equipment	Workshop, interviews	Cultural actors	1
	Provide information about availability		Consider needs, explore offers, consider specific offer	Equipment, material	Workshop, interviews, survey	Cultural actors	5
	Provide information about previous events and user cases		Consider needs, consider specific offer, initiate use, utilise product	Equipment, material	Workshop, interview	Cultural actors	1
	Provide pictures of the product		Consider needs, explore offers, consider a specific offer.	Equipment, material	Workshop, interview, survey	Cultural actors	5
	Provide accessible technical specifications		Consider needs, explore offers, consider specific offer, initiate use, utilise product.	Equipment	Workshop, interviews, survey	Cultural actors	3
	Provide information about condition, deviations and cautions.		Consider specific offer, exchange, initiate use, utilise product.	Equipment, material	Workshop, interviews, survey	Cultural actors	5
	Provide information about time limits		Consider needs, explore offers, consider specific	Equipment, material	Workshop, interviews	Cultural actors	1
	Provide accessible manual and electric schematic		Consider needs, explore offers, consider specific offer, exchange, initiate use, utilise product	Equipment	Workshop, interview, survey	Cultural actors	3
	Minimize errors during exchange	Avoid mix ups of equipment. Avoid forgetting to return parts	Consider specific offer, exchange, initiate use, utilise product, prepare product for exchange	Equipment	Workshop, interview	Cultural actors	3
	Propose suitable way of transportation	With comfort and environmental impact in mind.	Consider specific offer, exchange	Equipment, material	Interview	Cultural actors	1
	Display feedback from users		Consider needs, explore offers, consider specific offer.	Equipment, material	Workshop, interviews	Cultural actors	1

Appendix F - PUGH - matrix

Type of requirement	Requirement	Value of weight	Structured concept	Value	Social concept	Value	Pedagogical concept	Value	Sustainable concept	Value	Inspiring concept	Value
General requirements on the site	Provide a service for borrowing equipment and obtaining second hand material within the cultural sector	5		0	0	0			0	0		
	Follow accessibility guidelines for the web	5		0	0	0		-1	-5	0	0	0
	Follow usability guidelines	5		0	0	0		-1	-5	0	0	0
	Enable exploration of offers for everyone	3	Enter library, and then tell about membership. "add to cart" -> then info	1	3	enter library	Present need for membership, but allow to enter library	1	3	enter library	Enter library, and then tell about membership. "add to cart" -> then info	1
			Endast erbjuda fullt fungerande utrustning. (Kunden kan räkna med kvaliteten). Kurerat innehåll (litet utbud). Bilder av de faktiska produkterna (ej stock foto). Inkluderande språk. Kontaktuppgifter alltid nära till hands. Berätta vem som får låna och vem som inte får (när man försöker boka).		Inkluderande språk. Skrivna välkommen på landing page. Kontaktuppgifter alltid nära till hands. Följ expressionboars uttryck. Presentera företagside/vision/ambition.	1	Kurerat innehåll (litet utbud) Endast erbjuda fullt fungerande utrustning. (Kunden kan räkna med kvaliteten). Inkluderande språk. Skrivna välkommen på landing page, kontaktuppgifter, följ expressionboars uttryck.	1	3	Presentera företagside/vision/ambition. Certifierade mätningar. LCA, löpande eco cost på alla produkter, 1	Följ expressionboars uttryck, Visuella och audiella exempel på utrustning.	1
	Provide an honest, clear and inviting experience	3		0	0	n/ambition.		1	3	dens uttryck.		3
			Kategorier, rutnät, standardinformation, konsekvent informationshantering, typ av utrustning/material, modellnamn, 3 manuallänk,		Förklara tjänsten, typ av event/ användningssituation. Kategorier, modell, rutnät, typ utrustning, 1	3	Förklara tjänsten, rutnät, manual with focus on the environmental social and economic impact	1	3	Designigt grid, taggar/kategorier, Exempel från användare		0
					User name, creative area, organisation name (display), User/organisation on profile, Noder/grupper, studiecirklar (fysisk och digital mötesplats)	1						
	Provide a social experience	1	User name, organisation name (display),	0			Studiecirkel, user/organisation, creative field	1	1	studiecirklar	User name, creative area, organisation name (display), rekommendera andra sidor för socialt utbyte, media accounts	1

Content	Provide information about Returkultur as an organisation	1 About us	0	Our employees, 1 About us	1	Our employees + competence 1 areas, about us	1	1 About us	0	Employees + 0 creative area	1	1
	Provide information about where the funding comes from	1 List	0	Vid about us, samma typ presentation 0 som employees	1	1 footer	0	0 Landing page	0	0 footer	0	0
	Provide information about the intended user of the service	Requirements/check 5 list	1	Presentation of 5 the typical users	1	Present the typical user, application 5 form, checklist	1	Check list/application 5 form	1	Present a typical user that 5 is real	1	5
	Provide channels for support	Telefon, mail, q&a, 3 öppettider	1	Telefon, Mail, 3 ansikte	0	Telefon mail 0 ansikte Q & A	1	Telefon mail 3 ansikte Q & A	1	Telefon mail 3 ansikte Q & A	1	3
	Provide information about partners	1 Footer	0	Partnerssida, bild och 0 beskrivning	1	1 footer, list	0	0 Landing page	0	Section, product 0 page	0	0
										Inspierande exempel från annan partner när det finns. - What you can gain.		
	Provide information for potential partners	Processen för partners, 3 telefonnummer, mail	1	What you can gain, process, telefonnummer, mail, face, law 3 mail, face	1	What you can gain, process, telefonnummer, mail, face, law 3 and regulation	1	Data på vinnningar, krav på partners, what you can gain 3 gain	1	Telefonnummer 3 + mail	1	3
Admin	Provide an easy way to add resources to the platform	Funktioner från produktsidan 5 möjlighet att ta bort, möjlighet att redigera	0	Funktioner från produktsidan 0 redigera	0	Funktioner från produktsidan 0 redigera	0	Funktioner från produktsidan 0 redigera	0	Funktioner från produktsidan 0 redigera	0	0
	Provide information about upcoming pick-ups and drop-offs	3 Lista	0	0 Lista	0	Lista och 0 kalender	0	Lista och 0 kalender	0	Lista och 0 kalender	0	0
	Provide information about storage status	Vad finns inne? Vad är 1 utlånat? (Lista)	0	0 Lista	0	0 Lista	0	0 Lista	0	0 Lista	0	0
	Provide information about previous events (exchanges etc)	3 Lista	0	0 Lista	0	0 lista	0	lista, compounded list (how many times has this thing been borrowed etc) 1	3 reviews	1	3	3
	View feedback from users	3 kopplat till varje produkt	1	Kopplat till varje produkt, kopplat till retur kulturs bemötande och 3 tjänst	1	Kopplat till varje produkt, kopplat till retur kulturs bemötande och 3 tjänst	1	Kopplat till varje produkt, kopplat till retur kulturs bemötande och 3 tjänst	1	event type, bildstöd, Beskrivande 3 text.	1	3
Provide information about terms and conditions	Provide information about terms and conditions	Terms & conditions, 5 rubriker.	1	Terms & conditions, 5 Bra rubriker.	1	Egen section m. försäkring, bra rubriker, lyft fram det mest relevanta. 5 relevanta.	1	5 footer	0	0 footer	0	0

	Provide information about insurance - what happens if something breaks, is destroyed or stolen.								Egen section, bra rubriker, lyft fram det mest relevanta. Ersättningskostnad för varje produkt + förklara vad en ersättningskostnad är.	5	1	5	0	0	0	0	0
Provide information about pick up and drop off	Provide information about time for pick up and drop off								Presentera en tydlig sekvens i bekräftelsemail och hemsida beträffande tid, plats, metod, personal på plats och allt det	5	1	5	0	0	0	0	0
	Provide information about location for pick up and drop off								Öppettider, telefonnummer	5	1	5	0	0	0	0	1
	Provide information about available transportation solutions								Adress, karta, bild på platsen	5	0	5	0	0	0	0	5
	Provide information about the pick up and drop off procedure	1				1				1	1	1			1		1
	Provide information about accessibility at the pick up and drop off location	1							Text, ringklocka på dörren	1	1	1	0	0	0	0	1
	Collect user feedback	3				1	3	Text	Info på hemsidan	3	1	3	1	3	0	0	3
	Provide the user with feedback after product return	3							Stjärnor, kommentarsfält, transportmedel, inte kunna låna igen innan man gett feedback	3	1	3	1	3	0	1	3
Provide the cultural actor with guidance	Provide suitable categorisation of resources	5							Fysiskt och digitalt kvitto med tydlig text för bekräftelse. + CO2 besparing	3	1	3	1	3	0	3	3
	Provide support to the cultural actor	3							Type of equipment/material, event, skill, hotline, user feedback (med ratat skillev)	5	1	5	1	5	0	1	5
	Facilitate reuse of handed out material	1							User cases, digital guide, workshops	1	1	1	1	1	0	1	1

Requirements for each item	Provide information about size	3 Mått		0	0 Mått	0	0 postnord	1	3 mått	0	0 mått		3
							Exempel från andra användare, publikstorlek, scenstorlek. Teknisk						
Provide information about intended use					Exempel från andra	1	1 specifikation	1	1 osv	0	0 specifikation	0	0
Provide information about compatability with other equipment				0	0 användare	0	Lista med länkar	0	Lista med länkar.	0	0 länkar	0	0
Provide information about recommended skill level				0	0 länkar	0	0 länkar.	0	0 länkar.	0	0 länkar	0	0
				1	1 Chilliskalan	1	Chilliskala plus förklaring	1	1 Chilliskala	1	1 Chilliskala	1	1
Provide information about previous events and user cases				0	Färgfält m. bokning, namn på den som bokar	0	Färgfält m. bokning, namn på den som bokar	0	Färgfält m. bokning	0	0 bokar	1	5
Provide pictures of the product				1	recensioner, input field för typ av event. 1 fotostöd	1	1 fotostöd	1	origin of the product (given by the opera etc.) Counter (har lånats 5 gånger t. ex.)	1	1 from reviews	1	1
Provide accessible technical specifications				0	taken picture from returkultur	0	taken picture from returkultur	0	taken picture from returkultur	0	0 from returkultur	0	0
				0	Understandable language, links on hard but necessary	0	Understandable language, links on hard but necessary	1	Understandable language, links on hard but necessary	1	3 words, youtube	1	3
Provide information about condition, deviations and cautions.				0	Remove all equipment that is not 100% working until fixed	0	Remove all equipment that is not 100% working until fixed	1	Returkultur updates "deviation" input field in the admin page. Pictures of deviations. User reviews	1	5 admin page	0	0
					notis till RK om någon bokar något över typ 1 månad så att man kan diskutera. (RK godkänner alla bokningar)	0	notis till RK om någon bokar något över typ 1 månad så att man kan diskutera. (RK godkänner alla bokningar)	0	notis till RK om någon bokar något över typ 1 månad så att man kan diskutera. (RK godkänner alla bokningar)	0	0 alla bokningar	0	0
Provide information about time limits				0	notis till RK om någon bokar något över typ 1 månad så att man kan diskutera. (RK godkänner alla bokningar)	0	notis till RK om någon bokar något över typ 1 månad så att man kan diskutera. (RK godkänner alla bokningar)	0	notis till RK om någon bokar något över typ 1 månad så att man kan diskutera. (RK godkänner alla bokningar)	0	0 alla bokningar	0	0

	Provide accessible manual and electric schematic		Provide the original manual	0	0	Provide the user with a special manual that is designed to work with markings on the product etc	1	3	Original manual	0	0
	Minimize errors during exchange	3	physical/digital receipt/inventory list	0	0	physical inventory list and returkultur stickers/markings on s + markings on parts	1	3	physical inventory list and returkultur stickers/markings on s + markings on parts	0	0
	Propose suitable way of transportation	1	Suggest transportation mean	0	0	Suggest transportation mean	0	0	Suggest transportation mean	0	0
	Display feedback from users	1	Stjärnsystem	1	1	Citat + bild, stjärnsystem	1	1	On product page	1	1
				15	47			26	76	22	63
				21	53						21
											69

Appendix G

Cognitive walkthrough

Culture actor: Getting to the digital platform



CW Landing page. Get in to the library

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y	They are not yet in anything resembling to a web shop and will look for the action to access the library.		
2. Will the user discover that the correct action is available?	Y	Highly visible colorful button visible on the start page, top and bottom.		
Will the user associate the correct action with the desired effect?	Y	The text indicates that you will get into the community by clicking the button.		
4. If the correct action is performed, will the user see that progress is being made?	Y	The page changes character drastically into something resembling a web shop.		

Culture actor: Filtering equipment library

När vill du låna?

Hämta (endast på vardagar):

Lämna (endast på vardagar):

Vad vill du låna?

CW Filtering system

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y	You are asked "What do you want to borrow" and when do you want to borrow". It indicates that you should borrow something.	If you are after material or education you might search for material in the search box.	Maybe you should have the ability to be directed to the section you are after already on the landing page. Although there might be problems with people looking for material in the equipment section, there is a pretty clear hierarchy in the top of the page.
2. Will the user discover that the correct action is available?	Y/N	There is enough information to understand that you should search for equipment on the equipment section (which is where you first end up)	If you are after material or education you might search for material in the search box och mix up "scenutrustning" with material, hence expecting to see material in the search	
Will the user associate the correct action with the desired effect?	Y/N	Users often want to search for equipment. The search function might be expected to look for material also		

4. If the correct action is performed, will the user see that progress is being made?	Y		The wrong action (searching for material on the equipment page) can lead to the wrong conclusions (that there are no materials in stock at the moment)	
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Culture actor: Booking process

< April 2019 >

Mån	Tis	Ons	Tors	Fre	Stängt*
1	2	3	4	5	6
Malmö Antenn					
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
29	30	1	2	3	4

Hämta:
Lämna:

Antal:
Lägg till i varukorgen

*All upphämtning och återlämning sker vardagar mellan 09.00-18.00 efter överenskommelse vid Returkulturs lager på Varholmstgatan 7 i Sandarna i Göteborg. Läs mer under [Att låna utrustning](#).

< April 2019 >

Mån	Tis	Ons	Tors	Fre	Stängt*
1	2	3	4	5	6
Malmö Antenn					
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
29	30	1	2	3	4

Hämta:
Lämna:

Antal:
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Mån	Tis	Ons	Tors	Fre	Stängt*
1	2	3	4	5	6
Malmö Antenn					
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
29	30	1	2	3	4

Hämta:
Lämna:

Antal:
Lägg till i varukorgen

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< April 2019 >

Mån	Tis	Ons	Tors	Fre	Stängt*
1	2	3	4	5	6
Malmö Antenn					
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
29	30	1	2	3	4

Hämta:
Lämna:

Antal:
Ändra Gå till varukorgen

*All upphämtning och återlämning sker vardagar mellan 09.00-18.00 efter överenskommelse vid Returkulturs lager på Varholmstgatan 7 i Sandarna i Göteborg. Läs mer under [Att låna utrustning](#).

CW Book equipment from product page

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y/N	The user might still perceive the blurred out dates in the calendar as if the equipment is booked over those days, hence not even trying to book it.	The fact that Returkultur is closed on weekends is represented in a confusing way.	No new information. We knew this area was problematic and have tried to make the best design possible. The testers understood, and even when they were unsure, they tested achieving the

2. Will the user discover that the correct action is available?	Y/N	They will get no errors if they try. If they don't try they might not.		right effect and succeed.
Will the user associate the correct action with the desired effect?	Y			
4. If the correct action is performed, will the user see that progress is being made?	Y	Each step gives visual response indicating progress has been made.		

< April 2019 >

Mån	Tis	Ons	Tors	Fre	Stängt*
1	2	3	4	5	6
Malmö Antenn					7
8	9	10	11	12	13
14	15	16	17	18	19
20	21	22	23	24	25
26	27	28	29	30	1
2	3	4	5		

Hämta: 2019-04-19 x Lämna: 2019-04-25 x

Antal: 1 ▼ **Lägg till i varukorgen**

*All upphämtning och återlämning sker **vardagar mellan 09.00-18.00** efter överenskommelse vid Returkulturs lager på Varholmsgatan 7 i Sandarna i Göteborg. Läs mer under [Att låna utrustning](#).

< April 2019 >

Mån	Tis	Ons	Tors	Fre	Stängt*
1	2	3	4	5	6
Malmö Antenn					7
8	9	10	11	12	13
14	15	16	17	18	19
20	21	22	23	24	25
26	27	28	29	30	1
2	3	4	5		

Hämta: 2019-04-19 x Lämna: 2019-04-25 x

Antal: 1 ▼ **Ändra** **Gå till varukorgen**

*All upphämtning och återlämning sker **vardagar mellan 09.00-18.00** efter överenskommelse vid Returkulturs lager på Varholmsgatan 7 i Sandarna i Göteborg. Läs mer under [Att låna utrustning](#).

Varukorg (1)

CW checkout

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y/N	There is a risk that the user think that the equipment has been reserved when put in the basket. However three actions have been taken to assure they won't. 1. The name of the button is not "reserve" but "Add to cart". 2. The button changes text when you add to the cart into "go to cart". 3. In addition, you get a notification that something has ended up in the cart so that you have two alternative ways of getting there, especially if you continue reserving equipment..	Usually the checkout when you pay something. When no paymeny is needed one might misunderstand it as if no checkout should be necessary either.	
2. Will the user discover that the correct action is available?	Y	The placement of the cart follows convention, and also the button adding to cart changes name to go to cart.		
Will the user associate the correct action with the desired effect?	Y	The process resembles one of an internet store combined with hotel booking, and people are very familiar with that concept.		

4. If the correct action is performed, will the user see that progress is being made?	Y	They are provided visual response for every action.		
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RETURKULTUR
Varholmsgatan 7
414 76 Göteborg
Sverige

ÖPPETTIDER
Måndag - Fredag
09:00 - 16:00

EMAIL
hej@returkultur.se

TELEFON
0730 - 51 44 51

Vår vision
Att låna utrustning
Att återanvända material
Partners
Användaravtal och försäkring

RETURKULTUR
Varholmsgatan 7
414 76 Göteborg
Sverige

ÖPPETTIDER
Måndag - Fredag
09:00 - 16:00

EMAIL
hej@returkultur.se

TELEFON
0730 - 51 44 51

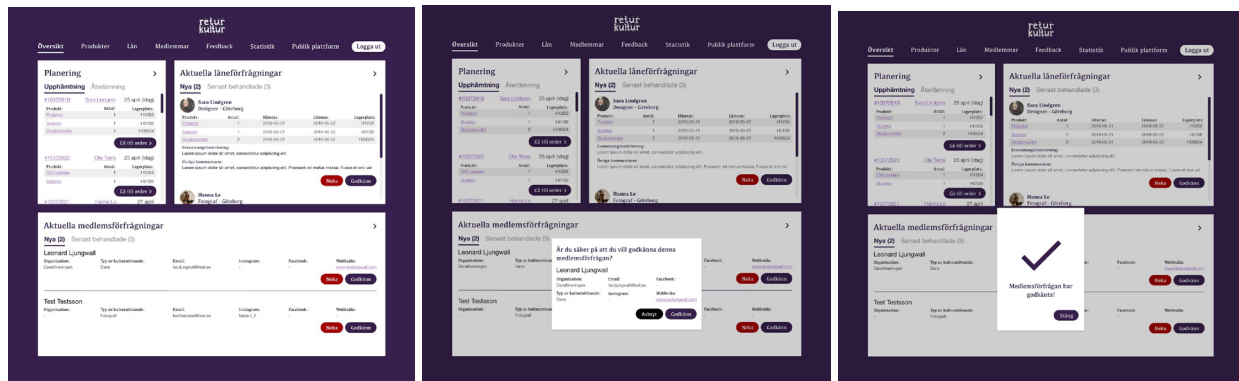
Vår vision
Att låna utrustning
Att återanvända material
Partners
Användaravtal och försäkring

CW Reviewing the cart

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y	Follows the convention of confirming an order.		Error message when trying to click button without having filled out obligatory fields.
2. Will the user discover that the correct action is available?	Y/N	There is a button that is greyed out until you have filled in the entire form. It is not very visible and the contrast is low when being "inactive".		Make the text white when greyed out so that it is readable even for visually impaired. (Google material design have even lower contrast in

Will the user associate the correct action with the desired effect?	Y/N			their design guidelines so we will settle with this)
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Admin: Approve reservation/membership request

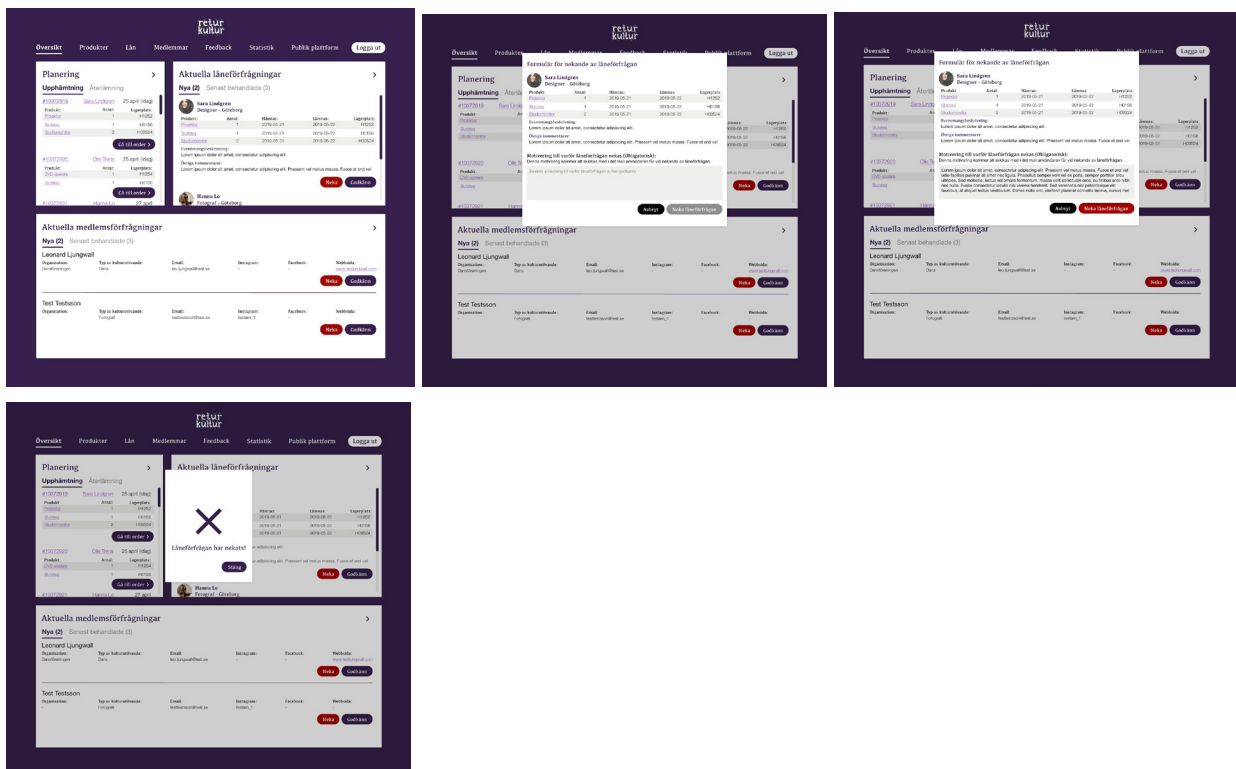


CW Approve reservation request/membership request Admin

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y	The heading of the section in combination with the button "Approve" makes it clear.		During this process the user is first guided by the section heading and buttons. After that the user will be asked to confirm this action while being able to see the request again. This eliminates the need to exit and view the request again. When approved once again, the user gets a proper confirmation that that is done.
2. Will the user discover that the correct action is available?	Y	--II--		
Will the user associate the correct action with the desired effect?	Y	When pressing the approve button the user will see a confirmation dialogue asking the user to confirm the approval. The request is then		

		showed in relation to this question and the user can if they want reconsider their decision. If this is done they will get another dialogue confirming the approval.	
4. If the correct action is performed, will the user see that progress is being made?	Y	The approval is confirmed by a confirmation dialogue and the request is deleted from the “new” list and added to the “recent handled” list.	

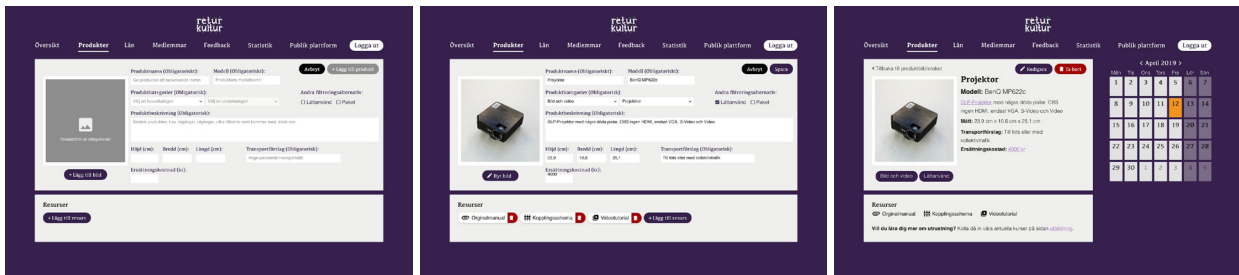
Admin: Deny reservation/membership request



CW Deny reservation/membership request Admin

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y	The heading of the section in combination with the button "Deny" makes it clear.		During this process the user is first guided by the section heading and buttons. After that the user will be asked to confirm this action while being able to see the request again. This eliminates the need to exit and view the request again.
2. Will the user discover that the correct action is available?	Y	-- --		
Will the user associate the correct action with the desired effect?	Y/N	When pressing the deny button the user will see an dialogue with a form where they have to enter a motivation behind the denial. This motivation is required. If not entered they can't continue the process, which for some could create confusion.	The motivation box might be skipped over, even though it says "required". The "deny"-button is greyed out, but some could still try to use it. This would have to trigger an error message!	The form with a motivation could create confusion do to it being required. Progress can't be made unless filled in, indicated with greyed out button, (required)-text and error message.
4. If the correct action is performed, will the user see that progress is being made?	Y	Yes, the deny is confirmed by a confirmation dialogue and the request is deleted from the "new" list and added to the "recent handled" list.		When approved once again, the user gets a proper confirmation that that is done.

Admin: Form, add product



CW Add product form Admin

	Y/N	Why?	Problem	Notes
1. Will the user be trying to achieve the right effect?	Y	The form states clearly what information that can be added.		Required fields and photos could create problems. If not filled in no progress can be made. If pressing the greyed out “add product button” the user will get error messages above missed information.
2. Will the user discover that the correct action is available?	Y/N	In the form all fields have labels telling what could be added and most of the actions should be detectable.	Some fields are required, could be missed. The photo is required as well and this is only mentioned in the placeholder picture, could be problematic.	
Will the user associate the correct action with the desired effect?	Y			
4. If the correct action is performed, will the user see that progress is being made?	Y	Yes, a product page will be created and shown.		