Who are we developing for?

IDENTIFYING THE USERS AND THEIR NEEDS FOR THE VIDEO STREAMING SUPPORT SERVICE “STREAMINGKOLLEN”

ELMA MAKSUMIC
Vem är det vi skapar för?
Identifiera och förstå sig på användarna till videostreamingtjänsten ”Streamingkollen”
Sammanfattning


I den här rapporten har data samlats in genom intervjuer gjorda på en tillfällig användargrupp, efter intervjuerna har all data delats in i olika segment baserat på likheter mellan användarna. Efter att segmenten var skapade så skapades det också Personas, en för varje segment som hittades. Personas skapades för att göra användardatans lättare att ta till sig och förstå sig på. Genom att skapa Personas slogs de olika upptäckterna om användarna samman och det skapade en enhetlig bild av användarna.

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Who are we developing for?
Identifying the users and their needs for the video streaming support service
“Streamingkollen”

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Abstract—It has become more and more important for creators of technical services to know whom they are designing for so they can satisfy their customers. A way to satisfy the customers is to include a User Experience (UX) process in line with the creation process of the service. To create a good UX for the users one firstly needs to identify and understand the users. This thesis has investigated how the use of Personas can facilitate the understanding of the user in the context of User Experience (UX). A Persona is a fictive person that is a representation of a user group. A Persona is created with the objective that through the connection of the user goals, attitude and behaviours one can truly understand the users from an UX perspective. This thesis is creating Personas for a service called Streamingkollen. That is a service with the goal to help users with problems they have, connected to Video on demand (VoD) services. A video on demand service is a service that allows the users to watch videos whenever they want. Netflix, SVT play, HBO Nordic, TV4 play, are some examples of VoD services.

The user data was collected through user interviews on predetermined users and then segmented into different user groups”[2]. Personas were created, to make the different user group more realistic and easier to communicate. The different findings about the different user groups was put together as a story about one person (representing the user group) with a name, family, a job etc., and different characteristics that reflected the user group.

The result is presented in three found user groups. The user groups were put together with different elements thanks to the segmentation and Personas. The segmentation made it possible to identify what causes the different needs that the users had when wanting support with a technical problems connected to VoD service and how these needs could be satisfied. The Personas translated the user data into stories so that the findings about the users were easier to understand and adapt to. The role Personas play in the UX process is that without the comprehensive picture that is presented in the Personas and created data gathering and segmentation, it can be hard to identify the users needs and how they can be achieved.

Index Terms—User Experience, Personas, User research, Streamingkollen

I. INTRODUCTION AND BACKGROUND
You wake up late for work, put on some coffee and struggle to get dressed. When you are going to pick up your coffee there is no coffee in the pot and you have no time to figure out why. Leaving the building you have your hands full. To open the front door you must turn the lock and at the same time push the door. To succeed with the procedure you need to put down some things on the floor. Once the door is open you need to hold the door with your body so it does not close and locks again and simultaneously you need to pick up your stuff from the floor. This whole situation makes you very frustrated.

The struggles in this short story are not because of bad luck or that things happen in life, and it is not because the coffee machine and the door are broken. The reason why this struggle happens is lack of attention to the User Experience (UX). UX can be described as: “User experience is not about the inner workings of a product or service. User experience is about how it works on the outside, where a person comes into contact with it.”[1].

UX is very complex and nothing that can be achieved only through good inner workings of a product, or something that can be applied after the service has been developed. UX is about understanding the users and creating a service for them instead of creating a service and hoping that the users will like it or understand how to use it. It is important to know that a product can smoothly accomplish what it's meant to achieve, but that doesn't mean that the user knows how to do it or will appreciate how it’s done [2]. This is what has happened in the example that was just told, the inner workings of the door and the coffee machine are working but the UX for both of them is bad. Looking closer at the struggles in the example, there are simple design solutions based on knowledge about the users that could have avoided the struggles.

The pot had no coffee in it because the person pressing down the power button did not notice that he/she never did push the button down all the way. This situation could have been avoided if the coffee machine had a built in feature that notified the user that the power was on, like a sound, a light, or click. The situation with the door happens because two things must be done at once. In this specific situation the constructors of the building knew about the problem and had created a button that unlocked the door. So instead of turning the lock and at the same time opening the door, one could first press the button and then open the door. That prevented people from doing two things at once and from having to put down things on the floor. In this case the unlock button was placed badly so no one knew that it existed and the struggle remained.

When products are being developed, people put a lot of
attention to what the product does and forget to look at how it works [2]. In the examples people focus a lot on making sure that the coffee machine makes coffee and that it is possible to open the door, people makes sure that the goal of the products are achieved. What developers then forget about is how do the users (who the products are intended for) want the goal to be achieved and what is affecting the users goal. This is what makes UX so complex because how people want their goal to be achieved through a product/service and what is affecting the goal lies in the understanding of users in the context where they will use the product/service and not how good the inner workings of a product is [1]. This example might seem simple and not that essential but with the technical environment that we live in, where the number of different solutions on the market for the users are increasing in pace with the users’ requirements, this is no longer just a simple example. Users have gotten the ability to choose the service they like the most and that they are mostly satisfied with, which has made designing for the users and achieving a good UX crucial when to sussed with a product/service. To successfully designing a service and achieving a good UX is much easier if the creators of the service know whom they are designing [3]. Therefore this thesis is going to be about understanding and identifying users with the goal of achieving a good UX.

This thesis is going to use the UX method Personas in order to find and understand the users of a service that is in the development phase. The service is called Streamingkollen and is developed by the research institute Acreo in collaboration with Lund University. The service is similar to the already existing service bredbandskollen.se but for VoD services. Bredbandskollen.se is a service that helps to measure the speed of peoples broadband and gives the users an automated answer if the speed is accurate or not. Streamingkollen is going to be built on the same concept, were the user can easily identify and understand their technical problem regarding VoD services and this will be done automated with out any human contact. However understanding a technical problem regarding VoD is very complex and therefore the content on Streamingkollen will not be the same as on bredbandskollen.se. The goal with Streamingkollen is to provide VoD users with data and information so they can know without being tech-savvy if there is something wrong with the VoD service that they are using.

The focus will be to do a user research and then create Personas to find out how this facilitates the understanding of the users and what role the created Personas have in the whole UX process. The problem statement for this thesis is:

1. How can Personas facilitate the understanding of the user in the context of user experience?

This thesis will try to identify and understand the users for the service Streamingkollen. Since Streamingkollen is in the development phase it is also very interesting to see what role the created Personas plays in the UX process. So when the Personas are created the result will be analysed to get an understanding of its importance throughout the UX process. The following question will therefore also be answered.

2. What role does Personas play in the creation of a good UX for the video streaming service “Streamingkollen”?

II. THEORY

How to achieve UX

“User experience encompasses all aspects of the end-user's interaction with the company, its services, and its products.”[4]. UX is like stated about all the aspects of the end-users’ interaction with a service and that can be everything from a making sure that the content on the service is wanted from the users this is called utility [5], that they know how to uses the service, which is usability [5] and it is also about understanding the underlying feelings that can impact the users when they are at the service. That can be everything from the users technical skill, if they use the service while they are short on time, etc. [6]. All this things just mentioned couldn’t be applied on the service at one occasion it must be implemented and thought of along the whole design process, because UX is about understanding and including the users in every step along the design process of a service [6].

To achieve good UX there are different methods to use. Hartson & Pyla [1] build the User Experience through four elements. Analyse, Design, Prototype and Evaluate. Analyse is to understand the users work and needs. Design is to create interaction design concepts. Prototype is to realize design alternative. Evaluate is to verify and refine interaction design.

Garrett [4] uses another approach with five steps The Strategy, The Scope, The Structure, The Skeleton and the Surface. The Strategy is a way of finding the users needs and what the company wants to achieve with the product. The Scope creates functional specifications and content requirements from the strategy plan. The Structure, from the result of the Scope a structure is created on the software side. The Structure is achieved throughout interaction design and the arrangement of content elements. The Skeleton, presents information in a way that it is understandable and users can interact with the functionalities of the system. The Surface plan is all the visual design that the user sees.

Hartson & Pyla and Garrett methods are just two examples, others methods can be Design Thinking or User Centred Design. All this methods have the same goal, which is to achieve a good UX for the users when they are at a service or using a product, but they all have different way of achieving it. One UX method dose not eliminates the others because there is not one UX method that fits every design process. Design processes are different depending on what type of service or product that is being developed, and the choice of UX method should be based on the design process. All methods have however one thing in common and that is that the first steps in all the methods are to identify and understand the users. The knowledge about the users plays a fundamental role in achieving a good UX because the knowledge found in the first step is the knowledge the rest of the process is based on [7]. The most common reason for failure with a service is not because of the technology or lack of usability it’s because nobody bothered to ask what the users want. That’s why the first step in achieving good UX is to identify the users. So before any line of code can be written, the first button designed, or the first service installed, knowledge about the users needs to be found and understood [6].
Data gathering
The first step in understanding the users is to gather data about them. Data is gathered in order to find the users’ goals, attitude and behaviours [6]. The users’ goals are the reason why the users communicate with you in the first place (Communicate in this context can also mean interacting with your service). The goals help to answer why the user has come to the service and what he/she wants to do. The users’ attitudes reveal how the users perceive themselves. Depending on the perception there are different ways to communicate with the users. The way you help someone that for the first time tries a technical service and someone that is using the service for the 100th time should be different. Various factors can affect the user, like age, gender, previous experience, etc. The behaviour can reveal more about people than what they say about them selves. By studying the behaviour you can find out where the users might be having problems, which is not necessarily the same as the problems that users say that they have. You can also find out how they use the service and by that know how to shape it [6].

To gather this data different methods and techniques are available and once again it depends on what type of service or product that is being developed. One method does not fit all so when choosing method one must be open and try the technique or method that is most suitable for the specific case, and not forget to be creative [6].

In addition to these three things mentioned above there are other important factors that are good to take into consideration when trying to understand the users. For example people’s acceptance of new technology, that Venkatesh, Morris, Davis & Davis [6] talks about. They have a theory called “Unified Theory of Acceptance and Use of Technology (UTAUT)” it addresses factors that impact the users’ intentions and behaviour most when accepting a new technology. They have found four main impact factors.
1. Performance Expectancy- the degree to which an individual believes that using the system will help him or her to attain gains in job performance.
2. Effort Expectancy- the degree of ease associated with the use of the system.
3. Social Influence- when an individual perceives that important others are using the new system and/or believe he or she should.
4. Facilitating Conditions- the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system. For example an online clothing shop has an easy way of returning clothes that does not fit.

These four factors impact the users’ intentions and behaviour the most when accepting a new technology. This information can be very important for companies that are developing a new type of technical service. Depending on what is being developed, different factors will be of different significance. In some cases what impacts the users needs might be the way the users accept new technology or the number of features on the web site, or it is both of them. Therefore it is important to look at different additional factors to the goals, attitudes and behaviours to identify the users needs [8].

Segmentation
During the data gathering the goals, attitudes, behaviours and other facts about the user are found. The next step is to understand the found data. To understand the data one can segment it based on similarities among the different users. Segmentation can be done on the users goals, attitudes, behaviours, age, gender etc. [6].

The segments should be based on similarities among the users. If a similarity is found it is important to validate however other needs that the users have on the service also are the same, to make sure that people belonging to the same segment, wants the same type of service. For example a coffee machine maker sees that there is a big target group that has the same drinking habits and they have the same service need that is; that the coffee gets brewed very fast. But when looking again the coffee machine maker realised that among the target group of people some were single households that wanted a small machine that didn’t take up space, the ones that was not single households lived with three or more people and they wanted a coffee machine that was big so they could brew coffee to all the people in the household at once. If the coffee machine maker had segmented that people want the machine to brew the coffee fast she/he would have not satisfied the target group.

When doing segmentation it is important to find similarities among the users needs. It is also equally important to after a similarity is found too look for other similarities among the found user group to validate that they actually want the same type of service. To avoid the example above to happen the found data needs to be looked at over and over again. It can also be good to communicate with some one belonging to the found user group to validate if the findlings are accurate it [6].

Personas
After the segmentations are done the different segments become user groups. To make the user groups easier to understand and more adaptable Personas are created. A Persona is a fictive person representing a group of people that have similar goals, attitudes and behaviours [8]. The Personas can also be based on a real person in the user group [7]. Instead of just presenting the user group as data the different similarities among the user groups gets connected and then presented as life stories of a person’s life [9]. This turns the user groups into a real person that is easier to understand and adapt to. The Personas are not just the similarities that are found they are also a user profile with a name, employment, interests, goals, attitudes and behaviours etc., written down on maximum 2 pages to make them come even more alive [10].

When making the user data come more alive and be easier to adapt it becomes a way of preventing people from making their own assumptions about the users. Why it is so important is because one common mistake when services are being developed is that creator/designers base their users facts on how they think the users are, or in some cases they even think that they are the users, instead of going thought the actual user data. The end result of that service is then based on that company’s perception of the users a not on the actually users. If
the company are lucky the user will like the product, but in the common cases they won’t [11]. It takes a lot of time to go through user data and additional time to understand it. Instead of reading the entire material people will most likely create his or hers own vision and no one wants that to happen. With Personas the creators of a service don’t need to go through all the user data, they can just read the Personas [6]. But even if everyone went thought the users data instead of making their own assumptions there is still a chance that the users would be dissatisfied with the end product. When Personas a comprehensive picture about the users is created which is not the case with only the user data. When people go thought the users data they need to make their own analyse to create the comprehensive picture. This can lead to people having different visions of how the users are and therefore people working on the same service creates it for different users [12].

It is really good to know the users but the user data in itself does not bring any value. When a company develops a new service the user data must be used from the other departments in the company. Otherwise there is no need of doing a user research. By using Personas in the development stage it emphasizes the needs of the users, something that often gets lost and the Personas is a tool to make it easier to communicate the users needs along the whole process [13], [14], [6], [15].

III. METHODS
User research
To understand the users better and create personas it is better to interview a less number of people and truly understand them, than send out a survey and get wide and open answers from 100 people [1]. That is why user interviews were chosen as the method to collect user data. To make sure that no information gets overlooked it is recommended to interview 4-5 people for every target group (Personas) that is found [1].

Before the interviews could be made, a temporary user group needed to be defined to know who to interview. This was done with some help from Kjell Brunnström at Acreo that is in charge of the creation of the service Streamingkollen and Ingrid Larsson that is creating an interface for Streamingkollen. The temporary user group became everyone that was in the age spam of 18 and older and that used VoD services. The temporary user group also got divided up based on age, technical skills and gender. The reason for dividing up in gender was to see if there was a difference between the genders. Streamingkollen is a service that should help the users with technical problems and that's why the participants were divided up based on technical skills. The age division is because the people between the ages of 18-35 are a generation of people that has grown up with technology and therefore the different age groups were created [16]. The target group was therefore divided up in two age groups with people between 18-35 and the other between 36- and older. Totally 16 people were interviewed, 8 people in every group. The total number of interviewed females was equal to the number of males. In the group of 8 people there were as many females as males who were tech savvy / technically ignorant.

To get the most out of the interviews it is better to let the participants speak freely about the specific subject. The duration of the interviews can be different, because during the interviews one can realize that some participants are more important for the research than others. So it is ok to ask different questions and have different long interview [17]. Therefore all the interviews were not the same.

When creating a new service just like Streamingkollen the reason for the user interviews is to identify the problems that the service should solve, and then after the interviews one can come up with a solution. Without identifying the problems, the solution cannot be made. Therefore during the interviews one should not ask the users what solutions they would like in the future or if they would consider using a specific service. What should be done is trying to understand the users, identify where they have a problem and what is causing it [18]. The questions in the interviews were therefore based on identifying the participants’ goals, attitudes and behaviours when they were faced with a technical problem regarding VoD services. Regarding what questions that were asked during the interview there was a few standard questions that every participant got asked, the rest were based on the answers that the participants gave.

Segmentation
After the interviews were done and transcribed the data got segmented. How the data should be segmented is very dependent on the specific case. Creating personas is a way of understanding the users from as many angles as possible [2].

Segmentation in this thesis started off by trying to identify similarities of the participants’ goals, attitudes and behaviours. If a similarity was found among a group of people, then the rest of the information about them got matched together to see if this group of people had more than just one similarity. Over and over again the user data was analysed to find different user groups that had as many similarities as possible. In many cases different participants had one similarity but when looking at them from many different angles, it could be noted that the participants were not similar at all. After the segmentation three different user groups were found.

Personas
After the user groups were found in the segmentation, Personas were created. They were done to get deeper understand of the findings, like what differentiated the different user groups, why a user group acted in a specific way, what got them upset, etc. [1]. The different user groups’ goals, attitude and behaviour got connected and written down like real life stories. In addition to this, other elements or characteristics got added to make the user data easier to understand.

IV. RESULTS
User groups
Of the 16 interviews conducted, 14 of them could be used. One woman and one man at the age 59 and 56 were the two participants that could not be used. These two participants had used a VoD service but very rarely and had never done a
troubleshooting. Out of the result from the 14 interviews that could be used, three different user groups were found after the segmentation. In the result below there are two different participants were two different participants in the group, still have been placed in the same user group.

General information about the three user groups can be found in the table, all conducted information can be found in the appendix.

<table>
<thead>
<tr>
<th>Group Description</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>They were not that tech savvy and were in the age between young adult and middle age</td>
<td>Age: 37 &amp; 24</td>
<td>Age: 23, 27, 35 &amp; 42</td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mix genders and very tech savvy young adults</td>
<td>Age: 22 &amp; 26</td>
<td>Age: 25 &amp; 27</td>
</tr>
<tr>
<td><strong>Group 3</strong></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>This was an older user group and all of them were very tech-savvy for their age.</td>
<td>Age: 45, 59 &amp; 63</td>
<td>Age: 52</td>
</tr>
</tbody>
</table>

| Table 1: User groups in the study |

The result from the interviews and the segmentation will be presented together. This is the result of the different participants' goals, attitudes and behaviours that they have when they are faced with technical problem related to VoD services.

**Result from the interviews and segmentation**

1: **Attitude when a problem occurs**

People's attitude when a technical problem occurred was different depending on the participants' technical skills.

Group 1 that were not that technically skilled and had no interest in learning new technology said that they got very frustrated when a problem occurred. Independently of how simple the problems were the fact that there was a problem got them frustrated.

Group 2 and 3 was all very tech savvy and did not get frustrated when a problem occurred. They said that often the problem was easy and fast to solve so there was no need for frustration just because there was a problem.

2: **Attitude towards solving the problem**

People had different ways and reasons for solving a technical problem related to streaming services.

Group 1 said that it was frustrating to solve technical problems and that they were more likely to work around a problem, than solving it. They would rather have looked at a video streaming in bad quality then spending time and effort to solve the problem. If they needed to find a solution to the problem, they often found a solution that worked for the moment and not in the long run.

Group 2 said that they solved almost every technical problem that occurred. They didn’t find it difficult or straining to fix a technical problem and when they did a troubleshooting they made sure that the problem was solved and they learned how to prevent it from recurring in the future.

Group 3 took care of the problem primarily because it was their duty in the household. They said that they did not fix every problem that occurred right away, only if the problem kept coming back. When they were to solve a problem they always set aside time to make sure that the problem was properly solved, so that it would not come back in the future.

In addition to this information the result showed that all the participants’ main reason for watching video streaming was for entertainment. The result also showed that group 2 that solved a technical problem with the streaming service right away had VoD services as their primary source of entertainment. Group 1 and 3 had other primary sources of entertainment like regular TV, read a book etc. and they would more likely do something else instead of solving the problem right away.

3: **The device they are using**

Group number 1 complained a lot about the device they used for watching VoD. They said that the device was slow, needed to be updated all the time, had viruses, the web browser crashed, etc. When asked what they did to avoid or fix the problem they said that the problem was too technical for them to solve or that the device they had bought was no good. They also said that they had gotten help to solve problems on the device before, but that new problems always turned up. The rest of the participants that were all technically skilled did not complain about their devices.

4: **The users’ demands on the services and when they complain**

When the participants talked about how seamlessly a service should work, they all said that they had different demands depending on what type of service they were using and if they were paying for it. Most commonly the participants complained to their broadband provider. The reason why they complain was because they presuppose that the Internet connection should work, and not that the broadband provider most commonly had problems. They all had higher demands on the broadband providers compared to other technical companies/services. The participants said/explained that the most common problem they had with a VoD service was unknown temporary problems that got solved the next hour, day our week by the VoD service. This type of problems all the participants accept and wouldn’t complain about until the problem was regularly coming back or not disappearing after a long time.

User group 1 said that if some program on a VoD service didn’t work one day, even after they had tried some simple solutions like checking the Wi-Fi signal, reloading the page etc., they would in most cases change to another service or download the program. The next time they wanted to watch the same program they would not return to the service that did not work the last time. Even if they knew that the other service had a better quality they thought that it was not worth the time and risk that is wouldn’t work the second time. If they were paying for a VoD service that didn’t work, they would just quit the
subscriptions without complaining to the company or trying to fix the problem. They would however complain about the service to people in their surroundings.

User group 2 was very well aware of what they could expect from a VoD service to deliver. If a service promised more than it could deliver this user group would cancel their subscription, especially if they are paying for it. Not only would they cancel they would also complain to the VoD service. They didn’t get angry if there was a temporary technical problem that the providers could not control. They would get angry if a provider of live sport sold the rights to 200 people when the service only could handle 100 viewers at the same time. This type of problem was not a temporary technical problem it was a problem that they knew would happen and ignored it.

User group 3, typically used products and services from companies that had been on the market for quite some time and that they trusted a lot. They didn’t like to change providers of any service so if there were a problem that kept coming back they would complain to the company and make sure that the problems got fixed. This user group described themselves as very trustworthy customers and was very likely to stay at one company for a very long time. In return however they had very high demands that things should work and that if a problem occurred they would get the help they needed.

5) How people search for help
When the participants had a problem with a streaming service and needed to do a troubleshooting, the result showed that there were two steps that the participants went through. In the first step the participants tried out different solution that they knew could help to solve the most frequent problems. Since this step was based on the participants’ previous knowledge on how to solve a problem with a streaming service the duration of the troubleshooting and number of tried out solutions was little different among the participants. The most common solutions that the participants had tried was reloading the page, checking the Wi-Fi signal, turning off and on their router, computer, phone, etc. If the participants couldn’t solve their problem with the help of only their previous knowledge, step two in the troubleshooting had to take place. Step two required that the participants took action to read Frequently Asked Questions (FAQ) pages etc. to be able to solve the problem. Step two was therefore in almost every case more challenging than step one. All the participants’ said/described that the level of frustration was much higher in step two then in step one. The participants attitude on how they wanted to carry out step two and why was different among the participants.

Group 1 really hated when they realized that they needed to take step two in the troubleshooting. They were more likely to refrain from using a service or watching a program then have to use their intellect to solve a problem. If they did step two in the troubleshooting they chose solutions that requires as little intellection from their side as possible. Solution they liked was to call the customer support or send in a question/use a chat function, this kind of solutions were preferable because with them the participants got help with their specific problem. If they had used the FAQ or Google instead they would have needed to read through a lot of questions and answers that was not related to their problem.

Group 2 had a big interest in technical things, when they searched for a solution to their problem they only did it at very advanced technical forums. Many times when they were at a technical forum trying to find a solution to their problem, they also found themselves reading and learning something new about other technical solutions. This group of people said that they knew that the FAQ existed but that they had never used it because they thought that the questions asked and answered under FAQ was too simple for their problems. The solutions that were given under the FAQ were solutions this group of people already knew about and had tried.

Group 3 first identified if the problem they had was related to their computer, the web browser, the streaming service, the broadband provider, etc. When they had identified where the problem was, they used that specific service/product’s customer support. Most common tools that this group of people had used at a customer support were the FAQ, mail a question, use a chat function or call them. This is a group of people that was very technically skilled but with a low interest in learning new things about streaming support. When they reached out for help, they wanted to know why the problem happened and how to prevent it from happening again. They have no problem reading about a problem that they had a context to.

6) Location of the problem
When the participants talked about problems that they had with a streaming service, they talked about two types of problems. One type was when something was wrong with the streaming service and every user experienced the same problem. In that case the problem could only be solved by the streaming service, and the users could not do anything else then just wait. The other problem was when the streaming service did not have any problems but some users were still unable to use the service without problems. In this case the affected users needed to identify and search for help/solve the problem.

The participants said that they had many times waited for the problem to solve itself (for the streaming service to solve it) when they instead should have acted immediately and solved the issue right away. They all knew that if they just called or sent a message to the streaming service they would with help from them been able to locate the problem, but all of them tried to avoid doing it. Their main issue was therefore not to identify the problem; it was that the only option on how to identify the problem was not adapted to the users’ needs.

Personas
With the result above and the Personas were created. Below are the three different personas. After analysing the three different Personas and based on the information in them the "The social worker that does not like technical problems” that is described below was chosen as the primary user group. This was based on the number of users that could be satisfied at once and that this user group was very likely to use this kind of service that Streamingkollen is going to be.
The social worker who do not like technical problems

Name: Christopher Eriksson
Age: 37
Profession/Occupation: Social worker.

Family: He has a girlfriend that he has been with for 12 years. Recently moved back to his hometown because his girlfriend got a job there.

Activities: During the weeks besides going to work he sometimes exercises afterwards with his girlfriend. On the evenings before going to bed they usually watch regular TV. If he is home alone he usually watch something randomly on a VoD service.

Within household: If a problem occurs he usually ignores it and hopes that it is gets solved over time.

If a problem occurs he usually ignores it and hopes that it is gets solved over time.

He would just quit an account without complaining if he was dissatisfied.

Facts

- Not that interested in technology.
- His girlfriend takes care of technical problems that occur in the household.
- Are more satisfied with bad video quality then having to go thought a troubleshooting.
- Are more likely to work around/postpone or do something completely different then solving a problem properly.
- If a problem occurs he usually ignores it and hopes that it is gets solved over time.
- He would just quit an account without complaining if he was dissatisfied.
- He thinks that his computer often is the problem and he thinks that he is not technical enough or is even willing to invest the time to fix it.
- He thinks it takes to much time and effort to read companies FAQ or Google to find the answer to his problem.

Will not be frustrated:
He will not get frustrated if he needs to wait someday for the problem to get fixed or for an answer on how to solve the problem, as long as the problem get’s solved and he needs to do as little effort as possible.

Will be frustrated:
He thinks that there are so many different reasons why he might have a problem, so there are just too many things to go through. Even if he knows that restarting the computer will help with the problem. He also knows that he just might end up waiting for the computer to restart and in the end realize there is yet another thing that he needs fix before the problem can be solved. He knows that all of this is just the effect of his laziness where he works around/postpone the problems. He simply wants things to work. He will also get very frustrated if he want’s to watch a program that is 20min long while he is eating, and the time it takes to solve the problem is longer then the actual program that he wanted to see.

What would make his life easier?
His life would be easier if problems that he was having got solved with as little effort from him as possible. He can take the time to solve a problem as long as he knows that the things that he is doing/reading about will in the end solve the problem. If he follows a guide and at one step he realizes that the guide is for a PC computer and he is having a Mac he will stop trying. Or if the guide wants him to press a button and he needs to Google himself to find that button on his computer, he will most likely stop trying to solve the problem.

A good user experience:
His friend once came over and sat with his computer for one hour and installed a lot of nice things and helped him with a virus that he had. After this his computer worked very well for a longer time period.

Different reactions in different situation:
If he is alone and just wants to watch something quickly and there is a problem he will not try to solve it. If he and his girlfriend have a TV program that they are following every week and one day that’s not working. They will try to solve the problem or look for other options. If he has downloaded a movie and he uses some of his older programs like VLC or quick player to watch it. He will put in more time if there is a problem. These programs he is familiar with and trusts more. He thinks that if he just put in time the problem will be solved which he don’t think about VoD services.
The family man that takes care of the IT in the household

Name: Bengt Larsson
Age: 57
Profession/Occupation: Integration coordinator
Family: Wife and two children that both have moved out.
Lives: In a townhouse in a small town in Sweden

A regular week: During the weeks he is going to his work, where he is from 8-16:30 every day. When he comes home after his work he usually cooks some dinner and prepares lunch boxes for the following day. Before he goes to bed he and his wife watches some series on SVT Play (a Swedish video streaming service).

On the weekends he spends a lot of time watching live sport, especially football premier league. The rest of the weekend he is usually with his wife strolling in the city and/or stopping for coffee at some coffeehouse. At the evenings, if they don’t have friends over, they usually watch television.

Facts:

- Tech savvy.
- In the household he is the one buying and taking care of the technology.
- Rather spend extra time properly solving a problem than coming up with a temporary solution.
- When he realizes that he needs to take action and solve a problem he does it right away and does not postpone it.
- He is a loyal costumer and will contact the companies if he feels that there is something wrong with the service. They can then together solve the problem.
- He likes to use services costumer support when he is having a problem.
- He often waits and hopes that the problem will disappear in the future.

Will not be frustrated:
When there is a regular problem with the VOD service and he knows that the problem can be solved right away, by simple solutions like reloading the webpage or turning the router on and off.

Will be frustrated:
When the problems that he is having cannot be solved right away by simple solutions. If this happens he just assumes that some service is having a temporary problem and therefore he just waits and hopes that the problem will be solved. The reason why he waits is because he has got it proven that problems most of the time will dissolve if he just waits. In the past he has put in time and effort to find where the problem was located, and then contacted the service customer support. They then told him that they were having problems for the moment. That they were working on it and that there was nothing that he could do.

What would make his life easier?
His life would be easier with a service that is helping him to identify the problem. He hates it when he waits for a problem to be solved and then after a while realized that if he just had contacted the customer support right away the problem would have been solved.

A good user experience:
He once had unplug his router and by accident tipped it over so a button was pressed. When he then later that day connected the router again it didn’t work. He had got the router from his broadband providers so he decided to contact them and ask what the problem could be. By phone he got in contact with the broadband providers very easy and fast. They located the problem and told him that his router was having problems. They saw that a button on the router had been pressed and if he just pressed it again the router should work just fine again, and it did. He also took advantage of having them on the phone and asked if they could help him change the name and password to the router, and they could. He was very happy with the whole experience.

Different reactions in different situation:
If he and his wife were just watching something randomly that he found on the VoD service and that was not working he would just try some other VoD service or they will do something else. But if he had waited a week to see the next episode of a specific program or wanted to watch live sport and that did not work he would get very frustrated. When he is used to something working and then it don’t he will get very frustrated. The most common problem that he experience is when he has bought some new technology. Like an Apple TV for example, then he usually is having problems in the beginning to understand how the technology works and how to make it work smoothly.
The student with big interest in technology

[20]

Name: Anna Karlsson
Age: 24
Profession/Occupation: Engineering student
Family: Single
Lives: Lives in an apartment by herself.
A regular week: During a regular week she is going to school where she has most of her friends. One friend that she studies with lives in the same area as her. The two of them usually watch some Swedish reality show once a week on a VoD service. If she has an exam she spends the weekends studying other wise she usually goes out and does something fun with her friends.
Facts:
• Very tech savvy.
• Loves when she learns something new about technology and that expands her knowledge.
• Find help to her problem through Google.
• Only uses very technically advanced pages when she searches for help.
• FAQ are too simple for her problems.
• Know what she can demand from services.
• Will complain if a service is not delivering what it has promised.
• If she is having any problems she can fast identify and solve them.
Will not be frustrated:
If there is a temporary problem with the VoD service and that get’s fixed very fast.

Will be frustrated:
When he is doing a troubleshooting and then in the middle of it she realizes that there is a problem with the VoD service (or some other service) and that there is nothing that she can do about it. She gets frustrated because she would have wanted that information direct before she started the troubleshooting so that she did not needed to waist time.

Also when she has paid for something that should work, but then realizes that the service is having problems that should not be there (not temporary problems that the service can not control) she gets very angry.

What would make her life easier?
If there could be a better transparency from the different companies whose products she is using so that she would know if they were having problems.

A good user experience:
She once wanted to watch something and then right away the service informed here that if she was on a Mac computer and using Safari she should change the some other web browser. Changing to some other web browser is one out of many things she does when she is having problems with VoD services. She likes this UX because she right away got an answer to her problem.

Different reactions in different situation:
If she is watching something alone and a problem is happening she just chooses another service or change to some other device. If she has waiting a whole week for a specific episode she will make sure that he can see it that night.

V. ANALYSIS AND DISCUSSION
This study was done to illuminate how the understanding of the users can be facilitated with the help of personas and to clarify the importance of the role Personas play when achieving a good User Experience.

The theory said that through the user research the user data about the users’ goals, attitudes and behaviours would be gathered [6]. Then the segmentation would identify the different user groups and make the found data be understandable [6] and by creating Personas it would make the user found easier to understand and adapt to [10]. In this thesis with the process of creating Personas the following was found that facilitated the understanding of the users: That there are three different user groups, put together based on different similarities with their goals, attitudes and behaviours. One primary group was chosen so everyone involved with creating the service would know how they should have in consideration when a decision about the service needs to be made. Personas also helped to understand how the different findings about the users were connected to one another and instead of just knowing what the user goals was, Personas also helped to understand what was causing them and how to prevent them from happening. To communicate the user information and
make them easy to assimilate a comprehensive picture of the different user groups was painted and presented as Personas. Personas works as a communication tool for other departments in a company that are working on a service were the Personas represent the intended users. The Personas are a guideline to know what the service Streamingkollen should do and how it should be done. To exemplify this below are some assumptions made from the result on what three different departments can use from the result that will help them with the work of creating Streamingkollen.

**The developers**
The developers know that the users would like a service that is identifying their problem. This should be done as automated as possible with as little effort as possible from the users. The users would like direct answers do their specific problem, just as they get when they call to a costumer service support. They like the support they get when they call to a costumer support, but don’t like the steps and ways they need to take to get there. The users have no problem reading a guide about different steps they need to take to solve a problem as long as the steps are easy to follow and are connected to their problem. The users will get frustrated if they start taking some steps and then realize that this guide is not for their problem therefore it is important that the right problem is identified. The users are having two different problems that Streamingkollen could help them with. The first is to identify different simple problems they are having and inform them of what they should do, like the router is not working, or they needed to update their flash player, change web browser etc. The second one is if a service is having temporary problems and they cannot themselves do anything to solve it. Then they would like information about this so that they don’t spend time trying to solve the problem.

**The interaction designers**
To identify how users interact with a service, interaction designers carry out different tests with the intended users and then come up with an interface. With the help of Personas the interaction designers know who to perform the test on. If the service is tested on the wrong people, the result will be misleading and not be for the intended users. The interaction designers know that the intended user group is not that interested in technology, that they will very easily do something else than put effort into solving a problem also they will not give a second chance to a service that did not work the first time if they found a different solution. The interaction designers also know that the technical information on how to solve a problem is very critical for the users. Too technically advanced information or long texts to read will not be appreciated from the users. Knowing the user group also helps the interaction designers to create an accurate first prototype.

**Stakeholders**
The result shows that the options on the market today for streaming support is not what the users wants so there is a need for this type of service. The participants said that they would quit a subscription to a VoD service without trying to identify the problem. They automatically just blamed the problems on the VoD services. This is not good for the VoD services but it can be solve with Streamingkollen. Streamingkollen could help to identifying where the problem actually is so the VoD services don’t get blamed and punished for a problem that is not theirs.

**Strength with Personas**
The strength with Personas is that they put together a comprehensive picture of the different user groups that creates an understanding to what the problems are, what is actually causing them and how it can be prevented, from the user perspective, just like said in the theory [10]. If a service would have been created only based on the users goals, that they want a service that can identify their problem the users would have most likely been unsatisfied. The reason why, is that the goal in itself is not saying anything about how the users want the goal to be achieved. This is showed in the assumptions above where the participants want a service that can identify the problem (the goal) and they want it as automated as possible and very effortless (the method to achieve the goal). To just create a service that identifies the problems is not the same thing as satisfying the users or creating a good UX and that’s why it is so important to look at the comprehensive picture of the users. Like said in the theory that is important to look at other similarities as well when one is found, to validate that the user group actually want the same type of service and not just happened to have the same goal [6].

This example gets even more telling when looking at the options that are on the market today when it comes to technical support. Everyone of the participants knew that if they just called or sent a message to a customer support they would receive the help they needed to identify the problem, but everyone refrained from using this option. Like the examples in the theory section about the coffee maker and the door, the customer support was not having any problems delivering answers to people. The problem was that the solution had a poor UX. The solutions on the market today achieve the participants’ goals, but are not having a good UX and are therefore not preferable from the participants.

Why the solutions on the market was not in line with the result could be explained by what was written in the method section, that it is very important to identify and understand the real problem and what is causing it, before a solution is created [16]. It could also be explained though the theory section, that the Personas need to be communicated to all the departments in a company that are working with the service [13], [14], [6], [15]. Both these things are equally important and it is hard to identify where in a process a mistake happened that lead to dissatisfied users. Since the creation of Personas is a guideline for the developers, interaction designer, investors and other departments in a company like explained above, the creation of Personas is the foundation of the UX process. If this is not done accurately the foundation and guidelines will be misleading and affect the whole process. Even if the user data is accurate there are still complications that can affect the process. One is that the different departments don’t read or get the chance to
read about users they are creating for and instead they just create a service based on their own assumptions. One other mistake is that the different departments interpret the users differently. These two examples have the same outcome. The result will be an end product for no one. That’s why it is so important to make sure that the description of the users gets understood the same from everyone involved. (KÅLLA)

**Method Analysis**

When gathering qualitative data about the users’ behaviour, it is desirable that it is done through observation of the users in their natural environment [6]. So one thing that could have been done was to observe the users as an addition to the interviews to better understand them. The natural environment for this service is when people are at home. The result from the interviews however showed the time when the participants decided to do a troubleshooting was very different. One user group for example didn’t do a troubleshooting right away, they tried in every possible way to avoid taking action to solve the problem. To see how the participants did a troubleshooting in the natural environment therefore required observations of the participants under unreasonably long time to wait for a problem to happen and then wait again for them to solve it. The other option was to stage the problem. But to stage a problem and then ask a participant to take action didn’t reflect the participant’s natural behaviour and was therefore not useful. So no observations were done.

To complement the study, statistics on how people used the streaming support services that the different VoD services had could have been help. This data was nothing that the VoD services could give out to a third part. To have this type of statistics would have helped to verify patterns that were found during the segmentation. The result showed that not all of the participants used the supporting services that the VoD services offered. So that data could only have verified some of the found facts.

To verify the method used for the segmentation or creation of the Personas is very hard, since there are no measurements that can be made. When the segmentation is done there is no specific method to use when trying to identify the different target groups. One way that can help to identify the right type of user groups is to let people in the project with different backgrounds help identifying the different user groups. Also letting other people in the project be part of the creation of Personas can help to spread the knowledge about the user groups [14]. In this specific case there were two people that were extra eyes in the project. One worked at the research institute Acreo, that is creating the service Streamingkollen and the other one was creating an interface for the service Streamingkollen.

**Future studies**

The biggest problem with Personas is that the knowledge about the users doesn’t get spread among the different departments in a company [14]. The Personas can help to facilitate the understanding about the users in the context of user experience. But if no one decides to use that information then there is no need for it. Future studies in this case would be to look at different option to communicate the different Personas.

**VI. CONCLUSIONS**

Creating a good UX is very important and at the same time very complex. To achieve a good UX on a service is not done through one thing, it is the sum of a lot of different components and that’s what makes it so complex to achieve [6]. In the process of creating a good UX Personas can be the foundation that the structure is built around, because Personas have showed to be more than just a way of identifying different facts about the users.

The way Personas facilitate the understanding of the users from the context of UX is firstly that user data was collected. Different findings about the users’ goals, attitudes and behaviour are found. Secondly by doing the segmentation different similarities among the users were found and understood. The findings in the segmentation helped to identify what was causing the users needs with a service and how they could be achieved. Then lastly the Personas were created to have as a way of preventing people to make their own assumptions about the users and in the future to have as a communication tool. The Personas help clarify how the service will work when the user comes in contact with it, which is how a service works from a UX perspective, instead of just knowing how a service works on the inside, which traditionally is done [1].

The role Personas plays in an UX process is that without a comprehensive understanding about the users it is hard to know how to create a service for the users. The findings in this thesis and the theory show that there are significant findings about the users that can be discovered during the creation of Personas that are important when achieving a good UX with a service. This finding can help to shape the service to makes sure that the service is developed after the users needs.

With what was described above Personas is a method that consists of different parts that are significant when achieving a good UX. Whether the created Personas will be communicated and used in the creation process of Streamingkollen or what the outcome of them will be remains to be seen. However, future research will validate the creation of Personas was a successful method for the service Streamingkollen.

**The future of Streamingkollen**

For future research and development of Streamingkollen the creators should focus primary on two things. The first is to help the user identify if different services are having any problems, problems that the users cannot do anything about. In this case the critical point for the users is that the inner workings of the service can deliver an answer if the service are having problem or not.

The second thing that the service should have is to help users solve simple problems they are having that prevent them from using a VoD service. In this case how the information is presented is very critical. The users like the help they get when calling to a customer support because then they can explain their specific problem, what computer they are on and what
web browser they are using etc. With this type of support they get help with exactly the problem they are faced with. The users don’t need to have someone on the line telling them what to try out. They could also follow a guide as long as the guide was about their specific problem.

When they are solving a problem they should not be sent away to another site where they need to follow some other guide that helps them to solve the problem. The users have a very low patience so it is better to make sure that some things are automated then making sure that the service has all the answers that the users might want.

Lastly the services that are on the market today are nothing that the users are satisfied with, none of the user groups liked the options. That means that if the following that was written above can be achieved there is a market for a service like Streamingkollen.

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VIII. REFERENCES


