

HOW NOT TO LOUSE

Increase attendance to the Blekinge Museum



Julian Dambielle, Kevin Hallberg, Kevin Sandström &
Enzo Seiholm
MT2569
2020-11-03
980512, 980127, 970921 & 970604

Table of Contents

Introduction.....	2
Theory	2
<i>Blekinge world heritage</i>	<i>2</i>
<i>Needfinding Online</i>	<i>2</i>
<i>Personas.....</i>	<i>2</i>
<i>Brainstorming.....</i>	<i>3</i>
<i>Agile Method</i>	<i>3</i>
<i>Empathy map.....</i>	<i>3</i>
Method	3
Results	4
<i>The data gathered from interviews.....</i>	<i>4</i>
<i>The Personas and Empathy Map.....</i>	<i>5</i>
<i>Information gathered from needfinding online</i>	<i>5</i>
<i>Data from prototyping testers</i>	<i>5</i>
Solutions.....	6
<i>Solution 1</i>	<i>6</i>
<i>Solution 2</i>	<i>6</i>
Discussion.....	7
<i>Interviews</i>	<i>7</i>
<i>Needfinding online</i>	<i>7</i>
<i>VR Solution.....</i>	<i>8</i>
<i>Teambuilding.....</i>	<i>8</i>
<i>Restaurant</i>	<i>9</i>
<i>Design Thinking</i>	<i>9</i>
Conclusion	9
References.....	9
Appendix.....	10

Introduction

Blekinge museum is a small museum located in Karlskrona, Sweden. The purpose of the museum has been to be an educational platform but is today striving to become a community developer. Today the museum is focusing on memories and traces of human history in Blekinge. The museum has difficulties attracting a younger audience, as their audience today consists primarily of people age fifty or above and families with young children. The museum is also struggling financially but increasing their attendance rate could generate more revenue. In order to attract a new audience, the museum needs to evolve. In this report, the problem is analyzed through a design thinking process. Needfinding was conducted through interviews, online, persona and empathy maps. After the result had been analyzed, a prototype was constructed to test the challenges of the idea. At the end of the report, the data gathered as well as the solution will be discussed to prove their legitimacy.

Theory

Blekinge world heritage

A World Heritage Site is a cultural or natural heritage that is considered by the World Committee to having scientific, historic or other form of significance (Nationalencyklopedin, 2020). Blekinge's world heritage is Örlogsstaden Karlskrona, which was built in connection with the city of Karlskrona in the late 17th century, to be the base for Sweden's navy. Örlogsstaden was considered a World Heritage Site in 1998 when it entered the UNESCO World Heritage List as item no. 871. (Wikipedia, 2020)

Needfinding Online

Needfinding is a process for discovering people's explicit and implicit needs so that appropriate solutions can be created. More specifically needfinding online is use for the needs of users expressed online. For doing needfinding online, you use social network, forums, comments, and all the website where you can find a user feedback. This allows to have a large amount of information to find solutions adapted to the user.

Personas

A persona is an imaginary character which you create based on the research you have done. The purpose with creating personas are to find out which different users will interact with a new innovation. Personas will help you to understand the user's needs, behaviors, experiences and the general market. Personas do not describe real individuals, but they are built of data collected from several people. When creating personas, you will realize that different people have different expectations and needs, which may lead to the need to create several different personas that are for the intended target group. (Dam, R. & Siang, T., 2019)

Brainstorming

Brainstorming is a method used to come up with ideas or solve problems. Brainstorming is carried out by gathering a group of people to generate ideas or solutions. The concept of Brainstorming is that ideas may not be criticized before they are done, the quantity of ideas is important which often leads to quality. The starting point is that all ideas are good, and if the idea does not seem good at the beginning it may develop into a good one. A good thing about Brainstorming is that everybody has the opportunity to come up with ideas. (Leifer, et al., 2018)

Agile Method

It is an iterative and adaptive project management methodology. Opposite to a classical method, not everything is planned beforehand. The client works hand in hand with the designers. The objective of this method is to better meet the customer's expectations and adapt the solutions as the project progresses. Characteristics include having a member of the development team that is also a customer representative, small iterations and flexible milestones (Beck, et al., 2001).

Empathy map

The purpose of an empathy map is to get a deeper understanding for a potential user. After creating a persona it is important to learn more about that type of person. An empathy map consists of different quadrants, those are: Hearing, Thinking & feeling, speaking & Doing, Seeing, Pain and lastly Gain. When you are done with the empathy map, you have a better understanding of the persona. (Leifer, et al., 2018)

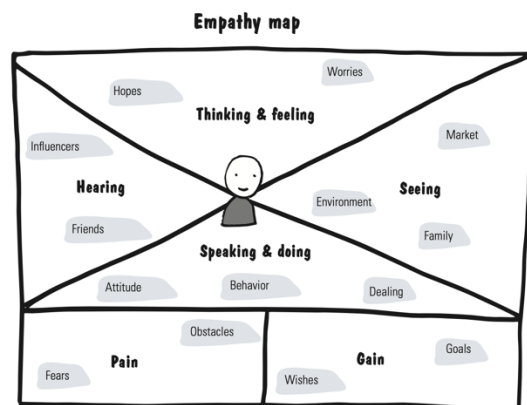


Figure 1. Empathy Map. Source: Leifer, et al., 2018

Method

At the start of the project, a visit to the museum was made to get a look on how things were running at the moment. Information was passed through a liaison from the museum who talked about the issues and interest of attracting people younger than fifty years old. After the visit, discussions were made on how the structure of the project should be with the help of inspiration from agile software development. This includes having small iterations that last one week, setting milestones, and deciding on which member of the group should be the direct link between the group and the museum manager. The daily scrums were replaced with online services where information could be shared on a daily basis.

The next step was needfinding. At first, interviews were constructed in a way that certain questions were asked by every interviewer. It was the person job conducting the interview to evolve the it in a way that was fitting for their interviewee. The interviews were not tunnel visioned about museums, but more the things around it, such as tourist attractions and activities, exploration etc. The interviews were conducted and summarized separately before a complete analysis of the data was made. Online needfinding was also conducted, through services such as TripAdvisor and the museums Facebook page. After this, personas were created to get an idea of who the idea is being sold to, as well as an empathy map where the personas separate emotions could be analysed. In the end of the needfinding session, all data was analysed to gather information for a possible solution to the museums problem.

After ideation, an idea was made based on a virtual experience when one is aboard a 17th century ship in Karlskrona. The solution was prototyped on three groups consistent of three to five people through role playing. One person from the project group acted as a navigator, giving out roles and setting the scene for the people testing the prototype. The navigator assigned one tester as captain and their role was to steer the ship and coordinate group members on what they should do.

The navigator then walked through the group what was happening at the “ship”, which in reality was an empty room filled with buckets, glasses, a Kubb set, and a sheet hanging from a lamp as the “sail”. The room consisted of pieces of papers on the wall which represented north, south, east and west. Three scenarios were played out, battle, stormy weather and sinking ship, sometimes simultaneously. During the battle phase, the members had to throw sticks at bricks on the otherside of the room, representing “cannons aiming at an opposing ship”. The members had to put all the bricks down in as few tries as possible. The number of tries would result in how damaged the ship would be after the battling round. When the ship was damaged, the navigator would yell out “damage in the south west part of the ship”, as an example, which meant the testers had to find ways to block water from potentially coming in, by using bricks in the room as blockades. The navigator would inform what the damage was in the form of the bricks available. For example, two times six damage meant two stacks with six bricks stacked on top of each other to control the damage. There could also be stormy weather, which meant the person steering the ship could not move and one member of the group had to stand by the sail to keep the ship afloat. During the stormy weather phase, the rest of the members had to remove water from a bucket with the help of glasses and pour it into a bucket on the other side of the room to prevent the water from sinking the ship. Every moment in the process was timed and the best performing group was rewarded. The users were afterwards interviewed separately. The roleplaying game is the minimal viable product for the project.

Results

The data gathered from interviews

Majority of the people interviewed (see Appendix 1,2 & 3), where in their twenties or late teens. However, the people who were interviewed worked in different sectors, such as management, daycare, construction, manufacturing or were studying. The data gathered from the interviews showed several reoccurring patterns. When asked about what activities the users enjoy when travelling to a city, visiting a museum came up most of the time, as well as trying local restaurants and other tourist attractions. People are looking for a unique experience that will give them an instant connection to a city, such as the Heineken museum in Amsterdam or Liseberg in Göteborg. When asked about disappointments when visiting tourist attractions, some people have had poor experiences when

visiting museums, especially smaller museums. One major issue people had was that the experience felt stale and there was no interactive experience. People got bored by just walking around looking at things, except if it is a topic which they are interested in. One person with children said in the interview that visiting a tourist attraction without a physical element made her children uneasy and inactive in the experience. The most common attraction when visiting a city was trying out the local food.

A team leader, two production managers as well as two CEO's were interviewed and they all mentioned that they had traveled to a city to attend local teambuilding exercises, such as Boda Borg and Teamtastic. They all find teambuilding outside of work important to improve communication and create bonds between members of the group. One of the CEO's have had a bad experience with teambuilding, primarily because the exercises by the person responsible for the seminar felt outdated and boring. They also tried to eat out at restaurants with their coworkers to get a personal bond between one another outside of work, for the purpose of increasing effectivity and wellbeing at work.

The Personas and Empathy Map

Two personas were created to fit the new audience for the museum (see appendix 4 & 5). The first one is called Kevin, and he represents the younger demographic between the ages of 18 to 25. Kevin is a person who is curious and energetic who is looking for learning and challenging his mind and body. Kevin has a positive and challenge seeking mentality whose goals at the end of the day is having a fun experience. If Kevin can learn something while also hold onto his money at the same time, he is very happy. He is also not interested in people telling him what to do and wasting his time.

The other persona is Göran, he is a CEO/team leader for a company between the ages 40 to 50. Göran's main purpose is to feed his family, but at his work it is to create value, which means he need his workers to perform at a high level. Göran is a decisive person but is experiencing a lot of difficulties at his job. For instance, he wants to have a cohesive group with an effective work environment for all. This is challenging for Göran as he needs to improve his relationship and communication with his employees, as well as understanding them on a personal level in order to do so. In his spare time, he likes to do activities with his family, such as travelling or fishing. He is hoping to retire early and move with his wife to Spain.

Information gathered from needfinding online

On Tripadvisor the Blekinge Museum is ranked number 10 out of 20 things to see in Karlskrona. Visitors appreciate the museum's exterior architecture and interior design. The temporary exhibitions are also a nice sight. However, visitors find that the museum is too small and does not show enough about Karlskrona history.

Among the 267 reviews on google, visitors are happy to find activities for children in the museum and its park. They precise that the staff is very welcoming. In the negative aspects we find that the descriptions are not always written in English, the premises are too small, there is not enough information about Blekinge.

Data from prototyping testers

The users agreed that at first it was difficult putting yourself in the setting of a ship in a regular room and that the roleplaying would benefit from warming up prior to doing the exercises. However, once it got going and everyone was in the same flow, the exercises were entertaining. Four users said that the

activities became more fun and serious with a time limit. One user felt that five people were too many with the exercises that were presented while the other four said four to five people would be fine. They all agreed that there should be more exercises in the real thing, as three users said they believed that the real thing might get stale while the other two said they expect more from a VR game / experience. One member said it would be interesting to capture the aesthetic of a real ship and suggested the ship should travel around familiar scenes in Karlskrona. Four out of five people, also the same people who have tried VR in the past, were interested in trying the real thing. The member who had not tried VR was unsure whether she would pay for the experience or not.

Solutions

In the following section, two solutions are presented to increase the museums visitors and revenue. The first solution is a Virtual Reality experience, and the second solution is to implement a restaurant to their facility.

Solution 1

The first solution to the problem is developing a Virtual reality software which the museum can implement on their premises. The software is designed for three to five people, working as a team on board a 17th century ship in Karlskrona. The ship will take a journey through Karlskrona's harbour dependent on how the participants steer the ship with the virtual reality controllers. With the controllers, the users will be able to walk around the ship and interacting with objects. They will have the ability to steer the wheel, pick up hammers, planks, buckets, cannonballs while also having the ability to walk around with the objects. The objects that are picked up will have functions. The bucket will be able to pick up water, the hammer and planks are used together to repair the ship, and cannonballs can be put into cannons which can be aimed and shot at targets. The experience requires the team to work together to prevent the ship from sinking on the journey.

The journey starts in the harbour while team members are deciding on who will do what on the journey. One member should be captain steering the ship telling the others what to do, while the others work on what is needed on the ship according to the script. If the ship gets damaged users will have to pick up planks and hammers and use them on the part of the ship that needs to be repaired. If the ship has a lot of water on board as a result of an attack or stormy weather, the users will have to pick up buckets and try to get water out of the ship. If the users would like to target the other ships, they will have the ability to aim cannons and put in cannonballs to then fire at will. The journey ends either by coming back to the harbour, or by losing because the ship has sunk.

The virtual reality experiences require an empty room where the participants can move around freely, with a speaker system to further enhance the realistic element. The museum has empty rooms already which they can convert. The solution requires the museum to work with software developers, historians and constructors. The VR googles and the controllers the museum should lease the physical equipment such as googles and controllers in order to save costs. If the idea turns into a big profit, they should invest in buying the equipment to save costs in the long run. One member of the museum needs to educate themselves with this type of software, as if anything goes wrong in the experience someone needs to jump in and help.

Solution 2

The Blekinge Museum has a beautiful garden with a lot of space that can be used to create something that adds great value to the museum. A good solution for that is to open a restaurant there. There is space for both indoor and outdoor servings. By having a restaurant, the museum can increase its

revenue. Either they open their own restaurant, or they just rent out the facility so an external restaurant can open. Since the museum has a strong connection to Karlskrona and Blekinge the restaurant should also have it. Serving traditional food is a great way to have that connection. By having a restaurant, it would be another reason to visit the museum, for example first walk around the museum and then end with a high-quality meal.

The museum should build the facility in their garden and rent the facility out to a restaurateur. This is a way for the museum to not stand for the large costs of running a restaurant, but at the same time being able to make money from rent payments and extra tickets sold because of the nearby restaurant.

Discussion

Interviews

In order to get more reliable data, more interviews could have been made. As a result, the data gathered is not from a big population which can lead to deviations. Also, when conducting needfinding, the demographic chosen was the one that the customer wanted, which meant certain groups were excluded. Gathering data from people above the age of fifty could give the result a different outcome. Example, they might stop visiting the museum as they believe the museum is too high tech or they feel like the museum has lost its old charm. Online surveys were not made, as the project was more interested in qualitative data than quantitative.

The majority of people who were interviewed was an acquaintance to the interviewer, which can lead to bias. Because of the relationship between the interviewer and the interviewee, the session could have been plagued by an unserious nature or that the interviewee was trying to give you the answers you wanted. However, in the interviewing sessions, the interviewees were informed that there is no right or wrong answer, and it is more important that they give honest opinions. Also, the people who were interviewed were either from Swedish or French origin, which meant the data may have a cultural impact. The group had prior to the needfinding already discussed a potential solution. This means that the interviewing sessions could have been forced to a specific direction to align with that solution. Prior to the interviewing sessions, the members had attended a workshop about interviews as well as reading the course literature on how to conduct interviews. So certain interviewing errors that could have occurred was minimized. However, because of COVID-19 restrictions, the majority of the interviews were not conducted in person. Because of this, facial cues were difficult to interpret and the interviews felt less personal. This could have negatively affected the data.

Needfinding online

In order to have a critical look at the needfinding online, it should be noted that the opinions left on the internet are mostly those of families with children or elderly people. As the museum is very little frequented by young adults, there is no feedback online from them. It should be noted that on Trip Advisor, reviewers were referring to the Marin museum on the Blekinge Museum page, thinking that the Marin museum is the Blekinge museum. This speaks further volume of their poor marketing (Tripadvisor, 2020). In order to make the project successful, the museum will have to spend resources not only marketing the Restaurant and the VR experience, but the Museum itself as it is already insufficient.

VR Solution

The VR experience can strengthen teams through team building. Similar exercises but without the virtual element has been successful in doing so, such as Boda Borg (Nilsson & Nilsson, 1998). The virtual reality element can put a new twist on it, but at the same time one needs to consider the technical bias. One of the users who tried the prototype felt like the real thing would not work, as she finds it difficult to imagining it being realistic. She had never experienced VR in the past, but the other members who had used VR in the past said that they believed it could work as an effective exercise as a team. If the museum wants to attract companies, they should do so by emphasizing that the VR experience can work as a team building exercise.

The VR experience should be adaptable to different difficulties. This is to adjust for the person using it, as people between different ages have different capabilities. To make it more user friendly there should be a staff member who works as an instructor to help people get started with the activity and also help them if they are finding difficulties performing the tasks in the VR experience. At the beginning they can choose what the journey would be like, if they would want to just cruise around on the ship or perform on a scripted journey. It is also important to keep in mind to change the script, as it increases replay ability of the experience.

In order to make the VR experience a reality, the museum needs to contact software developers, constructors and buy equipment suited for the room. It is important that a historian works with the software developers, to make sure the experience feels as realistic as possible. To do this the museum needs to invest capital in the project and the resulting cost can implicate whether the museum decides to create a facility for a restaurant as well. The costs might exceed expectations, and therefore the museum may want to wait with investing in a restaurant facility as well.

The VR experience is a good idea because it is a fun way to interact with your friends, and it is also a great way to improve teamwork. As an educational standpoint, the users can learn much about Karlskrona's history, and at the same time have a fun and interactive experience. The VR experience can also be further developed, used both as a game where teambuilding can be improved, but also to show how life were and how Karlskrona has evolved over time. To invest in VR is something that are going to interest a new demographic and will improve the number of visitors, but also the museums profit. VR is also a techneque that has been improved much in the last years, and it is going to be developed further in the future. This means that the museum is investing in the future and giving them a big leap into the 21st century.

Teambuilding

According to our research, the aim of companies is to create cohesion within their team, and it is popular to do so with teambuilding exercises. A facilitator must be at the centre of the activity to energise and manage the exercise. The event should have a playful and/or fun character and the facilitator should step in if the situation becomes too serious. To create cohesion between the users, they will have to work together in order to complete the tasks. The users will be able to communicate and see and interact with each other in the game. If the members are not able to communicate and coordinate, they will lose the game. In order to beat the game, they will need to work together. As stated previously, if there is a lot of tension, a facilitator comes in and helps them work it out. The purpose of the game is to have a fun team exercise.

Restaurant

When talking to Maja on different solutions, she mentioned Vandalorum in Värnamo. Vandalorum is an Arts and Design Museum which implemented a restaurant a while back to big success (Expressen, 2020). Also, the fact that the interviewees were interested in dining when visiting tourist attractions supports the idea of starting a restaurant on their premises. If the museum would not like to invest in developing the restaurant themselves, they can build the facility and rent it out to local restaurants.

By renting out the facility to a restaurateur they get a monthly payment, but the restaurant also can increase ticket sales. The museum can attract people to the restaurant, and the restaurant can attract to the museum, which increases total value.

Design Thinking

After visiting the museum, Maja asked us for a solution. As engineering students, it is natural for us to start thinking for a solution when you are exposed to a problem. Neither of the students prior had worked with design thinking, which emphasizes finding needs before ideation (Leifer, et al., 2018). In the beginning of the project the group had a ABCD methodology mindset, which is based on working backwards to your solution (The natural step, 2020). This is because the group has used this methodology in previous courses. The group did not consider the design thinking process in the beginning. Over the course of the assignment realizations were made that the project should have been made in a different way. As a result, everything that had been made prior to this realization was scrapped, and the group started over. This resulted in a different solution that emphasizes the users a lot more.

Conclusion

Younger audiences are interested to have an interactive experience they could share with friends. The VR experience has the opportunity to supply this demand, and also have the potential to reach out to companies who are looking for new team building exercises. The museum has a garden that could be used to generate profit as a space for a restaurant. Whether they decide to have the restaurant themselves or renting out the facility is up to them, but either way it has been proven profitable in different parts of the company. To succeed with the VR experience and the restaurant, Blekinge museum needs to make some big investments, hopefully after a few years the museum will have turned a profit on it.

References

- Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., ... & Kern, J. (2001). *Manifesto for agile software development*.
- Dam, R. F. & Siang, T. Y. (2019). *Personas – A Simple Introduction*. Retrieved: 2020-09-28 from: <https://www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them>
- Facebook. *Blekinge Museum*. Retrieved: 20-10-12 from: <https://www.facebook.com/blekingemuseum/reviews/>
- Google Reviews. *Blekinge Museum*. Retrieved: 20-10-12
- Lewrick M, P. Link, and L. Leifer. (2018). *The Design Thinking Playbook*. Wiley.

Nationalencyklopedin. (2020). *Världsarv*. Retrieved: 2020-09-25 from: <https://www.ne.se/uppslagsverk/encyklopedi/enkel/varldsarv>

Nilson, C., & Nilson, C. (1998). *More team games for trainers*. McGraw-Hill.

Tripadvisor. *Blekinge Museum*. Retrieved: 20-10-12 from: https://www.tripadvisor.se/Attraction_Review-g189843-d3545841-Reviews-Blekinge_Museum-Karlskrona_Blekinge_County.html

Wahlgren, A. Expressen. Retrieved: 20-10-23 from: <https://www.expressen.se/allt-om-resor/resmal/europa/sverige/gotaland/gor-en-roadtrip-i-smaland-har-ar-10-sevardheter/>

Wikipedia. (2020). *Världsarv*. Retrieved: 2020-09-25 from: <https://sv.wikipedia.org/wiki/Världsarv>

Appendix

All the appendix references can be found in the following link:

<https://drive.google.com/drive/folders/13471NwvL4WT4Yb9ND8F3PdtY61dyk8Rk?usp=sharing>

The reason they are not hear is because the format recommended to us is unreadable in the document.