Amir Hossein Ghaedi

Development of Sustainable Heritage Spaces Through Human-centered Entrepreneurial Approaches

Master's thesis in Industrial Design Engineering
Supervisor: Andre Liem

August 2022

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Norwegian University of
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Abstract

The aim of this master thesis is to research and develop existing heritage spaces into more sustainable and commercially attractive living/interaction spaces. Human-centered design approaches are adopted to assess the future potential of Bakklandet (Trondheim) to be developed into an entrepreneurial heritage site. In the past several years, "Bakklandet" has been and still is the most important historical site of Trondheim, attracting tourists worldwide. However, compared to other heritage sites such as ones in France and Italy, a lack of commercial activities has been observed. To remain relevant as a future heritage site, which is attractive and interactive for locals and tourists, Bakklandet needs to be an outstanding example of architecture or testimony to a cultural tradition, which exhibits an important interchange of human values over a period of time. The introduction of local entrepreneurship can be a catalyst to strengthen and sustain the existence of a cultural tradition embodied by its human values and made visible though it's historical architecture. Using a case-study research method, the Bakklandet context has been analyzed. After that, the focus group and the stakeholders have been determined and serval interviews have been conducted. After designing service blueprints, and getting certain feedback, the user interface has been designed based on the needs of the district and the locals.

Contents

1 Introduction

Cultural heritage is the legacy that we receive from the past, experience in the present, and transmit to future generations (Pelegrini, 2007). **Cultural heritage** includes: cultures, customs, beliefs, rites, rituals, ceremonies, indigenous knowledge, social customs and traditions, arts, crafts, music, political and ideological beliefs that influence culture and behavior, history, practices concerning the natural environment, religious and scientific traditions, language, sports, food and drink, calendars, traditional clothing, cyber cultures in the digital world, and emerging new cultures which will become the heritage of the future (Baker , 2013).

Bakklandet is a cultural heritage space that **appears as an idyllic district** with good living conditions. It has become one of the city's most important tourist attractions and is known far beyond the country's borders. However, as compared to other cultural sites across the world, such as those in France and Italy, there is a noticeable lack of commercial activity. To remain relevant as a future historic site that is appealing and engaging for both locals and visitors. The Aim of the master thesis is to examine the heritage spaces with focus on the human centered design approaches. The project consists of literature reviews, surveys, interviews, other ethnographic method such as observation and finally user interface design. This thesis is also aims to find out the current commercial status of the cultural district of Bakklandet. Second, this thesis will try to provide suggestions and purpose a suitable service for the future practice in the district.

With these aims, the thesis starts with a literature review of previous publications. Then, the scope and research questions (**Figure 1-1**) are drafted and defined for conducting the literature review. Literatures are systematically searched

-among scientific databases. The searched literatures are categorized and analyzed, followed by discussions on the searching results and analyses.

Questions

I.   What makes the Bakklandet different than other heritage space of the Europe?

II. What are the possible challenges and issue in the heritage area of the Norway and possible way to coping with them?

III. What information can be utilized for the possible future development of the street?

Figure 1-1 Research questions

Further steps of the research were conducted with clues provided by the findings from the literature reviews and case studies. Ten interviews were conducted with locals and people who participated actively to the present study and provided insights into this topic. Some of them were the shopkeepers of the district, also another group was the holder of the festivals such as Isfit, Uka and Trondheim Municipality Department.

At last, based on all collected information, a general idea was illustrated with the recommendations for researchers and practitioners and finally a User interface was designed.

This master thesis consists of six parts, the first part is ***Introduction*** of the content, and the second part is ***Background*** including the previous articles. The third part is ***Tourism*** and its impact on business of the heritage space. Forth part is the ***Case study*** and research trip outcome which was done in Malta. Fifth part is ***interview***

-for the ideation and challenges, and the sixth part is ***Design*** which by the utilization of the design tools such as service design, the user interface has been made according to all gathered information. The last part is the ***conclusion***.

To validate the result, a mixed method approach was employed in four parts (parts 2, 3, 4 and 6) to group quantitative and qualitative methodologies. Triangulation method (**Figure 1-2**) was used to confirm the findings (Kaplan and Duchon, 1988). This included comparing data from a literature review, an expert interview, and a questionnaire survey.
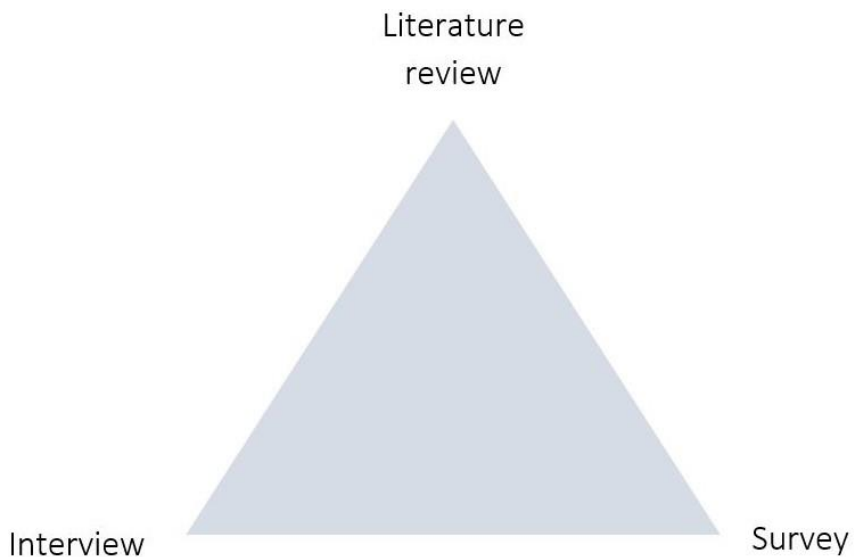
Figure 1-2 Triangulation method

2 Background

2.1 Brief study of Bakklandet in Trondheim

The following chapter introduces the reader to the research area of this thesis: Bakklandet, Trondheim, Norway.

The district Bakklandet is the area along the Nidelva, east of Nidrosdomen and Trondheim city center (**Figure 2-1**). After Bakklandet became a popular district, brokers and real estate developers are trying to stretch the city limits.

Figure 2-1 Location of the Bakklandet in Google map (Google map).

Bakklandet was first built in the early of 17th century. As the center of Trondheim had been grown large, the need of building outside the river began to appear. Bakklandet then became Trondheim's first su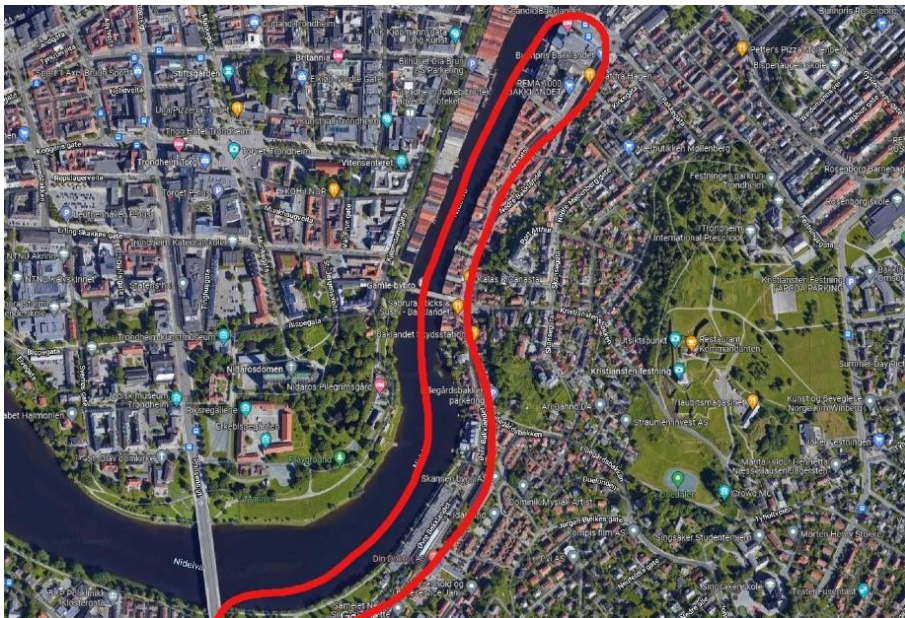burb. The Swedes besieged Trondheim in 1658 and burned down what was of settlement on Bakklandet. According to the drawing in **Figure 2-2** , from 1674, there were only scattered settlements at that time. In 1681, the city bridge was built, and this increased traffic and opportunities on the Bakkland side of the Nidelva. Constant city fires in the wooden houses were the reason why Trondheim got its permanent fire system in 1689, prepared by engineer Captain Friderich Pincier. The fire problem led to a ban on mooring at the piers in Kjøpmannsgata, for ships that had open fire on board. The storage of combustible goods such as cod liver oil, tar and gunpowder was also banned. The sailing ships of that time needed fire for cooking and heating, and the need for storage of combustible goods was present. Therefore, the trading houses set up piers on Bakklandet, and the activity gained momentum.

Figure 2-2 Drawing of the Trondheim in 1674 from (https://www.arkivverket.no/en)

Until the middle of the 19th century, Bakklandet was administratively outside the city, and the suburb developed into a bustling trading post. Companies such as ropeway and shipyards, slips and cranes were established in the area (**Figure 2-3**) Pubs and houses followed, and unregulated as the area was, streets and houses were created where there was natural space. It was usually fishermen, craftsmen and workers who settled in the district. The houses were small, and the conditions were simple.

Figure 2-3 Bakklandet in 1916, (source: Trondheim City Archives)

From the 1960s, the district was threatened by redevelopment. A new access road to Trondheim was planned, and the buildings on Bakklandet had to be removed. There was a great commitment to preserve the old buildings, and zealots were at the forefront of the fight against the municipality. Their involvement did not lead to an immediate victory, but the municipality has never implemented the plans. **From the 1970s, the buildings have been restored** (**Figure 2-4**) and Bakklandet appears today as a very idyllic district, and many tourists come here. The fight for conservation has proved to be very important, and today it is shocking to think back on the municipal plans. Regardless of political color, all residents of Trondheim are proud of this district and are happy to show it to visitors

Figure 2-4 Picture of the Today's Baklandet (Source: https://www.trondelag.com)

2.2 A brief study of Valletta in Malta

Following the brief introduction of the Bakklandet, this chapter introduces the reader a case study has been done for the analyzing and comparing with the area of the thesis: Valletta, Malta.

Valletta (shown in **Figure 2-5**) is both a capital city and a port city. Since its beginnings, it was the main entry point into Malta, with ships docking in the Grand Harbor alongside Valletta. Right up to the nineteen fifties, virtually all goods and people coming from overseas entered Malta through Victoria Gate, the City's gate facing the Grand Harbor. Malta's independence in 1964 reinforced Valletta's role as the islands' political and administrative capital. The city provides the nation's most important transport, commercial, administrative and financial hub (Smith, 2010).

Figure 2-5 today's Valletta (https://en.wikipedia.org/)

2.2.1 Knight's period

Valletta owes its origin to the Knights of St John, who designed the city as a shelter for injured soldiers and pilgrims during the 16th century Crusades.Mount Sceberras, on which Valletta rests, was an arid tongue of land until the Knights arrived, located between two natural harbors.

The only structure on the bare rocks was a small watchtower called St Elmo, which situated at the far end. Grand Master La Valette, the valiant hero of the Great Siege of 1565, quickly realized that the order needed to establish appropriate defenses if it was to keep its hold on Malta. He devised a proposal for a new fortified city on the Sceberras peninsula as a result (Emle 2014) (**Figure 2-6**).
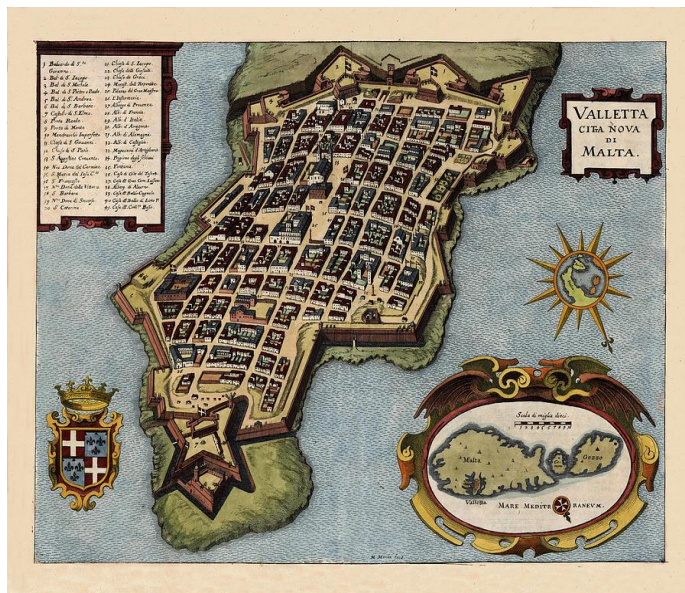

Figure 2-6 A scarce plan of Valletta, drawn by Douillier after Villamena and engraved by H. Raignauld

Valletta had evolved into a sizable city by the 16th century (Hughes, 1978). People from all across the island rushed to reside behind its protective fortifications, especially as Mdina, Malta's capital at the time, had lost much of its allure.

In the ensuing years, the austere mannerist style of Cassar's structures gave way to the more lavish palaces and churches with graceful facades and rich sculptural motifs
The new city, with its strong bastions and deep moats, became a bulwark of great strategic importance. Valletta's street plan is unique and planned with its defense in mind. Based on a more or less uniform grid, some of the streets fall steeply as you get closer to the tip of the peninsula. The stairs in some of the streets do not conform to normal dimensions since they were constructed in a way so as to allow knights in heavy armor to be able to climb the steps.

The fort continued its importance as a military installation with the arrival of the British to Malta. At fact, two battalions of the 35th regiment were stationed in the fort in 1800. The fort was not altered by the British in any way (Robert, 2012).

Fast forward a few centuries, and the city built by gentlemen for gentlemen was subjected to another siege, this time in the form of World War II, which devastated Malta. Valletta was severely damaged by the bombing (**Figure 2-7**), but the city survived and rose again within a few years. The scars of the war can still be seen today at the former Royal Opera House site in the heart of the city, a wound that has divided Malta's MPs for the past 60 years over what should replace it (Galea, 2019).

Figure 2-7 Bomb Damage in Valletta, Malta, 1 MAY 1942 (Source: https://www.iwm.org.uk)

During the post-war years, Valletta lost many of its citizens who moved out to more modern houses in other localities and its population dwindled to 9,000 inhabitants. However, in the last few years many individuals with a flair for unique architecture are trickling back into the city and investing in old properties. (Dimelli, 2019). Valletta, the smallest capital of the European Union, is now the island's major commercial and financial center and is visited daily by throngs of tourists eager to experience the city's rich history.

3 Tourism

3.1 Definition of the Tourism

One of the most important key part of entrepreneurship of the project is tourism. However, the definition of the tourism is constantly evolving and changing overtime. Therefore, the changing definition of tourism is a highly complicated subject (Candela & Figini, 2012).

Some of definitions of the tourism:

- Tourism is the science, art, and business of attracting and transporting visitors, as well as accommodating and graciously catering to their needs and desires (McIntosh, 1977).
- Tourism is the process by which people travel from a location to another for recreation and leisure (Khan, Hassan, Fahad & Naushad, 2020).
- The activities of people who travel to and stay in places other than their usual environment for leisure, business, or other reasons for no more than one year (UNWTO, 1995).

Tourism can be defined in a variety of ways, which is why the United Nations World Tourism Organization (UNWTO) undertook on a project from 2005 to 2007 to create a common glossary of tourism terms. Tourism is defined as follows:

Tourism is a social, cultural, and economic phenomenon that involves people traveling to countries or locations outside their usual environment for personal or business/professional reasons. These people are known as visitors (tourists or excursionists; residents or non-residents), and tourism is concerned with their

-activities, some of which imply tourism expenditure (UNWTO, 2008).

3.1.1 Tourism in Norway

Norway, which is located at the outskirts of Europe, was discovered early on for tourism purposes. In the middle of the nineteenth century, wealthy Englishmen came to Norway to climb and walk on the mountains, to see the fjords and waterfalls, and later to fish and hunt. As a result, Norway's beautiful landscapes and nature became increasingly well-known throughout Europe. Overall, Norway, Sweden and Finland are very similar as tourist destinations. In the important summer months, the countries in northern Europe could enjoy growing incomes from tourism in future, due to the longer season. All in all, therefore, these countries are amongst the gainers. On the one hand, there was the world experienced, rich, and naive-condescending Englishmen, and on the other, the narrow, locally limited world of the native peasants, who served the Englishmen as carriers and had no sense of the beauty of the landscape, because they judged the landscape only for its efficiency for farming. From there, foreign tourists had a significant impact on Norwegians' attitudes toward their country's beauty. Hotels were built, first in the fjords and then in the mountains (Caroline, 2001).

3.2 Importance of tourism in entrepreneurship

As one of the project's primary goals is entrepreneurship it is critical to understand the relationship between tourism and business. There is a widespread belief that the tourism industry can help entrepreneurs to grow (Ferreira et al., 2019; Hingtgen et al., 2015). **Figure 3-1** depicts how the entrepreneur level changes as tourism grows. The series is represented on a graph, with the horizontal axis representing the number of tourist arrivals and the vertical axis representing the number of entrepreneurs registered.

According to the findings of this study, increased tourist flows are associated with an increase in the number of entrepreneurs entering the market, which may not only increase the opportunity but also guide the entrepreneurs to maturity in business. The concept of support tourism may not only provide new job opportunities, but it may also influence the entrepreneurial process from beginning to end. (Subramaniam & Masron, 2019). Therefore, by flourishing the tourism industry, it is possible to flourish the businesses in the heritage spaces such as Bakklandet.
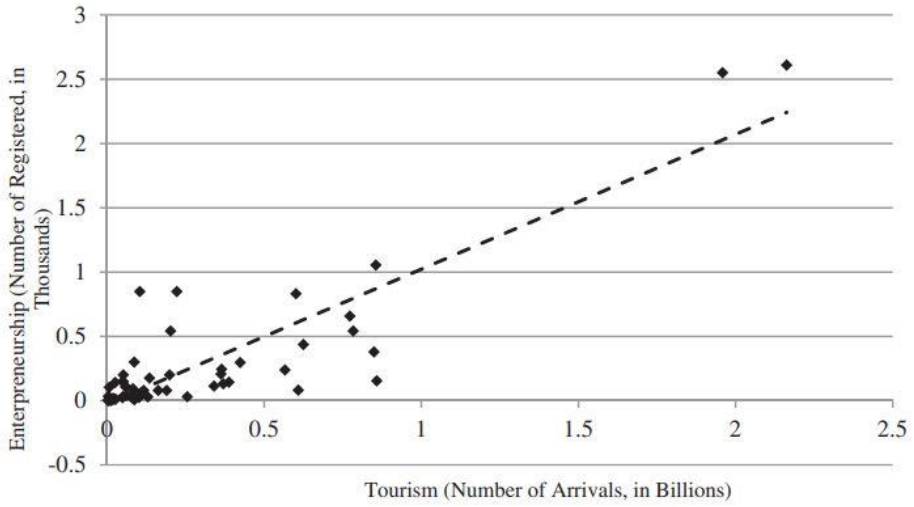
Figure 3-1 Entrepreneurship versus tourism in 56 developing countries in 2017. The simple regression line is represented by the ascending line. Source: World Bank (2020)

4 Case Study

4.1 Case Study in Malta

In order to get several significant insights for the Project, I had an Erasmus project trip to the Malta.

The Project itself consisted of young students with design discipline from all over the world. Using design tools such as Youth Community Consultation, the goal is to find a solution for one of Malta's visited sites during the Erasmus project.

These cultural sites most of which had been made for military purposes have been abandoned and remain unused until now. These study areas in Malta were in the city named Cospicua near the Valletta, previously known as Bormla, which is still used by Maltese.

At the start of the project, all students from different universities were gathered at Valletta Design Cluster (**Figure 4-1**), a public building for creative and cultural practice which supports design and innovation projects with a social impact and community benefits. After describing the complete information about the project, we did 4 hours of walking through the whole city to visit the abandoned cultural sites shown in (**Figure 4-2**). The next day, we were divided into several groups and chose one specific area to work on. The project lasted seven days, from 9:00 a.m. to 6:00 p.m.

Figure 4-1 Valletta Design Cluster

Figure 4-2 Visited sites

4.1.1 ST. MARGARET MEADOW

In the second day of our project, we chose to work on a green space in Cospicua that we named St. MARGARET MEADOW (shown in **Figure 4-3**). an remote area surrounded by schools such as De La Salle College, St. Margaret Primary School, and Birgu Primary School. It is a location with a plain densely forested with plants and wildflowers. I noticed that St. MARGARET MEADOW was a fantastic location with beautiful views and a lot of potentials to benefit the residents who live nearby when we visited. Unfortunately, it is an abandoned and neglected area. It appears that residents do not visit it on a regular basis. I discovered several difficulties, including difficult access to the area for the elderly and small children, as well as thorny plants.

One of the benefits of the area, was its proximity to the city center and several schools. So if it was in better condition, they would all have access to it. This made us able to get a good insight into the area and what the user needs. In the second observation, we identified several stakeholders near the area, including:

- Birgu Primary School

- De La Salle College - two janitors

- St. Edwards School

- Agency for Community and Therapeutic Services

- Birgu Sunday Market

- Birgu weekly Street Market

- Bormla Local Council

- Close by neighborhood

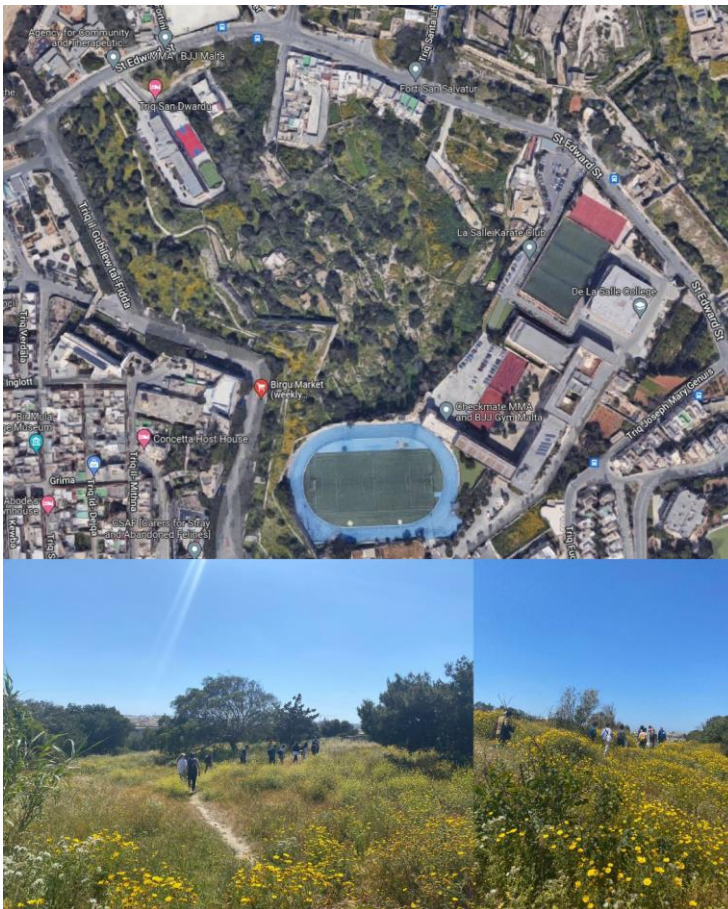- Farmer in the middle of the Meadow

Figure 4-3 ST. MARGARET MEADOW

4.1.2 Interview

We conducted seven interviews with stakeholders and asked the designed series of questions. The questions were as follows:

- What kind of activities do you like?

- Have you heard about St. Margaret Meadow? Have you been there before?

- Do you live far away from the district?

- What kind of games do you play together with your friends?

- How could we make this area more enjoyable?

When we went to visit the place and interview the people related to that area because they lived or worked nearby, we noticed that most of them have been indifferent about the green space in the area. They mentioned that they have used the place occasionally such as hunting the animals, using the shortcut to go to school, and using it as a hiking track between the other parks. Also, one thing that make the people concerning was the safety as the place was abandoned, and sometimes drug addicted people camp in these areas. All seven interviewers agreed that the area would be ideal for getting some fresh air, playing, hiking, and exercising.

4.1.3 Design

Following the consultation with stakeholders, we returned to Valletta Design Cluster to work and analyze the information we gathered. We organized our ideas

-and solutions using various methods such as brainstorming. In addition, we formed some personas to assist us in prioritizing our user needs and developing the best solution.

Finally, we worked on several preliminary concepts that led to some potential ideas for the future St. Margaret meadow prosperity. We decided to strengthen the connection between the community and the site by collaborating with surrounding schools to schedule green classes for their students. So that students from those schools could gather and benefit from the rich cultural environment. The second idea was to hold a workshop where students could share their ideas for the future development of the St. MARGARET MEADOW with one another. The final plan was decided to make the area more walkable by constructing a pathway, thereby improving accessibility for the local communities in the area.

On the final day of the workshop, alongside the other students, we presented the final projects based on the concepts and proposed it to citizens and youth leaders **(Figure 4-4).** It was an interesting encounter in which we was able to see what the other groups had accomplished in a week and share our thoughts on the workshop and the experience of youth community consultation while working hand in hand with citizens.

Figure 4-4 Presentation

4.1.4 Findings

Between the Bakkklandet and the St. MARGARET MEADOW, there are some similarities which is noticeable:

- Both places use to have different functionality use in the past, one was for the defense purpose and another one was for the pier, which needed to be changed. based on the need of the current situation of the users and locals.

- Both heritage spaces have a cultural environmental which can be utilized for the attraction of the tourism.

5 Interview

5.1 Interview

The study of festivals, tourism, and local preferences is one of the project's main features, if not the most important. As a result, it was thought necessary to include them in the interface's creative process. Therefore, many interviews with the Stakeholders are being conducted and recorded. Those interviews are centered on interviewees experience in the district. Similarly, some questions about their general opinion were asked.

That process has been divided in three steps:

1. In the first stage, I have interviewed with 7 people, women, and men, spent around 10 to 20 minutes with each one.

2. In the second round, 3 people who held the store in the Bakklandet were interviewed.

3. In order to understand the challenges and obstacles on the possible ideas and feedback. An interview was conducted with a stuff in Trondheim municipality Department.

4. In the fourth round, I interviewed with several festival stuff in Trondheim.

5.1.1 First round

To begin, an interview of eleven questions (shown in shown in **Figure 5-1**) was created and distributed to Norwegians in order to gain insight into the Bakklandet district. The goal of the

-interview was to learn about their perspectives (shown in shown in **Figure 5-2** to **5-4**) on the Bakklandet and what distinguishes it from other European heritage sites.

Figure 5-1 The First questionnaire

1.	3	5	4	5	4	4	2
2.	It is picturesque, but housing conditions. I am unsure about.	Not noisy and in a good spot into the city.	It is very pretty, with the wood and river. Also, the culture is nice. However, it is quite crowded and noisy by the river.	I can walk 15 minutes and get pretty much anything that I need. Plus, the place pretty, and friendly.	The location is so good but very expensive to live.	Quiet close to the shops, rustic and aesthetics. There are no cars.	Too crowded and too steep.
3.	4	4	5	5	5	4	3
4.	It's a nice part of the town in terms of appearance, and has a certain degree of character due to its coffee shops etc.	It's beautiful to walk around there and the houses are not all stacked together. I feel like there is a lot of space because of the river on one side (even though you cannot use it).	As a place for going through it is pretty, vibrant and full of life.	Colorful buildings, pedestrian and bike centric streets. Ease of access to the river.	The architecture and atmosphere.	The above reasons.	Pretty, but not to live.
5.	I'm not sure of an example, but it strikes me as a typical waterfront area of a town, so maybe areas by rivers in other cities would be similar.	Not really, there is something similar in the Fengnan district near Tangshan.	No.	No, I didn't see any.	Some streets in old Stockholm or Netherlands.	Yes, several cities historical centers. Verona-Venezia-Perugia-Siena-Riga-Tallin-Vilnius.	No.

Figure 5-2 Feedbacks of the question 1 to 5

6.	3	3	N/A	N/A	1	1	N/A
7.	I don't really have any good comparisons, so chose neutral.	The purpose is completely different, it's not a residential area, but a park that follows a river. It's very similar to be in there: you're in the middle of the village, but there is more surrounding nature.	N/A	N/A	It is smaller than those.	They are different places and their dynamics are completely different. 3 of the ones I mentioned are the capital cities, thus implying more activity. TRD is so small, and Bakklandet is not even the historic center, is an old neighborhood in a town of 300k persons. I would say the advantages it has is being small and calm, but it will be a disadvantage for someone who looks for more activity.	N/A
8.	Last time I went through there were some building sites? I suppose completing those projects would improve the area. More shopping possibilities would probably attract more of a crowd, but the question is then if one views shops as a good or bad thing.	Not much I guess. Maybe a green area (like a beach on the river). This is quite impossible though (given there are buildings everywhere).	More flowers and maybe a street festival in the summer.	Don't know if Bakklandet really needs more visitors. It can get pretty busy. Maybe better organization of cruise tours so they are not all standing on the old town bridge at the same time. Maybe a public toilet would help get more visitors.	More outdoor cafés or Branding with some particular areas of Bakklandet that people can take picture and share in social media.	I think it already attracts the number of visitors it can handle, in the summer is almost impossible to walk and it's not a good idea to convert the place into an amusement park. Also the space is limited and the number of people that fit in is also limited.	Outdoor escalator!

Figure 5-3 Feedbacks of the question 6 to 8

9.	Probably fame; if one compares Bakklandet to a similar area in, say, Paris or Berlin or Madrid, the difference in visitors would probably be due to the cities being bigger, more well-known, etc.	N/A	Cafe, bar, restaurants, concerts	N/A	I will say first advertisement and then if visitors visit one more time it is the atmosphere. For example it can trigger their feeling of nostalgia.	Visibility in social media, web, etc. Offers such as shops and cafes.	N/A
10.	3	2	3	3	4	3	3
11.	Tourists are always a trade-off; one the one hand it brings money and liveliness to an area. On the other it means more rubbish and noise, which isn't always ideal for residents.	It's a residential area after all, so many tourist, especially doing activities might be damaging for the neighborhood.	I think it should. I Just do not worry about it. So not negative or positive	I have no problem with tourists at Bakklandet, but it is a small area and can only take so many at a time. I think attracting tourists there off season would be better rather than all crushed together for 2 hours in summer off the cruise boats.	There should be some amount but many tourists will reduce the calm atmosphere of Bakklandet.	I think the dynamic of the place as it is fine. Having more tourists will definitely badly impact the nature of the place into more dirty, up the prices of the already existing residents and thus make the zone a commercial shopping mall, which will destroy the essence of it.	Not too much tourists, it will be too crowded.

Figure 5-4 Feedbacks of the question 9 to 11

5.1.1.1 Findings of the first interview

- Unlike the other places in Europe, Bakklandet is smaller district with smaller population
- Due to the scale of the Bakklandet, most of the people believe that the number of tourists, should be controlled. However, they believe that the tourism is the main source of income in the district.
- Compared to the most cultural site of the Europe, Bakklandet is much more relaxing place which has more surrounding nature.

5.1.2 Second round

After making the initial contact with the locals and receiving the preliminary results, I went to the Bakklandet district and interviewed three shopkeepers. I responded to the questionnaire (Given in **Figure 5-5**) questions. However, this time, the interviews were centered on the District's entrepreneurship. Furthermore, a special emphasis has been placed on topics related to the details about the current states of the district they would change to make it more profitable. As previously stated, the interviews lasted approximately 30 minutes in order to obtain the information. Due to the ideas obtained in the first round, and these new interviews, new details about their behavior as tourists (In **Figure 5-6**) have been obtained, which are as follows:

- There are no adequate amount shops that related to the Norwegian culture in the district. Even the number of these shops has been decreased during the last 3 years.
- Usually, they have more customers during the summer.

- Unlike the first interview which most of the locals believe that the number of the tourism should be controlled. There is a high demand of tourism in the district as it gives more profit.

Figure 5-5 Second Questionnaire

1.	4	4	4
2.	There are a lot of tourists which are the important source of income for the district. Usually visitors of Bakklandet want to buy unique things from Norway.	Because when the weather is good (around the summer), there are more people which is good place for tourism.	District is the most historical part of the city so a lot of tourists gather in this area
3.	5	4	4
4.	We need more shop in the district. During the last 3 years, nearly 2 shops in the district has been closed permanently	I think more shop would be good as it can attract more tourist in the area	We definitely need more shops. To attract more customers in the area.
5.	We have any kind of hand craft products. The customer buy anything.	Handmade Dairy products	Coffee and cakes
6.	I think we need more unique shop such as hand craft stores in the area.	We need a more homemade shops which sells special stuff such as special tea.	I think would be better to add some pop up store in the neighborhood

Figure 5-6 Feedback from Second Questionnaire

5.1.3 Third in interview

Based on the feedback and comments from the previous two interviews, several ideas such as street shop store or a Cultural festival came to my mind. However, several questions arose:

- What make the Norway to not have any street shop festival such as El Rastro in the Madrid/Spain
- Is there any regulation regarding to the selling of the street food in the Norway?
- Is there any issues or challenges in making the Street Festivals?

These questions enabled me to conduct an interview with Trondheim Municipality in order to better understand the regulations and challenges of the Festival in the District. The interview lasted almost 30 minutes. The following are the interview questions and answers:

1. **What are the regulation in the making festivals?**

According to the municipality, the properties are divided into two categories: private and public. While people are free to hold events or go shopping on their private property, they must apply for permission to hold an event on public property. The next step is to plan the event's commercial, for which you will need to pay a rent if necessary.

2. **Are there any challenges which discourage people to have street market or festivals?**

For holding street markets or festivals on public property. The costs of renting the street must be borne by the user. However, the municipality compensates renters. It returns the money that was given after the festival. As a result, the number of customers at the festival or street market must be large in order to make a profit.

3. What are the regulation for the serving food in the street?

Certain hygiene rules must be followed by the food provider. However, there are some difficulties with food marketing in Norway. Large supermarkets typically buy food in bulk at much lower prices, so the food they sell is significantly less expensive than locally produced food.

5.1.4 Fourth Interview

After learning about the difficulties in organizing festivals, I decided to conduct another interview with the current festival committees in Trondheim. The interviewees were members of the Uka and Isfit staff. Because both festivals are primarily concerned with sustainability, such as volunteer work, it was an excellent opportunity to learn more about their respective events. For this purpose, I sought their advice on organizing festivals in heritage areas such as Bakklandet. The interview was conducted via Zoom meeting with two people and lasted nearly 45 minutes each. Prior to the interview, a questioner (**Figure 5-7**) was created for this purpose.

1. Would you please give me brief summary of your Festival?

2. On average how many people comes to the festival? Are attendance usually from Norway or from all over the world?

3. Is there any profit or Income in your event?

4. In scale of one to five (From agree to disagree) what do you think about the making Festivals in heritage district of Trondheim? Why?

5. How do you think we can utilize the Festival culture of the Norway in the bakklandet to make Income for the locals in the neighborhood?

Figure 5-7 Questionnaire of the Fourth Interview

Following the interview, these are the answers which I gathered:

5.1.4.1 Uka Festival

1. *UKA is a student festival that comes to life every second year. It is arranged by Studentersamfundet in Tronheim, and over 2100 students work as volunteers at over 100 big and small events. In addition to events at Studentersamfundet we put up a huge tent in Dødens Dal, the footballfield by NTNU Gløshaugen. Here we host big concerts and events with up to 6000 tickets sold. And as I said earlier, it all is arranged by students and we all work for free. The concerts and events spread all over October every second year, and has for purpose to host a huge celebration of the student life of Trondheim.*

2. *In October 2021, there were sold over 100 000 tickets in total. Usually the attendance is from Norway, and also most of our tickets are sold to students here in Trondheim. What we do is we sell the thing as cheap price but seeing as many as ticket possible*

3. *One of the reasons Studentersamfundet set up UKA is to finance the drift of Studentersamfundet for the next two years. So all the profit from UKA goes to Studentersamfundet and therefore also back to the students that all year long can come to Studentersamfundet for cheap beer and fun events. Most of the income of UKA comes from ticket sales, but also we collaborate with companies from the business world, for example Equinor. You can read more about UKA's partners at www.uka.no*

4. *I think it would be popular to host an event that brings the history of these districts to light. Generally, my impression is that the cultural life of Trondheim is already pretty fully booked. So if you want it to be a popular event, you would have to find a very specific group that you would like to host your event for.*

5. *By giving the locals opportunity to show off their work I think you have come a long way to giving back to the locals. If you early on in the process of planning include the locals, and let them set the standard of the festival, I imagine that the interests for the events will increase. It could be as easy as hosting a day for stands all over Bakklandet. Also focusing on the volunteer job would be great idea. There are always people who are willing to do the volunteer jobs.*

5.1.4.2 Isfit Festival

1. Isfit is a largest student international in the world. we have several events and concerts. In addition, we have other cultural programs such as art exhibition. We have Volunteers to create cultural events. Polarization as team to have impact on cultural program. It is worth saying that we have a lot of workshop. The main purpose of the festival is getting all around the world to connect together. And we give gift and prize to the student. In ceremony we hand these prizes. Since the festival is large we have only second year. Festival is for 10 days. From beginning of the morning to late night.

2. Every second year, we invite 500 international student from all over the world to come to Trondheim.

3. First of all we don't have any event in street. We make thing run. It is possible to do the festivals. We are nonprofit organization. Unlike the Uka which make the profit. And we have a lot of free event.

4. I disagree, as they don't have huge Avenue. I think for more festival it is hard to make bigger events.

5. It is not only about festival. What is special is all driven by volunteering and organization in Norway that might be key to new possibility. Volunteering for

-free. Pieces of walk like a carnival to move from one place to another place. More possible to have mini festival or art exhibition or coloring street.

5.1.5 Results

Volunteer staffs are an essential component of both festivals. According to the interview, there are always individuals in Norway who are eager to perform volunteer work in exchange for a reward. The sustainability of the festivals' production finds its purpose in these components.

6 Design

6.1 Service Design

After gaining the necessary knowledge about the project's various key items and the stakeholders' perspectives, we continue to service design which is the next step. The different interface features, that we are going to design depends on the user features. We know that our stakeholders are Tourists, locals and shopkeeper who has some specific needs in the districts. Quality, culture, history, famous places, safety and income are all expected.

6.1.1 Storyboard

The use of a tool known as a storyboard is one way to learn the environmental elements that influence the customer for designing a product or service that meets their needs and demands. Storyboards provide a common visual 'language' that allows people from various backgrounds to communicate about design aspects. A storyboard can be read by clients, members of the design team, experts, and future users. (Muller, 2001). The concept of the storyboard is named "Sea Food Festival" which takes place in Bakklandet.

6.1.2 Concept

Based on the previous chapter of case study in the Malta. I created the concepts using two key factors:

1- Adapting past functionality to meet current needs
2- Using the cultural environment for the development of heritage space.

As the Bakklandet had several piers. I decided to transform the district's old functionality into a summer festival where people can sample fresh Norwegian seafood. The concept is called "Sea Food Festival" (Sjømat), and it is held in Bakklandet. This festival takes place in Trondheim every summer. The festival includes street markets selling Norwegian seafood. The client can sample them all by paying only the entry fee. Furthermore, the client can buy an entire meal of the food that he or she prefers. The key point is that the majority of the people and staff who work on the festivals are unpaid volunteers. They do, however, have some advantages, such as a ticket that includes free breakfast, lunch, and dinner at the festival. I created two types of storyboards for this purpose, one for the client and one for the volunteers, to show how they go through the process. The storyboard was designed and modified three times, with feedback from the client obtained each time.

6.1.3 Storyboard Round 1

The Storyboard was created in two versions: one for unpaid Volunteers and one for the client. As shown in the appendix, the client and volunteers interact through the festivals by purchasing tickets and applying for volunteer positions. I showed the interviewees the two storyboards, then asked them to go to the website "Padlet," where I randomly placed all of the frames from both storyboards. I asked them to arrange the frames in the order they saw fit. The interview was conducted with two people and lasted 30 minutes each.

6.1.3.1 Feedback 1:

I believe that there should be more frames between purchasing the ticket as it is not clear how the volunteer is buying. Also it would be better if you show before and during the festival. It is worth mentioning that volunteers should get some benefits from attending the festivals.

6.1.3.2 Feedback 2:

This looks very good. I'm not convinced about two things: One is that your volunteers have interviews. They take a long time, and if this is a one-week festival there is no point. Try to get people that know people in the community/neighborhood or just go with whoever. The tasks aren't very advanced. Number two: I do not think you'll be able to get any volunteers when the benefits are not better, at least not the first time. Getting volunteers after the pandemic is very difficult, so you'll have to do a lot more than three meals. I suggest you provide for example some working clothes (usually a t-shirt) and maybe a tote bag, this way they will promote your festival the rest of the year. Make sure they are good designs! I would also suggest promoting the volunteer work with being close to star chefs, a social open-bar event and getting work experience from the restaurant and service industry. If you can't get volunteers you could always pay local football clubs or similar. The first year will be difficult, but make sure they get a very good experience that is chill and easy for them and then they'll bring their friends next year!

6.1.4 Storyboard Round 3

After redrawing storyboard in 2 rounds, the ideal storyboard (Shown in **Figure 6-1 to 6-2**) has designed with additional details which includes:

1- The process of buying ticket for the client is more obvious.

2-There is website which the volunteer can go in and apply for the festival jobs. Also the volunteer get additional benefits such as tote bag beside the free meals.

3-In the new storyboard, after the festival the customer will be asked for the survey to assess their satisfaction.
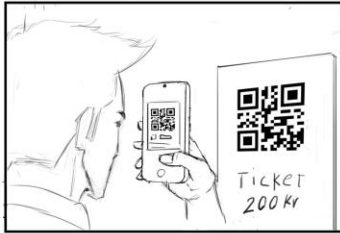
1-The Client watches the Festival advertisements in the media .

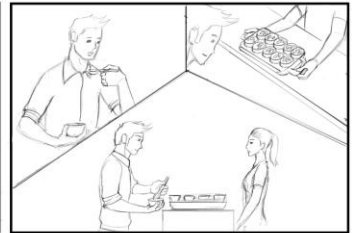2-The Client goes to the Website, sees the informaions about the festival and purchases the ticket.

3-The Clinet enters to the Sea food Festival In the Bakklandet.

4-S/he notices the Qr code which he can purchased the ticket by his/her own phone.

5-S/he shows the purchased ticket from his/her mobile phone at the entry of the festival in order the check in.

6-S/he tests a variety sea foods which has served for free.
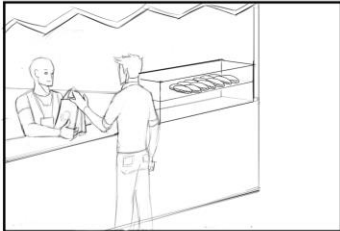
7-S/he purchases a whole meal of a food that he liked .

8-The customers comes out happily with tested and purchased meals.

9-The client asked to fill the survey about the festival

Figure 6-1 the ideal storyboard for the Clients

1-The vlounteer applies for the sea food festival staff through the website.

2-The volunteer's application get accpted.

3-The volunteer goes to the office and talk to the employer.

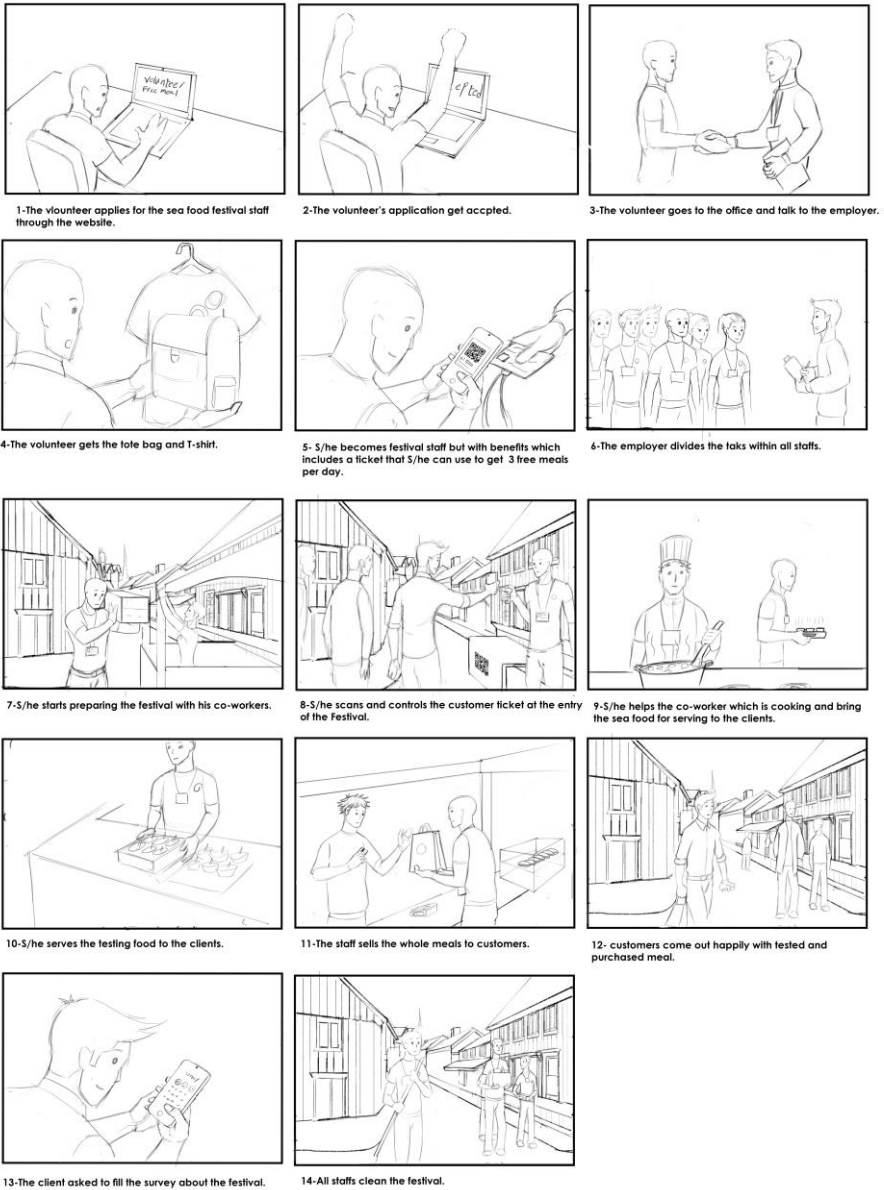4-The volunteer gets the tote bag and T-shirt.

5- S/he becomes festival staff but with benefits which includes a ticket that S/he can use to get 3 free meals per day.

6-The employer divides the taks within all staffs.

7-S/he starts preparing the festival with his co-workers.

8-S/he scans and controls the customer ticket at the entry of the Festival.

9-S/he helps the co-worker which is cooking and bring the sea food for serving to the clients.

10-S/he serves the testing food to the clients.

11-The staff sells the whole meals to customers.

12- customers come out happily with tested and purchased meal.

13-The client asked to fill the survey about the festival.

14-All staffs clean the festival.

Figure 6-2 the Ideal storyboard for the volunteer

6.2 User interface design

Designing a website would be our final product. Once the ideal storyboard has been created, I drew up a service blueprint which is the most widely used service design technique. A service blueprint is essentially a graphical tool for visualizing the various components of a given service as well as the interactions among the service's stakeholders (Shostack, 1984). In this project, total of six blueprints for the seafood festival were created for two stakeholders (clients and volunteers).

6.2.1 First design of service blueprints

As the main purpose of the project was sustainability I decided to design the two types of service blue print in **Low cost** and **high cost**:

1- Everything in the **Low cost** (Shown in **Figure 6-3)** service blueprint process has been done traditionally, without the use of a website or technology. There is no website involved, as shown in the appendix, which contains two service blueprints.

2- In the **High cost** (Shown in **Figure 6-4)** service blueprint, the use of website and theologies have been included (shown in the appendix), based on the need for the services. For this purpose, two blueprints have been created.

6.2.2 Second design of service blueprints

To get better feedback from the two types of blueprints mentioned above, the two blueprints of each type were combined into one and given to three people for feedback, as shown in the figure.

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8			
Physical Evidence	Serving table				Staff uniform		Entry Gates		Temporary Stores		Advertisements
Customer Actions			Putting ads via social media and internet	Seeing the Advertisement of festivals through social media and internet	Buying Ticket at the festival	Check in the Ticket	Walk Through the Festivsal	is greeted by shop keepers	Enjoy testing foods	Enjoying the enviroment of the BAKKLANDET	Purchasing a whole meal
Front of Stage Interactions					Volunteers sell the tickets att the gate	Volunteers Greet Guests	Volunteers chceck the tickets	Servers delivers testing food	servers renew the testing meals		servers sells a whole meal packages
Back of Stage Interactions	Makng the Advertisement	Volunteers Register through the email or phone call	Volunteers Getting Accepted	Volunteers Go to the Place of festival	Volunteers Make the Festivals Ready and devided task with each other				Chef prepares foods	kitchen staff does the dishes	Chef prepares a whole meal	Volunteers Clean the Festival
Support Processes										Goods and the logestic of the festivals	seeing the Advertisement of festivals through social media and internet

Figure 6-3 Final Low cost service blueprint

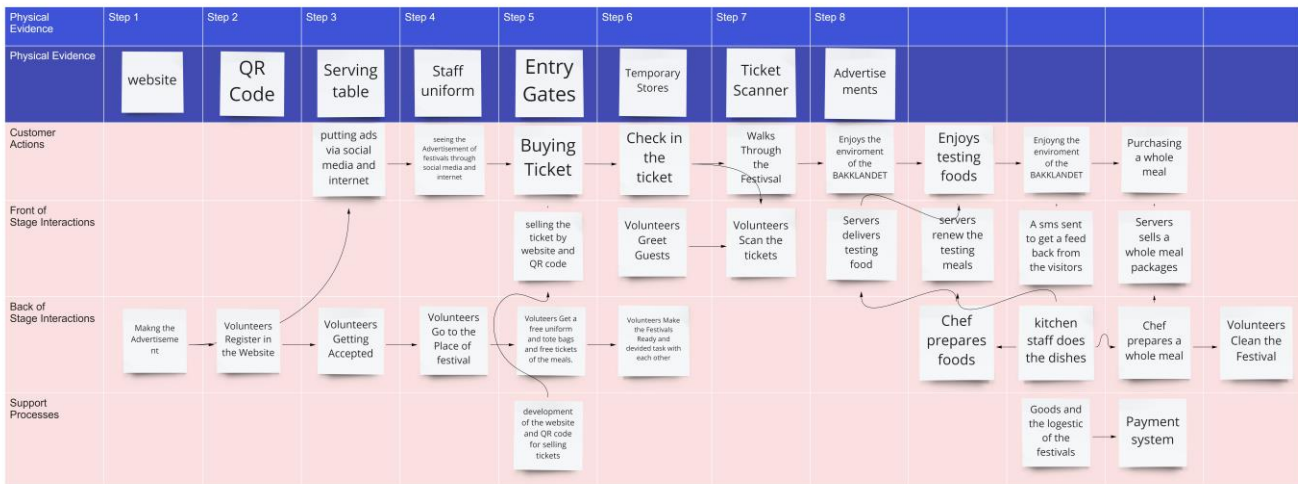| Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8			
Physical Evidence	website	QR Code	Serving table	Staff uniform	Entry Gates	Temporary Stores	Ticket Scanner	Advertisements			
Customer Actions			putting ads via social media and internet	seeing the Advertisement of festivals through social media and internet	Buying Ticket	Check in the ticket	Walks Through the Festivsal	Enjoys the enviroment of the BAKKLANDET	Enjoys testing foods	Enjoying the enviroment of the BAKKLANDET	Purchasing a whole meal
Front of Stage Interactions					selling the ticket by website and QR code	Volunteers Greet Guests	Volunteers Scan the tickets	Servers delivers testing food	servers renew the testing meals	A sms sent to get a feed back from the visitors	Servers sells a whole meal packages
Back of Stage Interactions	Makng the Advertisement	Volunteers Register in the Website	Volunteers Getting Accepted	Volunteers Go to the Place of festival	Volunteers Get a free uniform and tote bags and free tickets of the meals.	Volunteers Make the Festivals Ready and devided task with each other			Chef prepares foods	kitchen staff does the dishes	Chef prepares a whole meal	Volunteers Clean the Festival
Support Processes					development of the website and QR code for selling tickets					Goods and the logestic of the festivals	Payment system

Figure 6-4 Final High cost service blueprint

6.2.2.1 Feedbacks

- *I think this looks good, you should absolutely sell the tickets online, a physical ticket sale is a much bigger operation and gains way less traction from people talking about it over lunch or someone seeing the advertisement on social media at home. You need to scan the tickets or use names, but names take a lot of time and queuing, so this is not optimal for the visitor.*

- *The development of the website is definitely needed as you need to provide the client from all over the world. Also it is important to be able to gather as many volunteers as possible which having the website is the best way to do so.*

- *To be able to sell more tickets you should have website to sell from however it is possible to do the traditional but the number will be limited which won't make enough income for the district.*

6.2.3 Final service blueprint

According to the feedback for the merged blueprint, all interviewees preferred the **High cost** blueprints over the **Low cost**. Thus, there is a demand for the website to design the service. Therefore the High cost blueprint is selected for the design phase. For this purpose, the potential problem in each section of the Blueprint has been identified (in **Figure 6-5**) for designing the user interface. As shown in the (**Figure 6-6** to **6-10**), a solution has been devised for each section. Finally, all component of the website's user interface has been designed in Figma based on the proposed solutions.

Showing the current status of the volunteer named **Application** in his/her profile.

How volunteer can check how application is going?

Adding the Possibility of the **Registration** in the website so the volunteer can login and goes through the process.

Adding a **Recruitment section** in the website so the volunteer can go to the process and read the information is not time.

It is not clear how the volunteer goes through the application process

Volunteer might miss the date or not understand how to apply

Adding the feature of **Sending Email** or **SMS** notification if the client had created the account in the website.

Adding a **latest news** in the homepage so client can acess to the news about buying the ticket and the deadline as soon as.

It is possible that the client might not notice the news.

Add the **latest news** in the homepage so client can access to the news about buying the ticket and the deadline as soon as possible.

It is possible that all tickets were sold before the client realizes.

Adding the **"Task"** section in the web and show the certain tasks which they should do.

For the volunteers, the task would not be well organized.

Adding a sub section in the **"Special requests"** named **'what is your request about'** so based on the selecting given subject it will be contacted to the certain committee.

Still it would not satisfy him/her.

Adding a **Special request** in the website so once the client logins to his/her own profile s/he can choose certain stuff.

The client might not find any food which would be appropriate for him/her.

Showing the **Menu** and the recipes in the website to the client so he or she can have knowledge about the certain food.

The client might be allergic to some food, so S/he wants to know what kind of recipe used

Adding an option named **'Edit your ticket'**, **'Refund'** and **'Contact Support'** in the profile section in the website so the client can ask or request anything regarding to the ticket

How the client can refund? Or change the details of the ticket?

Buying the ticket with **"Email only"**

Which information should be as an alternative

Adding the phone number should be optional

The client might not want to give his/her own number

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8			
Physical Evidence	website	QR Code	Serving table	Staff uniform	Entry Gates	Temporary Stores	Ticket Scanner	Advertise ments			
Customer Actions			putting ads via social media and internet	seeing the Advertisement of festivals through social media and internet	Buying ticket	Check in the ticket	Walk through the festivsal	Is greeted by shop keepers	Enjoy testing foods	Enjoying the enviroment of the BAKKLANDET	Purchasing a whole meal
Front of Stage Interactions					selling the ticket by website and QR code	Volunteers Greet Guests	Volunteers Scan the tickets	Servers delivers testing food	Servers renew the testing meals	A sms sent to get a feed back from the visitors	Servers sells a whole meal packages
Back of Stage Interactions	Making the advertisement	Volunteers register in the website	Volunteers getting accepted	Volunteers Go to the Place of festival	Volunteers get a free uniform and tote bags and free tickets of the meals	Volunteers Make the festivals Ready and devided task with each other			Chef prepares foods	Kitchen staff does the dishes	Chef prepares a whole meal	Volunteers clean the Festival
Support Processes					Development of the website and QR code for selling tickets					Goods and the logestic of the festivals	Payment system	

Figure 6-5 Founded issues in final blueprint

Problem	Solution	Problem	Final Solution
1. Volunteer might miss the date or not understand how to apply.	Adding a **Recruitment section** in the website so the volunteer can go to the process and read the information in no time. Adding the Possibility of the **Registration** in the website so the volunteer can login and goes through the process.	2. How volunteer can check how application is going?	Showing the current status of the volunteer named **Application** in his/her profile.

Figure 6-6 Solution 1

Problem	Solution	Problem	Final Solution
1. It is possible that all tickets were sold before the client realizes.	Add the **latest news** in the homepage so client can access to the news about buying the ticket and the deadline as soon as possible.	2. It is possible that the client might not notice the news.	Adding the feature of **Sending Email** or **SMS** notification if the client had created the account in the website.

Figure 6-7 Solution 2

Problem	Solution	Problem	Solution	Problem	Final Solution
1.The client might be allergic to some food, so S/he wants to know what kind of recipe used	Showing the **Menu** and the recipes in the website to the client so he or she can have knowledge about the certain food	2. The client might not find any food which would be appropriate for him/her.	Adding a **Special request** in the website so once the client logins to his/her own profile s/he can choose certain stuff.	3. Still it would not satisfy him/her.	Adding a sub section in the "**Special requests**" named "**what is your request about**" so based on the selecting given subject it will be contacted to the certain committee

Figure 6-8 Solution 3

Problem	Solution	Problem	Solution	Problem	Final Solution
1.The client might not want to give his/her own number	Adding the phone number should be optional	2.Which information should be as an alternative	Buying the ticket with "**Email only**"	3. How the client can refund? Or change the details of the ticket?	Adding an option named "**Edit your ticket**". "**Refund**" and "**Contact Support**" in the profile section in the website so the client can ask or request anything regarding to the ticket

Figure 6-9 solution 4

Problem	Final Solution
For the volunteers, the task would not be well organized	Adding the **"Task"** section in the web and show the certain tasks which they should do.

Figure 6-10 solution 5

6.2.4 Web design

The website depicted in figure has several sections: home page (**Figure 6-11**), about, login, news, contact us, ticket, and recruitment. The website has two separate portals. One for customers who want to visit the festival and another for volunteers, both of which can be accessed in various ways. (The link of the website:

https://www.figma.com/file/T4YAduMy83lWvD6Zdezxfj/Untitled?node-id=45%3A2945)

6.2.4.1 Client portal

The portal is designed for the client which will be able to purchase the ticket and modify it as his/her own will. This portal consist of:

6.2.4.1.1 Client Login Webpage

The client can login to the portal through the 2 ways:

1- From the ticket tab by purchasing the ticket, once they go through the purchase they will be asked to create an account. Also there is a **login** option in a case of having an account.

2- Through the login tab in the home page, once the client clicks on the tab and chooses the Login as the Client, s/he can either Login or sign up an account.
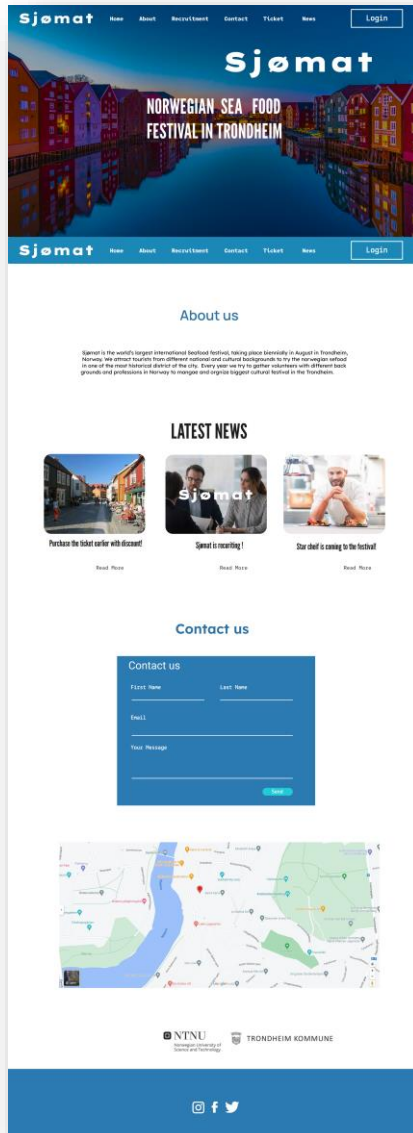
Figure 6-11 Homepage of the Website

Figure 6-12 Login page for the client

6.2.4.1.2 User interface

Once the login has been done, the user sees the certain user interface in the homepage:

- **Your ticket**

    In this section, the client will be able to check and download the QR code ticket by clicking on the "Print" button on the top right side of the screen. Also the client can check the ticket number, activation date and expire date of the ticket. (**Figure 6-13**)
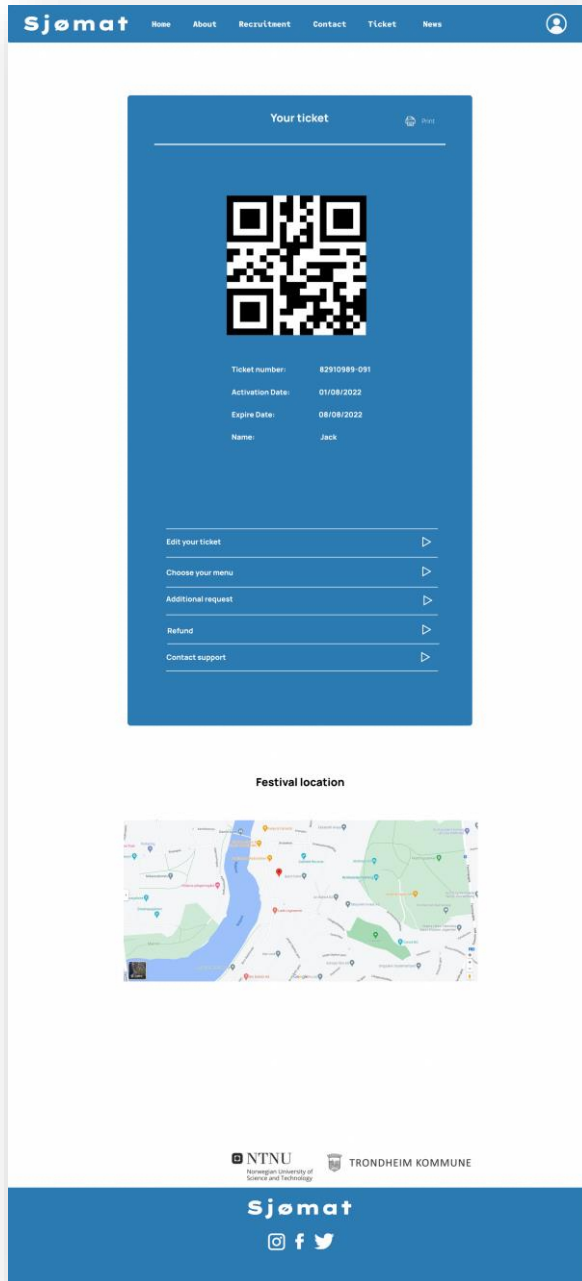
Figure 6-12 your ticket page

- **Edit your ticket**

> Through this section, user can change and edit the number of the client in the ticket by paying more price and change the duration of the ticket in certain given duration if s/he wants to change the date. (**Figure 6-14**)
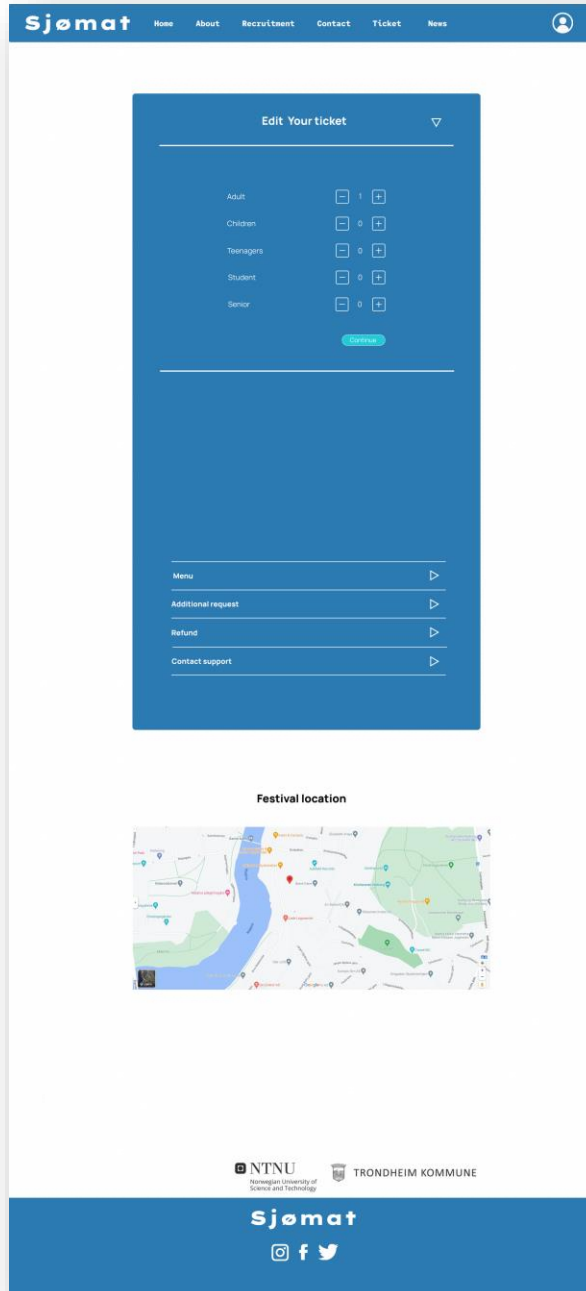
Figure 6-13 Edit your ticket

- **Menu**

    It is possible that the tourist would need a certain diet or to be allergic, so it is right to know the food and the ingredients which will be served in the festival (**Figure 6-15**).
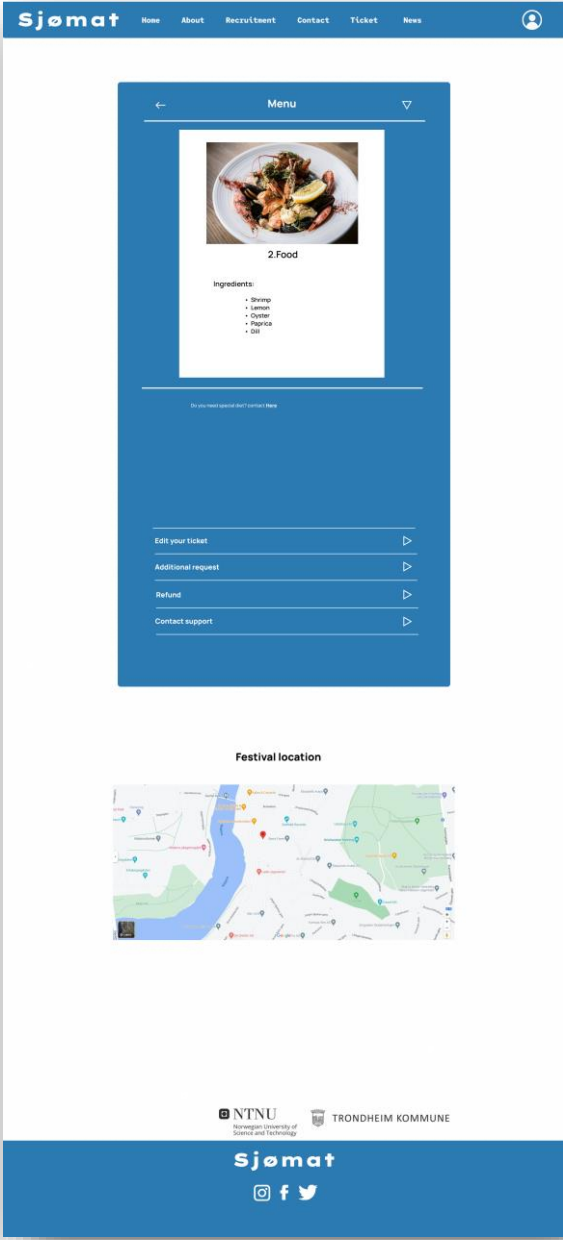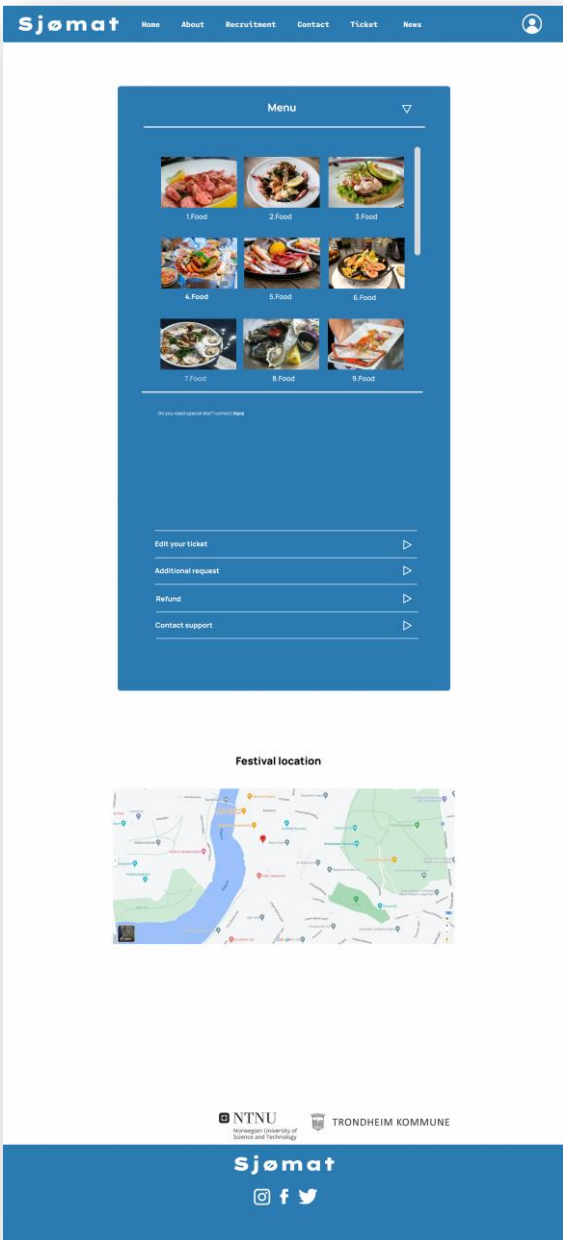
Figure 6-14 Menu page

- **Additional request**

  In case of volunteer wants some special requests such as requesting certain diet food or wants to have a special meeting, s/he can send a message. By choosing the given subjects in the **"What is your request about"** the message automatically will be send to the related committee of the festival (**Figure 6-16**).
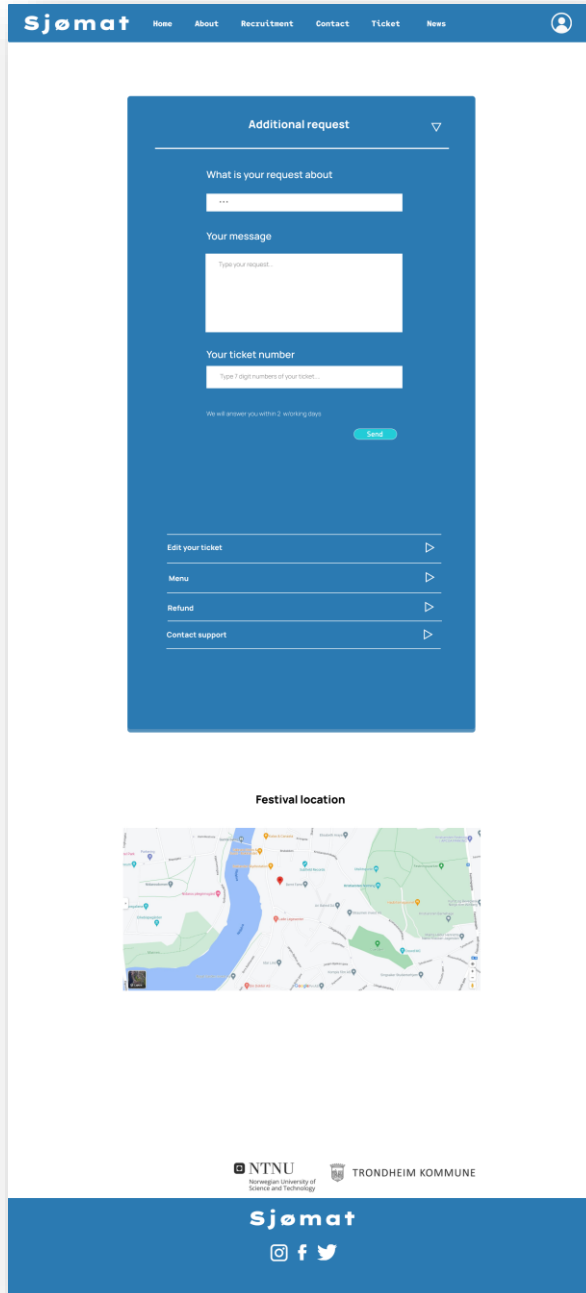
Figure 6-15 Additional request

- **Contact support**

  When the customer has an issue regarding to the festival or website, s/he can request ticket through the **"Contact Support".** If the customer could not find an issue he is looking for in the **"what is the ticket about", s/**he can choose **"Other"** and write in the "**Please specify"** about his problem. Also there is s section named **"Choose the committee"** which s/he can contact directly to the certain committee by selecting it (**Figure 6-17**).
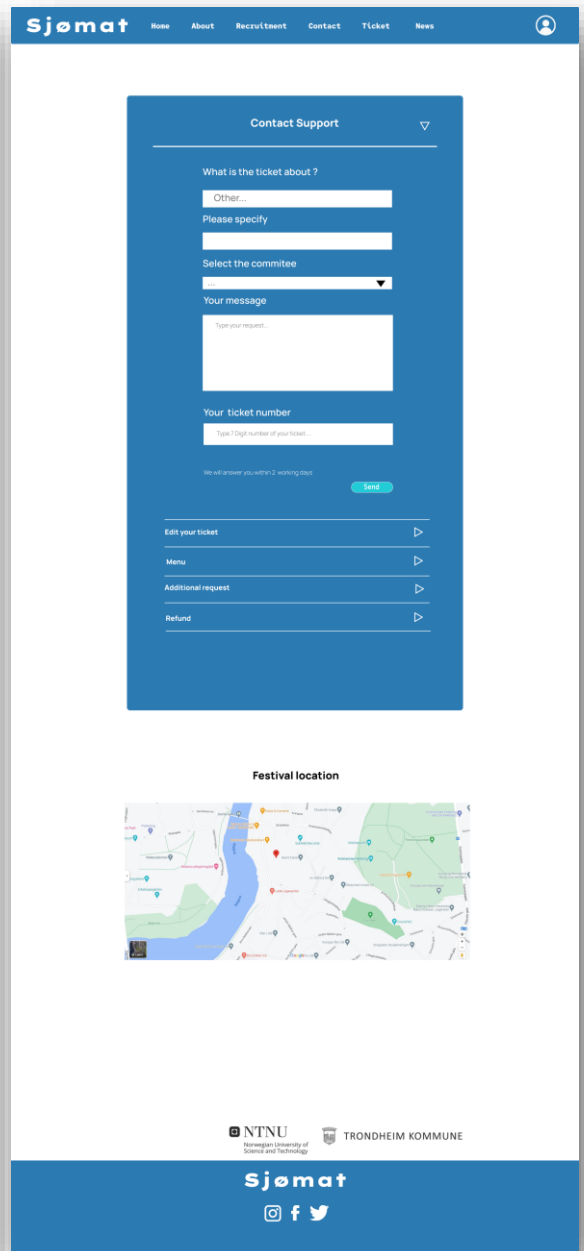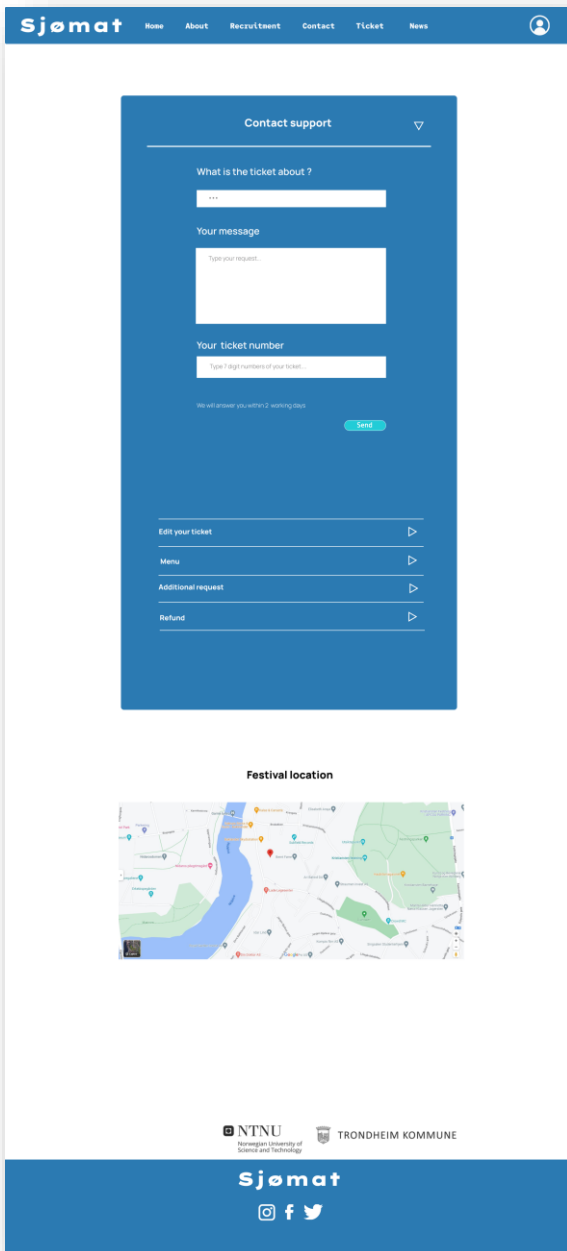
Figure 6-16 Contact support

6.2.4.2 Volunteer portal

This portal is designed for the volunteers, so s/he can search and apply for the certain jobs. The portal is consist of:

6.2.4.2.1   Volunteer login webpage

1- The Volunteer has two options for gaining access to the portal: From the "**Recruitment**" tab (Shown in the **Appendix 4**), click "apply here" in the given instructions; once purchased, s/he will be prompted to create an account or login.

2- After the volunteer clicks on the login tab on the home page. And select "**Login as the Volunteer"**, s/he can either login or create an account. **(Figure 6-17)**
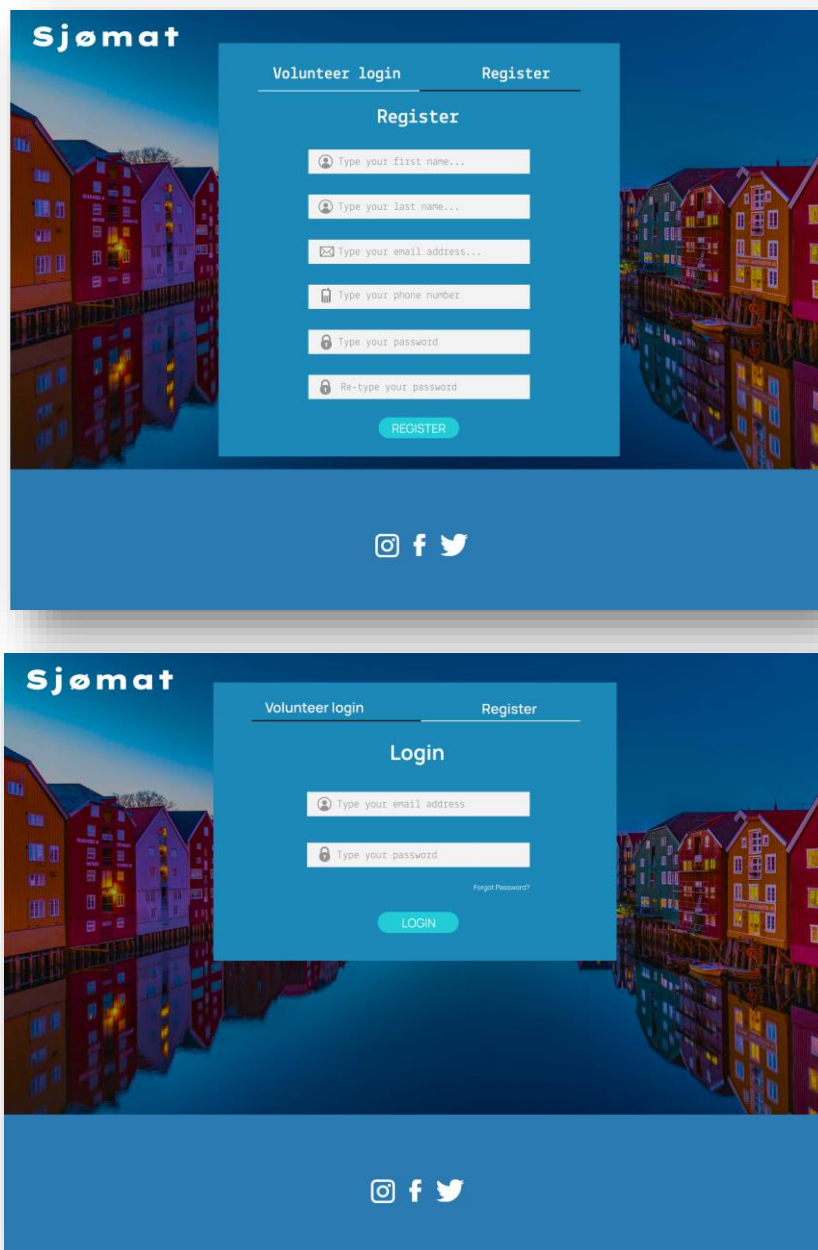
Figure 6-17 Login page for the volunteer

6.2.4.2.2 *User interface*

After logging in, the user go through the new portal named "SjømatJob".

The following user interfaces in the homepage includes:

- **Jobs**

  In the job section, the volunteer can look for the position that s/he can apply. By pressing the **"Read more", s/**he can go through the job section and apply. (**Figure 6-18**)
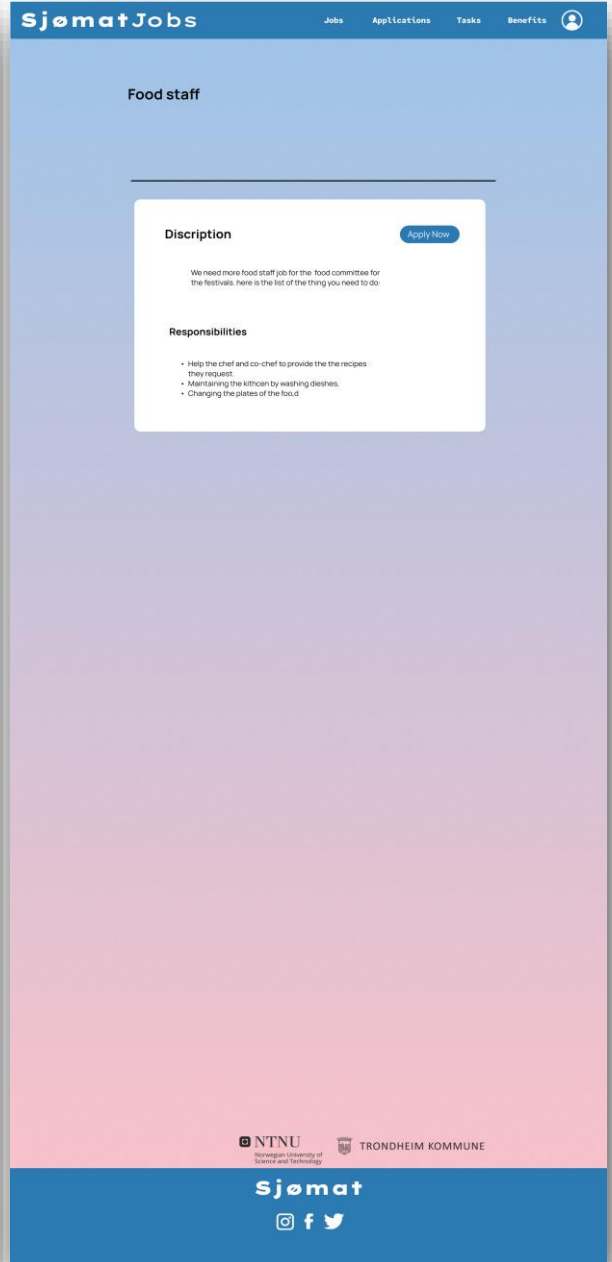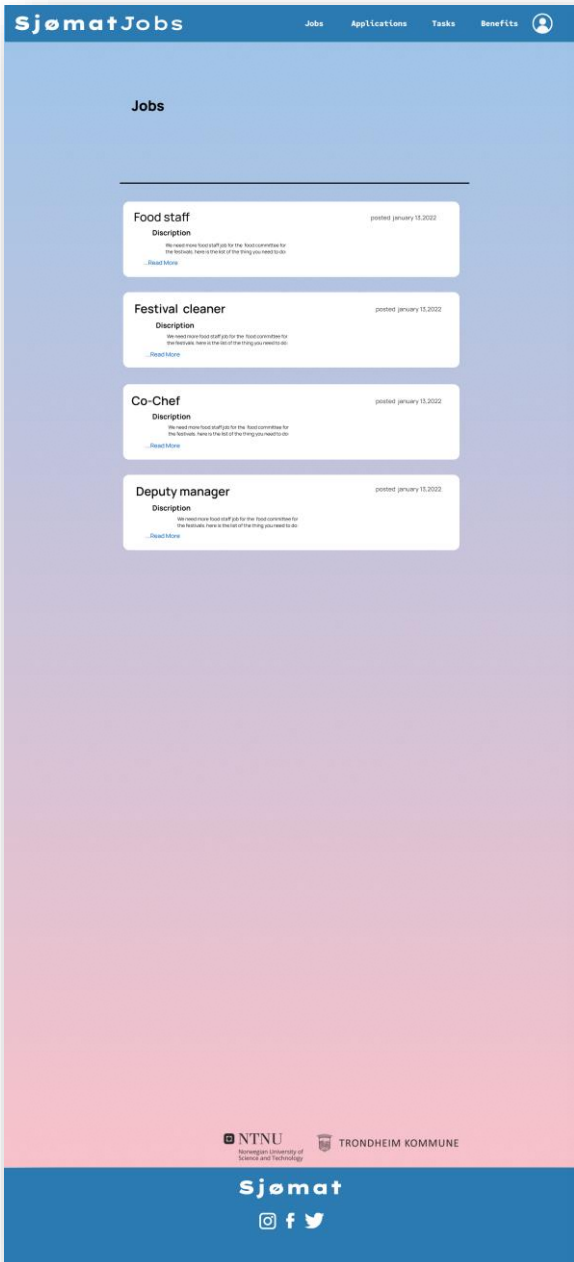
Figure 6-17 Jobs page for volunteers

- **Applications**

  In the application process, the volunteer can check the application status of the job positons which s/he applied. By clicking the each job position, the details of the job will appear. (**Figure 6-19**)
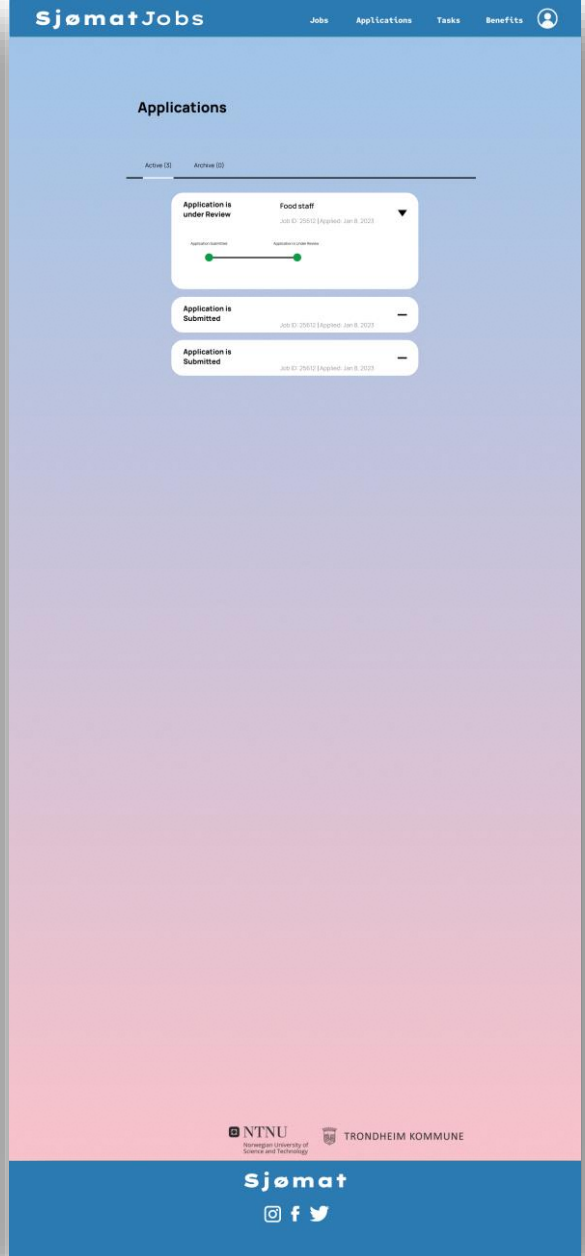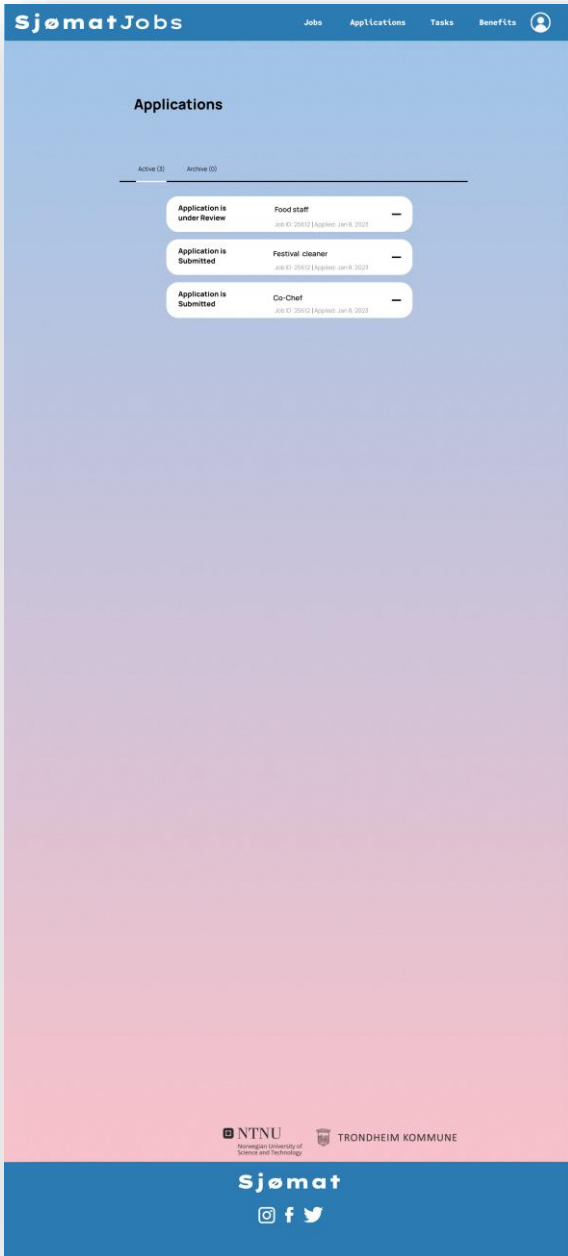
Figure 6-18 Applications page

- **Tasks**

  After being hired as a volunteer staff, the volunteer can check his or her own task that s/he supposed to do in prior days. (**Figure 6-19)**
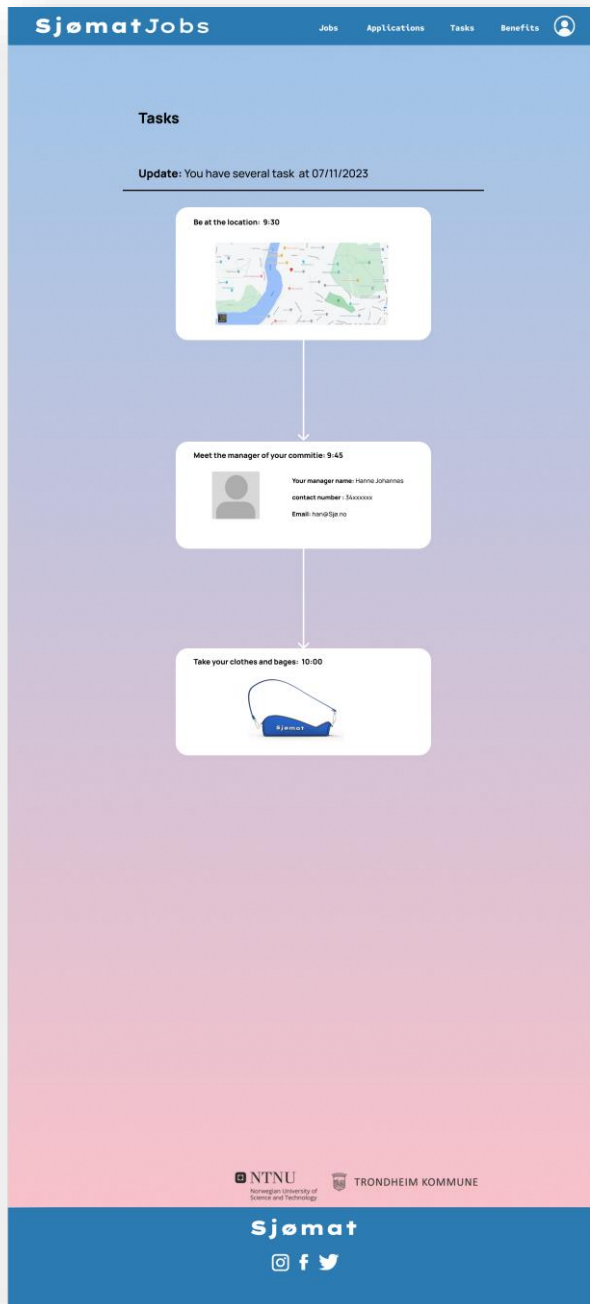
Figure 6-20 Task page

- **Benefits**

  In this section the volunteer has automatically access to the festival ticket which s/he can have free meals of the festival. (**Figure 6-22**)
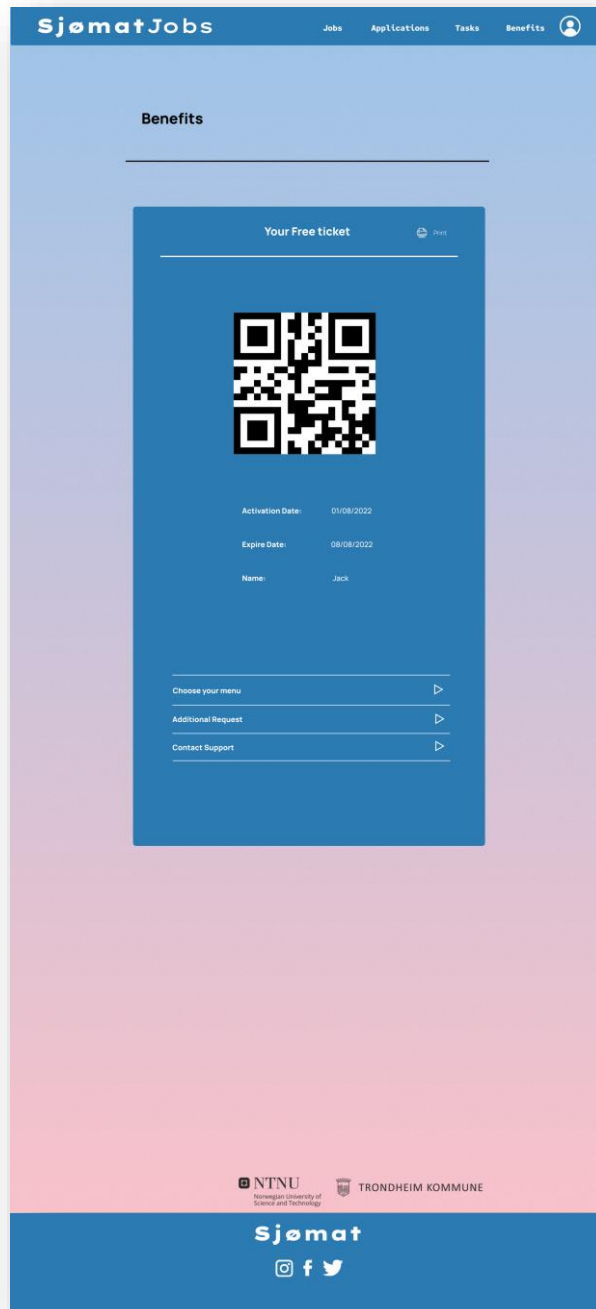
Figure 6-21 Benefits

7 Conclusions

Now we revisit the goals of the project once the application has been designed which was designing a service that would assist in developing a sustainable heritage space for the Bakklandet. In doing so, I offered new way to conduct a festival by using a website for tourists and the visitors, This make it possible to increase the commercial activity in the district by finding innovative and sustainable ecosystem with respect to their culture.

Furthermore, the festival will make the district, a cultural brand in the long run and make it a unique visiting site along the other famous European cultural sites. It is worth saying that with the focus on seafood festival, it is expected to get sponsorship from the seafood industries in the Norway as it is the most profitable business in the country. Moreover it would be a great way to advertise their seafood products. Also, to amplify the commercial status of the district they can invite the famous food bloggers or star chefs to the festival. However, this requires patience because it is challenging at the beginning to attract the visitors and volunteers.

Finally, as a designer, I believe that it is critical to understand the audience for whom we are designing. All of the meetings and experiments conducted by real people during the project's development were essential for the project's success.

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9 Appendix

9.1 Appendix 1. Storyboard

The appendix one contains, the two earlier storyboards created prior to the final storyboard (**Figure 6-1 & 6-2**), used during the interviews in the Design stage.
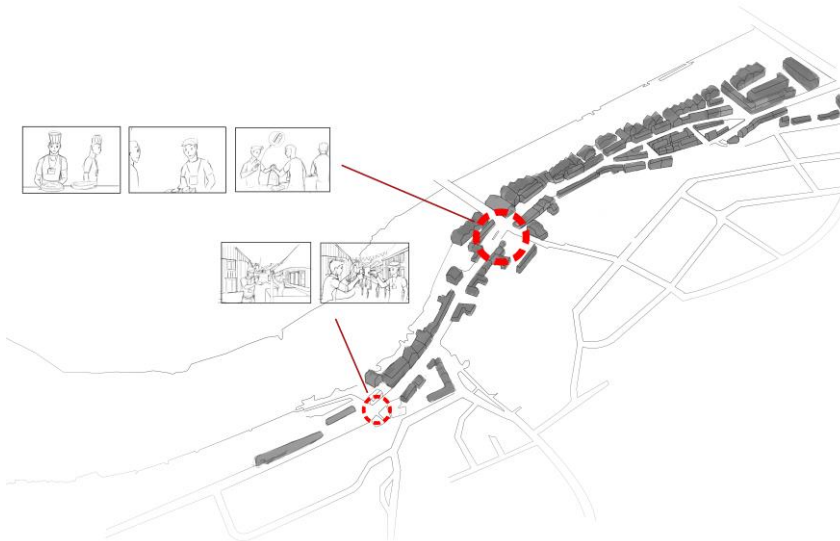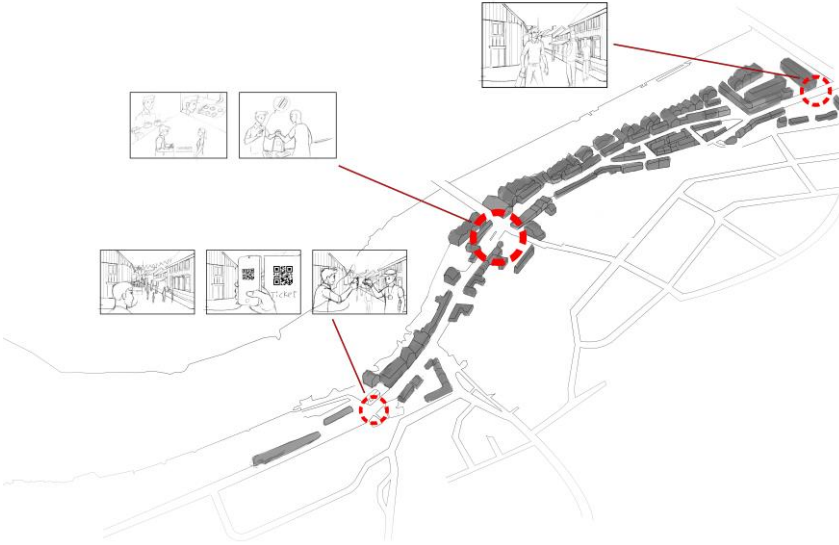
Figure 6-22 journey of the Storyboard

1-The Vlounteer apply for the sea food festival staff Through the Website
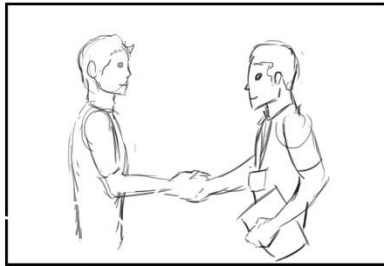
2- He becomes Festival Staff.
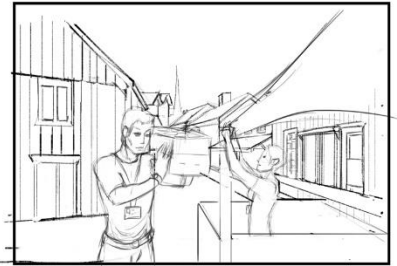
3-He start preparing the Festival with his co-workers

4-He helps the co-worker which is cooking and bring the sea food for serving to the clients

7-He brings the variety of Sea food to serve the Customers for testing

5-He Sells a meal to the customers

3-The Clinet enter the Sea food Festival In the Bakklandet.
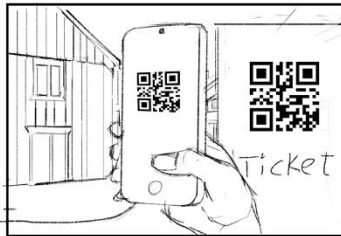
4-He notices the Qr cod which he can purchased the ticket by his own phone.

5-He shows the Ticket that he purchased from his mobile phone for at the entry of the festivals. for the check.

6-He tests a variety sea food which has served for free .

7-He purchases a whole meal of a food that he tested and liked

7-The client asked to fill the survey about the fe
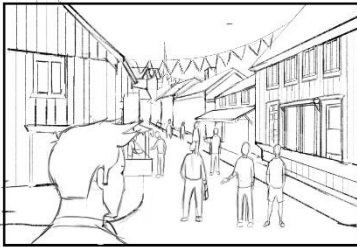
1-The Clinet enter the Sea food Festival In the Bakklandet.
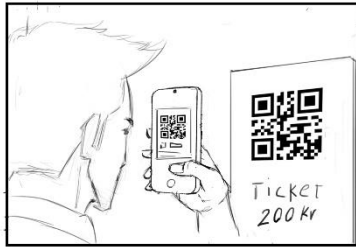
2-He notices the Qr cod which he can purchased the ticket by his own phone.
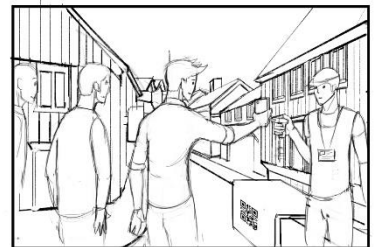
3-He shows the Ticket that he purchased from his mobile phone for at the entry of the festivals. for the check.
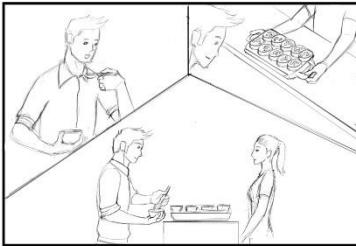
4-He tests a variety sea food which has served for free .
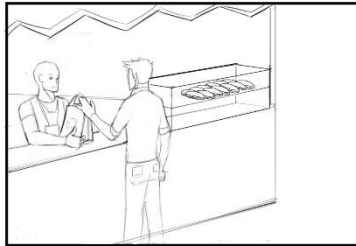
5-He purchases a whole meal of a food that he tested and liked
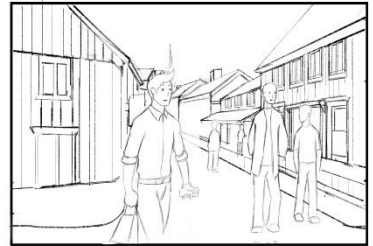
6-The customers comes out happily with tested meals and purchased meal.

Figure 6-23 Storyboards

9.2 Appendix 2. Service Blueprints

This appendix contains, the several service blueprints led to the combined versions of blue prints (**Figure 6-3 to 6-4).**

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Physical Evidence	Advertisments	Ticket	Serving table	Staff uniform	Entry gates	Street stores		
Customer Actions	Watching the Advertisement of festivals through social media and internet	Arriving to the festival	Buying ticket	Walks through the festivsal	Is greeted by shop keepers	Enjoys testing foods	Enjoying the environment of the BAKKLANDET	Purchasing a whole meal
Front of Stage Interactions	Putting ads via social media and internet		Selling the ticket	Greet guests		Servers delivers testing food	Servers renew the testing meals	Servers sells a whole meal packages
Back of Stage Interactions	Making the advertisement					Chef prepares foods	Kitchen staff does the dishes	Chef prepares a whole meal
Support Processes				Preparing the festivals		Payment system		

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Physical Evidence	Advertisments	Staff uniform	Tote bags	Ticket	Entry point	Street stores	Serving table	
Volunter Actions	Sending the applicaton throgh the email	Getting Accepted	Go to the place of festival	Getting a ticket for the free meal	Make the Festivals Ready and devide task with each other	Check the customer's tickets	Serves foods to the customers	Cleaning the district
Front of Stage Interactions	Provide advertisment of the festivals in the internet and billboard	Gathering applications	Employers accept the certain applications	Employer talk to the volunteers	Employer gives voluteers free uniform and tote bag			
Back of Stage Interactions		Evaluate applicants			Producing the tote bag and uniforms to the volunteers	Providing the QR code scanner for the volunteers		
Support Processes			Preparing the festivals		Payment system			

Figure 6-24 Service blueprints

9.3   Appendix 3. Tote bag

The third Appendix contains the tote bag which designed for the volunteers who joined the festival.

Figure 6-25 Tote bag

9.4   Appendix 4. Other User Interface:

This appendix contains, all the screens that have not been shown in the design chapter:

Main page

This page allows users four main actions, create an account, log in, get the new password and go through the several pages which contain:

News

This page allows visitors to access the latest news and events of the festivals.

Recruitment:

The current page is designed for the volunteers who would like to work in the festival, through this page they can access the latest news and the criteria of the job applications.

Ticket:

This page allows the customers to purchase the ticket

Sjømat   Home   About   Recruitment   Contact   Ticket   News   Login

Order summery

Name: Jack

Phone number: +47xxxxx

Visitors: 1 Adult

_____

Total Price: **NOK 200**

☐ Send the ticket via email

☐ Send the ticket via sms

Procced to purchase

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Science and Technology

TRONDHEIM KOMMUNE

Sjømat

Amir Hossein Ghaedi

Development of Sustainable Heritage Spaces Through Human-centered Entrepreneurial Approaches

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