University of Lapland
Faculty of Art and Design
Arctic Art and Design Master's Degree Program

# Designing Tourism Services for Sustainable Development in Finnish Lapland Using Service Design Tools

Master's Thesis
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**Summary:**

This master's thesis examines the role of service designer in a local development project: My part, as a service designer, was to help the local community to develop service concepts for the area of Pasmajärvi, Kolari, in context of tourism and business, thus to establish a common way or approach to local development projects that include community. The project and research were based on data collection through workshops with local participants and the testing of outcomes.

This thesis is focusing on co-creation of products and services with the local community for future tourism services that will contribute to the local economic development and inform the community of business opportunities. Products and services consist of locally sourced materials. The local participants ideated many of the products and services, while I assisted with the development processes. This thesis is based on the "Activating the locals" project, which aims to present the possibility of development in the area by giving the local participants the control over forming a common plan for future projects in the same context.

In this thesis my aim is to illustrate the role of service design in sustainable community development in remote areas in need of economic stimulation through tourism and business. The data from workshops and meetings with the community will be used to further develop and test the outcomes (products and services). As a result, I will be able to find ways in which approaches to local community development opportunities can be generated through service design tools.

As an outcome I present recommendations for approaching community development in a rural area by including the community in the process.

**Keywords:** Service design, co-design, sustainable development, local, tourism.

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## 1. Introduction

Introduction chapter of this thesis will start with explaining the research topic and background of this study, followed by examination of the research questions and objective, presentation of research methodology used for the case and concludes with explaining the structure of this thesis.

### a. Research topic and background

Currently tourism is the biggest service sector industry in the world, owning eight percent of global employment. Through globalization and increasing standard of living, tourism sector is growing rapidly (Kotler & Bowen, 2014). However, the development in the tourism sector also presents challenges to sustainability, thus environmentally, economically and socially sustainable tourism services are on the rise (Carvalho, 2001). This new approach to tourism is used for the development of remote areas and creating new tourist destinations.

As a result of urbanization and due to economic reasons, the migration of people to city areas are increasing annually, causing rural and remote communities to slowly die. Sustainable development is the key to save remote areas from facing environmental damage (Cooper & Ozdil, 1992). One of the definitions of sustainable development is "development which meets the needs of the present, without compromising the ability of future generations to meet their own needs" (Page & Connell, 2008, p. 119), highlighting the importance of understanding the needs of the communities. Another definition of sustainable development emphasizes that local inhabitants of an area should be in charge of the process because it may lead to feelings of ownership and taking up the responsibility to achieve the desired outcomes (Page & Connell, 2008). Both definitions show that understanding the needs of the communities and giving the power to to them is a way to achieve sustainable development, emphasizing the importance of collaboration between locals and other stakeholders.

Including communities in the design process is a way of co-designing. “Co-design is the act of creating *with* stakeholders (business or customers) specifically

within the design development process to ensure the results meet their needs and are usable" (Stratos Innovation Group, 2016). Co-design is often used to collaborate with different stakeholders and designers. The main goal of co-design is to enable social interactions between users and designers to learn, create, develop, express and evaluate their ideas and visions together (Robertson & Simonsen, 2013). Thus, the process itself becomes important to self-realization and self-empowerment by the community.

b. Describing the area of the case study

Finnish Lapland is the Northernmost region in Finland with approximately 100.000 km² area and 180.000 in population (Statistics Finland, 2018). Lapland has only 3.4% of the country's population, thus it is the least densely populated area of Finland. Rovaniemi is the biggest and capital city of the region with an approximate 62.000 population, followed by Kemi and Tornio. Lapland's population is decreasing since 1990 (Britannica, 2018). With a decreasing and aging population, small and remote villages are dying.

Lapland was destroyed during Lapland War in 1944 by Nazi German Army after Soviet Union demanded from Finland to expel the Nazi Army. After the destruction, 90% of Rovaniemi was burned to the ground (Britannica, 1998). Over the following decades, Lapland was rebuilding and reconstructing. Industry boomed and grew until late 1990s when businesses became unprofitable and the population started to decrease.


Figure 1: Finnish Lapland and Pasmajärvi village (Source: Google Maps, 2019)

Pasmajärvi is a small village located in Kolari, Lapland, Finland. The village is 1.5 hours drive from from both the Kolari and Rovaniemi centers, the two closest big cities. Pasmajärvi has approximately 50 residents. In 2017, Pasmajärvi was awarded “Vuoden lappilainen Kyläkilpaipu 2017” which translates to the village of the year 2017 in Lapland.


Figure 2: Pasmajärvi village (Source: Google Maps, 2019)

The village has an annual Pasmajärvi Day celebrated in August with a different theme every year, music festival in July and karaoke night every Saturday. Also, there is a former camping area called Tirrovoimaa located near the Pasmajärvi lake. In the camping area there are dorms, kitchen, workshops and a beach.

Residents of the area are mostly elderly people that hasn’t moved away. Young adults moved away for school or job purposes and haven’t returned. Population is approximately 50 and decreasing every year.

### c. Tourism in Lapland

Lapland offers untouched nature in most of its area with eight seasons over the year. With significant features such as six months of snow, the Northern Lights sighting and Santa Claus on offer, tourism is the rising star in business in Lapland with growing numbers of visitors and services each year. According to House of Finland (2019), growth in international tourism in Lapland was 6% more in 2019 compared to 2018. Up until 2019, tourism is focused on the winter season, but for

sustainable growth and development, all year-round tourism is necessary. Tourism companies in Lapland are currently developing their services for summer season as well as winter season (House of Lapland, 2019).

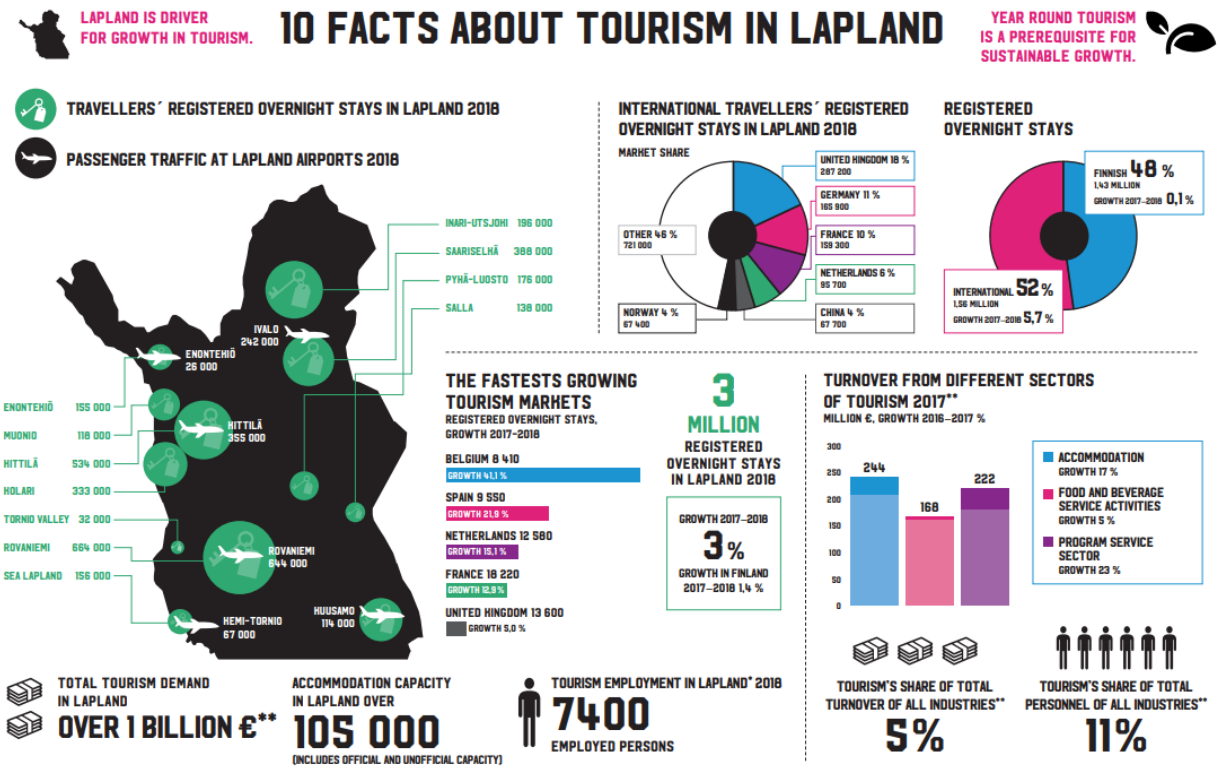


Figure 3: 10 Facts About Tourism in Lapland (Source: House of Lapland, 2019)

d. Objective of the study

Pasmajärvi is a dying village, the aim of this study is to present a way of approach to the problem of sustainable development by tourism in this remote area by using service design tools to keep the village alive by creating new job and economic development opportunities. The study includes approaching locals of the area with an idea of developing tourism activities, keeping them in the design process and testing the outcomes together.

The above-mentioned topics bring a new perspective to the world of service design, using service design as a tool to approach a remote community on a mission of sustainable development through co-design in context of tourism.

e. Research questions

This study proposes following research questions:

1) How to stimulate participation in local communities of Finnish Lapland through co-creation processes by using service design tools?

2) How to create sustainable and local services that can draw tourists to Finnish Lapland?

3) How to use service design as a tool to stimulate local economic development for sustainable development in remote communities?

f. Methods for data collection

The research strategies used in this master's thesis is qualitative and community-based participatory research. The data collected in this research derive from ethnography, observations and the workshops. During the workshops and meetings with the community of Pasmajärvi, I also used photo documentation and filed notes to capture the working processes.

Data gathered from the workshops and meetings has been analyzed by using deductive and interpretive methods and developed during the period of February-November 2018. Details about the data collection and analysis is explained in chapter research approach and methods.

g. Structure of the thesis

This thesis starts with examining past studies on Service Design, Participatory Design and Sustainable Development. After the mentioned literature review, there is the presentation of the research design and methodology used for this study followed by the actual project process covering the time of November

2017 - October 2018. This thesis ends with a discussion on a proposed framework for future studies and conclusion.

### h. Potential Significance

This master's thesis aims to show a way of approach how sustainable development can contribute to the remote communities of Finnish Lapland. The project focuses on working with them to achieve sustainable development in the community areas. The approach presented in this thesis potentially can be used for communities living in similar areas with similar challenges to sustainable development. Additionally, this thesis aims to illustrate the significance of using Service Design to tackle development challenges and working with the communities.

### i. Limitations

This research project is based in Pasmajärvi, Lapland, Finland and covers a a way of approach to the communities in Finnish Lapland. Although the study proposes a framework on how to approach the communities in Finnish Lapland, it can also contribute to the studies in similar context. The study is based on Service Design, Participatory Design, Sustainable Development and Tourism but excludes in-depth testing, construction and building of the proposed deliveries. Research methodology is based on qualitative research and Community-Based Participatory Research, quantitative research methods are not used in this study.

Tourism and development are constantly changing areas in Finnish Lapland with the decreasing population and the behavioral change in the new generation, new studies are required on how these changes affect the existing population and how the new generation will adapt to these changes. This study presents a framework on how to utilize service design as a tool to tackle economic development challenges in Finnish Lapland, however further research is needed on how the economic development will change Finnish Lapland.

## 2. Key concepts of the study

### a. Service Design

#### i. What is Service Design?

Service design is an interdisciplinary field that combines different methods and tools from various disciplines. While not being a stand-alone academic discipline, it is a new way of approaching a problem. Service Design has many definitions, nearly as many as definers. As Richard Buchanan (2001) has once said “If you would ask ten people what service design is, you would end up with eleven different answers – at least” (Stickdorn & Schneider 2010, p. 22). Service Design is an evolving field, there is not a definition that covers all aspects of Service Design yet, but to answer the question “What is Service Design”, several definitions need to be considered.

From Stefan Moritz’s (2005) point of view, Service Design is a multi-disciplinary and integrative field that works in an holistic way helping to create or improve services. According to Moritz the outcome of Service Design process should be useful, usable, desirable for customers and efficient, effective for companies.

Very similar to Moritz (2005), Brigit Mager (2009b) states that Service Design is an approach that understands human activities, feelings, needs and motives while putting the user at the center. Mager sees service design as a systematic, creative user-centered approach to discover on-point and hidden customer needs and desires that are usable, useful, efficient, effective and desirable, depending on the users’ point of view and feasible, viable and valuable from the provider’s point of view.

According to definitions from Moritz (2005) and Mager (2009b) Service Design process have three elements in common, being multi-disciplinary, being user-centered and holistic view. Also, the outcome of the process seems to have common elements as well, being useful, usable and desirable for users and efficient, effective for providers.

### ii. Principles of Service Design

Analyzed Service Design definitions state that there are main principles of Service Design. According to Marc Stickdorn (2010), Service Design has 5 main principles:

1. User-centered

Service Design depends on the users' feedback including feelings, needs, desires and capabilities.

2. Co-creative

There are different stakeholders in a Service Design process. Designing processes should include all stakeholders to achieve maximum success and satisfy needs from all points of view.

3. Sequencing

There are many actions taking place in a service and those actions are sequenced and interrelated. To correctly show all the relations, whole service should be visualized.

4. Evidencing

Physical artefacts are the evidences of a service, they present the intangible services in physical forms.

5. Holistic

Service Design includes the whole environment of a service not just the service itself.

These principles highlight that Service Design is not just about designing a product but considering users, providers, areas and products and relationships, connections between all (Karaoulanis, 2018).

### iii. Service Design process

Service Design follows an iterative process opposed to a linear process. A linear process doesn't allow step-backs or fails whereas an iterative process includes fails, several circular test steps and step-backs. Iterative design process

is not linear, it consists of prototype and test cycles connected by insights and leads the way to successful development.

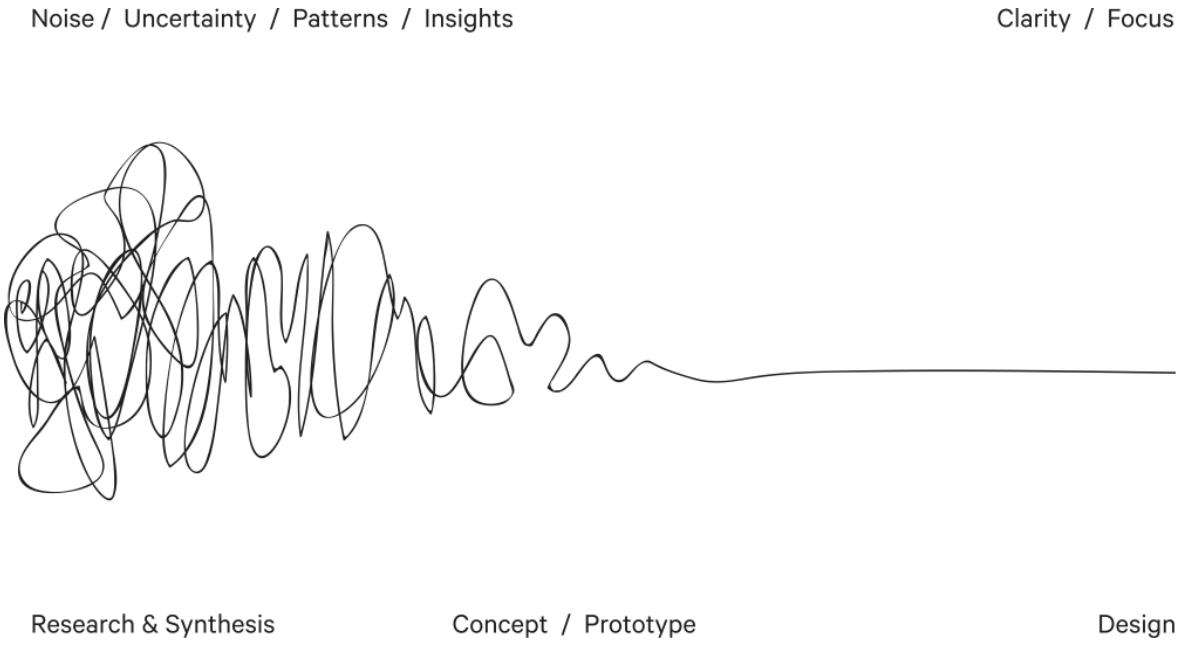


Figure 4: “The Squiggle” (Source: Newman, 2002)

As drawn by Damien Newman (2002), design process is not linear, especially in the research and synthesis stage. “The Squiggle” shows how complex the process is to reach the “Design”, which is the only part the stakeholders usually focus on as stated by Newman (2002). However even if the process reaches the “Design” stage, there are possible setbacks and fails, “The Squiggle” elegantly shows the complexity of the process but fails to show the iteration at every stage.

In the process it is necessary to act on the results of the testing, decide to move forward, take a step back or even start from scratch (Stickdorn & Schneider, 2010). This process depends not being afraid of doing mistakes and learning from mistakes. Iterative process suggests four main stages: Exploration, Creation, Reflection and Implementation.

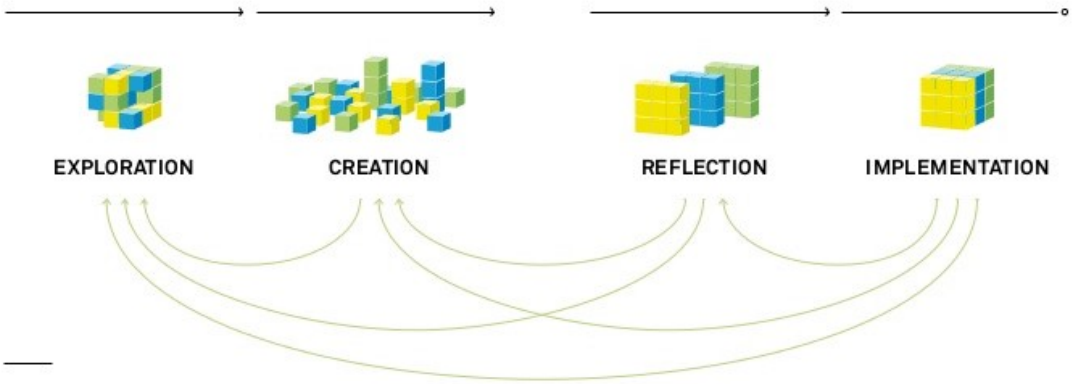


Figure 5: Iterative process (Source: Stickdorn & Schneider, 2010)

Exploration: Every Service Design process starts with research. User research, place research, benchmarking… Then identifying the problem to work on. “Gaining a clear understanding of the situation from the perspective of current and potential customers of a certain service is crucial for successful service design.” (Stickdorn & Schneider, 2010). Main tasks of Exploration stage are to gain a clear perspective of the user, organization, situation and visualizing the findings.

Creation: Ideation stage. Bringing as many ideas as possible to the table. Creation process includes all stakeholders and their solutions to the problem. This stage brings different stakeholders together to work together and understand each-other’s views. Main tasks of Creation stage are collaborating and ideating as many solutions as possible.

Reflection: Testing stage. This stage begins with selecting ideas from Creation stage to prototype. Once the ideas selected, they are prototyped rapidly to be tested, at this point the quality of the prototype is not important. After several tests, several prototypes are selected to be developed and tested again to develop service concepts.

Implementation: Bringing the concepts to life stage. In this stage selected Service Concept in Reflection stage is implemented in reality.

In this study another form of iteration process is used, named as Double-Diamond process by UK Design Council (2005). The stages are named Discover, Define, Develop and Deliver.

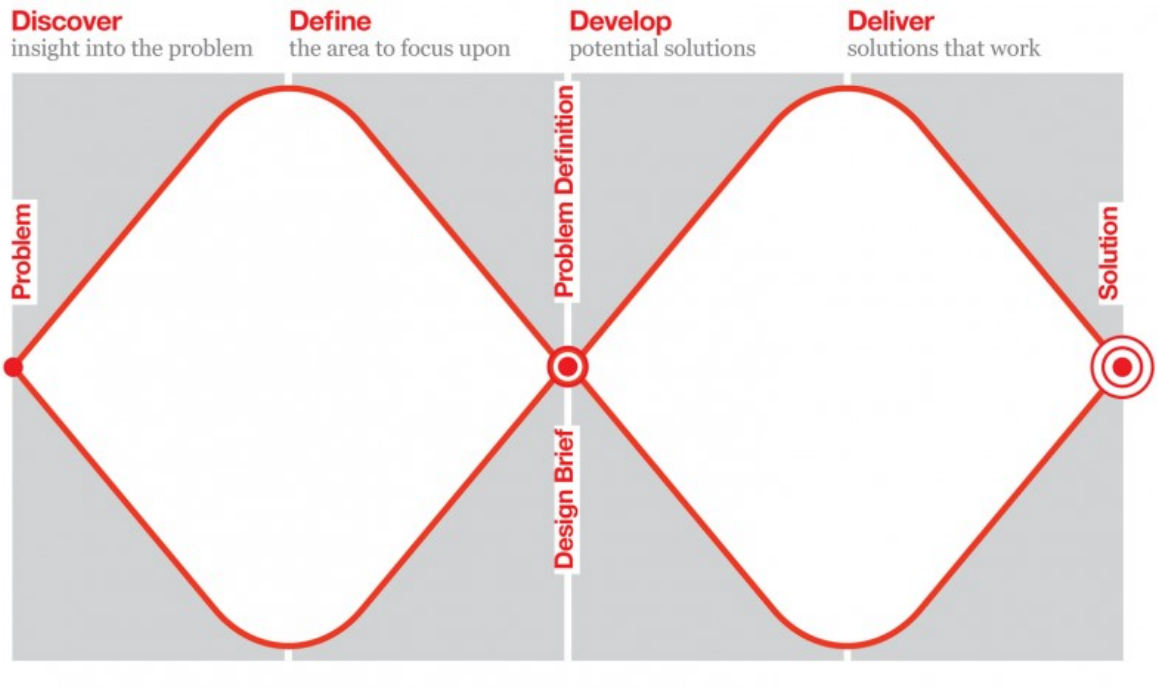


Figure 6: Double-Diamond (Source: Design Council, 2005)

Double-Diamond process shows the stages of divergent thinking and convergent thinking while connecting the different stages of iterative design process. These stages are not linear, there is always the possibility to take a step back or start over.

### iv. Service Design tools

Since Service Design is an interdisciplinary field, the tools used in each project depends on the disciplines involved. People involved in the process are described as T-shaped people. A T-shaped person is expert in one field and has general knowledge in other fields (Guest, 1991). When t-shaped people come together, their general knowledge has common areas and they bring together their expertise and tools, forming an interdisciplinary working team.

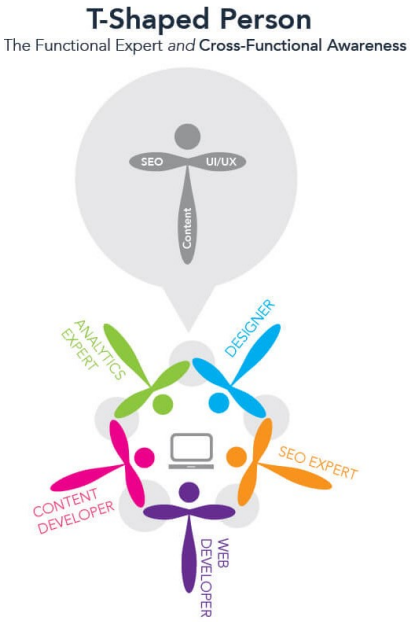


Figure 7: T-Shaped Person (Source: Zion, 2014)

Depending on the project and problem, expertise and tools change. Service Design tools exist to visualize the process, collect data, co-design, develop and deliver the final outcome. The process of this study started with research, continued with bringing stakeholders together to create together, further design development and testing. The tools used followed the process of this study:

- Benchmarking: Evaluation of the best practices in same context including products, services, policies etc. Benchmarking allows the companies to improve their services or create new services depending on the data collected from the comparisons (Global Benchmarking Network, 2010).

- Stakeholder Map: Stakeholder map is a visualized version of the relationships between different groups included in a service. Depending on the service, it can include users, staff, partners and other stakeholders. With Stakeholder Map, the relationships between different groups can be seen and analyzed.

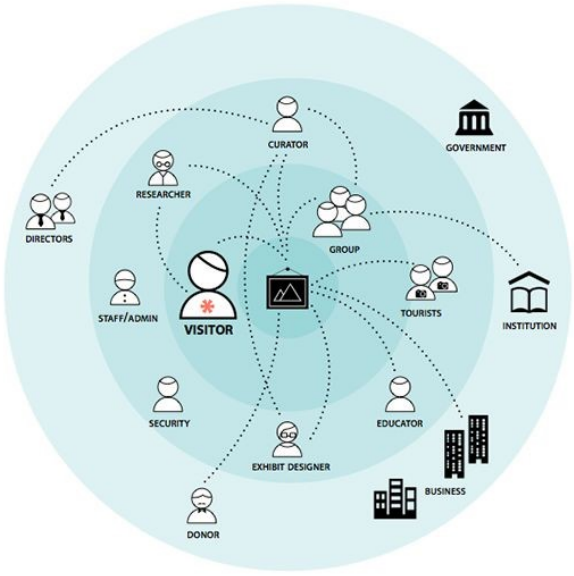


Figure 8: Stakeholder Map (Source: Triode, 2015)

- Service Walkthrough: Visualization of the touchpoints where the set user interacts with the service. Service Walkthroughs are a way to show the journey of the user in the said service by going through all of the steps they take and detailing the steps.

Figure 9: Service Walkthrough (Source: Romm, 2015)

- Idea generation: Ideation techniques to stimulate a group of people to brainstorm. There are several ways of ideation, some examples are Mindmapping, Six Thinking Hats, S.W.O.T. Analysis and Storytelling.

Ideation techniques are used to inspire people for group discussions and idea generation.

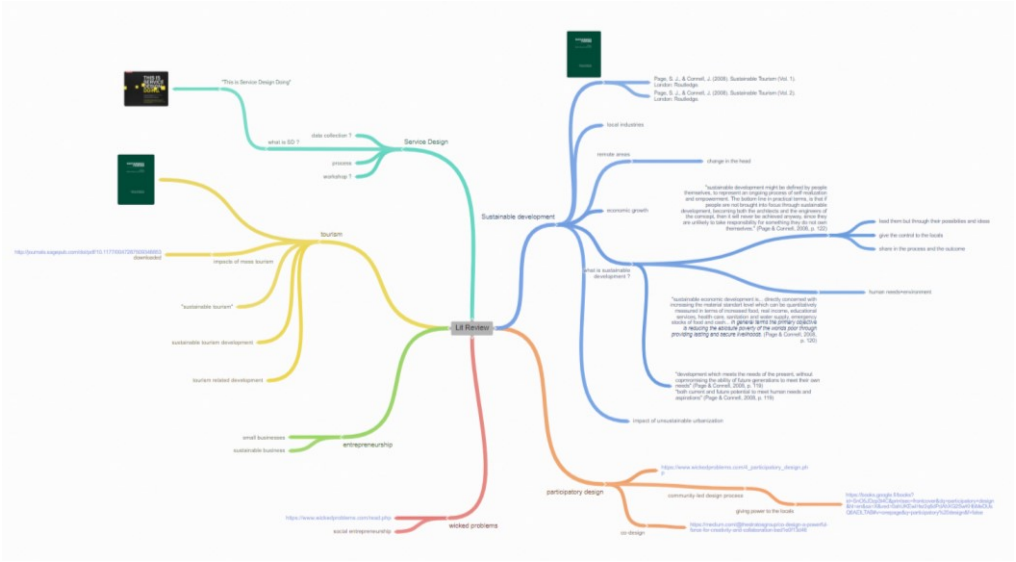


Figure 10: Literature Review Mind Map (Source: Kılıçkap, 2018)

- Co-creation: Bringing in different stakeholders to the design process, designing with the involved parties. Co-creation is one of the bases of Service Design, it is a crucial to the process. With co-design each party can be involved in the design process and the outcome will be solutions that satisfies everyone's needs.

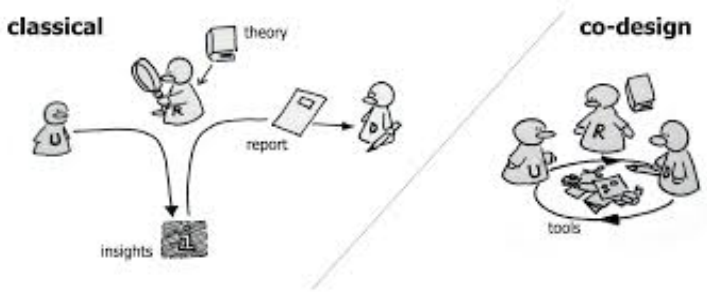


Figure 11: Classic design and research vs. Co-Design (Source: Sanders & Stappers, 2008)

- Storytelling: A way of sharing ideas, insights and concepts. Every product and service have a story behind it. Putting a service or a product in a narrative can stimulate new ideas or develop the existing ideas. Storytelling can make the service concepts more compelling (Stickdorn & Schneider 2010).

b. Participatory Design

i. What is Participatory Design?

The roots of Participatory Design go back to 1960s and 1970s. At the time the societies of the Western countries demanded an increase of societal say in the governing decisions that affect their lives and they were ready to participate in collective ways around shared values (Robertson and Simonsen, 2013). In Germany and Austria, some local community groups were trying to involve citizens actively in the solutions to the local problems (Jungk and Müllert, 1987). This political stand influenced designers on how to include participants in their own projects, in fact the topic of Design Research Society conference in 1971 was Design Participation (Cross, 1972). Around the same time, architects began to include people in their environmental design projects.

Over the years Participatory Design matured into a research and design field also researched and designers started using participatory approaches in their work, presenting the new generations with directly involving participants in the design of products, services and environments (Robertson and Simonsen, 2013).

Participatory Design can be defined as an approach where all the stakeholders are involved in the design process. Traditional design processes usually include the client and professionals however Participatory Design approach includes all of the stakeholders paying or not (Participate in Design, 2018). The involvement levels of the stakeholders can vary between passive involvement to active involvement where sharing of the ideas and contributing to the design happens. Participatory Design is also known as co-design or co-creation.

The core of Participatory Design is active participation and this occurs when the stakeholders move from just informed participants to being involved in the process and decision-making, for example moving from being interviewed about a specific issue to being involved about the solution of the said issue by sharing ideas, testing the ideas and being in the process (Bodker *et al*., 2004). Through active participation, mutual learning takes place throughout the whole process,

users learn the design opportunities in the means of technology and design while the designers learn the specific knowledge of the users on the use of the design and practices (Robertson & Simonsen, 2013). In Participatory Design process, all stakeholders increase their knowledge by learning from each other and the situations of working together to create together.

Benefits of Participatory Design are as follows (Participate in Design, 2018):

- Reduction in cost and risk of failure: With participation, the question of use is answered through the involvement of users, so there is less chance of a project failure caused by usability problems.
- Establish ownership: Instead of top to down approach, with participation, solution is created with the community and that leads to the responsibility and ownership of the solution by the community.
- Empowerment of the community: Participatory Design makes use of the strengths and knowledge of the community which leads to awareness and empowerment.
- Make change easier: Participation of different stakeholders will present different approaches to an issue and with seeing the different point of views will encourage the community to be more open-minded about change and the adaptation easier.
- Greater community involvement: With working together, comes knowing each other better and forming networks and when people know each other better, they trust each other and make decisions together.

### ii. Participatory design methods, tools and process

Participatory Design is about involving all stakeholders in the design of a new product, service or environment and there are numerous methods used for Participatory Design but to define, according to Andersen et al. (1990), a Participatory Design method should comprise of following parts:

- Application area: The area of development the design process is intended for, design of a website requires a different approach then design of a furniture.

- Perspective: Design process should be as close to the user as possible so the users can participate in the design decisions.
- Guidelines: Recommendations on which stakeholders to include, how to include them, which tools and techniques to use and how to resolve the conflicts in the process.
    - Techniques: Explains how to execute specific activities in the process.
    - Tools: Instruments used in the process.
    - Principles of Organization: Explains how to distribute tasks and work in the design process.

An example a Participatory Design method is MUST, an acronym in Danish that translates to “theories and methods of initial analysis and design activities” (Bratteteig *et al.*, 2013). MUST is a Participatory Design method developed by researchers from Roskilde University in Denmark to encourage participation throughout the users and organizations including management and staff (Bodker et al., 2004). MUST is a method that includes all stakeholders and consists of a framework for the Participatory Design process highlighting the definition stage of the design problem which defines the problem, uncover the needs and opens the way to the possible solutions.

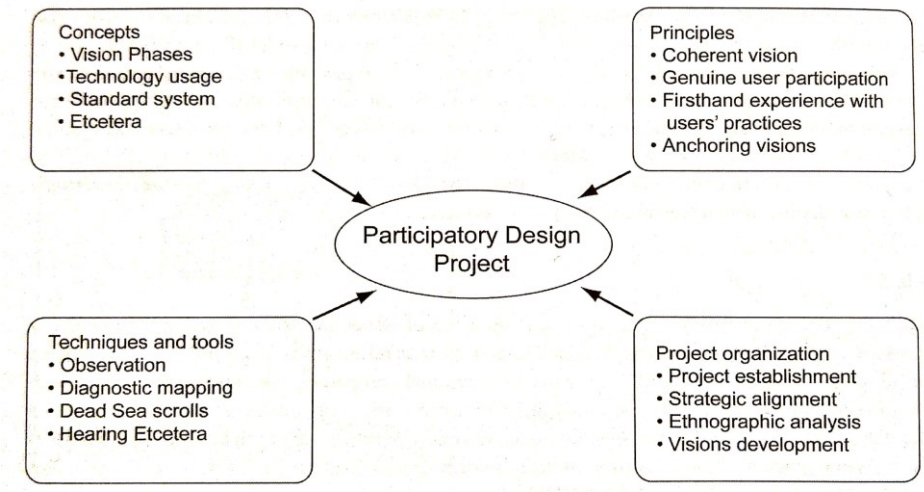


Figure 12: Participatory Design Project based on MUST (Source: Bratteteig *et al.*, 2013)

Participatory Design process is an iterative development process. As seen from Figure 13 the process consists of iterative development cycles connected to

each other to make one big development cycle (Bratteteig et al., 2013). Each cycle can be done differently using different tools and techniques designed for that specific cycle. The main focus of Participatory design approach is the early stages of design which are identifying needs, understanding practice and materializing the the solutions.

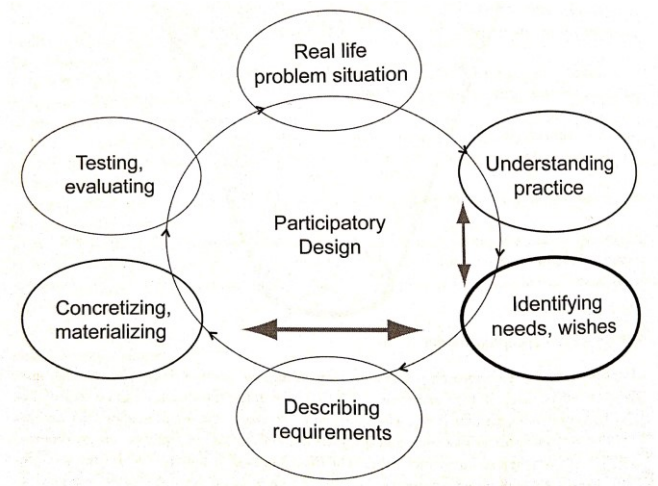


Figure 13: Iterative Cycle of Participatory Design (Source: Bratteteig *et al.*, 2013)

Used tools for Participatory Design were defined by the MUST method up until recent days which presented a guideline for systems design (Brandt *et al.*, 2013). MUST method is one approach to a Participatory Design problem, but it doesn't cover all of the tools and techniques that can be used in a Participatory Design project process (Brandt *et al.*, 2013). The process is a practice of making, telling and enacting and the iterative cycle between these three elements is fundamental for participation to occur with ease and joy. Tools used fo the process enable the iterative cycle of telling, making and enacting, some of these tools are (Brandt *et al.*, 2013):

- Workshops: Bringing stakeholders together in the same environment to design together around the same issue.
- Storytelling: Telling of experiences and dreams related to the visual materials provided that are linked with the design problem.
- Prototyping: Mock-ups or other low-quality models of the solutions are made and tested by the participants to encourage new ideas and development.
- Role-playing and scenarios: Imagining and acting out possible solutions

- Gamification: Design games to encourage more participation and ease the participants into the process of design.

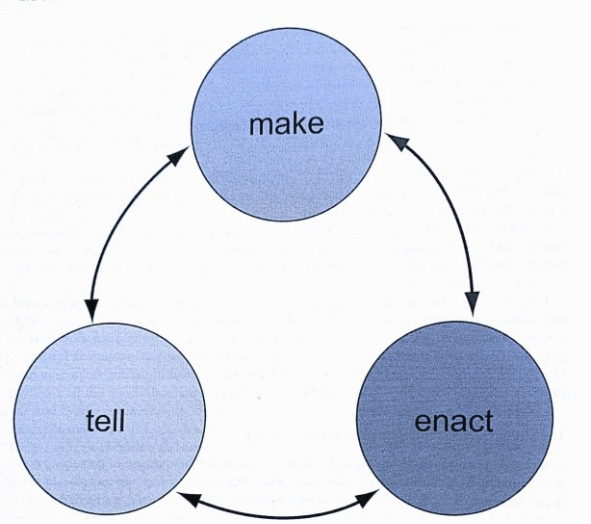


Figure 14: Participatory Design project process (Source: Brandt *et al.*, 2013)

### iii. Community-based Participatory Design

Community-based Participatory design is a distinct field in the area of Participatory Design, which differs in the context of area of the design and design problems (DiSalvo *et al.,* 2012). Traditionally Participatory Design took place in workplaces with employees but community-based Participatory Design takes place outside of workplaces and according to Carroll *et al.* (2008, p.1) community-based Participatory Design should “address important issues such as environmental protection and sustainable development, historical preservation, the arts, provision of medical services and distribution of food to the needy, housing construction for low-income people, protection of animals, aspects of public safety and security, and much more”. Community-based Participatory design can be defined as design process that highlights social issues in communities and relations of groups that takes place beyond traditional organisational structures. Community-based Participatory Design deals with much more obscure problems than traditional Participatory Design because community-based Participatory Design usually overtakes the social issues in the communities outside of workplaces (DiSalvo *et al*., 2012).

One area to use community-based Participatory Design would be enabling creativity and fostering cultural production (DiSalvo *et al.*, 2013). Participatory Design is moving out of just workspaces and expanding into whole new environments like communities and neighborhoods with the purpose of bringing creativity into the communities through cultural art activities.

c. Sustainable Development

i. What is Sustainable Development?

Emergence of the term “sustainability” goes back to early 1700s Germany, it was used to express the concern on preserving natural resources (Kulhman & Farrington, 2010). In late 1800s thinkers such as Mathaus and Jevons expressed the importance of resource use. However, until 1960s, public was not informed about the concept. “Limits to growth” report was published in 1972 by scientists from Massachusetts Institute of Technology, writing that if the current production levels were to continue to grow the carrying capacity of the Earth would be exceeded in the next 100 years (Meadows *et al.*, 1972).

The term sustainable development came out in 1980 in World Conservation Strategy (IUCN, 1980) highlighting the achievement of sustainable development through resource management, however it did not link the social or economic issues to the development and sustainability.

Sustainable development is a vague term that is open to interpretation and as a result, the term has several definitions depending on the context and audience. In the present days, sustainable development term is used to express different views on development and the fact that there is a lack of agreement on the definition of the term brings out the question of the practicability of sustainable development in real-life, which means the term requires more debate for an appropriate definition (Redclift, 1992).

The most broad coverage of sustainable development was brought out by Our Common Future report (WCED,1987, p.15), also known as the Brundtland

Report, explaining that sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The use of “needs” in this definition covers material needs as well as emotional needs and values. Our Common Future report (WCED,1987) is based on four primary dimensions:

- Protecting long-term environmental sustainability: Sustainable development should not endanger the ecological life on Earth.
- Meeting basic human needs: Meet the needs of employment, food, energy, housing, water supply, sanitation, and health care.
- Promoting intergenerational equity: Fairness and justice in between the generations.
- Promoting intragenerational equity: Fairness and justice between nations.

Brundtland Report (WCED, 1987), gives a wide approach to sustainable development. Highlights from the reports as summarized (WCED,1987):

- Links environmental issues to economic, social and political factors.
- Sustainable development is presented as a process of social change with a global perspective. Change is presented in a three-pillar model with social, economic and environmental dimensions.
- Has a positive approach to development, stating that sustainability can be achieved in the mentioned three dimensions.
- States development in technology and social organizations will bring new sustainable development opportunities.
- Acknowledges that there is a biophysical limit to growth and development. Planet can not withstand the growing consumption rates and extensive resource use.
- Takes the poor of the world into account, especially in Third World countries
- Challenges the North to decrease their consumption levels to the boundaries set by the environmental limits and consider equality and justice in the process.
- Acknowledges that the present generation is responsible for the lives of the future generations.

Brundlant Report (WCED,1987) is a set of guidelines however it is not detailed enough to form policies.

Another definition of sustainable development by Barbier (1987), adds the economic term into the definition to highlight the human-needs over the ecological needs. The definition states that sustainable economic development's main goal is to increase the material standard of living of the poor in terms of basic needs, healthcare, education, income and sanitation to provide long-term and secure sustenance. This definition puts the economic development before the other possible needs of humans and environment.

A third definition suggests that the terms of sustainable development can be defined by the people themselves (Page & Connell, 2008). According to the definition, sustainable development is an ongoing process of empowerment and the people should be in focus of the process, being the builders of the development, achieving the goal by themselves other than guided into it because that is the only way the development can hold in the long-term. People don't take responsibility for something they didn't create.

All definitions for sustainable development have elements in common. The focus is people, their needs and future, their relationship with the environment and economic development.

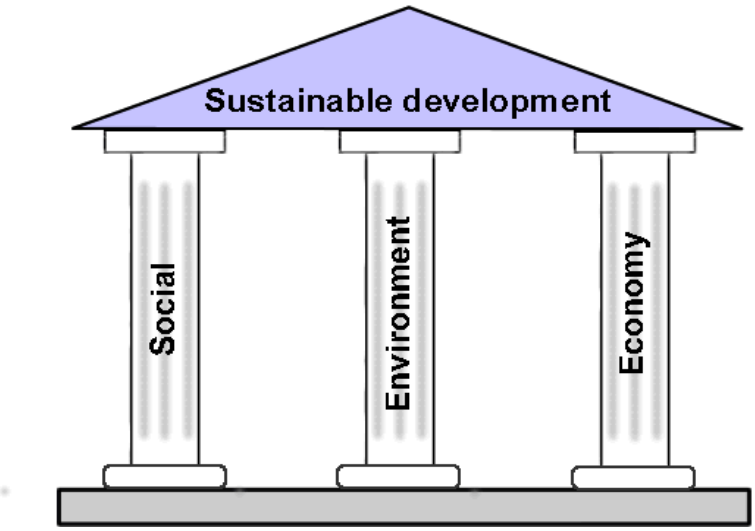


Figure 15: Three Pillars of Sustainable Development (Source: Moshina, 2015)

Three pillars of sustainable development highlights that to achieve sustainable development there must be social, environmental and economic development:

- Social: Human values, relationships and establishments.
- Economic: Use and distribution of resources.
- Environmental: Input from both social and economic aspects and their impact on the ecology and resources. (Ekins, 2000)

The changes in sustainable development policies are visualized by Baker *et al*. (1997) by a ladder with a global focus. The ladder shows the different approaches from different perspectives and the steps towards an ideal model of sustainable development. Looking through the ladder, one can see the different policies and the connections in association with politics between them. The ladder also highlights the relationship between humanity and environment and sustainable development actions. According to the ladder, Sustainable Development starts with a baseline of pollution control which is partly described as resource exploitation, process continues with weak sustainable development moving on to strong sustainable development which is partly explained as maintenance of critical resources and diversity with democratic participation from the society (Baker *et al.*, 1997). In the ladder the ideal model of sustainable development has following explanations:

- Satisfying the needs over the wants.
- Strict rules on the use of natural resources.
- Green technology.
- From bottom to top decision making, control in the hands of societies.

The ladder of sustainable development can be seen in Figure 15, clearly showing the relationship between different areas to achieve the ideal model of sustainable development.

Sustainable development is a process rather than an end-goal because it is a dynamic concept working on changing needs over time (Baker, 2006). Concept begins with visioning possible futures for the society then through necessary changes in attitude and values the process for development starts.

| The Ladder of Sustainable Development: The Global Focus | | | | | | |
|---|---|---|---|---|---|---|
| Model of sustainable development | Normative principles | Type of development | Nature | Spatial focus | Civil society-state relationship | Philosophy |
| **Ideal model** | Principles take precedence over pragmatic considerations | Right livelihoods, meeting needs not wants, biophysical limits guide development | Nature has intrinsic value, strict limits on resource use, aided by population reductions | Extensive local self-suffeciency | Bottom-up community structures and control, equitable participation | Ecocentric ↑ Antrophocentric |
| **Strong sustainable development** | Principles enter into law and governance | Changes in patterns and levels of consumption, shift from growth to non-material aspects of development | Maintenance of critical natural capital and biodiversity | Hightened local economic self-suffeciency, green and fair trade | Democratic participation, open dialogue to envisage different futures | |
| **Weak sustainable development** | Declaratory commitment to priciples | Reuse, recycling, repair of consumer used products | Substitution of natural capital with human capital, harvesting of biodiversity resources | Initial moves to local self-suffeciency | Top-down initiatives, elite participation | |
| **Pollution control** | Pragmatic | Exponential, market-led growth | Resource exploitation, nature has use value | Globalization, shift of production to less regulated locations | Dialogue between the sate and economic interests | |

Figure 16: The ladder of sustainable development: the global focus, freely adapted from Sustainable Development by Susan Baker (2006)

### ii. Sustainable Development and being local

Sustainable Development is closely related to being local. Being local consist of using the local resources instead of importing from outer sources, including local community in the process of change and working with them, possibly led by them through their knowledge and expertise on the area and resources (Kilipiris & Zardava, 2012).

Locally sourcing the resources needed is the first step to being and staying local for sustainable development. Sourcing local is beneficial for the protection of the environment because sourcing locally eliminates the transportation from global sources and therefore the it decreases the carbon emission, leading to a better environment. Also using local resources sustains local production, keeps the local capital in the community and forms and sustains community relations (Choi & Sirakaya, 2005).

Local sustainable development goes through local communities, starting with local governments' involvement with the relevant sectors then moving on to the communities, encouraging participation, inclusion and partnerships to achieve sustainable development (EuCDN, 2016). Community involvement is crucial because understanding their needs and attitudes towards development and change are the foremost steps to sustainable development. Keeping the decision-making process local encourages sustainable, slow and controlled change that enables the community to adapt and develop (Kilipiris & Zardava, 2012).

### iii. Sustainable Tourism Services

The word "tourism" and originate from French word "tour", meaning the traveling activities of people outside their own environments for leisure or business, lasting less than one year (UNWTO, 2012). According to Lane (2009), in 1950s and 1960s, tourism was booming in a way that it was seen as revolutionising, by 1970s tourism was driven by the inexpensive fuel, resources, rising income, level of education, technological advancements and media Traveling became a drug and started affecting more and more people (Lane, 2009). This effect of tourism was seen as positive, broadening the vision, increasing happiness and prevented conflict, however criticism towards tourism spread in late 1970s, mentioning natural, mental and social consequences of mass tourism. In mid 1980s, an alternative to mass tourism, softer tourism, came out and after discussion, the term sustainable tourism was established (Bramwell & Lane, 1993). Sustainable tourism flourished from the concern of the impacts of mass tourism. Mass tourism was a tool for economic development but it also brought formidable impacts on the environment and people, host communities and environments suffered from the impacts while the visitors had the benefits (Lane, 2009). Impacts of tourism can be categorized in three sections:

- Environmental (Cohen, 1978)
    - The intensity of the resource use on the tourist site will affect the environment, the increase in tourist numbers will increase the resource use and environmental damage. Hawaii is an example of such damage, to satisfy the increasing tourism demand approximately 2-3 billion dollars was invested in tourism

development between the years of 1969-1975, 20-30.000 hotel rooms were estimated to be built with 30-50.000 workers were estimated to be imported. All this increase in a short amount of time took its toll on the environment and resources.

- Resilience of the eco-system is a factor in the impact of tourism developments, not all environments can stand increasing amount of tourists and developing tourism facilities. For example, big cities can withstand increasing amounts of tourists better than small cities and countryside. Extreme eco-systems such as reef corals and pure environment of Finnish Lapland are the least resilient eco-systems.
- Long-term vs. short-term perspective of the developers change the environmental effect of tourism. Long-term thinking tourism developers tend to be more aware of the environmental impacts than the short-term thinking tourism developers.
- Transformation of the tourism development environment is a common element of mass tourism developments, changing the environments according to the tourist demand comes in time and with more and more increase in tourist numbers, environments are forced to change out of their natural forms and withstandings.

- Social and cultural (Butler, 1974),
    - Resources used by the local residents only before the tourism development, have to be shared with the visitors of the tourism development or even used solely by the visitors in some cases. This causes irritation among the residents of the area.
    - Increasing amount of tourists also means increasing amount of material use and demand, which also increases the prices of the local products, land and food because the developers tend to exploit the profit that come from the visitors.
    - For some of the jobs in the tourism developments, local residents might not be suitable therefore developers bring outsiders into the area for the work force which creates further resentment by the local residents.
    - Changes to the culture is inevitable by the rising amount of visitors and increasing interaction with the locals. Morals, lifestyles and

tastes change with increase in crime. Increasing crowding also can push the local residents away.

- Economic and political (Vanhove, 1997)
    - Mass tourism tend to increase the inflation in the local area with rising demand and prices to the local products, lands and facilities.
    - Higher taxes on tourist products and services.
    - Insufficient market reaction.
    - Local residents may or have to accept a decreased quality of life with the coming tourism developments disrupting their lives.

As mentioned, tourism has a substantial effect on the hosting communities and communities react to the effects. John Ap and John L. Crompton (1993) state that the community of the hosting area have different reactions to the tourism developments in their area: Embracement, tolerance, adjustment and withdrawal. Further explaining:

- Embracement is the reaction when the host area residents welcome the visitors. The residents not only benefit from just accommodating the visitors but also in different factors as well like jobs, lasting relationships and long-term positive effects.
- Tolerance means that the residents have a degree of hesitancy towards the tourism development and tourists, this comes out when the positive benefits rival the negative impacts, benefiting economically with new jobs but life-style disruption with increasing traffic would be an example of tolerance.
- Adjustment also means adapting and escaping the increasing amount of tourists and crowds by re-arranging the life-styles. Local knowledge of the residents come in handy at this point, with knowing how to avoid crowds in the area.
- The most extreme reaction is withdrawal by the residence, meaning leaving the area temporarily depending on the tourist season, moving out of the area completely or in some cases psychologically withdrawing.

If we go back to the definitions, there are two general types of tourism; mass tourism and sustainable tourism. Mass tourism is defined as intensive resource consuming tourism (Fischer, 2014). Sustainable tourism is also known as

alternative tourism or green tourism. Sustainable tourism is defined as tourism services that considers the present and future economic, social and ecological impacts while meeting the needs of the host communities, visitors and sector (UNEP & UNWTO, 2005).

Since sustainability is not only about environment but also culture and economy, sustainable tourism developments should cover the following elements (Mowforth & Munt, 2006):

- Sustainable
    - Environmentally: Preventing or minimizing the ecological impact of tourist activities.
    - Socially: Enabling the community to adapt to the change, meeting the needs of the hosts and tourists.
    - Culturally: Able to absorb or adapt the elements of the host culture in order to separate from the visitors.
    - Economically: Sufficient economic gain to cover the costs and ease the effects brought by the visitors without violating the other conditions.
- Educational: Educating local communities about tourists and tourism and informing visitors about the natural and human environment of the host area.
- Locally participatory: Services are controlled considerably by the local government and communities.
- Assistance to positive change.

According to Krippendorf (1987), the main aim of a balanced sustainable tourism development should not just be better economy but more happiness. Meaning, the development should be measured by the community happiness depending on better jobs, better housing, better facilities and greater well-being. Krippendorf (1987), highlighted the steps to achieve more happiness with sustainable tourism:

- The needs of tourists and locals should come first and they should be coordinated: Untangle the conflicting interests and set-up clear goals for both parties.

- Locals should have the ownership and control of the lands: Give the property control to locals for them to supervise the constructional development for better resource use and sustainability.
- Plan investment: Internal and external investments should be planned in advance.
- Workforce should be local: Enabling stronger local presence on all levels and steps starting from design, construction to business running.
- Use and market what is typically local: Local traditions, culture and materials should be the main features from architecture to service and products.

In March 2004, World Trade Organization (WTO) Sustainable Development of Tourism Committee published a revised definition for sustainable tourism and the requirements for it, “Sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments”. Meaning, from the perspective of WTO sustainable tourism is not a type of tourism anymore but a set of practices that could be applied to mass or alternative tourism types. Sustainability practices cover the environmental, economic and socio-cultural issues and the balance between these issues regarding the tourism developments (WTO, 2004). Therefore, the sustainable tourism principles are:

- Optimally using the environmental resources, without damage and helping to conserve the nature.
- Appreciate the authentic culture and social life of the hosting communities that the tourism development is located.
- Provide long-term economic solutions, present gains to all stakeholders including the host communities, tourism developers and visitors.
- Keep the stakeholders informed and in the process. Sustainable tourism is a process and decisions have to be made whenever necessary, it requires constant monitoring.
- Keep the tourist satisfaction high while raising awareness about the sustainability issues.

As stated from different sources, Sustainable Tourism Development is a changing concept with baselines of keeping the environment undamaged, keeping the host-community happy and developing the economy in the host area. Sustainable Tourism development may move from a tourism type to a set of principles, but the baselines still stay the same and transition from tourism type to a set of principles enable the existing tourism developments to take a step towards sustainable tourism development and start the process. The set of principles approach may undo some of the damage done by the mass tourism developments.

## 3. Research approach and methods

a. Research design

As seen from Figure 16 below, research design is built on two strategies: Qualitative research and Community-Based Participatory Research (CBPR). Methods used for the research are observations and workshops with instruments including notebook, camera, laptop and workshop materials used. Collected data is analyzed in qualitative data-analyzing methods.

| Research Design | |
|---|---|
| **Strategy** | |
| Qualitative | To understand the experiences, attitudes, behavior, feelings and interactions of people and nature. |
| CBPR | Community-Based Participatory Research, observations made in the project area, Pasmajarvi. |
| **Methods** | |
| Ethnography | In-context research of the community's daily lives. |
| Observations | Interactions with locals in their environment, observing their daily life and attitudes toward development. |
| Workshops | Designing with the local community, ideating and developing together. |
| **Instruments** | Notebook, camera, laptop, workshop materials |
| **Analysis** | |
| Qualitative | Deductive approach, descriptive coding |

Figure 17: Research Design (Source: Kılıçkap, 2017)

Qualitative research is the research on people's lives, experiences, values in context according to Patricia Leavy (2017). Leavy states that qualitative research enables a wide understanding of people, products, perspectives, experiences and situations. Qualitative research collects descriptive data over numeric data. Qualitative research methods include observations, workshops, focus groups, ethnography, interviews and more. In history, qualitative research methods have been used in the past centuries, but the field got its name in mid 1900s (Babbie, 2014). In 1970s and 1980s with the technological development, qualitative data- analysis methods also developed, in 1990s society wanted to be included in the decision making therefore passive researcher role was taken over

by active research participants (Brinkmann, 2014). In this study used qualitative research methods were ethnography, observation and workshops.

Community-Based Participatory Research is involving stakeholders other than the researcher in the research based on a specific community-based problem (Leavy, 2017). Community-Based Participatory Design (CBPR) is also known as Participatory Action Research. CBPR is usually used to enable change in the community with collaboration and sharing of knowledge between the stakeholders (Leavy, 2017). The history of CBPR goes back to 1940s civil right movements and development of Participatory Action Research in the Americas (Wallerstein & Duran, 2003) where CBPR was used to create societal and political change in the communities. The CBPR method used in this study is workshops.

b. Data collection

Methods used for data collection in this study are ethnography, observations and workshops. Instruments used for data collection were notebook, camera, laptop, workshop materials.

According to Marshall and Rossman (1989), observation is defined as the precise descriptions of happenings and products in a determined social environment. Observation can be categorized in three types, participant observation where the researcher is involved in the cultural activities as a participant, direct observation where the researcher is not involved in the activities and disturbs the community as little as possible and indirect observation where the researcher observes the reactions to an action without being involved (Schensul & LeCompte, 2013). For this study mostly participant and direct observation types were used.

Ethnography is an observational research approach that produces in-depth knowledge and data on people's lives, behaviour, values with interacting with them and observing them over a time period (Laurel, 2003). Ethnography is a powerful research method that provides descriptive understanding, holistic view and relevant perspectives (Blomberg et al., 1993). There are types of ethnographic

research including field ethnography, digital ethnography and photo ethnography. For this study field ethnography is used. Field ethnography means a group of people are observed by a researcher in their natural setting and daily lives (Laurel, 2003). Field ethnography's purpose is to understand the culture of the studied community and it will be done by participatory or nonparticipatory observation (Leavy, 2017). If the researcher interacts with the participants that will be participatory observation, if the researcher does not interact with the participants over the set period of time then that it nonparticipatory observation as explained by Leavy (2017).

Ethnographic research for this study started with the first interaction with the locals of Pasmajärvi on November 2017, first trip to the area with an over-night stay. Every interaction with the locals and observation of them was noted and documented to get an understanding of their daily lives, experiences and hopes for the area. Observations included the trips, interactions with the locals, participating in the local activities and locals' reaction to the project group's attitude. Notes, photos, videos were taken and collected in the time period of November 2017-August 2018 on every visit to Pasmajärvi and interaction with locals.

Workshops are another method to collect qualitative data. In English language workshop is defined as a period of time where a group of people share their knowledge on a set issue by discussing or doing practical work. According to the definition the base of workshops is collaboration (Leavy, 2017), meaning collaboration between the different stakeholders that are involved in the process. For this study two workshops were carried out to collect the ideas of the community and keep them in the design process by using their ideas, knowledge and feedback.

Data was collected using notebook, camera, laptop and workshop materials. A notebook was formed for the purpose of data collection and used as observations notebook by the researcher. Camera was used to take photos and videos for documentation. Laptop was used for note taking and presenting. Workshop materials were used to collect workshop data. Data collection took place between November 2017-August 201

c. Data analysis

Main data of this study came from detailed notes on workshops and observation with photos taken in the process. Also, materials from workshops supported the collected data. For this study, qualitative data analysis was used with a deductive approach and descriptive coding. Deductive approach is using the research questions to organize and analyze the data, research questions are the guide to the analysis (Haregu, 2012). This study's research questions as written in the introduction chapter:

1) How to stimulate participation in local communities of Finnish Lapland through co-creation processes using service design tools?

2) How to create sustainable and local services that can draw tourists Finnish Lapland?

3) How to use service design as a tool to stimulate local economic development for sustainable development in remote communities?

For data analysis, first the collected data was sorted into three categories related to the research questions. Data was color coded in blue for question one, orange for question two and yellow for question three.

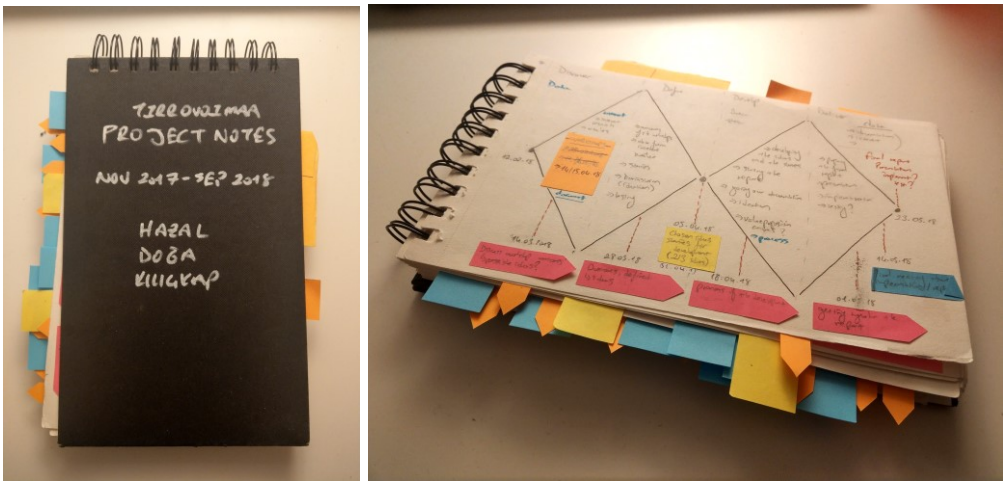


Figure 18-19: Coded project notebook (Source: Kılıçkap, 2018)

Color coded data was sorted into three groups for analysis. With content analysis, group one related to the first research question brought out the phrases workshop, area visits, interacting with locals and idea testing; group two brought out the phrases local resources, co-design, nature and local activities; group three brought out the phrases design workshops, development cooperation and product and service testing. In Figure 20 the visual mapping of the data can be seen.

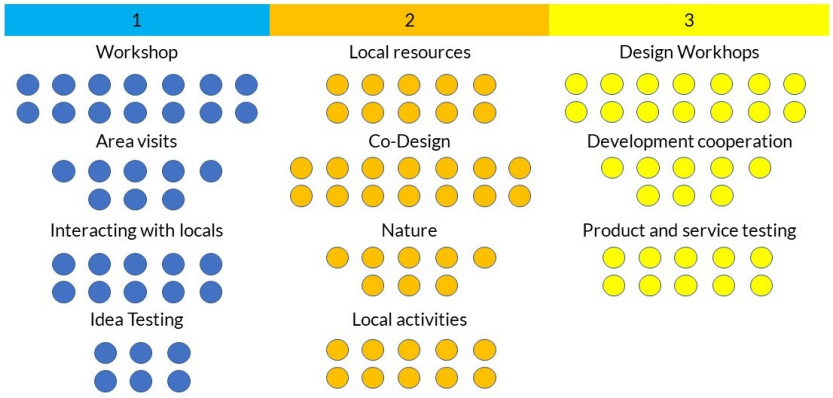


Figure 20: Visual map of data analyzing (Source: Kılıçkap, 2018)

d. Ethical Considerations

Participants of the study signed a consent form before the data collection started. Consent was given on note taking, taking photos, videos and voice-recordings as well as using participants' product and service ideas for this study. All participants joined the process by free will, study was announced with posters in Pasmajärvi village, published on village Facebook group and shared with the residents via project manager. Participant amount was not the same throughout the study, some participants withdrew from the study and new ones joined in the process. Throughout the process, participants were consulted on the service and product developments and informed of the research and next steps of the study.

Participants were contacted by social media and project manager, main language of contact was Finnish since most of the participants did not speak English, however everything was translated in the process to keep the researcher and participants informed of the whole process.

## 4. Project Process

Tirrovoimaa is an area located in Pasmajärvi village in Lapland region, Finland. The project focuses on exploring the eco-friendly nature tourism opportunities the area has to offer in order to develop the area. This study focuses on bringing the locals into the designing phase of the development to be local and encourage entrepreneurship.

The project started in November 2017 with research and planning, as well as community consultation on how the process should be. Duration of the project was one year including planning, design, testing and final delivery. Double-Diamond process was used for the process design.

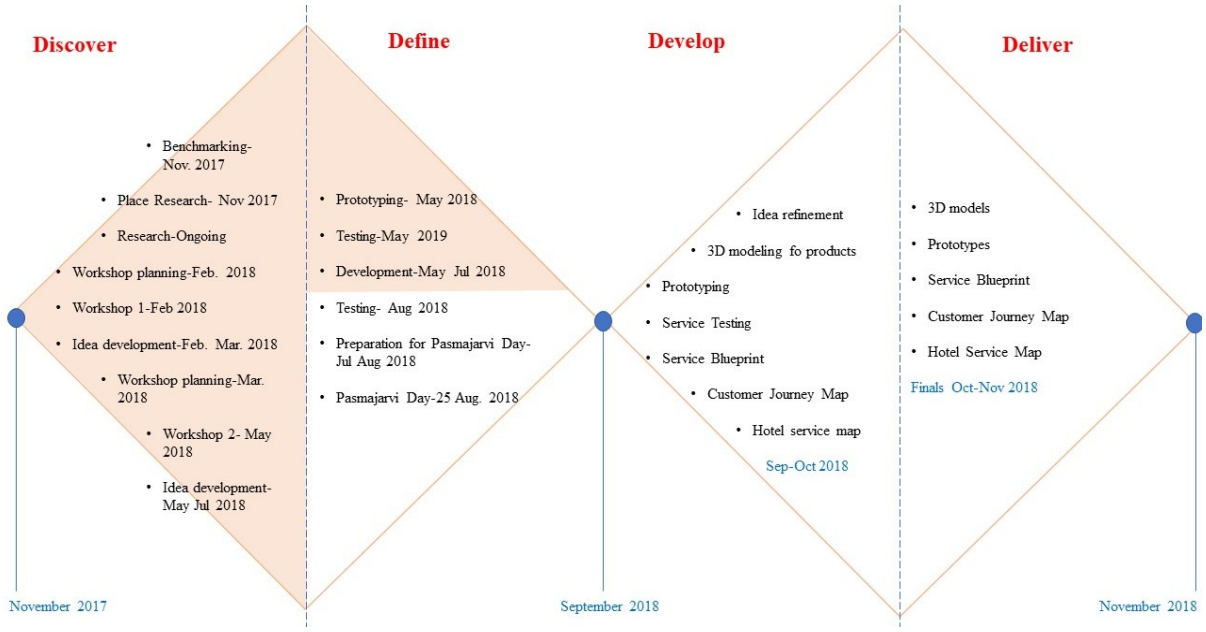


Figure 21: Project process in Double-Diamond (Source: Kılıçkap, 2017)

### a. Discover

Discover stage of the project included general research, benchmarking, stakeholder mapping, place research, experience research, observations and workshops.

Project started with a general research, in November 2017, on eco-tourism, nature tourism, potential users and sustainability to understand the main focus and key elements of the project. General research showed:

- There are global trends in eco-tourism and sustainability including a turn to being local in services. The services offered are becoming more connected to the local culture.
- Potential users would be between 30-45 years old and mostly woman.
- Eco-tourism and sustainability come with wellbeing tourism.

After a general research, to get deeper knowledge about existing establishments, benchmarking was done on the existing examples of eco-friendly nature tourism developments around the world. Chosen examples were from Finland, Brazil, Japan and Australia in order to see the international standards and what are the existing best practices all around the globe. Benchmarking showed that there are elements in common in eco-friendly nature tourism developments:

- Design is the main drive from architecture to services, connecting the nature and local cultural design view.
- Closely connected to the nature and the surrounding areas, blending into the nature instead of disrupting it.
- Sustainability is the key.
- They are small scale, controlled by locals and they stay local in their service offerings.
- Visitors interact with the locals and local activities.

These elements in common, set a baseline for the project. This study, as a part of the project, is focused on sustainability, locals' role and visitor interactions.

Next step was to form a stakeholder map for the project to see the stakeholders, the relationships between them and how they relate to the project. Stakeholders for this project were future tourists, local community, Kolari municipality, project group, University of Lapland, investors and collaborators.

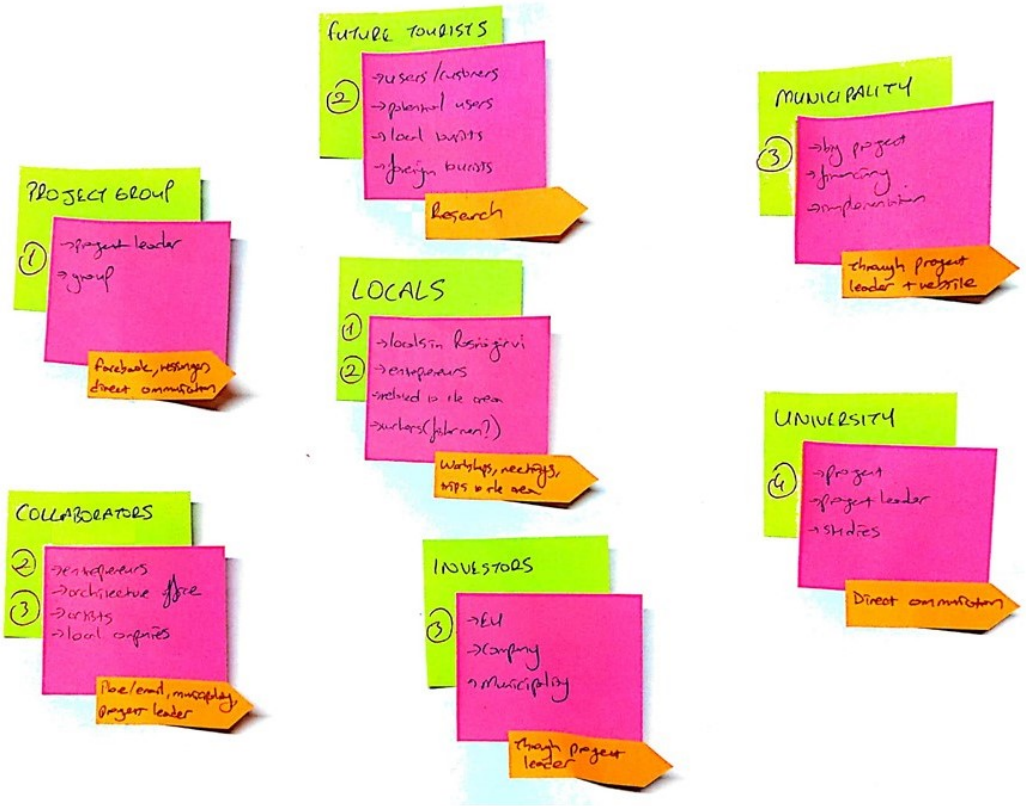


Figure 22: Stakeholder map (Source: Kılıçkap, 2017)

Stakeholder Map that is shown above shows the stakeholders, their role and the communication methods. Stakeholders are:

- Project group: Hazal Doğa Kılıçkap, Shiho Eikoku, Marcelo de Souza and Jenna Holton as project students, Hanna-Riina Vuontisjarvi as project manager.
    - Roles: Project students and project manager, researching and traveling together, observing each other's experiences and learning from each other.
    - Communication: Facebook groups, face-to-face communication
- Future tourists: Tourists that will be using the future services.
    - Roles: Primary users of the services.
    - Communication: Research, observation.
- Municipality: Kolari municipality
    - Roles: Project financing, community connections, implementation of the project.
    - Communication: Through project manager and municipality website.

- Locals: Community of Pasmajärvi
    - Roles: Design collaborators, guides of the area, hosts for over-night stays in Pasmajärvi.
    - Communication: Through project manager, face-to-face communication, through activities done together and workshops.
- Collaborators: Local companies, architects, future workers.
    - Roles: Through email/phone and project manager.
- University: University of Lapland
    - Roles: Project collaborator, project students
    - Communication: Direct communication by students and project manager.
- Investors: Financing stakeholders of the project, EU, foreign companies, municipality.
    - Roles: Financing
    - Communication: Through project manager

Through the formed stakeholder map, the roles and connections of the stakeholders included in the project are clearly visible and that opened the way to possible collaborations and problem solving for the project.

Discover stage continued with place research. A trip to the project area, Pasmajärvi, was taken in order to see, observe and document the nature of the area and meet the locals that was going to be involved in the project. First a walkthrough of the area was done, starting from the village center to Tirrovoimaa area and back, seeing the nature and the potential path for the visitors. Then local meeting point, the former school was visited to discuss the walkthrough and the feelings with outcomes:

- Nature in the area is untouched, gives the cozy feeling of being home.
- Silence is the highlight, even the tiniest sound can be heard like ice breaking or walking on snow.
- Area offers different landscapes with walking paths including swamp, hill and forest.
- “Magical Experience”

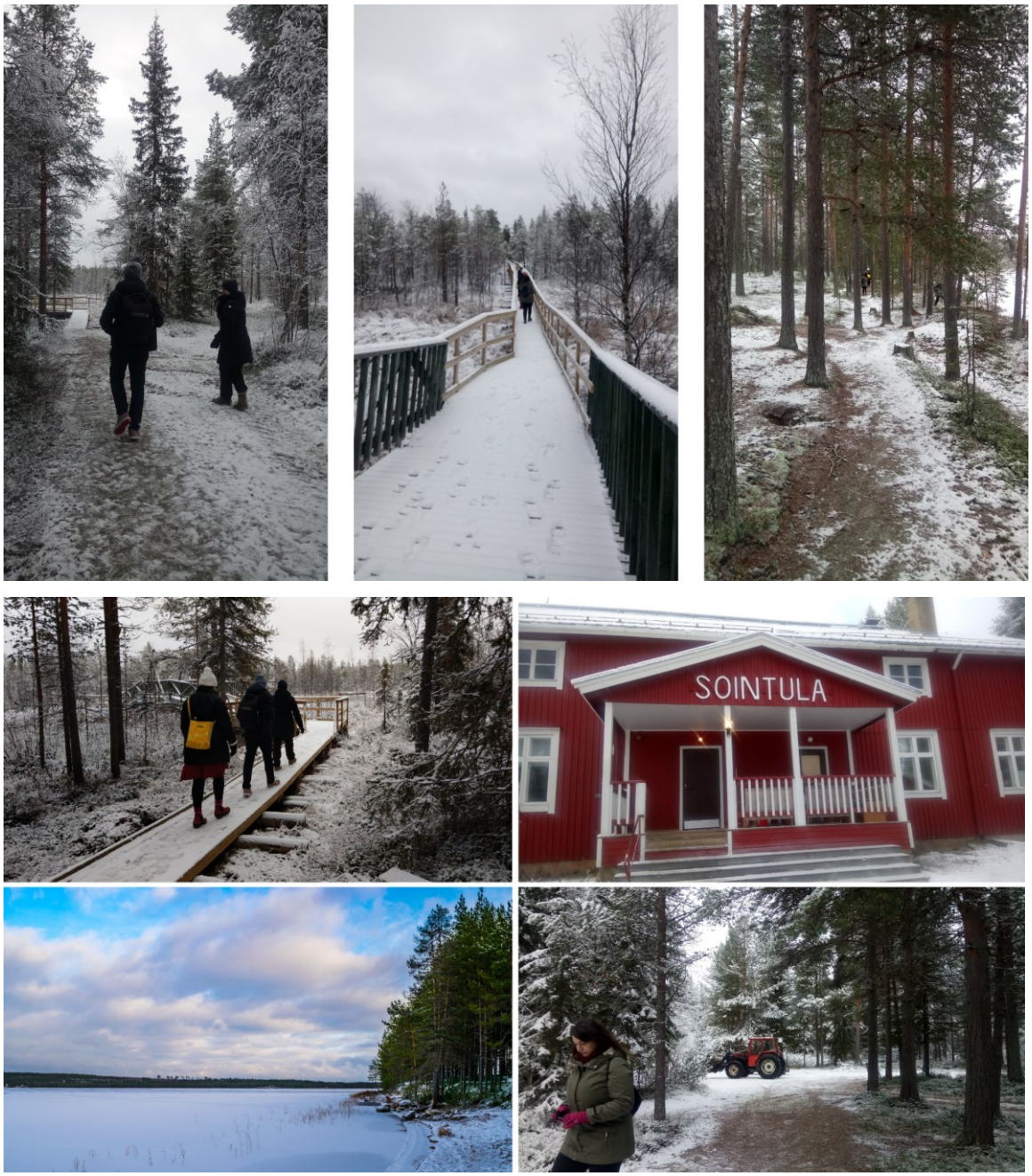


Figure 23-29: Pictures from first Pasmajärvi area visit (Source: Kılıçkap, 2017)

Following the sharing and mapping of the feelings of the area, a local product research was done on the place. Local products including food, materials and local produces were looked into and the area offers:

- Fish and salmon
- Berries
- Herbs, mushrooms
- Pure water
- Tar and tar products

- Pare (rooftop wood)
- Wool products
- Reindeer and reindeer products.

At the end of the trip and observations, project group formed a storyboard of potential tourist experiences for the future.


Figure 30: Storyboard (Source: Kılıçkap, 2017)

In the storyboard, a case of a group of four women tourists visiting the area in the winter season was chosen to be detailed. Group's experiences in the area, their activities, interactions with nature and locals were mapped into a three-day possible. The purpose of this storyboard was to brainstorm about the possible opportunities in the area that can be used by the tourists and go over the project group's first experience in the area as tourists. All these findings, including the place feels, local products and storyboard were presented at the end of November 2017.

Highlighting the main focus of this study, interacting with locals and including them in the design phase using local materials were needed thus local workshops were planned. To learn from the locals and encourage them to stay in the process, a theme of "From Stories to Products" was chosen. Main purpose of the theme was to learn from the locals, get their stories and build on the shared

stories to ideate new products and services. The plan of the workshop was to make locals form groups and work together on a shared product/service idea.

Each workshop was to be started with an icebreaker of sharing a story or experience about a chosen local material, continued with detailing the story in the first phase of the workshop to discover points that can be used to ideate, in the second phase one of the ideas from each group was to be chosen to detail. Workshops were ended with sharing of the ideated product/service ideas with other groups.

A total of two workshops were conducted in Pasmajärvi with locals of the area. Workshops included an icebreaker, storytelling, detailing the story, ideating product ideas from the story and choosing one idea to develop. After the workshops, the presented ideas were developed by the designer to be shared with the community.

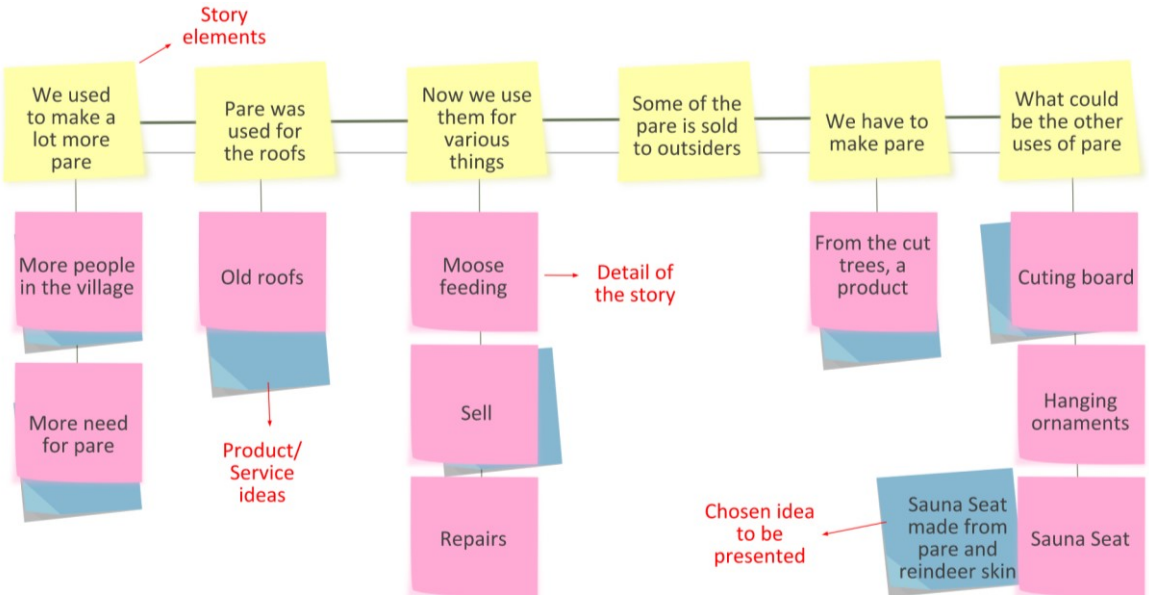


Figure 31: Detailed workshop process (Source: Kılıçkap, 2018)

The first workshop focused on three local materials: Pare (rooftop wood), wool and tar. Two groups were formed and the groups chose pare and tar to work with. The second workshop focused on local food made from local ingredients. Three groups were formed, salmon soup, blood sausage and canned fish were chosen as local food products. Groups were given paper, post-its and markers to visualize their storylines and ideas. Workshops started with sharing stories about

the chosen product in the groups and putting them on post-its, forming a storyline. Second step was to detail the story they created together and ideate product ideas from the stories. Last step was to develop one idea into a product. At the end of the workshops, groups shared their process and final product ideas.


Figure 32-34: Pictures from Pasmajärvi workshops (Source: Kılıçkap, 2018)

Workshop 1-Pare group ideated a product made of pare, a sauna seat.
Workshop 1-Tar group ideated a service showing and explaining how tar is made, a tar path
Workshop 2-Salmon soup group ideated a serving method for the salmon soup.
Workshop 2- Blood sausage group ideated a producing method.
Workshop 2- Canned fish group ideated a can design including recipe.

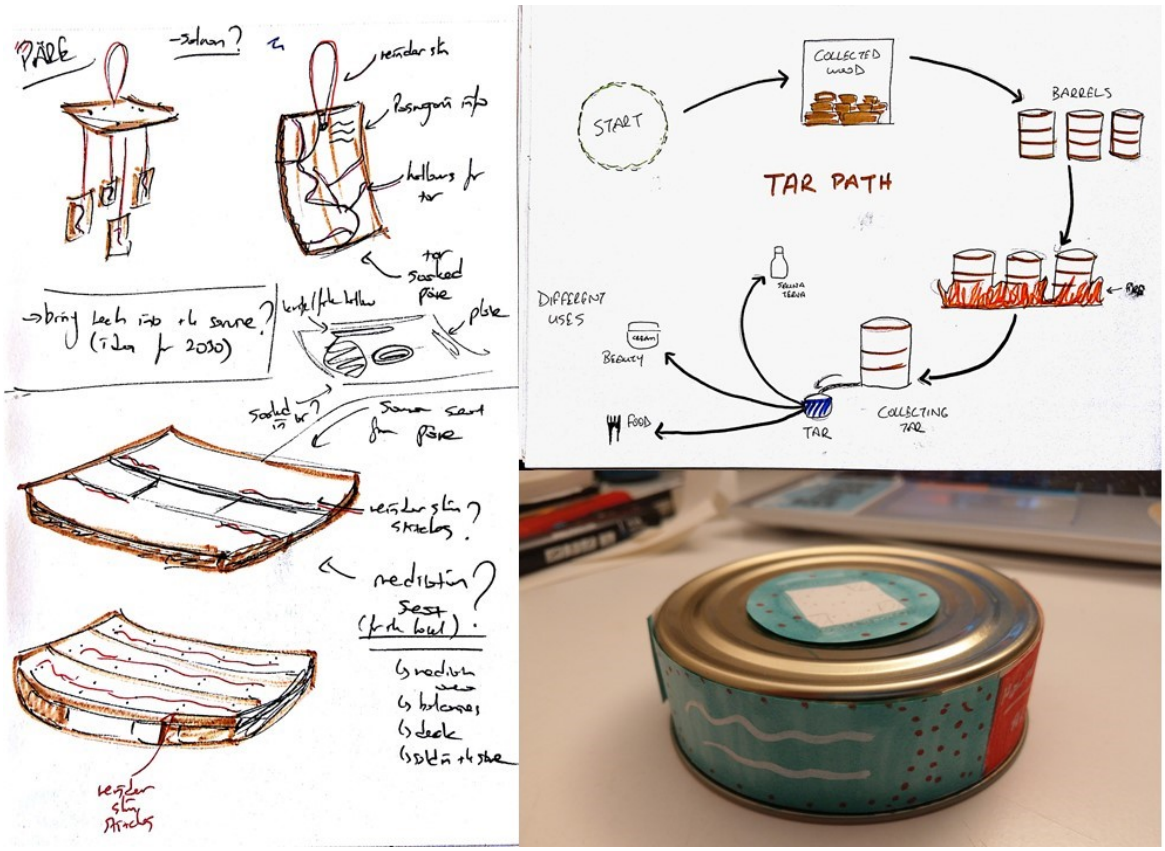


Figure 35-37: Sketches and prototype of workshop ideas (Source: Kılıçkap, 2018)

During the workshops data was collected by observing, workshop notes and workshop products. Analyzed data led to following outcomes:

- Participants are eager to join the design phase.
- Participants are eager to ideate, they only need to learn how to develop the ideas into products and services, need to knowledge on entrepreneurship and product development/sales.
- They want to be kept in the loops and see the development, be included in the production and testing of the ideas.
- Participants want to develop the area to bring people.

After the first trip to the area in November 2017, another trip was taken to the area in March 2018 for experience research. This second trip consisted of trying out the local experiences including local food, snowmobile driving, hiking, husky rides, laavu, snowshoeing, fat-biking and most importantly, interacting with locals and their daily life. The two-day trip was activity packed, lead and navigated by locals of the area. Local experiences ware tried out by the group, data was

collected covering the local behavior, local activities and staying over at local accommodation provided by locals. In the following week, tried out experiences were mapped out and presented.

Figure 38-42: Pictures from second Pasmajärvi area visit (Source: Kılıçkap, 2018)

From the experience research, one service idea was formed by the deisigner, a laavu and nature walk service.  The idea was simulating a local experience to the tourists. Visitors would hire a van from the locals, the van would be prepared with food and cooking materials for cooking on open fire in laavu and one natural activity the visitor would choose like a nature walk or canoeing in the lake. Visitors would take the van to a selected laavu in the area, make their food, do their nature activity, clean up and return the van to the locals.

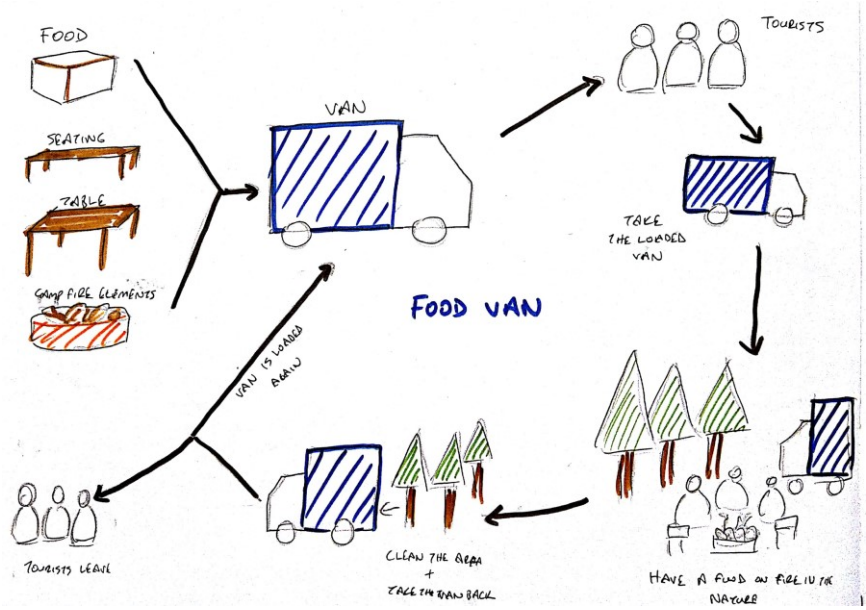


Figure 43: Service sketch of Tar Path (Source: Kılıçkap, 2018)

Discover stage of research, observation, ideation and workshops ended in May 2018.

b. Define

Define stage of the project process started with highlighting the main focus of the study which was to creating local products/services for sustainable tourism development. In this stage, collected data from the research and workshops was deeply analyzed, ideas from the workshops were selected to be developed and local participants were informed and invited to develop the products/services and test them on Pasmajärvi Day, 25th of August 2018.

Collected workshop data stated that the local participants of the area were open to the idea of development and entrepreneurship but very protective of the nature of the area and their culture, they didn't want a disruption in their lives. Pasmajärvi has only 40 residents, in order to keep the area alive there has to be development to bring people to the area. The local participants were encouraged to ideate products/services for visitors that won't disrupt the nature or their daily lives. After realizing that their ideas can come to life and be used for future visitors, the local participants were enthusiastic about developing the ideas and testing them.

One idea was chosen to be developed and tested, sauna seats made from pare. Information was collected from the locals on how pare was made and how to bring the pieces together. The product was developed in May 2018, before the pare was made in June 2018. After collecting the pare pieces, the design changed in August 2018 before Pasmajärvi Day. The product was tested in sauna and sold in Pasmajärvi Day. Ten pare sauna seats were made to be sold, four pieces were sold, and remaining seats were given to the locals. Local participants chose to continue the development of the product and define the price again.

Figure 44-45: Pare Sauna Seat product testing on Pasmajärvi Day (Source: Kılıçkap, 2018)

Three other ideas were chosen to be developed by the designer and presented to the locals to keep them informed, Tar Path, Canned Fish and Food Van.

Define stage ended in August 2018.

c. Develop

Develop stage started in September 2018 with analyzing the data from Pasmajärvi Day product testing and developing the other chosen

products/services. In this stage a mindmap was made on how to develop the ideas and form customer journey maps. This stage ended in October 2018.

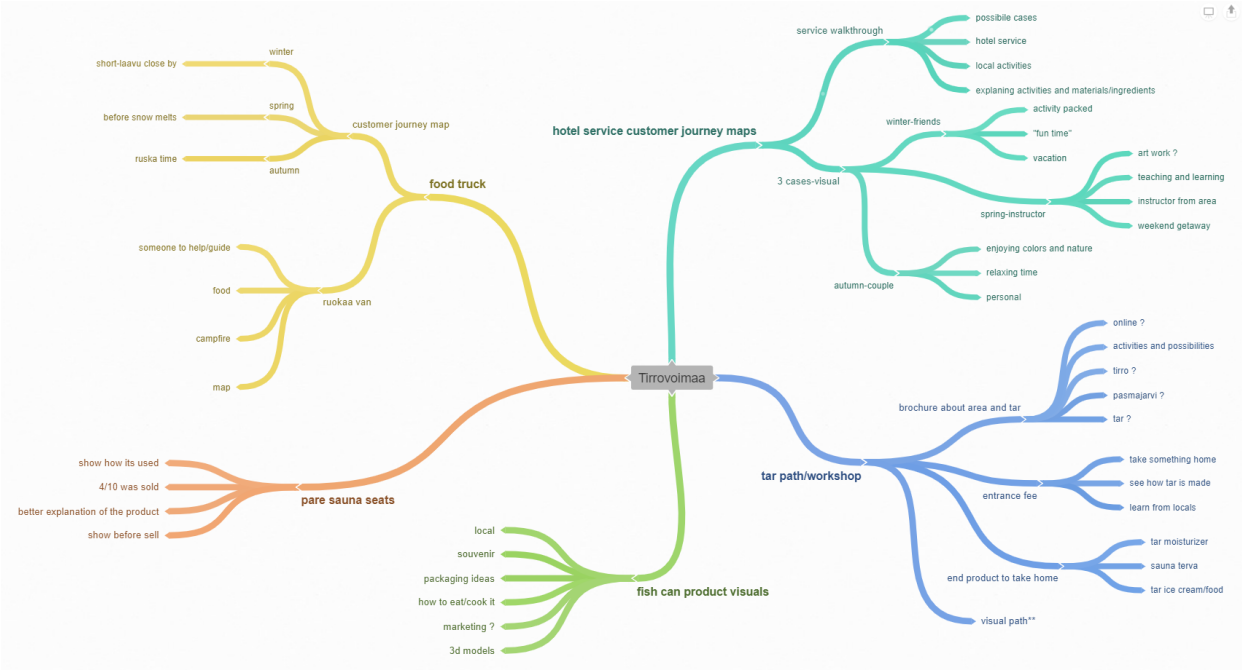


Figure 46: Final delivery mindmap (Source: Kılıçkap, 2018)

Mindmap consisted of showing the ideas with different tools and several customer journey maps that bring the ideas together. The branches in the mindmap show Product/service ideas which were Food Van, Sauna Seats, Local Fish, Tar Path and possible customer journey maps.

After a through discussion, idea of forming Customer Journey Map was dropped. It was decided that the delivery would be in Service Walkthrough form. Three different service walkthroughs were to be formed with different visitor cases and different tourism activities, including the developed product/service ideas. Walkthroughs were to cover different tourist cases.

Develop stage ended in October 2018.

d. Deliver

Final stage of the project process was Deliver stage. Deliver stage simply consisted of making the final delivery of the service walkthroughs of the developed

ideas combined with the future tourism services in different visitor cases and presenting them to the project manager, Hanna-Riina Vuontisjarvi.

The deliveries were three different service walkthroughs, showing the different cases for different potential visitors to Pasmajärvi area, experiencing different services and products. Service walkthroughs covered the entire trip from planning to leaving the visited area in three stages:

- Before visit: Planning the trip, confirmations, traveling to Pasmajärvi and transportation to the hotel.
- During visit: Check-in, program making for the stay, activities, food, interactions with locals, check-out.
- After visit: Transportation from the hotel, travel to home, follow-up forms and advice from the hotel, possibly planning next trip.

These stages were meant to cover the whole journey of different types of visitors.

The common elements in the service walkthroughs include the hotel services like sauna and workshops, food made from local ingredients, locals of the area running the workshops and activities in the area and booking channel for the hotel being online.

Cases present the opportunities for chosen user types and their interactions with the area and community in following criterias:

- Spending time in Pasmajärvi
- Nature activities
- Learning the local crafts, tools and materials from the locals
- Participating in local activities lead by locals
- Learning, using, eating, buying local products

Case 1 - Weekend getaway for a couple in the beginning of Autumn


Figure 47: Case 1 service walkthrough (Source: Kılıçkap, 2018)

Case one is a service walkthrough from the eyes of a couple taking a weekend getaway in the hotel Tirrovoimaa in the beginning of autumn. This case was chosen because the area is only 1.5 hours from Kolari and Rovaniemi by car and only one flight from Helsinki, it is an acceptable area for weekend trips in the country. The beginning of Autumn is the time for “Ruska”, color changes of the leaves in Lapland forests, which is one of the distinct times to be in nature.

The case has three stages of walkthrough as follows:

- Before stay: A couple finds the accommodation online, books through online channels. One week before the planned stay, the hotel sends a list of activities and programs they could join with a possible packing list. The couple packs for the trip according to the advice given by the hotel and heads for the airport. After their flight, transportation to the hotel waits for them at the airport and drives them to Tirrovoimaa, Pasmajärvi.

- During stay: The stay starts with checking in to the hotel and going to the booked room. The couple chooses an activity program for their stay, which includes Tar Path and Food Van. Then the couple rests and joins the night snack at the main restaurant then takes a private sauna and ends the day. The next day starts with local breakfast at the main restaurant. The day continues with a walk of the area and a photography tour with a guide and experiencing Tar Path to see how tar is made and used in different products. After the activities, there is dinner at the main restaurant followed by a meditation session outside. The day ends with private sauna. Their last day starts with breakfast continued by time at the spa. After spa, couple takes the Food Van activity to out to the nature and prepare their lunch there after hiking through the forest. After they get back to the hotel, they join a workshop to make their own souvenir from the local products then have dinner at the restaurant, pack their bags, check-out and get in their transportation to the airport.

- After stay: The couple takes their flight home, unpacks and relaxes, feeling ready for the week. A week after their stay at the hotel, the hotel emails the couple a survey for them to rate their stay, information about different seasons and activities about a possible next visit and finally a graph about their resource use during their visit at the hotel.

In conclusion, Case one presents the possible scenario for the chosen user type of a couple, including the interactions with the area, nature and locals through using the developed ideas from the workshops, Tar Path, Food Van and Sauna Seat.

Case 2- A groups of four friends take a three-day trip to Tirrovoima in Winter

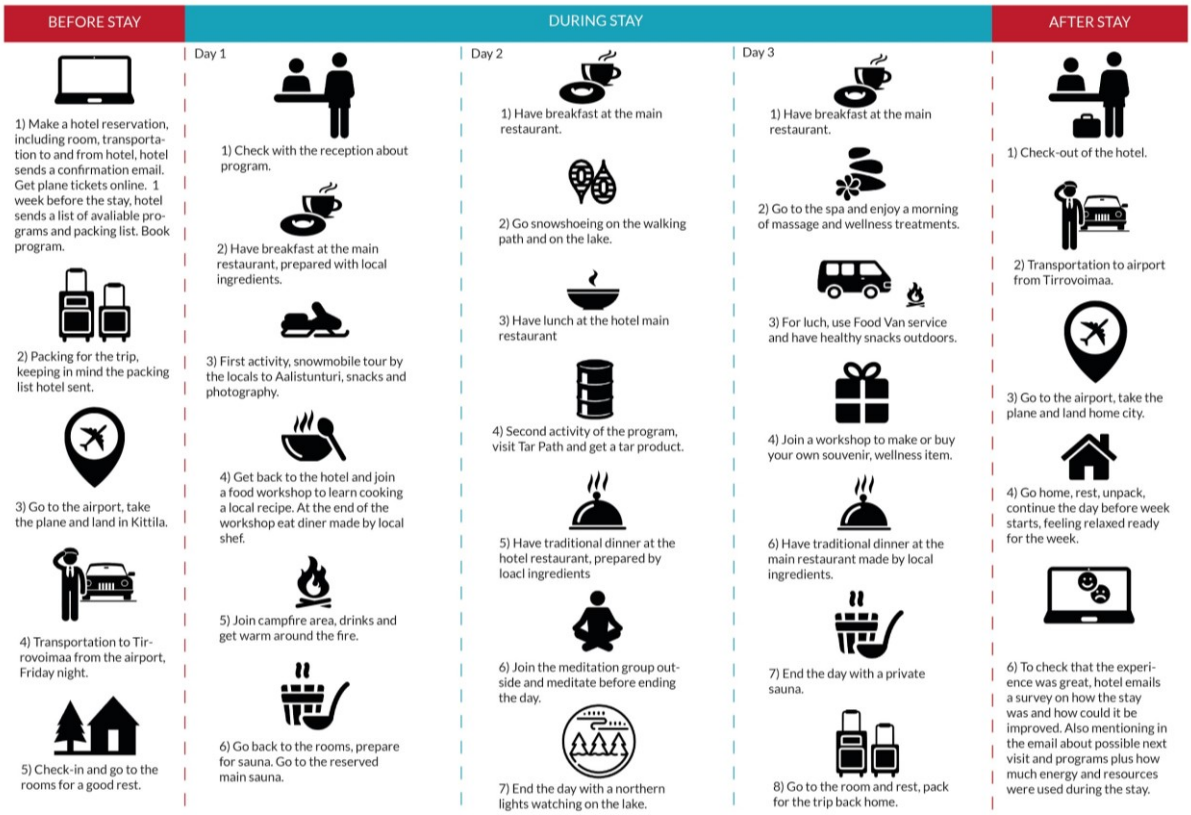


Figure 48: Case 2 service walkthrough (Source: Kılıçkap, 2018)

Case two is a service walkthrough from the eyes of a group of friends taking a three-day trip in the hotel Tirrovoimaa in the winter. Group has four people, two men and two women. This case was chosen because the area offers the energy packed activities while also offering relaxation and peace with nature, saunas, wellbeing workshops and local interactions. Winter is the time for snow coverage, freezing of lakes and rivers and Northern Lights.

The case has three stages of walkthrough as follows:

- Before stay: A groups book their stay online and buys their flight tickets. One week before, hotel sends an email on what to pack and what to expect in the area with possible activity programs. The group chooses and books their program. According to the list the hotel sent, they pack their bags and travel to Kittila airport. From the airport, hotel transportation picks them up and drives them to the

hotel. When they arrive, it is night-time so they directly go to their rooms.

- During stay: The first day of the stay starts with talking with the check-in desk about their booked program to get information then the group has breakfast made from local ingredients in the hotel restaurant. The first activity of the day one is snowmobiling lead by a local through Aalistunturi hill located in Pasmajärvi area. After snowmobiling, the group comes back to the hotel to have lunch made from local ingredients by a local chef. In the evening there is campfire and local snacks by the rooms. The group finishes their first day with traditional sauna in their rooms. The second day's activities include snowshoeing lead by a local, visiting Tar Path to learn how tar is made and get a local tar product and group meditation workshop led by a local. Day two ends with Northern Lights hunting while walking on the frozen lake. The activities of day three include spa treatment for relaxation, using Food Van service to go on a hike near a chosen laavu and make their own fire and food, attending a local crafts workshop led by a local to make their own souvenirs using local materials and sauna to end the day. At the end of day three, group checks out of the hotel.

- After stay: The group is transferred to Kittila airport for their flight and they take their flight home. One week after the stay, hotel sends an email consisting of a survey of their stay, their energy consumption levels, programs for possible future bookings and a guide on how to keep living the Finnish style.

In conclusion, case two presents the possible scenario for the chosen user type of a group of people, including the interactions with the area, nature and locals through using the developed ideas from the workshops, Sauna Seat, Food Van and Tar Path.

Case 3- Instructor from Rovaniemi is teaching a course in Tirrovoimaa in Spring

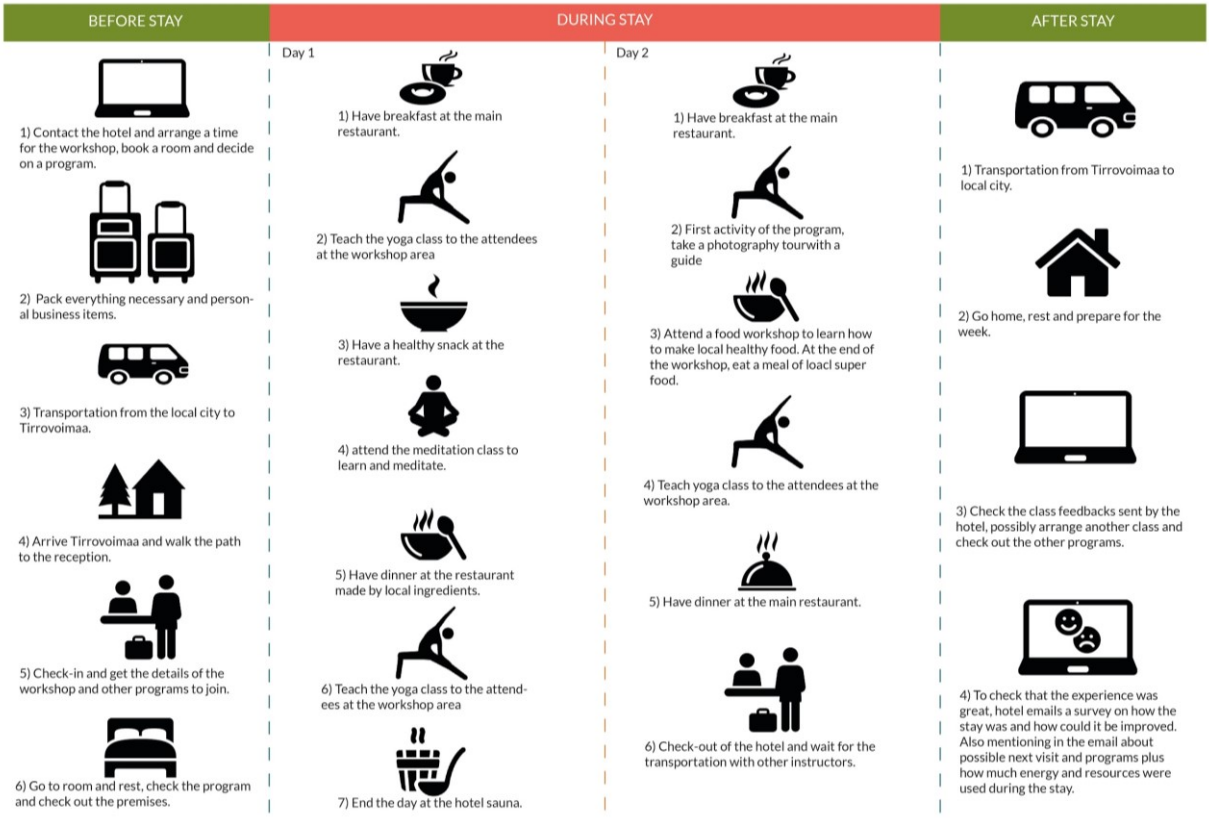


Figure 49: Case 3 service walkthrough (Source: Kılıçkap, 2018)

Case two is a service walkthrough from the eyes of a yoga instructor who plans to teach a yoga course in Tirrovoimaa on a spring weekend. Instructor lives in Rovaniemi and counts as a local, that is why this case was chosen, to see the opportunities for regional locals meaning locals of Finnish Lapland. Spring was chosen to highlight a different season and rebirth of green in the nature after the snow melts away and sunshine comes back.

The case has three stages of walkthrough as follows:

- Before stay: Instructor checks Tirrovoimaa hotel's website for available times to teach a course, book a room and choose a program for stay with instructor discount. After choosing a time for leading a workshop he/she contacts the hotel for a possible pick-up from the city. Hotel sends a shuttle for the instructors and transfers them to the area. Instructor checks-in to the hotel on Friday evening.

- During stay: Saturday starts with breakfast at the main restaurant made from local food by local chefs and moves on to the first yoga workshop for the instructor to teach. Day continues with lunch and joining meditation workshop taught by another instructor. After dinner there is another yoga workshop then the day ends with a private sauna. Sunday starts with breakfast followed by yoga workshop, cooking workshop, lunch and second yoga workshop. The day ends with dinner, check-out and transfer to home from the hotel.

- After stay: Instructor reaches home, unpacks and gets ready for the following week. Hotel emails a survey the next week about the stay and the workshops with the numbers on resource use and possible programs and workshops for a next visit.

As a conclusion, case three presents the possible scenario for the chosen user type of a workshop instructor, including the interactions with the area, nature and locals through using the developed ideas from the workshops.

All three cases are connected through the local participants in the area, activities provided and the area and environment itself, although the service walkthroughs present three different user types, the area they are visiting and the locals they will be interacting will be the same. The delivered service walkthroughs highlight that the chosen user type will interact with the local community through local activities, learn about the area and materials through their observations and interactions with locals and eat the local food made by local ingredients by local chefs. Chosen user types will learn from the locals while adding to the local economy and development through their interactions.

Deliver stage of the project process ended on November 2018 with the delivery of three service walkthroughs and final feedbacks on the possible future continuance of this study. Tirrovoimaa development project is set to continue on 2020 with the construction of the hotel and implementing the ideated products and services by the local residents of Pasmajärvi.

## 5. Discussion

Remote areas in Finnish Lapland need development to stay alive and sustainable development is the key to protect the nature while developing the economic, social and cultural situation in the areas. Key concepts of the study chapter presented that to achieve local sustainable development, communities need to be actively involved in the process and taking control of the development to sustain the needs of all stakeholders. Participatory Design or Community-Based Participatory Design (CBPD) is the key to involving communities in the design process and leading the development process by the community needs and expertise. Using Service Design as a tool to approach the community with workshops, ethnography and observations gives the researcher the data they need while keeping the community informed and in the process of design and development.

According to this study's process and findings, using service design as a tool to approach the community and keeping them in the design process empowered the community to explore their ideas and presented a way or idea development to the community for them to create their own products and businesses. Community consultation enabled the community to trust the researchers and designers and share their knowledge for the product development.

As a recommendation, service designers may follow a similar process to this study to reach a community and involve them in the development process. Here is the framework for service designers to use Community-Based Participatory Research to engage communities in Finnish Lapland into sustainable development projects:

- Do ethnographic research to see the community in their own environment and their daily lives to see the opportunities that may be used for economic, social, cultural and sustainable development. Sustainable development depends on the local resources including nature, materials, people and culture. To achieve sustainable development, designer should have the knowledge of the area and what it offers as well as the people and their

lives in the area to see the future design opportunities and points of development.

- Arrange meetings with the community to collect their thoughts and needs and discuss how to satisfy them. Needs of the stakeholders are the drive for sustainable development and for local sustainable development, the residents of the area are the main stakeholders, their needs come first. As a designer collecting those needs and trying to satisfy them in a sustainable way is the main goal.
- Arrange workshops with the local community for idea generation, co-design and development of the ideas together. Keeping the locals in the process so they can see the steps of development and bring out their own ideas and concerns. Community of the area has their own ideas for the area and they need to be explored and possibly made into products/services. Community will take ownership of the development if the developed products/services are based on their ideas.
- Develop the concepts and share with the community, inform them of the development and future steps. Informing the community keep the excitement of the participation alive and the fear of being left out at bay.
- Choose the service/product to be tested and test it in an environment open to the community, potential users and others. Testing is very important to see if the generated products/services will actually work and how they can be improved with the collected feedback.
- Inform the community about entrepreneurship and how they can make their ideas into businesses. Sustainable development is a process and it won't end with only one design process. The community should be able to take the control of the development after the designer leaves the area so that the development won't be cut in the mid-process.

Besides the framework, the attitude of the researcher or designer is also important because attitude effects the process. Researcher/Designer needs to be open to the communities, relaying on their knowledge as a base while adding his/her own knowledge as a designer into the process to help the community for development. The community of the area needs to be informed and kept in the process with every step taken and they need to be able to change the process

with their input, knowledge or ideas. The most important thing is to keep the process bottom-up to so the community will take the responsibility and ownership of the development and continue the process.

The above mentioned approach will involve the local community in the development projects and keep them in the process so sustainable development can be achieve. Community consultation used in this study before, during and after the workshops and area visits are a way to connect with the community and give them the control of the development.

This discussion proposes a framework and attitude for the future development studies related to communities of Finnish Lapland. It has to be remembered that each community has their own way of living and interacting, while this study may be used as a general base of approaching the community, the differences between the communities need to be taken into consideration while designing the process of the study.

## 6. Conclusion

This study led to forming a way of approach, through Service Design, to the communities in Finnish Lapland to tackle the development problem. For sustainable development to be possible, local communities need to be involved in the process of the development and this study is based on community involvement.

This study can be used as an example for problems in similar context. Development is challenging in remote areas like Finnish Lapland, especially hard with the aging population and decreasing resource in people and environment.

Thesis started with literature review covering the related framework: Service Design, Participatory Design, Sustainable Development and Sustainable Tourism. The conclusion of the literature review is that Service Design can be used as a tool in Sustainable Development, in this case through Tourism. Sustainable development demands community involvement, sustainable tourism demands local resources, local products and local workforce. All of these come through community involvement and Service Design can be used as a tool for community involvement.

Research strategy and methods for this project were carefully chosen. Data collection by qualitative methods and community-based Participatory Research enabled community participation in the research phase and analyzed data presented that the local participants of the study were engaged in the process and needed to be led into sustainable development while being kept in the process.

Project process clearly shows the whole project from start to finish with every step taken, research, workshops, area visits and development of the ideas in Double-Diamond process, Discover, Define, Develop and Deliver. This study ended with the final delivery of three designed service walkthroughs of the future services of Tirrovoimaa hotel in Pasmajärvi village.

This study answered it's research questions as following:

1) How to stimulate participation in local communities of Finnish Lapland through co-creation processes by using service design tools?

First, understanding the community with ethnographic research and organizing meetings to learn their needs and knowledge of the project area. Using their needs and knowledge as a base for the design process encourages the community to be involved in the process and share their ideas, help with development. Collected data of for this study suggests workshops, area visits, interacting with locals and idea testing to stimulate participation.

2) How to create sustainable and local services that can draw tourists to Finnish Lapland?

Finnish Lapland offers untouched nature, many materials, food, products and services that can be developed to draw tourists. To develop these, one needs to know about the local opportunities the area offers and the culture of the area to develop relevant products and services. Tourists look for authentic and local experiences and they can be designed with the knowledge of the area and community consultation while keeping the materials and workforce local. Analyzed data shows that local resources, nature, local activities and co-design can be used to create local sustainable experiences.

3) How to use service design as a tool to stimulate local economic development for sustainable development in remote communities?

Service Design offers an open way of approach with co-design, involving all stakeholders and holistic view. Service Design can be used to co-design products and services according to the community needs, wants and ideas to start economic development leading to sustainable development in the areas. Data of this study presents design workshops, development cooperation and testing as ways to use service design to stimulate economic development in remote communities.

This study is based in Finnish Lapland with the local communities for future economic development using service design as a tool. Recommendation for further research would be in-dept testing of the services and products the communities have ideated and developed while researching the effects of these developments on the nature, community and culture to start to process of local sustainable development.

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