



# Service Design @ Bouldertehdas

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## Master's Thesis

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## Abstract

This service design thesis is a study of a wall climbing facility's services, also called bouldering, from a holistic perspective. The aim of the thesis is to identify underlying problem areas and to help improve the service by utilizing various service design methods. Numerous methods, both qualitative and quantitative, are used in order to provide a more multifaceted understanding of the service. The thesis focuses on the customer experience in general and the importance of meeting the needs of a first time climber. Based on the research results, the service provider took action to expand the service. The renting of more space and renovating of the facilities, enabled the service to better meet existing customer demands. Most importantly, the ideas generated through different service design methods, were discovered in co-operation with the service provider. This reality of co-creation gave the owners new incentives and a new direction in developing the service. The owners were also provided appropriate service design co-creation tools for developing the service further by themselves in co-operation with the customers. This is expected to enable the service provider to keep the service on a sustainable path, going into the future. The discussion raises the possibility of marketing to schools the pedagogical aspects of climbing. Another issue raised was the importance of taking into consideration the expected general deteriorating fitness levels when catering to the beginner climbers of the future.

**Language:** English

**Key words:** service design, climbing facility, customer experience, sustainable

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## 1. Introduction

**Service design** is an interdisciplinary approach to improving services that combines different kinds of methods and tools from various disciplines. Service design is evolving all the time and thus has no common definition or clearly articulated language of service design. (Stickdorn & Schneider, 2011, 29) However, the approaches to define service design academically include a holistic approach to improving the services. It also focuses on producing well designed experiences for the end user. Efficient, effective, useful, usable and desirable are the desired results from a service design project for the business. These aspects are very important from the customer's point of view. Service design, however, also aims to ensure that the service is more efficient for the service provider and stakeholders. Making them stand out amongst the competitors. (Stickdorn & Schneider, 2011, 30-31)

**The aim of this service design project is to improve the services of Bouldertehdas facility by using service design methods.** The project with the service provider started in the fall of 2014. Bouldertehdas facility was established five years ago and has a loyal and growing group of customers. Bouldertehdas is a climbing facility for people of all age groups. The services at Bouldertehdas had been mostly thought of from the service provider's point of view, so the idea of this project was to bring different stakeholders together to define and refine the services again, using service design tools. Since service design is a young sector of science, the stakeholders will need to be convinced of the usefulness of these methods.

The future of service design is yet to be seen. The possibilities are limitless, but often a service designer, or group of service designers are very costly for the business, not only costing money, but also taking up time from the services themselves. Good design, on the other hand, aims at bringing both more revenue as well as better and functional services for the company. One possibility could be a smartphone application that could teach the user to become a service design thinker, in fact this could just be around the corner. There is already an application resembling this designed to help sales personnel

to improve their sales techniques. The idea of this application is that an inexperienced junior salesman does not know how to sell to different types of customers. One needs a different approach and sales technique for every different type of personality. The application asks questions about the type of customer, and then tells you the best sales technique based on a psychological profile. Service design is more complicated, but it is user-centered as well, so this could very well be something for our future. The idea is that the service provider would use the application to develop the service while doing his or her daily routines. This would help the service provider to gain customer feedback and sustain the path of always improving the services. This would save money and time, also making the learning of service design affordable to small companies. (Lyytinen 2015) Digitalization is progressing in different sectors of service design. Service design itself will very likely evolve in numerous ways with respect to how it is implemented because of the growing possibilities of digitalisation.

Service design revolves around the customer. Without customers', there would be no service at all. At the center of all services are the people as the users of the service, in other words customers. The experience of a service comes from the contact between a service provider, or customer service personnel and the customer. In service design these are called touchpoints. The better the understanding of the needs, motivations, values and what is expected from a service from both sides separately as well as together, the better are the possibilities of improving the experience of a service. (Tuulaniemi, 2011, 71) When the customer's experience of a service turns from liking the service to loving the service, the service providers target has been reached. The word "love" is used purposefully in service design and customer care. Good level of a service is not enough for the customers anymore, they want a service to have "the wow factor" by exceeding their expectations. When the service provider takes it a step further by trying to build a relationship with the customers, this is referred to as "loving the customer". (Helpscout, 2015)

## 1.1 Background

**The history of Bouldertehdas** is a relatively short, but successful one, as it has existed for five years. During this time, they have been able to expand their

customer base. The possibility to make this service design project for the service provider came out in a conversation about the author's current studies while using the service. In the discussions it was agreed that implementing service design methods to try to find parts of the service that need improving could bring value to the service. In the beginning the service provider did not know what parts of the service was needed to look into, but needed to know what could be done for the service in this growing market. After the results of the initial interview, common ground was found.

The author's interest in this project is partially motivated by his own involvement in the service as an active climber. The author has been climbing for three years at Bouldertehdas and is interested in improving the service also personally. Partially the interest was boosted by the service provider's personality and openness to participate with customers while giving good advice on climbing techniques. The parts where the climbing service is described is based on the author's own experiences and observations while using the service.

## 1.2 The brief

The **Business objective** of Bouldertehdas is to produce the best possible service at the best possible price. Expanding the service is a possibility if there is need for it. There is always room for improvement in the service experience as this leads to added value for the service. Bouldertehdas has a climbing merchandise shop, and the sales could always be higher. Also the utilization rate of the facility changes depending on the time of day and on the days of the week. Day time usage during week days is much lower and this is problematic. This will be analyzed in this project.

The **research objective** is to find parts of the service that need improvement. Looking into what adds value to the climbing experience will hopefully create a better bond between the customers and the service provider. The objective is to find out what brings value to the customers and the service provider, as well as looking at the service holistically to find areas of improvement.



The **target** groups are the regular climbers, and the beginning climbers that vary in age from about three to around seventy. Families and school groups, as well as children's birthday party groups and work groups are also target groups.

The **budget** for the implementations that arise from the results is not set. The possibility of using more money can be an option if the result brings more revenue to the service provider.

The **timing** of the research is between the fall of 2014 and fall of 2015.

## 2. Bouldertehdas and the climbing service

**Bouldering**, which is the only form of climbing at Bouldertehdas, is the sort of climbing that is done at low altitudes. This means under 6 meters, but indoors usually under 4.8 meters. The word bouldering comes from the word boulder, which refers to a big rock. The climbing is done without ropes or harnesses. Outside the climbers put a mattress underneath for protection in case of falling. The floors in the indoor facilities are usually covered with mattresses. The only equipment needed for climbing are climbing shoes and magnesium powder. Even though bouldering is the safest form of climbing, it must be remembered that climbing is a dangerous sport where one may be seriously injured or even die. (Arasola & Degerman & Keskinen, 1997, 21)



*Picture 1. Bouldertehdas climbing area*

Bouldering is great for extroverts. There can be a lot of climbers on the wall at the same time. Groups are naturally formed and the experience is very social. Climbers ponder together the different techniques of climbing. The routes vary in difficulty because of different climbing holds. Also the angles of the walls can change from an easy positive wall to a ceiling of 90 degrees. The color determines which climbing holds can be used to climb up a certain route. The climbing routes are usually marked with a number of difficulty or a color which is determined as a certain difficulty on the bulletin board. At Bouldertehdas they use a French grading system. The difficulty varies from 3 as the easiest, then 4, 5, 5a, 5b, 5c, 6+, 6a, 6b and so forth. The climbing of a route starts from the lowest climbing hold which is marked with a paper with the number of difficulty and who has built it. (Bouldertehdas, 2015)

The actual gear needed for bouldering is only the climbing shoes. The shoes are chosen so that the feet barely fit into the shoes. The tighter the shoe, the better the hold on the wall. Climbers often take their shoes off every now and then in order to improve blood circulation. This means the shoes are very tight. The same does not apply to beginners. It is more important that the beginner feels that the sport is fun and intriguing. This way he or she will come again. The tightness of the shoe is not important for beginners because the beginner will not climb routes that are difficult enough for it to make a difference. In climbing the technique is important. Legs are used as much as possible, since the arms get tired more quickly. The technique develops with practice, practice it is the best teacher. Magnesium powder is usually provided by the facility in a box in the center of the climbing area. The magnesium powder keeps the hands dry and helps to keep the grip on the rounded and smaller climbing holds on the walls.

**Bouldertehtdas facility** is in a 500 square meter indoor area that is located about 2.5 km from the center of Turku. The climbing area has many different profiled climbing walls as well as a big climbing boulder in the middle. There is about 400 square meters of climbing walls in total. The walls vary from “slightly positive” to “roof walls”. There are over 2000 climbing holds that vary from easy to hard. New climbing routes are made on a daily basis by the staff and there should always be plenty of routes for every level climber. The number of staff working at the facility varies from two to three.

The warmup and gym area are for warming up the fingers before climbing to prevent injuries. This is very important when climbing since the risk of an injury is more probable without a good warmup in advance.

The changing rooms are divided for men and for women. Both have toilets and showers for freshening up after climbing. There are lockers for storing valuables during climbing. There is a children's climbing wall as well as a play area with toys, TV and games.

The cafeteria offers fresh coffee and snacks. There is a social area in front for mingling and catching up on climbing experiences. This is very important since the climbers are generally very social. There are climbing and other magazines

for passing the time also. The cafeteria and the shop are in the same area. The shop sells climbing gear, climbing shoes, clothes and other climbing related merchandise that change with the trends and demand. Bouldertehdas also has an online store.

The climbing is the core service, but Bouldertehdas also offers other services that include: an introduction for beginners where the staff tells about the basics of climbing and safety. Climbing courses for those who want to better their climbing skills. Competitions for the climbers to compete on their climbing skills. Nummen sauna services are offered and children's birthday parties are possible to host. Climbers can even go on the website of the facility to see the webcam to check how crowded it is, before deciding to go to climb. For more possible areas of expanding the services, the niche services could be charted for the facility. If a service is distinguished by offering a high level of customer service from beginning to end, adding niche services will take the service to the next level. To get a premium service experience for the customer, the service level has to exceed the customer's expectations. This kind of service can be offered at a higher price. (Hauser 2015, 28-29) In the climbing service, these niche services could mean masseuse services, yoga instruction, solarium, physiotherapy or even manicure services.

## 2.1 Visualizations of the business

Some of the service design tools are designed to help in the visualization of the services. In visualizing the service of Bouldertehdas, the aim is to look at the service parts holistically. The stakeholder map and the business model canvas help in identifying the different parts of the service. They make it easy to see that all parts of the service are being accounted for as well as to identify the parts that need improvements.

### 2.1.1 Stakeholder map

The stakeholder map is a good tool for charting the different participants of the service. In the figure below are the core users of the service, the climbers. Most of the active climbers are members of the climbing association. The key partners are a group of companies that provide coffee, snacks, climbing merchandise,

cleaning and even sauna services. Then there are the facility owners that rent the facility to the owners of the service. There are also partners such as other climbing facility companies that buy climbing merchandise from Bouldertehdas. Bouldertehdas works as an import company for these companies.

## Bouldertehdas Stakeholder Map

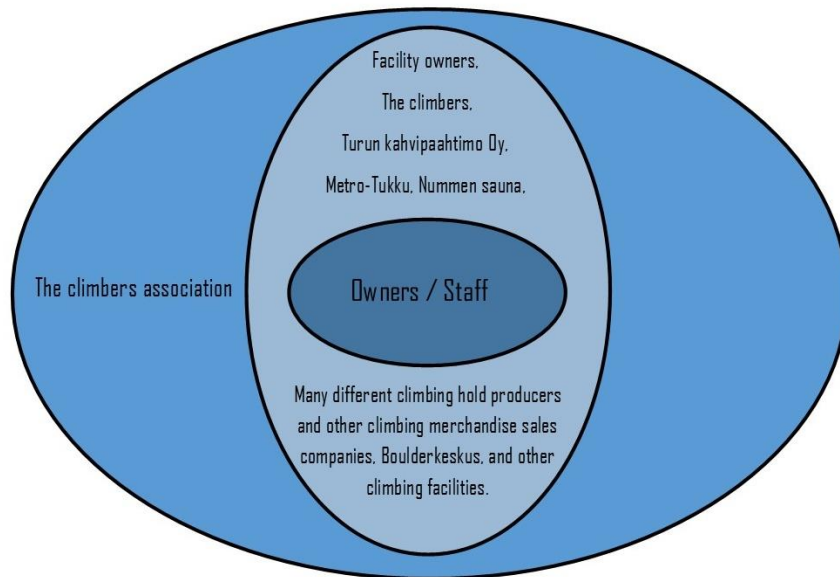


Figure 1. Stakeholder map

### 2.1.2 Business model canvas

The **business model canvas** is useful in describing, analyzing and designing business models. It can be used almost in any sector and can benefit service providers in a number of ways. (Stickdorn & Schneider, 2011, 212) The business model canvas made for Bouldertehdas visualizes the whole service on one sheet. This helps to select parts that could be improved.

The business model canvas shows how the business works by presenting all of the different parts of the service on one canvas. The business model canvas can be divided into two main sectors. On the left hand side the two columns show the infrastructure of the service, resources that are needed to make the service work, as well as the key activities which keep the business running. To make this work the partners are needed to supply the merchandise and other services that

create value for the service. On the right hand side the three columns focus on the customers. The customer segments show who is involved in using the services, while the value propositions show exactly what parts of the service bring value to the customers. The channels are seen as the distributors of the value, through which channels and where the customer is getting his valued services. The customer relationship shows what is needed to keep the customer and which parts of the services are most important for making a customer satisfied and interested in the service. Cost structure and revenue streams are opened only on a general level at the service provider's request. It is understandable that a business does not want to show the detailed financial figures and it is also not necessary for the objectives of this thesis. The business model canvas can be used as a checklist to see that all of the parts of the service are being looked into.

## Bouldertehdas Business Model Canvas

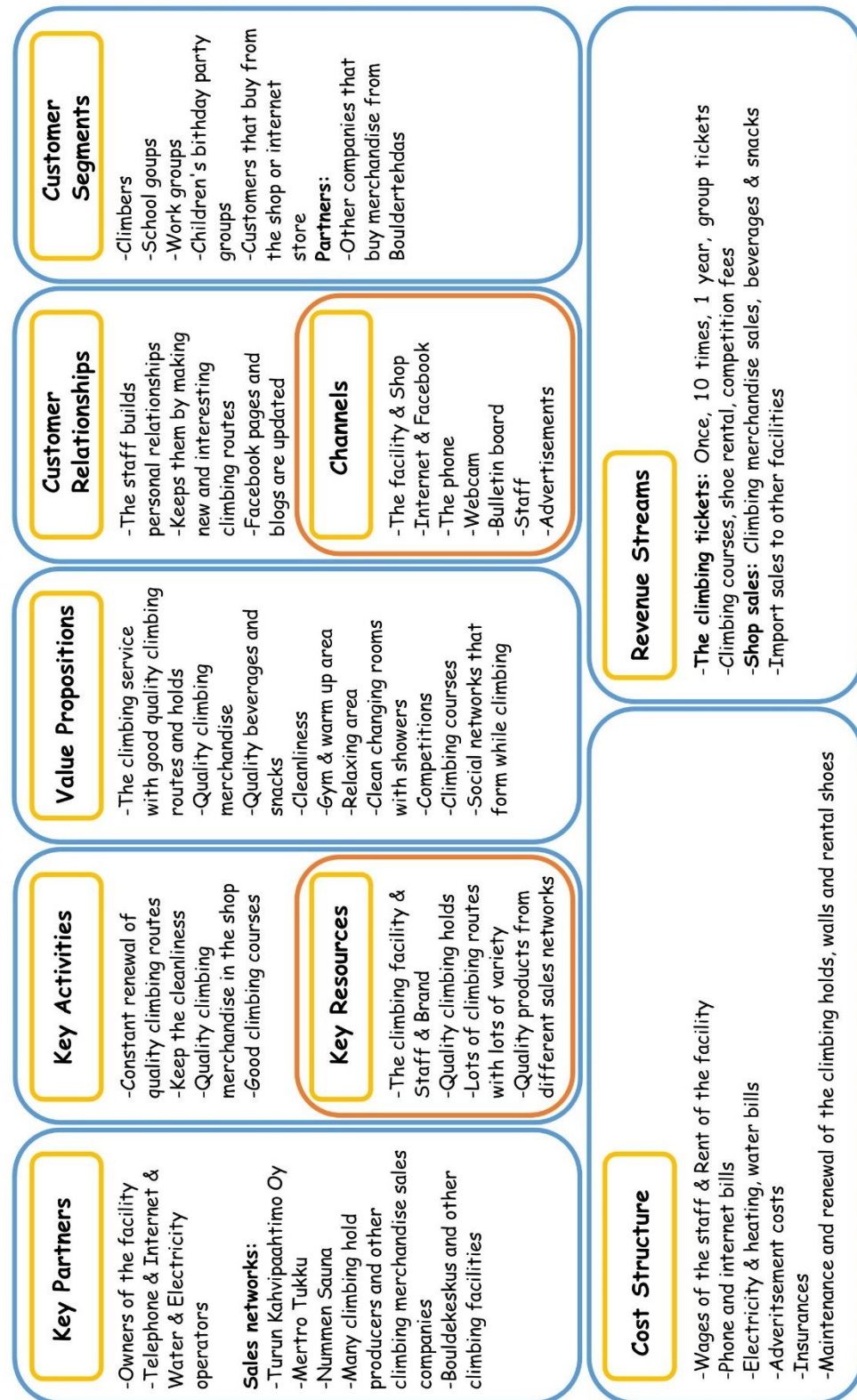


Figure 2. Business Model Canvas



### 3. Research problem

The core idea in any service is to get customers to use the service often enough for the business to work. This all starts from the first time customers that have come to the facility from many different reasons. Some might have heard about the service from a friend, or radio commercials. Some might have seen something about the service on the internet. What makes a beginner become a regular customer, is something in the service itself, and how he or she has experienced that service. A good experience is going to lure the customer back for more. It is probably not always related to the money charged for the service. It is more about the feeling when the service experience is premium quality from the beginning to the end. The first time climbing experience should at least provide interesting climbing routes. Also there should be enough of them so that the beginner cannot climb them all the first time.

Using marketing for getting new customers is not easy. Most people who climb at the facility are invited by a friend, so best advertisement is word of mouth. In this case the service must be good. Making the health benefits of climbing more known to the public could be a new angle to luring more customers. The service is currently being marketed through Facebook and Bouldertehdas website. They also advertise on local radio stations, which probably brings in new comers as well. The sport of indoor climbing has become more popular every year. Hence the service provider is optimistic about the future and more willing and open to new suggestions. The target is a better customer experience. The atmosphere of Bouldertehdas is welcoming, but are there still more ways to make the indoor climbing atmosphere remind us of the great outdoors, and is that what the climbers' want? These questions came up while observing the service and talking to climbers.

#### **The research questions are:**

1. What can be done to insure that the first time climber will come again?
2. Can the climbing experience of the customers be continuously improved, particularly on the part of the active users of the service?



## 4. Service Design answers to the need for change

We live in a world where the majority of developed societies have become wealthier. The world seems to have become smaller. With this wealth and possession of material goods has come a feeling of not needing to possess so many material belongings. The focus has turned to tangible and intangible services. The majority of the population in these wealthy and developed societies are middle aged and competition for their money is fierce. Due to these changes there is a growing market for services in sectors like transportation, sports activities, communications, learning, free time and many others. Since Finland is a country where services make up a bigger part of the gross domestic product every year, services are forming the foundation of our growing economy. Therefore, it can be said that we are living in the post-industrial period and in a world of services. (Tuulaniemi, 2011, 22) This means that the majority of people who are going to be employed in the future, are going to work in the service sector. More jobs in the service sector means more companies and people working to produce services. The service provider usually would like the service to improved, but their expertise is in producing the core ingredients of the service, not in the holistic functioning of the service. This is where service design is needed, to get to the point where the service is well designed and functional as well as interesting enough to be marketed through word of mouth.

This service design thesis describes the process of charting different parts of a service and how that brings about the need for improving these areas. Service design is utilized for the purpose of finding out what change is needed and how to successfully bring about a desirable change. Utilizing service design methods automatically makes the aim of the project focus on issues worth solving, thus making it the driving force towards change.

### 4.1 The customer's needs

To understand the needs of the customer, the experience must be observed holistically. There is a need to "jump into the shoes of the customer" and look beyond empirical analyses and statistical descriptions. To gain authentic insights from the customer, the individual experience must be understood in its whole

context. This is where service design thinking begins. (Stickdorn & Schneider, 2011, 36-37)

Some of these needs can be psychological. Personal needs of finding physical boundaries and abilities can be the driving force for some competitive climbers. On the other hand, for some it might be staying fit, even for the workplace, if the work is very physical. Socializing is an important part of the service, so some climbers might use the service even to escape boredom or from being alone. Some people for example might go to a pub to socialize after work, but climbing is certainly a healthier option. The need to feel freedom from the routines that regulate the typical work day can be a driving force for others. These needs can be seen as the personal drivers of the customers that use the service.

Then there are the physical needs and what is needed to fill them. These were partially opened up in the business model canvas. These needs can be grouped into sectors. The first is the climbing sector, which caters to the needs of climbers, with the climbing walls and frequently changing climbing routes that keep the customers interested in the service. The warmup and gym area help the customer to avoid injuries and the magnesium powder helps to keep the hands dry while climbing. Secondly there is the hygiene sector that includes the toilets, showers and the overall cleanliness of the facility. The third sector consists of the shop and the services around it. Beverages and snacks are needed to keep the customers' sugar and liquid balance in check while climbing. The relaxing area takes care of the recuperation needs along with the snacks. The climbing merchandise, such as shoes and sports clothes are needed in order to be able to use the service.

## 4.2 Organizational change

Changes within an organization can be difficult to implement. The problems accrue in the process that is needed to get from one state to another. The problem areas can be divided into three main issues: resistance to change, organizational control and power. The design of the process for achieving these changes and for reaching the desired state is not a simple step by step guide. To reach the desired state, the transition process is fraught with possible conflicts

and even political actions. Sometimes change may challenge the values and beliefs of people raising internal conflicts that may cause people to resist the change. (Senior & Swailes, 2010, 211)

The organization of this particular climbing facility is small and flexible. Change is relatively easy to implement. The only obstacle that could be in the way of the desired change, could be the service provider's own opinion on how they want the service implemented. They are climbers themselves, thus have a general view and opinion on how the service should be run, or at least has been done until now. The Bigger resistance to change could still come from the active climbers, if they feel the service is being marketed more for children and beginners. If they feel the climbing routes are made more for the beginner's needs, this might lead to rising stress levels of the active climbers. Every climber wants more of his/her own difficulty climbing routes and this is normal. The challenge is in how to make climbing routes for every customer segment so that all the climbers are satisfied. This way the climbers are considered to be part of the organization as stakeholders of the service. The opinions of the active climbers are easily heard, but the difficulty is in getting the opinion of the beginner who decides not to return to use the service. This would give the service provider valuable information about the beginner's needs.

#### 4.3 Co-design & Co-creation

An appreciative dialog between the stakeholders and the service designer is a very important part in facilitating learning and actions within the service. The seven Cs of caring conversation are: be Courageous, Connect emotionally, be Curious, Collaborate, Consider other perspectives, Compromise, and Celebrate. These have been seen to liberate and legitimize as well as enhance the quality of dialog. It helps provide feedback on what is, or is not working well. This then helps to tackle new issues. One very important aspect is that it provides a framework where co-analysis and questioning helps to develop skills for facilitation. This then makes the production change from an old facilitator-led model to a new co-production model. (Dewar & Sharp 2013, 1-4)

Co-creation is about the process of getting different stakeholders of a service together to improve the service. It has to do with being creative, but not in the traditional way. It has more to do with the process of generating ideas and listening to them. Co-creation is a fundamental part of service design that is done with a variety of different service design tools to gain insight from different user perspectives. It also helps to gain a smooth interaction between the stakeholders during the design process for the actual service parts. This then makes both service provider and customer satisfaction sustainable. The more the customers are involved from the beginning, the more they feel they are adding value to the service and evoking co-ownership, which in turn adds customer loyalty and long term engagement. (Stickdorn & Schneider, 2011, 38-39)

#### 4.4 Sustainability within continuous change

The necessity of services to change with time is mandatory for the business to survive. The buying habits of the consumers have changed from just buying products or services to buying ready-made solutions for easier living. The significance of single products and services is projected to be significantly less meaningful. Service providers will have to start looking into making overall solutions that embrace both tangible and intangible parts according to the consumers' will. (Tuulaniemi, 2011, 18-19)

A good example of this kind of change has happened in big competitive companies that use computers. They used to buy computers for their own needs, but with the market needing the latest equipment to be competitive, they found themselves falling behind and spending a lot of money for equipment, trying to stay competitive. Companies have resolved the issue by leasing the computers from a service provider. The companies stay competitive and they pay a monthly rate for this service. This keeps the competitiveness of the company on a sustainable path. Even more sustainable for the company could be to externalize the owning of the computer to the individual. This way the responsibility of keeping the computer up to date would fall on the individual. This could have other problematic consequences. Understanding the logic of services for all service providers is essential, if they want to be a part of future

services. This shows how the key partners play an important role in the future of the service. There is no point in trying to do a part of the service that a partner is specialized in and knows how to do better. Teaming up with this partner will bring a superior quality product or service to the customer, thus adding value to the service itself.

Since service design emphasizes the need to perceive a service as being in a constant state of change, the aim of service design is also to give the service provider a self-sustainable understanding of how to keep improving one's service in the long-term. Therefore, the challenge is not only in re-designing a service but rather in how to instill service design into the core workings of the service itself.

This way of interacting to find out the needs of the customer, has been executed in the marketing sector for years. In the past the economy functioned by producing products, which then were tried to be sold. Now the focus is in trying to find out what the customer wants, and only after that, to start making the products or services to fill those needs. Different organizations make huge efforts to figure out the customers' needs, especially when dealing with consumer goods. (Stickdorn & Schneider, 2011, 46) This way of identifying needs beforehand is slowly spreading to other service sectors also. The key to understanding the value of a product or service, is understanding the value of these channels to create working relationships between the consumer and the service provider.

The service provider's attitude towards changing the elements of a service in which customers imply that a change is needed, is very important. The term "killing one's darlings" is relevant here. The service provider has developed the service from almost nothing to being the great service it is now. Sometimes the service's development has a very strong direction based on the service provider's visions of what is expected of the service. When developing the service based on the diversity of the customers' values, understanding of service development to be linked to customers' needs is very important for the sustainability of the service for the future. Understanding the value of this will help the service provider become a self-sustainable developer of the service. In this

thesis the term sustainability refers to making the business sustainable by keeping a close eye on the customer demands and answering those demands to keep the customers. Integrating service design into the core workings of the business will make the service more sustainable.

#### 4.5 Value creation at the center

**“Understanding value and the nature of relations between people and other people, between people and things, between people and organizations, and between organizations of different kinds, are now understood to be central to designing services”** (Stickdorn & Schneider, 2011, 50).

Services in the traditional industrial mindset were thought of as being only imbedded in tangible goods. Now the understanding of the concept of services has changed to include all kinds of services, tangible and intangible. The same has happened to the value of the services. The value of the service is now realized as co-created between various different actors, social, and economic, in the process of using the service. (Sangiori, 2013, 96-97)

**What creates value in the climbing service?** Is it how the experience is interpreted as a first time climber, or how the person at the cashier makes the customer feel more welcome and appreciated? Perhaps it is because the facility meets up to the hygiene requirements, or then the general atmosphere is welcoming and warm. The minor details that sometimes do not feel important from the service provider's point of view, can often make the difference between a good experience and an excellent one. This became evident while observing and interviewing the climbers. Other parts of the services that bring value to the customers are: fresh grounded coffee in a comfortable lounge area, the shop with its excellent variety of quality climbing products, the location of the facility in general, the warm atmosphere with its climbing posters reminding the climbers of nature's different climbing destinations, the facility's suitable lighting, the children's climbing services and last but not least, the warmup area equipped with the gym and its equipment.

## 5. Climbing as an adventure sport

Rock climbing is a recreational activity and as such it is becoming increasingly popular among competitive sports. Climbers are a very social and heterogeneous group of people with one thing in common, the love for climbing. Two of the disciplines are sports climbing and bouldering. Both types of rock climbing can be done on artificial surfaces or on natural rock. The associations with danger and extremity belonging in the sport, might make the sport unapproachable to some. The thought of actual rock climbing makes people often think of the dangers of hanging off of cliffs on top of mountains. However they are now starting to understand that climbing in facilities like these is not the extreme sport climbing used to be. This may be the reason for the growing popularity of the sport. When done correctly, it is a relaxing form of fitness. It can be a lot of fun and is an extremely social sport. In Colorado, a climbing wall constructor writes that their company used to build an annual number of five walls, but now due to increasing demand, they are building about 40 annually. (Gold 2014, 3A)

### 5.1 Psychological profile

Studies indicate that prior knowledge of a climbing route decreases the stress levels associated with the climbing. (Draper et al. 2008, 497) The first climb for any climber is likely a stressful situation since there is no prior experience on the part of the climber. This issue needs to be addressed if the service provider wishes to minimize stress factors for first timers as it affects the first impressions of the climbing experience. (Draper et al. 2008, 493) Since there is no getting around the significance of experience, the service provider should consider creating a route for beginners which would be marked with exact instructions for climbing. This could then help minimize or even eliminate stress on the first attempts, as well as teach climbing techniques. This type of 'soft landing', or prior good experience, would serve to reduce stress levels when climbing more difficult routes. On one hand climbing can be an extreme sport. In the last two decades, extreme sports participant growth rates have exceeded by far the traditional sports activities' growth rates. (Brymer & Schweitzer 2013, 865)

Climbing as an activity can be seen also as a learning experience. Climbing is versatile as a sport and has potential learning aspects from a pedagogical standpoint in the form of problem solving. This implies that the benefits of climbing could compliment a multitude of learning aspects, not solely linking it to the physical aspects of the sport. It could also support many elements which are possibly missing in conventional learning activities. When done right, climbing can be an extremely social experience (Gold 2014, 3A), which would as such reflect the most important needs of an individual from a Deweyan perspective (Rinne & Kivirauma & Lehtinen, 2005, 172) since climbing requires creativity, inspection, artistic expression and an experience of a sense of community to successfully complete a climb. Climbing could thus offer a learning experience which exemplifies the holistic nature of successful learning. It could also reflect constructive ideas concerning knowledge construction, which sees learning happening as the result of a process of adapting into one's surroundings (Rinne & Kivirauma & Lehtinen, 2005, 177), since every climb requires one to adapt to the demands of the course. Climbing could thus be marketed as encapsulating, in a limited technical sense, the nature of learning.

Bouldering is probably the safest form of climbing, still the possibility of injuring oneself is always present. The question is, why do people like to participate in extreme sports? There are various reasons. One reason seems to be that it is "hard-coded" to our brains. When a person takes risks, the brain immediately provides him/her with a feeling of pleasure. Some people are more likely to take risks during sports activities, while others take risks with their money by investing into stocks. (Pain 2005, 533) This leads to the question of motivation behind participation in extreme sports.

## 5.2 Motivation

Climbing is generally associated with adventure sports. The study of adventure sports, especially from a psychological perspective, has often focused on the aspects of excitement and thrill seeking, what their role is in motivating one to participate in adventure sports. This has led to ignoring of the other possible motives. Recent qualitative studies have managed to break this stereotypical portrayal and have revealed the narrowness of the thrill seeking perspective into



the whole phenomena (Kerr 2012, 649). Participation is motivated through excitement of risk taking, the adrenaline rush, but also to a significant degree, the following: the interaction with friends, escaping from boredom, testing personal abilities, overcoming fears, connecting with nature and feeling the world around an individual in a different way (Kerr 2012, 656). One essential aspect to the motive of participating in extreme sports is the feeling of freedom. Freedom is seen in many ways, it can be conceived as liberation or movement away from unwanted social and cultural constraints. At the same time, it can push towards being free to accept personal responsibility. In this form freedom covers physical and mental concepts of desire and movement. (Brymer & Schweitzer 2013, 872)

All these identified motives offer numerous ways in which the totality of the experience which climbers are possibly seeking, can be enhanced. This should be done in a way that makes the experience better than by simply assuming that all customers are latent thrill seekers that need the thrill in order to be able to get a satisfying experience from climbing.

Identifying and answering to a multitude of likely motives within the customer base, correlates with the general principles of service design in its attempts to find strategic direction for the organisation as well as focusing the service to be user-centred. This is done by improving the processes within, improving the brand and deepening the relationships of the customers as well as creating new services (Tuulaniemi, 2011, 95). This also adds value to the business. Designing the venue in a way that facilitates the motives linked with adventure sports, could be an extra source of income for the facility. It can also be a way of making the climbing experience more suitable for a newcomer. Especially interesting would be to find new ways to address the feeling of freedom for climbers.

### 5.3 Risk factors for injury in bouldering

Both of the disciplines of rock climbing, sports climbing and bouldering, consist of specific types of movements and techniques that result in specific types of injuries. The most common are acute flexor tendon pulley strains of the fingers

and upper extremity overuse injuries. Ankle injuries are also common due to falling. (Woollings & McKay & Emery, 2015, 1)

Climbing is a competitive sport and the more competitive the climber is, the more prone he or she is to being injured. Injury prevention is important for the customer as well as for the service provider. The injury might take the customer away from the sport for weeks if not months. This is naturally most annoying for the climber, but results also in profit loss for the service provider. The possibility of injury is always present and it is made very clear by the instructors to the beginners when they start using the service. The staff at Bouldertehdas always gives a thorough explanation of the risks involved with the sport. The warming up of the hands and fingers is crucial for preventing pulley strains. The soft mattress absorbs the fall, but it does not prevent ankle strains if a climber falls from a bad angle. The fall can sometimes be from a very low height, but landing badly on the ankle may result in an injury. The best prevention of being injured is being aware of the risks as a climber. But is there more the service provider could do to help?



*Picture 2. The risk of falling*

## 6. Frame of reference

The frame of reference shows the platform where the service design project was executed. The service design project also aims at assisting the service provider to become more sustainable with the development of the services in the future. Hence the service design and sustainability are of core importance. The trends and demands of customers help in selecting the wanted merchandise for the facility's shop. The stakeholders are the most important part of a service, as shown in the stakeholder map and business model canvas. The users of the service must be lured into using the service. This is why in this platform the customers are shown as coming from outside of the service, even though they are the most important part of the service. The budget restrictions are always

present, but not necessarily stopping the improvements, if the generated ideas are forecasted to bring more profit to the service provider. The service designer tries to look at the service holistically to better understand the whole service. All of these different aspects of the platform work together for implementing a better service model for Bouldertehdas.

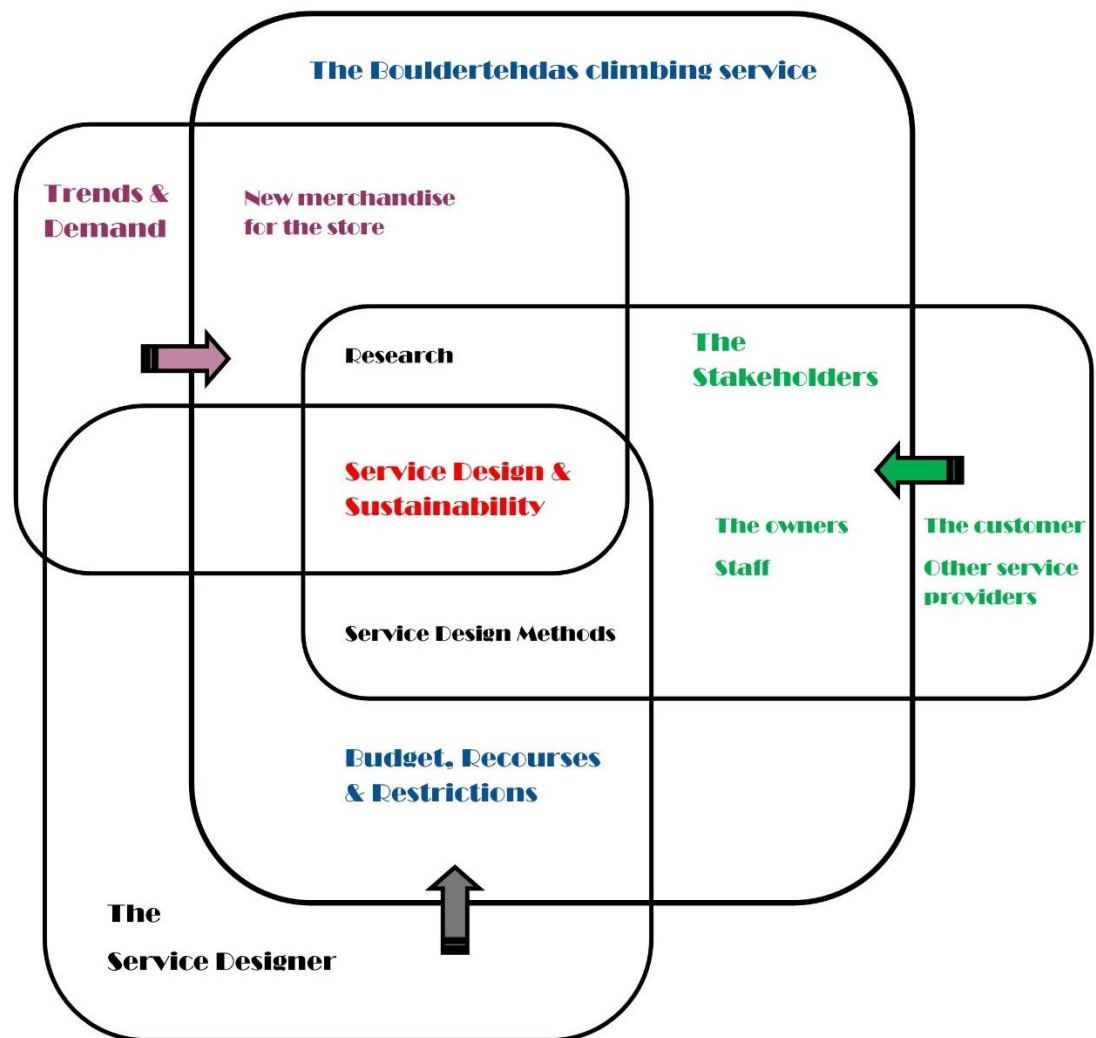


Figure 3. Frame of reference

## 7. Methodology and Research results

Most of the methods that were chosen are qualitative methods. Qualitative research is a very broad term that consists of many different philosophies and techniques. In an equally broad definition, it means using specific methods for examining people's experiences in detail. It is not only about applying the methods, but also about interpretation of the meaning from the studies' perspective, in order to understand the behavior of the participants. (Hennink & Hutter & Bailey, 2011, 8-9) The methods, that were chosen to research the problematic parts of the service, demonstrate their effectiveness in the number of research methods which were used for the project. The vast number of used methods, give a better understanding of the service as a whole. The research results are gathered from the various methods used in this service design task. The aim is to analyze the results in order to give the service provider directions for the development of the services, as well as to finding an answer to the research problem and the questions.

### 7.1 Process chart

Methods used	September—December 2014	January—May 2015	September –December 2015	Short results
Interviews	4 people		1 person	Gave direction for the projects
Observations	While climbing	While climbing & benchmarking	While climbing	Beginners are not being taken into consideration enough in the building of routes
Co-design		5 people		The area in question got a specific use, but the usage could be higher
Disney method		5 people		Resulted in a lot of good ideas for the future
Benchmarking		1 person / 3 facilities		The importance of cleanliness and easy and interesting climbing routes
Surveys		23 people	7 people	Not enough positive walls and the open question resulted in a lot of good ideas
Blueprints	First draft		Final draft	Shows the missing parts of the service
Business model canvas	First draft		Final draft	Opens the whole service on to one sheet
Personas			Draft	Deepens the understanding of the customer

Figure 4. Process chart

## 7.2 Initial Interview

**Interviews** are conversations where questions are asked to obtain information. There are many ways of conducting an interview. The interviews will involve contextual one on one observation and interviews of the people taking part in activities in the context. Contextual interviews give tacit and detailed knowledge about people's context. (Curedale, 2013, 3)

In **the initial interview** done in 2014, the aim was to find direction for the project by asking general questions about satisfaction and deficiencies of the services. The interviewees were 4 regular customers of the climbing service. The interview was done by telephone. The interviewees seemed to have lots of opinions, which was good for the project. Answers to the first question about satisfaction regarding the services, were mostly positive. Everyone was mostly satisfied with the service. One of the interviewees mentioned that the cost for the service was relatively high in his opinion. This interviewee had just recently started climbing and had no experience from competitors' pricing. The pricing at Bouldertehdas, in fact, is highly competitive in comparison to the wide range of services being provided.

The second question about missing services and what do the interviewees like and dislike, gave more insight into the service. According to one interviewee what was missing is **more positive walls** for training balance. The positive wall means that the angle of the wall is more than 90 degrees. Another suggested the gym equipment could be more up-to-date, even though he added that he actually uses another gym. Also a better coffee break area with more sofas were mentioned.

In the additional questions about likes and dislikes, the answers were very clear. The likes included the following: clean and comfortable environment partially thanks to the **no shoe policy that was commended**, welcoming atmosphere with good lighting, frequently made new routes, possibility of taking a shower after climbing and comfortable changing rooms. Good service as a whole was also mentioned. The dislikes included high prices, the price for an adult ticket and price of children's tickets, especially when the family has more than one child.

The third question on what to improve, resulted in criticism on the same issue of children's services. One of the interviewees said that there was no area to leave the kids to be looked after, so that parents could climb in peace. There was a suggestion to do something similar as climbing facility in Hämeenlinna, which has met the children's needs very well by making a children's corner, free of charge for kids, with an easy climbing wall, a DVD player and TV for entertainment. Actually Bouldertehdas has exactly the same type of children's corner and it is free of charge for little children, but this climber had not noticed it. **The problem seems to be the lack of signs** and the visibility of the area. This interviewee had been climbing at the facility several times.

This issue of the children's comfort in the climbing facility is difficult to address. This is partially due to the dangers of the surroundings. The climbing area is dangerous for children running around and the more there are children, the more there has to be staff looking after them. The families that come to climb with kids are seen as a positive thing and usually families look after their own children. But the possibility of just leaving kids unattended at the climbing area is a problem from the service provider's point of view. There was also a demand for more bicycle parking space, as the parking is often full with no space to lock the bikes.

The fourth and final question about what was valued most in the service, provided important information. Most of the interviewees answered that they valued most the varied routes, and the **constant renewal of routes**. Good, clean and comfortable facility with a nice atmosphere, without the feeling of a rush, was the second most valued aspect.

While this first part of the project was going on, the service provider clearly started to be inspired and interested in thinking of ways to start improving the service. This was only the start of the research, which **opened a good dialog**. The initial interview was important in giving direction for the other projects. It mostly showed minor problem areas, but served a bigger role in assisting the design of the satisfaction survey questions.

### 7.3 Observation

The **observation** method involves observing people in their natural activities and work environments. Observation can be direct or indirect. In the direct observation, the researcher must be present. In the indirect observation, observation can be done with the help of video and digital voice recording. (Curedale, 2013, 26) Direct observation was done at the facility, while someone was using the service and recognizing the parts which could be addressed together with other climbers. Observing the climbing experience as an active climber, the focus was on the most important parts of the service: the **climbing routes** and their variety, the **cleanliness and the atmosphere** of the facility, and observing **the change in the service provider** during the service design projects. The observations are opened up in a timeline. Some of the implementations happened during the observation period and are opened up in the text.

When the observations started in the fall of 2014, the number of **climbing routes** was at a peak. The difficulty of the routes varied in a good balance, especially the easier routes were well accounted for. In fact there was so many routes that some of them started to get mixed up as same color routes were built too close to each other. The quality and number of the easier (4 and 5 grade) climbing routes seemed abundant and interesting.

There was a climbing competition in the winter of 2014. The routes were all disassembled for the competition and the competition routes were built for the event. The event had a long lasting effect on the number and variety of the routes. It took many weeks, if not months, to build back the disassembled routes. The number of new routes was a positive change for the active climber, but the number of easy interesting routes had decreased. These easy routes are crucial for those who come to use the service for the first time. The experience can easily be negative for the beginner, if he or she does not find the routes interesting and easy enough to continue the newly found hobby. On the other hand, as is often the case, the new routes that were built for the competition, seemed to get a lot of attention and interest from the regular users of the service.



Continuously changing routes keep the active climbers interested in the climbing facility. These new routes are a very important part of the service, but it is difficult to make good routes of all difficulty levels. The route builders are often good climbers themselves and they like to build routes that are very difficult. They are understandably interested in these harder routes, built at their own level, but the facility needs routes with all levels. Often the easier routes are made using less imagination, built more like "stairs". The difficulty in making an easy, at the same time interesting route, is the key to getting more beginners to come again. The key for building an interesting, yet easy route, is in building a route that does not require much strength. It should require a lot of problem solving skills and pondering of the climbing techniques. This would bring value to the beginner, giving a sense of accomplishment having been successful. The building of these routes between the four and five grades is important. The routes seem to be limited to the 4, 5, and then go on to 6, 6+, 6a, 6b etc. The grading of the, +, a, b and c parts of the numbering, could start already between the numbers 4-5 and 5-6. For many beginners the difference in difficulty between these grades is too large, and this leads to the feeling of disappointment. For example, the interest in climbing the number four routes stops when they feel too easy, while the number five routes are too difficult and seem impossible. This is a big gap for beginners and it has been addressed with the service provider.

In the summer of 2015 Bouldertehdas was closed for a month for an expansion renovation, partially based on the results of the satisfaction survey and partially because of ideas which had been in the service provider's mind for some time. The service design project had an inspiring effect on the service provider and it was decided to go ahead with the renovation. After the new opening of the facility, the climbing area had grown in size to 800 m<sup>2</sup>, and the climbing walls to about 500 m<sup>2</sup> in total. The expansion was 300 m<sup>2</sup> more floor and 100 m<sup>2</sup> more wall area.



*Picture 3. The new Bouldertehdas climbing area after expansion renovations*

The extra space opened up the possibility for even more climbing routes without having to build them too close to each other. The renovation addressed the need for more positive climbing walls or “slabs”, as the climbers call them. Other demands were also met, such as the sideways climbing routes, for warm-up purposes. These demands came up from the customer satisfaction survey that is opened up in the next chapter.

The situation with the climbing routes is continuously being improved, since the making of new routes is a constant activity at the facility. The problem with the disassembling of all the routes for competitions could be a thing of the past, since the expansion of the facility makes it possible to hold competitions in one of the current areas.

The **cleanliness and the atmosphere** of the facility felt warm and inviting from the start of the observation period. The walls had few posters of climbing destinations which were very intriguing, but left the feeling of wanting more. Why was there not more of this type of visual material, which would bring the climber's feeling closer to the outdoor climbing experience? The posters can be used to bring the feeling of freedom while using the service. The feeling of freedom and its significance in the climbing experience was stated in the motivation part earlier. Dreaming of these destinations keeps the mind focused on something to practice for and accomplish in the future. These issues were addressed in the expansion renovation discussions and now there are many posters decorating the walls of the entrance and climbing area.

Cleanliness is well taken care of at the Bouldertehdas. Hygiene on the other hand is an issue that is difficult to address, since it is hard to measure by mere observation. The facility has taken measures to put up signs to remind the climbers of personal hygiene and hand washing after using the toilets. Hygiene seems to be very important for climbers. For some climbers hygiene includes the sand on the floor. Walking barefoot from the dressing room to the climbing area, the sand annoys them. For others hygiene is more about the general cleanliness of the facility. For some it is the smell of other climbers, some using strong scented deodorants and some smelling of sweat. Some things can be fixed easily, others one can do nothing about. Cleaning the floor, or having a sign saying no shoes allowed on the floor area, for example, is easy. Telling people to do something about the way they smell, however, is too personal.

These hygiene issues play a part in the climbing holds as well. The climbing holds are cleaned on a regular basis, about once a month. First the route is disassembled, and then the holds are scrubbed and washed. After this they are used again to build a new route. The hygiene issue is hard to control, since some of the routes are climbed more than others. Some routes might be left without cleaning for longer than a month. There is no data on whether this affects the health of climbers. It is not known whether seasonal influenza spreads through dirty climbing holds. The biggest factor to keeping holds clean is personal hygiene of the climbers which is almost impossible to influence. Old climbing holds can look dirty and the color can be hard to recognize. The holds may be

clean, but the color of the hold has gone with time. This uncertainty affects the climbing experience as well. On the other hand the routes are changed often, and that is one of the core values of a climbing service. In observing the overall cleanliness of the facility, one should be happy with the effort that the service puts into keeping it clean.

The observations of the service provider's change towards a more service orientated attitude, has been interesting to witness. In the beginning of the service design project, the service provider had a certain mindset on how the service was to be managed. This way of working had worked well but the service development seemed to be missing clear direction. The introduction of the service design aims and methods in finding value for both customer and the service provider, achieved the needed attention. The service provider became very interested in the projects. As is seen in the results above, the survey results were analyzed quickly by the service provider and put into action. The outcome of the renovation addressed issues about more positive climbing walls, more sideways warmup routes, and the possibility of holding climbing courses while the facility is open also to other climbers. Other issues that have been addressed, are the shop's variety of merchandise which has increased, the old grading system has been taken back, the marking of the routes to make possible circuits that consist of a certain order of routes, and even a massager has been providing services at the facility. These are all parts of services that have been improved based on the customer feedback. The service provider's newly found direction is something to be admired.

#### 7.4 Survey of quality and satisfaction

**Surveys** are a method of collecting information and data. Usually the data is collected from a large group of participants to study anything from objects to people. Surveys can take the form of a questionnaire or a face to face interview. (Curedale, 2013, 157) In the first survey about the quality and general satisfaction of the service, the aim was to find more parts of the service that needed looking into. What was the customer happy with and what was not meeting their standards.

**The Survey** was designed with the purpose of finding out customer satisfaction. The questions that were asked, came out of issues that were discussed while interviewing and observing the climbers. Almost all of the questions regarding satisfaction were marked from one to five, five being very satisfied and one not at all satisfied. There was one open question at the end of the survey where free opinion was expressed by the climbers. The survey was done at the facility on paper. Twenty-three people answered the survey, thirteen men and five women, five did not tell their gender. The ages were from fifteen to forty-four. Most of the people who answered the survey, had been climbing for over three years, but there were also answers from other climbing time options (beginner, over 6 months and over a year).

**The questions** consisted of different areas of the service, from cleanliness to climbing routes and their difficulties. The climbers were most satisfied with the cleanliness of the climbing area as well as the changing rooms. They also were very satisfied with the overall atmosphere and lighting. Even though the ticks were mostly in the satisfied boxes, there were some questions that were only scored average. These were the satisfaction with the children's climbing area and the price of the children's ticket. Also the bicycle park and the number of positive climbing walls all scored clearly lower scores. The overall satisfaction with the service scored fifteen 5's and eight 4', so the customers are very satisfied with the overall service.

**The open question**, about what could be improved in the service, resulted in a vast number of good ideas. The climbers had clearly been wanting to give feedback on what to improve, since the answers were very clear. There was positive feedback about the good service from the staff being active and teaching the beginners things about climbing. The clean and warm atmosphere and versatility in the easy climbing routes got good feedback as well as the good warmup area. Some said that the service stands out as better amongst service providers.

According to deductive content analysis, **the improvements** and **the faults** can be grouped into different motivational factors, climbing motivators, hygiene issues, competitiveness, and safety issues.

### **Hygiene issues:**

Some of the climbers' feedback seemed to focus more on the hygiene issues. There were complaints about the climbing holds sometimes feeling a bit dirty, or then the empty magnesium balls feeling grotesque. Better ventilation for the toilets was requested. Some of these issues are easier to address, while some issues of hygiene is difficult to completely address. The old climbing holds for example can look dirty because they are worn out, but may have been washed just a while ago. One way to address this is to buy new holds to replace the old ones. This is very costly, because the service utilizes thousands of holds on the walls. Perhaps it would be possible to sell the old climbing holds. Some of the climbers might want to buy old climbing holds to make a small climbing wall for practice at home. Hygiene issues are very important for the general atmosphere. These answers show that some of the climbers are requesting more cleanliness, even though the cleanliness at Bouldertehdas is one of the best in Finland.

### **Safety issues:**

The suggestions to make a gate for the stairs to stop children from climbing them, comes from the customers' needs for more security. The children's feeding chair has a double function, it helps with the feeding, but also stops the children from running around freely. This is important because a wondering child can easily walk under a big sized climber that is jumping off the wall. This can have serious consequences. These issues focus on the children's safety in the climbing facility. Someone even mentioned that there is a problem with the children running around on the climbing area. This seems to be an opinion that reflects more the attitude, or the stress that a climber might feel if there are children running around, even if they are not in the climbing area.

The climbing routes that go sideways on the walls for warmup, were also mentioned by the climbers. The routes normally go upwards, but this is not obligatory. The routes that go sideways, can be put next to each other and in one direction, so that once the first climber has climbed forward, the next one can start climbing. This is one option that could benefit the safety of the climbing

experience. The falling from a low altitude could lower the risk of injury substantially.

### **Climbing motivation:**

The climbing motivation comes from having a good experience and wanting more of it. The answers that focus on bringing more value to the service, can be seen as climbing motivation drivers. Some of the climbers answered that there is a need for more variety of different merchandise products for the shop. The shop has recently taken in more products, but the shop could benefit further by having a feedback system of some sort for gaining information about wanted merchandise. The opinions of how to improve the climbing service for the customers, consisted of notifications about climbing groups arriving on the bulletin board. This would make it possible to decide not to climb at the same time when some group is coming. The better gym equipment and more space for stretching, in this context, can be seen as a comfort issue, since the area and equipment are well accounted for. Someone also commented that the gym equipment should be routinely checked to ensure they are working properly. There is always the possibility that some equipment malfunctions, but the facility looks into the problems that are brought to their attention. These factors all have an impact on climbing motivation. These are parts of the service that the climbers would like to have improved in order to make the experience more enjoyable. This shows from the answers like, more slabs and too much variety within one color. This survey was done at a time when there was a trial period of using a different grading system and this resulted in answers saying the old grading system was better. Now the old system has been taken back into use.

### **Competitive:**

The answers that came from the competitive climbers consisted of requests to make the boulder in the middle of the hall even higher. This would make it possible to build the routes higher and make them more challenging. The numbering of the routes, as well as having ready-made circuits on the bulletin board, were requested. This would help in the marking of the climbed routes, as well as help in comparing performances with other climbers. The ready-made

circuits help in knowing the number of climbing that is involved in a single training session. It also makes easier the choosing of where to climb. The other requests, about courses on gaining muscle and finger strength, can be seen to contribute to the competitive climber's needs. The need for more competitions for the climbers that pay the annual fee, falls in the same category. Holding competitions every second month, would probably be an issue of money and spent time. Then there was the equipment that was requested by these frequent climbers, consisting of squat racks, power racks, pinch-holds on the campus boards etc. These are all equipment for the gym area that is only used by the climbers that climb the higher grade routes.

## 7.5 Co-design and Disney method

**Co-designing** can be seen as a specific part or instance of co-creation and refers to the design development process creativity that happens when the design professionals and the people not trained in design work together. Co-design is nothing new, it has taken two different paths in Europe and the US. The US co-design is seen more as a user-centered "user as subject" design approach, while the European approach is more participatory "user as partner". The evolution of the user-centered design research changing to a co-design led model is changing the design landscape into a more sustainable and collectively creative domain. (Sanders & Stappers, 2008, 1) The co-design project done at Boulderterhdas consisted of different stakeholders that worked together generating ideas for the benefit of the service.

The co-design project was done in the spring of 2015. The aim was to better utilize an upstairs lounge area at the facility. The upstairs **lounge area** was not used to its potential. The area was thought to be used mainly for drinking coffee and reading magazines. While observing the use of the area, it became clear that the area was hardly used. Discussions about how to implement a service design project to better utilize the area, resulted in the choice to use the **Disney method for this co-design project**. The idea was to gather a group of stakeholders to give ideas about what could bring value and usage for the area.



**The Disney method** is a parallel thinking method that allows a group to discuss an issue from four different perspectives. The four views are the spectator, the dreamer, the realist and the critic. (Curedale, 2013, 276) The different perspectives allow the group to be creative and at the same time look at the service critically.

The group was gathered from four of the regular customers that climb on a weekly basis, and one staff. The issue of the upstairs area was addressed, and the question asked, what ideas could bring value and usage to the area? The group seemed very enthusiastic to participate and the result of the task was very pleasing to the service provider.



Picture 4. The upstairs lounge area and the stakeholders at work

### First part: ideas of the outsider

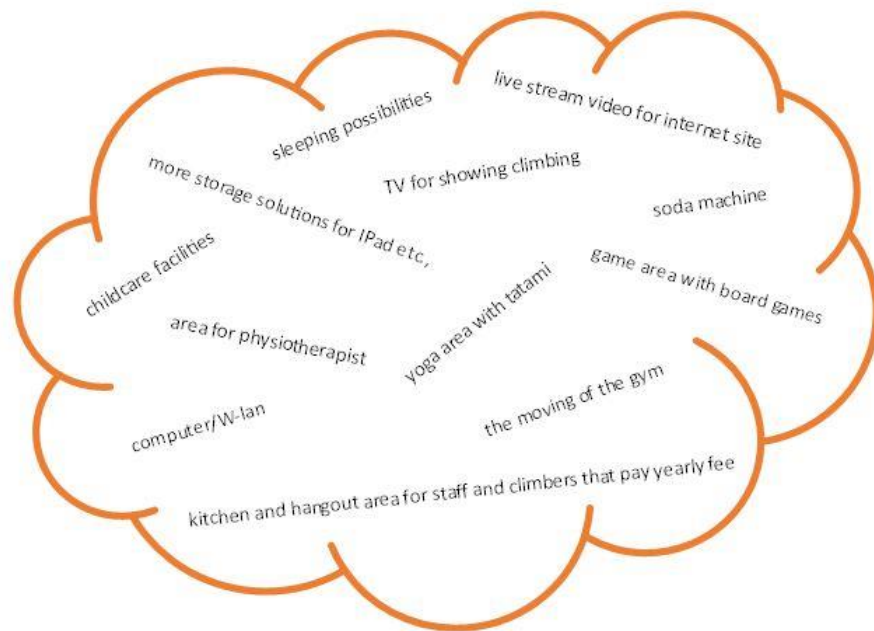


Figure 5. Ideas of the outsider

### Second part: ideas of the dreamer

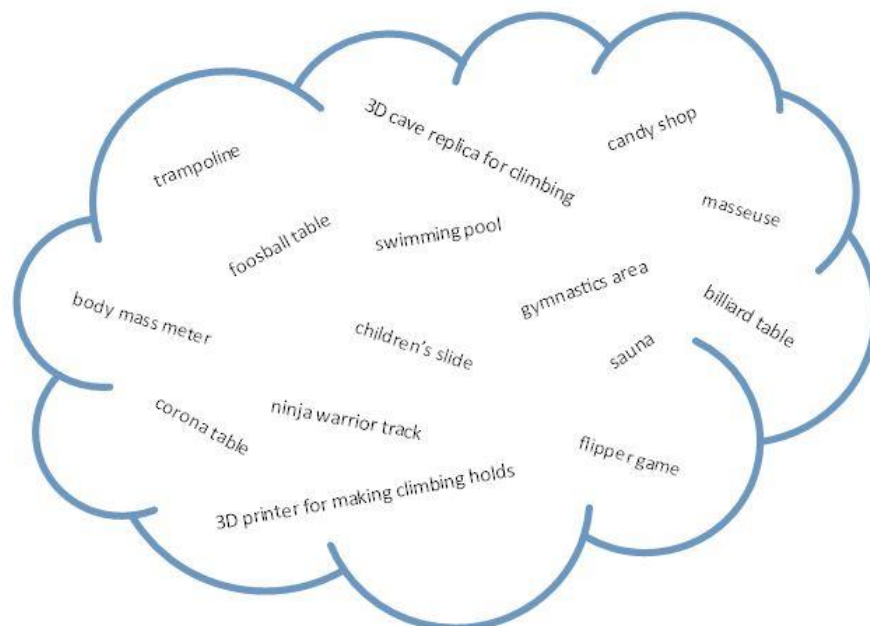


Figure 6. Ideas of the dreamer

### **Third part, realist:**

In the realist part the next ideas were questioned: Trampoline, candy shop, 3D cave replica for climbing, 3D printer for making climbing holds, massage, swimming pool, sauna, ninja warrior track, area for physiotherapist, TV for showing climbing videos. Some of the ideas that felt good, were put aside because the question arose, would there be enough use for them?

### **Fourth part, critic:**

In this fourth part, where the group acted as critics, a lot of the ideas were disapproved because of safety issues, or the fact that they were hard to make, or the fact that it would be too costly. Other issues were the video showing rights and other health issues.

### **Here are the Ideas that were approved:**

More storage solutions for iPad etc., sleeping possibilities, the moving of the gym, soda machine, game area with board games, yoga area with tatami, kitchen and hangout area for staff and climbers that pay yearly fee, body mass meter, flipper game, foosball table, corona table, billiard table, gymnastics area, children's slide.

Possibly some of these ideas could be used to modify the area to be more suitable for Bouldertehdas in the future. The project generated a lot of ideas, and that were welcomed by the service provider.

### **Here are the different possible solutions that were introduced to the service provider:**

The first option that was presented was to use the upstairs area as a gym, but leaving the heavy equipment down stairs. This would free some climbing space downstairs. The upstairs could also have a yoga tatami, body mass meter and even a gymnastics area. This option would force the service provider to look for another space to hold the meetings of the work groups as well as children's birthday parties.

The second option was to make the upstairs a gaming area with more relaxing possibilities. The area could have sitting cushions with more storage solutions and even a slide for children. This playful area could attract lots of users. There could possibly be a double usage of the area, for the time that there are no meetings.

One possibility was to not do much to the area. The area could mostly stay the same, but the focus would be on improving the recuperation possibilities by adding comfortable cushions and maybe even a bed or hammock. This too could be a double usage possibility.

One option that was presented was to make the upstairs area a climbing area. This would bring wanted warmup area where the climbing would be done horizontally.

One of the options was to make the annual fee customers a separate luxury space that could attract more annual fee paying customers. This area could have cooking possibilities, TV and other services.

### **Meeting up with the service provider to talk about the results:**

Talks with the service provider clarified that the area has restrictions that were not known, like weight restrictions that puts maximum weight at 4 persons / square meter. This makes putting the heavy gym equipment upstairs impossible. Money restricts the expensive solutions as well. Also the project was done at a relatively fast timetable, so some of the ideas that could be useful, were maybe easily tossed aside in the realist and critic parts. In fact some of these ideas have already been taken into the service, like the visits of the massager. This shows that the most important part of this co-design project was the generation of ideas. This could be seen as co-creation, since idea generation is a big part of it and the ideas are still usable. The results were left lingering in the minds of the climbers and the service provider as well. This has resulted in further conversations and some of these ideas might be usable in the service in the future.

### **The end result that the service provider chose for the area:**

The service provider chose a model that was different from any of the ones offered. The service provider chose to simplify the area by taking away the hangout sofa area, replacing it with an open area for having meetings with work groups. At the same time, the area can be utilized better for the children's birthday party groups as well. This would have probably been one of the solution models, had the service provider participated in the exercise as well. The learning is that including more of the different area stakeholders in the project is crucial. There was information lacking from the part of the service provider as a stakeholder in this project. Also prototyping of the area never happened, but the end result seems to work well enough for the facility. The prototyping needs money and time. For the service provider this means commitment and risk taking. The usage of the area could still be higher, since the groups that have meetings and the children's birthday parties are not held every day. Maybe a double use of the area could still be considered.

## 7.6 Benchmarking

With **benchmarking** we can compare organizations and their products, services and customer experiences to identify the best practices. It is a tool to identify, establish and achieve excellent standards. (Curedale, 2013, 49)

The benchmarking was done at three different climbing facilities, named here A, B and C. It was a good experience to see the differences first hand. The visits were done from a first timer's (**persona 3**) point of view, trying to be critical towards the services. The persona 3 is opened up later in the text that describes the method personas. The aim was to go climbing as on a normal day, with the difference that the climber had never been to these facilities before. Then the climber would write down the results of the experience, what was well accounted for in the services and what was lacking. Benchmarking is a good way to see the quality of the competitors and see other ways of producing the same service.

**The pre-service.** All of the facilities had their contact information with addresses on the internet so finding the places was relatively easy. When arriving on site, the place A was hard to see because of missing signs. Also the address pointed to a big area with no clear parking area for customers. The other two climbing facilities had better parking possibilities, but the signs could have been better in facility C. The webpages could also be improved for the first time users. They could include a video for first timers on how to arrive onsite and how to be prepared etc.

**The service.** Arriving at the **first facility A**, it became clear that the service was lacking at the desk. There was a bell to call the staff. Once the staff arrived, the service was explained well and they even started out with the most important question, are you a first timer? The service seemed good, but there was a lot of information told at the desk and it was difficult to remember everything once climbing. The service from the staff's side ended there. They did not come to ask anything or explain anything after that. The climbing service was good with a lot of routes to climb. The difficulty of the routes were mostly thought of from the "active climber's" side. There were very little easy climbing routes for beginners even though they had more positive walls than Bouldertehdas. The climbing holds were old and dirty and this made it hard to see the routes clearly. Even the changing rooms had sand on the floor and did not feel very clean. Another problem was there was no locking lockers for valuables.

There didn't seem to be any separate services for kids. The facility had a feeling of a club house. The gym area and warmup area were well thought of. They had been lifted up to free more climbing space. The second stairs had a pool table and games and a coffee machine for yearly climbers. The gym area had a lot of fingerboards, yoga mats etc. The sales area was confusing, a lot of the products that were on sale were all over the entrance room and even the dressing rooms. Leaving the facility there was no one at the desk to say goodbye or thank you come again. Not even talking about the post service, which none of the facilities seem to have? They could ask the climber on the way out about their experience, also for an email to show interest in feedback.

**The B facility's** service started with quick payment at the desk and no instructions at all. The climber had to ask the question, where are the changing rooms? Also where is the bouldering area? Even asking all these questions, the staff did not ask, are you a first timer? The service was still under construction so the experience was not a finished one. The changing rooms also had sand on the floor and the toilet area was not clean, but the rest of the facility felt new and clean. The same problem with lacking locking closets made the storing of valuables an unsafe experience. The valuables had to be left on the side of the climbing area, and had to be watched all the time. The facility was big with a lot of routes, but the same lack of easy routes repeated. Part of the climbing holds were new and clean, but a lot were old and dirty. This made the climber choose mostly new cleaner and clearer routes to climb. The gym and warmup area was new and spacious. It was well thought of with yoga mats and even heavy gym equipment. Signage to the climbing area could be improved since the way is a bit labyrinthine.

There was an area for holding children's parties, but there didn't seem to be an area for children to climb. The shop where the merchandise is sold was new and very impressive. There were also games and a pool table in the lounge area. They had signs about yoga and climbing lessons, and the advertising was well shown. This made the facility feel like a business which is being developed. Leaving the facility, the climber was left with the same feeling of neglect. Do they want the climber to return, and are they interested in the feedback?

**The C facility** visit started much like the second one. The difference was the hurry. It felt like they have no time to explain the service for the first timer. The lines to the desk were long, so that explains it partially. The customer had to ask for directions. The service also ended there from the staff. The facility itself was new and welcoming.

The children's services had been thought of very well. They had children's slides and decorative playful objects. They had their own area that was also used for climbing courses. The facility was very big and the bouldering area was only a smaller part of it. The warmup area was around the climbing area as well as an upstairs platform with yoga mats etc. The difficulty of the routes was again

thought of for advanced climbers and there were hardly any positive walls. The climbing holds were clean and very clear, because the difficulty of the routes was marked by the color of the climbing holds. The dressing rooms had locking closets, but the key chain had a big toy shovel that did not fit into any pocket. Also the dressing room floor was sandy and dirty. The post service was lacking also here.

**In summary** of the benchmarking, it can be concluded that the bouldering service is taken care of very well at Bouldertehdas. There are a lot of good and working solutions in these other climbing facilities also- But there are a lot of good and working solutions at Bouldertehdas. For example the staff's involvement at the facility, giving instructions to beginners and asking for feedback, work very well. Also the overall cleanliness of Bouldertehdas seems to be the best among competitors. This is partially due to the fact that people are requested to leave their shoes at the door. The other facilities all had issues with dirt because of people coming in with shoes on all the way to the dressing rooms. Other issues that were lacking in two of the three facilities were the locking closets to store valuables. A lockable closet to store valuables is very important.

Climbing as a sport is becoming more popular, and sometimes there are a lot of people climbing, so it is not safe to leave valuables in the dressing rooms or at the side of the climbing area. The other big issue was the quality and the number of different difficulty climbing routes. Mostly the facilities had climbing routes that were designed for the active climbers. There were very few easy climbing routes and positive walls. The easy climbing routes had not been thought or designed well. A lot of them were more like stairs for warming up on. It is important to make the easy climbing routes interesting for the first timers so that they get interested about the sport and understand that climbing is not only a sport that needs a lot of power, but that it is more about problem solving skills and stamina.

The easier routes are well taken care of at Bouldertehdas, but there is still room for improvement in making them more versatile and interesting. All of the facilities should focus more on the interesting and easy routes, because that is a big issue when trying to attract beginners to become regular customers. It is also



important that the difficulty levels of the climbing routes do not have too big gaps, so that the interest stays for the customer. The results also showed that all of the facilities have room for improvements in the pre- and post-services as well as signage. Bouldertehdas could also consider improving the children's climbing services by comparing how they are implemented at the facility C. Some of these issues have been improved since the benchmarking was done in the spring of 2015. The benchmarking gave a good view on the current state of the developing sport and facilities. The parts of the services that were well taken care of are being taken into close examination, in order to further improve the experience of Bouldertehdas services.

## 7.7 Personas

**Personas** are fictional profiles that are used to represent particular groups based on shared interests. They represent a "character" that the design teams and the service provider can engage. (Stickdorn & Schneider, 2011, 178) The personas are formed from three typical groups of climbers, the beginner, the active, and the pro climber. These are then used in the other projects to understand the backgrounds of differently motivated climbers. These three were chosen because they represent three basic groups of climbers that use the services of Bouldertehdas.

### Persona 1

The "pro climber". He goes on climbing trips with his buddies as often as possible. He goes climbing abroad whenever he gets the chance. He works to earn salary mostly to fund his climbing. In his home land, he chooses to go climbing outside when the weather favorable. These pro climbers form a tight group of socially well connected people. He only climbs indoors to socialize, keeping fit for climbing trips and competitions. He is very competitive. He climbs because he loves it. The pro climber's motivations are opened up in the competitiveness part earlier.

### Persona 2

The “active climber”. She rarely goes on climbing trips abroad with friends. Her climbing trips are mostly limited to the trips the climbing association provides in the homeland. She mostly climbs because it is a very good way to keep fit and she likes that she can see the results of the training every time she conquers a new difficult route. She sometimes takes part in competitions, but it's not that important to her. A big part of the climbing experience for her is socializing with other climbers. She is socially well connected with other climbers and this shows while mingling at the climbing area. She mostly climbs to escape boredom (Kerr 2012, 656). The active climber's profile was used in the blueprinting of the service.

### Persona 3

The “beginning climber”. He has just started climbing almost every week, but only because it's a lot of fun and it's a good work out. He doesn't know a lot about climbing, but he wants to learn more. He works a lot, but if he had the time, he would be interested in going on a climbing trip for the first time with good instructors. He is social, but has not yet had the chance to get to know other climbers. He climbs mostly to find friends outside the work place. The beginner climber's profile was also used in the blueprinting of the service.

The result of using the personas in the blueprints and the rest of the thesis work gave a better view of the customer as the user of the service. The results of the personas are in the clarification of the end user. Understanding the user is very important. The point was also to give the reader a better understanding of the different kinds of users and their motives for climbing. This method works well from a complementary perspective, but does not give a holistic view of the service.

## 7.8 Blueprints

The **service blueprint** is a way to specify and detail individual aspects of a service. This involves creating visual schematics to map the services from the users' and the provider's perspective. It can also include other parties that might be involved. (Stickdorn & Schneider, 2011, 204) The blueprints were made from three customer segments, the “beginner”, the “active climber” and the

children's school group. The visualization of the different customer segments using the service, can make the identifying of the needed improvements easier.

The user actions describe the customer journey in a linear pattern from left to right. In the first **blueprint of the "beginner climber"** the customer journey shows how the importance of the first time climber is focused on by the facility during the use of the service. Bouldertehdas has a very good approach to handling the beginners. This is very important, because the first experience is the most important, when trying to get new customers. On the other hand, the blueprint brings out the lack of contact on the service provider's part in the post service area. An email address could be requested from the first time customers in order to be in contact for the post-service. The pre-service could also include parts that would better introduce the sport on the website. Text and even videos could bring added value to the website. The introduction of the facility and its services could be presented on a video clip. This way the first timer could have a general view of the upcoming experience before arriving. This would help in minimizing anxiety for some climbers.

The **blueprint of the "active climber"** focuses on showing the typical climbing experience. In this blueprint the pre-service parts are more involving. The average climber wants to climb among friends, but tries to look for a time that is not so crowded. The true customer journey would be even longer, since the climbers use the service from 2 to 3 hours at a time. They have breaks between climbing sessions, but this is irrelevant for visualizing the use of the service. Sometimes the customers do not buy any merchandise or even drinks or snacks, but the shop is an essential part of the service and therefore visualized in this customer journey. The blueprint of the active climber shows that the pre- and post-service periods are well accounted for, so the improvements should focus on the main part of the service. These are the climbing holds and that there is enough versatility for each level of active climber.

The **children's group blueprint** opens up the typical school group visit to the facility. The blueprint shows that the same pre- and post-services could be developed according to the beginner's model. The part of the service where the group has the lunch break, could bring in extra revenue, if there was food

provided by the facility. In order for this to happen, the food should be very affordable. The schools already are run on small budgets and they practically get the lunch to go from the schools for free. This would have to be looked into further asking the schools if they would be interested in having lunch.

**The summary** of the blueprints gives a good picture of the different users, but it also shows that the service is mostly used in the same way. From the service provider's point of view, the main service parts to focus on are the pre- and post-service. The service provider commented about the visual outcome of the blueprints and generally liked the visual aspects of the blueprints, but was a bit skeptical about the effectiveness of investment in these. The blueprints gave a visual perspective on the service and the users in the context of using the service together with the personas. The use of personas help to understand the user of a service, while the blueprint maps out the parts of the service. They work well together in forming a general overview of the customer journey and in showing the versatility of a service.

## 7.9 Survey of the school group services

The survey was sent to all of the gym teachers of the Turku area. The focus was to find out how many of the teachers had used Bouldertehdas services and did they think that it is possible for them to bring school groups to use the service. These questions answered the two main issues the service provider wanted to know.

The survey was answered by only seven teachers. This was disappointing, but the teachers that did answer the survey, came from different backgrounds and schools. They represented all of the different schooling possibilities of the young students, from primary schools to vocational schools and high schools.

The answers to the first questions about 'prior climbing experience? and if yes, then where?', resulted in all of the seven teachers answering yes. The prior climbing experience could maybe explain the motivation in answering a survey about climbing. Six of the seven answered that the prior experience had been at the Kiipeilypalatsi which is a climbing facility in the center of Turku. One of the

teachers answered the other option, so the prior experience of the climbing service was from elsewhere. The conclusion was talked about with the service provider and it was not a surprise to the service providers since the Kiipeilypalatsi has had their service in Turku for a longer time. The answers of the prior experience did not bring the wanted result, because of the wrong choice of words for the question. The question was too open for interpretation and the wanted result of their prior experience at Bouldertehdas was not answered. It is possible that the teachers had been using Bouldertehdas services, but answered where they first had their climbing experiences and this possibly resulted in them not marking Bouldertehdas facility as a prior experience. This shows that the questions must be more specific.

Considering the limited number of responses, the teachers that did respond, represented a wide range of schooling. One teacher was from a primary school, while two were from secondary schools. Three teachers represented the majority by representing the vocational schools and one was from a high school. Other demographic questions (about age, sex, and distance to the school) gave an equally wide range of results. There were 3 male teachers and 4 female teachers. They represented all of the age groups from 25 to 64 years old. All of the schools were located relatively close to the facility of Bouldertehdas. Four schools were under 5 km and three under 10 km from the facility. Most of these questions consisting of the demographics, were in the survey because of the need to understand the background information. This information was requested by the service provider.

The question concerning the price of the student ticket was presented. The answer was very clear. The normal price for a student to come and climb is seven euros, but all of the teachers felt that this is too much. Bouldertehdas has made group ticket discounts for the previous school groups. The discount price for a group of 15 climbers has been 60 euros. This makes the price per climber only 4 euros. This discount has been made in the light of the short time that a school group can use to climb at the facility. They have two hours of gym class and partially this time goes into travel and preparing for the climbing. The reason the original price of the students was asked, was to find out if the different schools had different pricing. In the light of these findings, the discount price

seems to work well but the possibility of getting more revenue from schools seems unlikely. More important than getting revenue at this point of time, is to get school groups to come to climb, so that they get acquainted with the sport. It is very likely that some of the students will be future customers of the service.

The question about the possibility of coming to use the Bouldertehdas services, resulted in a positive response. Five of the teachers said that it is possible, while only two said that the service is too far and that the school has no resources. This shows that most of the schools are able to acquire resources for this kind of activity. One question that asked about the need for extra personnel to look after the kids while climbing, gave the response that there is a need for extra personnel. Five of the teachers said yes, there is a need, while two said no. The need is probably with the smaller children. The problem with this conclusion is that the resources are already stripped to the minimum with the discounted price for the student groups. Adding extra personnel is possible, but not at the same price. The price already includes shoe rental, and the normal climbing shoes wear out quickly and they are not cheap to replace.

The results gave the service provider a general view of the current situation of the schools. There has been school groups that have used the service before, but the schools are always low on resources for this kind of activity. The results were positive in the teacher's answers, saying that most of the schools could come to use the service. The discounted price offered for the schools is very low, but the aim is to get potential regular customers from the students.

### 7.10 Interview of a school teacher

With the survey that was sent to the teachers, an invitation to come climb for free was included. The aim was to get the teachers to come to the facility and try out the service, answering to questions at the same time. This idea was not a success. Only one teacher arrived at the facility. The questions were asked about the pricing, the possibilities of coming to climb with the group and how she saw the climbing as a suitable sport for school groups. The responses were positive, as she had already earlier brought school groups to use the service. She was satisfied with the discount price, but said that seven euro, the normal price,

was far too high considering the short time the students have to use the service. This is a valid point. The schools are cutting their budgets and the funding for these types of activities are also harder to apply for. Her opinion on the sport's suitability for school groups was positive. She saw the sport to be very good from the physical aspect of a workout, but also in the psychological way because of the problem solving involved with the climbing of routes. This shows that the teacher was aware of the benefits of climbing. In the end of the interview the teacher gave tips on how to market the service to schools by contacting the representatives involved, distributing information to the gym teachers. This was probably the most important information for the service provider. It seems that the climbing services are not yet known to most of the gym teachers. It is also possible, that they prefer to use services which they are accustomed to and are not willing to try new types of sports.

The interview of the teacher resulted in answers that were expected from a teacher that has used the service before. The answers were positive. The teacher mentioned the physical and psychological benefits of climbing that was seen positive for the students.

## 8. Analysis and evaluation of the results

The results can be seen to answer the **first research question** about what can be done to insure that the first time climber will come again. The use of personas demonstrate what customer segment is a user of these results. These results consisted of the **beginners needs (persona 3)**. In the results consisting of the climbing service, results asserted that beginners need more positive climbing walls, also more easy and interesting climbing routes are seen to be crucial for the first timers. Often the easier routes are made using less imagination, built more like "stairs". The easy and at the same time interesting routes are the key to getting more beginners to come again. The key for building an interesting, yet easy route, is in building a route that does not require much strength. The staff's involvement at the facility is seen as a very positive thing, giving instructions to the beginner. Sideways climbing routes could bring safety by

lowering the risk of injury in falling. Other issues about general parts the service consisted of the lacking of signage for the children's area. The price of a normal student ticket was seen to be too high in the opinion of the teachers, but they were satisfied with the discount price. The teacher saw the sport to be very good from the physical aspect of a workout, but also in the psychological way because of the problem solving involved with the climbing of routes. All of these answers can be seen to affect the beginner's experience, thus also effecting the possibility of the beginner climber to be satisfied and return to use the service again.

The results that answer the **second research question** about how to improve the climbing experience of the active users of the service (**personas 1 and 2**). These issues consist of **hygiene factors**, some positive like the no shoe policy that keeps the sand away from the floors of the facility and also the possibility of taking a shower was seen valuable. The facility has even taken measures to put up signs to remind the climbers of personal hygiene and hand washing after using the toilets. The negative issues consisted of the climbing holds sometimes feeling a bit dirty and the empty magnesium balls feeling grotesque. Better ventilation for the toilets was requested and some of the climbers are requesting for even more general cleanliness. One solution to having cleaner climbing holds would be the possibility to sell the old climbing holds. **Climbing experience factors** results show that the active climber (person2) felt that the disassembled routes for the competition had a long lasting effect on the number and variety of the routes. On the other hand new routes that were built for the competition, seemed to get a lot of attention and interest from the regular users of the service. It is difficult to make good routes of all difficulty levels. There is also a need for more variety of different merchandise products for the shop. Other service improvements were also suggested like a yoga area with tatami, or gaming area and even sleeping possibilities were suggested. One idea was to give climbers free Wi-Fi internet. More storage solutions and a children's slide was suggested. The satisfaction with the children's climbing area and the price of the children's ticket scored average points. The safety issues concerning children was also pointed out. Some parts to focus on for the service provider are the pre- and post-services. The competitive climber's needs (persona 1) can



be seen in the demands of the constant renewal of climbing routes and that the boulder in the middle of the hall would be even higher. The numbering of the routes, as well as having ready-made circuits on the bulletin board help in training and seeing progress. Courses on gaining muscle and finger strength can be seen as a competitive climbers need along with the demand for more competitions for the climbers. The equipment that consisting of squat racks, power racks, pinch-holds on the campus boards etc. are also equipment for advanced climbers along with better gym equipment and more space for stretching. The demand to see notifications about climbing groups arriving on the bulletin board is for insuring a peaceful training session. The **Atmosphere factors** affect all of the (personas 1, 2 and 3). The demand for a better coffee break area with more sofas was mentioned. The walls had only a few posters and the need for more was evident. The posters can be used to bring the feeling of freedom while using the service. Other results about the atmosphere were positive along with good lighting and comfortable changing rooms.

One other result can be seen as the service provider's involvement in the projects. The results were analyzed quickly and put into action. The renovation addressed issues about more positive climbing walls, more sideways warm-up routes, and the possibility of holding climbing courses while the facility is open also to other climbers. Other issues that have been addressed, are the shop's variety of merchandise which has increased, the old grading system has been taken back, the marking of the routes to make possible circuits that consist of a certain order of routes, and even a massager has been providing services at the facility. These are all parts of services that have been improved based on the customer feedback.

Even though some of the projects' results were based on a very low participation rate, the projects generated a lot of ideas that are still being discussed. It has opened up more dialogue between customers and the service provider. In this sense, the service design has achieved its goals. The research of the teachers' interview could have been supported by more interviewees, to be more reliable. The low answering rate to the schools' survey is unfortunate. Some of the questions of the satisfaction survey could have been asked differently, since there were low answering rates on questions that the customer did not feel that

were meant for them. The co-design project could have had different results, if the weight restrictions of the area had been known prior to implementation of the project. If the service provider would have prototyped the ideas, the end result would probably been different.

The methods that resulted in the most valuable information was the satisfaction survey, and more specifically the open question. The Disney method in the co-design project produced many ideas, but did not lead to a strait conclusion because of lacking information and the missing of the prototyping. Other methods worked well in giving a holistic view of the service.

## 9. Discussion

The climbing sector could generally benefit from approaching the educational sector by presenting them the sport's versatility and benefits. The feedback from the teacher expressed the potential that climbing could bring schools from a pedagogical standpoint in the form of problem solving (7.9 Interview of a school teacher). This implies that the benefits of climbing could compliment a multitude of learning aspects, not solely linking it to the physical aspects of the sport (4.1 Psychological profile).



*Picture 5. Demonstrating problem solving in climbing*

There has been limited prior cooperation with gym teachers, but this could be significantly extended. The marketing of the service could also take these psychological and pedagogical aspects into consideration when trying to reach teachers.

If schools would start utilizing the climbing service to meet their pedagogical aims, this would mean a significant increase in beginner climbers. As stated earlier, the first climb for any climber without prior knowledge of a route is most likely going to be stressful. This problem should be addressed, if the service provider wishes to eliminate stress factors for first time climbers because it affects

the first impressions of the climbing experience. Prior knowledge of a climbing route decreases the stress levels of the climbing experience. (Draper et al. 2008, 493) Marking the climbing route with clear instructions was seen as a possible solution. Emphasizing the problem solving element could help channel the stress into something more purposeful. This could help in accepting the anxiety associated with a first climb, to see it as a result of a problem that will fade once the problem is solved. The goal is to make climbing a learning experience. This could make the sport more interesting from a psychological point of view.

This kind of cooperation between these very different organizations would naturally bring needed revenue and day time usage for the facility. But it would also reflect service design's potential in helping the business sector reach its targets by evoking co-ownership, which in turn adds customer loyalty and long term engagement. (Stickdorn & Schneider, 2011, 38-39)

The gaming industry is extending itself into the educational sector (e.g. Rovio) and it seems to be a viable venture. Climbing could provide a very concrete version with the same logic but in climbing the social dimension is completely on a different level. Before climbing is to be associated with education, there is a lot of work to be done. This kind of cooperation needs long term engagement between the partners to reach a common goal. The profits of the service provider are easily accounted for in the potential new customers, but in order for this to work, **the benefits of the psychological and pedagogical aspects will need to be marketed to the schools.**

Climbing is still associated with being an extreme sport. The outdoor experience probably will always be, but the indoor climbing experience is very safe in comparison. The boulder climbing that is done indoors is the safest form of climbing. The possibility of injury is always present in the form of pulley strains and ankle injuries (Woollings & McKay & Emery, 2015, 1), but extreme sports are associated with being death defying or at minimum very dangerous. This kind of illusion might make a person think that he or she is not suitable for the sport. The climbing routes start from very easy, so that if a person can climb a ladder, they most likely can climb a route that is marked easy (grade 3-4). Still the question remains, is climbing for everyone? Perhaps it is not.

The experience of the beginner climber is most important on the first trial of the service. The service takes into account the beginners well in the guiding of the climbers, but the climbing service is lacking in the interesting but easy climbing routes graded 4+, 4a, 4b, 4c, 5+, 5a, 5b, and 5c. (7.3 Observation) This makes the gaps from 4 to 5 too big for a beginner. The need seems to be in making climbing routes that focus on balance more than strength. Since the hands get tired faster than the feet, these **easy climbing routes should be built more on the positive walls or "slabs"** (5. Bouldertehdas and the climbing service). Would building of these lacking routes bring more beginners to the service? At least after competitions when the routes are mostly disassembled, the beginner may feel there is not enough climbing routes for getting excited about the service (7.3 Observation).

The need for more positive walls for balance training was requested even by the active climbers in the satisfaction survey. The regular active climbers are athletic to begin with. This makes starting of climbing much easier and might have something to do with the fact that the focus is not mainly on the easy climbing routes. In talks with the service provider about the results, it was noted that the physical strength of the beginners is getting worse every year. This implies that **the need for the easier routes will only grow in the future**. The feeling of achieving real climbing routes, not just "ladders", will make the beginner excited. This will affect the experience of the beginner greatly. (7.3 Observation) The service could benefit from prototyping a trial period, where the beginner routes would be made easier to find by marking them more clearly (with big neon tags) and they should be located mainly on positive walls. This would give a good view on how much this affects getting new customers to come again to use the service. On the other hand the service provider stated that the beginner climber often does not want to climb a route with a big sign saying "Easy" or "Beginner". As the basic beginner is usually less skillful as a climber, the service might need to focus and adapt to their needs in the future. Perhaps the service will need to be broadened and developed to contain other services like arcade games, or selling food and beer. This is common in sports like golf. This indicates that the future of the sport might concentrate even more on the socializing involved with the sport. As it was stated in the motivation part earlier, designing the venue in

a way that facilitates the motives linked with adventure sport can be an extra source of income to the facility, as well as a way of making the climbing experience more versatile for a newcomer (4.2 Motivation).

The hygiene and cleanliness of the facility is appreciated by most of the climbers. The only issue worth looking into is the cleanliness of the climbing holds. Someone stated that the climbing holds sometimes feel a bit dirty (7.6 Survey of quality and satisfaction). The problem with the old and worn-out climbing holds is more difficult to solve, since there are thousands of climbing holds that have been bought for the facility in recent years. It is not an easy task to just change them. The majority of the holds are relatively new and don't have this problem, but the ones that are worn-out and are hard to define as a certain color are being changed with every new order of climbing holds which the facility orders. To accelerate this process, **the selling of the old climbing holds could be tested**. One way to solve this problem could be to sell the old climbing holds for a reasonable price. Some of the climbers want to buy old climbing holds to make a small climbing wall for practice at home. (7.6 Survey of quality and satisfaction)

During this past year when the service design projects have been implemented at Bouldertehdas, the research methods have resulted in many ideas that the service provider has implemented into the service. The implementations consisted of the renovation that addressed issues about more positive climbing walls, more sideways warmup routes, and the possibility to hold climbing courses while the facility is open to climbers as well. Other issues that have been addressed are the shop's variety of merchandise which has increased. The old grading system has been taken back and the marking of the routes to make circuits in the future. Even a massager has been providing services at the facility (7.3 Observation). This renovation has also made possible the holding of a competition in one area, without the need to disassemble all of the facility's routes. These transformations of the service have received good feedback from both the service provider as well as the climbers.

At the beginning the service provider was somewhat skeptical about the benefits of the project. Soon the service provider understood, however, that the

aim of the projects was to bring more value to both customer and the service provider and to focus on building better relationships with the customers. The service provider was open to the new ideas and that was of crucial importance for the projects. Many of the ideas came from customers during the process of implementing the service design methods. The results did not always lead straight to conclusions or the service provider chose a different solution from the one which was presented. But the projects that were done, resulted in co-creation by generating a lot of ideas for improving the service. Some of the ideas have already been implemented and are working well. Others will be left hanging in the minds of the participants and the service provider. They can be utilized once they have had time to develop.

This service design thesis shows that service design can work as a source of inspiration for a service provider. Some of the results felt less significant in the beginning, but after a closer analysis, they provided good ideas concerning possible ways of developing the service. For example the opinions of the school teacher might help the marketing of the service to schools. Also the service provider's quick response to the customer feedback showed that there was a will to make changes, only a systematic gathering of information necessary for making changes, had been lacking. These service design tools necessary for gathering the information were used in cooperation with the service provider and the knowhow is going to be used in the future.

Looking to the future, the climbing service should focus on the beginner's climbing experience since the demands of the active climber are already being well accounted for. This is driven by two valid points: the number of climbers is increasing annually and the physical strength of these new climbers is weaker than earlier. When the focus will be on making more easy climbing routes, keeping active climbers satisfied, may be a problem. The surrounding parts of the service will also need further inspection because the newcomers will most likely not be enthusiastic climbers, rather coming there for the social gathering. The service provider will need to look into what kinds of services the socializing aspect might bring in the future. Most importantly, the service provider has gained an interest in service design and is constantly thinking of ways to improve the customer experience. The service provider has even brought in niche

services to support existing services. This shows that the service is on a path that is sustainable and will most likely keep evolving with the demands of the customers, and this in return will bring in new customers.



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## Appendices

### 1. Initial interview questions

1. Are you satisfied with the service? (Oletko tyytyväinen palveluun?)
2. What services are lacking? What are you happy with, and what don't you like? (Mitä palveluja puuttuu? Mistä tykkäät ja mistä et?)
3. How would you improve the services? (Miten parantaisit palvelua?)
4. What do you value most in the service? (Mitä arvostat eniten palvelussa?)

### 2. Quality and satisfaction survey questions and results

#### Laatu ja tyytyväisyys kysely

Sukupuoli: 13 Miestä, 5 Naista, ja 5 Ei kerro					
Ikä: 15 – 44, ja 4 Ei kerro					
Kauanko olet harrastanut? Yli 3 vuotta 12 kpl Yli 1 vuosi 6 kpl Yli 6kk 1 kpl Aloittelija 2 kpl, ja 2 Ei kerro					
Kysely	Skaala				
	Huono	Hyvä			Kiitettävä
Tulokset	1	2	3	4	5
Kiipeilyalueen puhtaus	0	0	5	8	10
Pukuhuoneiden puhtaus	0	0	0	10	14
Kiipeilyalueen valaistus	0	0	1	10	12
Kiipeilyreittien määrä	0	1	1	8	11
Positiivisten seinien määrä	1	3	4	11	4
Kiipeilyreittien selkeys	0	0	4	9	9
Riittävästi oman tason kiipeilyreittejä (väri): ( )	0	1	3	12	6

Kiipeilyreitit vaihtuvat tarpeeksi usein	0	1	4	10	8
Lasten kiipeilyalueen toimivuus	0	1	7	3	4
Yleinen viihtyvyys / sisustus	0	0	0	11	11
Kiipeilyn hinta aikuiselta	0	1	5	11	3
Kiipeilyn hinta lapsilta	0	0	8	5	2
Polkupyöräparkki	1	3	10	3	4
Kaupan valikoima	0	1	3	11	6
Yleinen tyytyväisyys	0	0	0	8	15

+

Opastus positiivista, henkilökunta aktiivista.  
 Helppoihin reitteihinkin panostettu.  
 Hyvä ilmapiiri ja siistit paikat.  
 Monipuolinen lämmittelyalue.  
 Erottuu edukseen muiden palveluntarjoajien rinnalla.

-

Joskus otteet likaisia.  
 Mankkapallot pitäisi vaihtaa useammin. Tyhjät pussit ällöjä.  
 Kauppaan useampien valmistajien tuotteita.  
 Yläkerran portaisiin portti lapsia varten.  
 Syöttötuoli lapselle.  
 Valmiita circuitteja ilmoitustaululle.  
 Reitteihin numerot.  
 Ilmoitustaululle näkyviin tulevat ryhmät kuten synttäriporukat.  
 Vanha 5 portainen gradaus asteikko oli parempi.  
 Sieni voisi olla korkeampi.  
 Kolme väriä liian vähän. Turhauttaa kun sama väri sisältää liian helposta mahdottomaan.  
 Kurssi lihasvoiman ja sormivoiman kehittämiseen.  
 Punttisaliin lisää laitteita ja paremmat venyttely alueet.  
 Vuosijäsenille kisat joka toinen kuukausi.  
 Punttisaliin squat rack tai power rack.  
 Poikittaisia reittejä lämmittelyä varten.  
 Miesten vessassa voisi olla parempi ilmanvaihto.  
 Punttiksen nurkassa olevat alataljat eivät ole kovin toimivat.  
 Kampusradalle pinchiotteita.  
 Lapset juoksevat kiipeilyalueella.  
 Liikaa släbejä.  
 Enemmän kampusteltavaa punttiksellakin, pinchikampuslauta.

### 3. The Blueprints

(Zoom in to see charts on the computer.)

Blueprint of "The Active Climber"		The Service																Post-Service	
Pre-Service																			
Physical Evidence	Reviews	Reviews	The library's parking space	The climbing facility	The drop and outdoor deck	Changing rooms	Locking closets	Sign and equipment	Climbing walls, holds and motivation										Feedback page
User Actions	She goes online to the website to learn that the Beginner is open	They go and check the website to learn how to use it	She goes online to the website to learn how to use it	Enter the facility and sign up for the Beginner	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it
Frontstage				The staff greets the climber	She goes online to the website to learn how to use it														
Backstage	Waiting rooms	Checking the functionality of the station			She goes online to the website to learn how to use it														
Support Processes	The internet service provider			The owner of the facility	She goes online to the website to learn how to use it														

Blueprint of "The Beginner"		The Service																Post-Service	
Pre-Service																			
Physical Evidence		Reviews	The library's parking space	The climbing facility	The drop and outdoor deck	The equipment	Changing rooms	Locking closets											Feedback page
User Actions	He goes online to the website to learn that the Beginner is open	They go and check the website to learn how to use it	Enter the facility and sign up for the Beginner	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it
Frontstage				The staff greets the climber	She goes online to the website to learn how to use it														
Backstage	Waiting rooms	Checking the functionality of the station			She goes online to the website to learn how to use it														
Support Processes	The internet service provider			The owner of the facility	She goes online to the website to learn how to use it														

Blueprint of "The School Group"		The Service																Post-Service	
Pre-Service																			
Physical Evidence		Reviews	The library's parking space	The climbing facility	The drop and outdoor deck	The equipment	Changing rooms	Locking closets											Feedback page
User Actions	She goes online to the website to learn that the Beginner is open	They go and check the website to learn how to use it	Enter the facility and sign up for the Beginner	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it	She goes online to the website to learn how to use it
Frontstage				The staff greets the climber	She goes online to the website to learn how to use it														
Backstage	Waiting rooms	Checking the functionality of the station			She goes online to the website to learn how to use it														
Support Processes	The internet service provider			The owner of the facility	She goes online to the website to learn how to use it														

(Printed version has paper prints in the back cover pocket)

#### 4. The school group survey questions

### Kysely liikunnanopettajille

Opiskelen ammattikorkeakoulu Noviassa palvelumuotoilua ja teen lopputyötäni Turun Bouldertehtaalte. Työni tarkoitus on kehittää Bouldertehtaan tarjoamia palveluita ja yksi osa olisi muotoilla palvelupaketti koulu- ja opiskelijaryhmille.

**1. Onko sinulla aikaisempaa kokemusta kiipeilystä?**

*Mark only one oval.*

☐ Kyllä

☐ Ei

**2. Jos kyllä, niin missä?**

*Mark only one oval.*

☐ Kiipeilypalatsi

☐ Bouldertehtas

☐ Muu

**3. Minkä ikäisiä opiskelijoita opetat?**

*Mark only one oval.*

☐ Alakoulu

☐ Yläkoulu

☐ Ammattikoulu

☐ Lukio

**4. Onko mielestäsi mahdollista tulla kiipeilemään luokan kanssa?**

*Mark only one oval.*

☐ Kyllä

☐ Ei

**5. Jos ei, niin miksi?**

\_\_\_\_\_

**6. Jos tulette kiipeilemään, niin tarvitaanko lisää valvojia?**

*Mark only one oval.*

☐ Kyllä

☐ Ei

## 5. The school group survey results

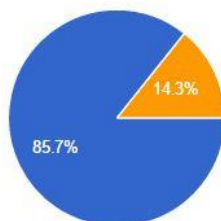
### Summary

Onko sinulla aikaisempaa kokemusta kiipeilystä?



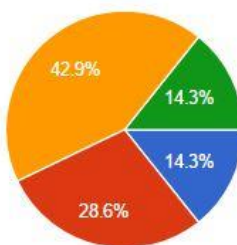
Kyllä	7	100%
Ei	0	0%

Jos kyllä, niin missä?



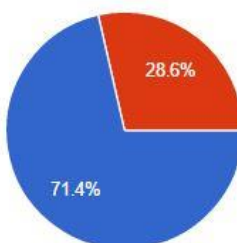
Kiipeilypalatsi	6	85.7%
Bouldertehdas	0	0%
Muu	1	14.3%

Minkä ikäisiä opiskelijoita opetat?



Alakoulu	1	14.3%
Yläkoulu	2	28.6%
Ammattikoulu	3	42.9%
Lukio	1	14.3%

Onko mielestäsi mahdollista tulla kiipeilemään luokan kanssa?



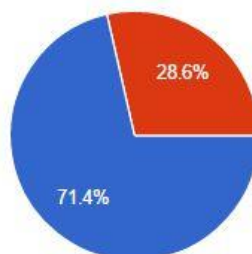
Kyllä	5	71.4%
Ei	2	28.6%

### Jos ei, niin miksi?

Kustannukset, eteisyys

se maksaa

### Jos tulette kiipeilemään, niin tarvitaanko lisää valvoja?



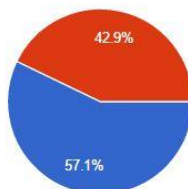
Kyllä	5	71.4%
Ei	2	28.6%

### Onko opiskelijahinta 7€ liian kallis?



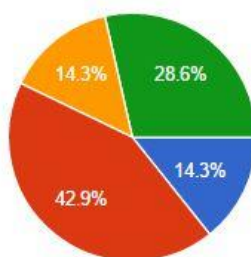
Kyllä	7	100%
Ei	0	0%

### Koulun etäisyys Bouldertehtaalta, noin. (Bouldertehdas sijaitsee Old Millin alueella Turun Nummessa. Ruukinkatu 4)

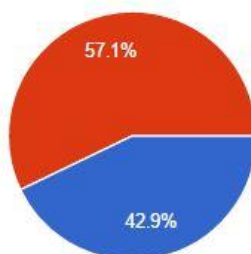


0-5 km	4	57.1%
5-10 km	3	42.9%
10-15 km	0	0%
Kauempana	0	0%



**Ikäsi**

25-34	1	14.3%
35-44	3	42.9%
45-54	1	14.3%
55-64	2	28.6%

**Sukupuoli**

Mies	3	42.9%
Nainen	4	57.1%