Improving the visually impaired tourists' experience in Helsinki

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**Abstract**

Date 28.11.2019

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<tr>
<td>Degree programme</td>
<td>Bachelor's degree in Tourism</td>
</tr>
<tr>
<td>Report/thesis title</td>
<td>Improving the visually impaired tourists’ experience in Helsinki</td>
</tr>
<tr>
<td>Number of pages and appendix pages</td>
<td>52 + 8</td>
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This Bachelor's Thesis is about accessibility in travel destinations from the perspective of visually impaired tourists. It has two core sections; theory and research which are used to map out different ways in which Helsinki as a destination could improve the travel experience for visually impaired tourists.

The focus point is the pedestrian perspective. The theory is about what part senses play in the travelling experience and how they can be used to enhance said experiences, how to aid the visual reception in a built environment, and the current state of accessibility in Helsinki. The thesis also includes benchmarking of other destinations' best practices regarding accessibility and enhancing the travel experience with sensation-based experiences.

The study was conducted using a qualitative research method. Observation tours with visually impaired participant as well as interviews were conducted face to face and by email utilised during the research. Additionally, the researcher observed navigation, safety and access to information. The research took place within a two-week period in the autumn of 2019. The research results were analysed through three themes: Accessibility, safety and senses.

As conclusion, different ways to improve accessibility are recommended based on the previously covered theory, benchmarking and research. These methods include for instance the use of tangible materials, guide strips and paving, audible information, awareness and training as well as colour and light contrasts. The thesis’ goal is to encourage and offer ideas to cities on how their accessibility for the visually impaired can be improved. Based on the gathered information, it was noted that all the themes are connected and at times are each other's causes.

**Keywords**

Visually impaired travel, accessibility, travel experience, senses, observation
# Table of contents

1. Introduction .......................................................................................................................... 1

2. Accessibility for the visually impaired ............................................................................. 3
   2.1 Design of built environments ......................................................................................... 4
   2.2 Current situation in Helsinki ......................................................................................... 7
   2.3 Benchmarking: Tourist destinations improving accessibility ...................................... 9

3. Senses as part of the travel experience ............................................................................. 12
   3.1 Enhancing the travel experience ................................................................................... 13
   3.2 Benchmarking: Cities enhancing travel experiences with senses ............................... 15

4. Method .................................................................................................................................. 18
   4.1 Qualitative approach ...................................................................................................... 19
   4.2 Observation .................................................................................................................... 19
   4.3 Unstructured interview ................................................................................................... 21
   4.4 Implementation ............................................................................................................... 22
   4.5 Reliability of research .................................................................................................... 25

5. Results .................................................................................................................................. 26
   5.1 Observation ..................................................................................................................... 26
   5.2 Interview .......................................................................................................................... 45

6. Recommendations ............................................................................................................... 48

7. Discussion .............................................................................................................................. 51

References .................................................................................................................................. 53

Appendices ................................................................................................................................. 56

Appendix 1. Observation form in Finnish ............................................................................. 56
Appendix 2. Email in Finnish which describes what consent is given by participating ..61
Appendix 3. Map of the first observation tour ....................................................................... 62
Appendix 4. Map of the second observation tour ................................................................. 63
1 Introduction

When accessibility comes up as a topic of conversation, often the first thing that comes to mind is the accessibility of those who have physical disabilities. This has caused the visually impaired travellers to often be left with very little possibilities for independent and safe travelling. On top of this, there is no guarantee that they will receive an equal chance of experiencing their destination in comparison to those with normal eyesight.

I chose this topic after observing a visually impaired local attempting to find his way around in the centre of the city of Mechelen while bikes were zooming past him fast. I often found myself watching him cross simply because I was worried, he would get hit one day. Afterwards, I found myself thinking of how the safety of a visually impaired travellers could have been improved in that kind of an environment. This thought brought back memories of the busy central roads in Rome without safe crossings where my mother and I had been horrified of crossing the road. My grandmother is visually impaired as well, so I also have personal interest in the topic.

The objective of this Bachelor’s Thesis is to outline different ways how Helsinki as a travel destination could improve the experience for visually impaired tourists. The study addresses the following research problems: How can Helsinki become a more accessible destination for visually impaired tourists? How can the travel experience be further enhanced utilising all senses? The study and theory are both limited to the pedestrian perspective and the observation is limited to the city centre and popular tourist attractions. This limitation assumes that these areas represent the most likely experiences for tourists visiting Helsinki and give a general impression of the accessibility within the city.

The research utilises both observations done by visually impaired participants as well as unstructured interviews. The results of the research are analysed by themes: Accessibility, safety and senses based on the assumption that those themes would cover every negative and positive point that is brought up during the observations and interviews. These themes all support the concept of enhancing a travel experience. This is based on poor accessibility planning which can ruin a holiday for any person with disabilities and increase already existing safety concerns that everyone has. Senses instead help enhance already positive travel experiences.

The analysed results are utilised to create a list of recommendations on concrete actions that the tourism sector in Helsinki could take to improve the visually impaired tourists’
travel experience. These recommendations are produced based on the theoretical framework and the research. Recommendations made concern improving the navigation possibilities and security, the general accessibility of travellers with visual impairments in attractions and facilities in Helsinki as well as ways of enhancing the traveller’s experience with senses.

As for the structure of the thesis, the first chapter addresses the accessibility for the visually impaired. This chapter includes the design of built environments, the current situation in Helsinki as well as benchmarking of tourist destinations that are improving accessibility. The next chapter is about senses as part of the travel experience which includes theory on how to enhance the travel experience in attractions, restaurants and shops. Along with this, there is further benchmarking, this time about cities that aim to enhance travel experiences with senses. After the subject’s theoretical framework set by the first two chapters, there are a few chapters about research theory and the research itself. The third chapter is about the method and covers theory on the qualitative approach, observation, unstructured interview along with information on the implementation of the research and reliability of the research. This chapter is followed by the results for the observations and interviews. The last chapter before the discussion consists of the recommendations made based on the theoretical framework and the research.
2 Accessibility for the visually impaired

First, in this chapter the need and benefit of investing further resources in improving accessibility are addressed, followed by a description of accessibility in built environments. Next the current situation in Helsinki is addressed. Lastly, benchmarking is done regarding tourist destinations that are improving accessibility to find examples of the best methods.

Despite the travel sector’s strong emphasis on advancing the free movement of people and ideas, travel remains a challenge for many individuals due to disabilities, personal traits and requirements. People with disabilities are often insufficiently accommodated when it comes to services provided by the travel sector. The effects of this go as far as to limit the willingness to travel for those with disabilities caused by both the lack of accessible information and fear of something terrible occurring during their travels. This is a large global market whose requirements are still largely overlooked by the travel sector. The travel sector has been slower than some other sectors such as the finance sector, in adjusting to the challenges of providing accessible services and products. (AIG + Skift 2019, 6-8.)

Companies that offer completely all-encompassing service, are more likely to win over the customers by responding to more underlying demand. Simply providing information of the accessible solutions or the lack of them can make a great difference in the way a company is viewed. Aside from creating accessible services and products, it is also crucial that everyone feels welcome and like they are well cared for. Acting towards all customers, with or without disabilities, with empathy is the essential for gaining customer loyalty which should also show in how the staff is trained. (AIG + Skift 2019, 6-8.)

Visual impairment in Finland is most commonly caused by age-linked macular degeneration. Along with this, other common causes for the elderly are diabetes and glaucoma, while for the adults the causes also include neurological diseases and hereditary eye diseases. For children the causes include congenital anomalies of the eye and various disorders of the visual pathway. Accidents and premature birth are less and less likely to cause blindness thanks to the improvement in medication and increased utilisation of eye safety gear. (Näkövammaisten liitto ry 2019a.)

Finland is committed to the United Nations’ Convention on the Rights of Persons with Disabilities, which determines that products, environments, programs and services must be designed to accommodate everyone who uses them without the need to special planning
or changes. This design must not exclude aids needed by specific groups of people with disabilities. (Näkövammaisten liitto ry 2019b.)

2.1 Design of built environments

There are many ways to guarantee safe movement and the use of necessary aids independently in a built environment. The methods mentioned in this subchapter focus on things that affect specifically visually impaired people, and the methods are based on the Finnish Legislation. When designing an accessible and safe environment for visually impaired, there are many possible and potentially dangerous scenarios to consider. Nothing should hang from above unrestricted areas at a reachable height to avoid collisions, including lamps, signs, sunshades and tree branches. The minimum distance from the floor for these obstacles is set to 2.2 metres for spaces with unrestricted access unless it has been covered to prevent collisions. If there is a chance of collision there must be a warning and restricted access to such areas, for example railings, furniture and boxes with plants can be used as restrictive obstacles. Warning areas can also be created which must be easily distinguishable from the rest of the area by creating contrasts in shading and materials which can be felt by stepping on it or with the visually impaired person’s white stick. The open space in-between stairs and the lower edge of other structures such as overhangs, must be low enough (≤300mm) for a visually impaired person to be able to recognise it with a white stick to avoid collisions. (Kilpelä 2019, 24-25.)

In various passages, the flow of movement is directed with the surface’s darkness contrasts and material contrasts or structures like rainwater gutters as long as there is no risk of tripping. The surface material and colours must not create an impression of level differences, for example with stripes. Different guide tiles and guiding strips (image 1) are used for marking passages or to warn of crosswalks, stairs or other level differences. In areas without heating, stone stripes guide the visually impaired and the stripes endure winter maintenance as well. Warning areas show differences in surface levels, unless signal slabs with warning tiles are used. Warning areas are shown with darkness and material contrasts that are clearly distinguishable from the passage’s surface with either a foot or a white stick. Different functions are divided with rough stripes made of for instance dice- or Belgian block stones which are different from the rest of the pathway’s surface. (Kilpelä 2019, 25-27.)
Navigation is made easier by clearly limiting the passage with distinct surfaces. Outdoors this surface may be for instance a zone made of cobblestone, gravel or lawn. Passages can also be bordered with the well thought out placement of bushes or furniture, but they must not make the space smaller or present a risk of collision. The edge of sidewalks must have an edge support, so they are easily distinguishable from the roads. As an added measure, a contrast zone can be placed before the edge support that warns the pedestrian of the road using material- and darkness contrasts. This area is also where lights and signs should be placed to avoid creating additional collision hazards. (Kilpelä 2019, 25-27.)

Passages should have steady and non-glaring lighting because well-planned lighting adds to everyone’s safety and comfort. Placing a row of lights on one side of the passage or above it helps visually impaired people to navigate in the passage, but any light poles must be placed outside of the passage. There should be no dark spots in-between lights. Lights are useful in highlighting any changes or dangerous spaces in the area with intersections, level differences and entrances especially well illuminated. (Kilpelä 2019, 28-29.)

The play areas of buildings are designed so safe access is guaranteed and noise from the outside is minimised with the right choice and placement of plants. The area should have unobstructed access from inside the buildings and from outside the area while passages
to the area avoid crossing traffic. Areas with furniture must have distinguishable coating to avoid collisions. If there are differences in levels that are over 0.7 metres, they must be shown with railings and suitable plants. If these are not available, there must be a safe fall-absorbing platform below. The plants should not be able to spread to the passages which is why their upkeep is important. Stairs and ramps must be safe and equipped with railings and handrails. Furniture need to be sturdy and stationary without sharp corners with benches having back and armrests with seats of different height available. Colour, shadow and material contrasts along with different smells in the area help visually impaired people with navigating in the area. Public playgrounds have additional safety-re-quirements such as choosing an equipment set that is easier to move in because of the chosen materials, shapes and contrasts. The equipment thus creates interactive experiences through visual, auditory and sensory sensations. The play area should be bordered with protective structures or plantations. (Kilpelä 2019, 32-35.)

Entrances to buildings must be easily distinguishable from all possible approach directions. The way to the entrance from the arrival and parking area with signs and guiding structures for instance handrails. For the visually impaired, contrasts in materials and shadows as well as sound beacons at the entrance can be used as additional ways of navigating to the entrance. Any glass-surfaces should be marked so they do not increase the chance of collisions and for the same reason, any additional structures should be placed outside of the pathway to the entrance. A canopy and lighting should be built to emphasise the entrance further, but the lighting must be even and non-glaring. Embedding lights in the ground or floor should be avoided. The entry should be well-illuminated to avoid glare caused by the difference in the level of illumination indoors and outdoors. (Kilpelä 2019, 36-38 & 43.)
Automatic sliding doors are the easiest for everyone. A sideways sliding door is an especially safe solution because a front-facing automatic doors have the potential to create dangerous situations. The required safety distance in front of the front-facing door must be shown on the passage’s surface with darkness and material contrasts. Doors that are meant to be easily opened, entail that the door code devices or door phones are equipped with tactile markings so they can be utilised based on the sense of touch. Pathways must be illuminated evenly, and important sections are highlighted with further lighting. A row of nonblinding lights are situated on the ceiling or the walls parallel to the pathway to guide the movement. The windows must be placed in a way in which they do not cause glare on the pathways. Towards the end of a corridor they should be placed on the sidewalls. To better the perceptivity of stairs in all public spaces, the edges of the steps must be marked with a 20-40 mm wide contrast strip or warning stripes (Image 2). (Kilpelä 2019, 47-49, 52 & 59.)

2.2 Current situation in Helsinki

The City of Helsinki prioritises accessibility when planning construction in the compact city centre, for example by designing pedestrian crossings, sidewalks and roads to be smooth and obstacle free. Despite this, cobblestone streets in the historical areas still hinder the mobility of the visually impaired just like people with other disabilities. People with visual impairments must be very careful near roads and tram lines in Helsinki because audio-
and crossing signals are still not used in most areas in the city. Different seasons also create their own difficulties regarding accessibility. Because the snow and ice cover the ground during the winter it is harder to use different aids needed for mobility than it is during other seasons. In preparation for winter, some areas such as Aleksanterinkatu which is one of the big shopping streets, is heated so it does not get covered during the winter. (Kalmari 2019.) The accessibility of signs, maps, street name and information boards are analysed by the researcher in subchapter 5.1. An accessible, tangible map is also featured in image 3.

Image 3. Tactile map at the Kamppi -shopping center. (Humaljoki 2019)

Historical areas and attractions such as Suomenlinna Sea Fortress are a challenge when it comes to accessibility. The paths are uneven in many places and they are mainly made of cobblestones, gravel and sand making them especially unsafe after a rainy day or during winter. The paths and dim tunnels are also difficult for visually impaired people to navigate and there is a risk of falling from even great heights. Based on the source text (Suomenlinna 2019); in the planning of facilities, physical disabilities have been considered more than visual disabilities, and the solutions are promoted more on their website than those for the visually disabled. Improving the accessibility of historical environments such
as Suomenlinna Sea Fortress is a challenge, because there are limitations set by its status as a UNESCO World Heritage Site. Additionally, it is protected under national legislation. Suomenlinna for example has fortifications and buildings that date from different eras that and jointly with the immediate environment, preserve the fortress' characteristics especially regarding construction resources, methods and architecture. Since Suomenlinna is also a residential area, traditional construction methods are applied in a way that does not disregard the fortress’ cultural and historical values. (Suomenlinna 2019; UNESCO 2019.)

Finnish Federation of the Visually Impaired provides services with a social aspect while additionally acting as an advocacy organization for the blind and partially sighted with an aim to ensure their equal status amongst all other Finnish citizens. They strive to enhance the abilities and skills of the visually impaired as well as aim to influence the society. The Iiris centre is a training and congress location in Itäkeskus in Helsinki which has been designed to be accessible for people with sensory or physical handicaps. There is an auditorium equipped with top level technological gear as well as seating for 100 people and extra space for wheelchairs. Along with the auditorium, the centre has multiple meeting rooms available for reservations. The Iiris centre has a restaurant that serves breakfast and lunch to the public on weekdays. For gatherings or small meetings catering is available on request and planned according to the guests’ wishes and specific diets. The centre offers accessible and up-to-date accommodation with fair rates. It also houses various other services and shops as well as the Museum of Visual Impairment. (Näkövammaisten liitto ry 2019a; Näkövammaisten liitto ry 2019c.)

### 2.3 Benchmarking: Tourist destinations improving accessibility

Benchmarking is utilised to gain a clearer view of the best practices which have already been applied elsewhere as well as to get insight of how those methods work. The goal of benchmarking is to improve the destination’s own situation by modifying and implementing the studied best practices in the destination’s functions. (Bain & Company 2018.) Benchmarking is applied in subchapter 3.2 as well. Tourist destinations all around the world are starting to realise the necessity of improving accessibility. In this subchapter different progressively more accessible cities are brought up as examples of possible accessible methods in action. These methods are presented in Table 1. Addressing other destination’s solutions, works as an inspiration for what could be done in Helsinki as well.

**Madrid, Spain** is committed to providing their visitors with an accessible services. This shows in their investment in tailored tours for visitors with disabilities that are informative and aim to provide visitors with the best possible experience in Madrid. They have made a
brochure to provide in depth information of the city’s accessible choices as requested by many visitors while also pinpointing the service providers who have met the minimum accessibility requirements. The services and tours are inclusive to visually impaired travellers. (ESMadrid 2019.)

**Stockholm, Sweden** has created all their solutions regarding accessibility with the aim of improving the quality of life for their residents instead of concentrating in the incoming tourism. This is one of the reasons why the city as an accessible destination seems very scattered when it comes to the services provided. They are focused in informing and raising awareness on what can be gained from accessibility amongst the city’s service providers. New regulations on accessibility are constantly implemented building and service-wise and these actions are also promoted by different associations. Efforts are mainly towards physical accessibility. Unfortunately, the lack of coordinated marketing and information affects the city’s attractiveness as an accessible destination for tourists. (European Network for Accessible Tourism 2015.)

**Mechelen, Belgium** has invested into accessibility as a tourist destination which shows in some of the city’s main attractions. The information on accessible attractions and routes is presented in a brochure that can be found on the Visit Mechelen -website. The path to the entrance of the church of St. Peter and St. Paul has guidelines to assist those with visual impairments. The city museum, Hof van Busleyden is very accessible for persons with visual impairments because the texts are easy to read, signs are clear and tangible and the lift is equipped with an audible signal and buttons with braille labels. Colours, letters and symbols are used to make finding your way around the museum simpler and clearer. Additionally, there are clear guide strips and contrasts for example lines in LED lighting or different colours to help navigating around the museum. In the Tourist Information Office, which is also one of the oldest town halls in Flanders, suitable contrasts and text fonts have been applied to adapt to the visually impaired persons’ needs. (De Wilde 2018.)

In 2014 the City of **Sydney in Australia** started creating a tactile signage system in the central area by planning the installation of 2,100 braille and tactile signs. This includes street signs, pedestrian friendly maps, info pillars, signs and further technologically advanced solutions. This new system will help blind and visually impaired find information about navigating in the city more easily and make walking feel safer and more independent. (Vision Australia 2014.)
Table 1. Accessible services and structures in benchmarked cities (X=available).

<table>
<thead>
<tr>
<th>Methods of improving accessibility</th>
<th>Madrid</th>
<th>Stockholm</th>
<th>Mechelen</th>
<th>Sydney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tours</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information on accessibility</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main attractions</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Informing service providers</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New regulations</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessible information</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Advanced navigation systems</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
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</tbody>
</table>

As can be seen from Table 1, the approaches these cities have taken towards accessibility are very different with Stockholm focusing on fundamental changes in their system and Sydney’s focus clearly being on ease of navigating and providing accessible information. Mechelen and Madrid instead have chosen to invest their efforts into providing information on what they can offer their visitors accessibility-wise.
3 Senses as part of the travel experience

In this chapter the five senses and how they function are briefly introduced, followed by an overview of how these senses can enhance the travel experience in attractions, restaurants and shops. Lastly, there is benchmarking on how cities are enhancing travel experiences with senses. This is useful in recognising the different methods’ positive effects on the travel experience.

Out of the five senses, sight is by far used the most in peoples’ daily lives. The order of the other senses goes from hearing, smell to touch and taste. These senses work in mainly a relatively subconscious way but with advances in technology, it is possible for us to create more enhanced experiences. This shift has recently also been utilised by destinations and the rest of the tourism industry to create new links between destinations and travellers. (Welcome city lab 2018, 44.)

Sight takes up 84% of the daily combined use of all the senses. (Welcome city lab 2018, 46). Sight is based on the brain interpreting a message, which is sent from the eye, based on previous experiences. The way the message is interpreted affects the expectations of how what is seen is going to smell, taste and feel. Things and products that appear pleasant to the eye are more likely to appeal to people which is why beautiful presentation is essential when choosing a product. The appearance and other sensory properties should be in balance with each other to avoid unpleasant experiences when expectations are not met. How different colours are sensed is dependent on the eyes’ sensitivity as well as the type and level of lighting. Colour directs smell and taste perceptions based on what the colour is expected to represent. (Tuorila, Parkkinen & Tolonen 2008, 18-23.)

Even though humans are dominantly led by their eyesight, the scent of our surroundings strongly affects our positive or negative perception of a place. Specific scents can bring back memories and feelings from throughout our lives. Scents that are linked to a strong positive feeling, bring back memories of the experience that created the feeling originally. Experience of which scents are pleasant or unpleasant vary by culture. Pleasant scents can be for example fruity fragrances, but these are less universally agreed upon than unpleasant scents such as spoiled food or excrements. If the person knows the source of the scent, this affects how it is perceived. While the source is unknown the scent might be perceived as pleasant but once the source is revealed it can turn into an unpleasant scent. The perception can be affected by change in quantities as well. Sense of smell adapts to new environments quite fast so spending even a short period of time in a new environment can lead to its originally distinctive scent becoming imperceptible. (Tuorila,
Currently nearly all brands communicate their message solely by what is heard and seen, even though most emotions are caused by what is smelled (Tuominen & Heikkinen 2017).

The sense of touch and hearing play another important role for visually impaired people because they help in sensing different materials and structures. By touching an object, the person can sense for example its temperature, structure and the surface material. Hearing can help in confirming these perceptions or creating another depth such as the crunch of bread or leaves. People with visual impairments also understand touch better and faster than those with eyesight. This is caused by the brain adapting to the lack of vision. This helps visually impaired people also with faster Braille reading. (Tuorila, Parkkinen & Tolonen 2008, 55-59; Society for Neuroscience 2010.)

### 3.1 Enhancing the travel experience

The Hospitality and Tourism industry is constantly changing based of the increasing expectations of tourists. One of these changes is the necessity of new multisensory experiences. The emphasis of this change is not only in the digitalisation of services but also in concepts that help in creating unique and more immersive experiences for all travellers by for example assisting multi-sensory perception with objects, sound and lighting. (Tuominen & Heikkinen 2017.)

For visually impaired persons, being able to experience an attraction in depth requires in vast preparation within the attraction. Thus, attractions improve their accessibility constantly. These improvements are not only related to physical changes, but available tours, access to information, availability of audio guides as well as tangible exhibits. Along with audio guides, attractions should also invest into aids such as leaflets with larger fonts and magnifying glasses to allow easier access to relevant information. Some audio guides at for instance museums have been made especially with visually impaired visitors in mind. These tailored audio guides may explain the outline of the rooms along with the information about exhibition to make navigating the exhibitions more effortless. (Nidirect government services 2019.)

Considering the visually impaired visitors, the availability of specially tailored tours, audio guides and tangibility of exhibitions are good ways of enhancing their experience while visiting attractions. This has been realised gradually particularly in larger museums and galleries who have been creating tours especially designed for visually impaired visitors during which they have a chance to touch different pieces. Tangible pictures and models
as part of exhibitions can help with understanding the exhibited objects. In Helsinki, Kiasma museum has realised the importance of accessibility and trained their tour guides and attendants in assisting visually impaired people during their visit. Kiasma has also invested in Braille floorplans, a tangible relief of the museum and a model of the museum that visitors can touch. On top of this, they allow some of the pieces in the museum to be felt with worker’s nearby and with their permission, as well as let visitors borrow different aids. (Nidirect government services 2019; Kiasma 2019.)

In restaurants, a new phenomenon known as dining in the dark has emerged. During the experience, the guests are blindfolded to experience what it is like to dine without vision. The guest is more dependent on muscle memory, sound and feeling while dining without vision. The sense of taste and smell are heightened, making the experience more immersive because the guest can taste the dishes more in-depth than before. People are naturally often so fixated on what they see that the other senses are left in the background, so taking out what they see, brings other sensations to the foreground. Memories of past experiences and impressions fill in blanks left from what is sensed, making a deeper link with the whole experience. (Huntington 2016.) Dining in the dark as a phenomenon describes well, which factors restaurants should take into consideration when reflecting on how their visually impaired customers could experience the restaurant’s menu to the fullest.

All five senses affect an individual’s shopping behaviour. Sight, smell and sound lead the person to a plan to buy something while touch and taste lead to more immediate decisions. The senses also affect who the product is purchased for. Sight and sound may lead people to buy something for a person they’re not very close to, while taste and touch may cause the same person to buy something to someone who the person feels closer to. So, if a potential customer can feel or taste test the product and find it pleasant, it affects their purchase behaviour in comparison to only seeing, hearing or potentially smelling the product. (Lou 2017.)

Currently retail stores are too dependent on the visual perception, while it would be more in their advantage to invest time and money in making a visit to their stores into more of a multi-sensory experience. Physical stores have the advantage of being able to engage all the senses, which is something online stores are not going to be able to accomplish. If all five senses are fully engaged, potential customers are more likely to spend more time in the store, potentially leading to more purchases than originally planned. Unfortunately, currently no physical store has been able to do this efficiently, despite the potential to increase sales. (Danziger 2019.)
Visual perception is the first one to kick in when entering a store which is initiated with colour, design and lighting. Different brands such as Versace and Armani also use visual cues to establish an image of their brand. Versace has established an image as a confident and bold brand while Armani has aimed for a more timeless and refined image.

Touch is imminent in the feel of products and tactile shopping experiences. Customers who can touch the product are more likely to be drawn towards purchasing it. (Danziger 2019.)

Touching something can also bring past experiences and feelings back to the surface, creating a connection between the product and customer. Sense of smell is more primarily used to trigger memories and emotions than touch because of its closer connection to the brain’s limbic system. The right sounds or music in stores is linked to memories and emotions with the bonus of creating movement. Therefore, it is essential that stores choose the music they play in all their stores carefully so they can create a link in their customers’ mind between the music and their brand. (Danziger 2019.)

### 3.2 Benchmarking: Cities enhancing travel experiences with senses

The benchmarking focuses on best-practice cities and regions who have made a positively enhanced their visitors’ travel experiences utilising different methods. The key methods used by these cities and regions introduced in the following subchapters are presented in Table 2.

**Catalonia, Spain** is one of the leading accessible tourist destinations in Europe, offering 1,300 different resources and facilities accessible for people with disabilities. Cultural tourism in Catalonia has been made possible for people with disabilities by museums offering several audio guides in multiple languages as well as different tactile experiences available for people with sensory disabilities. Especially La Casa Milà La Pedrera has focused on providing visitors with visual disabilities with the fullest possible experience by offering tactile maps, models, objects et cetera where different materials and the architecture can be experienced in detail. (Sibley 2015.)

The City of **Mechelen in Belgium** is home to many historical wonders from the Burgundian period. In the museum Hof van Busleyden, many of the elements and displays are usable and the visitor’s experience is enhanced by a fusion of sounds throughout their visit. In the future, new services for the visually impaired will be created, for instance audio tours. Another museum with services for enhancing the visually impaired visitor’s experi-
ence is Kazerne Dossin. Most of the elements, texts and displays are accessible and usable to involve visitors. The museum has an audio guide as well, so visitors can listen the stories all around the museum. Inside the symbol of Mechelen, the St. Rumbold’s Cathedral, there is a wooden model of the cathedral and tower that visitors can touch. Outside the cathedral, towards the Grote Markt is a small-scale version of the tower which visitors can also touch and feel freely. Image 4 shows what a small-scale model of a cathedral can look like. This way even the blind can “see” what the tower and cathedral look like on the outside. (De Wilde 2018.)

Image 4. Aachen Cathedral. (Humaljoki 2019)

In Sydney, Australia, visually impaired people can experience many of the popular sightseeing spots like never before with the help of Cocky Guides which offers unique and adventurous tactile and sensory tours around Sydney. This includes for example a tactile sculpture tour of Manly, visits to the local farmer’s market in Kiama and much more. According to the founder of Cocky Guides, James McFarlane, the goal of the service is to make travelling fun, safe and accessible for the active blind and visually impaired travellers. (James 2019.)
Table 2. Methods of enhancing the experience in benchmarked regions (X=available).

<table>
<thead>
<tr>
<th>Methods of enhancing the experience</th>
<th>Catalonia</th>
<th>Mechelen</th>
<th>Sydney</th>
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<tbody>
<tr>
<td>Audio guides</td>
<td>X</td>
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<td></td>
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<tr>
<td>Tactile experiences</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Multisensory experiences</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sensory tours</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
4 Method

First this chapter dives into the different methods used during the research process. The methods are part of the qualitative approach, which is introduced next, followed by the introduction of the two methods: observation and unstructured interview. Next, the implementation of the research is addressed in detail. Last addressed topic is the reliability of research.

The objective of the research is to map out different ways Helsinki could become a more accessible destination for visually impaired tourists. An additional objective is finding ways to enhance their travel experience further with all senses. The target group for the research are over 18-year-old visually impaired persons without physical impairments that could restrict free movement of research participants. This limitation is meant to ensure that there are no additional distractions during the observation process. The goal of the thesis is to give insight into the following research problems: How can Helsinki become a more accessible destination for visually impaired tourists? How can the travel experience be further enhanced utilising all senses?

The thesis process began in September 2019 and ended in December 2019. The observation process' timing was planned more closely than the other necessary phases as illustrated in Table 3. Other parts of the thesis process were planned according to different version deadlines set together with the supervisor. The second deadline was not met because of difficulties in finding enough participants for the observations.

Table 3. Thesis process.

<table>
<thead>
<tr>
<th>September 2019</th>
<th>Research plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2019</td>
<td>Rough version of the theoretical section</td>
</tr>
<tr>
<td>14.-25. October 2019</td>
<td>Gathering participants for the observation by email</td>
</tr>
<tr>
<td></td>
<td>Preparation of the observation template and interview questions</td>
</tr>
<tr>
<td>28. October-10. November 2019</td>
<td>Carrying out the observations and interviews</td>
</tr>
<tr>
<td>November 2019</td>
<td>Analysing and reporting observation results</td>
</tr>
<tr>
<td></td>
<td>Finishing the theoretical section</td>
</tr>
<tr>
<td></td>
<td>Writing down the conclusions and recommendations</td>
</tr>
</tbody>
</table>

The gathering of participants by email began earlier than anticipated because there was uncertainty of whether enough participants could be reached through email or not. This
gave enough time for the second plan, which was to find participants from in front of the Iiris center. The observations started on 26th of October, so ahead of the planned schedule. The reasons for this change are introduced further later in the thesis (4.4 Implementation).

4.1 Qualitative approach

‘Qualitative’, is a word that implies that the emphasis is on different qualities instead of measurements and numeral realities like in quantitative research. The purpose of qualitative research is to understand various situations and settings, analyse actions and for the researcher improve their knowledge of interactions and relationships. In qualitative research, that the undergone observations and conversations are implemented in an efficient, purposeful, informed and precise way. Thus, the observations cannot be a consequence of any casual interactions. (Hillman & Radel 2018, 2 & 129.)

Qualitative method was chosen as the basis of the study to avoid the limitations of quantitative research method which is not based on descriptive research questions but instead on measurable information. The advantages of using the qualitative approach, such as the chance to address the issue more in depth and improving the questions during the research if it is necessary according to feedback received from the respondents. These opportunities unfortunately give space to researcher prejudice and there is a higher risk of upsetting the respondents. Along with these issues, the research is more difficult and takes more time to conduct because of the time and skills needed for analysing the results. (Brunt, Horner & Semley 2017, 143.)

4.2 Observation

Data collection utilising the qualitative research method of observation is a good way of analysing the way specific groups of people interact in their social and cultural settings. Despite qualitative tourism field research being accepted as a way of studying the field, the observation and participant observation practices may be thought as intrusive and contentious. Sometimes the participant observation method which aims to bring out the voices of the participants, disregards and dismisses those who do not fit in with the research subjectivities. Therefore, researchers need to be aware of their own standing point and relation to the researched circumstances. (Hillman & Radel 2018, 129.)

Since the objective of the study is creating guidelines for improving the travel experience of Helsinki’s visually impaired visitors, observing and analysing the environment and behaviour of the participants can be more important than quantitative figures. Observation
offers unique information that can be evaluated later, since the observer is continuously taking in what is really happening around them while writing the information down. The type of content gathered during the observation could be considered unethical if you do not reveal the research because something embarrassing or harmful could be observed. (Brunt, Horner & Semley 2017, 150-151.)

The observation is done with the researcher present with either one or two visually impaired volunteers as the observers. The researcher oversees the observation process to ensure safety and comfort of the participants as well as to observe the participants’ actions during the visits. These participants of different ages and various level of visual impairment will observe sights and areas in Helsinki that are often visited by tourists. The participants can choose whether they prefer to input their observations independently into an observation form created with Webropol or to have their observations recorded by the researcher and later copied onto the observation form (appendix 1). Observation forms are made with Webropol because it is accessible for visually impaired users’ tools and utilised often by the Finnish Federation of the Visually Impaired. Both options are presented to the participants since those close to blindness might prefer being recorded. The goal is to have six to eight participants and fill a minimum of 15 observation forms with 20 being the maximum number of observation forms. The observation questions are in Finnish to ensure that they are easily understood by all participants.

Questions 1-5 of the observation form include personal questions regarding the participants name, age, the tools and aids the participants are using during the observation and the quality of their eyesight. Question number five introduces the observation subject while questions 6-11 are about its accessibility and the feeling of safety. Questions 12-15 address the impression the participant has of the environment and how different senses affect said impression.

6. What things make it easier to perceive the environment?
7. What are the issues that make it difficult to perceive the environment?
8. What physical changes has accessibility been supported with in the environment?
9. What physical changes does the environment still need to improve accessibility?
10. What are the things that make you feel unsafe?
11. What are the things that increase the sense of security in the environment?
12. How would you describe the environment?
13. What things especially catch your attention in the environment?
14. What kind of sensations do you experience (smell, taste, hearing, sight and sensation)?
15. What kind of emotions and memories do the sensations mentioned above evoke in you?
Observation subjects for the participating observers include areas that are popular amongst tourists in central Helsinki as well as popular sights. Mandatory observation subjects set before the tours were Suomenlinna Sea Fortress, Old Market Hall, Helsinki Tourist Information, Helsinki Cathedral, Senate Square, Esplanade Park, Helsinki City Museum, Stockmann department store, Market Square and at least one shopping mall. These are later divided between two observation tour dates.

The observations done by the researcher focus on the ease of navigating in Helsinki, access to information during a pedestrian experience and how the visually impaired volunteers navigate around different sights and areas. Navigating in Helsinki was observed during the observation tour by analysing the volunteers’ movements and ease of navigation. Along with this the researcher individually observes the surroundings for signs, information boards, maps and other possible sources for information to confirm any difficulties a visually impaired person might have in accessing information during their visit with or without the use of necessary aids. Roads and pedestrian crossings are especially focused to make sure they are safe and easy to detect.

4.3 Unstructured interview

Unstructured interview questions might not be completely established but the interview is more based on topics. The respondent can answer freely which is why it feels more like an informal conversation than an efficient interview. The information received is difficult to compare and analyse but they can be used to realise the attitudes and opinions of the respondent instead of confirming or testing a method, product or theory. (Brunt, Horner & Semley 2017, 152.)

The unstructured interview is conducted face-to-face and by email. The visually impaired participants who took part in the observation tours are interviewed on their past positive experiences regarding accessibility in destinations as well as the part different senses played in their travel experiences. The interviews are completely in Finnish to ensure that they are understood by the participants. The purpose of the interview is to bring out things the visually impaired participants themselves find helpful when travelling to different destinations. The interview consists of the following questions:

1. What has been your most positive city travel experience as a visually impaired traveller?
2. How were the needs of a visually impaired pedestrian taken into consideration in that location?
3. What was your most memorable experience on that trip? Describe the role of different senses in the experience.

21
The questions are worded in a way that leads the participants towards positive experiences more than negative ones, but the third question allows for even negative answers. This is necessary because the interview is done to gain examples of best practices in other destinations, and not negative ones. The decision to apply this approach is based on the assumption that the observation tour will bring out plenty of negative discoveries and the best practices will create a balance between the positive and negative findings. The purpose of the interview is to give insight into which solutions have impacted the participants' travels positively. This acts as proof that some of the solutions done in other cities are supportive in practice for the visually impaired and not solely based on a theoretical belief about accessibility.

4.4 Implementation

One of the participants (C) for the research was found through an email sent out by the Finnish Federation of the Visually Impaired to their members. The federation was contacted early on during the thesis process. The email was sent out ahead of the schedule on the 8th of October instead of the originally planned time 14th of October. Since there were no more responses to the email before the 21st of October, the researcher went to the liiris center to look for more participants for the observation tours. The two other participants (A and B) were found in front of the liiris center.

Participant A is practically blind and relied on the use of a white stick during the observations. Participant A’s attendant could not make it on the day of the observation, so he was guided by the researcher in-between observation subjects and during the observations whenever it was necessary for safety reasons. Participant B is also practically blind and had a guide dog during the observations. Participants A and B are acquaintances. Participant C is completely blind and cannot even see the sun. He relied on his guide dog as well as a white stick during the observations. Since all participants are either completely or mostly blind, the most diverse attribute of the participants is their age. As seen in Table 4, all participants are part of a different age-group. Age can create differences in experiences and views.
Table 4. Age distribution of the visually impaired participants.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
<th>Visual Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30 years</td>
<td>1</td>
<td>Practically blind</td>
</tr>
<tr>
<td>31-40 years</td>
<td>1</td>
<td>Practically blind</td>
</tr>
<tr>
<td>41-50 years</td>
<td>0</td>
<td>Completely blind</td>
</tr>
<tr>
<td>51-60 years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>61-70 years</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>71-80 years</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

The observation tours took place on the 26th of October and the 6th of November. Originally participant C was going to bring his acquaintance with poor eyesight on his observation tour on the 30th of October as a fourth participant for the research. This plan was unfortunately ruined when the date for the observation tour was changed. The bus that participant C was going to take to travel to Helsinki, completely ignored his presence at the bus stop and rode past the stop despite participant C waiting at the bus stop with a white stick in his hand and his guide dog accompanying him. Many buses do not travel from participant C's location to Helsinki, so the observation had to be moved up to the 6th of November and the new date unfortunately did not fit on participant C's acquaintance’s schedule.

The participants took part in both observation and the interview. During both tours, the researcher observed the participants' movements in different locations and focused on things that were happening around them. Participants A and B took part in the first observation tour on 26th of October. A map of the tour can be found in appendix 3. The tour started at the Helsinki Central Railway Station. The first observation subject, Helsinki Tourist Information, happened to be located at the Railway Station as well. Neither one of the participants had been at the Tourist Information previously. The order of different observation subjects was already switched before the next location because a park was needed by participant B’s guide dog. Therefore, the Esplanade Park was chosen as the next location for observation which was originally much later in the observation route. This proved to be a good thing on the long run since towards the end of the observation of the park, it started to rain. The participants were prepared for this, but it was jointly decided that only planned indoor facilities would be observed that day to guarantee as optimal observation results as possible despite the weather. This meant that the Senate Square would not be observed later that day, but it was moved forward to the next observation tour instead.
The third observation subject was the Helsinki City Museum followed by Helsinki Cathedral. Since each observation tour was planned to have at least one shopping centre or similar, the observations were finished at Kluuvi shopping centre. After the observation tour the researcher decided to not conduct the interviews face-to-face but instead opted to send them by email. This was based on the notation that the participants were soaked from the rain and everyone’s previous enthusiasm and energy had died down. Conducting the research in that state of mind could have strongly affected the results. One of the risks was that answers would be rushed to get away from the situation as swiftly as possible.

Participant C’s observation tour took place on the 6th of November. It was agreed with the participant that the observation tour would last for most of the day. This was because the participant was very enthusiastic about the tour and excited to have a chance to explore the city centre. It was made very clear that the tour would end whenever the participant so wished. The long duration was partly because of the visit to Suomenlinna as well, since the connections there are not always optimal. For example, because the ferry to Suomenlinna was just missed in the morning, there was an hour long wait until the next ferry. There were plenty of resting breaks during the day to ensure that the atmosphere remained positive.

The second observation tour started at Kamppi Metro Station after which there was a short walk to the first observation subject, Old Church Park which the participant was surprisingly familiar with. The second observation subject was the Old Market Hall. After this the destination was meant to be Suomenlinna Sea Fortress, but the ferry was barely missed. Because the waiting time was an hour, the second observation subject ended up being Senate Square with Suomenlinna Sea Fortress following as the third subject. After this the next subject was Helsinki City Museum followed by Stockmann department store. Afterwards there was a break at a café where the interview was conducted. The seventh and last observation subject for the day was the Helsinki Tourist Information. A map of the observation tour can be found in appendix 4.

Two of the observation subjects were completed on both tours. The reason for this was that Helsinki City Museum was such a pleasant experience on the first tour, a third perspective felt necessary to confirm whether this was simply a coincidence. As for Helsinki Tourist Information, it felt necessary to receive more perspectives on it since tourist information centers often have a crucial part in tourists’ visit in a city. Even though, this was the case more in the past than the present, these centers still tend to be the best prepared for receiving any visitor.
4.5 Reliability of research

Since the research is carried out in Finland, the language of the observation and interviews is Finnish to avoid any additional chances of the participants misunderstanding the questions caused by a language barrier. The research findings will be translated into English during the analysis. This creates potential issues in reliability since there is a chance of mistranslating the meaning of the original version. Words used during qualitative research need to be easy for the participants to understand, so the participant responds to the right question. To make sure that the interview and observation questions were possible for anyone to understand, they were tested before the research was conducted. (Brunt, Horner & Semley 2017, 153-155.)

There is also a chance of accidently leading the participants with additional questions that might have a leading tone during the observations. This could mainly be avoided by keeping the purpose of the research in mind and making sure the responses were as neutral as possible when analysing the contents of the recordings. (Brunt, Horner & Semley 2017, 155-157.) In this case this does not affect the reliability of the research as the researcher did not have any set views on the subject as she is not visually impaired and the questions were not worded in a manner that could be used to prove or disprove a theory as they were about a current situation that the participant was in physically. No additional questions were asked by the researcher during the interviews nor observations. When asked to clarify something in the observation form, the answers were straightforward and simple. In moments of uncertainty of whether the responding to said questions was acceptable, the questions were simply repeated to avoid accidently leading the participants.

From the ethical point of view, there are many issues related to qualitative research. When conducting interviews, the researcher may find out personal information about the other person that was not meant for the researcher to hear. To avoid unnecessary issues caused by accidents like this, the researcher should create a consent form (appendix 2) which has a detailed description of what is done in the research and the procedure itself along with how the gathered data is treated. Especially if sensitive data is gathered, keeping the research anonymous is essential. (Brunt, Horner & Semley 2017, 168.)
5 Results

This chapter concerns the results of the research. The results of the observations are introduced in detail and analysed, followed by the presentation of the interview results and their evaluation. The results of both the observations and the interviews are processed in three themes: accessibility, safety and senses. Accessibility theme covers the utilisation of infrastructures in a built environment as well as how easy navigating in the environment is. Safety theme covers different causes for a visually impaired pedestrians sense of security or the lack of it. Senses theme covers the role the senses played in participants’ experiences as well as the role of colour contrasts in navigation. In total 17 observation forms were filled by the participants and three interviews were conducted.

5.1 Observation

Observation is analysed one subject at a time through the questions with the help of the previously mentioned themes. Since the questions themselves are themed, they will be addressed in order. The factors discovered during the observations that have positive and negative effects on the travel experience are introduced in Table 5. They will be split according to the themes utilised in the analysis. Every participant gave permission for the pictures that were taken during the observations to be used in the thesis only.

Helsinki Tourist Information

Helsinki Tourist Information was observed by all three participants. The researcher noticed that while participants A and B went over to the info-desk to ask for information and help, the worker responded helpfully to any questions but in the end pointed towards the brochures without offering to show where they were located. Hence, while the worker was friendly and somewhat helpful, she did not take participant A and B’s disability into consideration. Participant A noted that better preparation before-hand would have made perceiving the environment easier because the participant was not certain of where he was. He was expecting a small room but instead was guided into a much larger room. The huge size of the room became apparent to him because of the loud echo in the room, which is why he said his hearing was very important in perceiving the environment. Participant B also said hearing to be a big part in perceiving the environment in combination with his guide dog. He could hear a voice nearby at the info-desk or somewhere giving advice to someone and felt that he could go ask for assistance even in this space without knowing the person. Participant C found the space to be much quieter than the rest of the Railway Station since it is in the ticket hall. He was especially delighted by the fact that the
Tourist Information was on a raised floor as shown in image 5. He thought that was a great idea since it was very easy to find with both a guide dog as well as the white stick.

Image 5. Observation at the Helsinki Tourist Information. (Humaljoki 2019)

When it came to things that made perceiving the environment difficult, participant A thought it was the large space, while both B and C thought one of the reasons was the echo. Participant C remembered how when he was younger, he had often collided with something when he could not find his way with the white stick because of the echo. He currently only collides with people when he is with the guide dog but despite having used this as a transit place for all his life, they still get lost in this environment. Additionally, participant B thought the large crowd of people and not knowing where he exactly was played a part as well.

According to participant B accessibility in the environment has been supported with the raised floor that makes the Info-area higher than the rest of the ticket hall and the fact that the Info is right by the door. He could not find any guiding strips or tactile surfaces. Participant A said that he could not find anything that would have caught his attention at least. Participant C thought that the building must be one of those museum buildings which means that modifications are not allowed, but something must be done about that echo so the acoustics in the space would improve. Participant A did not have an answer for what
physical changes still needed to be made in the environment to improve accessibility. Participant B instead thought that simply informing visitors of what accessible solutions are in place would help. Even if the Tourist Information had Braille text or maps or something similar available, there was no information about them available. So, the visitor had to know about these things. He added that, naturally adding tactile surfaces and strips to the floor would be useful. Participant C thought guiding strips would be great as well but also commented that wide, large spaces are always a problem so something should be done about that.

Participant A said that what caused him to feel unsafe was not knowing where he was, losing his surroundings. Getting lost in the space and not knowing where the door is and where he should be going. This was mostly agreed by participant B, but he added that being in an unknown space and being surrounded by people while alone made him feel the most insecure. The only choice then is to find the closest wall. Participant C found the people in the area the most unnerving. People had often asked him about drugs. The participants were asked about what in return increased their sense of security in the environment. Participant A experienced that it was the clearness of a space where one does not need to zigzag constantly. This way you don’t lose direction as easily. Participant B pointed out the importance of awareness and knowledge. He added that having a guide dog gives him confidence because even when he is lost, the dog will help or at the very least encourages him to ask other people. It’s important to be able to listen and speak with other people and not be afraid to ask for help. Participant C instead was encouraged by the constant camera surveillance and the presence of security guards.

When asked to describe the environment, participants A and C pointed out how large the space is while participant B found the space to be magnificent and atmospheric in a way as well as bleak and cold. Additionally, participant B described the space as echoey. Echo was also brought out when questioned about what caught the participants’ attention in the environment as well as the size of the room. Participant B mentioned that the echo mixes up the number of people in the room even if there are not that many people present. Participant C mentioned how he enjoyed talking while sitting there and listening to people because the atmosphere was very calm at that moment. The next question regarded the sensations the participants experienced to which hearing was brought up the most, with other people being the source of the sensation. Participant B felt that it was cold, but that might have been because he came into a very gaunt space from cold weather. Other sensations were quite neutral according to everyone. The sensations caused by the environment awoke quite neutral feelings in participants A and B. Participant A mentioned feeling lost but there being no strong feelings. Participant C mentioned
feeling positively especially about the current environment. The place is always related to either departure or arrival. Because he is one of the travel industry people, railway stations, airports, harbours especially appeal to him since people are always going somewhere.

**Esplanade Park**

Esplanade Park was observed by participants A and B. Both participants had been in the park before. According to participant A, **perceiving** the environment was supported by the close proximity of roads. Both participants agreed that being able to hear the cars in the background helped, since now they knew where the roads were. Different surfaces were helpful for participant A because gravel is easy to walk on when you know there is grass by the side. He added that since there were people walking around who are easy to listen to, he could follow them in the right direction. Participant B said that along with the noise of the cars, the guide dog made it very easy to find his way around a familiar surrounding like this. What made it difficult to perceive the environment according to participant A was that during dark and gloomy weather, all the colour contrasts disappear. This affects him even though he cannot really see colour but more the contrasts between light and dark. Participant B was also affected by the rainy weather because it disturbs hearing in its own way. Despite the noise from the cars being helpful in perceiving the environment, there is always a chance that some cars make different sounds and are louder or quieter than others, which can be misleading.

**Accessibility** in the park has been supported with certain material choices according to both participants. Participant A pointed out again the grass and both participants mentioned that there was distinguishable paving around the statue to which the researcher had guided the participants. Participant B mentioned the gravel and the fact that if you left the gravel area, the road helps with identifying the area as well. According to participant A, the park does not really need improvements, but if anything, something that guides the person like a guide rope. Those are used in some places. He was not sure if it would be a suitable solution in Esplanade Park since it could disappear underneath the snow. Participant B thought that there should be information available on statues or other sights. Participant A chimed in that if there was guidance tile paving in the middle of the gravel path, it could be followed through the park. It would be especially useful for people who use a white stick. Both participants felt safe in the park because they knew it was a park area with people around and was surrounded by specific roads. Participant B said that the gravel, his guide dog and presence of people he knew also further increased his **sense of security**.
When asked to describe the environment, the loud noise of the traffic was mentioned by Participant A, but he said that otherwise it was very peaceful and park-like. Participant B described the park as rainy, relaxed and open. Because of the lack of leaves, it felt like there were not a lot of trees around which made the park feel quite open. This in turn made him feel safer. Regarding the sensations they experienced, both mentioned hearing. For participant A this meant the noise of cars, people and he also noticed some birds around. Participant B also mentioned the cars and the footsteps of people. Participant A felt like the gravel was comfortable to walk on while participant B talked about feeling half wet because of the rain, quickly adding that he liked rain. He pointed out feeling the gravel under his feet as well and the movements of his guide dog. The park made participant A feel peaceful despite the traffic. It was partly because he knew where he was. In participant B the place brought back summer memories. Despite the weather being colder, he still felt warmth. He has wandered there doing different things on multiple occasions.

Helsinki City Museum

Things that made it easier for participant A to perceive the environment included the fact that despite there being plenty of dark colours, the museum’s displays had light backgrounds and were illuminated. This helped him recognise where the walls were located. On top of this, he liked the use of materials, especially pointing out that despite there possibly being a little echo, the wooden floors and walls made the space very pleasant. Participant B concentrated more on the availability of information. The moment we stepped inside, there was a very helpful museum worker who informed us of different things found at the museum, what to expect and which displayed items visitors were allowed to touch. This helped a guide dog owner prepare well for what was ahead. Participant C was similarly delighted by how the museum personnel welcomed him wholeheartedly. The employees were not grumbling about the guide dog and allowed him to touch some of the display items. One of these display items is pictured in image 6. Participant C was pleased with the museum’s acoustics too. According to participant A, the museum was a little labyrinth-like made perceiving the environment slightly difficult but not too much so. Participants B and C instead found many of the displays, paintings and other visual details difficult for a person with visual impairment to examine which affected their general view, but that was expected. For example, participant B had trouble with perceiving the second floor of the museum. Participant C personally did not find low doorframes and other low hanging objects, that people could hit their head on, to be a problem.
To the question about what physical changes has the accessibility been supported with in the environment, participant B responded by pointing out that the elevator and ramps on the floor supported the overall accessibility. He pointed out that while the overall accessibility had been taken into consideration, that consideration had not especially extended to the visually impaired people. By chance, one worker had experience regarding visual impairment, so she knew how to advise us well and tell the essential things. Participant A felt that accessibility had not really been supported, that they were already set-up things. Participant C instead thought that in this exhibition, the logicality was evident despite it consisting of two floors. It was easy to move from point A to point B and then onto point C and D. Participant A stated that accessibility could be improved by installing guiding strips on the floor. Focusing more on the access to information, Participant B thought it would be great if at least something was in Braille. He does not expect everything in the museum to have Braille, only some key information and the most exciting things. Not all text needs to be made available, it would be nice to simply know which piece or sight was in question. He agreed that guiding strips on the floor would help everyone too. Because of the lack of guiding strips, the researcher sometimes needed to show the participant where the tactile exhibition pieces, such as the old telephone and the small jukebox, were. The small jukebox is shown in image 7. Participant C stated that having access to the pieces inside the glass cabinets would improve accessibility, but he was aware that this would be impossible. He has simply always been fascinated by the things people are not allowed to touch.
All participants felt the museum to be a very safe environment. Only thing that was pointed out by participant B was that he hit his head at one point during the visit on a door frame, but he personally did not have a problem with this. Participant B is quite tall. What enhanced the sense of security in the museum for participant A was that many objects in the museum are meant to be touched, so the purpose was not to really watch out for anything. For participant B the reason for the sense of security was the design of the museum, especially the second floor was very nice. He noticed the small corridors but the material choices on the second floor were on point. Downstairs was larger and the atmosphere was bleaker but not too much. Material choices were adequate overall. Participant C felt comforted by the knowledge that staff was available whenever necessary.

Participant A described the museum as pleasant and wooden in a positive way while participant B described the place as warm and informative even though there was a lot of noise where he was sitting at that moment with slight echo. He felt like he could come to the museum again and that it was a plus that there were things he could touch to figure out what content the museum had to offer. Participant C assumed that both floors were huge and felt like the walls and such were movable so the museum floors could be redesigned for future exhibitions. That was the impression he got from the space, but he was not certain of it. What especially caught participant A’s attention in the environment were
wood as a material and that there was the right amount of people while participant C noticed the calm atmosphere. Participant B noticed the materials, differences in material and the recognition. The concrete things, such as the dome with an old-fashioned phone inside along with the separate room with old-fashioned furniture that he could touch, were nice. He felt like he could move around with the guide dog quite independently which is always a plus. This meant that he could visit again alone with another blind person.

In the museum, participant A could sense slight human noise on a suitable level, and he felt tempted by the café. He felt at home because of the wooden surfaces because he is from an old farmhouse. He described this as a nice experience. Participant B felt warm and found the wooden surfaces to be pleasant since he is also from a farmouse. He smelled the coffee and buns because he was sitting close to the café. At times he felt slightly cold which he assumed to be caused by the constant movement of doors and because it was concrete building. At least the first floor felt like it, but the second floor was fine. Participant C again mentioned the fact that he could touch things. He said the space didn’t smell like much, maybe a little stuffy. The memories and feelings awoken by these sensations were positive and warm for participant B with participant A describing the feeling as homely. Participant A described the museum as different from others. Usually he does not like museums because he must be very careful, and the spaces feel awkward whereas here he did not have to rush with the exhibits. Participant C did not know how to respond.

**Helsinki Cathedral**

Both participants thought the space was very clear and was based on the same structural pattern as most churches which made it easier to perceive. Rectangle aisle in the middle, and bench rows around. The common layout made it easy to navigate and nothing special was added to it. Because of the clearness, participant B admitted to not even paying attention to anything else. He also pointed this out as an issue when perceiving the environment since he only expects the basic solutions, he does not realise to look for anything else either. Both participants pointed out the fact that the doormat had risen in a way that caused a risk of falling.

Neither participant thought that their accessibility had been supported in the cathedral. Participant A mentioned that the lack of warning strips on the stairs leading up to the cathedral showed the lack of accessibility planning towards the visually impaired. After this, the researcher was asked if there were any stripes, the lack of which the researcher confirmed. Participant A and B both were quite sure that there were ramps available for
wheelchairs, but they were not informed of the ramp’s condition. Participant B thought it was possible that the clear layout might be the only planned solution for accessibility. According to participant A warning stripes on the stairs were necessary to improve accessibility. Participant B thought the stairs were fine when accompanied by a guide dog. He focused on the numbering of the bench rows instead and noticed the numbers were not raised. Raised numbers make finding the correct row easier and they are available in some churches.

Nothing in the cathedral made the participants feel unsafe. The sense of security was caused by familiar and clear design that is present in other churches. So, there was no expectation of anything being different. Participant B remembered visiting the cathedral before, so he knew what it was like. Participant A described the environment as neutral while participant B noticed a positive echo that lingers but was not distressing. Participant A’s attention was caught by the myriad of stairs as well as the doormat. Participant B had his attention on the echo, benches and the aisle. Participant A sensed a nice echo which was not disturbing. He found it entertaining when everyone was so quiet and whispering just because they were in a church. He felt tempted to begin whistling to test how the sound travels inside the cathedral. He found the experience to be fun. Participant B instead sensed the softness of the carpet and the hard floor underneath his shoes. He heard the echo and felt the wooden benches. These sensations brought back memories of his confirmation school days along with going to Christmas church. Participant A remembered confirmation school days as well and he felt immediately mischievous to be in a church.

Kluuvi shopping center

Participant A thought that perceiving the environment was made easier with some sparse lighting in the ceiling, but they ended suddenly. Despite this, he felt that the passages were quite clear. Participant B admitted that having a guide dog made moving in shopping centers so much easier in comparison to the white stick because all the escalators, entrances and shops are found easily. Of course, the sound of escalators and the scents from the stores help as well but he personally feels that a guide dog makes moving around in shopping centers so much simpler. Because the shopping hall is quite dark, the skylight window was very blinding and participant A felt that it made perceiving the environment difficult since he could see even less for some time. Participant B said that there was a risk of the guide dog getting overwhelmed by all the shops and people around it and leading the participant into the wrong kind of store. Participant A thought that accessibility was not supported in the shopping center. Participant B was not certain whether
there was an info board on one of the floors, but thought that it would have been useful in finding larger stores if they were pointed out with a big dot on a map. Researcher noticed there were no info boards available during her individual observation. According to participant A accessibility could be improved by installing guiding strips, better lighting. The contrast between bright and dark spaces was quite substantial. Participant B mentioned signs and guide strips to the info board and even lighting. As larger measures he suggested having guiding strips in front of each store that led into the store, but this could create difficulty for wheelchair users.

The differences in lighting inside the shopping center made participant A feel unsafe. Participant B sometimes feels unsafe in large crowds of people but not so much with his guide dog. Without a guide dog he thinks he would feel frustrated if he could not navigate everywhere by following the edges and guide stripes. Nothing in this space increased participant A's sense of security. Participant B again mentioned the confidence his guide dog brings, adding that if he gets lost, he dares to ask for help because he has an adorable dog with him. Both participants described the shopping center as a traditional shopping center. Participant B added that there were sounds, people, smells and scents. So, there is everything, but not too much of anything, which made the short walk quite pleasant. What caught both participants’ attention was the sound of escalators. Participant B also noted the different smells and the scent of coffee as well as his guide dog’s reactions. Participant A noted that for his sight, he noticed that some corridors were too dark. Participant B instead sensed the scent of coffee coming from the cafes and he felt warm. He heard sales personnel inside different stores which told him, what type of stores they were. He felt hungry when he heard a salesperson giving away some free snacks. Senses are very sensitive in shopping centers when you expect to hear much information that you would otherwise miss completely. Participant A felt very frustrated by the situation because the problem was something so simple, and they could not even invest time and thought into it. Participant B instead remembered different times he had gotten lost and times when he had succeeded. Since he had spent plenty of time in shopping centers along the years, they are often attached to both negative and positive memories.

Old Church Park

Because participant C is completely blind, he regards good planning and acoustics to be very important in perceiving the environment. It is always bad if the place is very echoey and noisy but in this park, there is some sound of traffic, but not enough to bother with other observations. At that moment there was a short pause in traffic so he could hear people walking tens of metres away from him. When a car went past again, it hid all other
sounds. Loud noises were mentioned as the one thing making perceiving the environment difficult. In Old Church Park, participant C felt that accessibility was supported by clear gravel pathways with very distinct grass edges. When asked about physical changes that could be made to improve accessibility further, participant C pointed out that there is no such thing as an accessible environment that is completely fool proof. He felt that everything was as well as could be in the Old Church Park, and even someone without a guide dog could easily navigate in the park because that’s how clear it is.

Image 8. Old Church Park. (Humaljoki 2019)

Participant C admitted that sometimes high noise levels make him feel unsafe while navigating somewhere. What increases his sense of security instead is the open environment which can be seen in image 8. The park has plenty of trees and apartment buildings on all four sides of the park. It makes him feel like he is under other people’s surveillance which creates a sense of security when he knows that if something happened, someone is likely to come and help. Participant C already described the environment, but he feels like the park is one of the best places for a completely blind person. What caught his attention in the environment was the gravel pathways instead of stone paving or let alone asphalt, because it is nice to hear walk past you which can be heard on gravel. Participant C experienced all other senses than sight, for example he heard leaves sliding on the ground. He likes this park. If one even likes anything in Helsinki, this is a good place to be.
He has been coming here for decades and finds it to be a very calm place even on Saturday evenings during the summer.

**Old Market Hall**

As with the previous observations by participant C, he concentrated on acoustics as part of **perceiving** the environment. In the market hall the refrigerators and other appliances were buzzing but the building itself was very clear that he would dare to come here even alone with a guide dog. The surface of the floor is good, not slippery with carpets in some places. What makes perceiving the environment more difficult, is the buzzing of the appliances. Personally, he does not find this to be a problem even though the noise covers the voices on people. He doubts he could hear someone walking softly in the hall, which could result in a collision if the person does not move aside themselves. **Accessibility** has been supported with the use of different surface materials. Participant C **remembered** when the market hall was actually old, before the renovation, and back then it was poorly accessible. Now there are some great surfaces. When it comes to accessibility the Old Market Hall is close to optimal, so participant C could not think of any improvements. There was nothing in the space that made him feel **unsafe** and what improved his **sense of security** was that everything was at a proximity and there are no large, open halls. This improves accessibility because you always know where you are.

Participant C **described the market hall** as a very tall space with one quite narrow main corridor. He said that there is at least one corridor going across towards the sea. He could also hear where all the counters were but said it is difficult to say which counters sell what product. He found the market hall to be one of the best public spaces and very **accessible**. Participant C’s attention was caught by the sound of coffee cups at a café but said it is probably because he drinks so much coffee. Different **sensations** participant C experienced were the hard, uneven walls that he was touching, different nice smells and the sound of the appliances once again. He thought the wall was uneven to bring out something old in a new form while the smells were caused by the number of different foods sold at the market hall. Participant C said that the whole place is **emotional** for him because he has been there often with great friends. On top of this the smell of fish brings back **memories** because his father and grandfather worked at the sea and participant C worked at sea on many occasions himself. So, all the scents from that time were in that building in miniature form and if he walked outside, he could smell the sea.
Senate Square

According to participant C, all the differences in the environment make **perceiving** it easier. For example, the researcher found a one times one metre smooth surface within the Senate Squares cobblestone-surfaces that she guided participant C to because walking into the surrounding area would have been a risk for a blind person. Participant C was not able to identify what it was, but the researches recognised it as a very faded relief of the Helsinki Cathedral which can be seen in image 9. The researcher noted that it was so worn-out it was barely recognisable even with good eyesight, let alone with a white stick. Large open squares are generally difficult to perceive according to participant C who tends to stay away from squares like this when alone. He describes navigating in these types of areas as very challenging unless you can hear where the traffic is going. At Senate Square, the tram tracks on two sides of the square help the participant navigate somehow. **Accessibility** in the square has not been supported in any way and in participant C’s opinion there is one drastic change necessary for making it accessible, the removal of the cobblestones and changing it into paving. The paving’s edges could be followed with a white stick. If the researcher had suddenly left the participant alone in the middle of the square, he would have felt **unsafe** because he would not know where to go. Nothing at the Senate Square increased the participant’s **sense of security**.

Image 9. Relief at the Senate Square. (Humaljoki 2019)
Participant C described his location in the Senate Square by assuming that he was almost in the middle of the square and looking towards the Helsinki Cathedral. On his left side should be Unioninkatu and on the right the street where tram number seven comes from. What caught his attention however was that some buildings on the left were under construction. He also noticed that otherwise it was very quiet and there were only a handful of people around who were mostly tourists. As for the sensations, participant C felt very cold, but other than that there was only the sound of cars. The Senate Square does not really bring back any memories or make the participant especially feel anything. It is just one place out of many.

Suomenlinna Sea Fortress

The factor that make it easier for participant C to perceive the environment is even terrain. This is because he does not need to focus entirely on moving around, instead he can let the guide dog take the lead. Then he can simply listen, “watch” and smell what is around him. An area with even terrain in Suomenlinna can be seen in image 10. Participant C mentions that when the terrain is very uneven like in many areas in Suomenlinna, it makes it difficult to perceive the environment as his whole focus and energy is used entirely on moving. Since construction is very restricted in Suomenlinna, the participant does not think anything has been changed to improve accessibility. This makes it a very difficult destination even for those with a guide dog, and the participant could never imagine coming here on a wheelchair. The researcher encouraged the participant to not think of what changes are allowed. After this the participant noted that the pathways would need to be changed into proper gravel paths along with the removal of rocks and the like.
Nothing made the participant feel **unsafe**. He simply said he would not come to Suomenlinna alone, since there he would not know how to move around. This was not surprising to the researcher as she had observed how many unfilled holes were in the middle of the road. What increased his **sense of security**, was having a good guide with him. He would **describe Suomenlinna** as rugged, windy place where he cannot really hear the normal sounds of the city. Other sounds are present, just not the ones you would always hear in the city. He had not been to Suomenlinna in a long time so how uneven the terrain was, caught his attention. He **sensed** the smell of fresh sea air and the sounds mentioned previously. As for touch, the participant said there had not been much touching of surfaces while in Suomenlinna. Because of this the researcher led him to the cannon nearby which the participant recognised and it felt like he enjoyed the experience. The proximity with the sea lead to experiencing warm emotions.

**Stockmann -department store**

Because the department store is such a huge place, according to participant C, there are many different types of acoustics which still allowed him to orientate well. The size of the department store made it difficult to **perceive** and the participant said that personally he
would not go to this store without someone seeing present. Participant C thinks that accessibility has not been supported there at all other than the elevators buttons, which he assumes are based on a standard. Considering the size of the building and the number of floors, a talking elevator would be a suitable way of improving accessibility in the department store, according to participant C. He mentioned that elevator in Iiris center talks, and many Asian hotels are equipped with talking elevators.

Factors that made the participant feel unsafe included the massive size of the building because he feels unsafe if he gets lost and there it is a high probability. The attentiveness of the staff and their independent initiative from the moment we entered the building increased his sense of security. They were immediately ready to assist us in finding the correct floor. The participant described the environment to be massive, quite full of people and clean. He did not know what to answer to what caught his attention in the building. As for sensations, he experienced different smells, listened to sounds and felt the bench he was sitting on and so forth. He did not experience very positive feelings because the building is so big and labyrinthine.

Accessible information and navigating in Helsinki

Researcher’s observations regarding access to information and navigating in Helsinki city centre bring light to how many things have been mostly overlooked when it comes to navigating in Helsinki as a visually impaired person. The researcher has no visual impairments, so she mainly observed the availability of tactile maps, accessible info boards, guiding elements, audible signs and the visibility of the stores’ entrances.

During a pedestrian experience of Helsinki city centre, it is difficult to find accessible information such as tactile maps, info boards and street signs. The only tactile map that could be found was in Kamppi -shopping center which showed all the bus terminals located there as well as the names of the streets surrounding the shopping center. The researcher concluded that this was simply because of the terminals, and not meant for making the shopping center itself more accessible based on which locations were named on the map. There were many guiding strips and tiles in the area around the tactile map leading to the bus terminals, the metro and the escalators. This makes navigating to the terminals, metro and onto the higher floors of the shopping center, easier with a cane. One of the centrally located Info boards near the map did not work while even the working ones would not have been easy for someone who is nearly blind since they were not audible and the texts were small and the touch screen surface was often faulty as well. Street signs all over Helsinki city centre are not accessible for a visually impaired person since
the text on them is small with no contrasts. Tangible texts are also available in some statues, for example the statue in front of Fazer café. Information about Karl Fazer has been written in the bottom part of the statue in tactile letters.

When it comes to shopping, it would make even more sense for brands to wish to stand out from the crowd. Instead, especially on the northern Esplanade, many stores had opted for similar signs in neutral colours that did not have much colour contrasts aside from the small canopylike fabrics that hung on top of every window and entrance as can be seen in image. The store’s name on these fabrics was written in white with a black background as can be seen in image 11. This creates a colour contrast, but its purpose fades significantly when the surrounding stores have done the same. Many stores away from the northern Esplanade have ignored the importance of colour contrasts in their signs as well. On top of this, some logos are so small and messily designed that it is hard for even someone with perfect eyesight to read.

![Image 11. Kalevala store front. (Humaljoki 2019)](image)

Regarding **safe movement** in the city’s centre, the researcher’s focus was mainly on the pedestrian crossings. The fact that there are only a few beeping traffic lights placed around the center can be very confusing for a visually impaired person. It was even mentioned by the participants during the observations as a side note because they were confused by the fact that only every other traffic light beeped. Within an area the placement of beeping traffic lights was very inconsistent. This can create dangerous situations if a visually impaired tourist, after walking through a set of beeping traffic lights, expects the following traffic lights to also beep.
When analysing the results of the observations through themes, it is apparent that Helsinki's city planning is quite lacking concerning the accessibility of visually impaired people. This makes it difficult for even locals to find their way around the city safely, let alone a tourist who has not visited the city previously. It can be concluded by looking at the factors presented in Table 5. that overall accessibility has the strongest positive and negative effects on the travel experience.

Table 5. Themed factors that have positive and negative effects on the travel experience.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Positive effect</th>
<th>Negative effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>Consideration of disabilities in customer service</td>
<td>Not having a clear idea of the formation of the space</td>
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<td></td>
<td>Good acoustics</td>
<td>A lot of echo</td>
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<td></td>
<td>Different floor levels</td>
<td>Large open space</td>
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<td></td>
<td>Location in relation to the doorways</td>
<td>Massive crowds of people</td>
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<td></td>
<td>Guiding strips, tiles and paving</td>
<td>Gloomy weather affects visible contrasts</td>
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<tr>
<td></td>
<td>Tactile surfaces</td>
<td>Rain disturbs hearing</td>
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<td></td>
<td>Informing visitors of available accessible solutions</td>
<td>Cars that have unique sounds or different noise levels</td>
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<td></td>
<td>Placement of roads</td>
<td>Snow</td>
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<td></td>
<td>Various, recognisable surfaces</td>
<td>Glass displays</td>
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<td></td>
<td>Gravel to walk on</td>
<td>Low doorframes and other low-hanging objects</td>
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<td></td>
<td>Grass bordering pathways</td>
<td>Non-tangible paintings and other only visual details</td>
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<td></td>
<td>Paving around statues</td>
<td>Labyrinth-like passageways</td>
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<td></td>
<td>Information available on statues and sights</td>
<td>Unexpected obstacles such as raised doormats</td>
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<td></td>
<td>Well-lit museum displays in darker rooms adds contrast</td>
<td>Lack of information boards</td>
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<td></td>
<td>Tangible displays and exhibits</td>
<td>Loud appliances</td>
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<td></td>
<td>Well-trained staff available</td>
<td>Large open squares/places</td>
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<tr>
<td></td>
<td>Attentive staff</td>
<td>Cobblestones</td>
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<td></td>
<td>Logical layout of exhibitions</td>
<td>Uneven terrain</td>
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<td></td>
<td>Key information in Braille</td>
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<td></td>
<td>Raised numbers on seating</td>
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<td></td>
<td>Guiding strips in front of each store that lead into the store as shopping centers</td>
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<tr>
<td>Safety</td>
<td>Clear floorplans without zigzags</td>
<td>Not knowing where you are exactly/losing your surroundings</td>
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<tr>
<td></td>
<td>Understanding of the area</td>
<td>Being surrounded by people while alone</td>
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<td></td>
<td>Guide dog gives confidence</td>
<td>Unknown places</td>
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<td></td>
<td>Camera surveillance in public</td>
<td>Suspicious people</td>
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<td></td>
<td>Security guards</td>
<td>Lack of warning stripes on stairs</td>
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<td></td>
<td>Presence of other people</td>
<td>Large open squares/places</td>
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<td></td>
<td>Right material choices</td>
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<td></td>
<td>Open outdoor environment</td>
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<td></td>
<td>Familiar design/floorplan</td>
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<td></td>
<td>Close proximities</td>
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<table>
<thead>
<tr>
<th>Senses</th>
<th>Calm atmosphere</th>
<th>Echo</th>
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<tbody>
<tr>
<td></td>
<td>People's voices and footsteps</td>
<td>Coldness</td>
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<td></td>
<td>Openness outdoors</td>
<td>Gauntness</td>
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<td></td>
<td>Relaxed atmosphere</td>
<td>Feeling lost</td>
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<td></td>
<td>Gravel under the shoes</td>
<td>Loud noise of traffic</td>
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<td></td>
<td>Birds</td>
<td>Rain</td>
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<td></td>
<td>Rain</td>
<td>Noisy</td>
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<td></td>
<td>Movements of the guide dog</td>
<td>Stuffy smell</td>
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<td></td>
<td>Warm summer memories</td>
<td>Overwhelming scents</td>
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<td></td>
<td>Wooden materials</td>
<td>Feeling neglected</td>
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<td></td>
<td>Colour contrasts</td>
<td>Uneven lighting</td>
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<td></td>
<td>Welcoming staff</td>
<td>Rugged</td>
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<td></td>
<td>Warmth</td>
<td>Windy</td>
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<td></td>
<td>Touching exhibits</td>
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<td></td>
<td>Smell of a café</td>
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<td></td>
<td>Sound of escalators</td>
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<td></td>
<td>Smell of food</td>
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<td></td>
<td>Smell of the sea</td>
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<td>Fresh air</td>
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Many of the factors presented in the accessibility theme apply to the safety theme as well because accessibility strongly affects the feeling of security. For example, if the person feels like they cannot sufficiently navigate around an area, it affects how secure they feel wandering around the area independently. Some of the sensations mentioned under the
senses theme are also related to accessibility. For instance, when the ground is made of gobble stones instead of gravel, it affects the accessibility of the area as well as the person’s ability to sense what is happening around them. Another example would be echo. If a space is very echoey and on top of that, quite large, it affects how easy navigating in the space is. While this is negative regarding accessibility, echo can be used to create exceptional sensations.

During the observations, hearing was thought to be especially important by the participants. This was brought up especially because of the effect echo as well as the sound of people and vehicles had on perceiving the environment. The participants also regarded the customer service to play a big part of their experiences with especially Helsinki City Museum receiving plenty of praise regarding their staff’s welcoming attitude and informative service. Other, more physical attributes that were brought up on multiple occasions were the positive difference having gravel pathways or installing guiding strips or paving could make in navigating around the city centre. As a negative factor in navigating, the cobble stones were mentioned. Access to information during the pedestrian experience was thought to need some improving as well since nothing was written in Braille in any of the locations.

5.2 Interview

Responses to the first interview question about where the participants’ positive city travel experience took place included Pisa in Italy for participant A and Paris in France for participant B. Amsterdam in the Netherlands and Singapore were chosen as positive travel experiences by participant C. The city was not mentioned in the interview for France, but it was assumed by the researcher to mean Paris based on the presence of a metro, districts and the trip to Disney Land. During the interview that resulted in the response of Amsterdam and Singapore, the participant asked if the question was about the current trip to Helsinki or travel experiences in general which required the researcher to confirm that the interview question referred to general travel experiences.

How were the needs of a visually impaired pedestrian taken into consideration in that location?

Participant A: We stayed in a hotel run by a local association for the visually impaired. In the immediate vicinity of the hotel were both guide wire and guide stripes. One road needed to be crossed to reach the hotel’s beach but there were traffic lights for that. On the bottom of these traffic lights’ motion detector was a button for the blind and visually impaired which made the lights change to green faster.
Participant B: Accessibility in these parts of the city was great for a cane user. Additionally, there were sound beacons in front of the bus stops and the big buildings which worked well. There were announcements at the bus stops. There were raised strips on the ground which could be felt with the white stick.

Participant C: The first is Amsterdam in the Netherlands. Even though it is an old city, it has been properly taken care of, and everywhere in the Netherlands things have been taken care of nicely. The reason why they are so well managed is that one of the princesses is blind. That’s how it probably all started even though the princess doesn’t live in the Netherlands but in New York. Beep lights are at almost every pedestrian crossing in the Netherlands.

Another place where much has been done in a very old city, is Singapore. It all depends on your point of view you observe what has been done because not only the street view has been designed so one can move around in a wheelchair, but there are also talking elevators in many places. And they also say that “the door is open”. Even now, when we went to the department store, there were many elevators side by side and you must be attentive to realise which door is about to open. There is a general buzzer that announces the elevator is coming but there is no buzzer to show which elevator is coming there. In many locations in Singapore these elevators were well taken care of. Then there were guiding strips on the floor so you could go from place to place with a white stick. The white stick is very well known in these countries. While it is known here at home as well but somehow, I have noticed that everyone knows it in these countries.

*What was your most memorable experience on that trip? Describe the role of different senses in the experience.*

Participant A: While visiting the area around the Pisa Tower, we did not need to pay the entrance fees to the tourist destinations. We got to a chapel for free, where every hour, a singing monk performed. The sound in this dome-covered chapel was stunning.

Participant B: In its entirety, circling around the city, whether by bus, subway or by walking. Everything had its own sound, smell and sensation. Naturally, all of these were needed to find our way to Disneyland where the service towards the sensory and physically disabled was overwhelmingly effective.
Participant C: I have basically lived in the Netherlands; I have not really done it but what I mean is that I have spent a lot of time there. And what I look for there is the internationality and different Asian eateries. Those are available here too but I have to say that I like well-seasoned food and here at home if you ask them to put an extreme amount of chili, it is not going to be enough. I made that mistake once in the Netherlands and ended up crying while eating the food because it was so strong. The world of scents and dirty water in the canals. It sounds funny but that smell of food coming from restaurants and the scent of the canal.

Singapore on the other hand has a tropical scent. All plants and the like are mixed with a huge amount of fumes and scents from eateries. Singapore is around the size of Helsinki, but 7 million people live there. Despite this, the traffic is smooth.

Accessibility factors that have positive effects on the travel experience based on the interviews include the availability of guide wire/strips and guide stripes, beeping traffic lights in crossings, sound beacons in front of bus stops and big central buildings, announcements at bus stops, talking elevators as well as other people being informed and aware of the meaning of someone walking with a white cane. Many of these accessibility factors also came up during the observations aside from sound beacons and raising awareness of the meaning of the white cane. The fact that same factors were brought up during both the observation in Helsinki and related to their fond travel memories, offers a view of what is meaningful for the participants themselves as visually impaired travellers.

Nothing directly safety related was mentioned during the interviews, but smooth traffic can be considered a safety benefit as well as the consistent distribution of beep lights at pedestrian crossings. This outcome was expected since there were no direct questions about safety. Since the focus of the interviews was to gain information on positive experiences, bringing up safety could have brought up more negative memories.

Sensory experiences that positively enhance the participants’ previous travel experience based on the interviews include musical performances in unique acoustic locations, everything having around the traveller having its own smell, sound and sensation on walks in their destination, wider offering of international cuisine, international atmosphere wide variety of different scents, smell of food as well as tropical scents. Many of the sensations these experiences represent, were brought up during the observations as well. Based on this, it can be assumed that even if the destinations wary, people generally expect the same sensations such as the smell of tropical flowers, music in great acoustic environments and smell of food to represent positive experiences.
6 Recommendations

The recommendations chapter introduces the key recommendations which are based on the research, theoretical framework and benchmarking. They are divided into the main themes of navigation and safety, accessibility and enhancing the travel experience. There are many possible methods to be picked out from the thesis material, but these methods are considered to be the most realistic and attainable by the researcher.

The installation of a few audible information boards in major shopping centers is suggested for improving the navigation possibilities and for providing accessible information. The boards could be located away from the most crowded areas. Visitors should be informed of them with well-placed tangible signs or with guiding strips. The suggestion is based on the researcher’s observation that the information boards in shopping centers are currently not accessible to nearly blind visitors. This denies them access to information which is available to other visitors. There is usually nothing guiding the visually impaired visitor to these information boards either.

Creating more tangible maps of the most central locations and major shopping centers is essential to improve navigation and the sense of security. These pedestrian friendly maps are already available in, for example Sydney, Australia. In Helsinki there is at least one available at the Kamppi shopping center as well. Sydney has invested into tactile and braille signs which would also be helpful in navigating around Helsinki. Along with these suggestions towards improving navigation, it was brought up multiple times by the observation participants that placing guiding strips, tiles and paving in most locations would be very helpful in finding pathways to different sights, services and entrances or exits. The importance of these assisting features was especially highlighted for large open spaces such as the Senate Square. Guiding strips were also available in multiple destination cities mentioned during the interviews such as Pisa, Paris and Singapore.

What could have a significant impact in improving general accessibility of travellers with visual impairments in attractions and facilities is training the staff to be prepared to inform visually impaired travellers of the accessible solutions available for them. The staff should also be trained on how to assist these visitors during their visit when necessary. The necessity of training came up plenty during the observations since the staff were often the highlight of very positive experiences.
The key information about the exhibitions in museums should be available in Braille to improve the travellers’ access to information. This does not mean all the information available or even most of it, but enough information so a visually impaired visitor can get a broad idea of what the exhibition has on offer. The same applies to other sights and statues which should have short information plaque in Braille to ease finding information. These suggestions were brought up during the observations. The lack of information in Braille often affected the participants’ possibilities of really knowing what statue they were examining or what information could be learned from the museum’s exhibition. In the theoretical framework subchapter 3.1.1 Attractions, it was also recommended that big and clear fonts should be utilised so the visually impaired can see the text with a magnifying glass.

As in Paris, France, the installation of sound beacons at big buildings’ entrances and bus stops is recommended for Helsinki as well. Especially at locations such as the Central Railway Station, where there are many bus stops in one place, being able to distinguish them from one another is important. An example of a sound beacon in Helsinki can be found at the liiris center as well. To increase the audible navigation tools in the city centre furthers, beeping lights should be placed consistently at pedestrian crossings. During the observation, the researcher heard the participants mention the inconsistent placement of beeping lights at pedestrian crossings. It was very confusing when the beeping suddenly disappeared since this made distinguishing the crossings at quiet moments difficult without a guide dog present. This could potentially lead to dangerous situations.

Another audible tool for improving accessibility is the installation of talking elevators in large department stores or other buildings with multiple elevators and many floors. During the observation participant C admitted that there was no way he would have been able to find the right elevator by himself at Stockmann department store since he could not recognise which elevator was opening its doors. This appears to have been especially memorable to him since he brought it up again during his interview when he also mentioned that talking elevators can be found in many buildings in Singapore.

Recommended ways of enhancing the traveller’s experience with senses include offering visitors multisensory experiences involving their sense of smell, touch and hearing. This can be done with concerts in unexpected locations with unusual and interesting acoustics or with different tangible tours. An example that came up during the interviews of a multisensory experience was participant A’s experience of listening to a singing monk’s performance at a chapel with stunning acoustics. Another recommended way of enhancing the experience is to offer tactile and multisensory tours which are meant for the
visually impaired. These are currently available for example in Sydney, Australia. The importance of using tangible materials in attractions and public buildings was made clear by participants during the observations.

Table 6. Recommendations.

<table>
<thead>
<tr>
<th>Navigation and safety</th>
<th>Accessibility</th>
<th>Enhancing the travel experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audible information boards</td>
<td>Training of staff</td>
<td>Offering multisensory experiences</td>
</tr>
<tr>
<td>Tangible maps</td>
<td>Key information available in Braille and big fonts</td>
<td>Multisensory tours</td>
</tr>
<tr>
<td>Guiding strips, tiles and paving</td>
<td>Sound beacons at entrances and bus stops</td>
<td>Tactile tours</td>
</tr>
<tr>
<td>Tactile and braille signs</td>
<td>Talking elevators</td>
<td>Use of tangible materials</td>
</tr>
<tr>
<td>Consistent beeping lights at pedestrian crossings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The recommendations are based on both the theoretical framework as well as the research itself. The recommendations have been divided into three categories: navigation and safety, accessibility and enhancing the travel experience as seen in table 6. This allows for a clearer comparison of the recommended methods.
7 Discussion

The research is trustworthy aside from the effects caused by the researcher guiding one of the participants instead of his attendant. The research provides a viewpoint into what it is like to visit a city, in this case Helsinki, from the perspective of a visually impaired person. This is affected by the fact that in the end all research participants were mostly or completely blind, so the perspective of a person who has some vision left, is not represented through the research. Since the language of the observation and interviews is Finnish but the results were translated into English during the analysis, there is a chance of mistranslating the results.

The research process was conducted with ethical principles in mind. The observations were done as anonymously as possible considering two of the participants are acquaintances. Their names never appear on the research results and they are referred to as Participants A, B and C. They have received on multiple occasions a description of the research process, anonymity and the processing of their information.

When it comes to a visually disabled person's accessibility, security and senses, in the end they are all connected. There is much to develop when it comes to the accessibility of Helsinki as a city from the pedestrian perspective, but the keywords are tangible materials, guide strips and paving, audible information, awareness, training and colour and light contrasts. These recommendations are described in more detail in chapter 6: Recommendations.

I think there is interest in the subject of the thesis based on how often I have been approached about it during the thesis process. Before the thesis process Tourism Office in Mechelen expressed interest in the subject and during the thesis process I have been approached by an accessibility specialist from the Finnish Federation of the Visually Impaired. During the observations, personnel of the Helsinki City Museum expressed interest in finding out more information on the recommendations especially.

I hope more cities will pay attention to accessibility in their city and service planning in depth in the future and become more inclusive of people with different disabilities. This development could be based on information presented in this thesis or implementation of the research in other cities. I hope that cities will create new, creative solutions and actively share them as a network to increase the inclusiveness of the tourism sector altogether.
The thesis process was very varying. I was always well-prepared when it came to the research itself but still, I often had trouble meeting the deadlines. The second seminar’s deadlines were not met because of my preparations for the upcoming research phase. I did not learn better time management skills during the thesis process. I learned to look at different elements of city planning from the point of view of someone who has completely different circumstances in comparison to my own.
References


Appendices

Appendix 1. Observation form in Finnish

Havainnointi - Näkövammainen matkailijan kokemus Helsingissä

Tutkimuksessa keskitytään siihen, miten itse matkailukokemusta voidaan parantaa, sekä kuinka kaupungissa liikkumisesta ja suunnistamisesta saataisiin mahdollisimman esteetöntä ja helppoa.


1.

Etunimi  *

Sukunimi

Sähköposti
2. Ikä

- 21-30 vuotta
- 31-40 vuotta
- 41-50 vuotta
- 51-60 vuotta
- 61-70 vuotta
- 71-80 vuotta

3. Mitä apuvälineitä käytät havainnoinnin aikana?

4. Minkä tasonen näkösi on?
5. Havainnoinnin kohde *

6. Mitkä asiat helpottavat ympäristön hahmottamista? *

7. Mitkä asiat vaikeuttavat ympäristön hahmottamista?

8. Milla fyysisillä muutoksilla saavutettavuutta on ympäristössä tuettu? *

9. Millaisia fyysisiä muutoksia ympäristö vielä kaipaa esteettömyyden parantamiseksi? *
10. Mitkä seikat saavat sinut tuntemaan olosi turvottomaksi? *

11. Mitkä seikat lisäävät kohteessa turvallisuuden tunnetta? *

12. Miten kuvailisit ympäristöä? *

13. Mitkä asiat kiinnittävät ympäristössä erityisesti huomiosi? *
14. Millaisia aistimuksia koet? (Haju-, maku-, kuulo-, näkö- ja tuntoaistimukset) *

15. Millaisia tunteita ja muistoja edellä mainitut aistimukset sinussa herättävät? *
Appendix 2. Email in Finnish which describes what consent is given by participating

Kutsu Helsingin keskustaan havainnoimaan näkövammaisten matkailijoiden esteettiömyytteä ja matkakokemusta

Hei

Olen neljännen vuoden matkailualan opiskelija Haaga-Helian ammattikorkeakoulusta, ja kirjoitan opinmääritystä näkövammaisten matkailijoiden matkailukokemuksesta Helsingissä. Tutkimus on ohjattu koskemaan vain julkisuhdejä näkökulkulmaa. Tutkimuksessa keskityin erityisesti siitä, miten itse matkailukokemusta voidaan parantaa, sekä kuinka kaupungissa liikkumisesta ja suunnistamisesta saataisiin mahdollisimman osoitteista ja holpero.


Pyydän kaikkia kiinnostuneita ottamaan yhteyttä 25.10.2019 mennessä sähköposti-osolitteeseen tuisku.humalokki@hnyv.haaga-helia.fi.

Ystävällisin terveisin,

Tuisku Humalokki
Appendix 3. Map of the first observation tour
Appendix 4. Map of the second observation tour