

# Inclusive and accessible travel: Case Finnair Oyj

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#### **Abstract**



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This thesis aims at highlighting perspectives that are essential for organising services for air travel passengers with reduced mobility (PRM) and passengers with other disabilities. The focus is to understand the challenges faced by disabled passengers in air travel.

Aviation is a growing field of transport, carrying almost 4,4 billion people in the year 2018. At the same time, the population of the world is ageing. What ties these forecasts to the research is that ageing is generally related to an increasing number of disabilities. The background from the thesis comes from the expectations of a growing demand for accessibility services for passengers.

This thesis is commissioned by Finnish airline Finnair. As part of it, training material is produced for Finnair personnel communicating with disabled passengers at the airport and on the airplane, to improve the airline's accessibility services. Producing the material was the overall aim of the thesis, which makes this a product-oriented thesis.

The method of the thesis was desk research by which we identified the relevant perspectives and phenomena that characterise the disabled passengers' travelling. We used the findings to create the commissioner's material. The literature review in this thesis introduces these relevant perspectives: The thesis identifies organisations promoting accessible tourism and presents the regulatory framework of the disabled people's travel in the European Union and the United States. The thesis introduces two approaches to disabilities, a medical and a social models of disability. Because specialised knowledge is required to implement theory into practice as an accessible, barrier-free environment, the thesis presents a universal design approach in detail. We also cover the concept of corporate responsibility in this thesis.

The main finding of the research is that even though service arrangements for passengers with disabilities differ from those for mainstream, passengers with disabilities would like to be treated and communicated to the same way as other passengers. We noticed that this is not yet the case and that the present way of organising services often treats disabled passengers as objects to be transported. The need for collaboration between airline service providers and organisations that promote accessibility was recognised to develop the services. Designing a passenger path and physical environments according to the social model of disability and following the principles of Universal design are recommended to change the passenger experience.

The result of the thesis is that we could identify the relevant information among the numerous sources and include it to the commissioner's training material. The value of the thesis is to help change airlines' services towards accessibility and inclusion.

#### **Keywords**

Accessibility, inclusive air travel, corporate responsibility, social model of disability, universal design

## **Table of contents**

1	Intro	duction	1
	1.1	Background of the topic	2
	1.2	Research problem	3
	1.3	Methodology	4
	1.4	Thesis structure	4
2	Res	ponsibility in business	5
	2.1	The phenomenon	5
	2.2	The concept of Corporate Responsibility	6
	2.3	Tools for Corporate Responsibility	8
	2.4	Corporate Responsibility in the aviation sector	10
	2.5	Conclusions about business responsibility	11
3	Air t	ravellers with special needs	12
	3.1	Organisations promoting accessible tourism	12
	3.2	PRM Categorisation	15
	3.3	Regulations and inconsistencies in serving passengers with disabilities	16
	3.4	The medical and the social model of disability	17
	3.5	Universal design	22
	3.6	Summarising the of aspects of special needs travel	25
4	The	developmental task for Finnair Oyj	26
	4.1	Developing guidelines for employees	26
	4.2	Airline overview	29
	4.3	Methods	30
	4.4	Results and further suggestions	31
5	Disc	ussion	33
R	efere	nces	36
Αŗ	pend	lix 1	43
Αŗ	pend	dix 2	44

#### 1 Introduction

"Respect is how to treat everyone, not just those you want to impress."

- Richard Branson -

One billion people, or 15% of the world's population, experience some form of disability or condition that complicates life. These conditions are disabilities, such as physical or cognitive disabilities or visual or hearing-related disabilities. Disabilities commonly create special needs for operating in the society that is built to serve people without limitations. (World Health Organisation & World Bank 2011, 27-28.) Different phases of life form special needs, too. Almost everyone will be temporarily impaired at some point in life. Those who reach old age will experience increasing difficulties in functioning. (World Health Organisation & World Bank 2011, 3.) When increasing accessibility, the solutions benefit several groups in a society.

Helping other people is self-evident in developed societies. When operating in the commercial industry, guidelines and regulation are needed to ensure equal treatment to everyone. Setting guidelines ensure a certain level of service to those people with special accessibility needs. Voluntary actions taken on top of the standard required by law are a step towards the equal treatment for all. Corporate responsibility is a rising trend as many companies are looking for ways to better serve all customer segments.

This bachelor's thesis focuses on understanding disabled air passengers' needs in air travel context and explores the ways airlines can organise their services for special category passengers. The result of the thesis is training material, which aims at raising awareness about disabilities among the personnel assisting disabled passengers at the airport or in the airplane. The overall aim of this thesis is to make the passenger journey more comfortable experience for disabled and elderly people.

"We have a moral duty to remove the barriers to participation to unlock the vast potential of people with disabilities".

- Stephen W Hawking -

#### 1.1 Background of the topic

Air transport is a fast way of travelling, quite readily available and affordable for many people. International Air Transport Association (IATA) predicts that annual air travel will double by 2035 (IATA 2018). The five fastest-growing markets will be China, US, India, Indonesia and Vietnam (IATA 2016).

Many practical issues in airports and airplane environments, however, make it difficult for those with different kinds of disabilities, to choose air travel as the means of transport. Several studies have been conducted to examine how passengers with various disabilities experience air travel. Studies address common barriers to travel. Typically, the results highlight physical environmental barriers that hinder travel, but also bring to the light attitudinal barriers showing that passengers with disabilities tend to avoid air transport also because of assistance and communicational issues they experience during the journey. Customer care, shortages of staff or the attitude of staff were the most common reasons for why disabled passengers were dissatisfied with the assistance they received. (Civil Aviation Authority 2018.) Further research has been conducted to understand in more detail, what are the practical assisting skills and communicational skills expected by disabled passengers themselves from the staff assisting them (Wang & Cole 2013; Davies & Christie 2017).

According to European Union legislation, disabled persons and persons with reduced mobility, whether caused by a disability, age or any other factor, should have opportunities for air travel comparable to those of other citizens (EU Regulation 2006). A similar regulation applies to the United States as well: The Air Carrier Access Act (ACAA) prohibits the U.S. and foreign air carriers from discriminating against an air traveller with a disability (U.S. Department of Transportation 2019).

The population of the world is ageing. Ageing is happening in all regions and countries at various levels of development. Increased life expectancy is one of humanity's greatest achievements. However, global ageing has a major influence on disability trends and there is higher risk of disability at older ages. (United Nations Population Fund 2012, 13; WHO World Health Organisation & World Bank 2011, 35.) An IATA survey of 48 airlines reported that the requests for wheelchair assistance grew 30% between 2016 and 2017 (IATA 2019b). For airlines, an increasing number of senior citizens creates a passenger segment that on average has more special needs than younger travellers.

For airlines, to serve this customer segment and to meet their expectations require understanding the passenger experience along the entire journey. The journey starts when a person considers taking a trip, through the various stages of the journey to arriving at the destination. Global travel technology company Amadeus has identified four key elements that build value proposition of the ideal accessible trip. Those are effective communication, responsive service, standardised content and a personalised offer. After the journey the passenger will evaluate, based on his or her experience, whether intending to travel again. (Amadeus 2017.) Amadeus' study shows that it is essential for airlines to meet the customers' expectations to convince them come back.

A part of this thesis was to design comprehensive training material about accessibility for the Finnish national carrier Finnair to serve as a training tool about disabled passengers to the personnel. Both perspectives, the passengers' and transport provider's are included. For Finnair, accessible services have been one of the essential responsibility themes in 2018 (Finnair 2019.)

The aim of the thesis is also to clarify why it is vital to focus on the travel conditions of disabled people. The aim is to clarify the perspectives that allow airlines to see the benefits of investing in services for special category passengers. Presenting relevant themes such as corporate responsibility and ageing of population of the world the thesis aims at raising the discussion about enabling equal possibilities of air travel for everyone. Focusing on the disabled passengers would, as already discussed briefly, contribute to other special category passengers' travel.

#### 1.2 Research problem

Air transport sector has organised systems and processes by which it serves disabled passengers and meets the requirements of the law. Airlines are making improvements in the service processes for disabled people, however, no airline has succeeded in distinguishing itself in providing a significantly better service to disabled people than others. The thesis aims at clarifying the current situation of what has been done by the air travel industry for special category passengers. It also aims at coming up with recommendations for airlines what they can still do to improve the services to the passengers with special needs.

The foremost objective of the thesis is to create a tool for the commissioning airline to develop its services and products for disabled passengers further. The personnel providing the service to special category customers have a crucial role in the service. The training material gives Finnair a tool that can be used as such to provide the service personnel with necessary information about disabilities. The content can also be developed further into comprehensive training material for certain groups of staff. This will be discussed more in the discussion section.

The training material and the thesis discuss accessibility in physical environments. It does not cover the accessibility in digital forms, such as internet services.

#### 1.3 Methodology

This thesis is product-oriented. The new product is a training material for airline personnel about disabled people's travel. The content of the material is based on an extensive literature review, including academic articles and sources provided by organisations advancing the interests of disabled people.

Finnish airline Finnair ordered the presentation to be used as training material for internal purposes. The process of producing the contents included a test phase.

#### 1.4 Thesis structure

This product-oriented thesis includes the theoretical framework followed by an empirical part, the process description. Moreover, the thesis introduces the literature review, the related concepts, the law base, and the relevant organisations. The thesis presents disabilities within the context of aviation.

Chapter 2 introduces the concept of Corporate Responsibility, the history of it and some of the applications in aviation sector. In Chapter 3 we show that to develop accessibility, several aspects such as law base, prevailing policies and practices in aviation as well as attitudes to disabilities have to be taken into consideration.

Chapter 4 presents the product and the commissioner. Finally, in Chapter 5 we discuss our findings, introduce some new ideas for further development for the aviation industry and lastly, our own learning experiences.

#### 2 Responsibility in business

"Can you imagine what a different world we will live in when businesses do what's right for the communities and the environment in everything they do?"

Richard Branson –

Chapter 2 will explain the history of business responsibility and how it is applied to present world organisations. The first section will look at responsibility phenomenon from the past and how it has evolved into the modern world. (National Philanthropy Trust 2019; Hebrew Nations 2014; Safley 2003, 1.) The second section will explain the concept of corporate responsibility and its history with an example (Farcane & Bureana 2015, 31-42; Eur-Lex 2014). The last two sections will bring corporate responsibility to modern society and how organisations are currently applying it to the aviation sector. (Elkington 1999; GRI 2019; ISO 26000; Finnair 2019e; IATA 2019.)

In this Chapter, we use wording Corporate Responsibility (CR) which means that an organisation is behaving respectfully towards the environment and the society. It is one of the pillars for the organisation business practises. Corporate Social Responsibility (CSR) is about being proactive in social actions and brand development not part of the organisation genes but rather adding some extra beyond the organisation practises. (Conrady & Buck 2012, 201; Handrian 2019.)

#### 2.1 The phenomenon

As social phenomena, corporate responsibility and corporate social responsibility are not new. They are evolving terms that do not have a standard definition. Many people have a vague idea of what corporate (social) responsibility is, and it can have a different meaning for people depending on their cultural background, country of resident and wealth. Typical viewpoint to corporate (social) responsibility is as 'a corporation giving some money to charity work'. While this is true, it is evolving, and for example, European Commission defines corporate social responsibility as 'a concept whereby companies integrate social and environmental concerns in their business operations and their interaction with their stakeholders on a voluntary basis' (European Commission 2011).

Corporate responsibility is originally philanthropy, which in Greek ('filanthropia') has the meaning 'love of humankind'. Philanthropy has its founding roots already back in thousands of years. For example, ancient Hebrews 2500 BC used a mandatory tax, 'tithe' to

benefit the poor. Indeed, first thousands of years corporate responsibility was very much focused on philanthropy, whether it was charity through taxation or mostly voluntary alms given by individuals to beggars and poor. (National Philanthropy Trust 2019; Hebrew Nations 2014.)

In early modern Europe in 1400<sup>th</sup>-century, charity and corporate responsibility transformed from random voluntary acts towards more constitutionalised sharing of resources to people in need. What was earlier inclusive and free became compulsory social disciplinary mechanism. Before poverty was considered innocent, but with institutionalisation, it became something suspicion. The importance of charity lessened, and poor relief emerged. It was a requisite, albeit grating step toward modern social welfare. (Safley 2003, 1.)

In the present world, it is almost a must for any organisation to be active in the community beyond shareholder needs (Reference for Business 2019; McKinsey 2013). For example, a company may choose to preserve Kenyan forests, build wells to small African villages or something else (United Nations 2008; Watergood 2019). Today it is also essential to promote chosen charity in social media to the company stakeholders (Investopedia 2019). This way, the company becomes socially acceptable in the view of the public (McKinsey 2009). It may generate revenue when consumers select products or services from this company rather than from a company that is not socially responsible (Investopedia 2019).

#### 2.2 The concept of Corporate Responsibility

The concept of Corporate Responsibility (CR) has been developed soon after World War II. In the '50s business environment, not only had to think profits but start to consider labour rights as well. Social movements in civil and women's rights intensified. Subsequent decades were an era of awareness and issues until the '90s CR became part of the company strategy. After the year 2000 until today, CR is already an integral part of the company business and even regulated in the EU region if the public company reaches a size of 500 employees. (Farcane & Bureana 2015, 31-42; Eur-Lex 2014.)

Last 20 years, the public has had a growing impact on the development of CR via various Non-Governmental Organisations (NGOs), national governments, and international institutions that are participating actively in CR development. The rise of social media made it possible for individuals to share their views, which have forced businesses to be active in CR beyond national and international regulations. (Farcane & Bureana 2015, 34.)

The following figure presents the history of the Corporate Social Responsibility (CSR) timeline in the last 70 years.

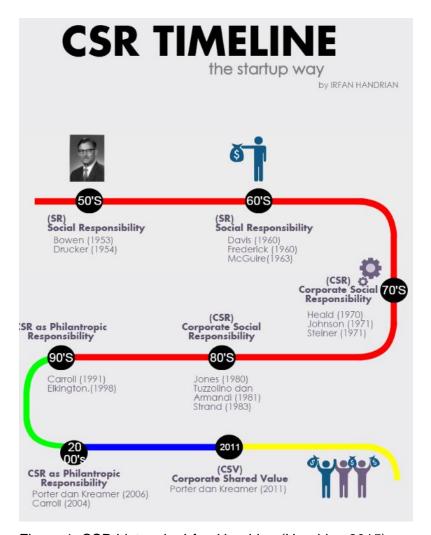


Figure 1. CSR history by Irfan Handrian (Handrian 2015)

Business-as-usual is no longer an option for companies. There is growing consensus among governments, businesses, and individuals that considering social and environmental aspects are a vital part of business as well. Organisation's single task is not to create profit for their shareholders only, but regarding other stakeholders is a must with sustainability aspects as well. (Conrady & Buck 2012, 201.)

An excellent example of unsustainable, profit-focused industry is the American whaling industry the late 1700s through mid-1800s centuries. It flourished over one hundred years, creating enormous wealth for boat owners. Stories like Melville's Moby Dick celebrated courageous men at sea hunting whales. The decline of the industry began in the mid-1840s, and in a few years, the industry collapsed due to the near extinction of whales. The sector lacked corporate responsibility making it unsustainable in the long run. (Savitz & Weber 2014, 1.)

#### 2.3 Tools for Corporate Responsibility

Organisation's primary and most important measure has been so-called bottom-line performance. If a company made a profit for its shareholders, it was all that mattered. The 21<sup>st</sup> century has changed the view. While financial performance is still the most crucial factor, new aspects have emerged alongside to profitability. One of the most used strategies among publicly owned organisations is triple bottom line strategy. This strategy considers three aspects – people, planet, and profit. (Elkington 1999.)

- People: An organisation should be socially responsible towards its employees and to all stakeholders. As an example, a stakeholder can be a small farmer in rural Bangladesh for an international company giant in Europe.
- Planet: Whatever an organisation does it should be environmentally responsible.
   The exploitation of nature is not anymore publicly accepted, and also strict governmental regulations are implemented.
- Profit: This is the traditional measure of an organisation. Nowadays, making a
  profit is not possible without considering people and planet or profit-making is only
  short term.

The following figure illustrates the triple bottom line. It shows how the three mentioned aspects create a sustainability area in the middle.



Figure 2. Triple bottom line

Finnair translates the triple bottom line to cleaner, caring and collaborative. Cleaner means environmental aspects like fuel efficiency and recycling of materials. Caring is people, both employees and customers. Collaborative means profit part in triple bottom line considering all stakeholders and economic responsibility. (Finnair 2019c.)



Figure 3. Finnair's triple bottom line. (Modified from Finnair 2019c)

Part of the corporate responsibility is also to have transparent reporting that any stake-holder can read. Global Reporting Initiative (GRI) is the first global standard for sustainability reporting. GRI is an independent international organisation since 1997 and is widely used by businesses to do reporting considering climate change, human rights, governance, and social well-being. (GRI 2019.)

To achieve evolving public needs of corporate responsibility, the International Organisation for Standardization (ISO) provides ISO 26000 standard. The standard guides on how businesses can operate in an ethical and transparent way that promotes the welfare of society with an environmentally sustainable way to do business. (ISO 26000.)

Finnair actively initiates corporate responsibility via the corporate responsibility program. The program has targets and performance indicators inspired by three themes: cleaner, caring, and collaborative. Moreover, Finnair actively communicates its corporate responsibility to stakeholders in the sustainability report. Finnair does reporting according to GRI reporting guidelines. In 2013, Finnair also signed the United Nations Global Compact Initiative to comply with principles like human rights, labour, environment, and anti-corruption. (Finnair 2019e.)

#### 2.4 Corporate Responsibility in the aviation sector

The airline industry enables people to travel and experience new cultures. It is visible in everyday life and under critical evaluation every single day. Thus, the sector needs to be highly sensitive to demands about corporate responsibility. Airlines need to evaluate market atmosphere and make long term plans based on the results.

Currently, the industry has committed to cut aviation emissions to half the levels of 2005 by 2050. The growth should be carbon neutral already from 2020. At the same time, there is a growing demand for air travel, which IATA estimates to be an average 4,1% per year over the next 20 years. It creates a challenging and highly competitive market where only the most market-sensitive airlines can survive. (IATA 2019.)

While climate change is one of the most remarkable challenges and a megatrend shaping the future to which airlines are addressing by carbon level scheme, an ageing population is another one. The ageing population creates a huge market opportunity as this segment will have more free time and have wealth for travelling. The airlines need to understand this market segment and provide passenger experience addressed to a group of people. (Klemettinen 2016.)

Amadeus commissioned research about accessible travel from ILUNION consulting firm, 'Voyage of discovery. Working towards inclusive and accessible travel for all'. ILUNION interviewed over 800 accessible travel specialist from international organisations, both public and private sectors, and regular travellers across the globe. By 2050 the world demographics will look quite different from now. An ageing population will represent over 21,5 per cent of the total population, and thus it is vital to consider seniors (over 65) as one special needs group along with other disabilities. (Amadeus 2017.)

In the last decades the travel industry has gone through a revolution as the internet with Low-Cost Carriers (LCCs) brought travelling to the reach of hundreds of millions more people. The trend shows no exhaustion at present. However, one demographic group has not yet been able to utilise the travelling trend entirely – people with accessible needs. This group wants to travel equally to any other regular traveller. They want to plan, book, purchase, and travel independently. (Amadeus 2017.)

#### 2.5 Conclusions about business responsibility

In the past triple bottom line was all about profit what mattered and other two aspects; the planet and people were on the sidelines. They only happened in random acts like charity or saving resources if it benefitted profit directly. The exploitation of labour and nature was commonly accepted.

Currently, due to rising concern towards the lack of world resources and climate change; the planet has become a rapidly increasing trend for businesses and individuals to matter. Especially millennials like Greta Thunberg (Thunberg 2019) has taken world environmental and climate change issues to their agenda. The planet part in the triple bottom line continues to be in focus in the future as well even some high-level world leaders (Trump 2019) are resistant about the human part in climate change.

While, in the past, the people have been the most neglected part of the triple bottom line, it is increasingly becoming in focus nowadays. Companies like Finnair wants to profile as a company serving all customers, including PRMs equally (Finnair 2019f.) As average human age is getting older, there are more and more people benefitting from this attitude change. In the end, there can be no profit if there are no resources left. Furthermore, the growing segment of special needs customers creates new business opportunities for companies willing to grasp on them.

The next Chapter will review the high-level global organisation and how they are promoting the people part in the triple bottom line, especially in the aviation industry. It also identifies gaps in current regulations and promotes means to close those gaps towards more inclusive air travel.

#### 3 Air travellers with special needs

"The future of air travel lies in the hands of inclusiveness!"

- Harri Kujala -

Chapter 3 will first describe organisations that are actively working towards more inclusive travel (United Nations 2016; UNWTO 2016; ENAT 2019; Foundation Once 2019; Open Doors Organisation 2019; ISO 2019). Secondly, it will present IATA's categorisation currently used in the airline industry when a customer with special needs books an air travel ticket (Wheelchairtravel 2019). There is also a review of current regulations and inconsistencies in them when serving special needs customers (Eur-Lex 2006; U.S. Department of Transportation, 2010). Lastly, it will present a social model and universal design which benefits all customers with special needs (Buhalis & Darcy 2011, 4; National Disability Arts Collection & Archive 2017).

#### 3.1 Organisations promoting accessible tourism

United Nations Department of Economic and social affairs has a mandate of the secretariat for the Convention on the Rights of Persons with Disabilities (CRPD). This mandate came to force in May 2008 and have been ratified by 177 states and the EU by November 2016. The CRPD is a legally binding international treaty (United Nations 2016.)

The convention on the CRPD and its optional protocol (A/RES/61/106) give a framework to human rights with a social development angle. It aims to change audience view to people with disabilities. Instead of seeing persons with disabilities as "objects" of charity and social protection, they should be seen as "subjects" with rights. Moreover, they should be able to claim those rights and be active members of society on an equal basis with others. So far 92 states ratified the optional protocol. There the states recognise the UN committee right to investigate violations claimed by disabled persons to their legal rights to equality. (United Nations 2016; United Nations 2007b.)

United Nations' goal is to transform the world with 17 Sustainable Development Goals (SDGs). The program is called #Envision2030, and it explicitly includes persons with disabilities in multiple parts of SDGs. The agenda has a principle of "leaving no one behind", that the world would be fully inclusive by 2030. Seventeen goals are listed below, and the majority of the goals links to disability. (United Nations 2015.)

# SUSTAINABLE GALS DEVELOPMENT



Figure 4. UN sustainable development goals (United Nations 2015)

United Nations World Tourism Organisation is the agency responsible for promoting sustainable and universally accessible tourism. It is one of the leading international organisations developing more inclusive travel. (UNWTO 2016.) UNWTO Secretary-General Taleb Rifai says that: "Accessibility is a central element of any responsible and sustainable tourism policy. It is both a human rights imperative and an exceptional business opportunity. Above all, we must come to appreciate that accessible tourism does not only benefit persons with disabilities or special needs; it benefits us all." (UNWTO 2016.)

European Network for Accessible Tourism (ENAT) is a non-profit association for organisations. It aims to study, increase awareness, and promote the best practises for accessible tourism. ENAT is active in five continents and over 30 countries. Any organisation, private or public, can join to ENAT. High-level organisations like the European Commission, Lonely Planet, and World Tourism Organisation are members of ENAT. (ENAT 2019.)

Asia-Pacific Network for Accessible Tourism (APNAT) established in 2014. APNAT aims to raise accessible tourism awareness in the Asia-Pacific area. Asian continent is known

by its hospitability, but awareness about accessible tourism varies a lot between Asian countries and organisations. APNAT is still emerging and active through Facebook group ATAP (Accessible Tourism – Asia Pacific). (ENAT 2016.)

ONCE Foundation is an organisation from Spain established in 1988. ONCE is a country level organisation but working actively in international accessibility matters due to its long history and experience. Its main objectives are training and creating jobs for persons with disabilities. Another priority is promoting and creating universal accessibility for all. (Foundation Once 2019.)

Open Doors Organisation (ODO) in Chicago, U.S. based organisation was founded in 2000. ODO focuses on creating society accessible to everyone. They teach businesses to succeed in the disability market and empower disability communities. (Open Doors Organisation 2019.)

International Organisation for Standardization (ISO) is an organisation developing and publishing international standards. It was founded in 1946. Its name ISO is derived from the Greek word isos, meaning equal. With international standards, ISO helps to create world equitable for all people and trade. (ISO 2019.)

ISO 21542:2011 Building construction – accessibility and usability of the built environment is a standard which specifies requirements and recommendations for public buildings. The standard is the foundation to construct buildings accessible and usable to everyone in its regular operation but also in the case of an emergency. (ISO 21542:2011 2011.)

Some of these organisations promote accessibility on a general level (ONCE, ODO) and others have the focus on tourism business only (ENAT, APNAT). ISO focuses on standardising processes and by the standard introduced here, it provides a tool for tourism business to achieve concrete measures accessibility. All these organisations promote the advantage of disabled people and accessibility.

#### 3.2 PRM Categorisation

The International Air Transport Association (IATA) is guiding its members to use specific ticket codes indicating the level of needed assistance. IATA's resolution 700 defines categories for incapacitated passengers and how to assist them throughout their journey at the airport and onboard. The resolution 700 is binding for all IATA's members. The passenger can make Special Service Request (SSR) for the serving airline with Medical Information Form (MEDIF) typically 48-72 hours prior to the flight. The incapacitated passenger category is identified in airline messages by A4A/IATA Reservations Interline Messages Procedures (AIRIMP). (Wheelchairtravel 2019.)

The following tables list IATA SSR codes. Four tables are used for better readability.

Table 1. IATA SSR codes for physical disabilities

Code	Description
BLND	Blind passenger
DEAF	Deaf passenger
MAAS	Meet and assist
WCHR	Wheelchair for distance, can ascent and descent steps
WCHS	Wheelchair for distance and steps, can walk to a cabin seat
WCHC	Wheelchair, the passenger is entirely immobile

Table 2. IATA SSR codes for wheelchair codes

Code	Description
WCBD	Wheelchair (dry cell battery)
WCBW	Wheelchair (wet cell battery)
WCMP	Wheelchair (manual powered)
WCMB	Wheelchair (lithium-ion battery)
WCOB	On-board wheelchair provided by the air-
	line

Table 3, IATA SSR codes for intellectual disabilities.

Code	Disabilities
DPNA	Passenger with an intellectual or develop-
	mental disability like Alzheimer disease,
	down syndrome, autism, mental retarda-
	tion, other cognitive difficulties, etc.

Table 4. IATA SSR codes for medical cases

Code	Description
LEGL	Left leg in a cast
LEGR	Right leg in a cast
LEGB	Both legs in a full cast
OXYG	Passenger needing oxygen during flight
PPOC	Personal portable oxygen concentrator
STCR	Stretcher passenger

#### 3.3 Regulations and inconsistencies in serving passengers with disabilities

EU regulation defines a person with reduced mobility as any person whose mobility when using transport is reduced. It can be temporary or permanent, covering both physical and intellectual disability. The disability can be inherited or caused by an accident or by age. This group of passengers are by EU law eligible to transport service made available to his or her particular needs. The assistance should be provided without additional charge. (Eur-Lex 2006.)

EU regulation 1107/2006 applies to all air carriers departing or arriving at the European airport. Moreover, it applies to EU carriers departing or arriving from airports located outside the EU. In the EU, duties are divided between the air carrier and the airport. The airport is responsible for assisting in the terminal building until the aircraft seat. The airline provides assistance on-board until arriving terminal inside the EU. The arriving airport staff assists the person with reduced mobility from the aircraft seat through the terminal to the next mode of transport. (Eur-Lex 2006.)

While in the EU assistance duties are divided among the airport and the carrier, in the United States and other countries following the U.S. Department of Transportation act 14 CFT Part 382, the assistance duty is different. In the 'Non-discrimination on the Basis of Disability in Air Travel' regulation, the air carrier provides all assistance services both at

the airport and on-board. The regulation applies to all air carriers whose flight originate or terminate at U.S. airport. (U.S. Department of Transportation, 2010.)

Other countries (Non-European and non-U.S.) may be subject to their regulations. Carriers who are not IATA members may only work in best-effort mode with no service guarantees or even refuse to give any assistance service. These different assistance providers and levels leave a disabled person in a vulnerable position. Service discontinuation risk is high between assistance providers touchpoints.

#### 3.4 The medical and the social model of disability

Disabilities can be seen in a very different light depending on whether one is familiar with the traditional medical model of disability or if including elements of the more modern, social model of disability.

The medical model views the person's impairment as the person's problem, and that requires medical intervention in the form of individual treatment to normalise their disabled body. The medical model of disability emphasises that people are disabled by their impairments or differences. (Buhalis & Darcy 2011, 4.) According to the medical model of disability, the word disabled means less able and being less able leads to becoming less able to play an active part in the world which is just the person's bad luck (National Disability Arts Collection & Archive 2017). The medical model is the traditional way of looking at disabilities, and it often leads to discrimination because it does not try to remove the barriers that disabled people are facing in their daily lives. This is the reason why disabled people themselves tend to be willing to abandon the medical model.

The social model of disability sees that disability is a social construct that is created by social barriers. It differs from the medical model by pointing out that the person does not have a disability but is disabled by society. The society sets disabling barriers that include restricted access to keeping people systematically excluded. The barriers also include prejudiced opinions and attitudes prevailing in the society. The key difference between the medical and social model is the solution-oriented approach. The social model of disability looks for solutions; the ways the barriers in the surroundings could be eliminated. The focus is on the way how we design society. It is possible to plan and organise surroundings to provide accessibility, independence and opportunity in a way that enables people rather than disables them. "When we remove barriers, disabled people can be independent, with choice and control over their own lives". (National Disability Arts Collection & Archive 2017.)

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) already discussed in Section 3.1, actively points out the two principles of viewing persons with disabilities, either as objects of medical treatment and social protection, or seeing persons with disabilities as subjects with rights. The convention is the first legally binding instrument with comprehensive protection of the rights of persons with disabilities. It focuses on disabled person's right and capability of making their own decisions for their lives. The convention requires measures to be taken to ensure the accessibility of the physical environment and information and communications technology. The obligations are, for example, to ensure that the public sector, as well as the private sector, respects the rights of persons with disabilities. (United Nations Department of Economic and Social Affairs 2019.) Thus, in Finland for example, the publicly owned airport operator Finavia, and the airlines operating in Finland under the Finnish flag are subjects to the convention's obligations as Finland has ratified the convention.

Air transport has a tradition that relies strongly on the medical approach of disability. One example is the categorisation of travellers into different disability categories, presented in Tables 1-4 in Chapter 3. This approach is partly justified because categorisation is needed to enable communicating safety related issues effectively and precisely. Another example of the medical approach is the passenger path of a wheelchair passenger taking a flight, shown in Figure 4. The services along the path are based on the personnel assisting disabled travellers. This refers to the medical approach of thinking and arranging the services. If arranged according to the social approach, the process would enable wheelchair users enter each phase of travel independently or as independently as possible.

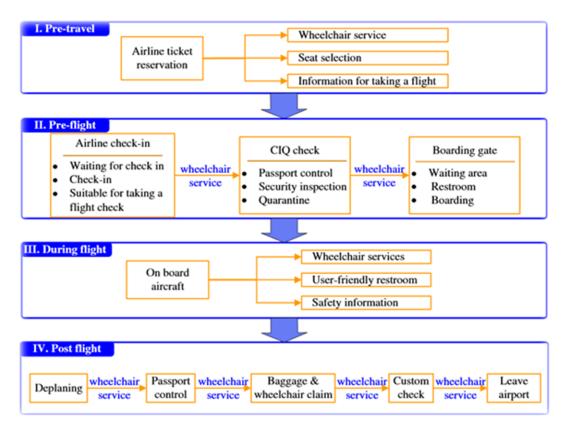


Figure 5. Passenger path of a disabled passenger (Chang & Chen 2012)

The study by Davies & Christie (2017, 89) lists a set of practical recommendations for the air travel industry, based on the experiences of passengers with reduced mobility. The recommendations include improvements in seating, boarding, wheelchair procedure as well as accessibility to the toilet on aircraft. The developing areas are presented in table 5. Implementing the recommendations would take a PRM passenger towards independent travel by providing the surroundings that enable the journey without a travel companion. Furthermore, Davies' and Christie's study suggests that the procedures should be standardised to provide similar service throughout UK airports. To harmonise the services further, there is an obvious need to implement various actions regarding accessibility within the air travel industry throughout the world.

Table 5. Areas of developing air travel experience for passengers with reduced mobility. (Modified from Davies and Christie 2017)

Areas of improve-	Explanation
ment	
Seating regulations	The wheelchair user's seat is commonly the window seat, where the handling
	team has to lift over three seats. Some airlines use upgrade possibility to
	business class if empty seats are available.
Boarding priority	Wheelchair users often board the plane first, but not always. PRM passen-
	gers prefer boarding first, as it might cause the feeling of humiliation when
	boarding last, the whole plane boarded and waiting.
Wheelchair process	Returning the wheelchair to the door of the aircraft during disembarkation.
	PRM passengers commonly feel helpless and dependent on others without
	the chair.
Understanding the	Staff need to have a greater understanding of the humiliation and embarrass-
passenger	ment that interacting with a PRM can cause. Regular awareness training is
	suggested.
Specialised teams	Specialist disability teams are suggested for airports, with extensive training,
	to look after the procedure of boarding and disembarking the aircraft.
Toilet accessibility	Access to the toilet on aircraft or a perceived lack of access to it needs to be
	addressed by the aviation industry and should be considered in the design of
	new aircraft.
Manual handling	Manual handling equipment to aid wheelchair users on and off the aircraft
	should be examined: the needs identified are padded and/or have pressure
	relieving qualities to be comfortable, adjustability to lower and raise the aisle
	trolley to match the height of a wheelchair or the seats on the plane.
Standardising	All procedures should be standardised in order to provide similar service to
	be expected throughout airports.

In addition to the medical and social model, which are commonly found in literature concerning disabilities, the third and the fourth approaches have been identified to characterise different perspectives to disability. The third model, the charity approach, treat persons with disabilities as passive objects of welfare payments as they are not considered able to provide for themselves by going to daily work or by some other means. Consequently, society provides for them. The fourth model, the human rights approach, together with a social approach are the two recent and most modern approaches. Human rights approach of disability acknowledges persons with disabilities as subjects of rights and treats the barriers in society as discriminatory. Voting, for instance, is a right of everyone. A human rights

approach to disability recognises the lack of voting material and the inability to have assistance in voting as discriminatory. (United Nations 2014.)

Social media offers a platform for sharing experiences and empowering people with disabilities. Searches with hashtags #disability or #disabilityawareness, for instance in Instagram show a glance to a modern world of wheelchair users sharing pictures, often accompanied with texts such as "I love my wheelchair! It's not a limitation but a liberation..." (@chiara\_schalatter 2019) or as in the picture xx below, "I love when I can travel freely. I love when everything is accessible for me/us. Accessibility equals freedom" (@thejourneyofabravewoman.)



Figure 6. A picture published in Instagram (@thejourneyofabravewoman)

Disabled people themselves share experiences and practical tips and recommendations about accessible travelling in social media. Sharing content in various channels is a great example of social approach of disability. In addition, the nature of social media allows anyone follow these accounts and become aware of the life of the disabled people.

#### 3.5 Universal design

In societies that promote equality, everyone should be able to use common spaces and buildings comfortably, without difficulty. This sets accessibility requirements for public places and buildings. With the diversity of abilities, individuals benefit from environments that are built in a way that support individuals to use the environments as independently as possible. A universal design approach aims at providing designs that take into account physical and behavioural factors in a built environment. Universal design principles can be applied not only to the built environment but also to products and services provided as well as to information and communications technology (ICT). (National Disability Authority 2019.) Table 6 below introduces the universal design principles.

Table 6. The 7 principles of universal design. Modified from National Disability Authority 2019)

	Principle	Guidelines
1	Equitable use	Providing the same means of use for all users, avoiding seg-
		regating any users
2	Flexibility in use	Accommodating right- or left-handed access use, providing
		adaptability to the user's pace
3	Simplicity and intuitive use	Eliminating unnecessary complexity, arranging information
		consistent with its importance
4	Perceptible information	Providing adequate contrast between essential information
		and its surroundings
5	Tolerance for error	Arranging elements to minimize hazards and errors, providing
		warnings of hazards and errors
6	Low physical effort	Allowing the user to maintain a neutral body position, minimiz-
		ing sustained physical effort
7	Size and space for approach	Providing adequate space for the use of assistive devices or
	and use	personal assistance

As can be seen by the principles, taking them into account when planning build environments is beneficial for people that have disabilities. What is remarkable as well is that well-planned environments are suitable not only for the disabled but for everyone. To highlight the core of the design and the meaning of "universal" in it, designing for one group can result in solutions that address the needs of many others. For example, building step-free entrances facilitate wheelchair users but also parents with baby strollers; people with luggage, people using walking aids and people with visual difficulties. (National Disability Authority 2019.)

Limitations are often thought as permanent disabilities, however, they are caused by ageing, or by minor or vaster accidents. At some point, almost every person experiences some form of inability (National Disability Authority 2019). Figure 5 shows the share of people that have advantage of accessible environments.

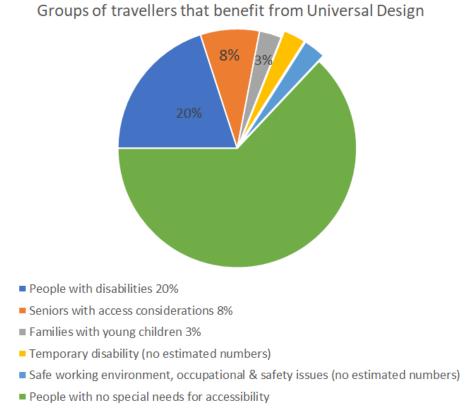


Figure 7. Groups of travellers that benefit from Universal Design (Modified from Buhalis & Darcy 2011)

Other terms that Universal design are used, such as inclusive design and design for all, as different approaches to accessibility. Even though they serve slightly different purposes, they all share the same overall goal, increasing the accessibility of the interactive system for the broadest possible range of use. (Persson, Åhman, Yngling & Gulliksen 2014.)

Accessible lavatory facilities is one of the most critical practical issues disabled people face in air travel (Chang & Chen 2010, 1216). Table 7 below introduces a few examples of how the principles of accessibility have been implemented into practice. These are examples of universal or inclusive design.

Table 7. Examples of different approaches and applications of accessible design in aviation (references mentioned in the right column)

Service or product	Actor/location	Specific	Reference
Restroom in airport termi-	O'Hare airport/	Restroom model is the first of	(Harrington
nal 2, equipped with elec-	Chicago, US	its kind in the US.	2019)
tric hoists, enough room for			
the large wheelchairs and			
scooters, accessible toilet,			
sink, and shower.			
Airbus' Space Flex: Rear	Airbus narrow-	Lavatories accessible first time	(Airbus 2014)
lavatories can be combined	body fleet	in single-aisle aircraft (narrow-	
into one spacious one by	(A320-series)	body)	
folding the wall in between.			
Universal Design Service	Narita Airport,	The spacious restrooms are	(Narita Airport
Facilities: Multipurpose re-	Japan	available for various special	2019)
strooms		category groups from wheel-	
		chair users to those requiring	
		special assistance and parents	
		with little children.	

Airlines have a set of tools to provide the special category travellers with information and even simulated experiences of travelling in an aircraft. Three examples are listed to introduce measures of three European airlines:

- Virgin Atlantic organises familiarisation opportunities for people that hesitate travelling by airplane. Commonly the reasons for concerns relate to assisting equipment, for instance, if there is enough space in an aircraft for the equipment to be used. Many of the guests are families that plan to have a trip with their disabled child, and they visit the mock-up of an aircraft interior with the child, to discover whether the airplane conditions would enable the journey with the child. (Lundy 26 November 2018.)
- British Airways offers training courses under title Flying with confidence, including technical and psychological sessions, where those unfamiliar with flying of various reasons get information about different phases of flying (British Airways 2019).

Finnair informs its passengers about the conditions in airplane and airports. There
is an informative page published for elderly people on Finnair's web page about
things to be considered before flying. The tips include advice on preferred seat
bookings, wheelchair services at the airport for transfer, packing the medication,
and ordering food in advance (Finnair 2019d). Sharing information actively helps
passengers to prepare for the flight in advance and to avoid unforeseen circumstances.

Common features for the services are the airline's genuine desire to collaborate with special category passengers and prepare them for the journey. This is to share responsibility and to and ensure that the air travel conditions and services meet the passenger's expectations.

#### 3.6 Summarising the of aspects of special needs travel

In Chapter 3 we presented an overall view of the organisations actively working towards accessibility and inclusive travel. We introduced IATA ticket codes to show that airlines a system for collecting information about disabilities and communicating the level of assistance needed from the reservation to the end of the passenger journey.

We showed the legislative background by introducing the regulation in EU and in the United States and showed the difference in the air carrier's and airport operator's duties as arranging assistance services. We pointed out that other countries may be subject to their regulations.

The medical and social approaches to disability were introduced to bring prejudiced attitudes as part of the theme. The social model is solution-oriented and the modern way of thinking: to look at the barriers in the surroundings that can be eliminated. We explained the principles of Universal design and described its role as a part of the practical solutions. We showed that about 30% of the population would benefit from environments designed according to the Universal design principles that support individuals to act independently.

In the following chapter we focus on the product of the thesis - how we worked from the commission to the deliverable product.

#### 4 The developmental task for Finnair Oyj

Passengers with disabilities value accessible physical environments. Besides the needs of accessible physical environments and equipment, the impaired passengers value the way they are treated and how communication succeeds with personnel at the airports and onboard. They have a need to be treated the same as passengers without any disabilities. Furthermore, the need for effective communication and accurate information. (Wang & Cole 2013, 1239.)

Davies & Christie (2017, 92) have interviewed wheelchair passengers for their study and the following quote of a passenger using a wheelchair the quote sums up what a wheelchair user encounters when travelling: "The staff generally are very polite, but you often feel they don't really know what they are doing. They usually have to make at least a couple of phone calls to somebody else to ensure that, you know... so if you find you are the first wheelchair-user they have ever seen I find that a bit weird really". The experiences may influence the upcoming intentions for flying as difficulties with any stage of travel may discourage disabled travellers from taking another trip in the future.

#### 4.1 Developing guidelines for employees

Finnair offers appropriate services to its disabled passengers. It also provides training regarding disabled passengers to its personnel. Finnair has ordered this project work - an information package about disabled passengers - to develop their processes and practices related to different groups of disabled passengers. The following guidelines were given by the commissioner to design the content of the material:

- The information package should handle a different aspect of accessibility
- The content could be presented within the aviation context, but this was not necessary
- The results should be formulated in a consistent form as a powerpoint presentation or similar, to be used for training internally in Finnair
- Information content should be gathered from various sources
- The final product should be compact maximum of 40 slides
- The content should be understood without the presenter; in other word, it should be consistent and on a general level.

The project started with a kick-off meeting at the beginning of February 2019. The meeting participants were the project workers, the commissioner representatives and the project work instructor from Haaga-Helia UAS.

We arranged two appointments with the commissioner during the project to introduce the work phases, to discuss the contents and the structure of the presentation with the commissioner. The meetings served for checkpoints and also the quality of the work was monitored as the upcoming steps were defined and validated in the meetings. In addition, the commissioner's representative was contacted by e-mail several times.

As planning the content and discussing it with the commissioned, we decided to focus on accessibility in aviation and present the information in aviation context. Introducing the aviation-related legislation appeared to be essential to include, since services for disabled passengers are implemented by laws, agreements, and recommendations. Introducing the terminology and commonly used abbreviations were included because they are essential communicative elements in aviation and daily use at the airport and the aircraft. While proceeding with the information search, it also seemed necessary to include the most important organisations working for and promoting the services for disabled within the travel context. We included aspects related to passengers' special needs such as allergies and presented them shortly. Finally, we introduced categories and types of disabilities.

During the finalising stage, five people, four of them forking for Finnair and one at the Helsinki Airport, were asked to test the material. The persons were asked to read through the training material and answer five questions concerning the presentation, to find out aviation personnel's perceptions of the content and gather feedback. The purpose of the evaluation was also to look if modifying the content further would be needed. The questions presented to the test persons handled the usefulness of the information content and the clarity of the presentation. The time used for the reading was asked as well as further development ideas. Finally, the test person was asked whether s/he would recommend the presentation to a person with similar tasks that he/she is doing her/himself.

Three of five people answered. Feedback of the clarity and the information content of the presentation was positive. We made minor modifications to the presentation according to the feedback. Also, we made improvements to slides to clarify the responsibilities of the passengers themselves in allergy-related issues. The structure of the introductory slide was clarified based on the feedback. Adjustments such as enlargement of infographics and adding bullet points were made.

Here are some quotes from the answers:

# What are the things you learnt? Please name 1-3 most important issues.

"There are many kinds of passengers with disabilities, not all of them are disabled, but they have other reasons that make their moving hard at the airports and on the plane, such as small children. Many persons benefit from the accessibility and Universal design, something I haven't thought before".

#### Are there topics or concepts that would need more clarification?

"Allergens: Just to clarify airline doesn't have to forbid the passengers to bring nuts/animals on board if someone has an allergy. It's also passenger's responsibility to make sure they are able to travel onboard safely with their allergy, serious allergy: not necessary fit to fly".

# Considering your current work, would you recommend this presentation to your colleagues that have similar tasks? Yes / No. Could you please specify, why.

"Yes. The slides were clear and well presented. Everything was justified, like why elderly people might need assistance services and it's good to understand they are growing group. And it was also great that you have explained what a person with reduced mobility is etc. Even I work with PRMs pretty much all the time, this presentation also opened my eyes and helped me to understand there is a different kind of PRMs like there are many types of blindness. The instructions on how to deal with PRMs were also good".

The questions and the cover letter for the test group are found as Appendix 1.

At the finalising stage, we added pictures to support the presented themes and thus making the presentation lighter and more attractive to follow for the reader. Figure 6 shows how illustrations support the written content.

### Persons with physical disabilities Physical disability is a diminished capacity for movement, partial or general difficulty in performing motoric activities. It may affect to upper or lower limbs or both. Causes can be multiple like hereditary, acquired, congenital or caused by accidents. Persons in a wheelchair. Some people require help to operate their wheelchair and move them from place to place. Others will be able to manage their chair and for example, move from their chair to a bed or play a sport. Persons with upper limb limitations. These people may need help with reaching, picking up and handling objects. Persons with lower limb limitations, not needing a wheelchair: Walking can be slow and unsteady. They can use crutches or walking sticks. There may be difficulties in using stairs and with luggage as arms are needed to use crutches. Source

Figure 8. An example slide from the training material for Finnair

This project work result, the training material in a powerpoint format of 36 slides, was sent to the commissioner in May 2019. The commissioner has an intention to use the content for the training that targets the ground personnel working mainly with gate-related customer service tasks.

The complete training material is included as Appendix 2.

#### 4.2 Airline overview

Finnair is a network carrier with its head office located at Helsinki Airport. The Finnish government is a major shareholder (55,8 % of the shares). Finnair flies to 19 destinations in Asia, 7 in the Americas and over 100 in Europe. Finnair was established in 1923, which makes it one of the oldest operating airlines in the world. Finnair is a member of the Oneworld alliance. (Finnair 2019a.)

In the Sustainability report 2018, Finnair has stated its goal to be a leading airline in the field of environmental responsibility (Finnair 2019c,11). Within the strategy, Finnair clarifies that it is committed to acting towards a cleaner, more caring and more collaborative future. It also aims at minimising the negative environmental impacts of its operations and at maximising the social and economic value that it creates for stakeholders and society. (Finnair 2019b.)

The company's operations are guided by principles, policies and guidelines defined by the company, including the following:

- · Code of Conduct
- Risk Appetite Statement
- · Risk Management Policy
- Treasury Policy
- Disclosure Policy
- · Compensation Policy
- · Insider rules
- Board Diversity Principles
- Approvals Policy
- Insurance Policy
- Staff Travel Policy
- · Occupational Health & Safety Policy
- Competition Policy
- · Information Security Policy
- Data Protection Policy
- Corporate Responsibility Policy
- Business Continuity Management Policy
- · Environmental and Energy Efficiency Policy

Figure 9. Areas of guidelines, implemented by Finnair (Finnair 2019c)

At the end of 2018, Finnair had 6462 employees. 32 % of the employees worked as cabin crew, 15 % as pilots and 15 % were office workers. Finnair Kitchen (catering services) had 8 % of the employees, and technical services had 7 %. The smaller groups of the employees worked in ground services, in as technical employees or aviation employees, as well as travel guides, travel agency employees, or in management. The number of employees increased by 544 from the previous year. Employees used in average 51 hours for training, varying from 22 hours of the office workers to 108 hours for pilots. (Finnair 2019c, 30.)

#### 4.3 Methods

This thesis is product-oriented. The product is training material on disabilities and air travel. The work is commissioned by Finnair, and the material is produced for internal purposes, to increase skills and competences in working with people with disabled passengers.

Research for this thesis has been conducted by a literature review based on academic articles and sources provided by organisations that advance the interests of disabled people. We also included Internet sources and social media sources to take into account different perspectives and understand current phenomena comprehensively.

We paid special attention to the structure and the visuals of the presentation. The main objective was to produce training material that would be clear and consistent by the structure so that it could be understood by a single reading. Visual elements were added to increase audience interest and help the audience to understand and remember the contents. For this purpose we added cartoon illustrations specially designed for this material.

Before handing the training material to the commissioner, it was tested by collecting views of several people working within the aviation sector. The presentation was finalised after testing, based on the test results.

In the written thesis, we discuss in more detail the backgrounds that affect air travel for people with disabilities. We look into the history of corporate responsibility and also national organisations that advocate for people with disabilities. We aim at getting an overall view of where the airlines are right now and what the airlines' prospects carrying disabled passengers would be.

#### 4.4 Results and further suggestions

For Finnair, accessibility is one of its important goals. Finnair wants to understand the customer's need for assistance. Finnair cooperates with various expert bodies, such as The Finnish Association of People with Physical Disabilities. The goal is to raise awareness and understanding among personnel about how to meet different people and help them with their demands, needs, and aspirations. (Invalidiliitto 2019.)

The result of this product-oriented thesis is an information package about disabled people within the air travel context. It is produced in cooperation with Finnair whose intention is to use it for internal educational purposes. As feedback the following was stated by Finnair: "Passengers with disabilities presentation gathers together relevant content from various sources in a compact way. There is lot of legislation related to this topic regarding customer service and the most important legislation is presented clearly. Different disability categories are depicted widely. Interesting fact from the presentation is that airlines for example tend to have only one reservation code for blind persons but this presentation shows that there are many sub-categories related to sight disabilities. Presentations is written in general level and can be used as an introductory to different disability categories in our trainings". (Haahtikivi 2019.)

The testing phase showed that 1) the presentation consists of relevant material 2) it has a clear structure and 3) it could be recommended as studying material for those working in

various tasks at the airport of for an airline. However, as the test group consisted of three participants only, the results must be considered as preliminary.

To make the presentation content compact as was defined by the commissioner, the knowledge content had to be kept at the general level. This caused the need for compromising and excluded the possibility of presenting the issues in a profound manner. The material produced could be developed further into a comprehensive training material or by dividing the contents into sections to deepen the content and targeting it for certain groups of personnel. This could be done for instance by commissioning another product-oriented thesis. The specific areas, that could serve as individual modules for training, could include the following:

- Passenger Assistance Techniques
- Introducing different types of wheelchairs and other mobility devices
- Introducing medication and internal medical devices and nebulisers
- Focusing in more detailed on specific disabilities

The content of the detailed presentation should be collected not only from literature but also by familiarising with real-life cases and equipment with disabled people and various organisations.

#### 5 Discussion

"Knowing how to build an accessible future, how could we not?"

– Johanna Joutsiniemi –

This thesis studied how airlines can better serve their special needs passengers. Studies of accessible and inclusive travel are relatively new, and there is even less academic research conducted focusing on the aviation sector. Thus, we see this thesis as a necessary adding, and we also see this thesis as one of the first giving this angle to the aviation sector.

We consider this thesis to be trustworthy because it is based on academic articles and internet sources by generally trusted organisations dealing with a disability theme. The training material was based on similar sources. In addition, the training material was tested to ensure comprehensibility and usefulness before handing it over to the commissioner, by persons working within aviation. The training material is approved by the commissioner, and in addition to that, the commissioner has an intention to use it for training purposes.

The phenomenon of population ageing has been noticed by airlines. Why tourism business has paid little attention to accessibility so far even though the accessible travel market has huge potential, was not studied. This could be the next step of the subject, and the research could be done by interviewing salespeople and processes developers in aviation business among airlines and ground operators. Assumingly, the reasons have to do with the costs followed by the extra efforts to serve disabled passengers during their passenger path. As the expenses by the increased demand for service are evident, the recipe to do business out of the growing numbers of disabled travellers could somehow be related to corporate responsibility and the customer's willingness to use the services of responsible companies.

Another perspective of inclusiveness in aviation is the awakening of the airlines to the increasing demand for services for disabled people as disabilities increase by aging of the population. This can force the airlines change their services towards inclusion and make accessible travel the new normal. Some senior citizens with disabilities may want to travel by other means of transport, but air travel cannot be replaced when travelling long distances or crossing geographical barriers such as oceans and mountain ranges.

Collaboration between universities, airline service providers and organisations that promote accessibility is needed to study accessibility further. These collaborative parties could effectively lead to introducing practical solutions to be implemented at airports and airlines. With the support of these parties airlines could develop the passenger journey of the disabled passengers from the pre-travel phase all the way to the end of the journey.

We could not introduce any accessibility solutions as a best practice, simply because the options are not numerous. The practical solutions that we found and chose here to be presented, are occasional, implemented by certain airports, airlines or aircraft manufacturers. Thus, aviation industry service level harmonisation would be a vital part of inclusive travel development. Now, airports and airlines are developing separately their special needs customer experience. Key Performance Indicators (KPIs) and Service Level Agreements (SLAs) vary from airport to airport and airline to airline. This creates service discontinuation situation touchpoints in a customer journey. Commonly agreed KPIs would help industry to measure and identify these problematic areas. A customer would also be able to compare different airlines and airports and choose the best for his/her needs.

For disabled passengers it would be necessary to get the levels of service defined in more detail. This would make it possible for a passenger to know what can be expected as service and enable planning the journey and consider, if the personal assistant is required as a travel companion. In an ideal situation the service for the disabled passengers would be similar regardless of which airline is used or which part of the world travelled.

Understanding the ideology of the social model of disability has changed our entire approach to disability. For airlines, implementing social model principles would mean renewing the crucial parts of the airplane environments for more independence to the special category passenger. While renewing cabin configuration for example to changing seating capacity, it would be easy to make changes to the lavatory facilities to enable accessibility.

We have also noticed that IATA is very much focusing on physical disabilities in its categorisation. Passenger with an intellectual or developmental disability has only one category – DPNA. This is the area that needs further development. A mildly autistic person may need quite a different service and support on a journey than a person with a more severe cognitive disability. Currently, with only one IATA category, service providers cannot tailor their service to prepare themselves adequately to make the best possible customer experience.

We do not think that any airline is yet superior in providing services to disabled passengers. Based on what we found during process, Virgin Atlantic has taken a few great steps towards inclusiveness. For this reason we chose to include quotes from Virgin Atlantic's leader to this thesis.

In the end, the journey for the thesis writers has been an eye-opening experience. The world can change to become more inclusive. The change needs to happen first in the mindset and awareness. The rest is then just removing obstacles so that every person willing to travel can do it within his/her limits. We want to raise awareness with this thesis. As finally, virtually everybody is a person with special needs at some point in life.

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#### Appendix 1

#### Questionnaire for testing the trainin material content

Olette lupautuneet testaamaan esityksen, kiitos! Se tapahtuu katsomalla materiaalin läpi ja vastaamalla sitten 5 kysymykseen. Kysymykset kannattaa vilkaista läpi ennen kuin alatte tutkia materiaalia. Pyytäisimme teiltä vastauksia torstaihin 9.5. mennessä vaikkapa vastaamalla tähän s-postiin. Vastaukset auttavat meitä muokkaamaan esitystä edelleen ja saamaan sitä käyttökelpoisemman toimeksiantajallemme Finnairille.

Kiitos jo etukäteen ajastanne! Terveisin Harri ja Johanna

#### Passengers with disabilities presentation

#### Questions:

- 1 How much time did you spend going through/studying the slides?
- 2 What are the things you learnt? Please name 1-3 most important issues.
- 3 What would you change/develop in the slides? Give 1-3 concrete developing ideas.
- 4 Are there topics or concepts that would need more clarification?
- 5 Considering your current work, would you recommend this presentation to your colleagues that have similar tasks? Yes / No. Could you please specify, why.

## Appendix 2

Training material for Finnair: Passengers with disabilities (36 slides), Power Point presentation

(not to be published in the Internet)