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Universal Design in Norwegian Tourism Services for Customer Engagement

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Preface

This master's thesis is a part of completing my Master in Interaction Design at NTNU, Gjøvik. It will report on research conducted about how Universal Design can assure a higher quality of Norwegian tourism services in order to encourage users to use these services. During the research process, Universal Design in Tourism or Accessible Tourism is the topic concerned in regards to recent tourism industry studies. There are case studies, conferences, manuals and even standards to guide tourism providers to design their services in terms of accessibility for all. Norway itself also has several standards exclusive for travelling services. Thus, this thesis will use a notable guideline to evaluate Norwegian tourism services to suggest that Universal Design could ensure a higher quality of Norwegian tourism services in term of better communication with travelers.

That is the original plan for this thesis, after six months of researching, reading, evaluating, and writing it seems the result is not as I expected, but overall it shows the potential of having good standards to assure the quality of Norwegian tourism services are universally designed for customer engagement.

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Acknowledgment

There are several people I would like to thank whose help and support has made this project possible. First of all, I thank my supervisor, Miriam Begnum, whose invaluable feedbacks and suggestions has guided me to finish this project. Secondly I thank some of my classmates, who supported me emotionally during working process.

And always thanks to my parents.

At the end, thanks to you reader. If you are reading this line after the others, you at least finished two pages of my thesis. Thank you.

Linh Nguyen

Abstract

Going on holiday and exploring new territories are one of many popular human activities. This type of activity usually requires a certain type of physical ability due to the condition of travel destination. However, according to the World Health Organization 15% of the world's population has some form of disability. In addition, the population trend leans toward an aging population in the future, which leads to lower physical abilities of this group of people. Consequently it becomes important to be able to participate in this type of activity in any form of ability. Thus Universal Design in Tourism or Accessible tourism for all has become a popular topic in recent year. Nearly 24% of the population of Norway has some form of disability, and through a survey it said that they could not find enough information about possible universally designed services at their desired destination.

This leads to the research idea about to use universal design to assure quality of Norwegian tourism services to encourage people use these services. Here, the usage of "Universal Design for Customer Engagement Toolkit" provides a comprehensive best practice guidance on achieving better customer communication. This thesis will use this toolkit to evaluate some sample services in order to figure out how Universal Design could assure the quality of Norwegian tourism services to improve customer engagement.

Keywords: universal design, tourism services, Norwegian tourism services, Norwegian standard, elderly, population trending, ageing, accessible tourism, tourism for all.

Contents

List of Abbreviations

UD	Universal Design
ICT	Information and Communications Technology - or Technologies
UD-CETS	Universal Design for Customer Engagement in Tourism Services
ADAA	Anti-Discrimination and Accessibility Act
NSD	Norwegian Social Science Data Services
UNWTO	World Tourism Organization
WHO	World Health Organization

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1   Introduction

This introductory section gives a description of the thesis's problem, presents the research questions, outlines its scope and objectives, and proposes the structure of this thesis.

1.1   Problem description

Demographics are changing due to a variety of different reasons, such as low fertility rates, an increase in life expectancy, and immigration. According to demographic trends, the aging population is expected to grow quicker than other age groups. It is predicted that the over 60 age group will comprise 16% of the population by 2030 [1]. Alongside aging, this group may be presented with challenges and develop illnesses, such as some forms of disability, or face an inability to understand future technologies. According to the World Health Organization (WHO), 15% of world's population, approximately 1 billion people, are living with some form of disability [2]. Thus the necessity for a Universal Design (UD) concept, which aims to design environments, products, and services that are accessible, usable, and understandable to as many user groups as possible, becomes essential in creating a living environment for people.

By practicing universal design, more opportunities will be created for as many people as possible to be able to join all activities equally. One important human pastime is traveling, however not all people are able to enjoy this activity due to one form of disability or another. According to a survey that was conducted by Norsk Turistutvikling [3], there is not enough information about possible universally designed facilities or services at their travel destinations. As a result, they become cautious when traveling.

Even though Norway has several standards for designing infrastructure, buildings, products, and services, it seems there does not exist one standard to assure a uniform quality of tourism services. With respect to traveling, this activity might be an obstacle to some groups due to different physical or mental abilities, or other factors such as a lack of infrastructure or incompetent services for special user groups (such as the elderly or disabled). Moreover, 25% Norway's population, approximately 1.3 million people, have some forms of disability [3]. Hence this has created a sizable market share in tourism being left out. This thesis proposes to investigate how universal design can help to assure the quality of Norwegian travel services to encourage travelers to use these services. By using the approaches

set forth in, Universal Design Toolkit for Customer Engagement, Irish 2013 standard [4], we can use current universal quality evaluation techniques for Norwegian travel services.

1.2   Research questions

This thesis aims at finding a way to ensure the quality of Norwegian tourism services universally to encourage people use these services. In order to do that, the main research question for this thesis is how universal design can assure a higher quality of Norwegian tourism services to encourage travellers to use these services. There are several sub research questions along the way to study the main questions:

- How well do Norwegian tourism services communicate with people?
- How does Universal Design assure a high quality in Norwegian tourism services to encourage travellers to use their services?

1.3   Scope and objectives

The objective of this study is to check whether current standards in Norway are able to assure that Norwegian tourism services are universally designed and how the Universal Design Toolkit for Customer Engagement, Irish 2013 standard [4], fits into the Norwegian tourism situation, as well as to also suggest possible guidelines ensuring the quality of universal design in order to encourage a higher use by travellers.

1.4   Structure of the thesis

This thesis will include six parts. Chapter 1 presents thesis's problem, research question and its scope and objectives. Chapter 2 presents relevant knowledge to build up a foundation for this research. Chapter 3 presents the methodology to help answer the research questions. Chapter 4 presents the results of this research after applying said methodologies. Chapter 5 discusses these findings in chapter 4 and what limitation can be applied to the findings. Chapter 6 presents final remarks in addition to provide a conclusion for this research, and finally chapters 7 include all references used herewith.

2   Background

This section will present relevant background knowledge that is related to this research project in order to create a foundation for this study and further explanation for intended study.

2.1   What is Universal Design (UD)?

Each individual has their own physical and cognitive capacities and abilities to access activities. This allows for human diversity which must be considered during the process of developing products or services. Moreover, human abilities might change over time, so their priorities may also reflect that change. In addition, the development of technology has increased rapidly, which has led to exclusion and in some cases, the frustration of using new products or services. Thus, barrier-free design to improve the quality of living for people, including physical disabilities, has become a trend since the 1950s in Europe, Japan, and the United States.

In addition to changes in technology, demographic changes make us think about how to improve products and services in order to fit the needs of these changes. According to demographic trends, the aging population is expected to grow quicker than other age groups. It is predicted that the over 60 age group will comprise 16% of the population by 2030 [1]. This change will increase the estimated disability rate and other problems reflective of an elderly population. This significantly affects people and their interactions with their surroundings, either tangible or intangible objects. Realizing the limitations for this group of people to use products and environments that are not built based on their needs, the new concept about barrier free design was developed to guide people to build products and services exclusive to this group.

During the 1990s, the United States formulated a new code of laws providing for the right of disabled people to not face discrimination, known as the Anti-Discrimination Act (1990). From this point the concept of universal design, which means designing things that could be used by everyone despite their different abilities, became a trend in different disciplines. These disciplines include product design, architecture, and services without the need for adaptation or specialization design, introduced by Ron Mace, an American architect [5]. Alongside this concept, there are a set of seven principles that were introduced by the group of architects, product designers, engineers and researchers [5] in order to help evaluate the designs as universal.

The term universal design can be used interchangeably with different terms, such as design for all or inclusive design. No matter which terminology they use, the main idea of universal design still applies for all terminologies.

2.1.1   7 Principles of Universal Design

The main principles of Universal Design show what kind of functions and performances, product requirements, architectures, and solutions must be satisfied in order to be applicable for people with different impairments. The principles can also be used for evaluation and development within an educational and informational framework. Each principle has four or five descriptive guidelines which will be used to evaluate existing designs, guide the design process and act as a source for designing usable products and services [5].

1. **Equitable Use:** The design does not disadvantage or stigmatize any group of users.
2. **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.
3. **Simple, Intuitive Use:** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
4. **Perceptible Information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5. **Tolerance for Error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6. **Low Physical Effort:** The design can be used efficiently and comfortably, and with a minimum of fatigue.
7. **Size and Space for Approach & Use:** Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

2.2   Universal Design in Tourism services

Within European countries, in 2012 approximately 780 million travelers require some forms of assistant during their trip and this number will increase 10% by 2020 [6]. Thus there is a need for Universal Design in Tourism services for this large group of users.

According to UNWTO, all tourist facilities, products, and services should be able to be accessed by all and this should be a core of every sustainable tourism policy [2]. People might argue, "Why it is important to provide services for this small group of travelers?" However, based on the estimated number of people with some

form of disability (15% of the world's population, or 1.102 billion people), this is not a small market group at all. By simply taking this into account, there exist many studies about how to include as many user groups as possible in tourism sector.

UNWTO cooperated with the European Network for Accessible Tourism (ENAT) and the Spanish ONCE Foundation for the Social Inclusion of Persons with Disabilities to introduce a set of manuals based on the principles of Universal Design, The Manual on Accessible Tourism for All: Principles, Tools and Best Practices [7], including 5 modules:

1. **Module I:** Accessible Tourism – Definition and Context
2. **Module II:** Accessibility Chain and Recommendations
3. **Module III:** Principal Fields of Intervention
4. **Module IV:** Indicators for Accessibility Studies in Tourism
5. **Module V:** Best Practices in Accessible Tourism

Figure 1: 5 modules in The Manual on Accessible Tourism for All.

This manual can considered as the first manual to present both clearly and concisely about accessibility tourism for all to tourism industry. Along with this manual, UNWTO also published a recommendation booklet to help service providers communicate well with users [8]. UNWTO hopes to provide these free documents to all tourism service providers to encourage them to apply these guidelines to improve the accessibility of their services to customers.

2.3   Irish Universal Design Standard

The Centre for Excellence in Universal Design and Failte Ireland and The National Standard Authority of Ireland collaborated to publish the new Irish Standard Universal Design for Customer Engagement in Tourism Services (I.S. 373:2013) in 2013 [4]. Universal Design for Customer Engagement in Tourism Services (UD-CETS) was developed under the consideration of obligations to the Equal Status Acts (2000-2011) and the Disability Act (2005). Even so, the UD-CETS standard is a non-legally binding policy recommended to be used in order to improve communication between service providers and potential customers. The UD-CETS was re-

leased in the form of a toolkit, that acts as a guide and recommendation to tourism service providers. The toolkit include written, face-to-face, and electronic/web-based communication guidance.

2.3.1 UD-CETS toolkits

- **Written Communication:** providing printed materials about the service.
- **Face-to-Face, Telephone & Video Communication:** provide instruction how to communicate with customers.
- **Electronic & Web Based Communication:** provide descriptive information about services in a easy understanding way.

Each toolkit has a set of clearly illustrated checklists which will guide businesses to conduct their services. Depending on their type of business, they can choose which suitable toolkit to use to help design their products or services for improving communication with customers. This is especially important from a personal level, as the toolkit makes sure the information from the service providers will be conveyed to a diverse range of customers regardless of age, size, ability and disability. The toolkit can be used to train the staff and can be applied with little or no additional cost.

Figure 2: 3 toolkits in Universal Design for Customer Engagement in Tourism Services. Source here

UD-CETS case studies

The UD-CETS standard has been tested through four notable business cases, and as evidenced, the results by these businesses reflect a high level of satisfaction:

1. **Case study 1:** Jury's Inn and the Face to Face Universal Design Communication Toolkit.
   In order to improve customer service, Jury's Inn used Face to Face in the UD-CETS toolkit to train their staff on how to interact with customers when they have issues. Based on the checklist of this toolkit, their staff had applied it to one of their cases and it proved that the checklist worked well for them. The manager of the inn recommended this toolkit for any business in the hospitality industry to help them deal with different types of customers.

2. **Case study 2:** Viking Splash and the Face to Face Customer Communication Toolkit.
   Another business that used the Face to Face toolkit to help them train staff was Viking Splash. They were struggling with training their staff to deal with different groups of customers, such as adults, the elderly, and children for their Viking tour. With the checklist of this toolkit, they improved their service by reducing the complaint rate and increasing sales.

3. **Case study 3:** Clew Bay Hotel and the Written Communication Universal Design Toolkit
   Clew Bay Hotel used the Written Communication toolkit in UD-CETS to improve their food business. This toolkit aims to make written material, such as brochures, menus, and flyers, clear and easy to understand. They said by using this toolkit, it helped them increase online revenue by 20% and food sale by 12% per server.

4. **Case study 4:** Purty Kitchen and the Electronic and Web Communication Toolkit
   The last business case, Purty Kitchen, used the Electronic and Web Communication toolkit to improve their website. By using the checklist of this toolkit, their ticket sales have improved massively. By making a new website, with a clearer layout, larger text, and bigger images, it helped customers to get the information that they need quicker. Their website traffic has increased 80% and they now have a ticket transaction rate of 100%. Overall they are quite happy to use this toolkit for their digital material.

2.3.2 UD-CETS adoption successful case

Similar to Irish tourism, British tourism has also adapted UD-CETS and created their own guideline based on UD-CETS toolkit [9] to help businesses improve their communication with customers and increase their sales based on the orig-

inal UD-CETS toolkit. There are two notable case studies [9] that have proven that UD-CETS has also worked for another nation's tourism services to improve communication between service providers and users. They concluded that by using these toolkit, they made sure to communicate well with their customers to widen their market and improve their brand, and also to maintain the loyalty of their customers.

2.4 Norwegian legistration on Tourism Services

In Norway, universal design is an enforceable legal standard [10]. The Norwegian government has an action plan for universal design and increased accessibility (2009-2013) [11], though this plan mainly focuses on developing an environment for citizens, either public or private. According to the plan, every building, public transport, and ICT (Information and Communications Technology - or Technologies) will be accessible to all groups of people by 2025. However, pleasure services for people, such as tourist services, were not mentioned in this plan. Moreover, according to the survey of Norsk Turistutvikling, funded by Barne-, ungdoms- og familiedirektoratet [3], showed that 20% of participants did not get enough information about the possibility of universal design facilities or services to assure the safety of their trip. Hence the tourism market for disabilities is left out of the picture entirely. In order to include this group into services, there should be a way to improve the communication between customers and service providers to make sure they know what they could get from the service, especially when the service is designed universally.

2.4.1 Norwegian standards for Tourism Services

According to Standards Norway, there are several stand-alone standards for developing infrastructures, products and services following universal design principles [12]. The notable standard that can be used for tourism services is NS 11010, Accessible Tourist Destinations [13]. This standard is used as a basis for tourist destination's labeling system in terms of accessibility to the disabled. This standard was developed by Norway Standards and the Delta Centre. They formed a standardization committee to establish a national labelling system for accessibility in the tourist industry [13]. This standard contains 107 requirements within 14 main areas [13]. This standard is not a mandatory obligation for service provider but it helps improve the accessibility of destination and also it can be used to raise awareness about the needs of different groups of user for adaptation.

Comparison between NS 11010 and UD-CETS

Even though both NS 11010 and UD-CETS are about accessibility for all in tourism, the purpose of these standards are different. NS 11010 is more for assuring the la-

beling at the destination is matched with the needs of groups of users who have disability issues, while UD-CETS is intended for communication purpose to make sure users could understand what they could potentially receive from service providers as well as comprehend the services easily.

2.5 Norwegian tourism services

2.5.1 Norwegian travel type

Norway is well known for beautiful nature, a vibrant culture, and historic cities. According to a survey conducted by Innovation Norway, people who travel to Norway are highly satisfied with the beautiful nature here and apparently some people also enjoy the history and culture of Norway too. The idea of traveling in Norway as a holiday destination and what people know about Norway are presented in these figures below. (Figure 3 & 4) .
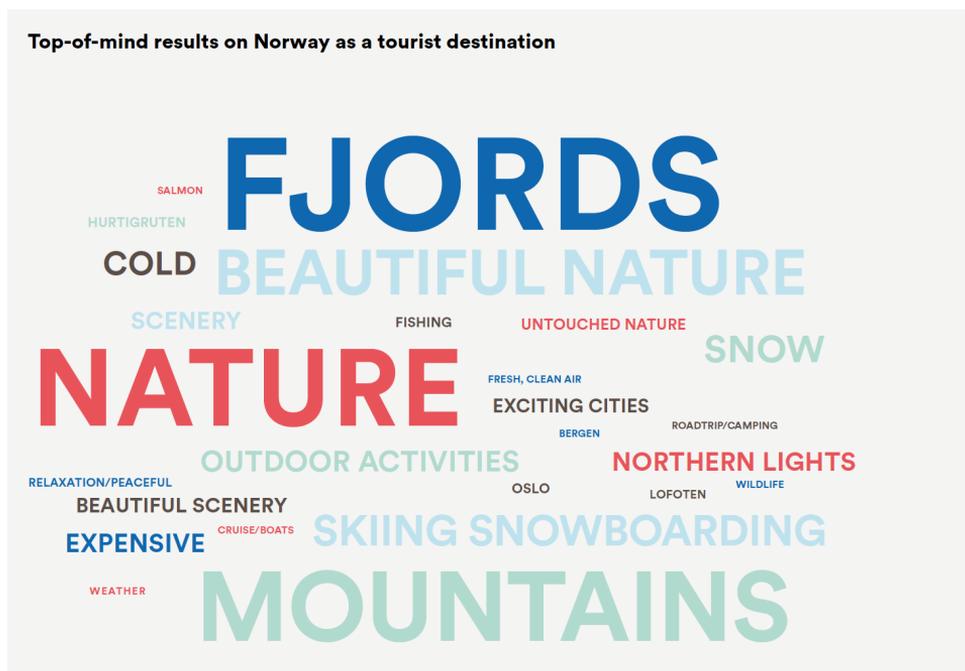

Figure 3: Top of mind results on Norway as a tourist destination [14]

2.5.2 Communication between Norwegian tourism services and customers

Norway focuses on building the environment for all due to their high standard in human rights. That is, the guiding principles that everyone should be able to enjoy all activities equally. Following this, there are plans and policies enacted to make
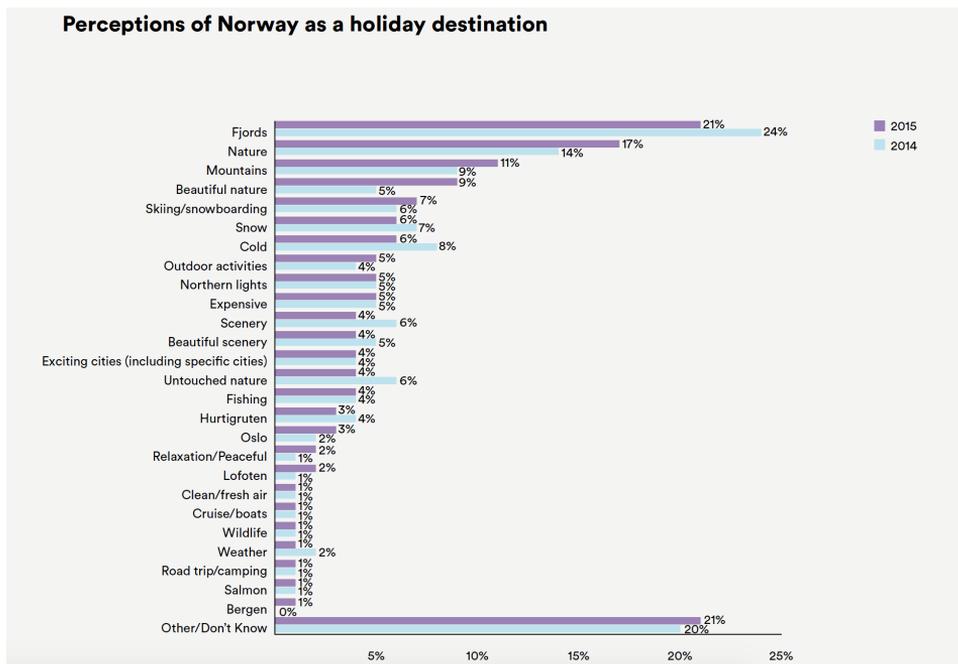
Figure 4: Perceptions of Norway as a holiday destination [14]

sure almost every city in Norway will be able to be accessible for all. However, as mentioned above, the result of the survey of Norsk Turistutvikling said that there was too little relevant information on universal design of travel destinations, and it was often time consuming to search for relevant information since they used different terms to present said information.

One of the case study in Best Practice in Accessible Tourism: Inclusion, Disability, Ageing Population and Tourism [15] is VisitOslo, Norway: Supporting Accessible Tourism Content within Destination Tourism Marketing. This case study is about how VisitOslo improved their website to help users access information about accessibility of the destination easier. The major problem was relying on a huge, yet unorganized database, that made it difficult for users to navigate and get the information they requested. By improving this issue, the results they obtained were quite promising. The notable results are:

- Information about Oslo and accessibility in Oslo is widespread to different groups of user.
- Number of visitor to Oslo increased.
- Revenue is increased.

3 Methodology

This section presents the methods used to inspect Norwegian tourism services using existing UD toolkit to help answer the research questions of this thesis. Section 3.1 explains which potential UD toolkit could be used to inspect Norwegian tourism services. In Section 3.2, the method to sample Norwegian tourism services will be presented to explain why those services are chosen for this research. Section 3.3 presents how to use chosen toolkit to evaluate sampling services. Finally, section 3.4 discusses the ethical considerations for this research project.

To gain an insight into Norwegian tourism services before using UD-CETS toolkit to evaluate them, the research must identify which services should be evaluated. Tourism services include all services that serve travel purposes, such as transportation, accommodations, and entertainments. So when Norwegian tourism services are mentioned, this study will mainly focus on informative materials of entertainment services, such as websites, mobile applications, print material, and communication methods from service providers instead of the physical facilities of Norwegian tourism, because the first step of using one service is knowing basic information about it. In addition to the main research question of this study is how using Universal Design on Norwegian tourism services to communicate well with travelers, so this study aims to understand how Norwegian service providers communicate with customers to inform them in regards to the accessibility of travel destinations. Moreover, according to Norway - Universally Designed by 2025 [16], most buildings and public transportations in Norway are going to be accessible by all, so we must assume that most tourist attractions, tourist facilities and public transportation in Norway are universally designed in this research.

3.1 Potential toolkits to evaluate Norwegian tourism services

Universal Design in Tourism or Accessible Tourism is not a new concept. However, it is introduced through conferences, workshops or reports to establish a fundamental groundwork or to encourage tourism industry to pay attention on how to provide services for all user groups. UNWTO cooperated with the European Network for Accessible Tourism (ENAT) and the Spanish ONCE Foundation for the Social Inclusion of Persons with Disabilities, to produce a booklet with several case studies which show the best practices and the most relevant aspects of accessible tourism [2]. With this booklet, they hope to encourage service providers to see the need and benefit of making services accessible to all. This booklet can serve as a

good example on how to practice universal design in tourism. It is not an official guideline for the whole industry. Part of this study is finding a potential guideline to perform an empirical evaluation of Norwegian tourism services. During the research process, there are few notable manual and guideline could be used in this study. They are including a set of manual suggested from UNWTO [7], UD-CETS toolkit from Irish Standard [4] and NS 11010 from Norway Standards [12].

Based on background studies about these guidelines, they all aim to provide a tool to help tourism service providers design universally designed products or services to improve the accessibility to all people. However, since this research is about finding a way to use Universal Design to encourage people use Norwegian tourism services, the chosen guideline should reflect that purpose.

NS 11010, Accessible tourist destinations [13] focuses on universal design of the physical surroundings of a travel destination. This standard ensures the labeling system of the destination is universally designed. Moreover, in order to use this standard, service providers have to purchase it from Norway Standards. So this standard is not accessible for all and it does not mention the communication quality between service providers and travelers. That is why NS 11010 is not a good standard for this study.

Another set of manual are from UNWTO [7]. This set of manuals include five modules which include useful tools, how to implement them, and best practices for accessible tourism for all. This manual is for all tourism service providers whether public or private, national or international level. Through this manual, UNWTO hopes to encourage more service providers practice accessible tourism for all. However, the scope of this manual is too large for this study so it will not be used as a guideline for the empirical evaluation process.

Along with this set of manuals, UNWTO also published a recommendation on Accessible Information in Tourism in form of a booklet [8]. This booklet included a list of guidelines to design informative materials, such as print materials, digital document, audio-visual content, websites, and more. All of these guidelines are designed based on Universal Design principles for customer information and communication. This booklet could be a good guideline for this study if it included a direct communication method, such as face-to-face or telephone guideline, because there are groups of people who might have difficulties in accessing these types of information, such as people with visual, hearing, mobility or cognitive impairments. Furthermore, even though this booklet was introduced by a notable organization, there is no information in regards to successful case studies having used this booklet to design their services. Additionally this booklet used Electronic & Web Based Communication toolkit in UD-CETS toolkit as reference for their content. Taking all of these varying reasons into consideration, the researcher has decided to not

use this as a guideline for the study since this booklet cannot ensure the quality of tourism services fully in term of communication with all user groups.

Based on the foundation study of this research, it showed that UD-CETS toolkit covers almost every channel relating to communication between service providers and users, from written communication to direct communication, and including web-based communication. Almost every user group is covered in the UD-CETS toolkit. Furthermore, UD-CETS is available to use without any extra cost and has been tested through several case studies and successfully adopted by British tourism services. Thus UD-CETS has been proved to be a good guideline for this study's purpose.

3.2 Samples of Norwegian tourism services

As mentioned above, this study will not evaluate how universally design facilities, transportations in Norway is. This study will use UD-CETS toolkit to evaluate the quality of informative materials and communicative services in Norwegian tourism services. Via a cursory glance through the materials of Norwegian tourism service providers, there are many websites, applications and printing material in downloadable format. It is impossible to examine them all, so we can use sampling methodology to choose notable services for this study. Sampling can be defined as "a smaller set of cases a researcher selects from a larger pool and generalize to the population" [17]. Since this study will use UD-CETS as the main guideline for the empirical evaluation, the samples for this study have to represent the objective target of each toolkit, which will be listed below:

3.2.1 Written Communication

Written communication materials include print brochures, downloadable brochures, flyers, booklets, menus, etc. The purpose of these materials is to act as a bridge between tourism service providers and travelers. Traditionally travelers can only get these materials when they are at the certain destination, but in the digital age, some service providers put a digital version on their website so people could find and read it beforehand. Though, due to limited space on print materials, the information on the page should be concise but well informed to convey essential information about the service. Furthermore, due to limited resources, the researcher cannot collect all samples from every destination in Norway so only reachable and downloadable materials will be sampled in this study. According to Innovation Norway [14], the fjords and nature are amongst the top tourist destinations in Norway, and those famous scenic views are located in several famous cities such as Oslo and Bergen, hence the researcher collects samples from these two cities as samples for primary evaluation. The chosen samples are collected from the VisitOslo office and

website (Figure 5), and the VisitBergen website (Figure 6) which includes all information about Bergen city, nearby fjords and how to get there. How these samples will be evaluated will be explained in detail later.
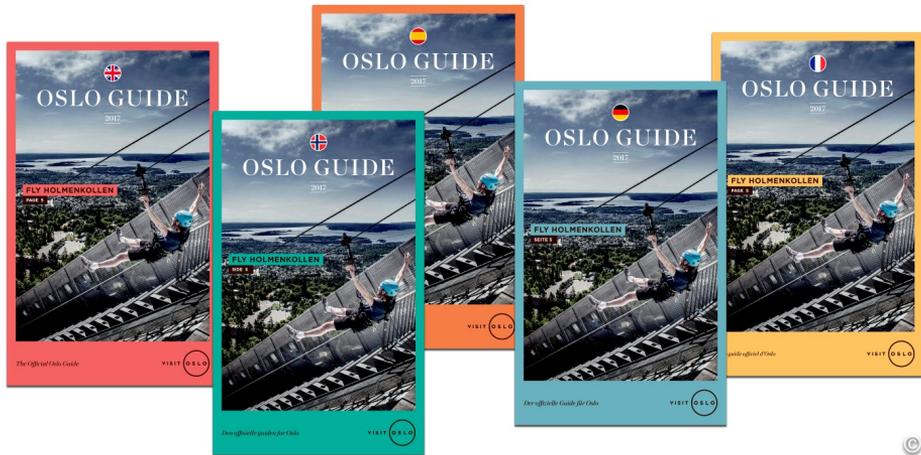
Figure 5: Oslo Guide in different languages (link here)

Figure 6: Different of downloadable brochures at visit Bergen (link here)

3.2.2 Face-to-Face, Telephone & Video Communication

Since the tourism service providers of Oslo and Bergen have been chosen as samples for this sequence of study, their telephone and face-to-face communication services will be considered as this study's sample set. Since the researcher of this study is based nearby to the Oslo Area, face-to-face communication is conducted at the official office of VisitOslo. However, in order have the result of qualitative

real experience, the researcher will operate in the roles of potential customers who are unable to communicate in Norwegian, and they are new to the city, hence this is their first experience. For telephone communication, the number will be chosen randomly based on snowball sampling method from Bergen and Oslo based tourism service providers.

3.2.3 Electronic & Web Based Communication

A large portion of this study is based on electronic and web-based communication because most travelers prepare their trips based on web based information that they could find on the internet. Based on the survey of Norsk Turistutvikling, it seems that this type of communication is unable to necessary information about universal design facilities or services at desired destination [3]. Hence it becomes relatively crucial to provide good information about the possibility of having universally designed facilities in travelers' destination. Because with good information design, it will have a positive effect on the conversion rate of the business. Many studies have proven that by improving the accessibility and ease of use of websites, more users will make an inquiry or purchase the product or service. It is easy to find information about travel destinations in Norway via the internet, however, VisitNorway, VisitOslo, and VisitBergen are notable official tourist websites that provide almost every detail about traveling around Norway for both native and international travelers. Thus this study will use these websites as samples for this section. Moreover, there are several applications that are introduced directly on these websites so this study will also check them out to see how they are designed to help different groups of travelers.

The sample websites:

- https://www.visitnorway.com/
- https://www.visitbergen.com/
- https://www.visitoslo.com/

Furthermore, electronic devices at destination can also a part of this study since they also help to communicate with traveler on spot. Since researcher will act as visitor to visit Oslo in face-to-face study, this will also include in this trip but using Electronic & Web Based Communication toolkit to evaluate this type of sample.

3.3 Empirical evaluation process

After having chosen set of guidelines to perform the empirical evaluating for this study, and sampling materials, the study will be conducted as explained below.

3.3.1 Written Communication

In the written communication toolkit in UD-CETS [4], there are checklists and also illustrated guides to make sure all information on the printing materials will be designed in a way that reader could easily access it. The purpose of this study is to evaluate whether these materials could communicate well with readers to help them understand that Norwegian tourism is accessible to all. Hence, samples of print materials will be evaluated based on these criteria:

- Whether content is easy to understand or not
- Document design format: readable font, font size, design layout, visual content.

3.3.2 Face-to-Face, Telephone & Video Communication

Using the snowball sampling method, telephone numbers were chosen from Bergen and Oslo tourism services to inspect whether this type of communicate satisfy the checklist in UD-CETS toolkit for face-to-face, telephone, and video communication. However, in order to customize the process to fit with the situation in Norway, the evaluating criteria will be modified as the list below:

- The call will be answered with live person or auto reply system.
- How many levels of auto reply system are there?
- What happens during the waiting process?
- Repetition or transferring process of this process

As mentioned above, researchers will use real experience at VisitOslo office as a sample for face-to-face communication. The evaluating criteria will be listed below to fit in this study:

- Which language is used during face-to-face communication?
- How is the verbal communication?
- How is the non-verbal communication?

3.3.3 Electronic & Web Based Communication

According to the Electronic & Web Based Communication toolkit, when evaluating this set of samples, researchers should pay attention to these criteria:

- How information is presented in the website/application/electronic devices
- Usability of website/application/electronic devices
- Accessibility on different devices
- Social media communication of these website/application/electronic devices
- Accessibility of documents/brochures through these website/application/-electronic devices

3.4 Ethical consideration

The ethical aspects of this research were made clearly early on, as suggested by the project's supervisor. This research is purely based on expert empirical evaluating so it is suggested that there is no need for any approval from the Norwegian Social Science Data Services (NSD).

4 Result

Overall, the common result of this study is most informative materials are always presented in both Norwegian and English, or attempting to have as much English language material as possible. Along with English, these materials are also translated into other common languages, such as French, German, and Spanish, because these are also common languages within European countries and have many millions of speakers.

4.1 Written Communication

4.1.1 Articulacy of the content

The content of the brochures are presented in simple language so it is easy to understand the information there. Since these brochures are used to introduce and inform about attractions and services at the destinations, there are plenty of visual materials such as pictures of destinations or visual icons to replace the title of the paragraph and avoid repetition.

Along with descriptive information about attractions, they also include details regarding contact information in each location, such as accommodation, tourist agencies, and emergency contacts of that main destination. However, there is lack of information about accessibilities of that location.

4.1.2 Document design format

Overall, these brochures are structured clearly and well laid out. All of them satisfy all checkpoints in the Written Communication Toolkit (Figure 7). However, none of these brochures provides accessibility information of the destination to readers.
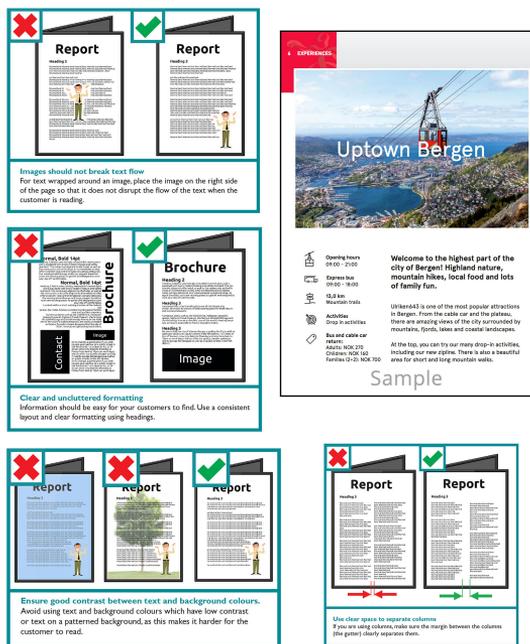
Figure 7: Result of printing sample based on checklist of Written Communication toolkit

4.2 Face-to-Face, Telephone & Video Communication

4.2.1 Telephone

By using the snowball method to choose samples for this part of study, the researcher noted down all issues based on listed criteria in methodology chapter above.

- The call will be answered with live person or auto reply system?
  - There is no consistent reply system among different service providers.
  - For services that have auto reply system, some have both a Norwegian and an English auto reply system, whilst some only have Norwegian system.
  - For services that have staff replying in real time, they mostly used Norwegian to introduce themselves, but travelers can use either English or Norwegian to ask for help.
- How many levels of auto reply system are there?
  - There are at least two levels to reach to the final step of telephone service. Even though the calls were made within working hours, it might

take more than three rings to get a reply by their agent. In some cases, there was no answer after finishing all levels of the auto reply system.

- What happens during the waiting process?
  - ○ Several services have set waiting music during waiting for a reply from supporters. However, it might take up to several minutes of waiting and occasionally the line went off without any suggestions or replies.
  - ○ Some services do not have waiting music or messages in between waiting.
- Repetition or transferring process of this process
  - ○ It depends on the service provider. This process can differ.

4.2.2 Face-to-Face

VisitOslo information desk is located within Oslo Central Train Station (figure 8), so it is easy to locate and search for information if travelers come directly from the airport, or to anyone who lives within the city. Since this study will not evaluate facilities of the destination, assume that traveler could find VisitOslo info desk by following the signatures around the station. Apparently, they put different types of brochure in different languages in the open space of the office, so people could visit and take these materials easily. In case the visitor needs any assistance, they can take a queue number and wait for their turn to get help from the staff there.

In a role of visitor, the researcher follows this process. The notable communication step of these staff member is asking which language the visitor uses before starting any conversations. The staff are quite friendly and patient when explaining the different types of services they provide and possible services that visitor could get through them. Furthermore, they also explain in detail whatever visitors ask about services, including information about how to get around Oslo and what visitors could get from the attractions. However, when asking about the possibility of having support for different form of disability, it seems they have to ask around in order to reply to the visitor.

Figure 8: VisitOSLO office at Oslo Central Station

4.3   Electronic & Web Based Communication

4.3.1   Electronic devices

They have installed several electronic devices in front of and inside of the VisitOslo office to help visitors access information about Oslo easier and faster during the waiting time for getting help from the staff (figure 9). The interface of these devices come from web-based material about the city, so they will be interpreted at a later time. The major noteworthy issue about these machines is the response time is quite slow, and the position of these devices is not for people who use wheelchairs or short people.

Figure 9: Electronic devices at VisitOSLO office
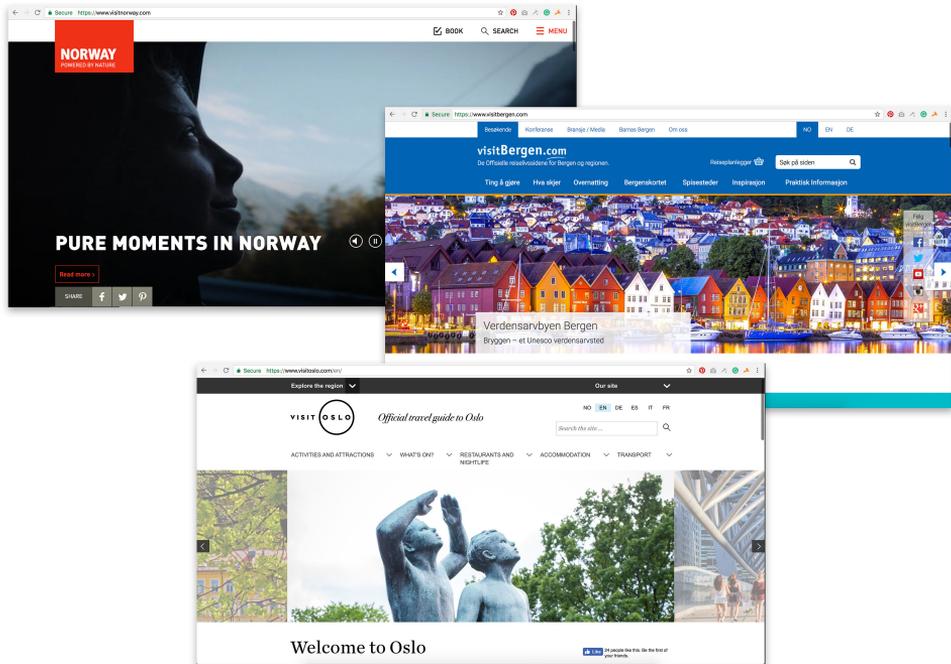
4.3.2 Web Based Communication

Figure 10: Three samples websites

Overall, all three sample websites have a nice and clean layout with readable font sizes and a good colour contrast (figure 10). The results of evaluating the sampled websites based on Electronic & Web Based Communication toolkit are shown below:

- All three websites contain a vast amount of information about Norway in different languages. However, the layout of VisitNorway changed slightly when changing from other languages to Norwegian (figure 11). In addition, a few pages in one website have not been translated.

  The information on these websites is presented clearly and understandably with different levels of headers, using colour to emphasise the important or relevant links to related articles. However, if looking for information about accessibility of the destination within these websites, it is hidden within the content of the article. Some articles do not provide this piece of information. The booking system on VisitNorway lacks information about accessibility for different groups of users and is written in a cryptic manner, thus making it difficult to understand the booking process on this website. However, it is

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possible to contact their service directly via email and receive a relatively fast response, within 24-48 hours. Another notable result is there is no contact form on all three websites but a list of contact information on their contact page.

Along with information about traveling in Norway, these website also provide different types of information about tourism in the country and how to contact or get support for user issues.
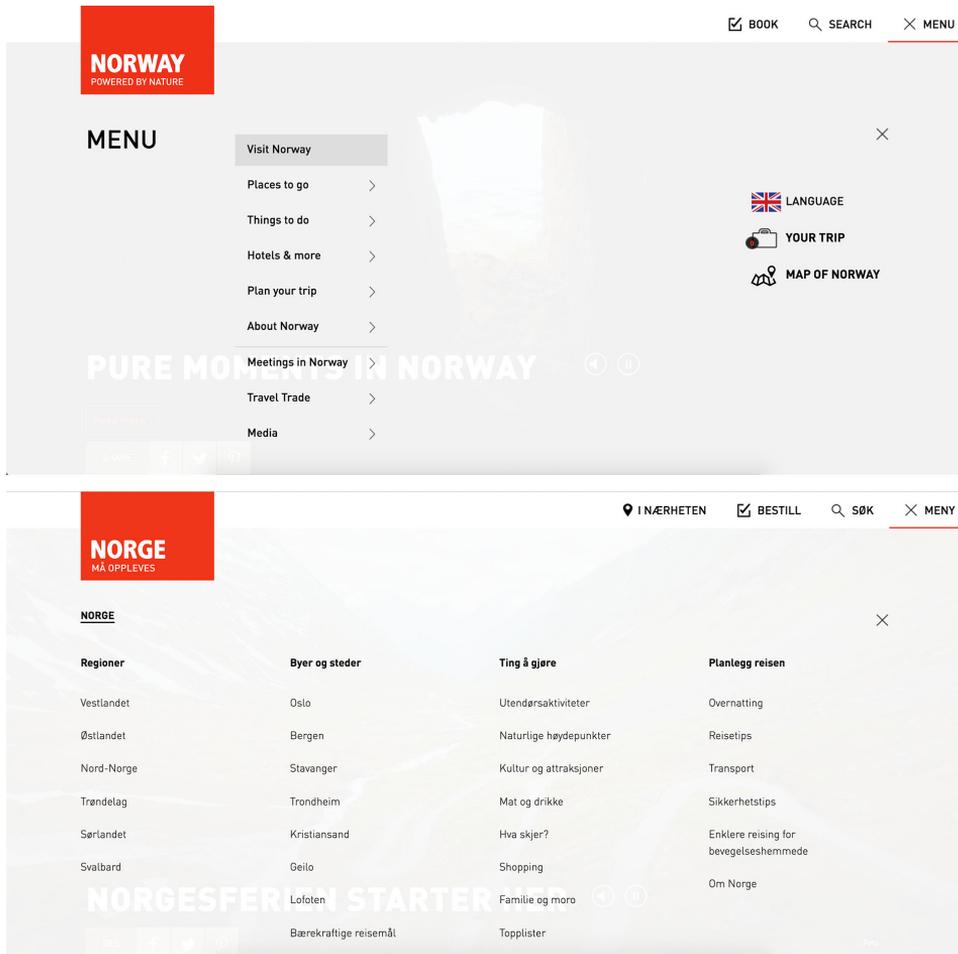

Figure 11: Layout changed when changing language

- It is difficult to browse around the website without having a final goal in mind due to the enormous database of the website and complex sitemap system. Furthermore, from VisitNorway, it can link directly to the websites of

VisitBergen and visitOslo without having a backtrack option.

The response time on websites is near instantaneous unless the page contains a number of quality pictures. Although on electronic devices, the loading time is quite slow.

- These websites have a mobile first design. This means all of them can be used on different devices, such as mobile, tablet, or any other screen size devices. Furthermore, VisitNorway and visitOslo have their own mobile application on different platforms such as iOS and Android.

  The difference between mobile web version and native application version is the application uses location service to provide information of the user's current location. Because VisitNorway contains all information about traveling in Norway, it use location service to provide accurate information to users. The VisitNorway application used a combination of the TripAdvisor database and website database to show the services and activities around the traveler's location. The navigation on this application is quite confusing compared to its website. VisitOslo has a better application in term of usability, however. It is easy to navigate around the application and one may also find the same content as on the website.

- Facebook is a commonly social media that all three websites have in common. According the activity on their social media page, they update their social media page several times a day. Beside Facebook, these websites also have accounts on Twitter, Instagram, Youtube, Flickr, and Google Plus.

- Apparently the link to access the documents and brochure page is located in either banner of the website, as in VisitOslo case, or at the end of the page like in VisitBergen. Since VisitNorway is the overall information hub, there are no documents or brochures on this page. On both VisitOslo and VisitBergen, they explain clearly the purpose of those documents and brochures including any alternative versions that may exist. Moreover, it is possible to order print material in bulk via their hyperlink on the page.

5   Discussion

Since tourism services are designed to include everything that provides a better experience to travelers, they include facilities in travel destinations, transportation in and out of the destination, accommodation services, and entertainment services. In addition, with the Universal Design plan in Norway [11], almost everywhere in Norway is universally built and can be accessed by all user groups. With the support of labeling standard NS 11010 [13], service providers can make their facilities more accessible. However, it seems Norway is still facing a similar problem to the rest of the European nations about providing the information about accessibility of their facilities and services to people [6].

Based on the report of customer behaviour from the European Commision, people who have some form of disability and people who are handicapped have similarly patterned behaviour when travelling, the major difference being that people with some form of disability spend more time on preparation for the trip because of their needs. Unlike the survey from Norsk Turistutvikling, the study from the European Commission shows that 70% of surveyed websites have information on accessible offers but this information is not a key point of their services. This report is similar to what this thesis' study found after on-website evaluation. By using the UD-CETS toolkit, it showed that most of Norwegian tourism services are well universally designed in terms of the service itself but not the communication aspect of the service. For instance, accessing information on written material and web-based communication are common preparation processes for travelers, but there is no indication about the accessibility of the service in the noticeable description of the material. It requires more effort to access this piece of information, which might cause a problem to a group of users who have issues in regards to using or accessing these materials.

Language barrier is not a big issue when traveling in Norway since most people here are able to communicate well in English, but for web-based communication material, there is no coherent system between Norwegian and English language usage on webpages. This might lead to missing essential information that travelers may need. During the study, another concerning issue is the telephone communication service. According to the result, the auto reply system does not work as well as expected and it might cause frustration to the customer. Even though it shows that face-to-face communication at Norwegian tourism services are highly satisfactory, not all people could approach this type of communication due to different

reasons. Hence telephone communication should be up to par to other forms of communication as an alternative method.

Even though VisitOslo has improved their communication by including accessibility information on their website, this piece of information is still in the form of descriptive information instead of promoting the point of the service, like one of the good practices mentioned in the report of the European Commision [6] (Figure 12).

Figure 12: Good practice on providing accessibility info (link here)

Based on the result of this study, all Norwegian tourism services are quite strong at providing contact information either on printing materials or web-based. This is a good communication method for any groups of user who could not use other type of media to communicate with service providers. They also have most of social media channels to broaden their communication ability, especially when they update information via these channels regularly. This might keep users in touch and up to date with current news at travel destination.

According to UD-CETS, when designing informative material for tourism services, designers should keep in mind customer behaviours when searching for relevant information. Those behaviours are included in four steps [4], which are:

- **Perception:** They use all their senses to perceive the information.

- **Discoverability:** It depends on their goal, they will find relevant information.
- **Understanding:** After finding relevant information, it depends on each person they will have their own interpretation about this information.
- **Use:** It is up to customer to decide the action after having this information.

Apparently even Norwegian tourism services have large database of information but they do not know how to execute it to suite with human behaviour to achieve the highest purpose which is communication well with customer about potential of services.

6 Conclusion

Overall, Norway has good universal design facilities to support travelers with different forms of physical ability or disability, but there is room for improvement in regards to their communication methods with potential customer. By using UD-CETS to check the communication aspect of sampled services, it clearly shows that some communication services are not universally designed and show a lack of essential points that need to be included in their service design process.

As discussed above, UD-CETS has succeeded in several nations in terms of improving all communication materials which are universally designed and also in providing key points of designing services which are designed based on customer behaviour instead of providing all information without having key points. Even though UD-CETS could be a good guideline for Norwegian tourism services to follow, there are several missing points in the guideline that can only fit in Norwegian tourism situation.

According to background information and study results, service providers should promote possibility of accessibility in Norway as a key value instead of placing it as descriptive information or making it so that it can only be found by using unfamiliar key terms. Hence by promoting accessible tourism for all in Norway is the way how Universal Design help to assure the quality of Norwegian tourism service for customer engagement.

This study could be used as foundation for further study when applying UD-CETS in Norwegian tourism services in business cases with small adjustments to fit within Norway's situation. Especially in regards to the importance of promoting universally designed facilities and services on communicating materials.

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