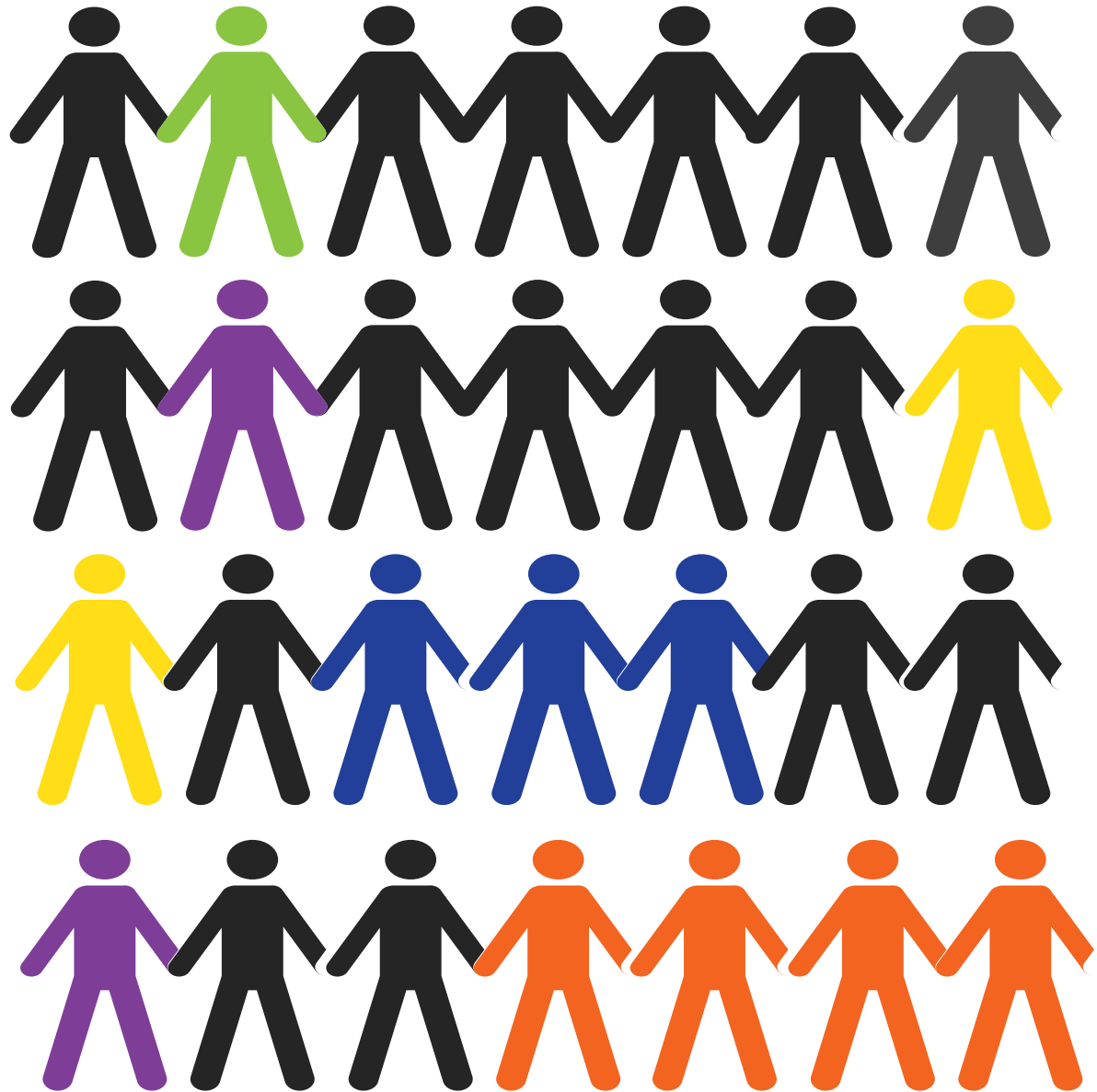


Who are we planning for?

A study about people with impairments and accessibility in green spaces in the greater Copenhagen Area



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Abstract

This report is focusing on accessibility issues when planning for sustainability. Specifically, it narrows to how people with impairments have difficulties to enjoy equally the use of green spaces in the Greater Copenhagen area. The methodology includes interviewing people in order to find out what is important for them when they would like to visit a green space. Apart from the focus on green spaces, there is also a presentation of the accessibility issues of the transportation network. The final result is to find an efficient way to improve accessibility issues through the planning process, as well as to point out that people with disabilities are marginalised.



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Preface

This report was written as part of the third semester of the Master Programme of Sustainable Cities in Aalborg University Copenhagen between September 1st and January 5th 2014. The semester theme, is described as the "Master Thesis" (The Study Board for Planning and Geography, Aalborg University, January 2014, page 1)

This project was supervised by Morten Elle, associate professor, Center for Design Innovation and Sustainable Transitions, Department of Development and Planning, The Faculty of Engineering and Science, Aalborg University Copenhagen and Philip Henrik Jensen, Consultant in the Danish Building Research Institute.

It was a unique opportunity to choose my Master Thesis topic based on what I find interesting to investigate further. The thought of focusing on accessibility issues was raised half a year ago, when I was in the middle of my third semester project and I read a comment in one of my questionnaires: "Your project is interesting, but you are forgetting to investigate accessibility issues!". That thought was in my mind for a while, "How could I be forgetting?". Therefore I decided, since it seems that more people than me are forgetting accessibility issues, to dedicate my Master Thesis on the topic. I believe that it is very relevant for planners who focus on sustainability, because "sustainable" should also mean "accessible".

It has been challenging to get in touch with the right people for interviewing them in a language that it is not their native one. However it was a very pleasant and eye-opening experience to meet so many interesting people, approach them and listen to their stories. Working my thesis on my own had also some drawbacks, but in general time went by fast but organised.

I would like to thank my two supervisors, Morten Elle and Philip Henrik Jensen, for guiding me and reading my material tirelessly and with interest until the very final drafts. They were very supporting throughout the whole period of writing my Thesis, all the time with a constructive feedback and a motivational spirit. As a result I will definitely recall my years as a student in Aalborg University Copenhagen with a smile.

I would also like to thank all the people that were interviewed. Marcel and Fabiola, who were my first interviewees and kindly accepted me to their home and explained me a lot of issues of accessibility. Hazel, who walked me around her campus and showed me a different perspective through her story. Karin, who had many constructive comments and the intention to contribute to my thesis. Ulla who surprised me with all the trips and experiences she had around the world. And Pernille, who kindly explained me all the challenges from a planner's perspective. They were all very interesting to meet and they are the voice of this report.

Last, but not least, my family was supportive through the whole semester despite of the geographical distance between us!

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To my grandparents
Loukia & Andreas

1.Introduction

This chapter includes:

The problem area

People with impairments in Denmark and Europe

Transportation in Copenhagen

Accessibility strategies and action plans in Denmark

Urban mobility and green spaces

Limitations of this report



I. Introduction to the chapter

People with disabilities are representing an important part of our society. However, they are often neglected by the planners and discriminated by the society, with barriers for their careers and lives. Approximately 10% of the world's population, or 650 million people (United Nations, 2006), live with a disability. They are the world's largest minority! Their population is increasing as the medical advances and the ageing process (World-Health-Organization, 2014). In addition, an individual with a life expectancy of 70 years will spend on average about 8 years living with disabilities. This study is going to explore how are people with disabilities included or excluded from the use of green spaces, in different ways.

“

If all the problems had been created by society, then surely society could uncreate them. Revolutionary!

(Crow 1996, page 58)

”

According to Crow (1996), the key part of attitudes that make people disabled, is the interpretation of impairments with emphasis on the medical intervention and part of a personal tragedy. As a result, this group of people are discussed last from the city planners and the city is planned to serve the average person, excluding the ones that do not have the physical or mental abilities of the so-called “average” person, that the city is designed to serve. This is a major problem since now people with disabilities are the largest minority group, which is constantly excluded from the rest of the society. In addition, most of the problems of this group would not exist in a natural environment, where stairs and elevation differences are not as common as in a human constructed environment, as well as the chaotic distances in big cities which obligate to use transportation modes. Therefore, there should be a responsibility of the humanity when it comes to alternating the urban spaces, in order to not marginalise groups of people that would be able to live normally before the human intervention to the environment. This is particularly important when discussing the everyday life of people with impairments indoors, as well as their activities outdoors.

“

The social model of disability emphasises how people with impairments are disabled by the failure of societal arrangements to accommodate their needs.

(Prince 2008, <http://dsq-sds.org/article/view/65/65>)

”

The mobility dimension of social exclusion includes lack of access to adequate transport, which excludes the person from various social activities and reduces his opportunities for working, networking, etc. and prevents him from integrating to the society. Constraining the ability to travel, the chances of employment reduce dramatically, not only because of the disability to travel to job interviews but also because the location has now the main role in making the choice. In addition, mobility constraints create barriers in accessing education and as a result there is a discrimination of equal educational choices and quality, which will define a different career path for a person that is disabled. Leisure activities, relaxation as well as access to health centre require accessibility because the facilities are often located in the outskirts of the city and are difficult to reach with an affordable and suitable transportation mode (Kenyon, Lyons, and Rafferty 2002). On the other hand, while the particular impairment of a person is static, the disability is dynamic, and can dramatically change when the individual's environment changes (Crow 1996). Therefore, impairment is not the main cause of the disability, but the dynamic environment is. Disabilities are presented to the society with different attitudes therefore a change of attitude could trigger many positive changes for this group of people. It might be very unlikely that everyone has the same chances in society and that discrimination could be fully vanished. However, it is a matter of respect to include people with disabilities in all parts of the planning process and not to marginalise and neglect them. It is also important to consider them, when discussing the outdoor green spaces and gardens, whether or not these are functional for people with disabilities in the same way that they serve the rest of the society.

This report will focus on accessibility problems and social exclusion from the use of green spaces, investigating through interviews the views of people with disabilities as well as the view of the municipality. The purpose would in a broad sense be to find out an approach for the planners in order to not “forget” people with disabilities when creating parts of the city.

II. The structure of the chapter

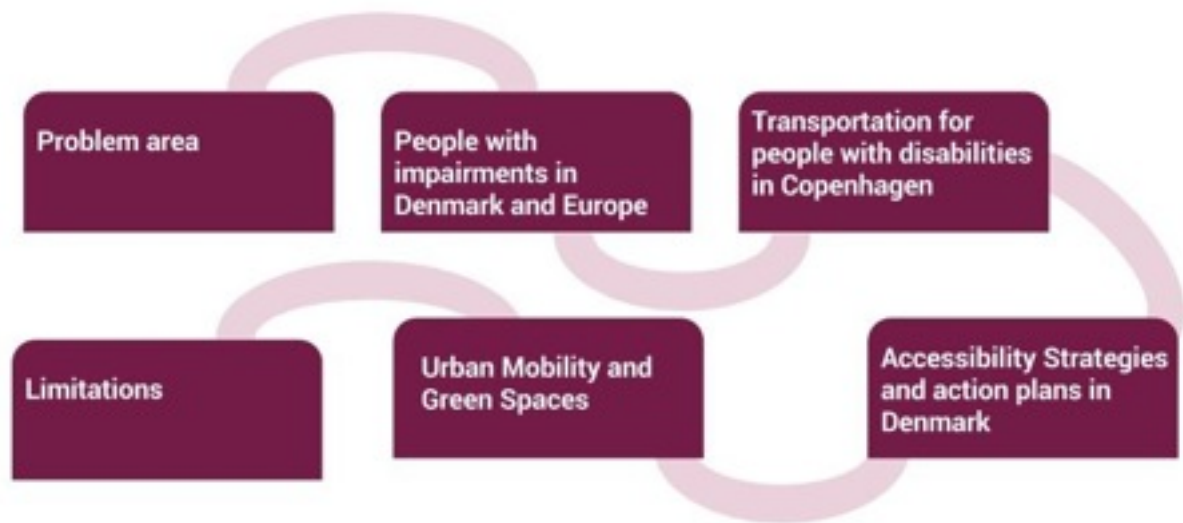


Figure 1.1 The structure of this chapter

This chapter will introduce the general framework of this report. Before anything else, the problem area will be introduced. Then, the different definitions of impairment will be shortly discussed, as well as the proportions of the society that have different impairments, in order to show that this part of the population does exist and is larger than we believe. Then, information about how a person with disabilities has the chance to go around the city of Copenhagen with different transportation modes as well as what kind of research, strategies and planning are currently taking place in Denmark. The definition and importance of green spaces will follow, before the problem area is presented together with the limitations of this report, ending this first chapter.

III. Problem Area and Formulation

Despite the fact that Copenhagen is well known for its parks and public spaces that provides to the public, the problem area of this project derives from the basic need of equality in public spaces. The focus would be the access to green spaces as well as their inner design and their accessibility. First, the accessibility from home to green spaces will be discussed, in terms of having a suitable public transportation network which would provide equal travel times and travel frequencies to green spaces for people with disabilities and people without disabilities. Then, a focus will be placed more specifically on the design of parks, green spaces in general, arguing about the importance of universal design of these spaces as well. As it is seen on Figure 1.2, which will be explained in the next paragraphs, problems in transportation lead to problems to access recreational spaces and parks.

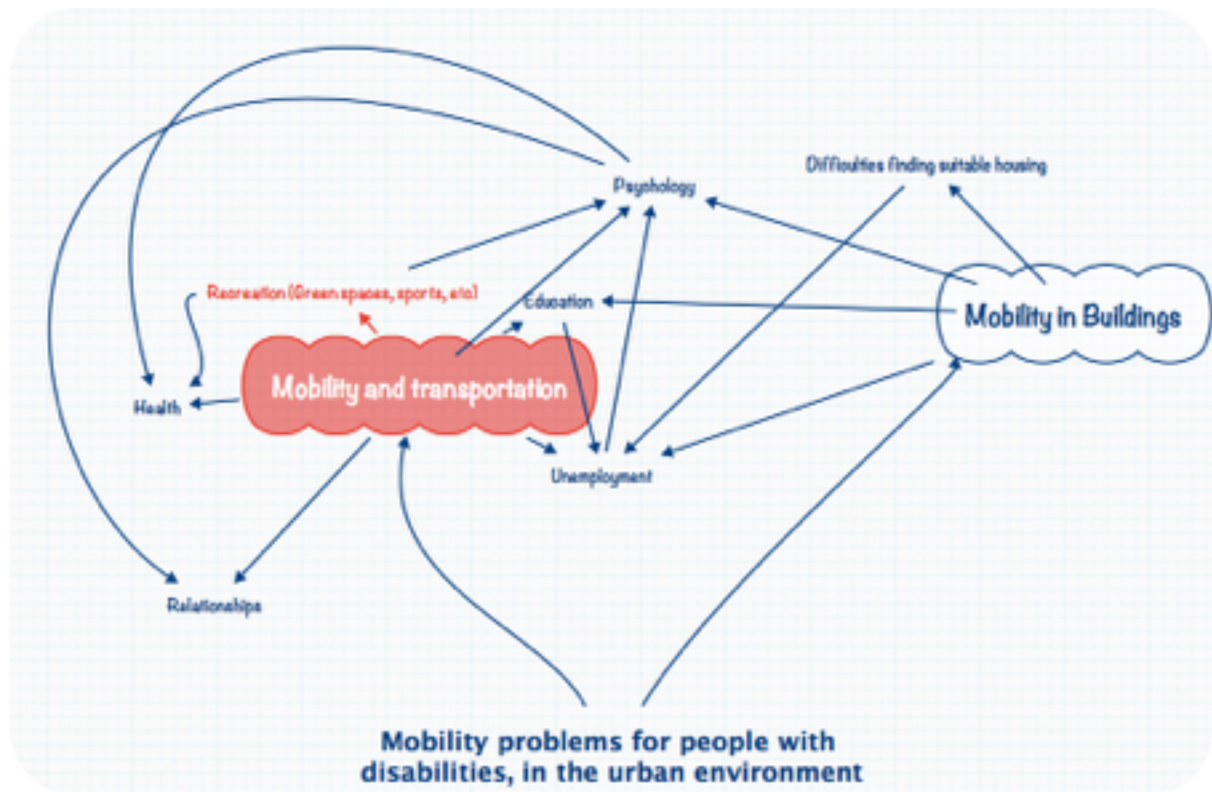


Figure 1.2 Mobility problems people with disabilities in the urban environment and relations between them, a brainstorm which leads to the problem area of this project.

Specifically, this project is taking place in Copenhagen, so the specific characteristics, problems, plans and policies will be discussed in the context of this city. On Figure 1.2, some of the disabilities of people with impairments within the city context are presented through a brainstorming process. If these are seen in two large categories, one of the problems in the buildings and one of the problems in the urban space except the buildings (mobility) then problems in these areas lead to problems in other areas of a person's life. Problems in mobility can result in health issues, psychological issues, problems with social interactions (relationships), education and employment. In the same way, problems to use and get in buildings also result in psychological issues, difficulties to find housing, unemployment, problems in education etc. Also, all these categories are affecting each other in different ways. This diagram does not have the purpose to present all the potential interactions but to show the importance of the urban environment on the individual's life as well as to show the focus of this report in relation to other categories and problems.

Accessibility in green spaces is affected very much by the issue of mobility in the city. Therefore, issues of using public transportation are very important and cannot be excluded from this study, they are forming the first important part of accessing the green spaces. Then, there is the issue of internal design of the space in the green space, so that it is universally designed to be used by the public. The lack of providing meeting these basic needs results in several other issues. The research question of this thesis is formulated as below:

Are people with impairments excluded from accessing and using green spaces? If yes, in which ways are they excluded and how could that be changed?

In order to answer the part of the question “in which ways are they excluded and how could that be changed”, it was decided to conduct interviews and collect the information on a table which refers to the different exclusion factors, the different ways that disabled people are excluded from a green space. This is further explained in the next chapters. This method was decided as useful since it would provide a more consistent analysis of the interviews which themselves are abstract and could be difficult to extract conclusions from them without a more concrete method. Then, the first part of the question will be discussed in relation to the exclusion factors that are found in the interviews.

The methodology of this research is going to be described in detail in the next chapters. Interviews will be held as well as field observations and literature research in order to have solid data of the problems. Then as a conclusion, the importance of the findings will be argued and underlined, as well as strategic steps towards solving these problems.

IV. People with impairments in Europe and Denmark

According to the United Nations (2006), disability is not static and therefore the more obstacles exist, the more disabled a person becomes. Many different definitions have been used to describe the group of people that have to deal with disabilities in their daily life. Most of them focus on the impairment itself, however the Academic Network of European Disability experts (December 2013) defines disability not as the impairment, but as the difficulty to engage into normal activities in a long or short-term period. The definition is important and affects not only the way that society is going to view people with disabilities in the long term, but also the actions that will be eventually taken to integrate them with the rest of the society. In extend, this will also affect engineers, architects and planners to become more aware when creating new constructions and areas, outdoors as well as indoors and this is the reason that it was thought relevant to include in this chapter.

If disability is defined as impairment, then it sounds like a problem that permanently stigmatizes the person and cannot be improved by the external environment, therefore it is commonly ignored. However, if it is described as a situation, as in Academic Network of European Disability experts (December 2013) definition, then it can be changed and society will consider it as something that has potential to be changed. It seems that nowadays there is a conflict between the two definitions and in relation to the ways to deal with the integration of this group.

“

Persons with disabilities have long-term physical, mental, intellectual, or sensory impairments such as blindness, deafness, impaired mobility, and developmental impairments. Some people may have more than one form of disability and many, if not most people, will acquire a disability at some time in their life due to physical injury, disease or ageing.

(United Nations 2014 un.org)

”

EQLS (2011-2012) :

“Do you have any chronic (long-standing: 6 months +) physical or mental health problem, illness or disability”?

If the person answers “Yes”, “Are you limited in your daily activities by this physical or mental health problem, illness or disability”?

EU-SILC (2006)

Ad hoc module on social participation

“Limitation in activities people usually do because of health problems for at least the last 6 months”
(Whether they are hampered in their daily activity by any ongoing physical or mental health problem, illness or disability)

ESS (2012)

“Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem?”

SHARE (2011)

“For the past six months at least, to what extent have you been limited because of a health problem in activities people usually do”?
(Also, ADL and IADL)

Eurobarometer (2012)

“For at least the last 6 months, to what extent, have you or someone in your household been limited because of a health problem, in activities people usually do”?

Figure 1.3 Definition of disability in the different surveys (Academic Network of European Disability experts December 2013)

People with disabilities can contribute equally to non-disabled people in many areas of expertise. The Academic Network of European Disability Experts (December 2013) also highlights that it has been proved that the job performance of persons with disabilities is also good, if not better than the average population. Fears of hiring people with disabilities and additional costs to the employers are overblown and a survey in 2003 has found that almost three quarters of the employers reported that employees with disabilities did not require any special accommodation (Academic Network of European Disability experts December 2013). The actual number of

unofficial disabled people is higher, because particularly elderly people avoid applying for official disability status, therefore disabilities should not be considered a phenomenon but an ordinary dimension of the society, especially after wars and destructions (Seeland and Nicole, No-date)

Disability Group	Prevalence per 1000 of population
Blind	1
Cannot use fingers	1
Dyslexia (severe)	10
Wheelchair users	10
Low vision	13
Reduced coordination	14
Reduced strength	27
Intellectually impaired	37
Cannot walk without aid	56
Allergic	100
Elderly	100
Hearing impaired	140

Figure 1.4 Disability groups and their prevalence per 1000 of the population (Nielsen and Ambrose 1999 page 13)

Above, Nielsen (Nielsen and Ambrose 1999) distinguishes the different categories of disability and presents the frequency, among 1000 persons. Hearing impairments are the most common while blind are the least common category. Therefore, among 1000 people, there are differences, which have to be taken in mind when planning the urban space, since the imaginary "average" person for which everything is designed, does not exist in reality. Therefore, besides defining a person as disabled, this categorisation is very broad but it shows the diversity in society and the different needs that people have. It is not realistic to have a narrow view of an average person and plan everything according to these minimum needs.

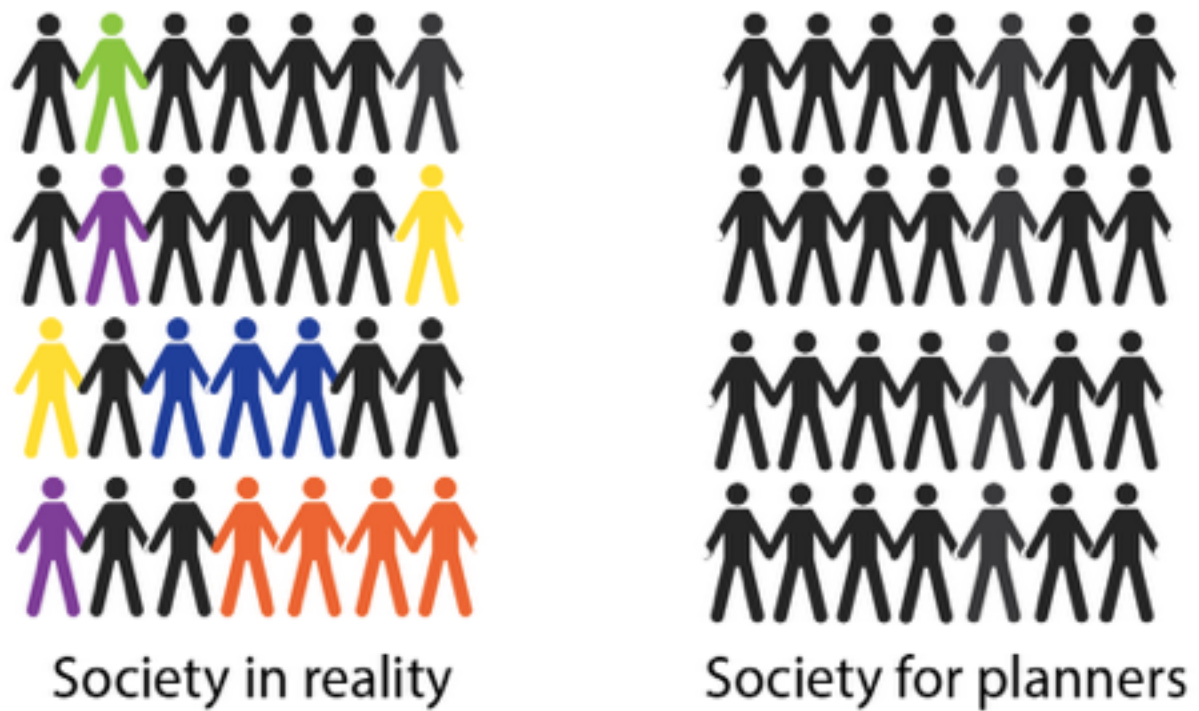


Figure 1.5 Who are we planning for? This picture has the purpose to underline the fact that using an imaginary "average" person to plan for is the most common case but creates problems to many groups of people that deviate from that "Average".

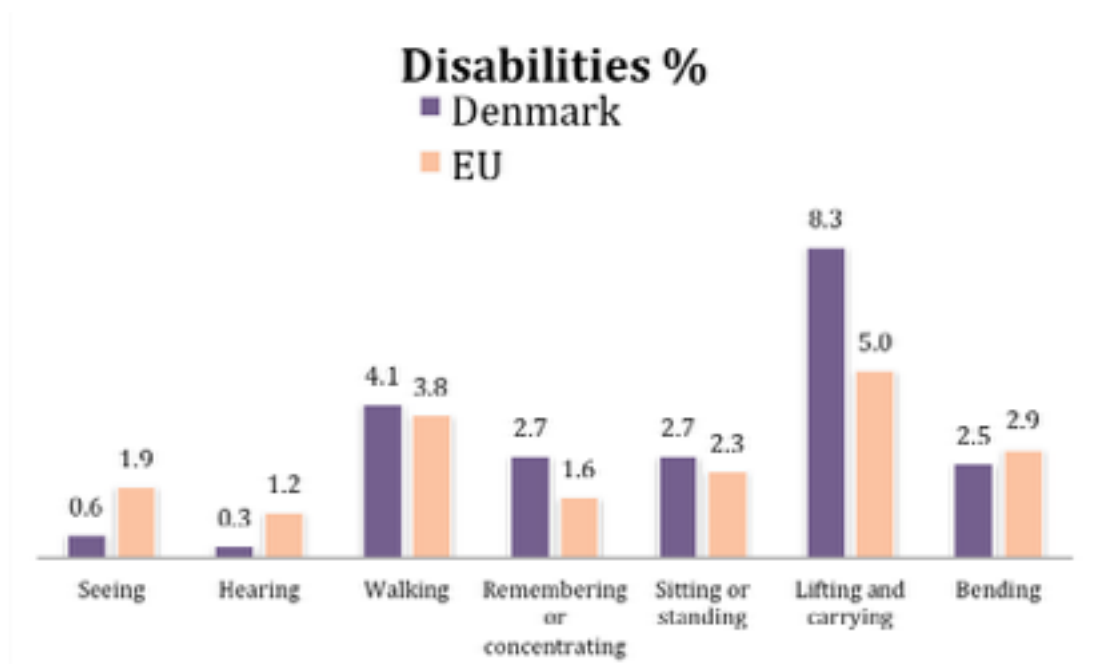


Figure 1.6 Gender of persons with disabilities in Denmark (Eurostat 2011)

On Figure 1.6, the percentage of people with disabilities out of the total population is presented, for Denmark and the European Union. The data are found in the databases of Eurostat (2011), where the classification is focusing on the activity that the person is having difficulties. Therefore the following classes of disability are defined from Eurostat databases : Difficulties in seeing, hearing, walking, remembering, sitting or standing, lifting and carrying, bending. In Denmark we notice

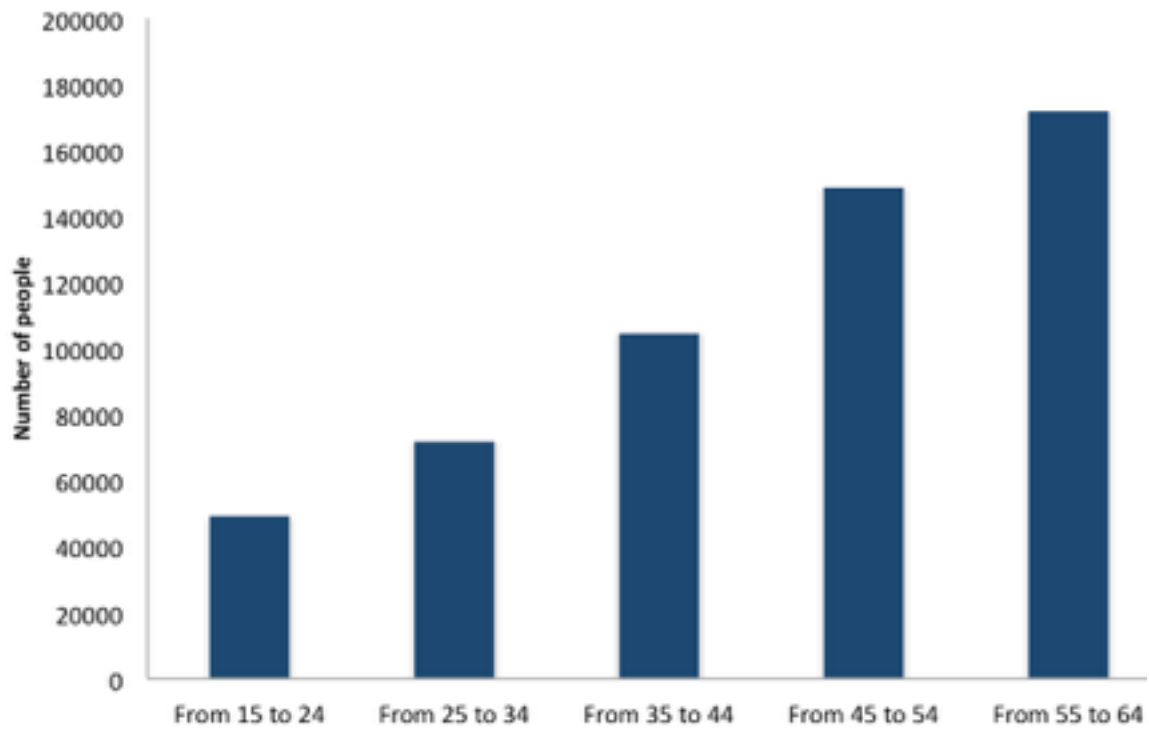


Figure 1.7 Population of persons with disabilities in Denmark, by age (Eurostat 2011)

an 8.3% of people with difficulties in lifting and carrying activities, which is much higher than the European average of 5%. All of these categories include problems that would affect the everyday transportation of a person and accessibility issues would occur. Also, these categories overlap, since the same person can have different disabilities at the same time.

Then, on Figure 1.7, the number of people with disabilities of the previous categories, are shown for Denmark (Eurostat 2011). Approximately 50,000 (Eurostat 2011) people in the age group of 15 to 24 years old have difficulties in their basic activities, while 172,103 (Eurostat 2011) is the same group of people but between the ages of 55 to 64 years old. The percentage is rapidly increasing, as people get older. Then, as it is shown on Figure 1.8 approximately half of the people receive help in their daily activities, and it can be assumed that not all of the people who need help are able to afford it. Therefore considering the small population of Denmark, it is a large population that is going to meet obstacles in their everyday mobility and therefore will be excluded in different ways. In addition, the fact that not all of the people that need personal assistance can afford it causes additional issues.

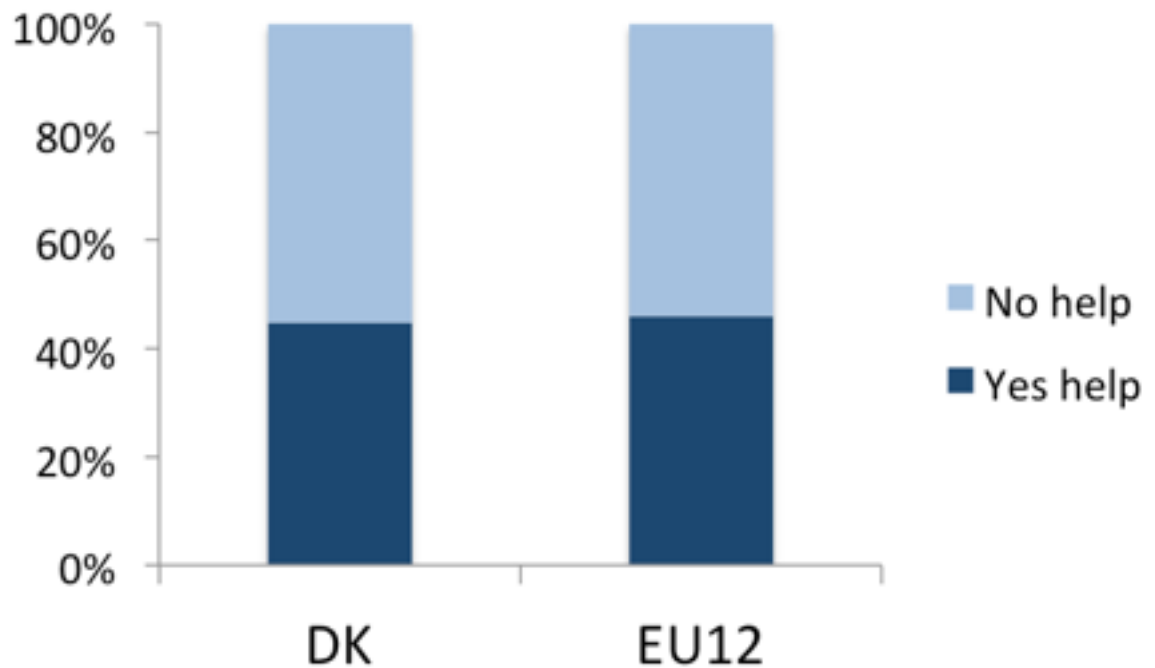


Figure 1.8 People with disabilities who do receive help or not (Academic Network of European Disability experts, 2010)

V. Accessibility of public transport in Copenhagen

The quality of public transport should not be perceived differently between disabled and non-disabled people. Differences mean that disabled are excluded from enjoying a normal urban mobility network to satisfy their needs. However, this as we can see on the figure below that in Denmark, the perceived quality of the bus transportation system is above average for both groups of people with disabilities and without disabilities. In addition, people with disabilities sometimes cannot use the same services of the normal public transportation routes, due to their failure to provide adequate service to them. Therefore, there are also "Special services" designed to accommodate disabled people's needs, as for example Movia Buses in Copenhagen do.

The regular bus network lacks of the basic design to accommodate the disabled and for that reason there is the Handicap transport scheme, which, as Movia defines it, is made to accommodate people who cannot use the ordinary bus system. There is the possibility to use the special transportation scheme for 104 single trips in the period of one year. In order to use this you have to become a member of the handicap system, go to your local municipality and pay an annual fee of 300 danish kroner. In addition, you have to pay 24 dkk for the first 5 kilometers as well as 2.4 dkk/kilometer for the next 35 km. These fees are paid per month. You have to book your trip no later than two hours before, as well as the service runs from 08.00 to 18.00. Your companion can assist you for free only if he is set by the municipality. If you are a member of the system you can also use the ordinary buses for free, with all the restrictions that this means.

Extra costs:
Membership fee 300kr
24 DKK for the first 5 km
2.4 DKK/km for the next 35km
1.2 DKK/km from over 40 km

Figure 1.9 Costs in Flextur (Movia 2014)

The Handicap transport scheme is useful as an additional transportation option for people with disabilities but has many disadvantages if it is considered an everyday transportation mode. It is more expensive and not as flexible as the normal bus routes which run all day every 5-10 minutes regularly, the Handicap transport scheme has to be booked therefore the trip has to be planned in advanced in order to be there on the agreed place and time, and no rescheduling can be done easily. In addition, since these buses have appointments with different people, in different places of the city, the trip duration increases according to how many people have to be picked up and where. It is not an alternative for the normal bus routes.

Copenhagen Metro claims that it is designed to be used from people with disabilities with as little assistance as possible, and provides the following facilities that are seen on the table below. Therefore, the Copenhagen Metro can be considered as a public transportation mode that people with different disabilities can use easier, compared to the other transportation modes.

Then the S-trains also provide elevators in most of the stations around the city, as well as ramps to get into the train with a manual or an electric wheelchair. These are used by the train driver, so the person who needs the use of a ramp has to wait close to the train driver, in the same entrance as the bikes. Then the driver comes out of the train and puts down the ramp.

At the station:	On the train:
Lift from street level to platform	Flush-floor train boarding
Platform doors at tunnel stations	Increasing tone before doors close
Uniform floor surfacing with "guideways"	Appropriate handrail placement
Delays announced on the loudspeaker system	Shielded sitting areas
Emergency call points at stations	Metro train stewards on board
CCTV surveillance at stations	Anti-trapping device on door edges
Island platforms at all stations	No 'chair legs'. Space for guide dogs
Totem pole display at entrance	Information signs and displays in trains
Static information at concourse level	Telecoil systems at call points
Information displays on platforms	Flush-floor train boarding
Telecoil systems at call points	Flex area in trains
Light signal indicates door closing	Folding seats for companions
Wheelchair bays on forecourts	Call points at a maximum height of 1,200 mm
Lift from street level to platform	Anti-trapping device on door edges
Ticket dispensers and validation machines at a maximum height of 1,200 mm	Metro train stewards on board
Information displays in elevated position	Appropriate handrail placement
Island platforms at all stations	
Lift from street level to platform	

Figure 1.10 Facilities of Copenhagen Metro, at the station and in the train (Copenhagen Metro, 2014)

VI. Accessibility Strategies and Action Plans in Denmark

In order to have a framework of what is the situation in Denmark, it was important to introduce some of the key points of how accessibility is integrated currently in the planning process. The Academic Network of European Disability experts (January 2013) divides accessibility requirements into three levels in order to be better understood. First, There are general accessibility obligations, then the specific accessibility requirements as well as the detailed technical specifications.

The general accessibility obligations are, as their title, "general", therefore there is no description of how they have to be implemented, they are not compulsory. For example, a general non-discrimination law says that 'taxis should be accessible to disabled passengers'

Then the more specific accessibility requirements specify criteria, so instead of stating, "buses should be accessible", it is stated "buses should be designed to allow wheelchair users to enter safely". However, still the statement is abstract without any specific technical details or rules.

These specific technical details are describes by the detailed technical specifications, which are laws or codes that describe design dimensions of a product. For example, a

regulation or standard says that 'The slope of the floor between any two points within the wheelchair space shall not exceed 11 degrees in the longitudinal plane...' etc. The latter rules could be again either voluntary or compulsory.

According to the Academic Network of European Disability experts (January 2013) Denmark has only general obligation and specific accessibility requirements for the urban city furniture, which means that there is no advanced technical specification where rules or laws specify dimensions etc. Therefore it is the second category that was described before, the category of accessibility requirements in Denmark currently. Also, it is only advisory to implement the requirements but not obligatory. However, Denmark is obligated to prioritise good accessibility for people with disabilities (Center for Ligebehandling af Handicappede, 2011) as well as Denmark has signed the United Nations convention on the Rights of People with Disabilities.

Denmark has signed the UN convention with ratification date on 24/7/2009 and as well as signed the optional protocol ratification date on 23/9/2014 (United Nations 2014). By ratifying the convention, the countries accept the convention's legal obligations and agreed to adopt the suitable implementation. The general principles that have been agreed in the UN convention are the following :

“

- *Respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons;*
- *Non-discrimination;*
- *Full and effective participation and inclusion in society;*
- *Respect for difference and acceptance of persons with disabilities human diversity and humanity;*
- *Equality of opportunity;*
- *Accessibility;*
- *Equality between men and women;*
- *Respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities.*

”

(United Nations, 2007, page 7)

Therefore Denmark is obligated to do actions to improve the implementation of the above principles, including accessibility issues and universal design.

Country	Convention Signature Date	Protocol Signature Date	Convention Ratification Date	Protocol Ratification Date
Denmark	30-3-2007	--	24-7-2009	23-9-2014

Figure 1.11 Denmark's signature (United Nations 2014)

What is a convention?



A 'convention' is a formal agreement between States. The generic term 'convention' is thus synonymous with the generic term 'treaty'. Conventions are normally open for participation by the international community as a whole, or by a large number of States. Usually the instruments negotiated under the auspices of an international organization are entitled conventions (e.g. the Convention on the Rights of the Child, adopted by the General Assembly of the United Nations in 1989) (unicef.org, 2014)

“

By ratifying a convention, and after the treaty comes into force, a country accepts its legal obligations under the treaty and will adopt implementing legislation.

(United Nations, 2014)

”

VII. Urban Mobility and Green Spaces



Advantages of using green spaces

Green spaces and natural light are beneficial for children, adults and especially for elderly people (Nielsen and Hansen 2007). As it is highlighted Seeland and Nicole (No-date) there is a great need to manage the impacts of environmental pollution and individual stress on the urban population especially on people with disabilities. During a large scale study in the Netherlands (Nielsen and Hansen 2007),

comparing the availability and volume of green space in the residential environment with health, it was found that residents who had access and enjoyed more green space were also enjoying benefits in their health. However, other differences should be examined as well in order to interpret correctly studies such as this, but in general there is a positive link between green spaces and health. Also, Grahn (Grahn and Stigsdotter 2003) support that the distance to public urban open green spaces is very important as people will not compensate for that distance with more visits to a park that is further away. They suggest that the more often the visits to a green space, the less often will report stress-related illnesses, regardless the age, gender or socio-economic status.

Other advantages of green spaces for elderly and disabled people include that the outdoor activities increase positive stimulation and concentration as well as beneficial to improve the sense of coherence, reduce aggression and agitation. Gardening is an important and enjoyable activity that could be reinforced from the public green spaces. Plants require regular care and therefore caring for plants provides the feeling of responsibility. This would mean that a positive psychology of elderly and disabled means less likelihood for further injuries or health problems, which can be also translated as a decreased demand for public health services. Parks that have staff teams for city farms or community gardens can be very beneficial for people with social care needs and can be a safe environment for people with disabilities as well as it can have therapeutic advantages (Chartered Society of Designers, No-date)

Different reasons to visit a park are described on Figure 1.12, in a survey about why do elderly people above 75 years old; go to their local park. Half of them are going for a simple walk; also a lot of people go to enjoy the flora and fauna, as well as the beauty of the surroundings. Less are focusing on keeping fit through going to a park, to improve their health or attend social events. Therefore it is considered that green urban areas have numerous uses and advantages, some of which are the ones

described from this survey, for elderly people (Chartered Society of Designers, No-date)

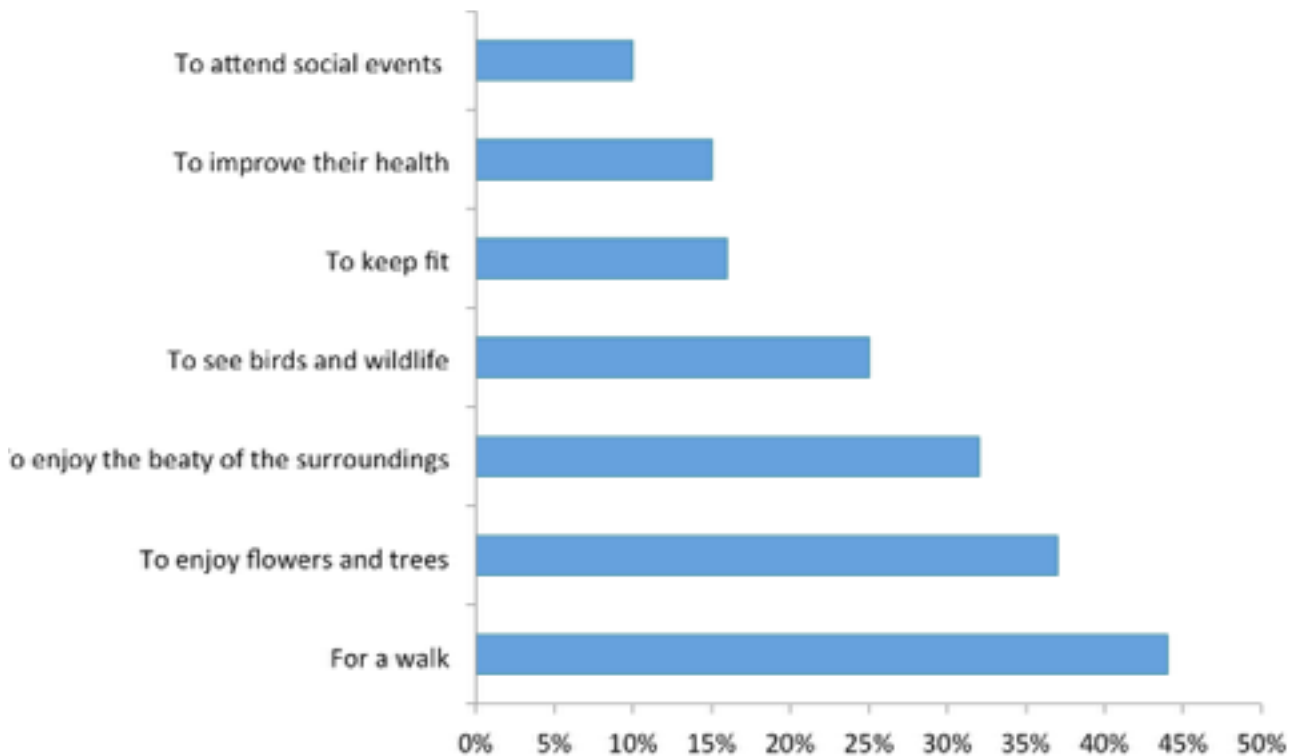


Figure 1.12 Why people over 75 years old go to their local park, (Chartered Society of Designers, No-date)

Problems in using green spaces

The greater obstacle preventing people from visiting green spaces is lack of time and distance (Grahn and Stigsdotter 2003). Life has become an indoor reality, spent in air conditioned rooms in front of a computer, while outdoor activities become more and more important and therapeutic. Therefore, public green spaces are designed to accommodate these needs of outdoor activities for recreation and social interaction to everyone. However, people with disabilities confront problems when using these public green spaces, which often limit their choices of outdoor recreation. These problems include the infrastructure within the green space (ramps, toilets etc), limited entrance times, special tickets or necessity of reservation, lack of adequate transportation facilities, etc. The relation of distance as well as the time spent in the green space is found to be the one on Figure 1.13, (Grahn and Stigsdotter 2003). It is obvious that distance is defining the frequency of annual visits to the green space as well as how much time is spent there. When the distance is as short as 50 meters, then the average number of visits is approximately 175 visits per year, with a duration of 252 hours spent in total per year. However, when the closest green space is 1 km away, the visits are less than half, as well as the time spent, because more time has to be dedicated in transporting towards the green space than when it is only 50 meters away. If it is considered that Copenhagen has placed green spaces 15 minutes away from any corner of the city, which is approximately 800 m, then the desire of the people to use green spaces is almost double. It is important to consider that the plans

of Copenhagen being green and accessible in less than 15 minutes, excludes an important number of people.

Distance to open green space	50 m	100 m	300 m	1000 m
Number of visits per year to urban open green spaces	175.36	166.76	145.81	77.68
Amount of time in hours	252.03	225.32	219.34	130.29

Figure 1.13 Distance of green spaces from home, number of occasions per year on which the respondents visited urban open green spaces and the total amount of time they spent in urban open green spaces during a year (Grahn and Stigsdotter 2003, page 18)

Copenhagen has numerous large parks, many of them even larger than 40 hectares (Figure 1.15). Swanwic et al. (Swanwick, Dunnett, and Woolley 2003) are defining the following categories for parks, that are described on the table. Most of the green spaces in Copenhagen are actually large enough to be defined as metropolitan principal parks, which include many facilities and are city attractions on their own. Therefore, since so many green spaces are available to be used from an “average” person in Copenhagen, there should be equally planned green spaces that people with disabilities are also able to enjoy as well.

Principal/City/Metropolitan Parks	Varied physical resource and a wide range of facilities, which would generally be recognized as a visitor attraction on its own.	More than 8 ha
District Park	Variety of facilities such as sports fields/ playing fields and play areas;	Up to 8 ha
Neighborhood Park	Landscape features and variety of facilities	Up to 4 ha
Local Park	Consisting usually of a play area and informal green space, landscape features but lacking other facilities	Up to 1.2 ha

Figure 1.14 Categorizing parks

Park	Size in hectares	Category
Amager Fælled	312	Principal/City/Metropolitan Parks
Utterslev Mose og Gyngemosen	243	Principal/City/Metropolitan Parks
Amager Strandpark og Kastrup Fort	170	Principal/City/Metropolitan Parks
Damhussøen og Damhusengen	85	Principal/City/Metropolitan Parks

Fælledparken og Amorparken	66	Principal/City/Metropolitan Parks
De indre søer	64	Principal/City/Metropolitan Parks
Valbyparken	64	Principal/City/Metropolitan Parks
Vestre Kirkegård	59	Principal/City/Metropolitan Parks
Vigerslevparken	49	Principal/City/Metropolitan Parks
Lersøparken	48	Principal/City/Metropolitan Parks
Vestvolden	36	Principal/City/Metropolitan Parks
Frederiksberg Have	31.7 *	Principal/City/Metropolitan Parks
Grøndalsparken	31	Principal/City/Metropolitan Parks
Christianshavns Vold	26	Principal/City/Metropolitan Parks
Assistens Kirkegård og Hans Tavsens Park	23	Principal/City/Metropolitan Parks
Kagsmosen	16	Principal/City/Metropolitan Parks
Krogebjergparken	14	Principal/City/Metropolitan Parks
Østre Anlæg	14	Principal/City/Metropolitan Parks
Bellahøjparken med Degnemosen	11	Principal/City/Metropolitan Parks
Emdrup Søpark	10	Principal/City/Metropolitan Parks
Kastellet's Uden	10	Principal/City/Metropolitan Parks
Ryvangens Naturpark	10	Principal/City/Metropolitan Parks
Ørstedsparken	7	District Park
Lergravsparken	4	Neighbourhood Park

Figure 1.15 Parks in Copenhagen, (Teknik- og Miljøforvaltningen 2014, page 53), (Wikipedia 2014)

Therefore there are plenty of parks in the municipality available for the citizens, but are these also usable from citizens with impairments?

VIII. Who is this project for and which are its delimitations?

The findings of the project could be used as an inspiration for more investigation into this problem area, as it is often neglected even in the academic society and it is usually forgotten when discussing a "Sustainable city". In addition, it can contribute into future considerations when designing green spaces.

This project discusses mainly the areas defined as public green spaces. However, very similar characteristics have other areas which are not defined as "green" such as the seaside and the beaches, city squares or even gardens and parks with an entrance fee like the zoo. All of these areas contribute to a more natural urban landscape and provide advantages in health issues, psychology and social interactions etc. Therefore, while it is highlighted that currently the distances to green spaces are a limitation for people with disabilities in Copenhagen, these excluded areas are not investigated and when included in the research there might be different conclusions. For example one might not have park in a distance of 300 meters of his apartment,

but his apartment might be next to a lake or the sea. This report was initially aiming to focus on central Copenhagen, however, due to the data collection methods the area had to be expanded and include the Greater Copenhagen. This is because of the difficulty of finding the people to interview for this particular topic. However, data for the parks and the maps could not be found together for Copenhagen and Frederiksberg, so they are combined from different sources. In general, the data for park sizes and locations in Frederiksberg were difficult to obtain. However there are not any conclusions drawn on these data, since they were used only to indicate the situation, therefore the validity of the report is not affected.

Also, this report does not have a purpose to focus on measuring the current situation in regards to specific dimensions of spaces and specific universal design methods for people with different disability. For example, the result is not expected to be that "this specific design has to be applied to all green spaces, with these exact dimensions etc etc". This is because that would shift the focus to the technical issues only, however the aim of this investigation is to include also social barriers and other reasons that are preventing a disabled person to use green spaces with the same way as non-disabled people.

Another important thing to mention is that the UN convention document is used in this report as an example, as a starting point of the research that has been done and is agreed to be implemented in many countries. Therefore there is no extensive analysis of the UN convention and the purpose is not to criticise what is missing from the convention either. Only some parts that were considered relevant to accessibility issues to green spaces are included and explained in the Theories Chapter, in way to show that the theories that are used are in line with the convention recommendations.

VIII. Summary of this chapter

Summing up the introduction chapter, many issues affect the mobility of people with disabilities and as a result the use of recreational areas and leisure activities becomes a second priority and it is almost neglected. In the next chapter the theories that are going to be used as a framework, as the "pair of glasses" of this investigation, will be presented and explained. This will be followed by the Methodology chapter, where the methods to collect the data are presented in detail. In the Analysis chapter the results of analyzing the interviews through the chosen theory-lenses are shown. Then, in the last two chapters, Discussion and Conclusions, there will be a discussion of the results, some recommendations and the answer to the research question.

2.Theories

This chapter includes:

Social exclusion and exclusion factors

Defining disability

Defining green areas

Defining universal design and accessibility

Defining sustainability

The United Nations Convention



I.Introduction to the chapter

The theoretical framework of this report includes not only solid theories but also a mixture of mindsets, which provide a certain point of view throughout this project. Also, in this chapter, most of the concepts and definitions that are used in this research are explained. The concepts of social exclusion and marginalization are used as a point of departure for the research, combined with the sustainability concepts.

II.Social exclusion

According to Kitchin (1998) space is currently organized to keep disabled people marginalised in their place, and to convey the ones that are out of place that they don't belong there. He supports that disabled people are on purpose

“pushed” into poor housing and excluded from transportation and from labour market as it has been described in many social theories. In addition, society has taught to the disabled to believe that this is their place on the social ladder. Both the social and the built environment, which disables them, are totally constructed, filled with barriers to inclusion and designed with certain spaces that are completely inaccessible. The society is learning not to accept difference but to accept sameness, protect it and categorize it into groups. As a result of protecting the “sameness” of the group that is more confident and dominant, the “able-bodied” are locking the different ones out of their space and placing them in a limited environment which does not directly interact with the rest of the urban life.

Disability is a constructed concept related to economic, political and social processes. The urban environment is hostile towards people who belong to these constructed and marginalized groups, and disabled their everyday activities. In addition, this whole exclusion is an unconscious part of everyday life and exists without the majority of the population to acknowledge. In this report, disability will be defined as a socially and spatially constructed concept underlining the positive potential for change through bringing awareness of this situation. Morris (2001) also acknowledges that the anatomical differences of disabled people exist so they should not be ignored but recognized in order to promote human and civil rights through actions to provide equal access.

In a study carried out in London (Church, Frost, and Sullivan 2000), to link transport and social exclusion, the first step included recognizing the factors that may reduce or remove the ability of people living in disadvantaged areas to access key activities. These factors are presented below on Figure 2.1.

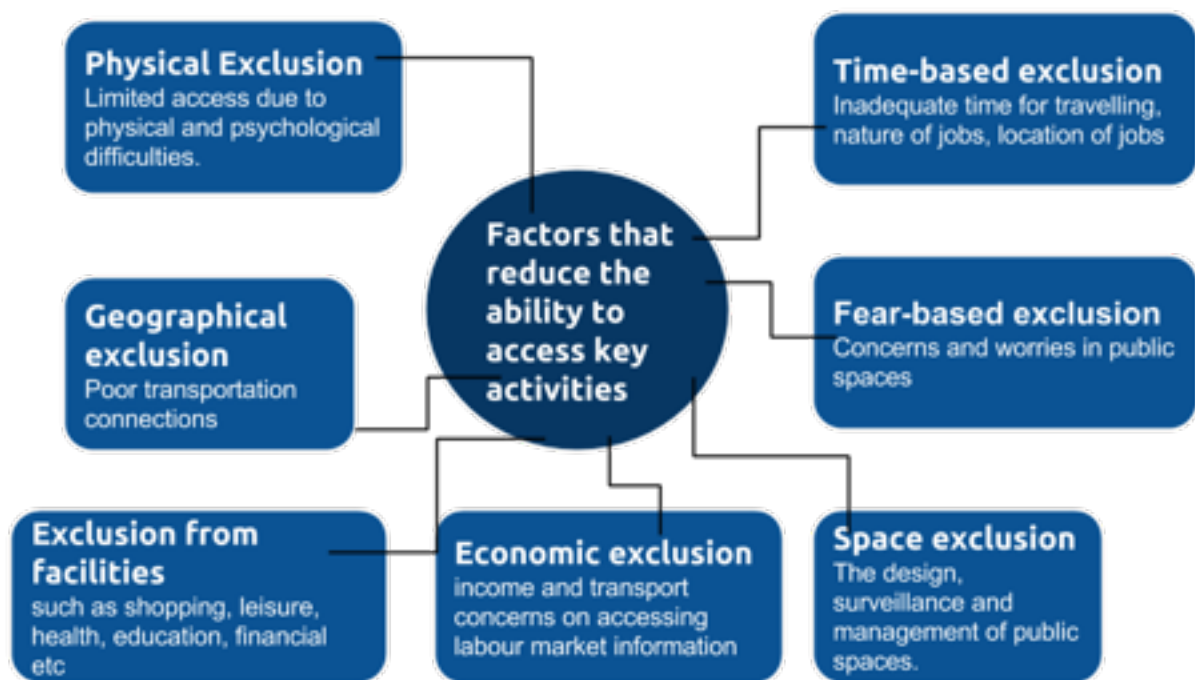


Figure 2.1 Factors that reduce the ability to access key activities (Church, Frost, and Sullivan 2000)

Church A, Frost et al. (2000) use the above categories before doing their research on social exclusion in London, in order to develop a conceptual network for understanding the relationships between transport and social exclusion. Therefore, the different factors of social exclusion through transportation affect the accessibility in green spaces. The relationship of the above factors with accessibility to green spaces is presented on the next table. Using this framework and categorizing the problems, it would be easier to recognize more specific issues concerning the accessibility in green spaces, without ignoring the external problems that affect this accessibility. These factors of exclusion are then presented and redefined for green spaces specifically:

Physical Exclusion: In this category, disabled people are physically excluded from the design of green spaces due to the lack of concern for them initially in the planning process. Therefore they come across many barriers that limit their way towards their nearest park, starting with the distance, then the barriers on their way, as well as the problems in the park.

Geographical exclusion: Here we are referring specifically to transportation from the person's apartment to the green space, focusing on the distance and the public transportation connection frequency and route.

Exclusion from facility: Green spaces include different facilities, such as events, open gardens, seminars, sports, etc., therefore an exclusion from the green space means exclusion from various facilities.

Economic exclusion: Economic exclusion refers more to accessing the labor market and jobs, and it was not considered relevant here since we are not arguing about social issues such as employment etc. In addition, since all these factors are going to be used when forming the interviews and analyzing them, it was not considered that the interviewees could provide us with enough information about economic exclusion.

Space exclusion: The inner design of the green space, the services, the management and the surveillance are important to include the needs of a disabled person. It was decided that discussing the toilets would be relevant to space exclusion, as well as the information maps in the park, rather than being considered facilities, but more as a service.

Time-based exclusion: This type of exclusion is connected with the geographical exclusion since disabled people need more time to transport from one place to another since the transportation network cannot serve their needs without delays, especially in Copenhagen where the design does not include disabled people's needs. As a result, a disabled person has to dedicate more time to transport himself to the closest green space.

Fear-based exclusion: As it has been discussed before, the urban environment does not welcome disabled people. The latter receive hostile messages from the inadequate design, which cause normal feelings of fear. Therefore, especially in a space such as a park, which can be very large and chaotic without the necessary information provided, fears that someone might get lost, or that an accident could happen to him and due to the lack of security or surveillance he might end up alone, do naturally occur. These fears create concerns and sometimes exclude certain groups of people from using the green spaces, as well as other urban spaces.

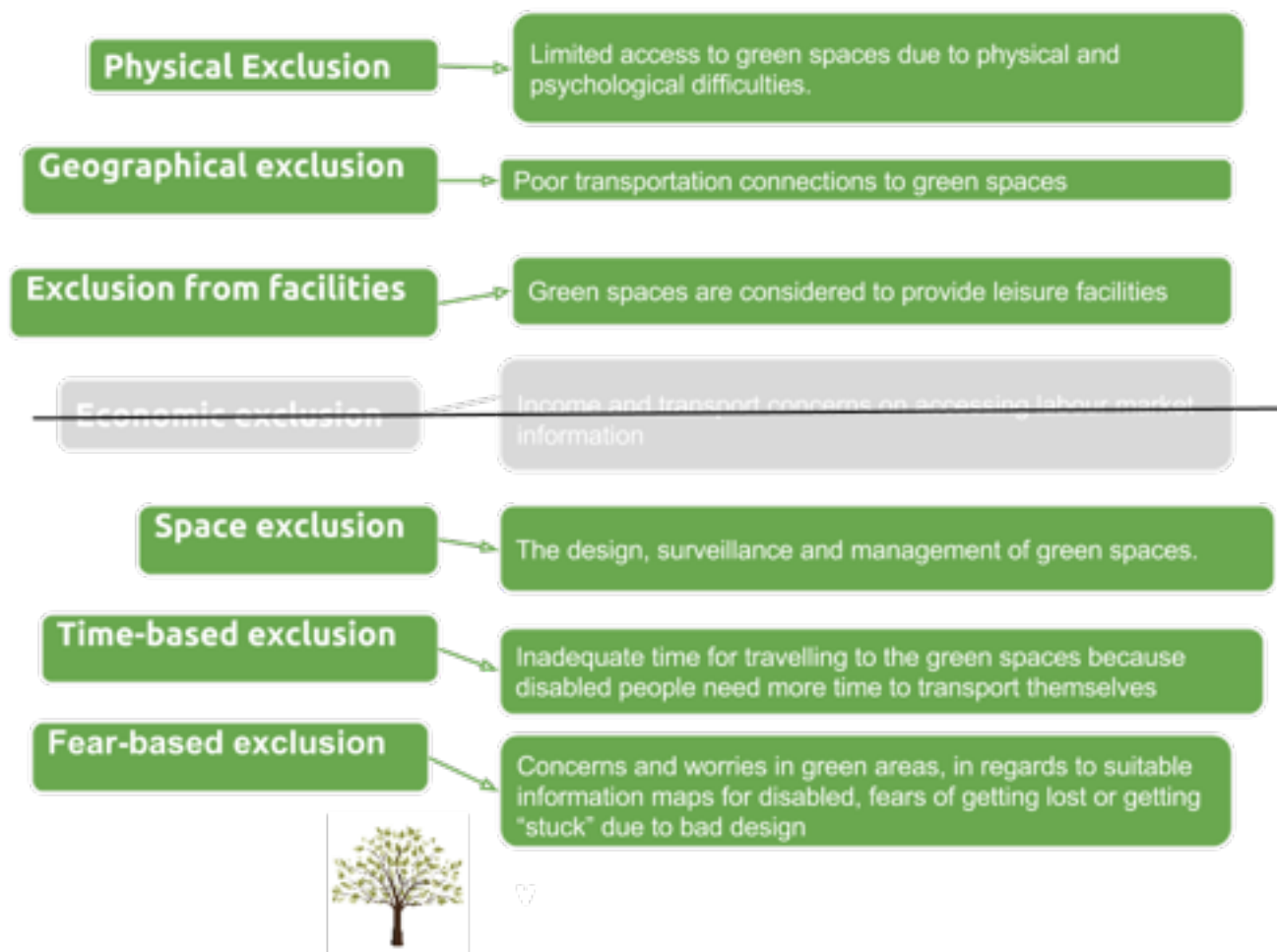


Figure 2.2 Different factors that cause exclusion from green spaces. Economic exclusion is blurred because it was decided to not include it in the analysis.

III. Definitions

In this part of the report, the most important concepts that are used, are defined here. This was thought to be important as there are many different views on who are disabled people, what is a disability as well as what is a green space.

Defining Disability

Disability is the disadvantage or restriction of activity caused by a society, which takes little or no account of people who have impairments, and thus excludes them from mainstream activity (UK Disabled People's Council 2014), (Morris 2001).

"Impairment is a characteristic, feature or attribute within an individual, which is long term and may or may not be the result of disease or injury and may 1. affect that individual's appearance in a way which is not acceptable to society, and/or 2. affect the functioning of that individual's mind or body, either because of, or regardless of society, and/or 3. cause pain, fatigue, affect communication and/or reduce consciousness." (Morris 2001, page 2).

"Disabled people are those people with impairments who are disabled by society." (Morris 2001, page 2).

According to Jensen and Nielsen (Nielsen et. al 2000) the following categories define disabilities:

1. Physical disabilities (or motor disabilities)
2. Visual impairments
3. Hearing impairments
4. Allergies
5. Learning disabilities

In this report there will be an effort to cover most of the categories when discussing the social exclusion, but there are limitations to this due to the difficulty to contact people with different disabilities and interview them. The focus is on people with physical disabilities as well as hearing and seeing problems. Allergic people or people with asthma are not investigated, as well as people with mental problems, learning and concentration problems, etc. On the picture below the disability groups are presented with a short description of each group.



Figure 2.3 Disability Categories and description, The descriptions are from (Nielsen et. al 2000) but the picture was created for this report.

Defining green spaces and accessibility

Defining green spaces for the purpose of this project resulted in a quite narrow definition. However other urban spaces are taken into account and discussed in the last part of the report as well. It is the space between buildings that is investigated here, narrowing down to spaces that are used for recreation among natural elements. Urban areas are made of buildings and space between buildings. This space between buildings consists mainly of surfaces such as soil, grass and trees and are defined as a green space whether they are accessible to the public or not. Besides green space, there is also "grey space" which consists of hard surfaces such as concrete and is divided to functional spaces (roads, parking lots, pavements) and civic spaces (town squares, plazas, pedestrianized streets) (Swanwick, Dunnett, and Woolley 2003). Therefore the open space is a mixture of civic and green spaces. In this project, the term green space is referring to green spaces accessible and open to public. Also, the following hierarchy of parks and green spaces is used here Figure 2.4 (Swanwick, Dunnett, and Woolley 2003). The hierarchy is not actually used in the report but it is presented in order to understand to which spaces the project is referring to.



Figure 2.4 Urban Space Taxonomy (Swanwick, Dunnett, and Woolley 2003)

According to Gehl (2010), during the planning process the starting point should be on the eye level and not from above. There are three scales of a city: The large, city scale, which includes the facilities, traffic, and it, actually sees the city as it is seen from above. The middle scale includes how the buildings are designed and how the urban space is organized. It is like a bird-eye view of the city, like flying very low with an helicopter. Then the small scale, the most important one, includes the human dimension of the city and it is the quality of life that takes place within the urban space, in an eye level.

Gehl (2010) argues that modernism focuses in buildings and sometimes planners plan most things from above, the space is organized from the large scale, the focus is on the design and the skyline of the city. However there has to be a different approach to the human scale, which cannot be seen or planned from a large scale, but only from the eye level. In the same way, planning accessible spaces needs to be done from a small scale. Accessibility is not only about people with impairments, but it includes advantages to most of the population, for example there are also people with their children in baby strollers that would have difficulties with stairs or in public transportation. Aslaksen (Aslaksen et al. 1997) argues that accessibility is still seen as a field of specialized care and presents this as planning paradox deriving from the education and background of the current architects and planners, which did not focus on accessibility and universal design including the disabled as well as having different priorities. He uses the slogan "*Planning for our future selves*" (Aslaksen et al. 1997, page 8), which does not consider the disabled as the "others" but includes everyone as when we all get older our physical abilities decrease. The idea of equality considers that if some groups of people have to use a special transportation and cannot use the regular public transportation, then it happens that someone from that group at some point will not be able to use the special transportation and will have to use the regular one. However this would not be possible since it is not accessible for him, and therefore this creates inequality related to work, education etc.

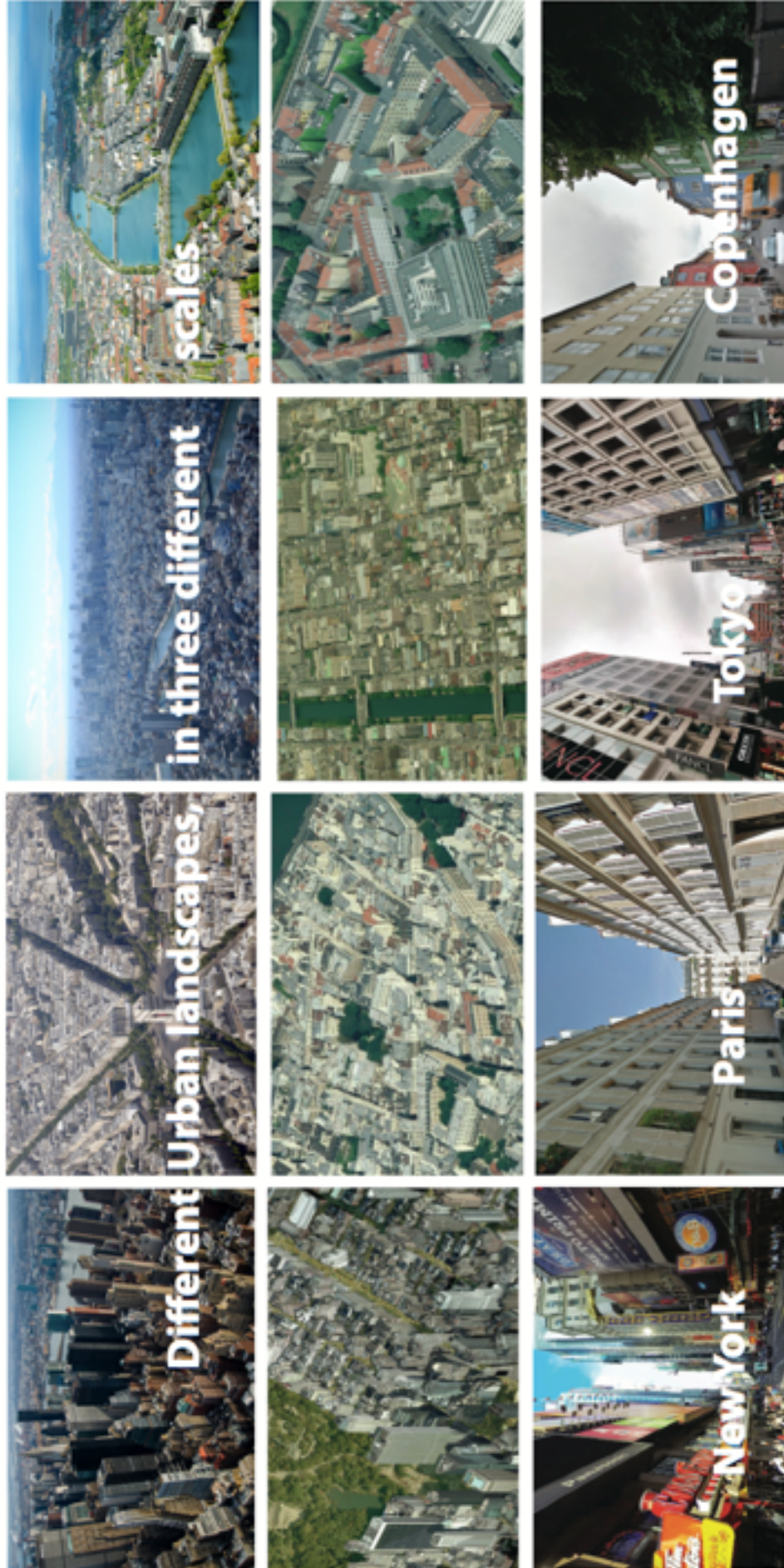


Figure 2.5 Examples of different city levels as Gehl (2010) defines them. The picture is created for this report.

The following definition is proposed by Aslaksen (Aslaksen, Bergh et al. 1997, page 9)

“

Universal design is the design and composition of different products and environments to be usable by all people, to the greatest extent possible, without the need for adaption or specialized design.

(Aslaksen, Bergh et al. 1997, page 9)

”

Universal design is a tool to influence the process of planning. Therefore planning accessible spaces does not only mean to add extra elevators and ramps everywhere, it has a deeper meaning which has to be used from the beginning of the planning process. If the buses did not have level differences then there would not be a need for the driver to stop and put down a ramp. If there were no unnecessary stair steps as part of the inner park design, there would not be a need for extra ramps. This could be implemented to the greatest extent possible. The principles of universal design are the following: (Aslaksen, Bergh et al. 1997, page 11)

“

Equitable use

The design is useful and marketable to any group of users. Therefore if we are discussing green spaces,

Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

Size and Space for Approach and Use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility.

(Aslaksen, Bergh et al. 1997, page 11)

”

People from different backgrounds including planners, engineers, architects and politician should be more than familiar with these principles in order to also implement them. It was considered relevant to include them in this report despite the fact that the principles are not used to assess the design of the green spaces. As it was also mentioned before, the purpose was to look deeper than the design as an exclusion factor and find other reasons as well.

IV. The planner's Triangle

In order to connect the issues of accessibility, universal design and green spaces with planning a sustainable city, the planner's triangle can be used as it incorporates the problem and shows the conflicts with the rest of the planning interests.

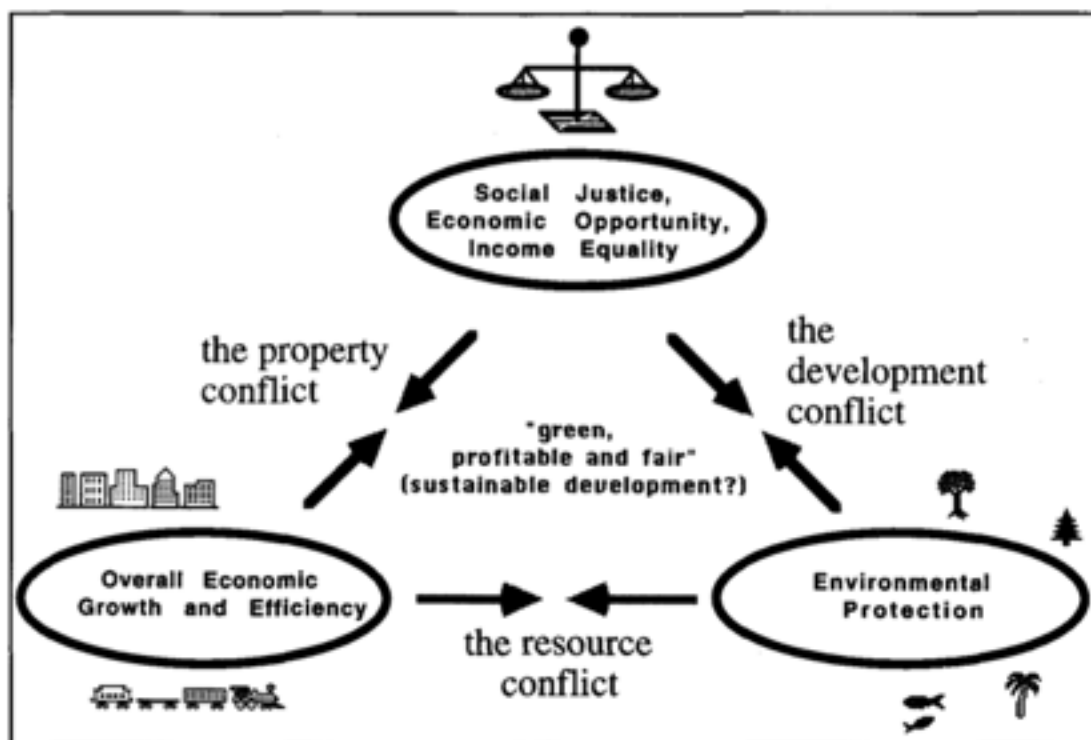


Figure 2.6 : The conflicting interests (Campbell 1996, page 298)

The triangular model (Campbell 1996) is used to question how are the sustainability purposes defined in the planning process. Campbell refers to the different conflicts

that occur when discussing sustainability and specifically, he uses the planner's triangle to describe them. Therefore, in the planning process there should be some consideration and balance between the three interests, avoiding to serve narrow goals. While these three interests are not the only ones that are conflicting, this triangle is a simple way to present and understand the importance of considering and understanding the interactions between the different interest groups in the planning process. The three corners of the triangle represent the following interests:

- **The economic development (Growing the economy):** The city is seen as a place of production, distribution, consumption and innovation, with a market competition with other cities.
- **The social environment (Distribute the growth fairly):** The equity planner is focusing of distributing the resources and services among the social groups, where space should be accessible as it is a space of communities and neighbourhoods.
- **The environment (Not degrade the ecosystem):** When the interest is environmental planning, then the focus is on consuming the available resources and managing the produced waste, which are both a threat to the natural environment. Managing space is very important, as it has to do with altering the natural environment.

When discussing about the problems in including disabled people in the planning process and universal planning, the major conflict that is recognized on the triangle is focused on managing the available space in the city. Therefore there should be a focus on making the city universally accessible but still consider how can space be managed in order to be always useful rather than rarely serving its purpose. For example, it would not be neither ecological, nor economically beneficial to make all toilets suitably spacious to accommodate a person on a wheelchair, since that extra space will fulfil its original purpose only on the 20-30% of its usage (approximately the percentage of disabled people). However, it has to be ensured that disabled people's needs can be always accommodated in an effortless and in the least time consuming way possible. Therefore universal design has to be considered when discussing sustainable urban planning. Sustainable development (Campbell 1996) is a concept that actually unifies the different interests and sets an additional goal of maintaining a balance. However, since sustainability cannot be measurable, using the term "sustainable" in front of plans and actions is easy and common, even when these actions or plans do not contribute to an actual sustainable development, but that cannot always be argued due to the abstract definition of sustainability and the lack of indicators. On the other hand, other actions can contribute to sustainability, without incorporating the term "sustainability" explicitly.

It is challenging to put into implementation and monitor sustainability, since the concept can be transformed when used. Nevertheless, the general direction towards sustainability is to bridge the gaps and conflicts that occur between the different interests, some of them presented on the triangle, and bring a balance to the system. This makes universal design and accessibility necessary as they are not balanced at all considering the focus of the planners. The planner's triangle will be used in the

discussion part of the report, to connect the concepts of sustainable development in Copenhagen with planning for disabled people.

V. The UN Convention

The convention about the Rights of persons with disabilities, engages the countries that join it, to alter their regulations and laws either by adding, changing or abolishing laws, in order to ensure that persons with disabilities are equally included in all parts of the society and not discriminated. The purpose of the convention is to elaborate with more details on these issues as well as attempting to trigger a plan of implementation. Therefore the content of the convention goes through many different issues that have to be re-examined. Among them, in many points of the content, there is focus on accessibility issues, which is actually one of the seven basic principles of the convention (United Nations 2007, page 5). Some of the most relevant parts of the convention were found and will be discussed here, as well as will be used in the discussion chapter of the report.

Article 9 (United Nations 2007) refers to accessibility issues in a general manner, it includes accessibility to transportation, to information, communication and technologies, as well as to the physical environment. All facilities have to be accessible to persons with disabilities, so all barriers have to be identified and eliminated in all indoor and outdoor areas as well as in the transportation modes. Also, technology and communications should be used as a tool to promote accessibility.

In **Article 18** (United Nations 2007), the right of being able to choose their residence is highlighted. This issue is very important since not only the residence of a person with disabilities has to have certain requirements in order for the person to be able to use it, but the residence has to be in a location that the person chooses, close to his chosen facilities, neighbourhood, job, including green spaces. This would be a part of eliminating the geographical exclusion from the green spaces as it is discussed earlier in this chapter. Also, Article 20 about personal mobility describes that the country should ensure that the person has access to the necessary assistive technologies and independently move in the transportation network in an affordable way.

Article 30 focuses on participation in cultural life, recreation, leisure and sport. According to this, the countries should ensure equal participation of people with disabilities. More specifically they have to be able to enjoy cultural materials in all formats, to have access to the theatre, cinema, museums, libraries as well as sports . leisure and recreational activities and in extend this does include the green spaces.

Therefore, the convention does highlight among many issues, the need for people with disabilities to enjoy recreational activities, participate in cultural life and sports, which is in line with the focus of this report, of eliminating social exclusion for disabled people in green spaces.

III. Summary of this chapter

In this chapter all the theoretical framework that is behind the mindset of this report, is presented. Social exclusion is introduced and discussed, as well as the exclusion factors that will be later used in the analysis as well. Also, the definitions of different

terms used in the report were explained in this chapter. In the next chapter, the methodology of the analysis part will be explained, which is influenced from the theories that were presented here.

3. Methodology

This chapter includes:

Interview methodology

Interview stages

Transcription and analysis



I. Introduction to the chapter

In this part of the report, the methodology that will be used to analyze the research question will be thoroughly described. Therefore it is describing the methods that will be used in the next part of the report, in the Analysis chapter. First, the way that the interviews are designed and conducted is presented in detail. In this part, the methodology of the interviews is divided in different steps according to the methodology of Kvale (2008). Then, the way to analyze the interviews and use them in this research is described as well. Additional methodological steps will be discussed

in the end of the chapter.

II. Interviews

According to Kvale (2008), interviews are suitable for investigating people's understanding of the meanings in their lived world and from their own perspective and experiences. This would be particularly useful for this research, in order to elaborate on problems that people with impairments face without making assumptions based only on written material from other researchers. In addition, using the interviews the context of the study can be incorporated directly on people's opinions and therefore the interview can reflect more specific problems in regards to the area of study.

The role of the interviewer is to ask and the interviewee answers, therefore interviews entail asymmetrical power relations, the situation is a one-way dialog. Also, a "hidden agenda" might be underlying in the interviewers questions for several reasons, in order to avoid biased answers when exposing the purpose of the research. Kvale (2008) uses two different metaphors to explain the role of the interviewer:

The interviewer as a "miner", who is looking for valuable buried metal and unearths it.

The interviewer as a "traveller", who is looking for an interesting story to be told when he returns home, while his journey would not only uncover new knowledge but also change the "traveller's" mindset as well.

In this research the interviews will be conducted from the second point of view, where the interviewer will be open to change his initial hypothesis and mindset according to what he discusses with his interviewees. Therefore it is expected to discover new perspectives from listening to what have people experience in their daily life. In order to organize the process of interviewing, the following stages are defined from Kvale (2008), and used prior to conducting the interviews of this report:



Interview stage	Definition	Ethical issues to consider
Thematizing	Formulate the purpose of an investigation and the conception of the theme to be investigated before the interviews start. The why and what of the investigation should be clarified before the question of how (method) is posed.	The purpose of an interview study should, beyond the scientific value of the knowledge sought, also be considered with regard to improvement of the human situation investigated.
Designing	Plan the design of the study, taking into consideration all seven stages of the investigation, before interviewing. Designing the study is undertaken with regard to obtaining the intended knowledge	Ethical issues of design involve obtaining the subjects' informed consent to participate in the study, securing confidentiality, and considering the possible consequences of the study for the subjects.
Interviewing	Conduct the interviews based on an interview guide and with a reflective approach to the knowledge sought and the interpersonal relation of the interview situation	The consequences of the interview interaction for the subjects need to be taken into account, such as stress during the interview and changes in self- understanding.

Transcribing	Prepare the interview material for analysis, which generally includes a transcription from oral speech to written text	The confidentiality of the interviewees needs to be protected and there is also the question of whether a transcribed text is loyal to the interviewee's oral statements.
Analyzing	Decide, on the basis of the purpose and topic of the investigation, and of the nature of the interview material, which modes of analysis are appropriate for the interviews	Ethical issues in analysis involve the question of how penetratingly the interviews can be analyzed and of whether the subjects should have a say in how their statements are interpreted.
Verifying	Ascertain the validity, reliability and generalizability of the interview findings. Reliability refers to how consistent the results are, and validity means whether an interview study investigates what is intended to be investigated	It is the researcher's ethical responsibility to report knowledge that is as secured and verified as possible. This involves the issue of how critically an interviewee may be questioned.
Reporting	Communicate the findings of the study and the methods applied in a form that lives up to scientific criteria, takes the ethical aspects of the investigation into consideration and that results in a readable product.	There is again the issue of confidentiality when reporting private interviews in public, and of consequences of the published report for the interviewees and for the groups they belong to.

Thematizing

In this stage, the why and what of the investigation has to be clarified, before the questions are formed.

The purpose of this study, as it is also explained in the problem area, is to contribute to prioritize equality for disabled people in terms of using the green spaces for the city. The purpose of the interviews varies among the different people that will be interviewed.

1. Regular handicap people: the purpose of interviewing disabled people is to understand his point of view and if he sees the problem of green space accessibility as major as well. Also, in this interview, information about his use of green spaces, how often can he use the green spaces, what kind of problems occur during the transportation to the area as well as in the area.
2. Planner/Specialized for disabled: Interviewing a planner would provide some information about what is happening currently in the planning process for disabled people in Copenhagen, what would be his personal opinion about social exclusion and also what has he experienced from other people that are involved in making the municipal plans.

Interviews can have explorative or hypothesis-testing purposes. For the purposes of this project, the interviews, as also explained above, are going to have exploratory purpose, therefore it is going to be a semi-structured interview, open to follow up questions, seeking for new information.

This stage includes obtaining a pre-knowledge of the subject to be investigate, therefore literature research took place to investigate the concept of disability in the cities in order to be able to understand and evaluate the interviewees opinions during the interview.

Designing

In this stage, the questions that have to be answered through the interviews are designed and the interview is planned in order to obtain the intended knowledge. Therefore with the use of Kvale's methodology (2008), each of the important questions are answered prior to the interviews, for this specific research.

Ethical questions at the start of an interview study

In his book, Kvale (2008) highlights the importance of potential ethical issues that are related to each stage of the interview research. These can be seen on the table above and are taken in mind in this phase of research. Also, he points out some indicating questions to be considered from the researcher before the interviews. The most relevant of them to this study are presented and discussed below.

What are the beneficial consequences of the study? How can the study contribute to enhancing the situation of the participating subject? Of the group they represent? Of the human condition?

The beneficial consequences of the study are to bring focus on disabled people's equality for using green spaces in the city, which has not been a topic of discussion in Copenhagen lately. By presenting information of the importance of green spaces as well as interviews highlighting the problems disabled people encounter, this study is conducted to benefit universal planning in the city.

How much information about the study needs to be given in advance, and what can wait until a debriefing after the interviews?

In this particular project, a small introduction to the focus of the project will be given in advance, since the topic will be familiar to the interviewees not much information need to be presented in advance.

How can the confidentiality of the interview subjects be protected? Who will have access to the interviews?

The issue of confidentiality of the interviews will be discussed in the beginning of the interview, before the recording starts. Since it is an academic project, it will be publicly available on the web.

How will the researcher's role affect the study?

It is not expected that the researcher's role will have any effects on the study.

Then, prior to the interviews, the "scientific" questions that needed to be answered were defined. As a next step, the interview questions were designed, which express these scientific questions in simpler, everyday language in order to explain it and have the correct answers. After the interviews, the reverse order will be done, the interview will be "translated" to answer the "scientific" questions that needed to be answered for the purpose of this research. In the following diagram some indicative questions are shown. In the "clouds" are the "scientific" report questions, while on the right column are the indicative questions that will be posed to the interviewee. The "clouds" actually split the interview to shorter discussions.



Figure 3.1 Sample questions that were used as a general guideline during the interviews

Interviewing

The interviews were conducted as following:

Name	Date	Disability group
Marcel Ramirez-Alexio and Fabiola Ramírez de Lauritsen	30/10	Physical disabilities
Hazel Gezen	7/11	Visual impairment
Karin Beyer	12/11	Physical disabilities
Ulla Trømer	27/11	Physical disability

Also, there was an interview with **Pernille Vous Jensen** who is working as a Forest and Landscape Engineer, in Furesø commune. The interview was conducted on the 2nd of December 2014.

Transcribing the interviews

Kvale (2008) advises to write explicitly how the transcription of the interviews is made as it is important in order to give an understanding and provide some realistic comparisons between other interviews that are transcribed with the same way. Therefore, here the transcription method is discussed.

The transcription took place immediately after the interview, in order to have in mind the whole situation and to not forget the body language and other facts that could not be recorder on tape. In addition, since the interviews were conducted in English, which is not the native language of the interviewee's nor the interviewer's. As a result, part of the transcription was to complete and compile the oral conversation into grammatically correct sentences, combining the different information that was discussed during the interview. Therefore, answers for different questions that were not explicitly posed in the beginning, were collected from the whole conversation and are presented in the written form of the interview. This was thought to be valid and a useful way of transcription for this report, because the interview will not be used for any linguistic purposes that demand to collect and present the exact detail during the interview. The interview is used here to produce a readable public story of the experiences and opinions of the interviewee.

In his book, Kvale (2008) defines the following steps when analyzing an interview. The three first steps are actually part of the interview situation and have to be considered in advance when constructing the interview questions. Then the fourth step is when the main analysis of the transcribed interview takes place, when the interviewer has to read the transcription again and again and analyze it according to the purpose of the study. The last two steps include potential actions such as getting back to the interviewee and ask to evaluate the transcribed interview and the interpretation, as well as include his comments to update the final analysis. Also, action research could take place after the interviews, when there is a collective action based on the knowledge that was gained from the interviewees. In this report, only the fourth first steps of the analysis will be implemented. The analysis itself will take place in the next chapter of the report.

1st step

The subjects describe their life. The interviewer does not have much to analyze here.

2nd step

The interviewees discover new relationships and new meanings of their everyday life, during the interview, based on their own description.

3rd step

The interviewer during the interview attempts to understand the meanings and tries to see if he got the correct understanding when sending the meaning back and waiting for a negative or positive reply of the interviewee. This type of interview allows to self correct while interviewing. In order to do that in this project, following questions and clarifications were asked during the interview.

4th step

The recorded interview is analyzed, as it is transcribed from the interviewer.

5th step

The interviewer could give his interpretations back to the interviewees in order to see if he has the correct understanding and allow them to elaborate on that. This was not implemented in this report due to time constraints to arrange additional meetings.

6th step

A possible step would be to include action research, where there is action on the knowledge that was initially produced in the interview.

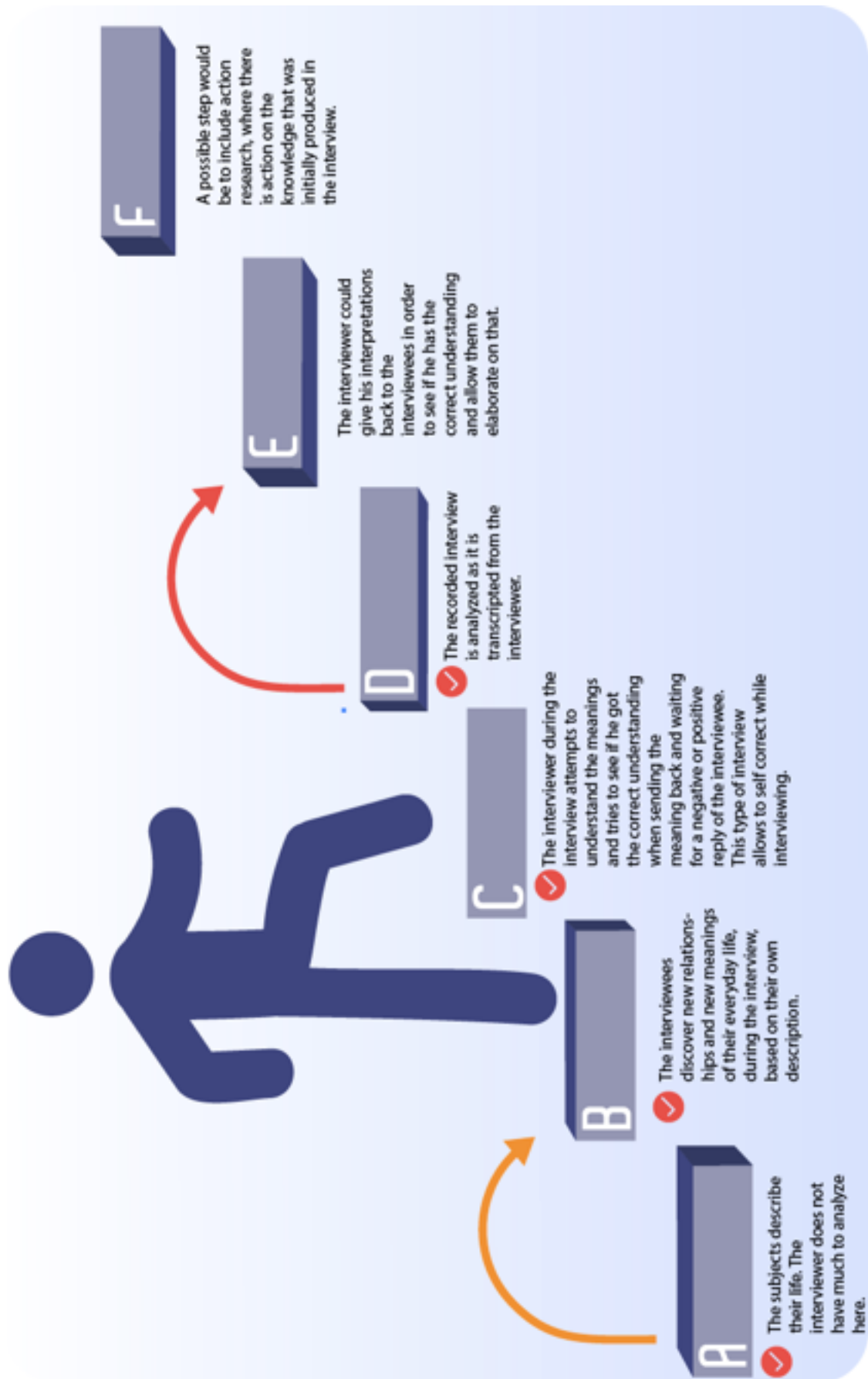


Figure 3.2 The interview steps (Kvale 2008) (Picture created for this report)

The analysis of the individual interviews included to recognize the different types of exclusion factors in the use and accessibility of green spaces, as it was described before in the theories chapter. Therefore after each interview, the exclusion factors that were mentioned are found and presented on a table.

III. Additional methodological steps

In addition to the interviews, it was discussed that it would be very useful if there could be some photographic evidence of the different problems. However, there were many difficulties in doing this not only because of the need to find people in Copenhagen, eager to spend some of their time to contribute to this but also because of the unpredictable weather conditions during the fall semester. Therefore it was achieved to take some pictures only together with Hazel Gezen (Gezen, 2014).

4. Analysis

This chapter includes:

Summaries of each interview
Exclusion factors found



Introduction to the chapter

In this chapter, the main analysis is conducted. In the first part of the analysis chapter, a short description of each interview is presented. The main findings from the interviews are summarised, in order to be compared with the other interviews. In this chapter the focus will be only on the interviews with people with impairments. The interview with the Municipality of Furesø will

be used to discuss the challenges in the next chapter of the report. The findings are presented according to the table that refers to the different exclusion types, and was presented in the theories chapter. So each interview is analyzed and the different exclusion types that occur from the interview are presented and compared. Then, in the second part of the chapter, the different exclusion problems that were found from the interviews are organised in order to be discussed in the next chapter.

I. Interviews

Marcel Ramirez-Alexio and Fabiola Ramírez de Lauritsen

Marcel is 20 years old and his parents are from Mexico. He lives in Copenhagen with his mother, he is studying computer science and planning to do a bachelor in the next years. He is physically impaired and needs help to transport himself. He was tetraplegic as a child because of a brain damage, but with continuous physiotherapy and daily exercises he can move now with a wheelchair and crutches while initially he could barely find his balance even when he was sitting. Mostly he goes around by car, then he also uses a wheelchair and sometimes for very short distances he uses the crutches. Fabiola is Marcel's mother and is also contributing to this interview from her point of view. They are living together in Copenhagen. She has used an electric wheelchair due to some temporary problems with her back. They both live in Østerbro, 500 meters from Fælledparken.

General impressions and analysis of the interview

Marcel's everyday activities include going to school and studying, as well as doing physiotherapy exercises at home. His normal transportation is by car, despite the very short distance to his school. Also, he needs someone to help him with his everyday needs, so he does not go outdoors alone. When he is at home, he uses a wheelchair and or his crutches. In addition, he does not feel like he has a reason to go to a park, he finds it not interesting as well as an exhausting experience to fit in his everyday schedule. Also he finds it difficult to transport himself to these 500 meters to his closest park, due to the obstacles he finds on his way and to the fact that he has to take the car to go through that distance. In addition using public transportation is not an option since it is a lot of trouble to go through to use it, especially buses.

“

There are many activities in Fælledparken but it is all for people who are not disabled. But do they have anything for disabled people, that's the question. Okay, they have football and many functions for children, but what function do they have for children who are disabled? Nothing! When there are children on a wheelchair there isn't anything they can do!" (Ramirez de Lauritsen, 2014)

"Actually there is no one to help you if you need something or if you have to go somewhere. You are all by yourself in the park." (Ramirez de Lauritsen, 2014)

"There should be more cooperation of people with a technical background to design more things for disabled people." (Ramirez de Lauritsen, 2014)

"You prefer to take the car because you prefer it compared to the effort you have to do when you use the manual wheelchair. They completely forget to plan about these things." (Ramirez de Lauritsen 2014)

"When you use the bus, it is not accessible! We always need help. When we were in Spain, all the buses there, had automatical ramps. The driver here (in Copenhagen) has to come and put down the ramp. Here just going on the bus is so much effort." (Ramirez de Lauritsen, 2014)

”

Hazel Gezen

Hazel is visually impaired since she was born. She is now 23 years old and she is finishing her bachelor in the Faculty of Humanities in Copenhagen University. She is a very active person, she likes to explore new places and is not afraid to get lost. She says that most of the blind people are not as active and are more shy and closed. She can play the piano, she is an athlete, she likes to jog. She lives in Brøndby, an area out of the centre of Copenhagen, 200 meters away from a park and 1 km away from the seaside.

After the interview, we went outside for a walk around the Faculty of Humanities Campus in Islands Brugge. We found a small green space next to Tietgen Kollegiet, a student dorm next to the campus, so as Hazel was exploring the green space, she was also explaining to me how she can identify her way back and how she feels the nature around her. She told me that there are no tactile surfaces for the blind people, within the campus. Usually she seeks on the ground for lines to follow, so sometimes she follows the drainage grates, that are made for collecting the rain water. Of course these are not suitable for navigation since they have not been constructed for this purpose, so most times they are just interrupted by an obstacle as in the picture.



Figure 4.1 This is where drainage grates lead as the arrow points. Hazel uses them to navigate sometimes as she seeks for different textures or lines that she can follow.

We also noticed that there is a step designed around the lake. Hazel said that but someone who was blind, once he thought it was stairs, so he found himself in the water! These steps could lead to an interesting building for example (Hazel said) but you suddenly find yourself in the water.



Figure 4.2 The step around the lake does not alert a blind person that he is about to fall in the water. There was a rope around one side of the lake but it seemed temporary and it was only in one spot.

There are also the constructions that were going on and caused difficulties since from times to times they moved to different spots. Then we went besides Tietgen, to the small green space. Hazel said that the design is actually well because you can easily find your way from the concrete to the grass and back. The trees were easy to find because she could feel them around, she said.

I saw her reaching for a tree before touching it so I asked her "How did you know there was a tree there?"

“

I don't know I can't explain it, I think the air is changing when I pass around them, you can almost hear where is a tree. But I never explored this place, I did not even now that there is this green space and the trees and that Tietgen is so close. Maybe I could come here to read a book. If I turn then I know this is the park and here is where I came from. So it is easy to find my way back I think. (Hazel, 2014)

”



Figure 4.3 Walking from the concrete to the grass and the benches



Figure 4.4 The building on the right is the Tietgen dormitory, and the building in the background is the Faculty of Humanities of Copenhagen University



Figure 4.5 This is the route from the concrete to the trees (Google Maps, 2014)

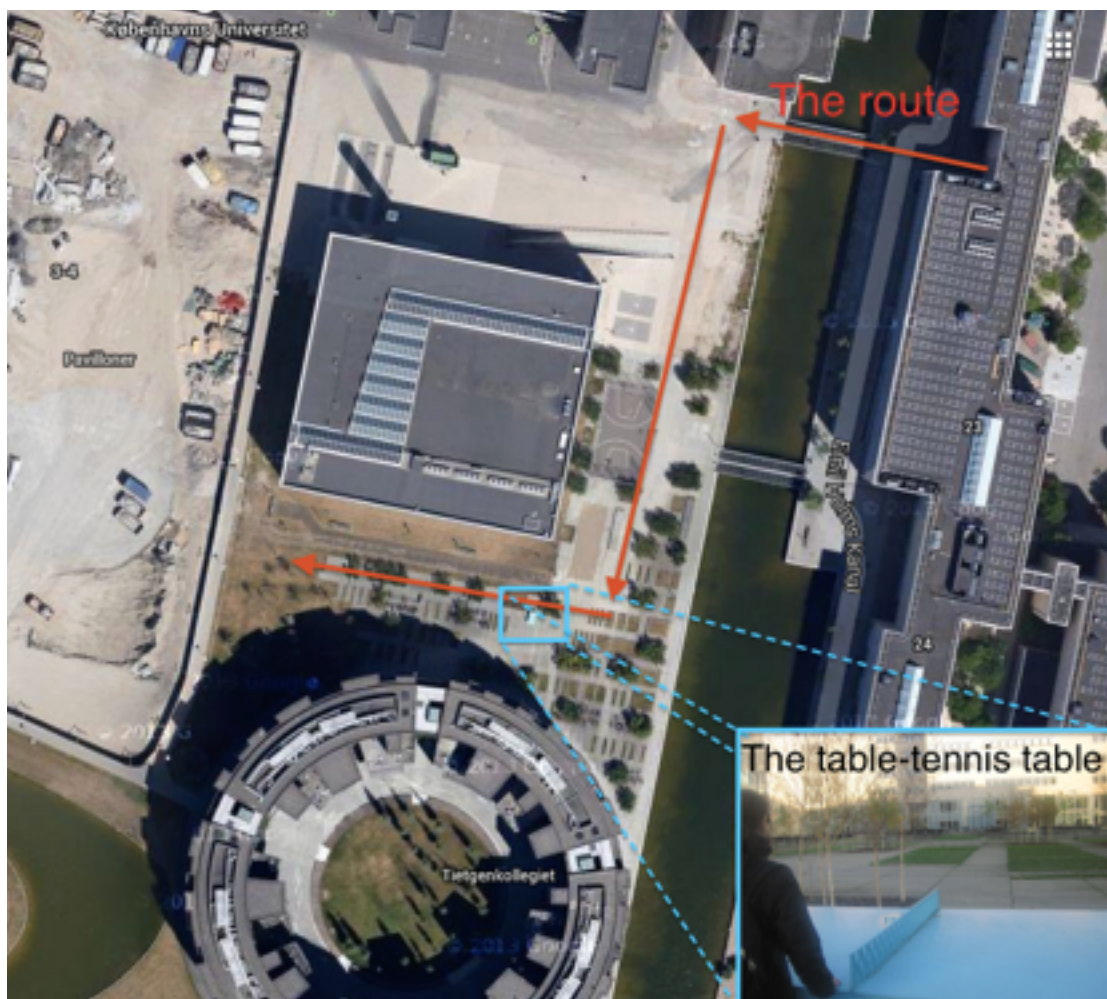


Figure 4.6 This is our route from the university to the green space. Hazel said that she can remember that if you go straight ahead from the concrete you find some trees and then all the way straight back, there is a table-tennis table, you turn, you find the bridge and the university canteen.

General impressions and analysis of the interview

Hazel does not seem to represent the average blind population because she is very active even compared to sighted people. She always challenges herself with new things and she tries not to be afraid of getting lost. She enjoys being outdoors and doing activities, but the human made spaces are much easier for her to navigate than a park. For example in a human made environment the urban design is usually repetitive, the shapes mostly predictable and corners can guide you to a direction towards the pavement. She uses the tactile surfaces to navigate around the city, but in the parks, there is no possibility of navigation in such an open space. Usually she needs to find a bench to sit, but there is no indicator to lead her to a bench in a green space. Also, the trees are easy to find, but lower plants and grass are impossible to distinguish. She says that she would either need more specific and predictable paths, or the use of technology, an audible guide etc.

“

“City is the kind of jungle that you can navigate because it is human made, so you know that things are kind of similar to each other and you can navigate by that. Nature and parks are more artistic. For buildings and roads you can make a mental map of the area so you know when you reach a corner that you go either to the left or to the right for example.” (Gezen, 2014)

“A park is just a whole open place with a bench somewhere, and it is not really logical where you can find where that bench is. So I would be able to find the park but to navigate in the park itself, I am not quite sure. Trees are of course easier to find but all these plants and benches are not easy to find.” (Gezen, 2014)

“Actually I think it is easy to use public transportation. Of course I needed to learn to use it in the beginning, but there is audio information in the trains and also in the buses, it tells me which stop it is.” (Gezen, 2014)

“I don't think that disability is integrated in places, no. When you are creating a place you don't really think about the universal design but only after the place is built, and then it is too late.” (Gezen, 2014)

”

Karin Beyer

Karin is a wheelchair user. She is 70 years old, and has a “fragile-bone” disease since she was born. When she was younger she was able to walk but she had to be very careful for vibrations and shakes from rough paths as well as to avoid crowded places. Now she cannot walk at all so she uses a manual wheelchair indoors and an electric scooter outdoors. In contrast with an “average” wheelchair user she has to be extra careful for rough surfaces, which can hurt her fragile bones. She lives in Furesø, Municipality and she really enjoys being outdoors in the woods, or in a park on a sunny day. In addition she is very active in the local Danske Handicaporganisationer (Danish Handicap organisation), so she is representing the disabled people of her Municipality, to the meetings with other organisations or politicians. She has talked about the routes she follows when she goes outdoors in the summer, some of them are shown in the pictures below.

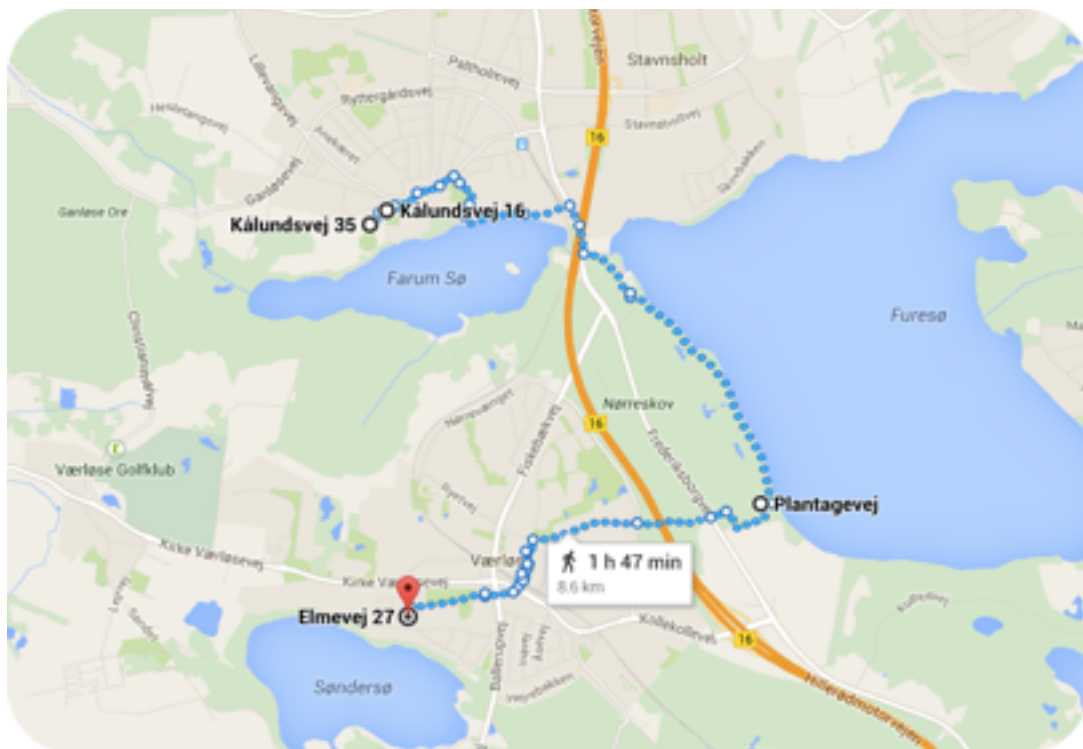


Figure 4.7 This is an approximate route that Karin would enjoy to do on her electric scooter on a sunny summer day. She can approximately go first to the small lake (Farum Sø) then to the larger lake (Furesø) and maybe sometimes until Værløse. That distance would be approximately more than 8 km. Karin says that she uses the bicycle lanes mostly.



Figure 4.8 Karin takes the train from her apartment to go to Copenhagen centre. Then, usually she enjoys the Kongens Have (Rosenborg Castle Gardens) and to go around the outdoor areas in the city. On the map there is an indicating route that she follows approximately (Beyer 2014).



Figure 2.8 Outdoor surface materials (gravel). Karin describes how gravel and other similar small-diameter surface materials can cause many problems to people using wheelchairs (Beyer 2014).

General impressions and analysis of the interview

A lot of issues came up in this interview as well. Karin highlights that persons with disabilities have very different needs among them as well as from people with different disabilities. She is one of the people who really enjoys to go outdoors as well as she always notices any barriers that she comes across so she can inform other people about them. Also, Karin underlines that if the technical people, the engineers, the architectures, were informed in advance for universal design, it would save not only the disabled people of a lot of trouble, but also it would save the expenses that are used to change the existing infrastructure. She believes that most of these problems are due to the lack of awareness. Therefore, since nowadays sustainability issues are discussed and the transformation of urban environment focuses on handling environmental problems, accessibility has also to be included in this process.

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“I enjoy it very much, therefore I do go out!”(Beyer, 2014)

“When I go home I can take off my shoes, but I cannot take off my wheelchair, even when it is full of mud.” (Beyer, 2014)

“What I am most afraid of with my scooter is when the path is inclining on the side.” (Beyer, 2014)

“I have been all around the city. I would never ask what can I do there, in green spaces. What do people do? They lay on the grass, they enjoy the sun, they sit and read a book.” (Beyer, 2014)

“We are so unhappy that the engineers and the architects are not being taught about these things.” (Beyer, 2014)

“That is actually the most important thing; you have to find out where the toilets are. There are many places that I can go with my electric scooter I enjoy it. I just need some more toilets that I can go in.” (Beyer, 2014)

“It is difficult along the roads because they are parking cars and signs and there are hindrances all the way.”(Beyer, 2014)

“It is also important not only to sit on my own wheelchair with my own food, but to be able to go to restaurants that serve nice food or a coffee.”(Beyer, 2014)

”

Ulla Trømer

Ulla Trømer is a wheelchair user. She has been using an electric wheelchair since she was only six years old. She is now in her 50s, living in Gladsaxe and working in Copenhagen three times per week. Her activities include travelling and therefore she has been all around the world, sometimes together with the Dansk Handicap Forbund (Danish Federation for the Disabled), for projects to improve the lives of people with disabilities in other countries. Therefore she has many experiences from what is happening abroad in comparison with the situation in Denmark.

General impressions and analysis of the interview

Ulla is not a very active person in terms of going outdoors very often. However, she also enjoys going to parks in Copenhagen when the weather is nice, mostly in the summer. She has the same opinion, that it is very important to consider the materials used for the surfaces of the park, as well as to communicate the design of the area to people with disabilities, using maps are easily seen, to indicate where toilets and ramps are located. In addition, she has a lot of input about public transportation, since she has also experiences from what is happening abroad. She finds it difficult to use public transportation for different reasons, starting with the paradox of how difficult it is to use the buses in Copenhagen. There are more paradoxes, rules that do not really make sense, according to Ulla and compared to other countries, as for example that two wheelchair users cannot travel on the same train in Denmark.

“

“Normally if you would take public transportation with a wheelchair the easiest is to use the S-train or the metro. Buses are possible, but if you are on an electric wheelchair the driver can say we don't want you, because they can't put any seatbelts on. But that is strange because no one else has seatbelts on a bus.” (Trømer, 2014)

“The electric ramps for the buses are invented in Denmark! You can go to Sweden and find them in the buses, but not in Denmark.” (Trømer, 2014)

“If for instance you are in England or in Spain, there is a button in the middle door, so you push it and the driver pushes another button and an electric ramp comes out, which is very nice.” (Trømer, 2014)

“When we were in Australia, everywhere where we found stairs, there would be a ramp next to it! Even down to the beach, and in the dessert!” (Trømer, 2014)

“In the Botanic gardens they have the big green house, you see it with a lot of stairs, but there is a ramp around the house. But if you only see the ramp if you get in from the other side and there is no sign to show that it is there.” (Trømer, 2014)

“In Australia I didn't feel disabled at all.” (Trømer, 2014)

“I think I would prefer to take the buses for sure if I could do that without a helper. The trains, even if they change the levels, still you will have to use at least an elevator to get to the platform, and they are very often not working.”

II. Exclusion factors

In this second part of the chapter, the exclusion factors that were discussed in each interview will be presented. So, for each exclusion factor, there will be a list of the interviewees and then the points that they highlighted. These will be discussed further, in the next chapter but are presented here in order to organise the data before the discussion.

Physical exclusion

Marcel

The park is only 500 meters away but he uses the car for this distance. The accessibility is limited without a car, because of lack of ramps, rough roads, etc. makes it impossible. Also, public transportation is not an option, because according to Marcel, it is not comfortable at all due to the lack of electric ramps.

Hazel

A green space is located only 200 meters away from Hazels home. Also there are green spaces in the university campus that she could use, in a distance of 100 meters, but she did not even know their existence.

Karin

The surface materials are very important as she highlights. Gravel and other similar surface materials in general are not comfortable on manual wheelchairs. Sand as well. Also materials that become mud when are wet. Rough and coarse materials should be avoided also. She also highlights that steep areas around the lakes, or paths that are steep on the sides are very dangerous for people on wheelchairs and especially for her case since she has a fragile-skeleton.

Ulla

She also talks about the materials on the surfaces being an issue, especially in a city like Copenhagen where it is so rainy. Therefore you are in a risk of sliding if you are on a wheelchair and there is mud on the ground. Ulla says that she has noticed that this is starting to change, and there are more paths covered with more stable materials now she talked specifically for the Botanical gardens in the center of Copenhagen.

Geographical Exclusion

Marcel

It was not mentioned if there is a poor connection towards the green space, but bus was not a choice due to the limited accessibility for disabled (manual ramps on buses instead of electric ones).

Hazel

Hazel says that public transportation is generally accessible for her. She has trained herself to use it to go to unknown places without help as well. She only needs someone to guide her if she wants to go outdoors to exercise and run, but not in transportation in general.

Karin

Karin uses the S-train. When you are disabled you have to be seen from the driver in order to pull down the ramp to get in the train with the electric scooter. If the weather is very good, then the train is too crowded and there might not be enough space to get on, she describes. Also, it is not allowed to use a bus when you have an electric scooter. When you have a manual wheelchair you need to have a helper to roll down the ramp, because the driver is not obligated to do so. She also describes that if you use the special Handicap service from Movia, you do not have the flexibility to enjoy your walk around the city and stay longer if there is something interesting, but you have to have a specific appointment with the Movia special bus. In addition it takes longer time than the regular transportation. If therefore are changes to the train schedule and people have to change to a bus, people on an electric scooters or wheelchairs have to know that in advance because it would change their route completely, they might not be able to get to their destination as they had planned. About the metro, Karin says that it is fine that you can get in without difficulties with the wheelchair, but she is very much afraid of emergency exits if there is any kind of problem underground on the metro. She says that there is no escape for people with disabilities since they cannot jump on the emergency small platforms on the walls of the tunnel. She does not like to use the metro at all because of that. Last, the car is not an option for Karin to go to the city center in Copenhagen because of the lack of parking spaces. There should be spacious parking places close to the parks, so that you can use the lift for the electric scooter on the back, etc. Most times the parking places for disabled do not have the necessary dimensions and cannot be used.

Ulla

She does not use the park that is outside her house very often. However she does go in Copenhagen during the summer, to enjoy some of the parks. Usually she goes by car, with much difficulty in finding a place to park. The she refers to all the known issues about the trains and buses. Ulla says that if the buses were accessible, she would prefer them over to the s-train, because buses are less complicated and closer to the ground, you do not depend on the elevator to take you to the platform for example; you just step out of the bus. The metro is accessible as well. However there is always an issue about safety in emergency situations, were both for trains and for the metro, people with disabilities have a disadvantage to use the emergency exits, which are usually narrow and difficult to access.

Exclusion from facilities

Marcel

The exclusion from facilities makes the park very unappealing and uninteresting to Marcel, since there is nothing to do besides rolling around, with difficulty. Children with disabilities have also significant problems, as there is no suitably designed playground for them. There are no events, facilities, functions or activities that people with disabilities could participate. The only function that the park provided to Marcel for example, was to use the open space as a suitable area to do his mandatory physiotherapy exercises.

Hazel

She points out that since the navigation in the park is poor, she cannot use it at all. There are no activities that she could join, for example for Hazel since she likes to run and exercise, she would be able to join a running group. There are no interesting things to do in a park that she cannot do by going to a café in the city, where it is easier to find your way back.

Karin

Karin says that she really likes to use a park as a place to enjoy the sun, to watch the music festivals and events, to sit and read a book, etc. In addition she says a lot about the importance of having access to cafes and canteens in the park, not only out of respect to the people and equality, but also because people with disabilities sometimes have to spend more time transporting themselves, therefore they would definitely need access to a place to stay and have some food for example.

Ulla

Ulla also describes that there is no discrimination law for people with disabilities in Denmark. Therefore you could be legally denied access from restaurants for example. She also refers to places with a high front desk as difficult to access.

Space exclusion

Marcel

In Fælledparken, the green space in North Copenhagen, 500 meters far from Marcel's apartment, if you want to get closer to the small pond and not just look from a distance. He says that sometimes design does not allow many options for a person on a wheelchair, besides going around the grass but not being able to enjoy the green or the water in the park from a closer distance. Also the surveillance is poor therefore a person that has a difficulty in getting around in the park will not receive any help from the personnel of the park.

Hazel

She has a large difficulty in finding a place to sit, a bench, in the park. From her experience sometimes even when she was in the park with her family she had the feeling that she was lost in the open space. The design is too wide and does not include tactile surfaces for blind people. In addition, surveillance is poor therefore a person that has a difficulty in getting around in the park will not receive any help from the personnel of the park.

Karin

The lack of being able to buy food from the canteens by yourself when you are on a wheelchair, is very important. However the most crucial service that is sometimes unavailable is the toilets which should have enough space to get in and close the door. Karin highlights that there should be also two arm-handles inside and not one! The mirror and the faucet should be accessible as well. There should be also information about the location of the toilets because these are absolutely necessary to be close to a green space since sometimes a person has to stay outdoors for a longer time. Sometimes there are barriers in front of the information points and maps inside the green spaces, as well as the maps themselves are placed very high up so if you are on a wheelchair and use glasses to see closer then you cannot use the map.

Ulla

She says an example, that in the Botanical gardens, there is a ramp to go around the stair to get into the main building, but you cannot see that this ramp exists, there is no sign or anything. Therefore, she highlights the need of placing information maps to indicate the facilities.

Time based exclusion

Marcel

Marcel spends a lot of time in school, as well as to study his homework and doing physiotherapy. Therefore he becomes exhausted and the option to go outside to the park does not appeal to him as he would spend time to transport himself, energy, as well as time and energy from other people's everyday life because he needs someone to assist him.

Hazel

Hazel mentioned that she prefers not to use a white cane when she is walking outdoors because it slows her down. However she has to use it if she visits a park or in new, unknown places. She does not have any other physical disability therefore it does not take her more time than a sighted person to use public transportation. Of course, she said that she would not use a green space all alone, therefore her time to visit them also depends on other people's availabilities and schedules, the same as Marcel.

Karin

Karin says that she has to have the time to plan in advance for going outdoors as she has to find the toilets, the train routes, the routes within the city, any delays or changes on the public transportation schedule etc. Using the special service of Movia buses (flextur/flextraffik) causes a problem on planning your time because not only you have to plan to be on the agreed pick up point on a certain time but also the bus delays because it has to pick up other persons with disabilities from different areas. Also you have to plan to have food and drinks with you and be prepared to stay outdoors longer just in case something happens. If she would go into the woods around her place, it is also important to know the paths she can follow in advance. It is safer for her to use bike paths that are made of asphalt because you could be found stuck in a pedestrian path of soil as she describes.

Ulla

She has a job as well, in the city centre, so she is busy in general in her everyday life. However, Ulla specifically has a green space outside her apartment, so it is easier for her to use it, even if she does not do that often.

Fear based exclusion

Marcel

Psychological factors that affect his option to go to the park, is first and foremost that he feels like it is not only too exhausting for him to go to a green area but also for the people who will assist him. Since he experienced this from a very young age, his mother describes his experiences in the zoo and all the discomfort and hassles that they both had been, so now he would just prefer to stay indoors. Yet another fear exclusion issue could be discussed. If for example he went to the park with friends, he would be not able to participate in all the social interactions with them, because of the lack of design in the park. Therefore he would be afraid that he cannot enjoy it if he finds barriers constantly and has to speak up to his friends for help.

Hazel

As it was discussed, the main fear for a blind person is getting lost. This is what Hazel described she has experienced, and she looked very certain that she was not going to go to a park all by herself, even if she is a daring person and tries to not be afraid of getting lost.

Karin

Karin describes that she is afraid of falling off a steep path with a big slope on its sides, because that has happened before and she had to wait on the ground until someone came to help her. Also there are considerations about the paths because they can suddenly be blocked from obstacles, or from materials such as mud, or become narrow/steep. Also sometimes there is not the available space to turn around and go back. She is also afraid of going underground and using the metro because she could be trapped in an emergency situation. Another issue that would upset a person on a wheelchair is to not be able to find a toilet, or that the toilet that says it is designed for people with disabilities is actually too narrow and unusable.

Ulla

She is very considered about the transportation issues, for example, if the elevators are not working that would delay the whole route and change the plans completely. Ulla does not seem to be considered or afraid of any other situations in a green space.

III. Summary of this chapter

In this chapter, all the findings from the interviews were presented, without much further discussion. This was preferred in order to be able to distinguish what the interviewees said, as clearly as possible, before there is a discussion on the findings. Moreover, a detailed explanation of each case will be further explain in the next chapter.

5. Discussion - Conclusion

This chapter includes:

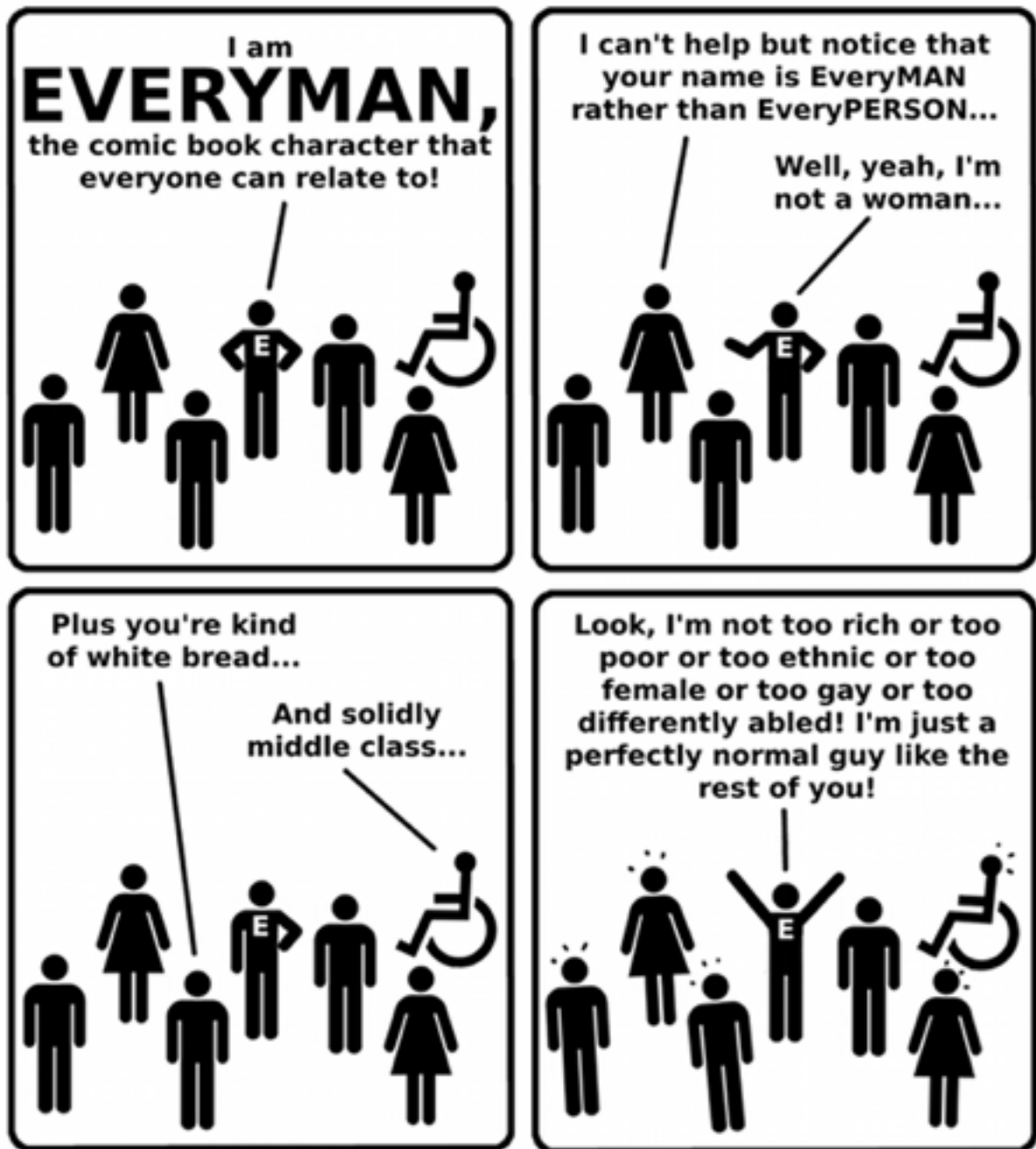
Answering the research question

Presenting the exclusion factors

Discussing the sustainability conflicts

Evaluation of methods and theories

Conclusions and recommendations



Comic from Hewitt (2014)

*"There are so few people in this world that actually want to harm other people. So nearly all the failures of accessibility around us it is because they are not thinking of us from the beginning."
(Beyer, 2014)*

I. Introduction to the Chapter

In this chapter, the results of the analysis chapter will be discussed. In addition, issues for further investigation will be mentioned. First, the research question of the report will be presented again and answered according to the research. In order to answer the research question, the exclusion factors that were found will be discussed here as well as additional issues. Then, there will be a discussion about sustainability and conflicts with accessibility. In the end of the chapter, there will be a section where the validity of the methodology and theories that were used is presented. Last, will be the conclusion of the report.

II. Answering the research question

During the interviews, the first main fact that was highlighted from the interviewees is that people with impairments, have completely different needs from each other, and are very difficult to categorise in groups in order to plan for including their needs. They face so many different barriers in their everyday lives, not only outdoors but also indoors and therefore they become very frustrated and stressed so they prioritize their everyday activities differently. As a result of the various barriers that they come across, any additional transportation outdoors could be considered not recreative but exhaustive. People with impairments are excluded from using green spaces in many ways. To answer in which ways they are excluded, the methodology of finding exclusion factors in the interviews was used and the results were presented previously and will be summarized here.

Are people with impairments excluded from accessing and using green spaces?

If yes, in which ways are they excluded and how could that be changed?

Physical Exclusion

“

I don't think that disability is integrated in places, no. When you are creating a place you don't really think about the universal design but only after the place is built, and then it is too late.

(Hazel 2014)

”

Issues of the physical exclusion in a park include the design of the park and the materials that are used. Due to the different needs of people with disabilities, it is difficult to ensure a high degree of accessibility. However, different studies on universal design and accessibility in outdoor areas have investigated these issues and have specified dimensions, materials and accessibility rules that would increase dramatically the number of disabled people that will be able to enjoy the green spaces. Moreover, these accessibility recommendations are not commonly implemented, mostly due to unawareness not only of the planners but also the architects and engineers that do not focus much on universal design when they are constructing a new area. Disability organisations do put pressure to alter the already constructed areas, to become more usable, but this results in additional costs since some elements are very difficult to alter after they are installed, so they remain as they are. Copenhagen has many “old” parks and gardens that were constructed very early and are not easy to change for several reasons (Wikipedia 2014) On the other hand, it is a city that is currently developing to accommodate a large number of new inhabitants, as well as to plan for sustainability issues as well, therefore many new projects and constructions are being planned.(Anne Skovbro, presentation, No-date)

“

We don't claim that disabled people should be able to go everywhere, because then there should be asphalt everywhere and that is not nice. We would like to have a system of main paths that are accessible so you can get around and have an experience of the park. Then there could be also of course other paths that people who can walk and have rain boots can use

them. But this is just enough for us this is what we would like, we should be able to take part in the enjoyment.

(Beyer, 2014)

”

All the interviewees highlighted the importance of the surface materials. People on wheelchairs are easily annoyed from materials such as gravel, soil or clay. These materials not only prevent their movement but also create trouble when are stuck on the wheels transported to their apartments.

“

When I go home I can take off my shoes, but I cannot take off my wheelchair, even when it is full of mud.

(Beyer, 2014)

”

“

People with disabilities are very different. Of course there are people who can't hear or can't see and that is something quite different from the lack ability to move around, but even among wheelchair users there are big differences from what they are able to do, what is not hurting them.

(Beyer, 2014)

”

Also, some people do have electric wheelchairs, which are more convenient to use in outdoor spaces. However if they have to take a bus, or go to a museum, or they cannot use an electric wheelchair, they would have to use a manual wheelchair. This creates additional barriers for their movement. In order to deal with this situation,

planning should be focus on manual wheelchair. Otherwise if planning is only for the electric wheelchair users excludes the manual ones but sometimes the opposite as well. In addition, surface materials are very important for people with other impairments as well, for example visual impairments. They have a great need to find navigation patterns within an abstract area as a park. They also enjoy being outdoors but it is a great difficulty for them to navigate. It is very important, at least to be able to enjoy some parts of the green spaces.

"A park is just a whole open place with a bench somewhere, and it is not really logical where you can find where that bench is. So I would be able to find the park but to navigate in the park itself, I am not quite sure. Trees are of course easier to find but all these plants and benches are not easy to find." (Gezen, 2014)

"It is starting to be better to go there with wheelchairs, because there were many unconcealed paths, which were difficult to use. That means that there was no asphalt on the paths, but other materials such as clay so it is very slippery also because it rains a lot." (Trømer, 2014)

"What I am most afraid of with my scooter is when the path is inclining on the side." (Beyer, 2014)

Physical Exclusion

We are so unhappy that the engineers and the architects are not being taught about these things. (Beyer, 2014)

"When I go home I can take off my shoes, but I cannot take off my wheelchair, even when it is full of mud." (Beyer, 2014)

"So the smaller the wheel, it is stopped by small stones. If you imagine that you are on the rollers you would not like to on that. The bike is nothing like it. You are stopped by these stones. So there should be no rough material." (Beyer, 2014)

"What is important in the outdoor areas is what is on the ground. In some places they have this rough stones but it is not nice, especially for the manual wheelchairs that have no elasticity. You feel it exactly up, if there are very small wheels in the front of the wheelchair." (Beyer, 2014)

Geographical Exclusion

Visualising the distance

Geographical exclusion focuses on how people are hindered from the green space from the transportation network. The European Environment Agency (Barbosa, Tratalos, et al. 2007) recommends that people should have access to green spaces within 15 minutes of walking distance, which is roughly equivalent to 800-900 m. It was interesting to visualise this distance to discover how it is actually implemented in Copenhagen, which will be shown in this section as well. On Figure 5.1 we can see data from different studies that have researched the daily average speed of a person using a manual wheelchair in his daily life as well as the average daily distance covered. The average daily speed was at its highest for athlete-wheelchair users, that is 0.8 m/s, who normally transport themselves for an average daily distance of 2.5 km. That would mean that only a disabled person in exceptional, athlete-like physical health, would cover approximately 720 meters in 15 minutes. Another study which focused on children, found an average speed of 0.67, which is 600 meters in 15 minutes. Both children and athletes are not representing the average disabled person. Also, it has been found that wheelchair bouts, have an average speed of 0.43 m/s (Sonnenblum, Sprigle et al. 2012), and cover approximately 8.6 m. The participants of this survey (Sonnenblum, Sprigle et al. 2012) wheeled approximately 10 bouts per hour (80 meters) and spent 10% of their time wheeling.

TABLE 1: Five studies measuring manual wheelchair use in everyday life.

Study	Population	Daily distance	Daily time moving	Daily average speed
Karmarkar et al. [14]	VA nursing homes	1.5 km	n/a	0.48 m/s
Levy et al. [15]	Adults	1.45 km	n/a	n/a
Tolerico et al. [17]	Athletes	2.5 km	48 min	0.8 m/s
Cooper et al. [13]	Children	1.6 km	n/a	0.67 m/s
Oyster et al. [16]	SCI	1.9 km	47 min	0.63 m/s
Ranges	—	1.5–2.5 km	47.5 min	0.5–0.8 m/s

Figure 5.1 Speed and daily distances travelled for wheelchair users, from different studies (Sonnenblum, Sprigle et al. 2012)

With these data, if we assume that a person on a wheelchair would like to access his local, 800 meters away park, he would have to use approximately 10 bouts on a manual wheelchair, which is the activity he normally covers in an hour. Therefore he would need much energy to continuously wheel for 800 meters and that would mean that with a speed of 0.43 m/s he would have gone to a distance of 387 meters in 15 minutes. This makes it obvious that if the plan is to have a green space in 15 minutes away, that should include the lower speeds of people with physical disabilities but it does not. Distance is only one of the difficulties that people with disabilities have to confront. Public transportation is an equally important issue. Before discussing what the interviewees said, first we can have a look on how these distance barriers relate to Copenhagen city center, using maps to visualise the situation. The distance should not be seen as only a mathematical calculation of an average speed of the average person, but there has to be a realistic approach that considers the time that has to be spent in everyday transportation that is suitable for every person's daily schedule. Therefore what follows is some maps that are indicating the distance from the green

spaces, in different places of the city. First, areas that are located in a distance of 800 m are investigated. Then the same procedure was done for a distance that would be more suitable for people with disabilities.

For both cases the data were obtained from the local GIS online data (Københavns Kommune, 2014) and the design was made using Autocad to scale and create the distances. The circles are drawn from the outer border of areas that are indicated as "green spaces" from the Municipality of Copenhagen. Therefore, not all green spaces on the map are accessible for the public, but only the ones with a dark green colour. Also, green spaces do not include areas close to the sea. However, seaside could be equally investigated as the green spaces. In addition, we can not see the residential areas on the maps, so there can not be any general conclusions of how many residential areas do not have a 800 or 300 meter proximity to green spaces. Therefore some areas on the map can be seen that are not close to a green space but these might be industrial or in general non residential areas, which cannot be distinguished 100% accurately with these maps.

The distance of 800 meters

On the following map, the circles have a radius of 800 m and as it can be seen almost 100% of Copenhagen citizens are located in less than 800 m away from a green space.

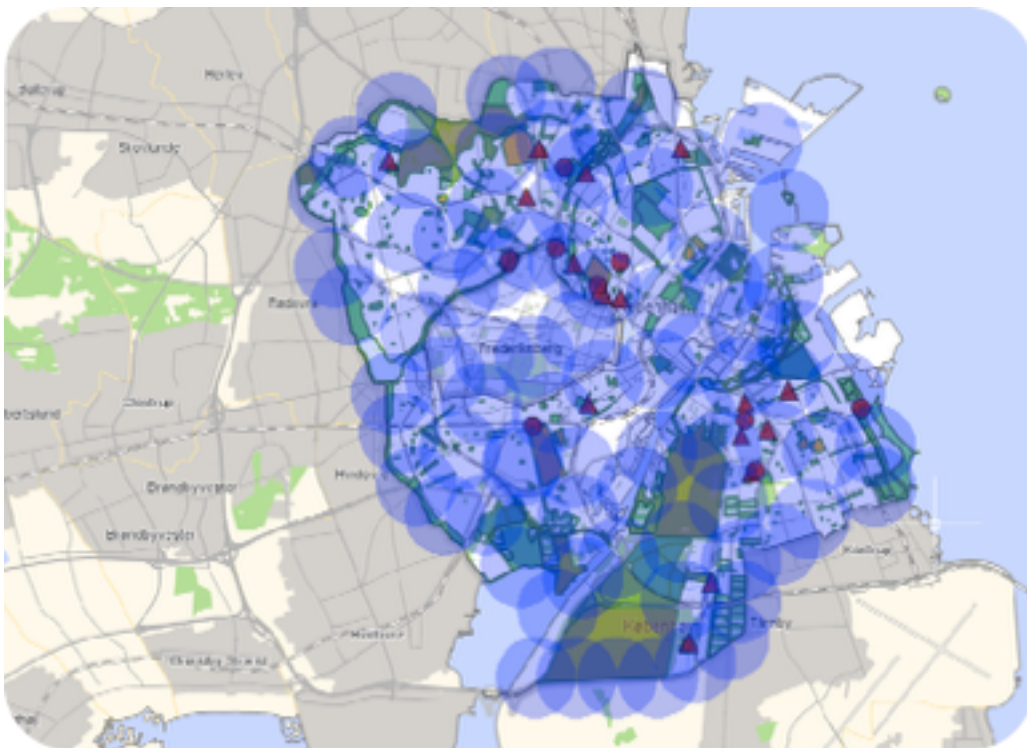


Figure 5.2 Areas that are located in less than 800 m away from green spaces (circle radius=800 m)

The distance of 400 meters

However, wheelchair users do not have the same speed as an average person. If it is assumed that a wheelchair user would not use any public transportation but only his wheelchair, with a daily average speed of 0.43 m/s, then the 15 minutes rule would be equivalent to hardly 400 meters distance. This data were obtained in a study for a city in the US, for people with spinal cord injuries (Sonnenblum, Sprigle et al. 2012). Therefore,

green spaces located more than 300 - 400 meters away, would not be accessible. However, this is a best case scenario, since wheelchair users travel on average a daily distance of 1.6 km per day (in 54 minutes approximately), if we assume that they would be capable of travelling 20% of their daily distance to get to a green space. Using the same method, the next map shows areas that are approximately 300 meters away from their closest green space.

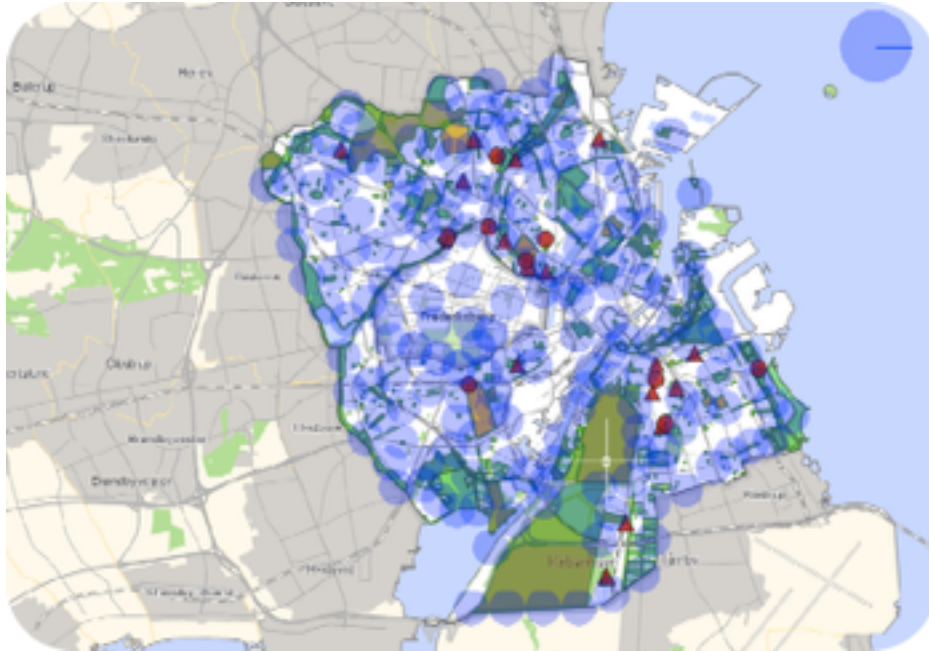


Figure 5.3 Areas located in less than 300 m away from green spaces (circle radius=300 m)

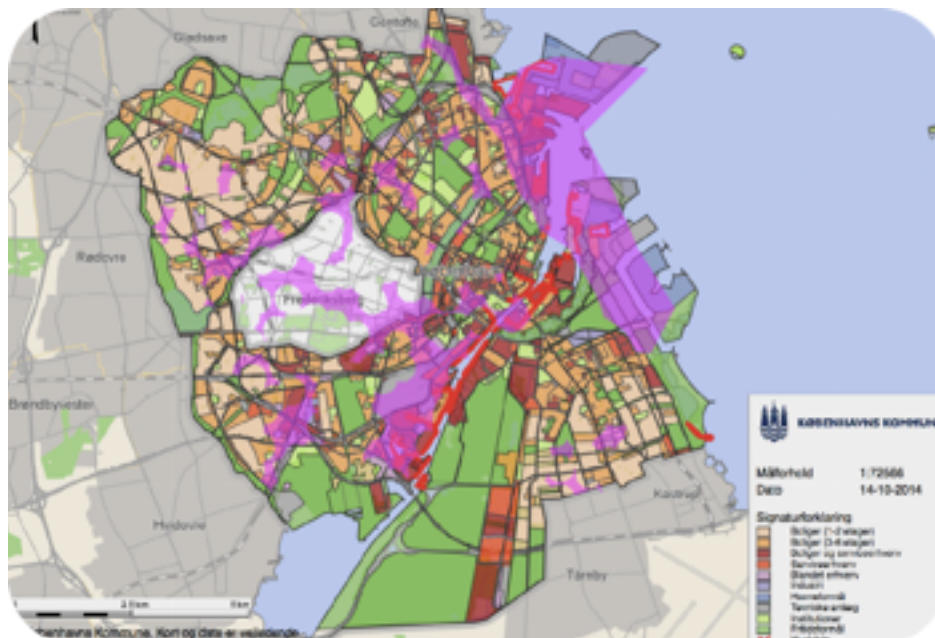


Figure 5.4 Areas, which do not have 300 m access to green spaces

Looking at Figure 5.4 it is obvious that the areas in Vesterbro, Nørrebro, as well as some areas in the inner city have less access to green spaces. The areas around Nordhavn are not developed and inhabited yet, and it should be discussed their proximity to water as well. Therefore, disabled people living on the red-coloured areas of the map

would either have to travel more than 300 meters on their wheelchair, either they have to use some mode of transportation to get to their closest park.

“

I think I would prefer to take the buses for sure if I could do that without a helper. The trains, even if they change the levels, still you will have to use at least an elevator to get to the platform, and they are very often not working.”

(Trømer, 2014)

”

Of course the issue of transportation is the most critical for people with impairments, not only in a discussion for accessible green spaces, but in a discussion for everyday mobility and quality of life. The importance of accommodating the needs of people with disabilities in the transportation network cannot be highlighted enough. This would be meant to allow people with disabilities to have access to the public transportation network in the same way as the rest of the society has, without increased trip duration, or additional fees.

“

When you use the bus, it is not accessible! We always need help. When we were in Spain, all the buses there, had electric ramps. The driver here (in Copenhagen) has to come and put down the ramp. Here just going on the bus is so much effort.”

(Ramirez de Lauritsen, 2014)

”

The people that were interviewed show that they come across many issues when it comes to going outdoors in Copenhagen. Starting from simply using the pedestrian streets and pavements to go around the city, or to the closest shopping area or park. Many issues are found in using an electric scooter to go around the city center, and much more when using a manual wheelchair. In addition, people with visual disabilities or other kinds of disabilities have as well more problems. As it was said above, specifically in Copenhagen, which has an old city center, the “bad”

accessibility design is already there since many years, and it is difficult to correct it 100%. However issues such as illegal parking, narrow pedestrian streets, elevation differences, materials used for surfacings, can be discussed to be changed and should definitely be considered in all the newly constructed areas, no excuses are available for these!

“

It is very difficult to find the parking places for handicap people. It is not only the question of fitting the car, but also having the space to get in and out.

There are regulations that tell people how to make the parking spaces specifically but they just don't do it. There is a lot of narrow parking places.

(Beyer, 2014)

”

Transportation with a car demands much planning for the appropriate parking areas as well, making sure that the dimensions of the space includes space to get in and out of the car with the wheelchair or electric scooter.

"If for instance you are in England or in Spain, there is a button in the middle door, so you push it and the driver pushes another button and an electric ramp comes out, which is very nice." (Trømer, 2014)

"When you use the bus, it is not accessible! We always need help. When we were in Spain, all the buses there, had electric ramps. The driver here (in Copenhagen) has to come and put down the ramp. Here just going on the bus is so much effort." (Ramirez de Lauritsen, 2014)

"The pathway they made for emergency exits is very narrow in the metro, so you can't be there on a wheelchair, you would have to take the stairs." (Trømer, 2014)

"The door closes very quickly, you can easily get stuck in the door, it has happened twice, almost got stuck." (Trømer, 2014)

Geographical Exclusion

"I do not dare to go to the metro, because if it stops somewhere, and you have to jump over to a very small platform along the wall, then how do you escape? With a wheelchair it is impossible!" (Beyer, 2014)

"Actually I think it is easy to use public transportation. Of course I needed to learn to use it in the beginning, but there is audio information in the trains and also in the buses, it tells me which stop it is." (Gezen, 2014)

"The electric ramps for the buses, are invented in Denmark! You can go to Sweden and find them in the buses, but not in Denmark." (Trømer, 2014)

"I cannot be sure that I will find a space to park it and go out with my electric scooter. And if it is occupied? It is not easy to drive around with a big car in Copenhagen." (Beyer, 2014)

"The easiest is to use is the S-train or the metro. Buses are possible, but if you are on an electric wheelchair the driver can say we don't want you, because they can't put any seatbelts on. But that is strange because no one else has seatbelts on a bus." (Trømer, 2014)

Exclusion from facilities

“

It is also important not only to sit on my own wheelchair with my own food, but to be able to go to restaurants that serve nice food or a coffee.

(Beyer, 2014)

”

As it was discussed with the interviewees, the green spaces were not particularly appealing to all of them. However, they were on very different situations and had different problems and needs. The first interviewee appeared to be very exhausted from physiotherapies as well as busy with school and studying. He also needs a helper to accompany him in general. Then the second one, Hazel, is blind but is generally an active person, enjoys sports and physical activity much. She says that green spaces are particularly difficult for her to use mainly because she cannot find her way inside the area. But since she enjoys jogging as well, maybe the green spaces could be more organized with group activities that blind people would also be able to join. Then Karin enjoys very much to go outdoors, not only to see other people around her but also to enjoy music festivals, events, exploring areas that she had not been before etc. She says that there are simple things that people enjoy in being outdoors and there should not be a particular reason to go outdoors in the nature in a sunny summer day. She says that despite the fact that disabled people might not be able to actively participate in a specific activity or sport, they should be able to at least to watch.



Figure 5.5 The canteen in Frederiksberg Park (Google Maps, 2014)

Therefore there should be the facilities for a blind person, a person on a wheelchair, or a person with hearing problems to also enjoy that. Karin says that there are systems and technology to make sure that people with hearing problems for example will be able to hear a meeting or a match if the microphone, which transfers the signal to the hearing aid, is used, but not always. Another issue that Karin brings up is that people on wheelchairs have difficulty to find a café to sit or go themselves to the canteen to buy food, due to the poor design. In order to fully use the park, they also have to be able to use the facilities within it!

“

There are many activities in Fælledparken but it is all for people who are not disabled. But do they have anything for disabled people, that's the question. Okay, they have football and many functions for children, but what function do they have for children who are disabled? Nothing! When there are children on a wheelchair there isn't anything they can do!

(Ramirez de Lauritsen, 2014)

”

Marcel's mother in the first interview highlights also the need for having facilities for children with disabilities. She says that it was a very stressful and frustrating situation when the children can watch other children go on a swing or a slide, but are unable to participate. In addition, in parks such as the zoo people on wheelchairs should be able to enjoy with the same way, but are not.

City is the kind of jungle that you can navigate because it is human made, so you know that things are kind of similar to each other and you can navigate by that. Nature and parks are more artistic. For buildings and roads you can make a mental map of the area so you know when you reach a corner that you go either to the left or to the right for example. (Gezen, 2014)

"When he was little, he wanted and use the swings but as a disabled person he couldn't! There is only the very small one for babies but they have to create something different for older people who also don't have the same balance"(Ramirez de Lauritsen, 2014)

"if for example you go to a restaurant and someone denies you access because you are Greek, that is not allowed. If they deny you access because you are on a wheelchair and say "I don't want you here", that is allowed. " (Trømer, 2014)

Exclusion from facilities

"It should be accessible to be able to go also in the queue and buy things, in the canteen, the café. It is very difficult to find an appropriate place to sit next to a table, and be able to buy what you need. It should be forbidden to have a very high front desk, it happens indoors as well."
(Beyer, 2014)

"It is also important not only to sit on my own wheelchair with my own food, but to be able to go to restaurants that serve nice food or a coffee." (Beyer, 2014)

"I don't find it so interesting, I would rather do something else."
(Ramirez de Lauritsen, 2014)

"When you go in the museum with your wheelchair, you have to change in one of their own wheelchairs, which is a manual one and you have to have a companion to push you around. If I go with my electric wheelchair, I know a guy this weekend who was denied access because he went without a companion, with his electric wheelchair." (Trømer, 2014)

Space exclusion

“

There are many places that I can go with my electric scooter I enjoy it. I just need some more toilets that I can go in.

(Beyer, 2014)

”

It is crucial, not only to include facilities that disabled people can use, but also to communicate their existence successfully to the ones that they are intended for. For example, the most important issue seems to be toilets. Toilets should not only be spacious enough to accommodate many different cases of people, but also they should be carefully designed inside. For example, toilets with only one armchest are almost useless, since it is not useful and practical to “guess” if a person can put his weight on his left or right side. Much focus should be put on having suitable and smart toilets, since it is the first thing that people with impairments have to be aware of, prior to their trip. They don't have the flexibility to go around and search if one toilet is not suitable for them but is labeled as a toilet to be used for disabled people. Therefore, the position of the toilets should be easily known to the people through the internet as well as on maps around the area.

“

In the Botanic gardens they have the big green house, you see it with a lot of stairs, but there is a ramp around the house. But if you only see the ramp if you get in from the other side and there is no sign to show that it is there.”

(Trømer, 2014)

”

Of course another issue is to make sure that people with disabilities have access to all kinds of navigation maps and are aware of the route that they can follow inside the park or on their way to use public transportation. They have to know if there are ramps to access buildings and structures in the green space as well as whether there are cafes or restaurants accessible for them. All this information has to be communicated

to people with visual impairments, people on wheelchairs, people with hearing impairments etc. Therefore the maps themselves have to be designed to be readable with the correct contrasts and on a suitable, low level.



Figure 5.6 Information map in Fælledparken in Copenhagen (Google Maps, 2014)



Figure 5.7 Information map in Jægersborg Dyrehave, a park north of Copenhagen. Karin Beyer said that the design and the height would not allow her to read the map. (Google Maps, 2014)



Figure 5.8 Information maps, in Frederiksberg Park (Google Maps, 2014)



Figure 5.9 This map shows the toilets that are designed to be accessible, in the Municipality of Frederiksberg. If we notice the map, it can be seen that the green spaces in the Municipality of Frederiksberg are lacking of accessible toilets. (Kommune Frederiksberg, 2014)

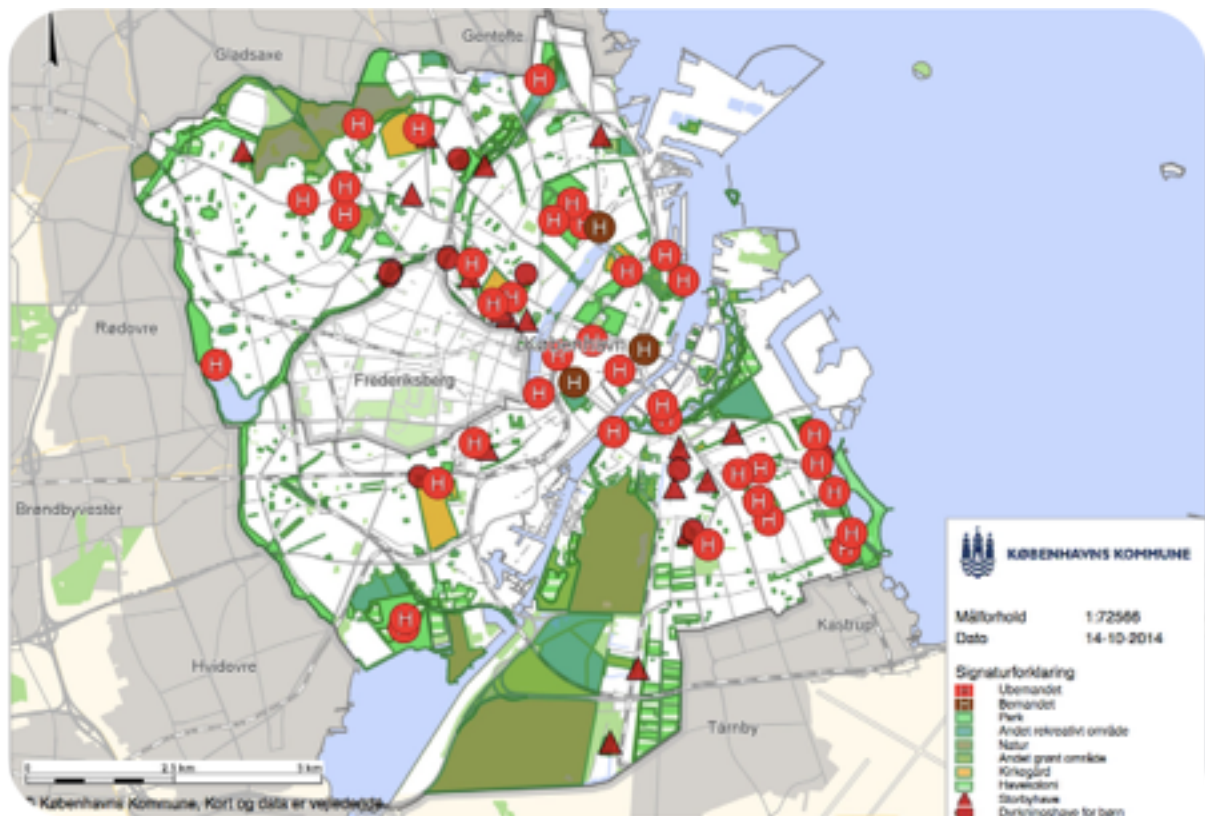


Figure 5.10 The toilets marked with "H" are designed for people with disabilities. This map shows the toilets in Copenhagen. (Kommune, Københavns, 2014)

City is the kind of jungle that you can navigate because it is human made, so you know that things are kind of similar to each other and you can navigate by that. Nature and parks are more artistic. For buildings and roads you can make a mental map of the area so you know when you reach a corner that you go either to the left or to the right for example. (Gezen, 2014)

"It doesn't need to be an ugly sign, no. But if they have a map when you get in you can just make a simple map with the symbols. When you are on a wheelchair, you know how to read these signs, you know how to look for the ramps and toilets etc. it is easy." (Trømer, 2014)

"It is just a whole open place with a bench somewhere, and it is not really logical where you can find where that bench is." (Gezen, 2014)

"Sometimes the map is too high up, but I am sitting down, and to see close I have to use my lower part of my glasses." (Beyer, 2014)

Space Exclusion

"It is important that the handle should be on both sides of the toilet, because sometimes there is a handle only on one side!" (Beyer, 2014)

"That is actually the most important thing; you have to find out where the toilets are." (Beyer, 2014)

"In the Botanic gardens they have the big green house, you see it with a lot of stairs, but there is a ramp around the house. But if you only see the ramp if you get in from the other side and there is no sign to show that it is there." (Trømer, 2014)

Time based exclusion

“

I come back from school, I do my exercise and all the things that I have to do and then I don't have much energy to go outside, I just stay in my room.

(Ramírez de Lauritsen)

”

As it was described before, a person with disabilities can be delayed due to different reasons on his way towards a destination, including obstacles on the pavement, difficulties getting on the train, the possibility of the train or bus being full, a potential change of the normal routes, or using a special transportation scheme such as the Movia Handicap service. In addition, a person has to do his everyday activities and go to work, which also might occupy him for a longer time due to accessibility issues. People with disabilities move with different speeds outside, slower than a non-disabled person. Therefore distances that are considered accessible for non-disabled persons are completely inaccessible from people with disabilities.

“

There is a beach out there in Brønby actually, sometimes I go with my mum, but I never try to go there alone.”

(Gezen, 2014)

”

Moreover, some people need assistants to go outdoors, therefore they have to take in mind their assistant's schedule as well. Movia's special transportation scheme, can be discussed here as well. The bus network in Copenhagen does not provide an efficient way of transportation for people with disabilities. It was discussed with the interviewees that the “special” transportation scheme that the company provides, is not equal to an everyday transportation network. The reasons for this are many, including the fact that it takes more time than a regular bus since the “special” bus picks up people at their homes, so you have to be delayed while the passengers are boarding or the route is changing etc.

“

But then they have to go around and pick up other people as well, and they take off, so it takes more time than a regular route. But it is an option sometimes.

(Beyer, 2014)

”

Another thing is that any transportation network changes could suddenly cause unexpected additional delays to people with disabilities. For example if an elevator is not working, the person has to go back to another station and use another transportation more. All these reasons make it difficult for a person to do an additional transportation and go to the park. It is very likely that a person with disabilities will be delayed very much from physical obstacles and transporting himself, that he would not be able to fit a leisure activity in a park, into his normal everyday schedule, as easily as a non-disabled person can do that.

"It is just a whole open place with a bench somewhere, and it is not really logical where you can find where that bench is. " (Gezen, 2014)

"There is a beach out there in Brønby actually, sometimes I go with my mum, but I never try to go there alone." (Gezen, 2014)

Time based Exclusion

I come back from school, I do my exercise and all the things that I have to do and then I don't have much energy to go outside, I just stay in my room. (Ramirez de Lauritsen, 2014)

"It depends on my time as well, if I have time to go back and do my work. It depends on the weather as well as on my work load." (Beyer, 2014)

"But then they have to go around and pick up other people as well and they take off etc so it takes more time than a regular route. But it is an option sometimes." (Beyer, 2014, about Movia's Handicap service route)

Fear based exclusion

“

*Trees are of course easier to find but all these plants and benches are not easy
do find.*

(Gezen, 2014)

”

People with disabilities have much more anxiety and stress in their everyday normal activities, and much more for leisure activities or travelling to places that they do not normally go often. For example Hazel, as a visually impaired person, experiences the risk of getting lost when she is in an outdoor area. This is particularly higher, as she describes, in a areas of a non-specific design, with natural elements, as a park. In addition, Hazel is generally a person seems not to be hindered by “fears” of getting lost in unknown places, she tries to move around the city all by herself as much as possible. However, she cannot enjoy a green space if she is constantly worrying about finding a place to sit, navigating around the grass and gardens, and she admits that she would not go by herself in any case. She has also an experience of feeling lost in a park back when she was younger, together with her parents.

“

*What I am most afraid of with my scooter is when the path is inclining on the
side.*

(Beyer, 2014)

”

Karin also describes her own concerns that make her anxious, she worries particularly for steep paths, which in her case are very dangerous due to her fragile-bone issue, more than an “average” person on a wheelchair. She has also experienced an incident of falling when she was in the woods, and she had to be patient and wait for someone to help her. In addition she has concerns about finding a place to park her car, because if she goes by car all the way to the centre of Copenhagen and cannot find a suitable parking spot, it would be a very frustrating situation.

“

I do not dare to go to the metro, because if it stops somewhere, and you have to jump over to a very small platform along the wall, then how do you escape?

With a wheelchair it is impossible!

(Beyer, 2014)

”

Karin raises another issue, about feeling unsafe that the escape exits in the transportation network are not designed at all to include people with disabilities. Therefore, she avoids the underground which she finds particularly risky. This is an important issue that has to be taken in mind and investigated more. Marcel as well knows in advance the frustration that he is not going to be able to fully participate in a walk in a green space with his friends, as he does not have an electric wheelchair but a manual one, and another person has to assist him. In addition he and Karin talked about the toilets as a very important thing to consider, as it is almost scary to have found the toilets for people with disabilities but to turn out that they are not accessible. Therefore there is much additional stress on people with disabilities when they go outdoors, and this seems that will be only improved if there is a general focus to resolve general accessibility issues that may occur



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Figure 5.11 Emergency exits and people with impairments, (Wilson, 2014)

"I cannot be sure that I will find a space to park it and go out with my electric scooter. And if it is occupied? It is not easy to drive around with a big car in Copenhagen." (Beyer, 2014)

"What I am most afraid of with my scooter is when the path is inclining on the side." (Beyer, 2014)

"Trees are of course easier to find but all these plants and benches are not easy to find." (Gezen, 2014)

Fear based Exclusion

"I do not dare to go to the metro, because if it stops somewhere, and you have to jump over to a very small platform along the wall, then how do you escape? With a wheelchair it is impossible!" (Beyer, 2014)

"Actually there is no one to help you if you need something or if you have to go somewhere. You are all by yourself." (Ramirez de Lauritsen, 2014)

III. Sustainability Conflicts

It is very clear now what the problems are, after interviewing different people. In addition, in a discussion with Pernille Voss Jensen (2014), provided also the view from the municipality, and how it copes with the different issues. Using the triangle of conflicts which was presented earlier in the Theories chapter of the report, we can discuss here the different challenges:

The property conflict

This conflict, between the interests of growing the environment and to distribute the resources and services fairly is very relevant when discussing people with disabilities. Pernille (2014) discusses about the problem of making all services accessible, as well as public transportation. Green spaces are also included, since they are also provided to the citizens. Pernille (2014) highlights the economic issues when considering accessibility. If an existing place has to be renewed, then the expenses are much. However, if a space is planned from the beginning correctly, many costs can be saved. In order to do this "correct" planning from the beginning, she underlines the need to include the people in the process and to hear directly their needs and thoughts. In Furesø Municipality, Karin Beyer is a very active person in terms of improving accessibility in outdoor areas and has contributed much in providing feedback for new projects in the city. The Municipality has found out that this direct cooperation is very positive for both the people with impairments as well as for the Municipality itself since it is simple and saves the costs of making changes later. This conflict affects the development of the city also in a larger scale, because in cities that adapt to sustainable development and make a lot of changes in their urban environment due to climate change, it is very important to include universal design and accessibility right from the beginning and to get used to this way of thinking and involving these issues in sustainable development. This would also help to save costs as well as materials and energy that would be used later to make changes. Also, it is simple to get closer to people with disabilities and include them directly in this process, rather than failing to imagine their needs during the planning process.

The development conflict

Here the issues that occur between distributing growth and not degrading the ecosystem are discussed. Again, there is a major issue. Pernille (2014) for example refers to the fact that when creating new accessible paths, which are made of solid surface materials and are very spacious and comfortable, then the organizations that represent environmental issues and protect the natural areas have to argue about doing as few alterations to the natural environment as possible. She specifically talked about the largest nature conservation and environmental organisation in Denmark, Danmarks Naturfredningsforening, which has the vision to protect nature and the environment (Danmarks Naturfredningsforening, 2014). Therefore, if there are places that have more hills, or trees that cause accessibility problems, these organisations would be against removing them for example, as well as additional infrastructure such as lifts and elevators in green spaces would sometimes mean that more energy has to be used, and that an additional "machine" would be present in the urban space. These issues can be resolved with "debates" with these organizations to find how to deal with improving accessibility when at the same time not degrading the

ecosystem. Again it is a matter of awareness, so especially now that cities plan for new sustainability plans, accessibility issues should be present from the beginning. Of course it is an advantage to make additional green spaces in the cities for example, but there has to be also a thinking procedure on if the citizens are able to use them.

The resource conflict

This conflict does not connect directly with accessibility issues, but is an extent of what was written before. Pernille (2014) talks about the challenges of installing new accessible toilets in order to increase the potential of people with disabilities to stay outdoors for a longer time. She says that not only the costs are very high, to do that as there have to be connections to the water network as well. This would mean additional energy use. The same for any electric devices that accommodate people with disabilities. Therefore if the design was appropriate from the beginning, there would not be a need for additional energy use from adding lifts and elevators. Public transportation with a tram rather than a train for example, would mean less costs on the infrastructure since it would not need elevated stations, as well as no elevators etc. Low level entrances in public transportation would save time, energy and frustration of using ramps.

IV. Evaluation of the methods and theories used in this report

It was discovered that using the theoretical framework of Church A, Frost et al. (2000) to recognize different exclusion factors in accessing green spaces was actually very useful. It helped not only in designing the interviews from the beginning but also during the transcription and analysis. Finding the different exclusion factors has been easier than using descriptive methods to analyze the interviews which were themselves very long to analyze in a different way. In addition, choosing to do interviews in this project, in comparison to a method which would include questionnaires for example, was more beneficial in order to find deeper reasons of the problems. A quantitative method might have been useful to indicate the quantity of people and the specific problems. However interviews were useful to show how much can the municipality learn from few interviews, without even a large survey. So if the politicians listened more, organized and approach the people the results would be much better. In addition, it has to be highlighted that finding people to interview which are willing to talk about accessibility issues and who have experiences from using green spaces, was a challenge, therefore not everyone interviewed had the same amount of comments about green spaces.

V. Conclusion and recommendations

In order to argue that a city is preparing for the future environmental issues, it is important to not forget about social equity and exclusion. This would start improving by increasing the awareness through educational programs, so that professionals get used to the thought of accessibility and disabilities in more sectors of the city. Both Pernille (2014) and all the interviewees agree that these issues are sometimes "forgotten", unacceptable for a place such as Denmark, which is viewed as a progressive place with many plans for sustainable development and equality. Other countries have done much more, and the only excuse for countries that did not do the same seem to be that they "forgot" about it. Political and economical issues are also in the way. However, especially for Denmark it is a huge disadvantage to have

such an inaccessible public transportation network, which actually promotes social exclusion and inequality, despite the UN convention that has been signed.

My recommendations would be, more educational courses on accessibility and universal design, for engineers as well as for all the relevant educational programmes. Also, a change of priorities of the politicians is necessary, in order to include accessibility. For example in Copenhagen, there is much focus on new cycling roads, and extensions of the transportation network (the new Metro line, the Harbour Tunnel), however there are lots of unresolved issues that prevent people with impairments to have a normal life. Improving accessibility has been “forgotten”.

The learnings from this research show that it was not only green spaces that people with impairments are excluded from, but they are constantly marginalised in general, during the planning process. However, small details sometimes become large hindrances which make the people with impairments to become “disabled”. These details are as small as the sign on the pavement that was not supposed to be placed there. People who can walk, will simply be annoyed and change their routes or squeeze through the narrow area of movement that the sign leaves free on the pavement. People who cannot walk, will have to do a manoeuvre and maybe even do a whole different route, trying to find a ramp as well. People who cannot see, might have a sudden collision with the object that they were not prepared for having in their way. Caring for small details not only is easy, but also it creates a friendly environment, inviting people with disabilities to use it equally with everyone else. Respecting the diverse needs of the society does not necessarily mean additional actions, but it means a different way of thinking. Increasing accessibility is an advantage for everyone, not only for people with impairments, since the human needs normally change as we age. The lack of a ramp, an elevator or missing the correct information system means much more than a mechanical problem. The design of a space affects also psychologically the people since they will constantly be stressed wondering if they will be able to reach their destination and actually do what they initially wanted to do.

Discussing with the municipality (Vous Jensen , 2014) they also see the same issue, that it is a matter of awareness and the people who are working on altering the urban environment, the engineers, the architects, the planners, the construction workers, they are not all educated and aware that for example placing the accessibility map too high, is way too high for some people and is creating trouble. Green spaces are only one part of the problem, which is extending to all urban areas. People with disabilities are difficult to be categorised, and the categorisation “wheelchair users” or “visually impaired” includes many diverse needs within it. There are different grades of severity as well as completely different needs among wheelchair users, for example. There should definitely be more concern when attempting to categorize people, as well as more concern in meeting and approaching them to understand their different needs.

As a result of this report, it has to be recognised that the Greater Copenhagen area, could really improve its accessibility issues. It seems that when discussing accessible green spaces, the problems do not lie only within the particular space. Small

hindrances spread over all the everyday activities. These would still prevent people with impairments to enjoy a perfectly, universally-designed, green space. It is a matter of cooperated effort to integrate a more human-friendly way of thinking to the society. Because without social equity, urban and social environment are inaccessible, therefore inhumane.



For some, It's Mt. Everest, (Jeseok Yi, 2007)

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7. APPENDIX: **the interviews**

Interview with Marcel
Ramirez-Alexio and Fabiola
Ramírez de Lauritsen
(30.10.2014)

**In general can you tell me about
yourself, or what is your disability,
how do you move etc.?**

Marcel: I am 20 years old. When I was little, all my nerve system and my ability to walk did not work so I was totally damaged as a "side effect" a normal vaccination. I wasn't able to sit, to do anything. Then I started training, when I began I was maybe five-six years old and gradually I could walk with crutches. Technically I have trained all my life to be able to sit and walk.

Fabiola: He had a vaccination, that all children have, but he has been damaged with that. Then he was what we call tetraplegic. He didn't have any balance, he was completely damaged, no reception at all, his nervous system was completely destroyed. In Poland they have a very good system and he went there for one month, we travel a lot for the physiotherapies.

Marcel: I stayed there for one month and then I trained every day, besides Sundays, 5-6 hours per day!

**Now, do you go to school by
yourself or do you need help?**

M: I need help to transport my self in general.

F: He always also needs help for the toilet as well so someone has to be there to help.

**So, my project is going to be about
green areas. How about you, do
you go to parks?**

M: Hmmm I don't go that much to parks actually, not that often.

**Okay. But Fælledparken is very
close right?**

M: Actually yeah, it is close, but I don't really go that often.

F: I force him to go sometimes, I force him because it doesn't appeal to him for many reasons.

**When you know that you have to
cross barriers right?**

M: Yes that is right, but it is not only that, I think it is also, yeah I don't

find is so interesting I would rather do something else.

F: I have an explanation. When he was a kid, we would go very often in the zoo. and in the zoo it was very tiring because he couldn't see anything, it was impossible to see when he was sitting. And from then he feels that it is exhausting not only for him but also for me, in the same way for the park, so you don't enjoy it. You don't get anything out of the experience.

**But when you go outside do you
use the wheelchair or the crutches?**

M: Actually it depends if it is a long distance I use the chair but if it is not that long I use the crutches. So it depends actually where I have to go.

F: In the parks it is impossible to walk, he has to use the wheelchair.

**Do you remember when was the
last time you went to the park?**

M: Two weeks ago, I actually almost forgot that.

**Do you also remember why did
you go? Was it for a walk in nature?**

M: Actually it was because I needed to do some exercises.

So it wasn't because you wanted to go out, it was because you had to do training?

F: It was training. It is the only place without many people and with so big spaces. But before that, we have been there to enjoy the sunset another time and it was wonderful.

It is very interesting because you are so close to Fælledparken and you are my best case scenario, within the 500 m distance that the Municipality has planned to be the ideal distance from home, it makes it almost impossible for you to use the park. What if the park was 50 meters from here? Do you think you would go more often?

M: Hmmm... No I don't think so.

F: I think that there are many activities in Fælledparken but it is all for people who are not disabled. But they do they have anything for disabled people, that's the question. Okay, they have the football and many functions for children, but what function do they have for children who are disabled? Nothing! When there are children on a wheelchair there isn't anything they can do!

That would be really cruel for a child on a wheelchair that watches other children play in front of it and wants to participate!

F: Yes exactly! The park is huge, and many people that go there can take a walk in the nature. The people who are excluded can only perhaps go around the green areas on their wheelchair they are excluded from any activities.

It does feel like the environment is uninviting, almost hostile, and you have the feeling that you are not meant to come here, is that right?

M: Yes that's true.

F: Exactly.

So what makes you not wanting to go there at all?

F: Hm, as an example, when he was little, everyone wanted to go and use the swings but as a disabled he couldn't use a swing! There is only the very small one for babies but they have to create something different for people who don't have the same balance. And those toys could be many things, for example they could make a slide, which would be easier to come up, with a small elevator. The

same for the slide, there could have been a slide that would be easier to climb up, to not only the parents are not exhausting themselves but also the disabled children can enjoy it. There should be more cooperation of people with a technical background to design more things for disabled people. Another example is the fountain in Fælledparken, When you go in the park you want to get closer to the fountain and put your hands on the lake, you can cross the first two steps with the wheelchair but then you cannot go any closer. So sometimes they went there with their friends and they went close to the fountain without thinking and he was left behind.

I think they should include you in the process of planning the space, and come and ask for your views, because they cannot imagine through your eyes, I realise I discover things that I would not have though without you telling me. Then, to continue, I would like to ask, do you use in general public transportation?

M: No actually, not very often. But sometimes I do. Mostly I use the car.

So when you go to school do you go by car?

M: Yes I go by car.

Is it close?

M: Yes it is only five minutes away.

And if you go to the park?

M: I also go by car.

F: When you use the bus, it is not accessible! We always need help. When we were in Spain, all the buses there had automatical ramps on the bus. The driver here (in Copenhagen) has to come and put down the ramp.

In London I have heard that public transportation is very accessible for people with disabilities, have you been there or do you have another example from other places?

M: No, I haven't been to London but I have also the feeling that their system is more accessible to people with disabilities.

F: When I compare Spain and Denmark in terms of public transportation, in Spain is amazing according to us, and we were on

vacation. Here just going on the bus is so much effort.

There are so many plans for cycling and sustainability and sometimes Copenhagen tries to advertise to much, but some important issues are completely forgotten, such planning for people with disabilities.

M: Yes that is true.

F: If you go to the park by walking, there is no ramp to go closer to the lake and also the pavement is so rough and uneven and you have to use your effort to look for ramps around, so you have to take the car even to go around the corner. You could walk to that corner, it is just there you, can see it from the window. You prefer to take the car because you prefer it compared to the effort you have to do when you use the wheelchair. They completely forget to plan about these things.

M: But also I have to say that, they are trying to look very fancy with the bikes roads and stuff but practically they forget some other groups, disabled for example, or older people, they forget them.

It is actually a lot of people that we are talking about.

F: As we are member of the spastic association, we know that there are 10000 members. But you have other kinds of disabled people, not only spastic, so it is true. Also, sometimes I use the electric wheelchair and it is very rough and bumpy so I lift my body with my arms so I don't feel them but then I have aches on my arms, I have pain on the muscles because every time I see the "bump" coming I prepare myself.

Do you have any other bad experiences in parks?

M: Not many in parks no, but I can tell you much about social exclusion. For instance when I was getting older I started to notice things that I didn't see before. You get very scared when they don't want to include you, some kind of people see you just like someone sitting on a wheelchair and that think you can't do anything, or work.

But when you went to school, was it the regular school right?

M: Yeah, at first, I went on “normal” school, with the other “normal” people (laughs).

But even using the word normal is part of the problem of being excluded!

M: Yes that’s right. Then later when I moved in Copenhagen, I was studying in a “special” school. The problem was that it was a mixed school, with all kinds of disabilities. So someone could maybe walk but there are also many people with mental disabilities and psychological problems, without any physical disabilities.

I believe that it is a wrong idea to go to “special” schools and also to call them “special”.

M: Yes, the thing is that it is not good to make an exclusion of “special” out of “normal” because then you make a separation.

And especially when you are a child and learn that you are not normal, and you are going to a school called “special”.

F: It is known that children don’t just learn what they are taught upon, but they learn among children, from each other. If all the children

did not use any language, and one has a disability that would allow it to develop it, he would never learn to speak. But if he was among other ones that are speaking, without any physical problems, you compete with them and perhaps learn.

Again, some last questions going back to the green areas, how is the service, is there anyone to help you if something happens and you are alone?

M: Actually there is no one to help you if you need something or if you have to go somewhere. You are all by yourself.

So if you get lost for example, there is no one from the park to guide you, right?

M: Exactly.

Are people in general helpful?

F: I think it depends, in Denmark, people would get offended if you help them automatically, but if you ask for their help they will be willing to help you, but not if you don’t ask.

M: If you compare other countries like Spain, Portugal there are very open and you don’t need to say

“excuse me could you help me”. Here they are not very open.

Do you go to squares or somewhere else to get some fresh air, a garden, would you go outside the house?

M: No, sometimes but not that often, because I come back from school, I do my exercise and all the things that I have to do and then I don’t have much energy to go outside, I just stay in my room.

These were my questions, I am finished, if you don’t want to add something else!

Interview with Hazel Gezen
(07.11.2014)

Tell me a about you, you are visually impaired, tell me about that.

I have only a little bit of sight, so I can see a little bit but it really depends on how the light is. When it gets darker, or in the night time I am able to to see more.

How do you move outside, do you need someone to guide you? How did you come today to the university?

I come to the university three times per week approximately, always alone. I only needed a guide when I go for jogging, to just be there so I won't get lost.

How do you come to the university?

Just by train and bus. I live in Brøndby so it takes around an hour to come here.

Lets talk about green areas. Do you like parks yourself?

No, not really, compared to cities. City is the kind of jungle that you can navigate because it is human made, so you know that things are kind of similar to each other and you can navigate by that. Nature and parks are more artistic.

It is interesting, the other person I interviewed also told me that he doesn't like to go to parks. He is on a wheelchair and he just doesn't find it interesting.

Yes it is not really interesting because it is just a whole open place with a bench somewhere, and it is not really logical where you can find where that bench is. I would never go alone actually. But I like the fact that you can just sit outside in the park when the sun is out, but I would never go with other visually impaired friends. I would probably have a sighted person with me.

Is there any kind of service in the park to help you navigate?

No, I never experienced that. Actually when I go outside I probably seek a café or something because it is easier, you can find a

chair or table or something, but it is not easy in a park.

But you do enjoy to sit outside you said, the nature, the sun etc?

Yes, yes I do.

When was the last time you went to a park?

Actually it was years ago, with my high school mates!

That was a time when you went with a purpose to visit a park right? But for example when you are here in the university do you go out to get some air in the green area in the campus?

No I don't, I don't even know where the green areas around here are. Once in a while I go with my student mates outside and we just sit on a bench. When it's with them they also guide me to the door again so I can find my classroom.

Do you have a park close to where you live?

Yes we do have several green areas and gardens. In the area that I live there is an area with a playground for kids etc . There is a beach out there in Brønby actually, sometimes I go with my mum, but I never try to go there alone.

So you go to the beach!

Yes I just go for a walk.

Do you go often?

No, not often, but still we do that once in a while. There is also a forest around where I live. I don't really enjoy these places because I can't really navigate in that.

Do you go to other public spaces, for example city squares? Do you do any other activities outdoors?

Yes I go sometimes to the theater and the cinema but it is easy when the gps can guide you in the city but not in a particular space as a green area. So I would be able to find the park but to navigate in the park itself, I am not quite sure.

When you were a child, did you enjoy to go to a playground?

Yes I really did, I played with the other kids and I didn't really find any difference between me and the others. I was climbing things and I enjoyed it much.

But there is no activities you could do in the park now, is there?

No, there is nothing. Actually I am doing sports but not in parks. I am playing Goalball at the national women team. We actually won against Greece ! Also I do fitness. I began going outside for running with a guide, but she couldn't run and she stopped half way. We did it in the evening when there is a twilight after six when I can see a little bit so it was easier, she didn't have to guide me physically she would just run beside me.

But you go running just around your house on the pavement not to a particular space, court, park right? There could be for example an activity with a running group in the park so you have sighted people to guide you, or even around the city.

Yes, actually the guide is guiding me I don't really know the place hopefully she can guide me home again. Running groups would be great!

So then again you don't like green areas, because there is nothing interesting to do and you can't really navigate, right?

Yes, it is just an open place and sometimes there are trees and plants. Trees are of course easier to find but all these plants and benches are not easy to find.

Do you remember any specific bad experience that you had when you were in a green area?

Actually that was weird, because I always like to just walk around and I am not really afraid of just going around and not knowing where I am . There was a time when I was walking and suddenly I didn't really realize where I was and I tried to find the others. I could feel people sitting here and there but I couldn't really find the persons that I know and I was like "where the hell am I" . It turned out that my family was only 30-40 meters away, so I was

not really far away but it felt like that.

So what did you do to find them, did you shout at them?

No, I found that embarrassing, so I just waited for my parents to reach for me.

Any other bad experiences in parks?

Not really. As I said before, I really like the human made things, you know there is a logical system in that, like buildings and roads and you can make a mental map of the area so you know when you reach that corner that you go either to the left or to the right for example.

I have heard that there are also audible guides in London in the metro, maybe they could be also useful to get around in the city or in parks, maybe connected to a gps.

Yes that could be cool. I was actually participating in a project some weeks ago, where they used a technology with the Bluetooth so that can tell you how many meter are between you and the object,

so they could try I think to use these also for parks, I am not quite sure. It would be great if you had the technology to tell you here is the door to the hospital or something.

And it doesn't sound like something difficult to create, everyone has phones with gps etc.

And it sounds cheap as well.

Also, I am including public transportation because if you cannot get to a park then there is no point to investigate if you can get around inside. What do you think, is it easy to use it?

Yes, actually I think it is easy. Of course I needed to learn to use it in the beginning, but there is audio information in the trains and also in the buses, it tells me which stop it is.

So you don't have any problems with getting around using public transportation, right?

No, I really try just to experiment and explore everything so I have been almost everywhere in Copenhagen not really knowing

where I was, but just to trying to get used to it.

Do you have to use specific routes or you can use it and go everywhere?

Yes, I am trying actually to not stick to particular routes but sometimes I do stick to specific routes because they are easy, but if I am going to meet some friends in an unknown place I always try to go myself instead of being guided.

I was wondering also, do you find it difficult to move due to the bike parkings?

No not really, only if they park in the middle of where we move but normally they don't. But bikes are better than cars.

What could be done to make the green spaces accessible for visually impaired people, besides the gps idea?

Hm maybe these lines on the ground like they do in the train stations that you can find the door. Maybe a more specific design, a specific road, so it is not just grass the whole place.

Do you think that in general spaces are constructed suitably for people with disabilities?

I don't think that is disability is integrated in places, no. When you are creating a place you don't really think about the universal design but only after the place is built, and then it is too late. You have to think about it from the beginning, while you create it. For example this part of the university is older but there is also the newer part and there aren't really the same accessibility lines on the floor, in the newer part there are lines on the ground surface to guide you to the door, there is a speaker in the elevator. Here in the old part they only have small things like Braille on the elevators but nothing more than that. So it has to be designed from the beginning.

It also an issue for people on wheelchairs because Copenhagen has all these old buildings that cannot be redesigned much but all the new buildings could be designed universally, at least all the necessary services.

I think there is also an aesthetic aspect of that as well, you know, so people won't change it.

Is there anything else you would like to bring up?

I really don't have more ideas hot to make a park accessible besides making narrow roads and easy to navigate.

I was wondering, did you go to a regular school as a child?

Yes actually I went to a regular school because I had the option to have a braille teacher for me, but they recommended to my parents to go also to a school only for blind people. So I went to both. But I did not think it was good going to the school for blind people, besides learning to read, we were all blind so we could not go around together, we could not help each other etc. It was better for me to be around sighted people.

Thank you for the interview!

Interview with Karin Beyer
(12.11.2014)

Tell me about your movements indoors and outdoors. Do you have also a helper?

I can move around with an electric scooter, because with the wheelchair I cannot move outdoors, the small stones are annoying me and when there is a little slipping to the side then this one (the simple manual wheelchair) would just fall to the side, so I only use it indoors, or towards the car, or in a shopping center, meeting places and so on. And I have a big car so I can come in, the car has a lift that goes down in the back so I can open the doors and make the lift to go down, I press a button. Other people do not have the full automatic system but maybe they need to have a helper with them all the time. But I do not need a helper, I can go around by myself. They only help I get is some cleaning help for one hour every two weeks.

So you have different needs from a person that has an injury which allows him to have strong upper body.

People with disabilities are very different. Of course there are people who can't hear or can't see and that is something quite different from the lack ability to move around, but even among wheelchair users there are big differences from what they are able to do, what is not hurting them. Some of them have difficulties with specific movements and some have not, you cannot just talk about wheelchair users as one thing. We can say more about that, it is a very important thing. Really you may have three or four people on wheel chairs in our meetings here and have different condition and the way that their daily life is and the way that they can get to places is so different.

Since when did you have a disability?

I was born with it. Not with a wheelchair but it has developed, but it is genetic. In my childhood I broke my leg every year, it is mostly the bones and the ligaments, it is a special thing with all the ligament and bones and teeth fail. But it is something else when you can still do sports and do things and you have "just" paralyzed legs. It is different with things that you dare to do.

So sometimes planning for disabled people views them as a group of wheelchair users that need a ramp, but there are different needs among them.

Yes. But when we talk about moving around in green areas I work with this disability group for accessibility in our municipality and whenever I am outside and meet a problem I remember it. Also here we are talking about that people with disabilities should have access to green areas because that is very important for all the people who live out here, they do it because it is not so far from Copenhagen, it's the lakes the woods, the green areas and you don't see that so much by just walking. The people who are working at the municipality and they plan and repair the roads and do things outside, are now understanding that they should think about people with disabilities also. I have now access to participate when there is a committee sitting, with people from different organizations. But the people here they respect that here in this Municipality we have the vision that we should include many people with many different conditions.

I guess it is also easier than Copenhagen because it is a small place.

Yes, in Copenhagen it is very difficult because it is such a larger Municipality. Also they do not have very much real nature. You have to go to parks. You can also go to the beach in some places but you cannot do it on a wheelchair. The sand is of course very difficult for a wheelchair. In some places they have some stones that you can go with the wheelchair but sometimes they don't think that you should also have space to make a turn around! Not everybody can go back with an electric scooter. Also if the wind is blowing you cannot see there the stones are, sometimes they are covered with sand. I think there is some places south where they did something better. The things I have tried in Copenhagen would be the parks and the zoological.

Here, around you place where do you go, is there a specific place?

When the sun is shining and I take my scooter to go out then I go from here to the rest of the old village and down to the path around the lake and along the lake and across the big road to Furesø lake, and maybe I take a longer route

around the woods, maybe the way to Værløse.

So you can actually go a long way on the scooter. Can you go a long distance with the electric scooter?

It depends because it is difficult along the roads because they are parking cars and signs and there are hindrances all the way. It depends on my time as well, if I have time to go back and do my work. Some people are not interested. They just like to go in shopping centers for example, so they don't need a scooter.

But is it comfortable?

Yes sure, I can do it for a long time. It is okay, if I don't need to go to a toilet. That is actually the most important thing; you have to find out where the toilets are. Some people who are using the scooter are able to walk so they just park their scooter, take maybe the wheeled walker and they can walk around. If they go to a toilet in a green are they can use a normal toilet. But I would need a place where I can go with my scooter and have something to hold on in the toilet, it should have the two armchests, which is very few places. So if I have to leave from home in the summer, I will ride my scooter, take the S train to

Copenhagen, where I know where I can get off safely, drive around and just enjoy that I am there, although I can't walk I am there among people, seeing them lying on the grass in the park, the children playing, or along the coast see the boats, it is very nice. But I need to know where I can go to the toilets and that is very few places.

How often do you go out here for a ride around?

It depends on the weather as well as on my work load because I am doing a lot for accessibility things. It is a kind of a voluntary work, that is what I do all the time. It is mostly for the flats on a specific organization. These flats are made to be accessible, it is the authorities who decide who can get them. It is meant for younger physical disabled people who have a need for an apartment without obstacles and broader doors, kitchen and bathroom that you can move around on a wheelchair.

Actually my dorm room is made for people with disabilities and it is really spacious and nice, the doors are wider etc.

Yes and just because you don't need all that, it is not a problem to have it. In too many places the

toilet is too narrow and when you come in with a wheelchair, you can hold on that but if you sit on the toilet indoors then in too many places you can't close the door if no one can come in and help. In this company who administrates several areas with small houses around here it is only these ones that are designed for people with disabilities. Nevertheless I am in the committee who decides how things should be administrated. That is a lot of work. For six years I was a chairman of the local department of DH in this local municipality. Now I am just a member.

And what about the trains, is it easy to use them?

Yes that is okay, because the S-trains, they have the ramps. So you have to place yourself in the front of the platform so the driver can see you, and fold out the ramp. With the electric scooter I drive up where are the bikes if there is place. But on a Sunday afternoon it could be difficult when there are many people and many bikes.

But they could have made it better, if there was not an elevation difference there would be no need for a ramp.

Yes that could be nicer.

But in the metro you can just roll inside right, there is no elevation.

Yes but I do not dare to go, because if it stops somewhere, and you have to jump over to a very small platform along the wall, then how do you escape? With a wheelchair it is impossible! But some people use the metro of course. But some people are also very strong wheelchair users, they had a damage in their back so they can't use their legs but the upper part of their body is very strong so for instance if something happens, not only in the train, if they fall or turn around, nothing happens to them, maybe it is difficult to get up again but nothing breaks. My bones would break; I have brittle bones, so I can't just risk to do some things, it is very difficult. Whenever you see some pictures in films with some very strong disabled people it is that their legs are paralysed but not that the bones are fragile. It could be something else, that the brain cannot control their parts etc.

When I was discussing with my other two interviewees is that they are not interested much in going to a green area. The first one is normally getting very exhausted from the everyday practices and

physiotherapies and it does not appeal to him to go outdoors, and the second is blind and has a hard time navigating in a green area because it is not human made and the shapes are not predictable. But in general she is very active and brave to go out, but the parks seem scary to go alone. But you do enjoy to go outdoors and you do it as much as you can, is it correct?

Yes, if I can go to the toilet and it is not raining (because I have to sit out with an umbrella on the scooter and it is not so nice when there is no one outside all the people are running indoors) but I have done it sometimes also with rain because I wanted to go to Copenhagen and spend sometime there. Maybe I am very tired afterwards but I can also get some rest if I can go somewhere to eat and have a toilet etc. so I can stay outside for a couple of hours. Therefore I enjoy it very much, therefore I do go out! I have a friend who is living 500 meter from here, he is blind and he uses the stick and a blind person's dog. He walks in the woods along the lake, he goes out with his dog everyday! Once I was on my scooter and saw him coming from the woods near the lake and I said "Hello Paul, it is Karin up here!" and he replied "Hey Karin, be aware that there is

some mud holes with mud and water a little further up there!" he was actually explaining to me so I could avoid it. But there is only some people who have a dog, you have to get a lot of training both the blind person and the dog individually and then both together. They have to know each other. He always takes the dog with him when we have meetings with the municipality and he just sits next to him.

What else, what kind of barriers do you meet when you going around with your scooter either inside the woods or on the road?

What I am most afraid of with my scooter is when the path is inclining on the side. We don't claim that disabled people should be able to go everywhere, because then there should be asphalt everywhere and that is not nice. We like when the people are near the urban areas here then they should be able to go also in a manual wheelchair or with a helper and so on. But out in the green areas it is more appropriate for people in electric wheelchairs or electric scooters. So we are not saying that we want everything accessible, but if there is an area with a lot of paths like here, then we would like to have a system of

main paths that are accessible so you can get around and have an experience of the park. Then there could be also of course other paths that people who can walk and have rain boots can use them. But this is just enough for us this is what we would like, we should be able to take part in the enjoyment.

So it is not about making everything accessible but satisfying the same needs even with a different way.

Yes. And it is also to be able to go around in the city of course. There are all these paths made for bikes but I can drive around, it is very useful for us. But some places are steep on the sides and you cannot see that from the map. I have tried it going on a steep path and I don't want to try it again.

What happened then?

I fell, and I couldn't come up myself. I could have broken my bones it was very dangerous, but I just had some hurts, nothing serious. Only when people were coming they helped me, I had to wait. And they had to know how to help me in a certain way because I cannot jump. I am so much afraid of that, falling on the side, and I have to explain to the municipality all the time. But in parks that are

arranged, shaped, you seldom have that problem. If you go in Copenhagen in Kongens Have (Rosenborg Castle Gardens), where I go often, mostly in the summertime, there the paths are very fine, no problem.

Do you remember any other specific problem in an artificial green area?

There are some places, in the zoo for example, where I would prefer to be on the manual wheelchair even if I have someone to push me around. I have been there both alone on my scooter but also with my daughter and her family and grandchildren, on the manual wheelchair. I can see many things from my scooter but when I am with my family, it is another dimension, it is also to enjoy as a grandmother what the grandchildren can see. When I didn't have the scooter there are so many places that I could not go in the zoo. If I should be able to fully enjoy it, then in every place that they sell ice cream, the canteens etc I should be able to have access, but it is not always the case. But if my whole family is there they can get up and queue and I can wait with my grandchildren. But it should be accessible to be able to go also in the queue and

buy things, in the canteen, the café. It is very difficult to find an appropriate place to sit next to a table, and be able to buy what you need. It should be forbidden to have a very high front desk, it happens indoors as well. It has happened in hotels for example where they cannot see that I am there I am hidden behind the desk and other people take my place and they I have to shout " Hey I am down here!". For example other businessmen come and do their check out sometimes before I do, and that makes me really angry. But outside in the green areas this is also important. It is the toilets that is the most important but equality is a respect that it should be accessible for us as well, to come close and to buy things and so on.

Also I was thinking of how could the parks be more attractive for people with disabilities, there could be different activities organized and interesting for people with disabilities. What do you think?

Again that depends of course on what kind of disability you have. But if you take my example, if I go to Copenhagen I go in the week that there is the jazz festival in the city, in the beginning of July. I look in the weather forecast all the time because I would have to be

outdoors all the time as I told you before. Then I go to Copenhagen and drive around, I have also a little table in front of my electric wheelchair so I have some water and some food in front of me. But it is also important not only to sit on my own wheelchair with my own food, but to be able to go to restaurants that serve nice food or a coffee. Then I go in the garden, in Kongens Have (Rosenborg Castle Gardens), where there is a big concert area the first weekend of July in the jazz festival. This part is filled up with people, they are placed everywhere on the grass, so I go in a good time in advance and find a place to sit there on my scooter to be able to see the orchestra. Then, in a small amount of time, there is a double amount of people! Every little inch is filled! Therefore I am not able to leave before the people leave, I have to stay until the end. But you have to plan that. I plan also when I go to Højbro Plads, which is not far from Christiansborg Palace. There are some little channels there and it is just a place with pavements in the city, which are a bit difficult to go with the scooter. However there are some events, musicians, and I like it. I also go to Nyhavn, which is also very rough with the stones and I have to go very very slowly with

the scooter because it is rough as well as because there are a lot of people all over. But it is like being a tourist in your own city, so it is nice nevertheless, in good weather and so on. So I go down there, I go down to the Skuespilleshuset in the end of Nyhavn. They have chairs outside where you sit and see all the boats, the tourists around, so I sit there. It is not a park, it is not especially green, but it is an area to go for the same purpose. Then sometimes I also go to Langelinje along the coast. There are many places that I can go with my electric scooter I enjoy it. I just need some more toilets that I can go in. I have been all around the city. I would never ask what can I do there, in green areas. What do people do? They lay on the grass, they enjoy the sun , they sit and read a book. I can also do that. I have a very small garden, I don't have an alternative to use my garden and stay here. But I do stay around the house mostly yes, I go into the woods here because it is close. In the summertime I want to go to a new place that I have never been, it can be close or not. You don't have to do things to enjoy the area, maybe some people play with a ball or with the children, I don't feel I need to play with a ball, I can watch them. I go

to places that the paths are good to use. The green areas are very nice and much better here in my area. But if you also want to see other people and tourists then it is better to go in the city center in Copenhagen.

Is it easy to go around to all these places in the city center?

It is almost impossible to go into the inner city. In order to come to my destination, Langelinje, Kongens Have or wherever I am going, I have to go through many streets that are very different. You are trying to drive on the paths on pedestrians but then there is a bicycle parking or there is a sign from the shops, many different barriers. And along the road a lot of cars are parked especially on a sunny Sunday, so it is difficult to get off and on the pavement and the road. But you do it when you need to, going through the difficult roads, but it is not enjoyable at all. For example there is also Strøget, but it is filled with tourists, sometimes I go. It was fun the first time but after years when I had difficulties walking it was not fun anymore. Then I got the electric scooter and it is safe, I am protected.

How did you move before you had the electric scooter?

Most of my life I was not a wheelchair user, I got the manual wheelchair and the scooter at the same time. I had to walk and drive the car, but not walk too far, and not in dangerous or crowded areas. For many years, when I could walk, I lived on the eastern part of the city, I took the car and parked it near the lake to go for a "walk. Other people could just walk or take their bike I could not do that. I did not have any other people coming with me, some of the wheelchair users do not even want to go outside and see when the green leaves are coming in the spring. Of course I don't go all the way to Copenhagen to see that, I have it also here, but I like it to go out and I find the possibilities to go out here, the paths. It is more to have a little enjoyment and see some more people when I go to Copenhagen, otherwise I could just stay here where there are much fewer people around.

Have you also used buses?

You cannot do that with the electric scooter. You are not allowed to come in. Some people can go with a wheelchair but you must be together with a helper to pull down the ramp, the driver is

not obligated to do that. But even if I had a helper I would not like it to be pushed around in Copenhagen with the rough stones on the manual wheelchair. I would get very hurt I my back from that. I have also represented Dansk Handicap Forbund (Danish Federation for the Disabled), in a board for accessibility in Movia. They have something that is called "flextur", I use that sometimes. I can order such a bus to come here, I do that sometimes instead of the trains because sometimes they make construction works on the trains in the summertime so I would have to change trains to another station and take a bus and so on. And that is not for me. And I have to know that in advance. So if I know it in advance or if the station suits me better to not go by train then, I call them, they come here and pick me up, I go in the car with my scooter. But then they have to go around and pick up other people as well and they take off etc so it takes more time than a regular route. But it is an option sometimes. Then I ask them to meet to take me back at a specific time on a particular place for example. Then I do my walk, I drive around, and I have ordered them to pick me up. I have to be sure that I can get to the place at that

specific time, and a little before. But if I had the option to take the S-train or a regular transportation then for example if I suddenly wanted to visit Tivoli unexpectedly and take the train back whenever I want, then I could not do that.

Is it a lot of people with disabilities here in this municipality?

I don't know how many because they are not registered and there is no specific definition of what disabled is. And you can not a member of the DH, we represent all the people with disabilities to the authorities. When it comes to the local administration it is the departments in every local DH that do the negotiation.

Is there any department in the municipality for people with disabilities, working on accessibility issues?

No not really, it is because every little thing they do they should also think for people with disabilities. For example today we have a discussion with the Folkeoplysning so they are representing sports and cultural activities in this group. So I am there to represent DH, not because we have arrangements, but because everything they do they have to also consider people with disabilities. I do not claim that I

should be able to join and play football but I can take part to the cultural things, to be able to join their meetings on my wheelchair or to enjoy the fruit and food they serve, to watch a match, etc and not be hindered. I want them to use the microphone, which is the conductor in order for people with hearing aids can get the sound directly into their hearing aids. So when you use a microphone and the loud speakers, it is very important indoors. But sometimes people do not know that this system exists, so they speak up without a microphone "Can everyone hear me?" and then who should answer that question if he cannot hear it? But I fight that even if I can hear when they use the loudspeaker, other people have a bigger problem with their hearing.

Are there many people in this department here?

You can feel of course that I would not be the person that would sit back and say "Excuse me, do you meeting, or your parks and so on, I have my flat where I can go to bed and take the bus", I am not that kind of person. But other people who have some disability they feel that it is their private problem, they can't come and say that other people should take

responsibility. When you see a big group of people here coming to the public meetings, most of them have grey hair. It is fewer of them that are younger because they have to be with their children. It is who has the time and the interest to be involved. We have a lot of meeting so even if you are not disabled, when we have a meeting you can have influence, or you can be informed and people come there. But you don't know how many have hearing aids for example or how deaf they are, in order to use a loudspeaker. And then for example there are questions from the crowd, and you cannot hear them because they do not wait for the person with the microphone to come closer.

Do you think that the other organizations do listen to your advise and do what you propose?

In this afternoon as well, I am going to tell this group of people of representatives (but actually now they have already learned this) that when I sit at the table, I have to be able to sit comfortably and reach the coffee and water, now they know what to do so I feel better. I don't have to interrupt the meeting to take a glass of water. Some of them have been very engaged in their organizations to

improve accessibility, and when I have the opportunity to tell them for example "This bump, should be moved away." Or that in the toilet, if you want to use a tissue, sometimes it is placed very high, or the mirror it too high, then I tell them to change that, to put up an extra mirror for example. That are small things but you want to be able to wash your hands etc, but I explain all that and you can see, I come out of the elevator there and I cant get into the door there, and they say "Oh I had never thought that!". So I do influence people yes. I hope.

So they do actually apply these changes?

There are so few people in this world that actually want to harm other people. So nearly all the failures of accessibility around us it is because they are not thinking of us from the beginning. Sometimes it is very expensive to change things afterwards so you have to explain to them that we have laws in this country, we have joined the convention for disabled people, we have the obligation to make the urban environment more accessible for people with disabilities. So we just help you to follow the laws of the country. We are trying to help you to do it right

in the first place so that you don't have to do these changes afterwards.

Anything else about the outdoor barriers?

What is important in the outdoor areas is what is on the ground. In some places they have this rough stones but it is not nice, especially for the manual wheelchairs that have no elasticity. You feel it exactly up and there are very small wheels in the front. I say to the politicians, try to imagine that you are shopping and you are filled with milk and eggs etc and you have to go to your car. If you meet such stones you have to lift your wheelchair as well. So the smaller the wheel, it is stopped by small stones. If you imagine that you are on the rollers you would not like to on that. The bike is nothing like it. You are stopped by these stones. So there should be no rough material. If you have something called "grus" (gravel) like in Kongens Have (Rosenborg Castle Gardens) there is such, it is like sand, that could be okay on a scooter and an electric wheelchair. But with a manual wheelchair, then it goes up the wheel and blocks it. And if it is raining it becomes like paint, it sits everywhere, like when they do constructions you have the

mud that it sits in all the wheels. Then I get this mud in my car and then when I go home I can take off my shoes, but I cannot take off my wheelchair, even when it is full of mud. Therefore if you build houses etc this kind of material should not be used, it should be something hard. Maybe in a park I accept it because I do not go there in bad weather. Also as we said, it should not be steep, as well as have parking places close to it. It is very difficult to find the parking places for handicap people. It is not only the question of fitting the car, but also having the space to get in and out. The small parking places for disabled people should be at least 3.5 and 5 meters long. When you have the big cars I have, then my car by itself it is 5 meters long and I should have extra three meters because there is also the lift which is 1.5 meter, and the scooter is 1.5 meter. I cannot just jump, I have to have this space. It is very difficult to find these spaces in Copenhagen. If you find parking for disabled people then it is usually too narrow or other cars would block it so then I would not be able to get in again. There are regulations that tell people how to make the parking spaces specifically but they just don't do it. There is a lot of narrow parking places, a lot of

places along the pathways, so you can't use it. I have really dare to get my car and go to Copenhagen because I cannot be sure that I will find a space to park it and go out with my electric scooter. And if it occupied? It is not easy to drive around with a big car in Copenhagen. So parking places, toilets, surface materials. Toilets that if the door is here, then the door has to go out, and I have to be able to turn around from my seat, sit back, etc. It is important that the handle should be on both sides of the toilet, because sometimes there is a handle only on one side! But I need to lift my self using both, and then it depends if my scooter or wheelchair can come closer so I can use it to come up. If you have been to Klampenborg, there is only one handle ! But officially by law there should be two armchests. Another issue sometimes is that there are these signs that tell you where you are in the park, maps, but then there are some barriers for me to go close! And it is also that sometimes the map is too high up, but I am sitting down, and to see close I have to use my lower part of my glasses. They are changing it now because I am saying it again and again. It is a little thing but it causes trouble when it happens. Then we talked about the things of

being able to buy them, you should be able to to that when you go into parks.

In the UK there are also university education focusing on disabled people. Here in Denmark there is not. What do you think about that as a cause of the exclusion and accessibility problems?

We are so unhappy that the engineers and the architects are not being taught about these things. There is for example in Aalborg University Copenhagen, the Building Institute, which I do contact and they help me when I ask things etc. But the architects should have it in their educations. But it is not only that, I was discussing for example with the people who are constructing the new crossing here, there is a conflict and blind people cannot find their way. We don't like to have that step from the pavement but blind people like it but we try to compromise. Also, there should be that lights with the hearing sign as well. So we try to develop things for people with different disabilities. Then I was talking to all these people the practical ones, who constructed everything, and I had the blind man there and he walked out in the traffic between the buses and the cars because there was

no sign with the hearing sound! But when they actually saw him walking between the buses and the cars that made an impression. Until now we have been able to save him. But then those people said, we have never imagined about that! So it is also the people who are constructing the things. For example even in hospitals I have seen the tissues placed high up there.

I am discussing as well in my thesis, the conflicts between what is a sustainable city and accessibility issues. For example if you plan "sustainable areas" you have in mind to use less space, but the extra room is important for accessibility issues.

Yes but if you think smart you can have this extra space used smart for another purpose. It is not enough to have some "boxes" that you will put disabled people in! Maybe you get an illness or a disability when you are 25 and you are still young you don't want to go to a little place where there are all the old and disabled people, you want to live with your family. I feel there could be a conflict of the accessibility and changing the environment because of the climate change, for sustainability purposes. People who really try to

make our physical areas to be able to take care of more rainwater for example, they try to plan nice things like parking, green areas on the streets, nice bridges, running water here and there, artificial rainwater lakes, very good things. I want these clever people to make sure that it does not conflict with accessibility. Of course climate change is a big issue, but if you develop methods from the beginning you don't have to lose the accessibility to buildings parks etc. If you close your eyes for it you certainly lose things, you think of the rainwater but not for accessibility. And it is also much cheaper if you plan it from the beginning.

I was wondering if there is register of how many people have disabilities in a municipality?

No they are not registered. And of course different illnesses develop and it is difficult to have that registered. But now a system that we have is that if you find out that there is a whole on the street then we have this application that I can take a picture and the gps coordinates are registered so that other people can see and know where it is. It is only for this municipality but it is also useful for disabled people. It is smart

because all other times I would have to create a picture, edit, make it to an email, write some text and send it. Now I can just do it like that. It is rather new but instead of people with orange suits go around to find out, but everyone helps.

A last question, do you know any good or bad examples from countries in terms of accessibility?

Since I became a wheelchair user I have not been able to travel much, but I have other friends that do that. They always say that the US are fantastic that they can go around with electric scooters in New York city easily, as well as sometimes they say that in Sweden is better. Also they mention always Barcelona. But I haven't tested it myself.

Interview with Ulla Trømer

27.11.2014

Could you tell me about yourself, and how is your mobility outdoors?

When I go out I use my electric wheelchair and I have a car also, which where my wheelchair can come in to. It is very easy to get on and off the car. It is actually a van, so I can take my wheelchair on the lift. I also go to work three times per week, in Copenhagen.

How is parking in Copenhagen then?

We used to have an office really in the center and it was always a problem to park my car. But now I have my own space to park. You need extra space behind and on the sides of the car. But if I want to go for a walk here I use my electric wheelchair. I can go everywhere by myself, I don't need help.

Do you usually go out here for a walk?

No, not very often. Actually there is a forest and a moor here, but I am not a very "outdoors" person. I could go into the park, not much in the woods. I am a "couch potato" girl actually. I love the mountains, I

like to see them but in general I don't go out much. Out here (in Høje Gladsaxe) there is a lot of green areas, you can see over there, everybody can go out and play football etc there is a lot of space for that. I like to go out in Copenhagen, in the Botanic gardens, and go around there. It is starting to be better to go there with wheelchairs, because there were many unconcealed paths, which were difficult to use. That means that there was no asphalt on the paths, but other materials such as clay so it is very slippery also because it rains a lot.

So now they started to change it?

Yes in some of these places there are now more solid materials and asphalt.

So which other parks do you use?

The Botanical gardens, then the gardens in Statens Museum of Kunst, also in Kongens Have (Rosenborg Castle Gardens). Kongens Have is very nice, open for everyone, there is so many things you can do there. In the summertime there is an outdoor theater, in July, a puppet theater.

Do you go often?

Most of my outdoor life is in the summer. In the winter it is too cold,

and if it is raining or snowing, it is too difficult to get out on a wheelchair. I hide in the winter just like the animals! But I think if I lived in Greece I would be outside all the year, if the weather was nice.

When you go to the parks in Copenhagen, do you use the car? Hmm, there is a problem to take public transportation. There is a bus stop up over there. The train station is 3 km from here. Normally if you would take public transportation with a wheelchair the easiest is to use the S-train or the metro. Buses are possible, but if you are on an electric wheelchair the driver can say we don't want you, because they can't put any seat-belts on. But that is strange because no one else has seat-belts on a bus. And the way they made it, is that you have your back towards a wall so you can't really move, it would be safe it wouldn't be a problem. But they are not very keen on having wheelchairs on the bus, and the ramp is very difficult to get out. The electric ramps for the buses are invented in Denmark! You can go to Sweden and find them in the buses, but not in Denmark. They keep saying in Denmark that we don't have it because of the bad weather, but Sweden has worse weather! But now they would have

to buy the ramps from another country because the factories in Denmark have closed since we did not buy them.

So sometimes they do let you in, but sometimes they deny it? Is there a law or a rule for that?

Yes, that is the way it is! The bus company has made a rule about that. Manual wheelchairs are fine but you can't do it by yourself. And the driver is not allowed to go out! If for instance you are in England or in Spain, there is a button in the middle door, so you push it and the driver pushes another button and an electric ramp comes out, which is very nice. Barcelona is the most adapted city. London as well. If I wanted to, I could take my wheelchair, go to the airport, check in my wheelchair, take the plane, get off the plane, get the wheelchair, go to my hotel, without any help. The buses are very good, you ring the bell and the ramp goes out, the driver doesn't have to go down. We never had any problem in Spain and England. Recently we went to Bolivia actually. And we took some pictures of me using public transportation here in Denmark for them to see them. As it is there, they have the vehicles from England, that the steering wheel is

on the right side, but they change it and they move it on the left side, because they drive on the right side of the road. However, they don't change the speed panel as well when they move the steering wheel, so the front passenger has the panel in front of him, even on the buses, so I was afraid not to press anything by mistake, it was terrible! It was impossible to get on the bus, the door was very old and narrow, not even 50 cm and the steps were very high. We didn't go by bus at all, only taxis.

Any other countries that you have travelled to and they were very accessible?

Well, not Latin America for sure, that was terrible. I went to Africa where we had a special bus and they made a ramp for us to get on, but the slope made it impossible to use it! So we told them "Could you please move away the ramp and just lift us to get in instead?" It was dangerous. When we were in Bolivia we were living in a house on the second floor and they adjusted the stairs with a ramp, so I could go on the second floor with my electric wheelchair. I stayed there for a whole month. DHF have a developing programme in Latin America, Africa and Vietnam and Bolivia was part of the programme,

so we stayed there for a month to experience what is happening. Life was challenging there but I knew it was only for a month and I knew it was a good experience, I saw how people are, how do they live etc. When we were in Australia, everywhere where we found stairs, there would be a ramp next to it! Even down to the beach, and in the dessert! We were in the dessert and there was a high view point, and my daughter and my husband went upstairs, but I said no way I didn't want to get on these stairs, because it was 47 degrees hot. Then my daughter came down and told me "Mum, you can come, there is a ramp over here" and I was like "okaaaay", very surprised! No matter where, there was a ramp. Also, sometimes when they don't have ramps, they tilt the floor! I had to actually put on my brakes, you didn't notice the tilting of course. In Australia I didn't feel disabled at all. Public transportation was easy too, we took a lot of public transportation in Melbourne, and in Perth, we went across a river to go to the zoo and I took the ferry. It was so easy to go there with a wheelchair; even the ticket booths were low, so there were no obstacles at all.

Do you remember any bad experiences in public transportation?

My only bad experience is when the lifts don't work, most of the bad experiences is when the electronic devices that should help you fail and don't work for some reason. Once I had went to a concert, and we left the concert earlier to make sure that we can get on the train back home. So we went all the way to Buddingen, to my place, but the elevator was not working. Then they told us to go back one stop to get off and then take the car, but the elevator was not working also in other stations. So I think I almost had to go back to where I started, to find an elevator! And I had a personal assistant and my car was parked in Buddingen station, and it was a problem that she had to follow the train until there was a station with an elevator. There is a lot of fine electric machines, but I really prefer things that are more manual, so that you don't depend on electronic things. It is very important.

And I guess also when they change the schedules and you have to switch to a bus for example, right?

Many people don't know that, but if for instance I would take the train and they tell me that I have to take the bus instead, then they are obliged to pay for me for a cab. But people don't know that. You can call DSB or Movia and they will tell you that, but of course they are not pleased to tell to people but they are obliged to help you.

So what do you think of trains?

I think I would prefer to take the buses for sure if I could do that without a helper. The trains, even if the change the levels, still you will have to use at least an elevator to get to the platform, and they are very often not working.

Do you remember any bad experiences in a park here?

In the Botanic gardens they have the big green house, you see it with a lot of stairs, but there is a ramp around the house. But if you only see the ramp if you get in from the other side and there is no sign to show that it is there. I think that is not okay. It doesn't need to be an ugly sign, no. But if they have a map when you get in you can just make a simple map with the symbols. When you are on a wheelchair, you know how to read these signs, you know how to look

for the ramps and toilets etc. it is easy.

Have you been using the metro here?

Yes but not often. The door closes very quickly, you can easily get stuck in the door, it has happened twice, almost got stuck. I can also get in during rush hours but I have a special card that you can go to the ticket office and buy a children's ticket, or two children's ticket if you have a helper. It gives you permission to buy children's ticket in Copenhagen. If you need the Rejsekort you can buy a special one for people with disabilities. It could be easier if you always had to buy children's ticket and if you need a ticket for your companion, then he could have a special card. It is for all the transportation modes as well as for some museums and parks, in Tivoli I only pay one ticket, I don't have to pay for my companion. Many cinemas they begin to say that if you need a companion, it is free for him, if you have this card. It costs 250 DKK every three years.

If someone does not necessarily need a companion in his everyday life, but he goes to take a bus, then can he also get that card?

Yes you can always apply for the card. There are different rules about the card of course.

Karin told me also about the metro, that in an emergency situation people on wheelchairs will have a problem to get out.

Oh yes, the pathway they made for emergency exits is very narrow, so you can't be there on a wheelchair, you would have to take the stairs. But every time you go out your door, as a person on a wheelchair, every time I go to shop or to a concert, I will always put my life in danger, because if I go to a shopping mall for example, there is no exit that I could get out of if I am on the second floor. Every time you choose to go somewhere and use something, you also make a choice that if something happens maybe you are not alive afterwards. That is a choice you do. But it is dangerous to cross a road as well, anything can happen. If you are afraid to take the bus, the train or the airplane you will never be able to do things. When I was in Bolivia we travelled by plane 16 times, in small, old planes and I thought that this country has this system for so many years and people are not afraid to use it. Sometimes it is bad luck or bad experiences that make you feel

afraid, but when I do something scary of and then think about it afterwards, it doesn't give my fear, that I would not want to do it again. But I am not that easy to scare.

Have you used Movia's flextraffic system?

Yes. I use it when we are going to fly, so I use it from here to the airport so I don't have to park my car. Also I use it when I go to my mother's house, she is on the first floor and there is lots of stairs. So when I use the flextraffic they also help me up the stairs, they have a special machine that helps to get up the stairs when you are on a wheelchair.

But flextraffic does not replace the regular bus system, does it?

No it is not like regular buses. You have to call for it at least two hours before if you are like, otherwise 14 hours before. It is not like a bus, they come and pick you up where you live, and it is more expensive than a bus as well. But if this is the only way for a person to get out it is a good thing they made. Maybe for people that don't have the opportunity or do not dare to go from their home to the bus, or they can't stand there waiting because maybe it is late etc, they have the

comfort of being picked up, so I think it's a good thing.

How do you think people could think more of accessibility issues and make everything more accessible?

In DHF we have a committee and we discuss a lot how to make things more accessible. However there is an issue, because if public transportation was 100% accessible, so the compensation that you have when you are taking a car, would be minimized, they would tell you that you have no need of a car. If you live in the countryside, no matter how accessible the buses are, in some villages the bus some in the morning and goes back in the evening, or in other places there is no transportation at all. We can apply for some money for a car if we fulfill some requirements, for example if you have a job and you have to use it etc, but the amount that they compensate, half of it we have to pay it back. They help us to get it in the start as well as to adapt it, they pay for the adaptation.

So if the public transportation was fully accessible, they might make it more difficult to have a car.

Yes, because you are compensated. We really want to have a 100% adaptable transportation but at the same time, people need the cars too and can they buy themselves. One funny fact is, that you can only be one person on a wheelchair on the train, when you go to the rest of the country, not the s-trains. So if you are a couple both on wheelchairs, you cannot both get on the same train for example to Aarhus. We were going to go for a trip to Berlin with some of my friends and it is very cheap to take the train. But, we had to go in separate trains until the border, and then get on the same train in Germany all together. The same train that came from Denmark! It is not allowed only in Denmark. It was an exhibition, and when they came to sell us the tickets the person that was responsible was like "I am so embarrassed, I am so sorry, I didn't know, we are not allowed sell you the tickets for the same train". He was so shocked and so embarrassed. The funny thing is that if I want to use the train, and I need help to get on the train, I have to apply 24 hours before. And then I am not even sure that I can also have help on my way back, I have to apply again. We went to London last spring, and we went to

Gatwick. I had looked at the train station on the internet and there was something about that you should inform them that you come with a wheelchair. I said, lets just go there and see what happens. But there was no problem, when we went they said "oh if you wait here just five minutes there will come someone to help you". So they came, they helped us, no problem at all. They had a ramp to use. It was a very old train and when I saw it in the beginning I was like "Oh my god, I am never going to get on that train" the door was very narrow, and high steps, but they had a ramp which just fitted, so we could get on with the wheelchair, it functioned. And no bad feelings, no one feeling angry because you used all the room and there was not much room around you, nothing. Also, they called ahead to our destination, so there was someone waiting for us to help us get out as well! Denmark is difficult. Danes have to learn to take care of other people and not just themselves. In the old days I think we took more care of other people but now we are more egocentric.

There is another thing as well. In the state museum of art, there is a new thing happening. Now when you

go in the museum with your wheelchair, you have to change in one of their own wheelchairs, which is a manual one and you have to have a companion to push you around. If I go with my electric wheelchair, I know a guy this weekend who was denied access because he went without a companion, with his electric wheelchair. The biggest problem is that the ones who agreed about the rules, Godadgang, they had approved this rules. The saddest thing is that our chairman of DHF, she has agreed about that rule. I was so angry when I heard about it, because we don't fulfill the convention, now everything about the convention is not fulfilled. We have just been looked through on the 23rd of September, and we had 72 problems in Denmark! We also don't have the antidiscrimination law in Denmark. For example, you may not discriminate people with different sexuality, colour, ethnicity, etc but you can just say all kinds of ugly things to a person on a wheelchair. I could be fined if I say something for someone with black hair, but if he said something about me, nothing would happen. Or if for example you go to a restaurant and someone denies you access because you are Greek, that is not allowed. If they deny you access

because you are on a wheelchair and say "I don't want you here", that is allowed. While we were in Bolivia, the people with disabilities if they wanted to have a taxi, then the taxis just drove by them, they did not want them in their taxis. But, when I waved at them, they stopped. Because, we were white, we were tourists, money.

Interview with Pernille

(02.12.2014)

You don't have many parks here, it is mostly natural areas right?

Yes it is mostly nature, forests and they are owned by the state. But we do have some small green spots, very small ones. Few years ago we also bought Sønderø lake . Before it was owned from the ones that supplied drinking water but they did not need it anymore, so we bought it. There is this green area around the lake, which also belongs to us. We focus on the footpaths and bikes, but mostly on pedestrian paths. But of course it can be used from different users. We try to connect all the green areas from South to North so you get connectionS between the small neighbourhoods as well. We

try to connect all the small cities with Værlose and Farum. When do these projects, we have to think who is going to use the paths, is it for cycling, walking or running etc When we decide this, then we decide if we can include more people, also people with disabilities. We have this fantastic path around this lake, but the problem is when the path is inclining, .It is very difficult in the forest because the routes of the trees often pass below the path. If they drive with the electric scooter it is not safe, they could tilt and fall. We always try to think all kind of users, any kind of disabled as well, also blind people. Especially when it is downtown in the city we try to make the use of the parks or other facilities inside the city accessible to everyone. It is difficult and in the end it is also about the money.

Because you have to use more space and construct everything larger and accessible?

Yes exactly.

But if you plan it from the beginning it is cheaper that renewing existing ones.

Yes, if you have the space it is not that expensive but if it is an area with hills it is quite difficult. It is also about the details, for example we

have maps and information points. When we place them it looks fine but when you think about people on electric scooters you have to also think about the height and more things. Sometimes we fail to think like that, and then Karin calls, and we go and she shows us the problem. Then it becomes obvious.

Is it difficult to include more the people when you make new changes and projects in order to correct the issues from the beginning?

Actually for many years ago, maybe 7 years ago or something like that, we did not involve the citizens as much as now and we didn't cooperate that much. But now we realized and they realized, that it is actually easier if you do it like that, involving the citizens.

I also know that there is an application on the phone, for indicating the location of different problems, in the municipality.

Yes that is true. Karin actually in the summer she goes all around the paths to find problems, and then she mails us about three or four pages for different problems. We don't have the time to go out and check that everything is okay.

I imagine that you can't monitor all the paths in the forests all the time, which would be difficult. But to compare with Copenhagen, I guess it would be much more difficult to organize everything because it is such a larger municipality of course, but on the other hand they don't have many natural areas, so it would be easier to monitor the human-made green areas.

I don't know if it is more difficult, but we do not have those human-made parks, but again we know some places that we can say for sure "go and visit" and that there are paths that are accessible etc.

So it is also because Karin is very interested and involved in this as well, right?

Yes she is part of it. We do have small organizations, and every year we have a meeting in January to talk about the missing links to connect the areas. Karin is representing a group as well, mostly focusing on foot paths. As I mentioned before, it is still developing. If you know, the Danmarks Naturfredningsforening they are also an NGO interested in the nature. They think that mostly natural areas should be for people who are interested in the nature and should not be a common

place to visit. Sometimes we make some funny discussions because as a municipality you have to look at all users, you can't say it is only for the ones who have a dog or the ones that place football, it should be for everyone who would like to visit the nature.

And I guess that they would not support to make large solid paths in the forests, they would be against altering the environment very much.

Yeah, they prefer narrow footpaths, only for people who walk. Then there is a problem. But they also know that we have to include everyone.

You have to both agree in order to proceed and change something?

Yes, we have found some common spots, we make some places only for wheelchair users and then we have other paths for foot or bikes. We are actually now working on making a map on showing the different uses of the paths that exist. The idea is, if you are a guest looking for example, for a path to run, you look at the map and maybe there is a recommended route for running. Also, it is to indicate the paths that you can use when you have a wheelchair.

I know that toilets are also a challenging and important issue for people with disabilities.

Yes actually we only have one toilet accessible here. It is again about the money. Once there was a toilet next to the lake, but it was too expensive, we closed the toilet. It is the cleaning and the connections to the water etc. We thought about toilets that you pay, which might be a solution. But the connections to the water network it is expensive. It is not something that we are often asked about actually, the toilets. The building is still there for the toilet that is closed, next to the lake and people ask about that one, why can't they use it.

So there are the same problems and expenses for both kinds of toilet, also the ones that are spacious and accessible?

Yes, but actually it is more expensive to make it accessible. Again we have to think all groups so if we make it, we would choose the expensive one, otherwise we would have trouble.

The existing toilet is it also for the disabled?

Yes it is. We had to do a lot of work with the pipes as well in the old toilet, because they had to be renovated. It was so expensive and

we could not afford it, so we had to close it. It is a wish to make a new toilet building. It is about one million, something like that, that is why it is not there yet, but it might come. We have a lot of visitors around the lake and there is a big parking space as well. It attracts a lot of visitors, so we could make a toilet there.

Karin was also referring to the issue of having high front desks in facilities, such as cafes, or inaccessible tables etc. Does the municipality have an influence in these issues?

Yes and no. When the cafes make changes, they need to be approved from us. The ones that give the approval have to check a lot of specifications. One of them is to secure that everyone can come and visit the spot. But, sometimes the café owners for example, they forget to do, as they would have to do. And also we forget to check them as well. Then Karin calls us and says, "what happened?" Here on the other side of the bridge there was a café, and they made an lift. I don't know why but it was out of order all the time, and there was stairs otherwise. We do have that problem sometimes, but it is not very often.

What do think also about public transportation?

It is always about the money, and it is a relatively new way of thinking to involve all the people. Earlier the thinking was to construct first and fix it afterwards. The easiest way it is to do it from the beginning and to call the people, Karin, and there is also a blind man with a dog, and they help us. Often we call them to hear if they want to meet, or we are making a new stop for a bus, or any changes that could involve them, in order also to avoid that they come afterwards to complain. The municipalities make a contract with the public transportation and I am not sure if we can also set conditions of what kind of buses we get. In the winter, if we get snow, that is a problem, with the footpaths. When we remove the snow, we put it on the sides, it is a problem to get rid of the snow. This is a real challenge for the people who use a wheelchair or scooter. We try at least in the places that we know that they visit a lot, to make them as clean as possible. You need to get used to the thought, especially the people who go out and remove the snow. That is also the reason why it takes so much time to learn to think that way.

It is also not much in the education.

No, it is a shame actually. It is quite strange, because it would be much easier if they had an idea from the beginning.

Is it also the organizations or more the individuals that are creating the pressure?

It is mostly the individuals, but they are actually representing organizations. I am afraid that when they are tired of doing this job, it would be very difficult to find other such dedicated persons. In some ways it is quite fascinating what they do.

Do you think that in Copenhagen they could have a similar cooperation with the people?

Actually I don't know what is happening in Copenhagen, it is a challenge because they are a large municipality, so they have so many small areas. I believe that involving the people like this it is a fantastic way to do it, because it is easy .it is simple, cheap and hopefully everyone is happy afterwards. Maybe sometimes we do get some extra work to do, but that is our job you can say, we are here for the citizens. It is also that when they call and tell us that something really works, it is an achievement, we feel nice, that

we make a difference. I think it is a great way to use. It is very difficult of course in such a large area as Copenhagen. Here you also know a lot of people, so you can contact them.

Are there actually a lot of people with disabilities here?

I don't think we are different than any of the surrounding municipalities. Sometimes it feels like there are a lot of people because the ones that are here make their presence and shout out loud. We focus on the issue as well, and in new and old buildings as well we try to rethink and what we can do better. There is an organization that is called godadgang.dk, and all the buildings that we own have been visited by them to see if they are accessible. They have descriptions of the buildings in their website.

I know that in general there are only recommendations, not specific rules, for dimensions and accessible design in general, right?

Yes exactly. Also when you make a footpath along the road, there are some recommendations but it is almost seen like it is a kind of law actually. It says about how steep it should be etc. In that way, it always should be made in a way

that everyone could use it. In the real world though, things are often different.

One last question, what would you say about the parking spaces?

I believe that we still do the mistakes with the parking spaces. Karin has shown us with her car, when you see it by yourself it makes sense why it is so important that there is room enough, and the road should be flat, etc. Again it is a way of thinking and it is an old habit that we do forget it sometimes. Then people call us and show us the problem, and then it is pretty obvious. I actually think we are doing okay; we always try to correct our mistakes and learn from them.

