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Is the City Planned and Built for me?

Citizens' experiences of inclusion, exclusion and (un)equal living conditions in the built environment.

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Abstract: This paper is based on a study where four go-along interviews with a total of sixteen participants were conducted in three Swedish cities. The purpose of this study was to find out how different aspects and qualities of the built environment affected different persons in terms of experiences of inclusion and exclusion and strategies used to deal with obstacles in the environment.

The study highlights the citizens' experiences and perceptions of the urban built environment, based on their individual conditions for using it, in relation to the planners' and decision-makers' visions, planning practices and construction. The participants were asked about their views on the necessary conditions for them to visit the city and its places and buildings, what barriers they might experience that either made them change routes or avoid the area completely and what kind of environments they experienced as welcoming and inclusive.

The study shows that there is an ongoing multifaceted exclusion of citizens from the built environment. This situation is not in accordance with current building regulations, neither with overall societal goals and ambitions, nor with the international conventions Sweden has undertaken to follow. The study also points to opportunities to change the situation, with the help of knowledge about enablers in the built environment and how Universal Design can become an important planning variable to bring about change.

Keywords: Accessibility, Universal Design, Disability, Urban Planning, Built Environment

1. Introduction

Having access to, and use the built environment has a significant impact on people's lives on many levels. It influences the possibility to get to a job or education, to be able to reach community services, leisure time and cultural activities, and is an essential part of the fundamental right to participate in society (UN, 2006). The access to, and experience of the local environment are also connected to health and wellbeing (Steinfeld & Maisel, 2012).

The perception of the surrounding environment is determined by everyone's individual conditions and experiences. Individual preferences, abilities and conditions colours the picture differently for each of us by our surroundings. What is an attractive urban environment for one person is perceived differently by others. An essential prerequisite for being able to take part in the city's offer at all, for many, is what is referred to in Swedish building regulations as accessibility and usability (Boverket, 2011).

The term 'accessibility' is often used in planning contexts as a matter of people's availability to different destination points or types of service. This approach is used not least in connection with traffic planning (Curl, 2013), (Jamei, Chan, Chau, & Gaisie, 2022). There is a significant difference between this way of using the term, compared to what 'accessibility and usability' aims at in the Swedish building legislation (Boverket, 2018). What is described in the law as *accessibility and usability* refers to people's use of the built environment, regardless of various disabilities. The regulations require planners and developers to ensure that what is built is accessible and usable for everyone in the target group identified as accessibility and usability for 'people with limited mobility or orientation capacity' (Boverket, 2011). When the term is used interchangeably with, for example, access to service, there is a great risk of ambiguity and misunderstandings among planners and decision-makers. Another complication is the difference between what building regulations states as accessible, and the individual perceived accessibility (Egard, 2022), (Hedvall, 2009), (Hedvall, Ståhl, & Iwarsson, 2022). The regulations prescribe minimum levels of accessibility which are not always sufficient to meet the conditions of all individuals.

In practice, using the term accessibility in other contexts, such as 'reachability' or 'access to', leads to ambiguities arising during the planning phase. When these terms are used interchangeably in planning documents, it is unclear whether accessibility in the sense of the law is meant or something else, which can cause unintentionally failing to achieve the meaning of the law during the planning process and exclusion of the appointed target group in the building regulations.

The planning tools used today are often based on standardized images of users' abilities, and previous research has shown the challenge of incorporating accessibility and concepts such as universal design into the planning tools (Koch & Legeby, 2022). Digital tools used in urban planning, are often used in relation to the concept Space Syntax (Hillier & Hanson, 1984), (Van Nes & Yamu, 2021) a method developed to analyse the shape and structure of the city in a social context and its impact on society. In this context, 'accessibility' is used as a way of describing proximity and spatial integration, which is intended to be a useful measure of perceived distance and orientability in the urban environment (Koch, 2022). The different values that are obtained with the help of different tools are the basis for analyses of e.g., how people move in the city, perceive the city in terms of distance, orientability, etc., and are also used as a tool in normative community planning to express desirable behaviours of the people in city life. Also, accessibility aspects in the built environment can be considered in a systemic perspective, of such patterns and effects on a larger scale (Koch, 2022).

In practice, however, there are large differences between this planning practice, and the accessibility and usability for different individuals in the city. The many different conditions of human diversity generate differences in how one chooses to move around in the city, how quickly one moves between point A and point B, how one orients oneself, etc. Aspects such as age, disability, gender, etc. provide different conditions both on a general and individual level. The assumption of an 'average person', and the use of measures and tools related to such beliefs, can risk driving a segregating development (Ericsson, Wojahn, Sandström, & Hedvall, 2020),

(Hamraie, 2017). While the norm is taken for granted as a given, without critical reflection, it also creates insider and outsider groups.

Mobility is in many ways a core issue in the issue of equal urban environments. Being able to move in and through the city presupposes, given the citizens' diverse circumstances, access to flexible means of transport. Public transportation is still not accessible for all in Sweden (Stjernborg, 2021). For some persons with disabilities, there is an option to apply for special travel services, i.e., an especially organised accessible transport. The right to use these transport services is decided by the 290 different Swedish municipalities, and decisions are based on different criteria, i.e., the duration of the disability and the individuals' significant difficulties in using public transport (Svenska Färdtjänstföreningen, 2012). The transports often take place in groups, where possible problems that may arise with different individuals travelling together in smaller cars, such as asthma and allergies, are not considered. According to public statistics, only 286000 persons in Sweden were granted travel service in 2021 (2,7 % of the population), which is the lowest number since the measurements started in 2009 (Trafikanalys, 2022). The number of granted applications is continuously falling, despite a sharp population increase during the same period (SCB, 2022).

It is a far-reaching responsibility to create accessibility and usability for people with disabilities, which Sweden has committed to implementing in connection with the signing of the UN Convention on the Rights of People with Disabilities, CRPD (UN, 2006). The CPRD states in article 9 the responsibilities on accessibility in relation to the built environment (UN, 2006) art.9 p 1a-b,2a-e), which is further developed and explained in General comment no 2 (UN, 2014). The strict application of universal design is expressed as the way forward.

What determines inclusion or exclusion from enjoying one's right to the built environment includes a wide range of different aspects: it can be about the design of the physical environment, access to different forms of service such as accessible public transport, but it is also about norms, attitudes, and the view of people outside the image of the 'average person' (Imrie & Kumar, 1998).

Inaccessible urban environments entail not only the exclusion of users, but also suffering, emotional burden, and costs because of accidents (Bonehill, von Benzon, & Shaw, 2020). According to current Swedish research, the number of injured users of electric wheelchairs or walkers has tripled between the years 2006-2016. Among the most common causes of accidents are curbs, level differences and uneven surfaces (Carlsson & Lundälv, 2022).

Previous and now used methods to capture social values in the built environment have been tried, for example, through sociotope mapping (Ståhle, 2006) and social impact assessment (Vanclay, 2003), (Esteves, Franks, & Vanclay, 2012). The sociotope mapping is a planning tool meant as a representation of users perceived space, by mapping the social and cultural values of places. The users play in this method a central role by participating in the mapping, and the outcome has been considered as valuable for local planners. The method has been used during by several Swedish cities in Sweden, among them City of Gothenburg (Göteborgs stad, 2023). The background to developing the model was recurring conflicts around densification, which led to a need to map places of special ecological, social, or cultural value. It is regarded as a 'bottom-up' process, aimed to handle the contradiction between the citizens' 'life world' and the planners 'system world' (Ståhle, 2006).

The concept of social impact assessment was originally an answer to requirements in National Environmental Policy Act (NEPA) 1969 of the USA (Esteves, Franks, & Vanclay, 2012). In a Swedish

context the concept has been used as an analysis tool and process support with the aim of gaining increased knowledge of a place and identify important social aspects that need to be taken care of in the planning work. It is also used to describe social consequences of various proposals for change. This tool is mainly used by strategic planners with low citizen participation (Boverket, 2023), (Göteborgs stad, 2023).

Strengths of both methods are that social issues are raised early in the process. In the sociotope mapping, the focus is mainly on how different places are used, not by whom. Social impact analyses are a strategic tool for the planners that do not involve the users in the same way, and where it is possible to make active choices about different types of consequences or different groups that are prioritized. As a complement to this type of tools, methods that involve the human diversity and who can use different environments are still missing.

Previous studies on disability and the built environment, have framed users' experiences of social oppression and marginalisation (Imrie & Kumar, 1998) (Imrie, 2012), how the analysis of the relationship between person and environment also should include individual physical, psychological and social dimensions (Lid & Solvang, 2016), (Bonehill, von Benzon, & Shaw, 2020). Citizenship and right-based conceptions of social justice are fundamental for the equal treatment of persons with disabilities as full members of the community, and analyses of access to the built environment need to be framed within this framework (Kitchin & Law, 2001).

2. Aim and research questions

The aim of this study was to shed light on citizens' experiences of inclusion and participation in the city, by identifying environments perceived as good examples or barriers in the built environment from the individual and a UD -perspective, where accessibility and usability are ensured, or not, based on human diversity, equal rights and equity. The study constitutes a concluding part of studies on universal design and the built environment, through all phases of the urban development process.

Participants' experiences of urban design and factors that either contribute to or discourage the use of the city for people with different abilities and conditions, are examined to identify patterns in the urban form and the design of public space and buildings that can influence the perception of an equal or unequal cityscape.

The study concerns citizens' access and accessibility to the city in a broad sense, such as spatial accessibility on a detailed and overall level, mobility modes, orientability and more.

The main research questions are:

- What urban environments are perceived as examples of an inclusive or exclusive built environment, and why?
- What strategies do participants use to avoid or overcome obstacles and barriers in the built environment?
- What are the decisive conditions for the participants to be able to visit and stay in the city?
- How do the participants perceive the opportunity to influence the design of the local environment?

3. Method

In the study, four go-along interviews (Kusenbach, 2003) were conducted. The method was chosen to get a holistic, in-depth understanding of how people relate or do not relate to the spaces in their cities, and what their day-to-day experiences of inhabiting this place are like. The go-along method is considered to be especially suitable for environmental perception, spatial practices and in social areas (Bartlett, Koncul, Lid, George, & Haugen, 2023), (Carpiano, 2008), (Kusenbach, 2003).

In total, sixteen citizens participated, divided on the three cities: Gothenburg, Kalmar, and Lund. The three cities are of various sizes – big city, a middle-sized city and a smaller town in a Swedish context - and are all located in the southern part of Sweden. These locations were selected as all cities took part in the research project behind. The participants were recruited mainly through invitations to different municipal citizen Councils, but all participants were not necessarily members of those councils. The participants of the study were familiar with disability perspectives on the built environment, but also to other relevant concepts such as the aging society.

All walks took place in central parts of the cities, covered 700 - 1500 m and were selected to cover a wide range of services in the city. The participants connection to the various places that were visited along the walks also varied. Some were familiar to the area since childhood, while others were moved in or had weaker connections to the area for other reasons. Thus, the participants experience of the selected areas were based on various kinds of previous encounters with the environment (Seamon, 1979).

All go-along interviews were conducted during autumn/winter 2022/2023, from November to February, which may be of importance considering reduced daylight and low temperature outside. The duration of the walks varied between 45 and 90 minutes. Two of the go-alongs were conducted in the same town, the other two in one city each.

The go-alongs were documented by audio-recording, notes and photos. The recordings were complete in three of the walks. In the fourth, this was not possible since there was a larger number of people who participated. As a complement to the collected data from walkalongs, some municipal planning document related to places/buildings that were visited on the walks, were used in the analysis.

The interviews were semi-structured, and among the questions discussed during the go-alongs were (translated from Swedish):

- What is important for you to feel welcome, safe and included in public buildings and places in this city?
- What types of places do you like to visit, and what places do you avoid, and if so, why? What prevents you from being able or wanting to use a certain building, environment or place?
- What does accessibility to the city's services and services mean to you?
- How does it work best for you to get through the city and between different destination points that are important to you (i.e. workplace, school, shopping, leisure activities)?

The interviews were all analysed thematically on an overall level with an inductive approach, aimed at finding patterns in the participants' answers on their experiences of the environment that were visited. The findings were analysed in a first step after each completed conversation walk. Patterns regarding environments, phenomena, activities, properties of buildings and places

were then analysed on an overall level (Yin, 2011); (Yin, 2018); (Bryman, 2016); (Kvale & Brinkmann, 2014).

4. Results

During the four go-along interviews, the participants have highlighted positive and negative aspects regarding their own opportunities to visit and stay in the city. The various factors that emerged and that affected the participants' access to the city's spaces and offerings are divided into the following areas, which are described in this section:

- Challenging and excluding urban environments
- Inclusive and welcoming environments
- Citizens' influence and participation in local urban planning
- Barriers, obstacles and enablers
- Citizens' suggestions

The different aspects, all related to accessibility in some way, will in the following section be discussed on a detailed level (as barriers and enablers) and on the overall level (as excluding or including environments and the possibility of having an impact on local urban development).

At the end of this section, a summary will follow of barriers and obstacles and what strategies the participants had when facing these barriers; what kind of environments that participants perceived as welcoming and including environments; and finally, some suggestions from the participants.

4.1. Challenging and excluding urban environments

The participants in the study, expressed several challenges in the urban environment, during the go-alongs. In this section, an overview of the most challenging and excluding environments, according to the participants, is presented, divided as follows:

- Topography and distances.
- Uneven ground surfaces, steep side-sloping walkways and level differences.
- Transport and mobility modes, including digital challenges.
- Areas of mixed use.
- Light and noise.
- Categorisations and special solutions

At the end of the section a short summary of the most challenging environments is given.

4.1.1. Topography and distances

Some of the key aspects causing challenges and exclusion on a general level, according to the participants in the go-along interviews, were related to topography and distances.

What a 'walking distance' is differs among individuals. For some, 500 m in a hilly terrain is a barrier-free route; for others, 10 m in a plain terrain can cause challenges. The walking distance can be seen in relation to the appearance of the terrain, but must also be related to the individual's conditions, which can also vary constantly depending on the daily state of health and

fitness. One participant made clear that on some days, 500 m could be a possible distance to move by foot; other days, she would have difficulties with the very short distance of 10 m. Another participant expressed the difficulties of carrying shopping bags for longer distances (more than 25 m).

Long distances from dwellings to different facilities represented clear barriers for several of the participants:

> *"It's difficult to reach the swim hall nowadays since they (The municipality) decided to locate the new swim hall in a suburb outside the city centre. It works if I can use the car to get there" (IP 1)*

Participants expressed the necessity to always plan every detail of a visit to the city beforehand.

> *"I must think about reducing the distances I need to walk as much as possible, so that I have the energy to do what I have gone into town to do. As I will never get the permission for travel service, I must find a parking lot as close to the entrance as possible" (IP 14)*

One participant using a wheelchair had a clear strategy to be able to get to the football arena outside the city centre.

> *"Outside the city centre there are more walkways and bicycle roads paved with asphalt. I use my electric scooter and have found out the shortest accessible route". (IP 3)*

Figure 1: After the reconstruction of the square the area is covered by uneven street stones without contrasts.

4.1.2. Uneven ground surfaces, steep side-sloping walkways and level differences

Uneven ground surfaces and level differences were considered by the participants as frequent barriers in the city centres. Sideways, walkways and squares covered with cobblestones or small uneven street stone was a considerable problem in all three cities. The appearance of such ground surfaces was, in a few cases historical heritage, but more often built in the 2000s. Despite requirements in the building regulations that walkways shall be firm, even and slip- resistant, a significant proportion of newly constructed areas in the city centres were covered with uneven stone paving. Level differences, which also according to building regulations shall be avoided in

the case of new construction and should be remedied afterwards in existing public environments, were frequent also in the city environments.

Some examples from the middle-sized city are showed in Figure 1 and 2. A newly reconstructed square is mainly covered with uneven street stones (Figure 1) and the newly built tram stop is reached only by stairs in the main walking route from the train station to the tram stop (Figure 2).

In the medium-sized city, the layout of the street space with sloping sidewalks, uneven ground coverage and level differences was a major obstacle for wheelchair users as well as walker users or pedestrians with balance problems. An example of a walkway with even and paving, in accordance with building regulations, was found - a shorter street in the centre that was renovated in the 1970s.

Among the rest of the pavements in the old city centre, many had steep side slopes. These were, in some examples, a result of time (with deficient maintenance) or, in other cases, a result of a conscious choice to lead away water from facades. This caused big problems, especially for the users of a walker and a wheelchair (Figure 3). The big risk of injuries was an apparent reason for the participants to avoid these streets, or if necessary, use the private car for direct reach of entrances to facilities they wanted to visit.

4.1.3. Transport and mobility modes

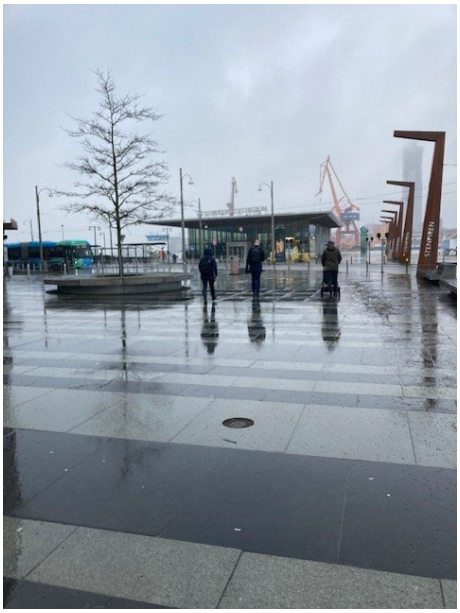
In all go-alongs the importance of good accessibility that well connects all parts of the city, both in terms of geography and facilities.

The necessity of *flexible transport modes* was also clearly identified in all three go-alongs. The difficulties of visiting the city centre using a private car was one reason to avoid visits at all. Some participants, all using different mobility aids, were dependent on strategically placed parking lots to be able to visit the city centre. The location of parking lots, with short distances to entrances of facilities, was decisive for which activities, places, and shops they could visit. Public transport was not an option for any of these participants due to inaccessible vehicles, stations or stops, or long distances between home and bus stops. One participant expressed the need to be a 'parking-expert':

Figure 2: A new level difference with stairs was created in an earlier flat area, when constructing the new tram station.

Figure 3: The walkway has a steep side slope, putting users in danger of falling, especially when using a walker or wheelchair.

Figure 4: The design of the open place do not support the orientation – different transport modes are using areas not separated from each other neither physically nor visually.



"One must be an expert on where accessible parking is located, and how to interpret the complicated parking rules" (IP 7).

Distances between home and bus stops were also mentioned as an excluding reason to visit the city centre at all. Barriers in the built environment in the city centre were also mentioned as reasons for participants to instead shop in external shopping centres with a higher degree of accessibility.

Digital challenges were also addressed. One participant expressed the difficulties using parking apps, as one reason to avoid going to the city centre by car. Without access to or knowledge of digital solutions, participants also expressed difficulties in buying tickets for public transport, reaching timetables for local transport and more.

Other challenges in using public transport, not caused by inaccessibility itself, was highlighted by several participants. Orientation in travel centres, to know which bus/tram to choose, to understand timetables and ticket rules, problems for persons with asthma or allergies to wait at tram stop when other passengers do not respect the ban to smoke and to pay attention to when trams arrive, were some of these difficulties.

4.1.4. Areas of mixed use

The concept of shared space for mixing traffic types was perceived by the participants as very challenging, especially for people with impaired vision, hearing, or orientation difficulties. In one of the cities, a shared space in front of a travel centre for public transport was visited. The main objection was that such a place is difficult, and even dangerous, as there are few visible or audible warning signals when fast cycle traffic crosses the footpath. The participants also expressed how the place's unclear boundaries and lack of contrasts specially created the difficulties of orientation, and how all the grey colours were perceived as unesthetic (Figure 4). When discussing how the lack of colours and lack of qualities to understand the environment could cause problems for users, one of the participants exclaimed:

"This is unethical aesthetics" (I9)

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Figure 5: The wheelchair -symbol was found at doors for goods intake, leading to back entrances.

Fig 6. One example of how ground surfaces have been improved in connection to the city's maintenance work. The uneven street stones are now only decoration on the sides of the walkway.

4.1.5. Light and noise

Well-lit outdoor environments are not only necessary for people to be able to get around safely and orient themselves but are also an essential quality for the experience of safety and security. One participant expressed the lack of lighting in one part of the city centre as being a decisive importance to visit that area or not.

How various difficulties in the sound environment created insecurity was mentioned during one of the interviews. It was, for example, about unsynchronized signal systems between different forms of public transport: when the tram arrives, signals are given, but when the bus arrives there is silence.

The risk of increased noise in the city center, and thus increased health risks, was discussed in relation to new residential environments near railways. The strategy to build new housing blocks close to the railway is related to densification. When crossing a bridge over the railway station in one of the go-alongs, the strength of the railway noise became apparent. In another example the other side of the coin was also discussed in terms of risks – the difficulties to detect when silent electric cars in the streets, especially for a person with reduced hearing.

4.1.6. Categorisations and special solutions

Thought patterns that categorize users became another recurring theme during the conversations. Stair-free options are often marked with a wheelchair-symbol, despite the necessity of alternative routes for many users. The acceptance of special solutions for persons with disabilities is still causing excluding and stigmatizing experiences. Still, wheelchair -users are directed to the back entrances, staff entrances and goods intake, and to specially designated audience locations. Some examples came to the fore during one go-along. To reach the entrance doors of the city's theatre in the small city, one must pass the stairs. No signs are telling persons who cannot walk stairs where to go. However, at the merchandise intake and stage entrance, there is a line at the bottom of the sign telling that this 'entrance' is also for wheelchair users

(Figure 5). There is no bell to use if you want someone to open the door from inside. One participant explained that the only way to get the staff's attention that you would like to visit the theatre and need help to get in, is to remain at the square outside the main entrance, and hope that someone can see you from the windows.

At the cinema in the same city, wheelchair users are placed either in front of the first row, where one must bend the neck the whole film through, or in the passages, which is forbidden due to evacuation rules. In the newly built assembly hall completed in 2016, people with wheelchairs may only sit at the top of the hall, which makes it impossible to be integrated with the accompanying company and challenging to reach the stage in case of interactive performances or conferences.

"We don't go to the cinema or the theatre anymore" (IP 2 and 3).

A strong image of the exclusion of certain citizens largely emerged during the conversation walks. In the big city, it was told about how whole neighbourhoods were impossible to move around in, for persons who had, for different reasons, difficulties with uneven ground cover. In the smaller city, a wide range of facilities were closed to those who cannot use stairs. This applied to the grocery stores in the residential area as well as services in the city centre. *'No, I cannot come in here'* became a common statement about shops, pubs, restaurants, hotels and other service establishments we passed during the walk.

4.2. Inclusive and welcoming environments

In all three cities participants expressed positive experiences from visiting the city. The patterns that emerged when discussing what attractive urban environments meant to each participant, some places or activities in common were:

- Places with views over the city, green areas and water.
- Squares as meeting points.
- Cultural activities.
- Historical buildings and architecture.
- Bridges.

To visit the city centre to be able to watch or take part in city life, in activities but also as an observer, was important to several of the participants. The possibility of moving around, especially for health reasons and the importance of visiting the city centre to avoid being isolated at home was explicitly mentioned.

For some participants, the visit to the city centres was mainly work-related, where accessibility to the actual building where this took place, including the way from the parking lot to the entrance, was most important. Others visited the city centre just in their free time or for fun.

The importance of views, green areas, water and interesting architecture was highlighted in all go-alongs. In one of the cities, the participants appreciated that the municipality created an app where you can report obstacles in the built environment, so that measures can be taken. The initiative to place so-called 'conversation benches' around the cities - benches that, through signage, encourage citizens to talk to each other – was highly appreciated by the participants.

4.3. Influence and participation in local urban planning

Several of the participants, who also were members of municipal councils for the disabled or the elderly, expressed despair when it came to the opportunities to really influence planning and building issues in the municipality.

"We are invited to sit at the table, raise our hands and have opinions. It's a one-way communication" (IP 1)

On the overall level, a lagging commitment of the municipalities to improve accessibility for persons with impairments was perceived by several participants as a significant obstacle.

Some participants, involved in city councils for disabled, aging people or accessibility, talked about the resistance they meet, often among municipal officials:

"The responsibility for actions to remove obstacles was firstly placed on a project employee, now it is completely taken away" (IP 3)

One participant even called the municipality a driver against deteriorating accessibility:

"An outdoor escalator was planned in a housing project, connecting the newly constructed block of apartments to the higher located bridge. This was by the Disability Council regarded as a very important detail in the decision of building permits. Later another unit in the city administration told the construction company to take it away to save costs" (IP 14)

In other cases, physical barriers to buildings prevented participants from participating and influencing. A participant talked about how he, being a member of the municipal disability council, was given the opportunity to discuss drawings for a new arena with the responsible architect. According to drawings, there were no integrated accessible audience seats in the arena, despite recommendations in the building regulations.

"I had to wait at the square while the architect brought the drawings outside as there were steps to the entrance of the architect's office. In the square, I examined the drawings, and we had a discussion" (IP 3).

The necessity that responsible planners and decision-makers are looking up to link the small individual detailed accessibility measures to an overall whole-city perspective was highlighted as an essential aspect by several participants.

"A holistic view is missing; accessibility is not only in the details but important on the overall city level" (IP 8)

"Measures for increased accessibility are sometimes not connected – they have not thought the whole way through" (IP 3)

Some also talked about how accessibility measures sometimes came about 'by accident', for example, level differences between walkways and streets that was taken away because of big Sports event. Other examples were how measures was taken slow, only in connection with replacements of lines and pipes in the street (Figure 6).

Every success in terms of impact becomes important, and testifies to a participant's understanding and perseverance:

"Nowadays, the city has a policy to improve the ground surface gradually, in connection with the replacement of lines and pipes in the street. Changes are slow; you must constantly push for action" (IP 3)

"How we fought to keep the Pharmacy in town, and we succeeded" (IP 15)

4.4. Barriers, obstacles and enablers

Benches were one of the most mentioned enablers during the go-alongs. Participants of various ages and with various impairments mentioned benches as a decisive aspect for the possibility of spending a day in the city centre. One participant expressed the paradox when the municipality want the citizens to exercise for better health, without realising that without public benches many people could not go out for walks at all.

"There are never enough benches. And many of those that exist are worn. When you come to town, you want to take a breath and have some peace and quiet. You need to be able to rest. Sometimes they put benches in the 'wrong' places - where the municipality themselves think they should be and not where many people want to sit" (I 1).

Access to public toilets was highlighted as another critical issue. Finding them, having access to and managing payments systems were all aspects connected to public toilets. For some of the participants, it was a decisive factor in being able to make a visit to the city centre.

Flexible mobility systems, including accessible public transportation and the possibility to use your own car, including finding parking lots with alternatives to digital payment, were of special importance for those who live outside the city centre.

4.5. Citizens' suggestions

In the various cities, different suggestions for improvements came from the participants during the walks. A general desire was addressed to planners and decision-makers to 'think the whole way through'. Being able to use the city is not determined by fixing any individual street crossings or entrances. Accessibility measures must be linked at the city level. You arrive, move between destination points, and get to, in and out of buildings and places, participate in activities e t c. A sense of inclusion is closely related to the possibility of being able to freely choose which theatre or restaurant you want to go to, to be able to choose a route when moving around within the city, not to be forced to make long detours to find specific special solutions or to spend all energy and ability to get to and from a destination instead of being able to save this for the activity you wanted to participate in.

There were many requests for improved accessibility related to what has been described above. Among other concrete proposals that emerged from the participants were:

- Change the design of the city carefully so that people do not lose their sense of home and orientation.
- Protect the range of services in the centre through increased accessibility and premises rents that counteract empty premises.
- Make it easier for all visitors through clearer signage and directions. In particular, the lack of signage for cyclists needs to be addressed.

- Avoid special solutions as far as possible. In residential areas, all tenants should be allowed to use door-opening systems that are installed as residential adaptations.
- Allow flexible mobility systems. Public transport is not available to everyone, and alternatives must be available.
- Flexible payment systems are needed both for paying for tickets in public transport, when parking with your own car, and in shops.
- Avoid so-called shared spaces, which are difficult for many to find their way around and create risks of accidents.
- Assistants to people with disabilities should be guaranteed free parking and admission to cultural events when working.

5. Discussion

The findings show that there is an ongoing exclusion of persons with disabilities from the built environment. In addition, this exclusion of people with disabilities also affects the possibilities to influence plans and construction processes. In the study, examples emerged of important aspects that functioned as enablers for various participants. The deficient dialogue with citizens also limits the acquisition of knowledge about such needs and solutions, seen from a human diversity perspective.

5.1. An ongoing multifaceted exclusion

The findings show how a multifaceted exclusion of persons with disabilities are going on. This confirms previous research (Imrie & Kumar, 1998); (Kitchin & Law, 2001); (Bonehill, von Benzon, & Shaw, 2020). The various stories told by participants of the go-alongs, bring out a picture of the many different forms this exclusion is rooted in. It also shows how the exclusion, with varying strength, is rooted in factors along a sliding scale: from troublesome obstacles in the environment such as squares paved with cobblestones, to the total exclusion that takes place when there are no alternatives to stairs to an entrance. Or when a person in a wheelchair wants to go to the cinema, and the only available space are placed in the escape route, where no one is allowed to stay. Or when a person with restricted mobility, who cannot use public transport, not are allowed neither to park a car close to the entrance nor use special transport, nor use a parking place for persons with reduced mobility, due to rigid rules (Trafikanalys, 2022); (SCB, 2022). The many forms in which the exclusion takes its form further demonstrate the importance of including many dimensions in the analysis of the relationship between a person and the environment (Lid & Solvang, 2016). Several of the examples shown in the findings, highlight the necessity to consider accessibility and usability also in a systems perspective and on different scales (Koch, 2022).

The findings also show how Swedish laws and regulations on accessibility in the built environment are systematically disregarded (Egard, 2022); (Stjernborg, 2021). Newly laid out squares and streets are paved with cobblestones or uneven stones, without thought and with no respect neither for the law or the user. Stairs are placed in public places where there were no level differences before. Walkways are kept with steep sliding slopes, regardless of the obvious risk of injuries. Shops and other services in the city centres continue their businesses without remedying what, according to the regulations, are regarded as easily remedied obstacles (Egard, 2022).

Many of these deviations are related to deficiencies in the physical environment. In addition to that, many challenges were related to contradictory or non-existent signage and difficulties with

orientation in dense built-up areas with no view of the surroundings. Other factors that exclude, such as negative attitudes, categorisations, and special solutions, also appeared, and the digital and economic exclusion. Several challenges were of the kind that should be easy to avoid or easy to fix.

High curbs and poor maintenance of streets and walkways create dangerous obstacles and cause injuries to people with poor balance, impaired vision, walking difficulties, users of wheelchairs or walkers, etc. (Carlsson & Lundälv, 2022). Mixed areas such as 'shared spaces' have since long been documented as very difficult solutions for many people (Imrie, 2012). Nevertheless, such places are still being built.

Existing methods for capturing social values in the built environment, such as sociotope mapping (Ståhle, 2006), (Göteborgs stad, 2023); social impact assessment (Vanclay, 2003), (Esteves, Franks, & Vanclay, 2012) or tools like space syntax (Hillier & Hanson, 1984), (Van Nes & Yamu, 2021) could be further developed to better capture also issues such as accessibility, usability and universal design.

The challenges brought to the fore in this study also show how planning tools and practices need to be supplemented with a human diversity perspective. To move forward, a step that can bring about change is to implement Universal Design throughout the planning and construction process in order to prevent and counteract excluding environments. By moving away from the assumption of an 'average' person, UD can be the key to provide more different and flexible solutions that better match people's different conditions (Steinfeld & Maisel, 2012).

5.2. The necessary enablers

The findings highlight several details in the built environment that can, for many persons, be addressed as 'necessary enablers'. From previous research we know that some of such decisive enablers are public toilets and benches (Kitchin & Law, 2001), (Koch & Legeby, 2022). In addition to that, participants highlighted how their possibilities to move around in the city were dependent on:

- Parking lots, both disabled parking and regular parking lots, for all those persons with restricted mobility who do not have permission from their municipality to park their car on a disabled parking.
- Handrails along slopes or other challenging environments.
- Lighting in public places.
- Clear signage and orientation boards.

5.3. Citizens' impact on the design of the built environment

Formal methods for citizen dialogue in connection with planning processes, general invitations to dialogue meetings are often made, where it can be assumed that citizens have access to the right digital information channels, opportunities to attend meetings independently, and that the venue and arrangement are physically, informatively, and communicatively accessible. This risk to limit which citizens can participate. The form and design of the arrangement governs the extent to which those present can express their opinion. In the end, the opinions received are sorted, whereby the responsible planners decide which opinions are to be incorporated into the proposal, and which should be left without action (Boverket, 2018).

The study shows how citizens and groups who experience obstacles and exclusion in the city have knowledge and ideas about possible improvements. The chosen method was helpful to address such discussions in environments that the participants were familiar with (Kusenbach, 2003). How the strong commitment to influence their city for the better was met by decision-makers, was experienced by the participants in the study in different ways, from cautious optimism to almost resignation. Several of the participants were members of local councils such as elderly councils or disability councils. Nor did they express that they could influence to a greater extent. In relation to Arnstein's ladder of participation, the lowest level, non-participation, and the bottom rung of symbolic participation are reached at most (Arnstein, 1969).

The findings suggest that established methods and models for citizen collaboration can be reviewed. When property owners, sometimes the municipality itself, do not even meet the current minimum legal requirements for accessibility and usability in the built environment, citizens who can contribute with knowledge and suggestions for solutions, are an important resource.

6. Conclusions

The negative special treatment of persons with disabilities from the built environment are in this study documented on a sliding scale from obstacles in the physical environment (sometimes easy to remove) to complete exclusion from public places, local services and more. The disregard of applicable laws and regulations (Boverket, 2011); (Boverket, 2018) continues systematically. This creates new obstacles in the built environment, while the work to remove existing obstacles stops or are delayed. To counter discrimination and segregation, there is an urgent need to rethink the planning processes, to leave room for human diversity and to move away from notions of an ‘average’ person or the normate template (Ericsson, Wojahn, Sandström, & Hedvall, 2020); (Hamraie, 2017).

The participants contributed to the identification of important enablers, highlighting especially the need for flexible mobility policies that take human diversity into account. The identification of enablers also made visible how the lack of holistic perspective in urban planning in itself contributed to creating obstacles and excluding users. The participants' experiences highlighted important issues such as equal conditions and prerequisites for mobility and residence in the urban space. It also points at the gap between what the building regulation states as accessible and the individual perceived accessibility (Egard, 2022); (Hedvall, 2009); (Hedvall, Ståhl, & Iwarsson, 2022).

The pointing out of the necessary enablers is important knowledge to achieve accessibility also in an overall, entire-city-perspective. The concept and practice of Universal Design is a key to pursuing such a development.

The possibilities to influence the design of the built environment were, according to the participants, very limited, despite participation in diverse municipal councils. Considering the findings in this study, there may be reasons for the municipalities to review forms of cooperation and dialogue with their citizens. To reach the minimum level of accessibility and usability, as stated in laws and regulations, is a modest goal. To avoid the exclusion of certain citizens and to achieve a more inclusive built environment presupposes a significantly deeper understanding of human variations and needs, where a close dialogue and collaboration with citizens and organizations for people with disabilities is necessary. How the UN Convention on rights for persons with disabilities (UN, 2006), (UN, 2014), is to be incorporated into practical action in

planning and construction, which in the Swedish context is a municipal responsibility, is another important aspect that needs attention for change to take place.

This study was a qualitative exploratory study, and the conclusions are not generalisable to the three case studies nor to Sweden in general.

There is a need for more research on the health effects and the social costs of exclusion that are highlighted in this study. By making such effects visible, the motivation to bring about change can increase among more actors.

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