

## RESEARCH

# Services, Systems and Policies Shaping the Built Environment for People with Mobility Impairments

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**Background:** For people with mobility impairments, access to the built environment is essential to their community mobility. Services, systems and policies shape accessibility and affect the opportunities people have to participate in society.

**Aim:** To gain an understanding of the accessibility policy of the built environment in Iceland through an exploration of policy documents.

**Method:** Public policy documents regarding accessibility from official websites of local and national authorities in Iceland were collected and reviewed.

**Findings:** This review summarizes policies and identifies critical concerns that need to be addressed to improve access to the built environment in Iceland: (1) inconclusive or incomplete information, (2) limited clarity in legislation and guidelines, (3) limited users' involvement in policymaking, (4) insufficient monitoring of services and (5) limited fit with usability values. All those aspects are critical to ensure and protect disabled people's rights to move around and participate in society.

**Keywords:** Accessibility; Universal Design; Policies; Mobility Impairments; Built Environment

The United Nations (UN) highlights the importance of accessibility for disabled people to support their fundamental rights and freedom. This focus is apparent in the UN Convention on the rights of persons with disabilities (CRPD), which emphasizes the significance of people having equal access to different aspects of lives, including services, physical environment, transportation and information (United Nations 2006). Nevertheless, disabled people experience multiple hindrances to accessing the built environment worldwide (WHO 2011). For people with mobility impairments, access to the built environment is essential to support community mobility (Author 2018; Lid & Solvang 2016; Torkia et al. 2015), or the act of moving around in the community, as people choose to or are required to do, which is crucial for their wellbeing, independence and possibilities for participation in society (Di Stefano, Stuckey & Lovell 2012). This impact of the built environment on people's wellbeing was the inspiration for studying how services, systems and policies shape community mobility for people with mobility impairments in northern Iceland.

Accessibility, in this work, is thought of as the characteristic 'of being able to be reached or entered' (English Oxford dictionary n.d., def. 1), and it shapes opportunities 'to make use of goods and benefits and to participate in ordinary, common life according to one's preferences' (Lid & Solvang 2016: 183). Based on the above information, a space is considered accessible if it is without disabling hindrances that prevent people from equally reaching, entering and moving around the space in their preferred manner. Even though various hindrances may be caused by individual and societal attitudes (WHO 2001), this article focuses on the built environment's physical aspect, primarily as shaped by services, systems and policies.

The concepts of accessibility and community mobility are firmly connected, as both reflect the importance of people's ability to participate in society as they choose to do. Another concept that is relevant to accessibility and opportunities to move around is universal design, or the 'design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design' (United Nations 2006: 4). The universal design term is often used as a synonym for accessibility or meeting the minimum standards so people can access buildings (Ostroff 2010). However, the term, accurately understood, means the process of creating usable products. It is a strategy to both improve accessibility and usability (United Nations 2006); it is a series of actions, as opposed to an end product. As a political strategy, universal design relates to human rights and includes accessibility as well as the individual's experience of using a space (Lid 2013, 2014).

All three concepts (accessibility, community mobility and universal design) relate to human rights issues that must be addressed by policy (United Nations 2006) as ‘policies govern and regulate the systems that organize, control and monitor services...in various sectors of society’ (WHO 2001: 192). Human rights are the fundamental rights all people have and are entitled to without discrimination (United Nations n.d.). Consequently, policies must ensure the rights people are entitled to and the obligations authorities have to meet those rights. For disabled people, this is highly important because they often need extra support to participate in society on an equal basis with others (WHO 2011). The CRPD is an equality and anti-discrimination treaty, a critical instrument highlighting all human rights and how those rights cannot be restricted based on impairments (Degener 2016; United Nations 2006). Services, systems and policies are highly influential as they can either hinder or facilitate people's involvement in life situations (WHO 2001). Even though it is known that various accessibility hindrances limit people's opportunities to move around in their communities, there is limited research focused on how services, systems and policies shape these opportunities for people with mobility impairments (Jónasdóttir & Polgar 2018).

This article presents a policy review, which was a part of the first author's doctoral work (Jónasdóttir 2019). In the first phase of the larger study, focus group interviews were conducted with people with mobility impairments and people providing services for disabled people in the town of Akureyri in northern Iceland. The participants highlighted aspects that need to be addressed in policymaking to support community mobility, such as (a) the importance of being able to participate in society by moving around, (b) the importance of voices of people with mobility impairments being heard and acted upon regarding services affecting them and (c) the need for more acknowledgement of the importance of accessibility in society. The participants further identified certain service areas they considered crucial to support community mobility, that is services affecting accessibility in the built environment and transportation services (Jónasdóttir, Egilson & Polgar 2018). These findings then narrowed the focus of this study to specific service and policy areas based on participants' prioritization (Jónasdóttir 2019). This article focuses on exploring the system as it affects access to the built environment through Icelandic policy documents (including legislation and regulations). The research question was how do public policy documents portray services affecting physical accessibility in the town of Akureyri in Iceland?

### The Icelandic policy context

It is essential to explain the Icelandic policy context as it relates to the subject of this study. The Ministry of Social Affairs is responsible for disabled people's affairs in Iceland, including formulating policies and monitoring their implementations. However, local authorities are in charge of the actual implementation, the provision of services for disabled people (Act no. 38/2018). Service delivery has been the task of local authorities since 2011 after it was transferred from national authorities to promote the integration of services by having all responsibility, both professional and financial, on one administrative level (Ministry of Welfare 2015). Local authorities in Akureyri have been considered exemplary for other service areas, and they state to aspire to provide integrated services where the needs of individual users are met with appropriate services, in line with standards, knowledge and needs (Eyjafjordur 2014).

Icelandic authorities ratified the CRPD in 2016 (Government offices of Iceland n.d.), indicating their intent and commitment to implement the treaty's obligations. Subsequently, regulatory amendments were made to respond to the requirements of the CRPD. In 2018, the Parliament enacted a new Act to govern services for disabled people who have long-term support needs, replacing the 1992 Act (Act no. 38/2018; Act no. 59/1992). The Parliament also amended the act governing local authorities' social service delivery (Act no. 37/2018). These changes signify a critical turning point in the policy concerning services for disabled people in Iceland, showing a much-anticipated shift towards the human rights principles of the CRPD (Act no. 38/2018; Act no. 37/2018), advancing social and human rights perspectives on disability (Degener 2016; Shakespeare 2013) and the independent living ideology (Ratzka 2007). The overall policy regarding disabled persons' affairs is closely connected to accessibility. Still, it is essential to note that an accessible environment also benefits other people, and thus services that affect accessibility are not exclusively specific services for disabled people. The Iceland Housing and Construction Authority (formerly Iceland Construction Authority [*Mannvirkjastofnun*]) is in charge of all matters regarding buildings, including accessibility (Act no. 160/2010; Act no. 137/2019). However, local authorities are often responsible for the implementation of that act.

### Methods

Public documents from official national and local websites were collected and reviewed from October 2017 to June 2018. The following websites were searched for documents: (1) The Parliament of Iceland ([althingi.is](http://althingi.is)); (2) The Althing ombudsman ([umbodsmadur.is](http://umbodsmadur.is)); (3) The Icelandic government offices ([stjornarrad.is](http://stjornarrad.is)); (4) The Icelandic Construction Authority ([mannvirkjastofnun.is](http://mannvirkjastofnun.is)); (5) The Association of local authorities ([samband.is](http://samband.is)) and (6) The local authorities in Akureyri ([akureyri.is](http://akureyri.is) and [visitakureyri.is](http://visitakureyri.is)). The search included websites of both levels of government, as the national authorities are responsible for policymaking and development but local authorities implement and execute those policies. The websites were manually searched for documents that offered any information about services, systems or policies shaping physical accessibility.

The documents that were found relevant, and therefore included, were acts, regulations, resolutions, plans of actions, guidelines, research reports, meeting notes, checklists and general information available on the websites about different services. Numerous documents that touched on relevant information were excluded from the final review, as

they did not add new information but simply referred to primary sources already included in the review, such as acts and regulations. In some instances, information was found that indicated supplementary documents of value for this study. However, out of the three documents requested from local authorities, only one report was available to include in the review. Details about the data sources (a total of 15) are presented in **Table 1**.

The data extraction and analysis were divided into three steps. First, data were extracted and organized based on a thorough reading of the included documents, utilizing the software Atlas.ti (version 1.0.30). A deductive content analysis was used during this process (Elo & Kyngäs 2008) to identify how the documents presented the service area, its organization and its implementation. The questions in **Table 2** guided data extraction and the initial coding categories. The questions were based on findings from focus group discussions with service users and providers (Jónasdóttir, Egilson & Polgar 2018). Second, the data were organized and summarized into content-related categories describing the

**Table 1:** Included documents.

Resolution no. 16/146, 2017	Þingsályktun um stefnu og framkvæmdaáætlun í málefnum fatlaðs fólks fyrir árin 2017–2021 [Resolution on a policy and plan of action on disabled people's affairs for the years 2017–2021]
Resolution no. 43/140, 2012	Þingsályktun um framkvæmdaáætlun í málefnum fatlaðs fólks til ársins 2014 [Resolution on a plan of action on disabled people's affairs to the year 2014] – Note, this plan was valid until 2016
Act no. 160/2010	Lög um Mannvirki [Building code act]
Regulation no. 112/2012	Byggingarreglugerð [Building code regulation]
Iceland construction authority, n.d.	Leiðbeiningar við byggingarreglugerð [Guidelines for the building code regulation]
Iceland construction authority, 2014	Verklagsregla [Procedure policy]
Iceland construction authority, 2018a	Skoðunarlisti öryggisúttektar [Inspection list for safety inspection]
Iceland construction authority, 2018b	Skoðunarlisti lokaúttektar [Inspection list for final inspection]
Iceland construction authority, 2018c	Skoðunarlisti – hönnunar [Inspection list for design inspection]
Town of Akureyri, 2018a	Aðalskipulag Akureyrar 2018–2030 [Main land use plan for Akureyri 2018–2030]
Town of Akureyri, 2018b	Snjómokstur og hálkuvarnir [Snow clearing and prevention of icy road conditions]
Town of Akureyri, 2012b	Samþykkt fyrir samstarfsnefnd um ferlimál fatlaðra [Agreement regarding joint committee on mobility issues for disabled people]
Town of Akureyri, n.d.a	Ferlinefndar fundargerðir [Accessibility committee – Minutes from meetings]
Town of Akureyri, n.d.b	Velferðarstefna Akureyrar 2017–2021 Drög til kynningar [Welfare policy for Akureyri 2017–2021, draft]
University of Akureyri research centre, 2017	Viðhorf Akureyringa til þjónustu Strætisvagna Akureyrar, snjómoksturs, hálkuvarna, svifryks og hreinsunar gatna á Akureyri [Perspective of residents in Akureyri regarding services of public buses, snow clearing, ice prevention, airborne particles and cleaning of streets in Akureyri]

**Table 2:** Extracted information.

Bibliographical data	Title Date of publication Author/institution How can the publication be accessed? Type of material
Content analysis – based on results from focus group interviews (Jónasdóttir, Egilson & Polgar 2018)	How is the legislation around accessibility? What do these documents say about universal design/inclusive design/accessibility for all? What services affect physical accessibility in Akureyri? • How are they organized? How do these documents address awareness or awareness-raising in terms of accessibility? • What measures are being taken to raise awareness? Who is represented in prevailing policy and service development and implementation? • Who is not represented? How does the document talk about user's involvement? How do these documents address issues of the accessibility monitoring system (and who does the audits)?

overall policies regarding the buildings and outdoor environment, loopholes in those policies and specific accessibility initiatives in Akureyri. Lastly, the documents and content-related categories were compared to the CRPD to check for compatibility. The first and third authors met regularly throughout the process to discuss and reflect on the analysis.

The details about the policies and citations to the policy documents are provided in this paper's findings section to add to its credibility. Additionally, the second author and a person external to the research team, both knowledgeable about the system and Icelandic services for disabled people, reviewed the findings and gave feedback for the purpose of trustworthiness.

## Findings

The findings are organized into five subchapters. The first four summarize the overall policies with a focus on (1) accessibility of the built environment, (2) loopholes in the system, (3) outdoor accessibility and (4) local accessibility initiatives. The last subchapter (5) highlights the compatibility with the CRPD.

### *Accessibility of the built environment*

Icelandic policy documents highlight universal design and accessibility for all. The building code act aims to ensure access to buildings and their premises, meaning that everyone should have access, be able to enter and safely exit buildings, and use buildings, based on equality and without discrimination (Act no. 160/2010). This act, as well as the most recent plan of action concerning disabled people's affairs in Iceland (valid from 2017–2021), underline the requirement that universal design values guide the design and organization of the man-made environment, such as buildings (Act no. 160/2010; Resolution no. 16/146 2017). To accomplish this goal, national authorities in Iceland aim to raise awareness of universal design values and implement universal design when buildings are modified or built. Furthermore, authorities aspire to ensure that accessibility hindrances do not prevent individuals from participating in society and intend to promote official oversight to ensure accessibility and propose ideas for improvements where necessary (Resolution no. 16/146 2017).

According to the website of the Icelandic (Housing and) Construction Authority, its main emphasis appears to be on safety concerns, such as structural, fire or electrical safety. However, monitoring the accessibility of buildings is also its duty (Act no. 160/2010). Thus, building inspectors are employed by local authorities to monitor the design and construction of buildings based on guidelines, procedural policies and checklists prepared by the Iceland Construction Authority. This monitoring is for construction processes of new buildings and alterations of older ones (Act no. 160/2010). More details about implementation are available in a building code regulation (Regulation no. 112/2012) and official guidelines regarding standards for certain accessibility aspects, such as widths of doors (Iceland construction authority n.d.). However, apart from these measurable requirements, no information was found on how buildings should be constructed, that is the process of universal design and how to implement the values of universal design.

### *Loopholes in the system*

Despite the focus on universal design and accessibility for all values in the Icelandic building code (Act no. 160/2010; Regulation no. 112/2012), loopholes exist that enable people to delay or avoid compliance with those values. The first loophole can be seen in the building code regulation, which has a statement about conditions where it is possible to get an exemption from the universal design requirements where it is hard to comply with those values (Regulation no. 112/2012.9). However, limited information is available about what kind of circumstances would allow for such exemption. According to the newest plan of action on disabled people's affairs, the Iceland Construction Authority must prepare guidelines regarding such exemptions (Resolution no. 16/146 2017). The Iceland Housing and Construction Authority has recently presented guidelines on the matter (November 2020) that state that designers will have to thoroughly detail the rationale behind deviation from universal design values. Still, it is unclear when the universal design requirements are waived and how requests for exemptions are processed.

Another loophole exists within the process of inspection when buildings are constructed or altered. Three inspections happen at specific points in the process: (1) design inspection—when the blueprints have to be approved, prior to the construction; (2) safety inspections—before the use of the building and after it has been constructed; (3) final inspection—within three years after the safety inspection (Regulation no. 112/2012; Iceland Construction Authority 2018a; 2018b; 2018c). Separate inspections lists are used for each of those inspections, and areas for improvements are identified and assigned priority by numbers indicating when those aspects should be fixed (#1= no deadline, #2 = one year and #3 = one month) (Iceland construction authority 2014). In the safety inspection list, every accessibility aspect is assigned priority #1 or #2 but never #3 (Iceland Construction Authority 2018a), which means that accessibility has low priority prior to usage of the building. However, the final inspection assigns some accessibility issues #3, such as entrances of buildings, doorways, hallways, accessible washrooms, accessible hotel rooms, number of elevators, emergency exits and accessible parking spots (Iceland Construction Authority 2018b), indicating that these accessibility aspects must be in a good state within a month from this inspection. Nevertheless, certain aspects are excluded in the final inspection. For example, the count of accessible washrooms gets high priority (#3), but the same restrooms' equipment and interior are only assigned #2 (Iceland Construction Authority 2018b). Interestingly, there is limited

conformity in assigning priority levels between the inspection lists. Some aspects have priority #3 in the design process but #2 in the final inspection, such as the number of accessible seats in theatres (Iceland Construction Authority 2018b; Iceland Construction Authority 2018c). Still, according to the building code regulation, all accessibility aspects should be completed before the final inspection (Regulation no. 112/2012).

### ***Outdoor accessibility***

No information was discovered regarding accessibility requirements on streets, sidewalks or trails. The only information regarding outdoor accessibility is found within the building code, which covers buildings and their premises, including public and commercial buildings; sport facilities; playgrounds and residences for students, disabled and elderly people (Regulation no. 112/2012). Even though this code covers substantial areas, some are left out. Furthermore, most often, there are no requirements to address accessibility issues in older buildings unless significant alterations to that building are intended. Thus, in older buildings, it is frequently up to the building owners' discretion to decide if they should improve accessibility in their outdoor areas. Furthermore, it seems to be up to local authorities to determine if and when access to sidewalks, streets and parking spots needs improvements. Even though the building code requires accessible premises in neighbourhoods constructed after January 2011 (Act no. 160/2010), keeping sidewalks accessible is not a requirement. However, Akureyri's local authorities highlight their will to enhance outdoor accessibility in the land-use plan for the area, including recreational areas, sidewalks, trails and public transportation (Town of Akureyri 2018a).

Participants in phase one of the larger study communicated how snow and ice removal is a significant factor in shaping opportunities for people with mobility impairments to move around in the community (Jónasdóttir, Egilson & Polgar 2018). Snow and ice removal of sidewalks and streets is the responsibility of local authorities (Town of Akureyri 2018b), and residents of the town have reported a need for improvement in that area (University of Akureyri Research Centre 2017). However, scarcity of information about snow removal on local authorities' websites did not allow for further exploration of this subject.

### ***Local accessibility initiatives***

Local authorities and an organization of disabled people structured a joint committee, which had the primary role of addressing physical accessibility. This committee will henceforth be called the accessibility committee. The committee's core functions were to assess accessibility in the municipality, make suggestions for improvements and monitor that accessibility is up to code (Town of Akureyri 2012b). Local authorities shall seek consultation from this committee regarding the design of new buildings owned by the municipality before final decisions are made (Town of Akureyri n.d.a.).

Minutes of this committee's meetings are available on the municipal website and provide information about topics addressed. Available records show that the committee convened 63 times from 2000 to 2018, with more frequent meetings at the outset and an average of 3.5 sessions each year. Only one meeting was recorded in 2018, and there were no meetings after that (Town of Akureyri n.d.a.). The reason for this change is undetermined.

Reportedly, the committee has contributed to better accessibility in outdoor spaces and buildings by, for example, tending to the location of traffic signs and benches as well as adding ramps where needed. It has also contributed to an increased number of traffic lights with sound and improved accessible parking spots. The committee has consulted on the design of publicly and privately owned properties across town, such as a hotel, a gas station, and a museum. The committee has also raised awareness of accessibility and how it affects people's daily lives (Town of Akureyri n.d.a.). The committee's official award to companies or buildings for being accessible has proven to be a valuable awareness initiative. Some of the venues that have received such an award are the local airport, the House of Culture, restaurants, stores, banks, a hotel, a bakery, a car dealership and a daycare facility. Additionally, the committee contacted various institutions or organizations to increase their awareness of how they might improve accessibility in some areas (Town of Akureyri n.d.a.).

Local authorities in Akureyri have not officially reported an assessment on accessibility in town, even though every municipality was expected to publish such an evaluation according to an older action plan for disabled people's affairs in Iceland (valid from 2012–2016) (Resolution no. 43/140 2012). The only formal accessibility assessment report is about access to the public bus system, not the built environment. Information regarding wheelchair users conducting an assessment of public buildings in Akureyri was found but no signs of an actual report. According to a response to a request for access to the report, the assessment was never completed, and therefore, no report exists (Einarsdóttir, personal communication, March 12th, 2018). No such assessment is required in the newest plan of action; instead, the national government encourages the public sector to appoint officers to monitor and make suggestions on accessibility improvements in their workplaces (Resolution no. 16/146 2017).

As Akureyri has been somewhat proactive with monitoring by establishing the accessibility committee, this lack of formal assessment is surprising. In their policy draft, local authorities state their intention to be exemplary regarding accessibility, including accessibility assessments of buildings and the downtown area, drawing on users' involvement (Town of Akureyri n.d.a.). Still, no information was found that confirms if the administration had approved this policy draft.

### ***Compatibility with the CRPD***

In line with the CRPD, the focus in Icelandic policies seems to be moving towards universal design's political agenda. However, this policy review indicates that the primary emphasis in Icelandic policies has been on minimum standards for accessibility, which specifies the width of doors, the gradient of ramps and other crucial aspects for wheelchair users to access a building. Limited attention has been paid to usability (e.g., by emphasizing building washrooms that meet standards, rather than restrooms that people can use) even though that is a significant aspect of universal design.

The current policies and practices for the accessibility of the built environment in Iceland are not congruent with the CRPD. They allow for various interpretations, which gives the society alternatives to offer services not in line with the convention. A characteristic of the data search and analysis in this review was limited information and a disconnect between sources, making it hard to know if the information found was accurate. Basic information about policies was not readily accessible or even available. For example, even though the policies define the term universal design, no information was found on how such design can be advanced, suggesting a lack of understanding of what universal design entails.

Because of contradicting information between different documents, it is difficult to grasp the overall policy, which creates confusion regarding legitimacy of information. Additionally, a lack of coherence between inspection lists makes it hard to understand why some design aspects are necessary at one stage and not at another stage. This incoherency must create confusion for those who work on a building project and ultimately undermine the importance of those aspects. Furthermore, such a contradiction makes it unclear what the requirements are under the law, such as who is responsible for creating better access in society.

According to the CRPD,

States Parties shall, in accordance with their legal and administrative systems, maintain, strengthen, designate or establish within the State Party, a framework, including one or more independent mechanisms, as appropriate, to promote, protect and monitor implementation of the present Convention (United Nations 2006: 25).

Limited information was found on whether such a framework will be established in Iceland. However, there is evidence of efforts to monitor compliance with disabled peoples' rights, mainly as it relates to physical accessibility. Some of those efforts are in their infancy, such as the encouragement of authorities to appoint accessibility officers within the public sector (Resolution no. 16/146 2017). Other efforts have been in place for a while, such as the accessibility committee in Akureyri (Town of Akureyri n.d.a) and the building inspections (Regulation no. 112/2012). Nevertheless, it is unclear how efficient these efforts are when it comes to enforcing the changes needed.

The limited involvement of disabled people in developing policies governing their interests is another critical issue identified in this review of policy documents. According to the CRPD, disabled people should be actively involved in developing and making decisions about matters concerning them (United Nations 2006). However, it was hard to see if and then to what extent disabled people's voices were incorporated into the documents reviewed, and in some instances, they were clearly not involved. The new plan of action (Resolution no. 16/146 2017) is an example of this. The plan aims to improve accessibility; however, there is a limited indication that disabled people were included in the process of assessing if the objectives are met. Although a few disabled people were involved in Akureyri's accessibility committee, the documents reviewed found no stated intent to engage disabled people in other monitoring efforts.

### **Discussion**

The findings from this policy review show that, even though there is movement in the right direction, Icelandic society has accessibility issues creating disability and violating people's fundamental rights to move around their community. Considering that authorities' policies and building code emphasize universal design and accessibility for all, it seems not to be a question about if the built environment should be accessible and usable, but how to promote and manage this decision.

The findings clearly show that many issues need to be fixed to fully ensure disabled people's rights. Although legal texts declare people's rights to an accessible environment, some wordings or exemptions diminish former statements and allow for interpretation and implementation of those texts in a way that is not in line with disabled people's fundamental rights. For example, buildings should be accessible, but exemptions to requirements are granted and renovations can be postponed.

To improve the protection, promotion and fulfillment of disabled people's rights, the Icelandic government must address some critical concerns highlighted in this study. The following discussion emphasizes those concerns: (1) inconclusive information and limited clarity in policy documents, (2) limited user involvement in policymaking, (3) limited fit with usability values and (4) insufficient monitoring of services. Note that similar concerns are raised based on a review of Icelandic transportation service policies, conducted parallel to the review presented here (Jónasdóttir 2019). Those concerns are only discussed here where they directly relate to physical access to the built environment.

#### ***Inconclusive information and limited clarity in policy documents***

Limited information was found on how to implement the idea of universal design into the design process. This need for clarity seems to exist elsewhere as similar issues with the uptake of universal design were identified in Australia, where

an unclear definition of universal design, and the implementation of formal accessibility standards, were barriers to any progress towards more inclusive design (Larkin et al. 2015).

The newest plan of action (Resolution no. 16/146 2017) is to support disabled people's rights. However, its emphasis on exceptions to the universal design requirements challenges the integrity of universal design values in Icelandic policy by allowing ways to avoid fulfilling these very same rights. If exemptions are to be available, they must be based on clear and strict guidelines. Based on article nine of the CRPD, state parties shall 'develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public' (United Nations 2006: 9). Thus, we strongly suggest that Icelandic authorities synthesize all legal requirements governing the built environment's universal design, including regulations and guidelines affecting it. An example of a feasible approach may be found in Canadian legislation, the Accessibility for Ontarians with Disabilities Act (2005), which provides guidelines for the development and enforcement of accessibility standards. Such non-discriminatory universal design guidelines would manifest that the government genuinely respects people's diversity and varying values. An enactment could steer construction processes and raise awareness amongst service providers and the general public. Additionally, such an enactment could take a holistic approach by truly addressing the usability in buildings and their premises, and on trails and sidewalks. Furthermore, such legislation should raise awareness of other aspects that affect accessibility, such as snow clearing, obstacles on pavements and the way people park their cars, as has been identified by disabled people as influencing their accessibility (Jónasdóttir, Egilson & Polgar 2018; Malhotra & Rowe 2014; Ripat, Brown & Ethans 2015).

The need for a clear and comprehensive policy is apparent from the contradicting information and lack of clearly assigned responsibilities. For example, most emphasis is on accessibility when buildings are designed by review of blueprints, but not necessarily in the later construction stages when facilities should be ready for use. This study suggests the need for increased emphasis on accessibility at later stages in the construction process—during the safety and final inspections—to ensure sufficient attention to accessibility. Higher priority in those stages would mean that issues should be fixed right away. Authorities need to do such critical changes to their policies and practices in order to be consistent with the universal design emphasis in their own building code (Act no. 160/2010; Regulation no. 112/2012).

#### ***Limited user involvement in policymaking***

The limited involvement of disabled people and their voices in the policies reviewed is concerning. This finding is in line with that of Löve, Traustadóttir and Rice (2018), who found that disabled people are not sufficiently involved in Iceland's policymaking processes, contrary to the requirements of the CRPD. Often, they are brought too late into the process, when decisions have already been made, or their suggestions are ignored, which limits their effect on the policy outcome. In line with the CRPD, users must be involved in policy development at the national and local levels, as emphasized by the newest amendment to the legislation that implements the treaty into domestic law (Act no. 38/2018; United Nations 2006). Hopefully, these changes give more weight to disabled people's voices in the development of policies affecting them.

It is essential to involve users in the universal design process as 'a rich understanding of human diversity...must guide interpretation and implementation of universal design' (Lid 2014: 2). Genuine involvement of users in the architecture and design procedures has been suggested as crucial for universal design (Jones 2014). In order to be considered universal, the design process has to involve the users of buildings, including people with mobility impairments, as they are the experts in their own situation. Lid and Solvang (2016: 183) argue that 'universal design... needs to be grounded in embodied experiences of people with impairments and their knowledge of disability, disabling processes and accessibility'. Unfortunately, such user involvement has not always been successful because of the power differences between users and others in the design process, as the users generally do not have decision making powers (Lid 2016). Therefore, Icelandic authorities will need to uncover a way to genuinely involve the users of the buildings (including disabled people) in the design processes.

#### ***Limited fit with usability values***

The findings show that the main emphasis has been on accessibility standards but not on the built environment's usability, even though the latter is essential for universal design. Usability is about the interaction between a user and the product (in this case, the built environment). It is 'the extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use' (International Organization for Standardization, 2018, article 3.1.1). The importance of looking further than the measurable characteristics of the built environment, and considering what people can, want to and need to do in those places, has been emphasized as crucial in the process of universal design by several scholars (Iwarsson & Ståhl 2003; Larking et al. 2015; Lid 2014; Persson et al. 2015). As Watchorn and colleagues (2019: 11) underline, 'the discourse around universal design must be more inclusive of the occupations people participate in to live, work, and recreate in their daily lives'.

Findings from a previous phase of the larger study highlight this link between accessibility and people's doing. They showed that people with mobility impairments not only need access to places but also need to be able to partake in activities that occur there, as other people do (Jónasdóttir, Egilson & Polgar 2018). Even though there is a need

for standards that specify the minimum requirements for all people to access buildings, there needs to be a way to determine how to construct buildings and spaces so everyone can use them as intended. The goal should be to eliminate discrimination, and thus the built environment should not be designed so some people will have to be separated from other people or use the spaces differently than others.

As outlined in human rights treaties, all people have equal rights to do things that are important to them, such as work, study, engage in leisure activities, and participate in cultural life (United Nations 1948, 2006). Wilcock and Hocking (2015) identified sixteen articles within the Universal Declaration of Human Rights that focus on things people do. This fact stresses the importance of not only considering if people can access a building, but also if they can use it as well. The users are needed to identify what they need and want to do in the buildings and how they can be designed to allow for such use.

### ***Insufficient monitoring of services***

The findings demonstrate a lack of a comprehensive monitoring system as required by the CRPD (United Nations 2006). Although minimal monitoring efforts were found in the documents reviewed, such as building inspections and Akureyri's accessibility committee, no intent was found in documents reviewed to involve disabled people in other monitoring efforts. Although the building inspectors know the requirements to meet minimum accessibility criteria, such as the number of elevators, door width and inclination of ramps, in most instances, they do not have the personal experience of relying on proper accessibility to move around and use a space. Thus, they may not recognize issues that an experienced wheelchair user might identify.

Because it is essential to involve users in the design process to achieve universal design (Jones 2014; Lid 2014, 2016), it is argued that monitoring should be on that process, not only the end outcome of the design as is the current situation. Recently the Iceland Construction Authority added information about universal design and accessibility to their guidelines. However, to date, their inspection lists only cover the measurable minimum standards feature, with no requirements for the usability aspect of universal design. Thus, authorities' oversight and direction do not reflect the increased emphasis on universal design in current policies and action plans (Act no. 160/2010; Iceland Construction Authority 2018b).

### ***Strengths and limitations***

The policy documents reviewed are geographically relevant to the Icelandic context and some specifically to Akureyri, a municipality that has been considered exemplary when it comes to services for disabled people in Iceland, as aforementioned. Issues identified within this local authority are likely to exist in other areas of Iceland. Additionally, the findings identify issues that may be relevant in other countries that have ratified the CRPD and highlight the importance of considering policies from a human rights perspective to support disabled people's participation in society.

The policy review only covered an exploration of written documents and thus did not study local authorities' actual implementation and whether those implementations are in accordance with the written policies. Additionally, it would be beneficial to understand possible tensions between local and national levels when it comes to practical and fiscal aspects of such implementations from the perspectives of policymakers at the national level and service providers at the local level. A participatory approach where service users, policymakers, service providers and researchers work together to improve this policy area might be beneficial.

### **Conclusion**

The objective of this review was to gain an understanding of the accessibility policy in Iceland through an exploration of policy documents. The findings emphasize how authorities need to clarify their policy text and improve oversight to ensure compliance with existing standards and compatibility with the rights of disabled people (United Nations 2006). Currently, measurable standards to allow access to buildings are primarily provided, while the usability aspect and the involvement of users in the design and assessment process are almost absent. Even though recent legislative efforts promote accessibility and equal access, implementation of the policies on practical and service levels remains unknown and needs further exploration, especially as it comes to universal design. Authorities must consider in their policy development and implementation not only how the above-mentioned issues affect people with mobility impairments and their opportunities to move around their communities, but also how to ensure all people's rights regarding equitable access to the built environment and inclusiveness.

### **Competing Interests**

The authors have no competing interests to declare.

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