Who Are We Building for? Tracing Universal Design in Urban Development

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Abstract. Despite laws, policies, and political visions to create cities and societies for all, barriers still exclude people from using buildings and public places. The commitments made in global agreements such as the Convention on Rights for Persons with Disabilities (CRPD) and the 2030 Agenda for Sustainable Development require significant changes in urban planning to meet the variety of needs and conditions in the population. Implementing Universal Design (UD) in urban planning processes is one important step towards a society for all.
Three recent studies in Sweden focused on UD in the urban development - how, where and what factors that supported or impeded UD along the planning and construction processes. The whole process, from signs in visionary programmes and development plans to process-related factors and visible results in the completed buildings and places, were analyzed from a UD perspective. The findings highlight three critical areas to pay particular attention to, when implementing UD in the built environment: Competing and contradictory interests, Critical choices and aspects and Images of the user. These challenges need to be addressed by all actors involved, together in a in a goal-oriented work, to reach common understanding on how an inclusive built environment can be designed and realized.

Keywords. Universal Design, Urban Development, Accessibility, Disability, Sustainability

1. Introduction

Three recent studies, by the author and colleagues, shed light on UD in urban development, on patterns of its presence and the underlying drivers for this in the urban development processes. In designing a built environment that will be usable by all people to the greatest extent, the principles, and goals of UD [1, 2] is particularly relevant. It responds to several contemporary overarching urgent matters as democracy, social justice, health, sustainability etc, and can help us to move away from design for an average person towards a wide range of users [3-5].

Building a society for all is a clear public interest and a basic condition for creating a sustainable society [6]. The definition and content of public interest is although since long a subject for discussion. With the shifts in dominating planning theories, a change has also occurred in who defines a public interest. In the rational planning theory, it was the planner as an expert who could define the public interest; in the neoliberal planning theory, it is the market. In postmodern planning, it is questioned whether public interests can exist at all [7]. The public interest can be seen as a decisively important argument for the public's involvement in planning in general. The states' intervention in land and property development after the second world war was considered "necessary to protect

public interest against private and sectional interests", to define what is 'good', a normative standard [8]

The design processes in urban development involve a long range of actors, from the public and the private sectors. In contemporary planning, the role of the planner has changed: from a previous rational practice where the planner was an objective expert who should meet the goals set up by politicians; to a network-oriented practice with strong influence from the market, where the planner is just one actor among many others [7][9].

The Swedish Planning and Building Act [10] states that all planning shall support built environments that are accessible and usable by all citizens, and this is specifically expressed as a public interest. By signing the Convention on Rights for Persons with Disabilities (CRPD), the signing States have committed themselves to ensuring and promoting the full realization of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind based on disability [1].

In contemporary planning, certain ideals challenge the idea and vision of a society for all. Some of these contemporary urban trends also have a clear connection to the sustainability discourse. Such concepts are for example *densification* and *mixed areas* as *shared space,* where the mix of motor vehicles, bicycles and pedestrians in the same space is meant to calm traffic by mutual understanding and respect [11][18].

In the urban planning discourse, urban densification is since long time considered an important measure for reaching a sustainable society and has also been associated with economic growth [12]. However, recent studies show how the understanding of densification as a measure to reach a sustainable society, does not correspond with the results shown by research. According to this research, positive effects exist for public infrastructure, transport, and economics, while there are considerable negative environmental, social and health impacts. Related to health issues, particularly negative effects on mental health are associated with densification, where the compactness of the built fabric and the lack of open space plays an important role when explaining perceived urban stress [13]. Furthermore, sustainability within planning and building is still strongly associated with the green dimension, further reinforced by concerns about climate change, while social aspects are less discussed. There are different descriptions of what social sustainability is, and whether the sustainability dimensions have the same weight or are placed in a hierarchy. Nevertheless, creating places and buildings that support the full range of human needs belongs to the core principles of sustainable urban design [14].

Analyses from the studies show that UD needs to be involved in all phases of urban development and that critical factors can be found in different fields such as norms and values, actors' way of cooperating and urban planning trends. The aim of this paper is to highlight and discuss some of the critical areas and aspects that might support or hinder the implementation of UD and a built environment for all. The research questions that form the basis of the studies can be found in the articles [15-17].

2. Traces of UD in the urban development

In the first study [15], an analysis was made of policy documents, programmes and development plans, to get a picture of what kind of users that were expressed in early stages. The second study [16] was a multi-case study of new constructions and remodelling, with the aim to catch signs and patterns of UD in completed buildings and

environments, both in new constructions and remodelling. In the third study [17], the findings from the second study were used as a base for discussion among actors involved in the process. In workshops and interviews participants from the city (planners, strategists, administrators of building permits, building inspectors and other professional roles from different departments involved in urban development) and private actors (developers, builders, property owners and architects) participated.

Some critical areas, to pay particular attention to in the urban development processes that emerged in these studies were *Competing and contradictory interests*, *Critical choices and aspects* and *skewed images of the user*. These challenging areas are presented below with examples of particularly critical factors to consider for all actors involved, in supporting the implementation of UD.

2.1. Competing and Contradictory interests

One recurring theme in the studies was '*competing and contradictory interests between actors in the process*'. Among these, were collisions between public and commercial interest, lack of consensus between city departments, and contradicting needs in different target groups leading to priorities for whom the design solutions were intended.

One example discussed in the workshops was a newly built housing area in a very hilly terrain. To cross the yards, reach the outdoor gym or use the common greenhouse, all tenants were assumed to be able to use stairs (figure 1). The outdoor gym was placed at the end of the slope, behind the last building, and the greenhouse was located around stairs.

Figure 1. A newly built housing block, where tenants need to be able to walk in stairs to use the outdoor environment and reach common areas.

In the workshop discussion around this example, critical questions were raised, like *"does everything really have to be accessible for everyone?"* and "*should we not use this space at all* (where an outdoor gym was placed, reachable only by stairs) *just because there are persons who cannot use the stairs?".* In the deepened discussion some raised the question if *we should accept that the cost of using all available space in an efficient way might lead to the exclusion of users?*

The participants agreed that this example is a clear example of collisions between public and commercial interests. The number of apartments that could be built on this piece of land was prioritised over the quality of the design of the outdoor areas. The location of the outdoor gym was a decision where the maximal use of land was prioritised over values such as inclusion and equity. The greenhouse was designed to attract apartment buyers, without paying attention to the exclusionary effects. According to the workshop participants, the public interest in building a society for all was not understood to be at the forefront of the project.

In another example, the lack of consensus between city departments, and the prioritization between target groups were discussed. The newly built hub for public transport has a large open public space in front. The location of a bicycle express lane in front of the building is invisible to the viewer, e.g., a pedestrian. No signs or contrasting ground material give warnings to pedestrians (figure 2).

Figure 2: A newly built hub for public transport, where a bicycle express lane is crossing the walkway towards the entrance.

When locating the bicycle express lane, the departments had two alternatives. The one that was opted out would have been placed on a parallel street. Two different approaches were discussed: maintaining a high level of traffic safety by separating different types of traffic and vehicles or creating a shared space to calm the traffic and create conditions for a changed perception of risks and safety. In this case, the two city departments involved in this project stood for opposite positions. This collision of policies, within the city organisation, came into force both in workshops and interviews. One interviewee expressed: *"We are thinking safety, while they are thinking security. We do what we can to get around their policies here"* [17]. In the workshop, participants agreed that an overall, holistic perspective is needed. When discussing possible alternative solutions, separations of bicyclists and pedestrians, contrasting ground materials and rules for cycling on the terms of pedestrians were suggested [17].

The results clarified conflicts of interest and different policies, not only between public and private actors but also between different administrations within the city.

2.2 Critical choices and factors

Critical resources, factors and choices along the planning and construction process, supporting or impeding UD, were highlighted in the discussions. Drivers supporting and impeding a UD approach in the urban development process emerged.

Among the important drivers for UD, a strong vision to build for all users from the start of the process was an important starting point. Allocation of resources (time, money, knowledge) and clear requirements in public procurement and contracts with developers were successful factors in implementing the UD approach in the project. Other important factors were to involve users and experts at an early stage and carry out pre-studies and consequence analyses based on human diversity aspects all along the process.

Aspects impeding UD were multifaceted. Urban trends like densification and mixed areas, the involvement of many actors with competing interests, a lack of assessment focused on human diversity, and what consequences that different choices and decisions had for different users were some of the strong factors counteracting a UD approach. Sustainability policies without a social dimension tended to put high demands on users' abilities, and accessibility dealt with late in the processes risked ending in special solutions for some users [16].

The results in this area can be important guidance in the various choices and priorities made during the process.

2.3 A skewed image of the user

Already at an early stage, in public visions, policies and guidelines, there are clear expressions of the imagined user. The perception of the users' abilities also showed to be drivers for choices and priorities in the planning and designing of buildings and places.

In the study of policy documents, programs and development plans in a medium-sized Swedish municipality, the results showed that categorisations of bodies and roles appeared widely in the documents and that patterns of differences and inequalities were found throughout the material. Prominent characteristics of expected users were youth, education, health, and success. Particularly notable was how older people and people with disabilities were absent from the materials. The analysis of policy documents also made a gap visible between laws and vision on one side and practice on the other hand, already at this early stage, in illustrations and text that did not conform to actual regulations. Both in planning documents and the environments analysed in the case study showed how high demands were placed on the users' functional abilities, not least in connection with descriptions of environmental sustainability. Citizens were expected to be able to walk and bike, use stairs, have quick reaction skills to handle mixed areas such as shared spaces and cope with quite far distances between modes of transport (public transportation or car park) and entrances to services and activities. [15].

A more inclusive and equal society requires that planning based on human diversity is embedded in the entire process.

3. Concluding discussion

The support of UD in the urban development process depends on the public sector's commitments and demands. In a public-private planning process, the definition of and solutions for, public interests should be solved in a cohesive process [7][8][9].

The number of actors with competing interests is a huge challenge when planning and constructing a society for all [7]. The need for a coherent overall view in all phases of the planning and construction process is clear, although a complex issue as the planning and construction projects are usually very extended in time. Conflicting policies and the contradictions between commercial and public interests are underlying conflicts that must be discussed among public and private partners. Finding innovative solutions that can appeal to all actors involved is a huge challenge.

Certain design trends in urban development are of particular interest to pay attention to, both from UD and sustainability perspectives, and need to be discussed and questioned. Visions of a city for all are at risk of failing when densification and mixed areas are shaped without considering human diversity and UD values and goals. Inequalities can increase, instead of being reduced, in the built environment. More research and more discussions are needed, for instance about the social and health consequences of densification [11][12][13]. This is also urgent when discussing mixed areas which could raise noise, air pollution and lived safety. Design solutions like the example of shared space discussed in the workshops should have been evaluated from a human diversity perspective at an early planning stage, together with users with different abilities and experiences.

Sustainability rests on three equally important pillars. The high ambitions and successful initiatives in the building industry to support the development towards a sustainable society from an ecological standpoint must not be blind to social and economic perspectives. The considerable negative environmental, social and health impacts [13] need to be discussed and lead to changed practices. The sustainable urban design supports the full range of human needs [14] and is a pre-requisite for a society for all [6].

The fulfilment of obligations stated in national laws and global agreements to create a sustainable and inclusive society for all [1][2][10] must be taken seriously, and active measures need to be taken more quickly. Public actors should protect the public interest and the rights of persons at risk of being excluded from an environment, where higher demands are placed on individual abilities.

Having UD in the toolbox and using it in all phases of the project increases the probability of succeeding in creating a society for all. What norms and categorisations of the intended users that lie behind the descriptions and plans in the early phases, have an impact on the final completed building or place [15]. Instead, planning and construction based on human diversity facilitate thoughts and strategies to build for all [3][4][5][16][17].

Experiences from the workshops and interviews showed that there are clear opportunities to reach common positions when it comes to planning and building for all users, when gathering around concrete, practical examples. Networking between actors with competing interests can work when the public interest is in focus. When analyzing the examples of existing built environments and urban development trends, very few signs indicate that a more inclusive built environment will be reached without a conscious, cohesive, and goal-oriented work by all actors involved. If public actors stand strongly behind all citizens' rights and private actors contribute with their innovative

power, there are conditions to find common paths. Based on the experiences from the workshops, Universal Design appears as a useful and important asset in such a strategy. A built environment accessible and usable by all is not a modest demand – it is a minimum requirement.

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