

Accessibility of service premises for people with disabilities in the historic areas of Lublin, Poland

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Abstract: Agenda 2030 and its Sustainable Development Goals apply to all individuals, including those with disabilities. Currently, newly designed spaces and buildings in Poland meet accessibility requirements for people with disabilities. However, the situation differs in historic city centres and historic buildings. The aim of this study is to investigate the accessibility of service premises located in historic areas for people with mobility impairments. The UN Convention on the Rights of Persons with Disabilities identifies barriers as a key factor limiting the full participation of these individuals in social life, serving as the starting point for this research. The city of Lublin was selected as a case study. Methods included an analysis of the accessibility of service premises in terms of architectural barriers. Results were illustrated with photographs and expressed in percentages. The findings indicate that individuals with disabilities encounter significant difficulties in using the majority of gastronomic premises. Furthermore, the presence of numerous barriers in the historic city centres was noted, which hinders access for disabled tourists.

Keywords: accessibility, mobility impairments, service premises, historic centre

1. Introduction

The Sustainable Development Goals adopted by the United Nations under the 2030 Agenda aim to ensure that all people, regardless of age, gender, disability, or socio-economic status, have full access to safe and sustainable infrastructure, as well as full participation in social, economic, and political life [1]. By 2030, the plan includes addressing the needs of vulnerable groups, such as persons with disabilities. Additionally, these goals require the creation of accessible, safe, and inclusive public spaces and green areas that serve everyone, with particular emphasis on the needs of the elderly, women, children, and persons with disabilities [2]. One of the key aspects of sustainable development is ensuring the accessibility of public spaces and buildings, which is crucial for social integration and the full participation of persons with disabilities in social life. In Poland, particularly in newly

designed buildings, accessibility standards are increasingly being adhered to. These standards include requirements for accessible entrances, appropriately wide doors, elevators, restrooms adapted to the needs of persons with disabilities, and signage that facilitates navigation within buildings. However, the situation is significantly more complex in the case of historic city centres and buildings. The historic urban fabric, due to its specific characteristics and cultural value, often does not meet contemporary accessibility requirements. The adaptation of such structures, while respecting their historical value, presents numerous challenges for architects and urban planners. Implementing these objectives is not only an infrastructural challenge but also a social and economic one, requiring appropriate management and the implementation of innovative solutions. In the context of historic city centres, adapting existing spaces to contemporary accessibility standards constitutes an exceptionally complex challenge. In such locations, it is often necessary to reconcile historical values with the need to ensure equal access for all citizens, including those with limited mobility. The phenomenon of disability, due to its scale and complexity, represents one of the priority areas of action within social policy, and the identification of problem areas is key to any intervention [3].

The aim of this article is to examine the spaces and accessibility of external entrance areas to service establishments located in the historic centre of Lublin along the tourist route, with a focus on the needs of persons with mobility impairments. This research seeks to assess the extent to which the historic city space meets accessibility standards and to identify barriers that prevent or hinder the full participation of persons with disabilities in social life. The results of this study may contribute to a better understanding of the challenges associated with adapting historic cities to contemporary sustainable development requirements and to formulating recommendations for further actions in this area.

1.1. Literature review

The Charter of Rights of Persons with Disabilities defines persons with disabilities as 'individuals whose physical, mental, or intellectual capabilities permanently or temporarily hinder, limit, or prevent them from engaging in daily life activities, education, work, and the fulfilment of social roles in accordance with legal and customary norms' [4]. In 2020, the Lublin City Council adopted a resolution regarding the implementation of actions by the City of Lublin for its residents with disabilities from 2021 to 2025 [5].

According to data from the 2021 National Census of Population and Housing, the number of people with disabilities in Poland was 5.4 million, representing 14.3% of the country's population. The European Health Interview Survey (EHIS), conducted in 2014, revealed that 7.7 million individuals (7,689,800, to be precise) self-identified as having a biological disability, defined as a reduced capacity to perform the daily activities typically associated with the general population. It is important to acknowledge the significant discrepancy in the estimated number of individuals with disabilities in Poland. Depending on the criteria used to define biological disability and the level of functional limitations, the estimated population of individuals with disabilities in Poland ranges from 4.9 million to 7.7 million [6].

Research on the accessibility of public spaces for persons with disabilities is well-developed both nationally and internationally. The 2030 Agenda and its Sustainable Development Goals, particularly Goal 11, which focuses on cities and communities, emphasise the importance of creating inclusive and accessible spaces for all, including persons with disabilities. A key document in this regard is the United Nations Convention on the Rights of

Persons with Disabilities, which highlights the need to remove architectural barriers as a prerequisite for the full participation of persons with disabilities in social life [7].

Universal design is a philosophy of creating products and environments that are accessible and usable by the widest possible range of users without the need for adaptation. This concept, initiated by architect Ronald Mace, extends beyond architecture and finds application in areas such as industrial design and computer interfaces. While it may not be possible to meet the needs of every user, universal design represents a way of thinking aimed at expanding the group of potential users as much as possible. The principles of universal design include: equitable use, flexibility in use, simple and intuitive operation, perceptible information, tolerance for error, low physical effort, and appropriate size and space for approach and use [8,9].

In Lublin, the implementation of universal design began with the Programme of Actions for Persons with Disabilities for the years 2013–2015 and continued in the subsequent edition for the years 2016–2020, which yielded the first tangible results [5]. In 2015, the Office for Persons with Disabilities conducted a renewed analysis of the accessibility of municipal facilities, including City Hall buildings and sports, cultural, and educational institutions. The analysis revealed existing barriers that should be addressed in future renovations and investments. In many locations, the situation had improved, and new facilities were designed in compliance with accessibility requirements [5,10].

The accessibility report on public buildings in the city of Lublin reveals numerous barriers that need to be addressed during planned renovations. Although many facilities have ramps and pavements, there is a lack of parking spaces in their immediate vicinity, which hinders access for persons with disabilities. Additionally, limited access to lifts and the location of institutions on upper floors effectively prevent persons with mobility impairments from accessing these facilities. Existing adaptations, such as ramps and entrance doors, often do not meet technical standards, and the interiors of buildings require further modifications to accommodate individuals with mobility, vision, and hearing impairments [10]. Cultural tourism and access to services play a significant role in enhancing the inclusivity and attractiveness of a city for all residents and visitors. Ensuring that cultural sites and services are accessible to everyone, including persons with disabilities, not only promotes equal participation but also contributes to the overall development and appeal of the city's cultural and tourism sectors [11].

The literature also addresses the conflict between conservation requirements and the needs of persons with disabilities [12,13]. In many cases, adaptive work is limited by heritage protection regulations, which complicate the implementation of necessary modifications. Moreover, the lack of accessibility in public spaces, particularly in city centres of significant tourist importance, can lead to the social exclusion of tourists with disabilities. The utilisation of Building Information Modelling (BIM) can prove advantageous in the control and intelligent implementation of modernisation measures [14].

At the international level, similar issues have been identified in studies concerning other historic European cities. For instance, research in Venice and Barcelona demonstrates that the problem of accessibility in historic city centres is global and requires a coordinated approach that considers both the preservation of cultural heritage and the rights of persons with disabilities. Barcelona, in particular, is recognised as one of the most accessible cities in the world [15]. Barcelona offers a wide range of spaces and venues accessible to individuals with various disabilities, publishing this information on a dedicated website created for this purpose [16]. Similarly, Venice has developed maps of accessible locations that can be navigated by wheelchair, addressing the challenge posed by the city's numerous bridges. Innovative solutions, such as the installation of stair ramps, have been implemented

[13,16,17]. In Jerusalem, a UNESCO World Heritage Site, a project has been undertaken to enhance the city's accessibility for residents with disabilities, as well as for pilgrims and tourists [18]. Simple solutions have been implemented, such as the incorporation of a ramp into the existing stairs, with an aesthetic design that harmoniously integrates with the city's architectural style (Fig. 1). Another illustrative example is the city of Tallinn, where facilities for individuals with disabilities have been introduced. In the Old Town district, the local replacement of paving with concrete slabs has created a wheelchair-accessible pathway (Fig. 2).



Fig. 1. A wooden ramp added to existing stairs in Jerusalem, providing wheelchair access to the Church of the Holy Sepulchre. *Source:* [19].

Fig. 2. Change in pavement type in Tallinn. *Source:* [20]

Kraków is an example of a Polish city that was awarded the Access City Award as early as 2010. Research indicates that most tourist attractions in this city are accessible to people with disabilities, including the majority of museums. Outdoor attractions are primarily adapted for individuals with mobility impairments [11]. This year's winner is the city of Łódź. In previous years, Gdynia, Poznań, and Warsaw have received the award [21].

In Lublin, studies have been conducted to assess the accessibility of public buildings for persons with disabilities. The findings indicate that certain government offices remain inadequately adapted to meet the needs of persons with disabilities. For example, the Crown Tribunal, which houses the Civil Registry Office, has only an external ramp, limiting access to upper floors due to the absence of a lift and the presence of stairs. Similarly, the building at 8 Rynek Street, co-owned by the Municipality and housing the Mayor's Office, also fails to meet accessibility requirements, as it is not equipped with a ramp or lift, making it difficult for persons with disabilities to access its services. The building at 3 Grodzka Street, home to the Classified Information Protection Division, and the building at 2 Złota Street, which houses the Office of Legal Affairs, the Department of Culture, and the City Conservator of Monuments, also lack sufficient adaptations for accessibility. However, the House of Words – Printing Chamber is accessible to persons with disabilities, and the building at 3 Podwale Street, where some organisational units of the City Office will be relocated, is currently being adapted for accessibility. Data show that parking spaces designated for persons with disabilities are available at three locations in the Old Town area: two spaces on Kowalska Street, two on Królewska Street, and six in Castle Square [10]. Due to the location of these spaces, the route to the historic part of the city for a person in a wheelchair is considerably extended, as the latter two locations are situated at the base of the Old Town hill.

The Tourism Development Office is implementing the "Place of Inspiration" programme, aimed at strengthening Lublin's image as an attractive culinary destination in Poland. As part of this programme, the Office provides recommendations for adapting offerings to meet the needs of persons with disabilities. One of the preselection criteria for Places of Inspiration for the years 2021–2023 is the consideration of accessibility for persons with disabilities [5]. The Lublin Tourist and Cultural Information Centre, located at 6 Krakowskie Przedmieście Street, is equipped with a tactile map featuring the layout of the Old Town and basic information for visually impaired and blind individuals.

1.2. Characteristics of the study area

Lublin (Fig. 3), located in eastern Poland, is home to 334,681 residents, making it the ninth-largest city in the country by population [22]. As one of the largest urban centres in the eastern part of Poland, Lublin is experiencing dynamic urban infrastructure development.

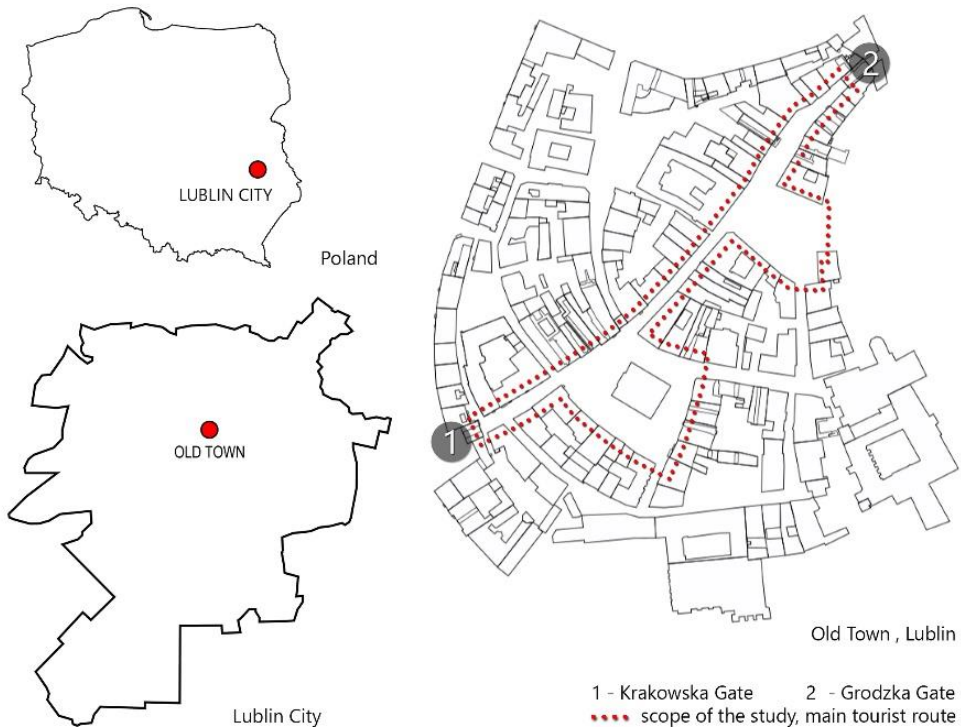


Fig. 3. Study area, Poland, Lublin; *Source:* Author

The year 2022 set a record for tourism, with the city receiving 753,000 visitors, while the Lublin Metropolitan Area attracted over 1 million tourists [23]. The most frequently visited places in Lublin include Lublin Castle, Litewski Square, Krakowskie Przedmieście, and the Old Town. All of these areas, with the exception of the Old Town, are fully accessible to persons with mobility impairments. The Old Town, due to its exceptional historical and architectural value, is an area of limited accessibility. The historic architectural and urban complex of the Old Town, one of the oldest of its kind in Poland, contains traces of settlement

dating back to the 6th century. In 2007, it was recognised as a Monument of History. It has preserved all the essential elements of its urban structure, which consists of harmoniously integrated layers resulting from natural urban evolution [24].

2. Methodology

An analysis of the accessibility of the city's historic area, with a particular focus on the Old Town district, was conducted. Due to the extensive size of this district and the fact that not all parts are critical to this study, the research area was narrowed. The selection criterion was the Old Town tourist route, which was identified as the most significant area requiring intervention. The research area was delineated to begin at the Krakowska Gate, continue along Bramowa Street, Rynek Street, and Grodzka Street, and end at the Grodzka Gate (Fig. 3).

A detailed inventory of the selected part of the Old Town was subsequently conducted, focusing on aspects such as the accessibility of entrances (including thresholds, ramps, and door widths), the presence of stairs, and other adaptations for persons with disabilities (Table 1). Standard analytical tools were employed in the study, including photographic documentation and maps. The collected data regarding the entrance areas of each establishment were catalogued in a table, identifying the architectural barriers present for each location. The results of the study were presented in charts, accompanied by a percentage analysis. Additionally, to illustrate the identified issues, photographs depicting typical architectural barriers in the surveyed area were included.

Table 1. The main identified issues occurring in the Old Town's public space. *Source:* Authors

Type of Architectural Barrier	Description	Impact on People with Disabilities
Type of Flooring	Uneven cobblestone surfaces, surfaces with cracks or gaps.	Difficulties in wheelchair movement, risk of tripping or falling, especially in wet conditions.
Stairs	Lack of ramps, steep stairs, high steps, lack of handrails, defects in stairs.	Impeded or significantly hindered access to buildings and spaces on different levels.
Narrow Entrances and Doors	Narrow doors, inward-opening doors.	Difficulty in opening doors for individuals using crutches, wheelchairs, or older people.
Thresholds	High thresholds at building entrances.	Difficulty in crossing thresholds for wheelchair users or people with mobility issues.
Lack of Ramps	Absence of ramps or excessively steep ramps.	Hindered or prevented access to buildings for wheelchair users or parents with pushchairs; danger when using excessively steep ramps.
Lack of Signage	Lack of tactile and auditory signage for visually impaired persons.	Difficulty in navigating the urban space, risk of getting lost or encountering dangerous situations.
Protruding Elements	Small architectural elements or flowerpots located in the path of travel.	Risk of tripping for visually impaired persons, narrowing of the entrance path.

3. Results

As a result of the research conducted along the main tourist route of Lublin's Old Town, spanning from the Krakowska Gate to the Grodzka Gate (Bramowa Street, Rynek Street, Grodzka Street, and Plac po Farze), the following data were obtained. 87% (39 out of 45) of the establishments along the main tourist route of the Old Town in Lublin have stairs directly at the entrance. 21% (8 out of 39) of the establishments with stairs at the entrance are equipped with handrails or grab bars to assist individuals with mobility issues. 41% (16 out of 39) of the establishments with stairs at the entrance have a landing that allows for the safe and easy opening of doors (Fig. 5).

The analysis of accessibility for visually impaired individuals revealed that 13% (6 out of 45) of the establishments offer some accommodation in this regard. In five cases, these consist of contrast-enhancing signage resulting from design and corporate colour schemes, while in one case, lighting is provided for the stair steps. Additional accommodation for individuals with mobility difficulties was observed in 9% (4 out of 45) of the establishments. These include a ramp for an outdoor seating area, automatically opening entrance doors, a call button for assistance, a sign indicating an alternative entrance for wheelchair users, and a floor mat flush with the floor.

Outdoor dining areas are present in 56% (25 out of 45) of the establishments, of which 40% are elevated above ground level (constructed from wood or steel) and operate during the tourist season. Only 10% of these elevated outdoor seating areas have ramps that allow wheelchair access (1 establishment) (Fig. 7). Overall, 36% of outdoor dining areas are inaccessible to individuals using wheelchairs.



Fig. 4. Narrow entrance door leaf, step, and significant slope of the terrain in front of the entrance; *Source: Author*



Fig. 5. Lack of handrails, damaged stairs, obstruction in the doorway, elevated outdoor seating area; *Source: Author*

29% (13 out of 45) of the establishments do not have at least one entrance door with a minimum width of 90 cm (Fig. 4). These cases typically involve double doors, where only one leaf is commonly used for entry. In 53% (24 out of 45) of the establishments, other obstacles for persons with disabilities were observed. These include damage to the entrance steps, planters and interior fixtures obstructing the door and stairway, rubber mats protruding above the floor, a cross slope in the terrain directly in front of the stairs/entrance, and steps made of irregular cobblestones. The results are presented in diagrams (Fig. 6).

The pavement in the Old Town, both along the main routes and around the buildings, is made of unpolished granite cobblestones with an uneven surface. In many areas, the ground is wavy and irregular, which can pose additional challenges for mobility.

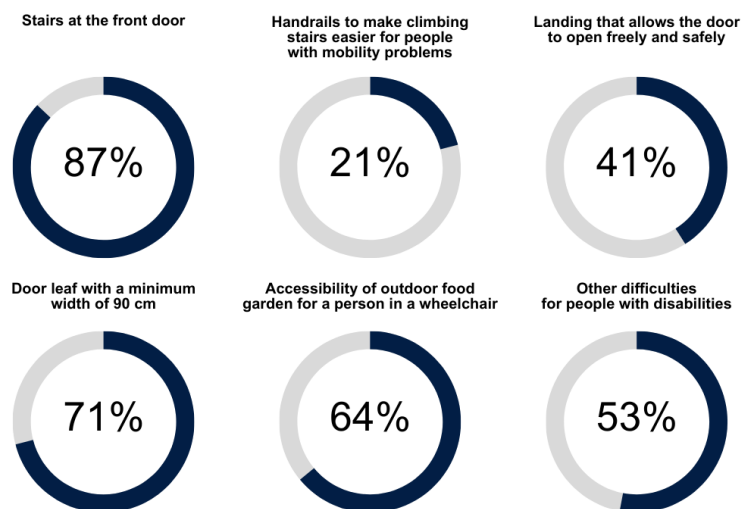


Fig. 6. Results on diagrams, *Source:* Author

4. Discussion

As studies from other European cities, including those listed as UNESCO World Heritage Sites, have shown, it is possible to adapt historic urban spaces even within the constraints of strict legal regulations and with the involvement of multiple stakeholders. Examples from Jerusalem, Barcelona, and Venice demonstrate that accessibility in historic city centres can be achieved while respecting the cultural heritage of these areas. In 2017, the pavement in Lublin's Old Town was replaced, and the original cobblestones were substituted with unevenly laid granite blocks. This raises the question: if the pavement was not historic but rather a reconstruction, could it not have been partially adapted to accommodate wheelchair users? The examples of other cities with their open policies on space accessibility highlight the importance of this aspect, showing that it is feasible to implement such solutions while preserving the historic fabric of the city.

In the context of tourism, a crucial sector of the economy in cities like Lublin, the lack of appropriate accessibility solutions can lead to the social exclusion of persons with disabilities, limiting their ability to enjoy services and tourist attractions. Although access to buildings may theoretically be possible, actual use often becomes challenging right at the entrance. Nevertheless, partial improvements in accessing services and navigating the main tourist route could be achieved.

With relatively modest financial investments, business owners can significantly enhance the accessibility of their services for persons with disabilities. Immediate actions could include adding ramps to outdoor dining areas, installing handrails and grab bars on entrance stairs, replacing double doors with narrow leaves by doors that have a minimum width of 90 cm and feature assisted opening, repairing damage to floors and steps, levelling floor mats with the surrounding surface, and removing obstacles from stairs and doorways.

In Lublin's Old Town, more advanced solutions requiring greater financial resources are also feasible. One significant improvement would be the installation of strips of flat, even pavement in place of the irregular cobblestones. These strips should be wide enough to allow tourists to pass each other in both directions and should include designated resting areas without sloped terrain (Fig. 7, Fig. 8). Another beneficial measure would be the installation of lifts for wheelchair users as an alternative to entrance steps. These lifts could be designed to blend with traditional wooden and steel staircases (Fig. 9). A mobile ramp would be possible, with a lightweight design that could be easily dismantled as required (Fig. 10).



Fig. 7. A ramp instead of a step in the outdoor dining area; *Source: Author*



Fig. 8. Smooth stair surface with handrail; *Source: Author*



Fig. 9. Stair lift as an alternative to entrance stairs; *Source: [25]*



Fig. 10. The unfolding ramp. *Source:[26]*

5. Conclusions

The research results indicate that a significant portion of the Old Town area, specifically the tourist route and the service establishments located within it, including restaurants, does not meet accessibility standards for individuals with mobility impairments. In most cases, significant architectural barriers were identified, such as steps at entrances, narrow doors, and the absence of ramps. Even where accessibility was theoretically possible, appropriate accommodations, such as handrails, were often lacking.

While some locations are equipped with ramps and pavements, the insufficient number of parking spaces in close proximity remains a critical issue, particularly for individuals with disabilities who use wheelchairs or crutches. Additionally, many historic buildings and restaurants are difficult to access for people with mobility limitations, primarily due to stairs and the lack of ramps. The provision of adequately trained personnel who are cognisant of the requisite assistance for wheelchair users in response to calls for help, such as the ringing of a bell, is also a crucial aspect.

Urgent actions are necessary to improve this situation, requiring the involvement not only of city authorities but also of business owners and the wider community. Implementing appropriate solutions will not only enhance the quality of life for residents and tourists but also contribute to achieving the goals of the 2030 Agenda for Sustainable Development, particularly in the areas of equal opportunities and inclusivity.

It is important to note that the study was primarily concerned with architectural barriers and individuals with mobility impairments. It would be beneficial to conduct further research that encompasses the adaptation of the Old Town area to meet the needs of people with other disabilities, such as visual or hearing impairments.

It is recommended to conduct broader studies that include other Polish cities with similar characteristics, which would allow for the formulation of universal recommendations for adapting historic city centres to the needs of persons with disabilities. Moreover, education and increasing public awareness about the needs of persons with disabilities are crucial for achieving lasting changes in public spaces.

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