



ACCESSIBILITY STUDY OF HISTORIC BUILDINGS AND CONTEMPORARY HERITAGE – ON THE EXAMPLE OF KIELCE’S PUBLIC UTILITY BUILDINGS

STUDIUM DOSTĘPNOŚCI OBIEKTÓW ZABYTKOWYCH ORAZ DZIEDZICTWA WSPÓŁCZESNOŚCI – NA PRZYKŁADZIE OBIEKTÓW UŻYTECZNOŚCI PUBLICZNEJ KIELC

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Abstract

Ensuring the accessibility of buildings and spaces is a common contemporary challenge, in particular for historic buildings and spaces as well as the heritage of contemporary culture. It involves all activities aimed at adapting facilities and space to the needs of people with various disabilities, including seniors. The problem of aging societies and increasing life expectancy forces extensive changes both in the approach to architectural and urban design as well as in the practice of making historic buildings accessible through architectural solutions. Particularly in existing public buildings, it becomes very important to pay attention to the specific needs and reduced psychophysical abilities of various groups of architecture recipients due to their age. For this reason, the article analyzes the accessibility of selected examples of historical objects (case studies) functioning in the structures of the modern city of Kielce – for several dozen years. In order to get acquainted with the functioning and architectural solutions of buildings, which are among the most frequented by the general public, in situ research was carried out, the multi-criteria method was used, enabling comparative analyzes and being an effective tool in making a precise assessment. The research was focused on the location of the city of Kielce, taking into account current reports and statistics indicating the largest increase in the number of people over 65 in the Świętokrzyskie Voivodeship. It was found that it is important to revise the approach and generally accepted functional and spatial solutions regarding the accessibility of this type of facilities.

Keywords: monuments, contemporary cultural assets, sharing, alternative access, people with disabilities

Streszczenie

Zapewnienie dostępności budynków i przestrzeni jest powszechnym współczesnym wyzwaniem w szczególności dla obiektów i przestrzeni zabytkowych oraz dziedzictwa kultury współczesnej. Wiąże się ono z wszelkimi działaniami służącymi dostosowaniu obiektów i przestrzeni do potrzeb osób z różnorodnymi niepełnosprawnościami, w tym seniorów. Problem starzejących się społeczeństw i wydłużania się długości życia wymusza szerokie zmiany zarówno w podejściu do projektowania architektoniczno-urbanistycznego, jak i praktyki w zakresie udostępniania zabytkowych obiektów poprzez rozwiązania architektoniczne. Szczególnie w istniejących budynkach użyteczności publicznej bardzo ważne staje się zwrócenie uwagi na specyfikę potrzeb i obniżone, z uwagi na wiek, możliwości psychofizyczne różnych grup odbiorców architektury.

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Z tego względu w artykule dokonano analizy dostępności wybranych przykładów historycznych obiektów (case studies), funkcjonujących w strukturach współczesnego miasta Kielce – od kilkudziesięciu już lat. W celu zapoznania się z funkcjonowaniem oraz rozwiązaniami architektonicznymi budynków, należących do najczęściej uczęszczanych przez ogół ludzi, przeprowadzono badania in situ, wykorzystano metodę wielokryterialną, umożliwiającą przeprowadzenie analiz porównawczych i stanowiącą skuteczne narzędzie w dokonaniu precyzyjnej oceny. Badania skoncentrowano lokalizacyjnie na obszarze Kielc, mając na uwadze aktualne raporty i statystyki wskazujące na największy przyrost liczby osób powyżej 65 lat w województwie świętokrzyskim. Stwierdzono, że istotna jest rewizja podejścia i ogólnie przyjętych rozwiązań funkcjonalno-przestrzennych w zakresie dostępności tego typu obiektów.

Słowa kluczowe: zabytki, dobra kultury współczesnej, udostępnianie, dostęp alternatywny, osoby z niepełnosprawnością

1. INTRODUCTION

The accessibility of buildings and space is a very current, widely promoted and increasingly loud issue in the media. Ensuring accessibility results from a statutory obligation [1-3], the constitution [4] and numerous other laws, resolutions [e.g. 5, 6] and is a contemporary challenge, in particular for historic buildings and spaces as well as the heritage of contemporary culture. It involves all activities aimed at adapting facilities and spaces to the needs of people with various disabilities, including seniors, and eliminating barriers in various spheres of social life. The problem of aging societies and increasing life expectancy forces extensive changes both in the approach to architectural and urban design as well as in the practice of making historic buildings accessible through architectural solutions. Particularly in public utility buildings, it becomes very important to pay attention to the specificity of needs and reduced, due to age, psychophysical capabilities of various groups of recipients of architecture. Therefore, it is important to revise the approach and generally accepted functional and spatial solutions regarding the accessibility of this type of facilities. Providing access to monuments and contemporary cultural goods also means adapting the facilities to the current utility, functional, technical and ecological standards. At the same time, in the implementation of these activities, the most important thing is the selection of appropriate, individual solutions that will not involve excessive burden or violation of valuable values, as it would be contrary to the principles of conservation protection [7, 8].

1.1. Purpose, scope and method of research

The main objective of the studies became to conduct accessibility analyses of selected public facilities that have been functioning in the structures of the modern city of Kielce for several dozen years.

These include both historic buildings and objects of high value spatial and architectural, structural and functional solutions as well as being a symbol and sign of history (PKS Kielce bus station).

In order to learn about the functioning and architectural solutions of buildings that are among the most frequented by the general public, such buildings were identified (case studies) and in situ studies were carried out. Attention was paid to ensuring the accessibility of the facility and its historic surroundings – as a comprehensive issue that should be analyzed in the context of the entire building, including: adaptation of access roads, parking spaces and contact space – entrances to the buildings. The issues of the solutions used to improve accessibility inside buildings have become equally important.

Taking into account the aging of the population and current reports and statistics indicating the largest increase in the number of people over 65 in the Świętokrzyskie Voivodship [9, 10], the city of Kielce was selected as the study site.

An important part of the work also became the identification of the most relevant criteria based on the actual needs and psychophysical condition of today's society.

The selection of public utility buildings included in the study was based on their importance and significance in the daily life of the residents of the city of Kielce and Kielce powiat, in terms of culture, access to public administration and public transport services.

The following public utility facilities in Kielce were analysed for accessibility

1. Kielce City Hall (1875).
2. Voivodeship House of Culture (1935).
3. Kielce Bus Station (1984, 2020).

1.2. Evaluation Criteria

Conducted previous research [9, 11-14] made it possible to formulate criteria as a tool for evaluating

the accessibility of the proposed significant facilities in the city of Kielce. The study used a multi-criteria method, which enabled comparative analyses and is an effective tool to help make an accurate assessment. Finally, 3 evaluation criteria were formulated:

CRITERION No. 1

External access to the facility:

- designation of a motor vehicle parking system near one of the main entrances, including the location of traveller drop-off points;
- unobstructed pedestrian routes leading to the entrance;
- entrances and exits at ground level;
- information at the entrance to the facility;
- wide door openings and easy door operation;
- sufficient space around the door to allow a person in a wheelchair to open and close the door.

CRITERION No. 2

Traffic in the internal space of the building – reaching all necessary functions and zones in the petitioner/customer service area:

- organization and hierarchy of space – a simple and logical functional layout of the interior space;
- available connections of the utility floors of the facility;
- easy access to elevators and toilets, including those adapted to the needs of people with disabilities, intuitive, obvious and accessible fire escape routes;
- spacious elevators equipped with access systems for people with limited perception, safe stairways that are convenient to use and will allow safe evacuation in emergency situations, non-slip surfaces for pedestrian routes;
- appropriate height, location and easy operation of buttons (for example in elevators);
- the visual aspect, the appropriate contrast of walls, floors, doors and signage.

CRITERION No. 3

Petitioner/customer service area:

- easy access to information points;
- appropriate height of service points;
- clear and universally understandable signage;
- the transmission of important information through two or more modalities – the senses of perception (touch, sound and visual content);
- hearing support systems.

2. MULTI-CRITERIA EVALUATION OF ACCESSIBILITY OF HISTORIC PUBLIC BUILDINGS

2.1. Kielce City Hall year of establishment: 1875.

Designer: Architect Franciszek Kowalski

The building is located in the central part of the city, next to the Market Square, and is located at the junction with Piotrkowska street, Constitution Square and Leśna street.

CRITERION No. 1

External access to the facility:

- parking spaces for people with disabilities are located in the city's multi-level parking lot and are located in the closest proximity to the building – on the side of Constitution Square;
- the paths leading from the parking lot to the office have a smooth, paved and level surface, free of obstacles;
- entrances for people with disabilities are located on the side of Leśna street and from the side of Constitution Square. The entrance from the Market Square does not have a ramp, so it is not accessible to wheelchair users;
- on the side of Leśna street there is an entrance from the ground level, while from the side of Constitution Square the entrance to the interior is possible via a ramp;
- in the entrance area from Constitution Square, the space at the entrance door is of adequate size for wheelchair manoeuvring, the door is opened automatically, which is a great convenience for people with various types of limitations;
- the functional layout of the exterior is simple, logical and clear.

CRITERION No. 2

Traffic in the interior space of the building:

- there are elevators for vertical traffic in entrance areas dedicated to people with disabilities. An elevator from the side of Leśna street allows vertical traffic for the general public, while the elevator from the side of Constitution Square side requires assistants to be summoned, as the doors to it are closed on a daily basis. They are not, however, spacious elevators, especially from the side of Leśna street – it is not equipped with access systems for people with limited perception;
- the functional layout is simple and clear;
- fire escape routes are not cluttered with any obstacles;

- intermediate corridor areas for access to the various functions have a smooth non-slip surface;
- the surfaces of some of the walls, for example, in the entrance hall from Constitution Square, mimic stone and are uneven, which can be a hindrance for the visually impaired;
- the illumination of the entrance space from Constitution Square is not evenly distributed, which may pose difficulties for the visually impaired.

CRITERION No. 3

Petitioner service area:

- the main petitioner service area from the side of Market Square has been adapted for people with disabilities – it has a lowered console top, which is adapted for people with disabilities who use a wheelchair;
- an additional customer service area is located on the side of Constitution Square and has also been adapted for people with disabilities – by means

- of a lowered console top, which is adapted for people with disabilities who use a wheelchair;
- a person with a disability, moving from the entrance at Leśna street must walk a distance of about a few dozen meters to the main service area from the Market Square side;
- all informational signage is clear and legible;
- there are no assistive listening components such as induction loops in the Kielce City Hall facility.

Conclusions

The Kielce City Hall building has been adapted to the needs of people with disabilities to the maximum extent possible. Using the elevator from the side of Constitution Square requires calling an attendant, and from Leśna street – to travel dozen meters from the building entrance to the petitioner service area. The building's assets include legibility of the functional layout, spacious corridors, anti-slip surfaces. The difficulty may be to travel the distance from the entrance at Leśna street to the customer service centre.



Fig. 1. View from the Kielce Market Square



Fig. 2. Location of the City Hall building
Source: <https://www.4dkielce.eu>, accessed on: 02.2023.



Fig. 3. Customer service zone from the side of the Market Square



Fig. 4. Access zone for visitors from Constitution Square



Fig. 5. A Braille board from the side of Market Square



Fig. 6. A Braille board from the side of Market Square, board layout and details



Fig. 7. Entrance from the side of Constitution Square



Fig. 8. Horizontal communication – ground floor from the side Constitution Square



Fig. 9. Elevator from the side of Constitution Square, ground floor



Fig. 10. Elevator from the side of Constitution Square, first floor



Fig. 11. Horizontal communication on the first floor in the City Hall



Fig. 12. Horizontal communication on the first floor in the City Hall

Photographs: the author, February 2023.

2.2. Voivodeship House of Culture (VHC), year of establishment: 1935.

Designer: Architect Edgar Aleksander Norwerth

The VHC facility is located at the intersection of Ściegiennego and Al. Legionów streets. It is one of the structures under conservation protection, so there is no possibility of significant interventions in its functional layout.

CRITERION No. 1

External access to the facility:

- the main entrance to the building is inaccessible to people with disabilities who use wheelchairs, these people are to use the elevators located in the inner courtyard;

- parking spaces for the disabled are located closest to the vertical traffic zone;
- the road leading from the parking lot to the VHC building has a level and convenient surface for wheelchairs.

CRITERION No. 2

Traffic in the interior space of the building:

- the main customer service area in the building's main hall is fully adapted for people with disabilities;
- the functional layout and access to toilets for the disabled are simple and clear;
- fire escape routes are not cluttered with any obstacles;

- the corridor areas are wide and spacious, with smooth anti-slip surfaces;
- connections of the utility floors of the facility are possible by means of external elevators.

CRITERION No. 3

Customer service area:

- easy access to information points;
- appropriate height of customer service points;
- no hearing support elements.



Fig. 13. View from the front side

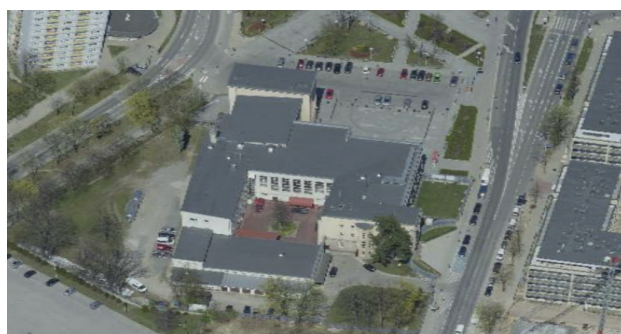


Fig. 14. View of the WDK building

Source: <https://www.4dkielce.eu>, accessed on: 02.2023



Fig. 15. Parking spaces for the disabled by the building



Fig. 16. Horizontal communication in the hall main building



Fig. 17. Horizontal communication in the hall main building



Fig. 18. Vertical communication in the main hall of the building



Fig. 19. Elevator for the disabled at the back of the building

Photographs: the author, February 2023.



Fig. 20. Disabled platform at the back of the building

2.3. Kielce Bus Station, year of establishment: 1984, year of reconstruction: 2020.

Designer: Architect Edward Modrzejewski.

Author of the reconstruction: Marcin Kaminski
Bartosz Bojarowicz Architekci s.c. Kielce

CRITERION No. 1

External access to the facility:

- parking spaces for people with disabilities are located in close proximity to the building;
- the pedestrian routes leading to the entrance are free of obstacles, and the pavements have been shaped with warning, guidance and attention fields – in accordance with the requirements of the Pavement Marking System, which is used to identify sites and corridors. The combination of textures allows people with visual impairments to move freely;
- all entrances to the building are adapted for the disabled and are located at ground level;
- surfaces leading from the parking lot and traffic system to the Bus Station building have a smooth even surface;
- signage and information at the entrances to the building are clear and legible;
- the main entrance areas of the building use sliding doors with appropriate widths, which significantly facilitates use;
- the space at the door is of adequate size and allows free manoeuvring for wheelchair users;
- the functional layout of the exterior is simple, logical and clear.

CRITERION No. 2

Traffic in the building:

- the functional layout of the building is simple and clear, corridors and horizontal traffic spaces

are wide and do not contain elements that make traffic difficult for people with disabilities, and have smooth non-slip surfaces;

- the first floor level is accessible to all users by means of spacious elevators adapted for the disabled;
- the signage of the vertical and horizontal traffic zone, as well as the descriptions of the doors of toilets for people with disabilities, the main service areas – are fully legible and intuitive;
- traffic areas in the building have contrast elements for the visually impaired. Contrasts have been used on both walls and floors, which can be a significant convenience for the visually impaired;
- fire escape routes are not cluttered with any obstacles;
- toilet and elevator door signs include buttons at the appropriate height with Braille markings.

CRITERION No. 3

Customer service area:

- convenient passenger information system: graphic, audio and tactile messages;
- information desks are located in the main hall of the building;
- access to the information points in the building is simple and clear;
- the information area and ticket office area have been adapted for people with disabilities, the lowering of the countertop to serve wheelchair users is valuable;
- the information and cash desk area is equipped with induction loops and a sign language interpreter service;
- for the blind and visually impaired, room markings in Braille have also been introduced;

- on each floor there are toilets adapted to the needs of people with reduced mobility;
- on the ground floor and first floor of the building, in the general traffic areas of the hall, there are Braille boards containing a plan of the station and the areas around it, which facilitates orientation in the space for the blind and visually impaired.

Conclusions

The Bus Station building is an example of a fully accessible facility.

The original facility, used since July 1984, was thoroughly modernized and rebuilt in 2022, in accordance with the principles of universal design, while maintaining its original and unique character. In the new Communication Center, all barriers have been eliminated and spaces friendly to people with disabilities have been created.

The building’s big assets are the pavement texturing system used in the facility, Braille signs, contrasting elements on the floor and walls, a simple clear layout of internal traffic, fully accessible service areas, toilets and elevators adapted to people with disabilities.

In the external space, parking spaces for people with disabilities have been designed, levels around the building have been leveled, ramps and accessible elevators have been prepared. The facility received a distinction in the 7th edition of the “Accessibility Leader” Architectural and Urban Competition (October 2022), the aim of which is to promote universal design and the best urban and architectural solutions in the field of adapting buildings and spaces to the needs of people with disabilities.



Fig. 21. Entrance to the bus station building

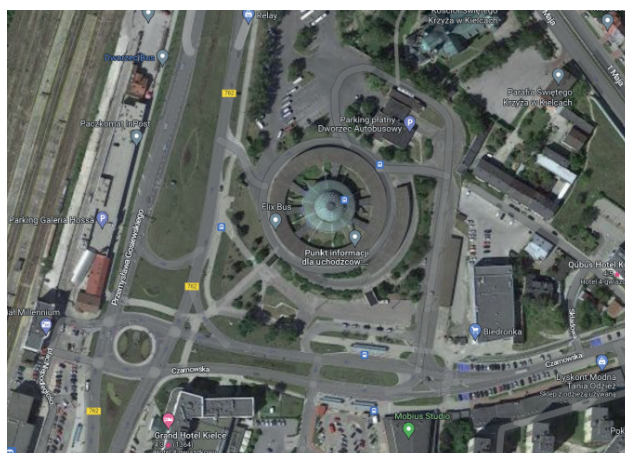


Fig. 22. Location of Bus Station Building.
Source: <https://www.4dkielce.eu>, accessed on: 02.2023.



Fig. 23. Horizontal communication zone towards the hall and guidance paths



Fig. 24. Horizontal communication in the main hall of the building



Fig. 25. Horizontal communication zone for platforms and paths leading to them



Fig. 26. Horizontal communication zone on the platforms



Fig. 27. Vertical communication zone – escalators and guide paths in the main hall



Fig. 28. Vertical communication zone – fixed stairs and guidance paths



Fig. 29. Typhlographic board on the ground floor hall



Fig. 30. Typhlographic board on the first floor hall



Fig. 31. Lowered console table in the service area
 Photographs: the author, February 2023



Fig. 32. Vertical communication in the hall-elevator

3. DISCUSSION

Based on the conducted visions of local objects and interviews with the manager and staff, it should be emphasized that two factors become the most important in the implementation of making objects available: 1) the choice of an appropriate solution ensuring the greatest possible protection of the value of the monument, 2) financial resources. In general, it can be stated that the presented buildings (City Hall of Kielce, Voivodeship Cultural Center) in most cases have architecture and internal space adapted to people with disabilities, but not to the full extent.

This is due in large part to the period in which these buildings were designed and built. In the situation of some structures, it is often difficult or even impossible to meet all the requirements for full accessibility, due to the specificity of the structure (the building of the Kielce City Hall), or conservation considerations (monument: Voivodeship House of Culture in Kielce). Then the situation forces the use of alternative solutions (e.g., Kielce Cultural Centre). In addition, the solutions that are introduced into the facilities at later stages of use are not exactly comfort solutions and those that should be considered equivalent to those envisioned at the stage of design or radical reconstruction of the facility.

To sum up, making Kielce facilities available is usually associated with the elimination of architectural barriers. However, this does not only boil down to the introduction of new architectural solutions, but also to undertaking activities in the sphere of communication and information. They are undoubtedly a safe solution for the protection of historic values. In the implementation of providing access to historic buildings and objects of

contemporary culture, priority has become available zones of entrances to buildings and enabling the overcoming of vertical communication barriers through the use of appropriate cranes and the ability to move around the facility (free, collision-free access to the service, reception, information zone). In the external space, the limiting factor is usually the technical condition of the surface with cavities, depressions and made of inappropriate materials (e.g. surfaces made of granite paving stones, the so-called cat heads). This significantly hinders the movement of people in wheelchairs, the elderly, the blind and the visually impaired. The vast majority of the improvements introduced so far refer to conventional and formal solutions. These are more conservative concepts, with characteristic devices dedicated specifically to the elderly and people with physical disabilities. A unique solution is the bus station, radically reconstructed in the 21st century. It should be articulated that the entire architectural and urban layout constitutes a fully accessible space – based on the assumed evaluation criterion.

4. SUMMARY AND CONCLUSIONS

The conducted analyzes of Kielce objects proved that ensuring the accessibility of monuments is still a complex and extensive issue. Adapting a historic building to the needs of people with various disabilities is very difficult, and even impossible to the full extent. To a large extent, full access is associated only with broadly understood modernization, i.e. construction works related to the reconstruction, extension or superstructure of the building, with interference in historic values.

No criterion	Description of the criterion	Kielce City Hall	Voivodeship House of Culture	Kielce Bus Station
CRITERION No. 1 External access to the facility	designation of a motor vehicle parking system near one of the main entrances, including the location of traveller drop-off points	+	+	+
	unobstructed pedestrian routes leading to the entrance	+	+	+
	entrances and exits at ground level	+	+	+
	information at the entrance to the facility	+	+	+
	wide door openings and easy door operation	+	+	+
	sufficient space around the door to allow a person in a wheelchair to open and close the door	+	+	+
CRITERION No. 2 Traffic in the internal space of the building – reaching all necessary functions and zones in the petitioner/customer service area	organization and hierarchy of space – a simple and logical functional layout of the interior space	+	-	+
	available connections of the utility floors of the facility	+	-	+
	easy access to elevators and toilets, including those adapted to the needs of people with disabilities, intuitive, obvious and accessible fire escape routes	+	+	+
	spacious elevators equipped with access systems for people with limited perception, safe stairways that are convenient to use and will allow safe evacuation in emergency situations, non-slip surfaces for pedestrian routes	+	-	+
	appropriate height, location and easy operation of buttons (for example in elevators)	+	+	+
	the visual aspect, the appropriate contrast of walls, floors, doors and signage	-	+	+
CRITERION No. 3 Petitioner/customer service area	easy access to information points	+	+	+
	appropriate height of service points	+	+	+
	clear and universally understandable signage	+	+	+
	the transmission of important information through two or more modalities – the senses of perception (touch, sound and visual content)	+	+	+
	hearing support systems	-	+	+
	SUMMARY	15(+)/2(-)	14(+)/3(-)	17(+)

The studies made it possible to formulate the most important conclusions and recommendations helpful in designing and managing the space of historic buildings and contemporary heritage:

- The key aspect is to recognize the opinions of all participants in the access process (manager, monument conservator, designers, staff and users, including those with disabilities) and often to seek an appropriate compromise to preserve

the protection of the monument and introduce solutions to ensure accessibility.

- Introducing modern solutions consistent with the image of the facility, not related to the risk of damage to the historic matter, along with the development of a concept of providing access that will satisfy all users and visitors, including:
 - designation of alternative routes that are easy to walk, the use of adjustable ramps;

- ensuring safe entrances and exits from the building and appropriate width of communication routes;
 - proper execution, use and proper maintenance of floors, sidewalk surfaces, use of handles, handrails, limiters, bumpers, guiding systems – individually tailored to a given facility and situation.
 - Offering a means of transport, help and assistance from the staff – which will affect and encourage a longer stay, providing properly prepared specialists, interpreters, sign language interpreters.
 - Special attention to innovation and consideration of the needs of future seniors, taking into account the dynamic changes in relationships between people and the virtual environment, providing a website that takes into account the rules of accessibility also in terms of ICT, comprehensive information about the accessibility of the facility and the possibility of reaching the facility and the communication and information zone.
 - Systematic and uninterrupted work on making facilities and the most complete offer available to all people, including selection of appropriate sharing options that do not excessively affect the value of the monument, support for various groups of recipients through specialized audio guides, guides, messages in Braille, introduction of Q-codes.
- In conclusion, it is worth re-articulating that every space, including the cultural environment, should enable all people to use it as independently and consciously as possible. This applies to both historic buildings and areas, including buildings and areas with cultural potential.

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