

Problems with Accessibility and Legal Solutions in Urban Areas - Case Study of City of Shtip, R. North Macedonia

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Abstract. This scientific paper aims to locate accessibility problems within the urban environment in the city of Shtip, which people with reduced mobility face on a daily basis. The geographic location of the city, the location of buildings, and the built infrastructure create architectural barriers that limit the movement of people with reduced mobility in urban areas. This is a case study where, through an analysis of the narrow urban core of the city of Shtip, a classification of architectural elements that pose a problem for the free movement of people with reduced mobility will be made, and based on the legal norms and knowledge obtained, proposed solutions will be provided to overcome the perceived problems. Through a review of the applicable legal norms, especially the misdemeanor and criminal procedures and sanctions they provide for non-compliance with the prescribed conditions for unhindered access for persons with disabilities, and based on the knowledge obtained, proposed solutions will be provided to overcome the identified problems. In this way, this paper will contribute to improving living conditions in the urban environment, will influence the ability of people with reduced mobility to function normally in society, and will contribute to ensuring equal rights for all members.

1 Introduction

The city of Shtip is located in the eastern part of the Republic of North Macedonia and is spread between the heights of Isar, Merite and Kumlak, and the course of the Otinja River divides the city into two parts. (Fig. 1) Such a geographical position limits the city's urban planning. The central urban core is the most densely built and with the highest frequency of people, which is a source of architectural barriers that hinder the movement of people with reduced mobility.

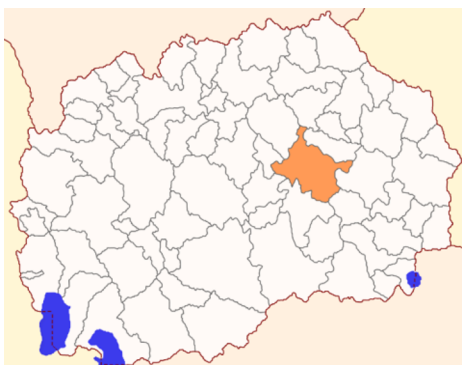


Fig. 1. Location of the city of Shtip

Today we live in a time when awareness of an inclusive environment is not just a theory, but intensive work is being done to implement it in practice. Inclusivity

is not just considered an additional benefit, but a main mandatory goal in dealing with accessibility problems in the urban environment. The fact that urbanism, design and planning of the city takes place in different time periods in which different legal norms and rules apply, also means the existence of architectural barriers that need to be overcome today. The urban environment is a space in which all people in a society function daily, so it should be accessible and allow for smooth movement from one location to another.

The problem of accessible urban environment is a general problem throughout the country, and the subject of analysis is the city of Shtip due to the increased frequency of people, after it became a university city. In addition to residents, a large number of students also reside there throughout the year, so by providing an accessible urban environment, it will be possible for young people with reduced mobility to study without hindrance.

2 Methodology

Through a theoretical framework, i.e. a qualitative method for defining the problem, an analysis of a specific case of an urban core has been carried out according to the criterion of accessibility. Entering the cause-and-effect determination of problems with accessibility in the city of Shtip, implies using a set of methodological procedures and ways of thoroughly studying the phenomenon. The

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holistic approach in terms of thoroughly examining the problem is based on a well-thought-out methodological approach appropriate for examining all segments.

The comparative analysis allows for the observation of positive experiences in the area of arrangement in places whose systems are more developed in terms of the application of practices within our institutions.

The observation method allows for an overview of the current real situation and prevalence of the problem on the territory of the City of Shtip. It is supported by the analytical and synthetic method, as a leading one in terms of observing the most dominant forms of non-compliance with the prescribed conditions and acquiring data on the general situation in the city, which should tighten the measures and policies for detecting cases of such failures in a certain area in a certain period of time.

In addition to the analysis of the positive legal and by-laws that regulated the subject of the research in question, conditions during direct field visits within the urban environment were also analyzed.

The methods of induction and deduction are in favor of drawing conclusions and statements about the benefits and scientific contribution of the research results within the framework of exhausting the specific phenomenon - accessibility problems in the City of Shtip.

In this way, we will contribute to mapping the flow problem in the central urban core of the city, especially from the aspect of ensuring uninterrupted access for people with reduced mobility. Through the analysis of the legal norms and consideration of the actual situation of the city, we will contribute to raising the collective awareness of the needs of people with disabilities.

3 Analysis of urban area

3.1 Inclusion in urban areas

The purpose of urban areas is to organize and facilitate human life and its functioning in the built environment through uninterrupted travel from one place to another. Within the framework of this spatial organization, there are architectural barriers that affect the freedom of movement of all its members equally. The challenge for any modern society that should be inclusive is to provide an accessible urban environment that will support the diversity of people and encourage a sense of belonging and equality for all. Inclusion is achieved through three interrelated dimensions, namely, creating an inclusive culture, creating an inclusive policy, and implementing inclusive practice. (1)

Human rights are universal, which means that they apply equally to all people everywhere in the world and have no time limit. Every individual has the right to enjoy his or her human rights without distinction of „race“ or ethnicity, color, sex, sexual orientation, disability, language, religion, political or other opinion, national or

social origin, birth or other status. Human rights serve as minimum standards that apply to all human beings; each state and society is free to define and apply standards higher and more specifically. Each country and society should adopt such policies in accordance with its own circumstances. For example, in the rights of persons with disabilities, there is an obligation to take steps to progressively achieve the full realization of these rights.

An inclusive society means that it offers equal conditions for all, i.e. that people with reduced mobility will be able to move freely and without barriers in the urban environment and function like other members of society. In this context, the United Nations Convention on the Rights of Persons with Disabilities includes a definition of the term “universal design”, which is a key tool in creating a more inclusive urban environment. The aim of universal design is to create products, environments, and services for the largest possible group of users. (2)

Although legal regulations and norms provide guidelines for overcoming architectural barriers, we are witnessing that this inclusive practice is lacking in certain parts of the urban environment. In this context, an analysis of the central city core of the city of Shtip was conducted, where several locations were identified that represent barriers to the free and unhindered movement of people with reduced mobility.

3.2 Located architectural barriers

Urban plans, in accordance with the prescribed building and planning standards, should meet the basic requirements of the building, and determine dimensions that will ensure unhindered movement for people with disabilities. The development, adoption and implementation of urban plans should ensure overcoming urban barriers and ensuring functional accessibility and mobility of land for widespread use, public spaces, to and within buildings and areas in and outside populated areas for all citizens, and especially for people with disabilities¹ and people with reduced mobility. Overcoming urban barriers and ensuring accessibility of public spaces and buildings implies determining measures and planning provisions that are applied in the process of developing, adopting and implementing urban plans.

Accessibility and simple adaptation of buildings are ensured by designing and constructing those buildings in a manner that contains elements of accessibility and/or meets the conditions for the use of aids used by persons with disabilities. (3)

In the context of this paper, the accessibility and passability measures, as well as the overcoming of urban barriers, which are an integral part of urban plans, refer to public traffic and other pedestrian areas on land for general use from the groups of use classes D (greenery, sports, recreation and memorial spaces) and E

¹ Persons with disabilities, within the meaning of the Urban Planning Rulebook, mean persons with permanent or temporary physical, mental and/or sensory impairments or disorders, for whom urban and architectural obstacles reduce or prevent their mobility, accessibility to buildings and areas, and thus their participation in society on an equal basis and the exercise of fundamental human rights.

(infrastructure) and buildings for public use with institutional, business and commercial purposes from the groups of use classes B (commercial and business purposes) and C (public institutions). Buildings for public use in urban plans should be planned with an elevation of the zero slab or with an elevation of the entrance areas that is equal to the levels of the access sidewalks and pedestrian areas. If differences in level are inevitable, then measures and planning provisions must be included in the construction conditions that will provide means for unhindered accessibility, such as ramps, platforms, escalators, etc.

The analysis was made from the aspect of ramps for overcoming elevation differences, pedestrian paths, sidewalks and accesses to public facilities. The graphic attachment shows the places that are accessible for people with reduced mobility, partially accessible, or completely inaccessible. (Fig. 2)

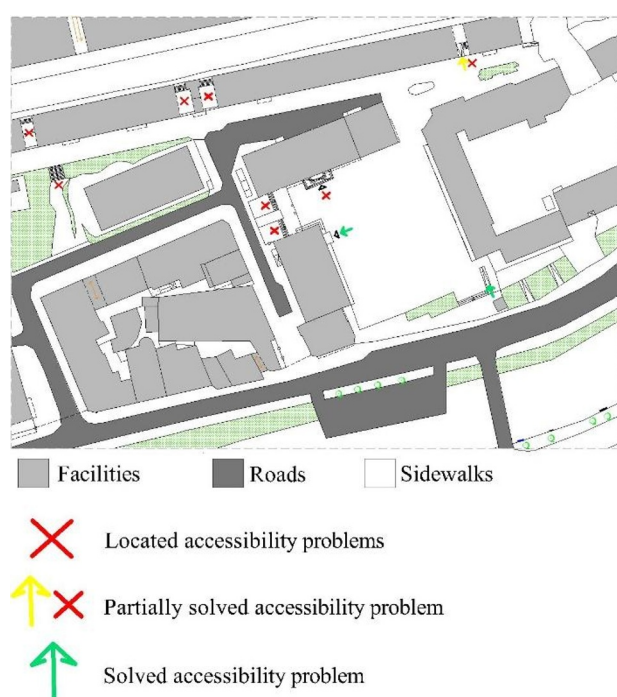


Fig. 2. Map of the analyzed urban area

This map shows the state of accessibility in the central urban core of the city of Shtip, where deficiencies are noticeable that affect the freedom of movement of people with reduced mobility. This refers to pedestrian zones that have elevation differences solved only with stairs, without ramps. The lack of resolution of elevation differences between the roads and sidewalks in the entire analyzed area is also visible. Within this urban area, there are two public facilities, one of which has a ramp for entering the facility, and the other facility does not have access for people with reduced mobility. Such conditions show that people with disabilities do not enjoy equal rights and opportunities within the urban environment and do not have the opportunity to participate equally in social life.

3.3 Legislation

To address accessibility issues, the Republic of North Macedonia has established a legal framework that

concisely regulates the issue of the rights of persons with disabilities and their access to facilities. Namely, the legislation relating to building conditions and basic requirements for buildings is based on and in accordance with international documents in this area. Therefore, legal solutions are offered to ensure the basic rights of inclusion of persons with disabilities in movement and their participation in social functions at a level that allows for fair representation and equal rights with other members of the community. The provisions of these legal acts are significant, as they represent a turning point in the approach of our legislation to persons with disabilities in terms of their free movement, access to public facilities and their stay in those facilities.

The basic law regulating the construction of construction facilities at the national level, the Law on Construction, among the basic requirements that a building should meet, also lists the provision of unhindered access and movement to and within the building. (4) This law also provides for deviations from some basic requirements for construction to enable unhindered access, movement, residence, and work. Namely, in the case of reconstruction or adaptation of a building registered in the National Register of Cultural Heritage, persons with disabilities should be enabled unhindered access, movement, residence and work, but after receiving a positive opinion from the Ministry of Labor and Social Policy and obtaining consent from the state administration body responsible for carrying out works in the field of culture. (4) Such legal provisions are in accordance with the basic principles of urban planning and spatial development that guarantee an integral approach to planning, the achievement of the public interest and the protection of private interest. They also provides inclusiveness and participation in the procedure for the preparation, adoption and implementation of plans and are aimed at achieving the basic goals of urban planning, including overcoming urban barriers for people with disabilities. (5)

In addition, the national regulation prescribes standards and norms for urban planning, which inevitably ensure overcoming urban barriers for people with disabilities and functional accessibility and mobility between buildings and areas in and between settlements for all citizens, especially people with reduced or impaired mobility, children, the elderly and others. (5) (6) The Law on Construction, taking into account the right to unhindered access of persons with disabilities, regulates the design of buildings for public and business purposes, buildings for housing in residential buildings, as well as buildings for residential and business purposes, which must be carried out and the facility must be constructed in such a way that persons with disabilities are enabled unhindered access, movement, residence and work to and in the building. The legal provisions also regulate the arrangement of public areas in the central city area and parks, where during the construction of new, as well as during the reconstruction of existing public areas - pedestrian paths, they should be designed and constructed in a way that there will be a path for the movement of people with physical disabilities and people with impaired vision. The technical characteristics and dimensions of the

path for the movement of people with physical disabilities and people with impaired vision are prescribed by an act of the state administration body competent for carrying out the works in the field of spatial arrangement.

At the local level, urban planning and the issuance of construction permits is regulated by the Law on Local Self-Government, which does not include either the principle of non-discrimination or the principle of accessibility. The obligation to ensure physical accessibility is further regulated in the Rulebook on the manner of ensuring unhindered access, movement, stay and work of persons with disabilities to and in facilities. This Rulebook outlines the minimum standards for the manner of ensuring unhindered access, movement, stay and work of persons with disabilities to and in facilities for public, business, residential and business-residential use. The Rulebook on standards and norms in urban planning also regulates the right to parking spaces. Accessibility of catering facilities is regulated in the Rulebook on the categorization of catering facilities. (7)

The Rulebook on the manner of ensuring unhindered access, movement, stay and work of persons with disabilities to and in facilities defines all persons with disabilities, such as those with physical, mental and sensory disabilities (Article 4.1), defines the facilities that have an obligation to ensure unhindered access, movement and stay of persons with disabilities (Article 5) and specifically explains all obligations for enabling access, movement, stay and work (from access for persons with disabilities, the height and specifications of the ramp, the width and other characteristics of the elevator, the shape of the door and other characteristics of the public toilet and bathroom, the number of parking spaces, the characteristics of the bus stop or platform, etc.). It is worrying that public facilities, including those housing justice institutions, have already been built, and many of them do not meet the standards set out in the Law on Construction and the aforementioned Rulebook. It will certainly take a long time for the already built facilities to be adapted to the needs of persons with disabilities, as the Law on Construction stipulates a deadline for the obligation to adapt already built facilities to ensure unhindered access for persons with disabilities. Until then, persons with disabilities will be in a discriminatory position compared to other persons in terms of the ability to access, reside or move in these facilities. (8)

Through the analysis of the legal regulations related to this issue, deviations are observed in the urban part of the city of Shtip. Namely, in the central urban core there are differences in elevation that are solved with stairs, and at the same time a ramp is not provided to overcome the same height difference. In one segment, a ramp is provided that has an inappropriate slope that partially ensures the movement of people with reduced mobility. This refers to the pedestrian paths that enter public areas, and during the analysis, two public institutions were also replaced, one of which has unhindered access, and the other is accessible. (Fig. 3)



Fig. 3. Pictures of the analyzed part of the city of Shtip

Although the legal framework and policies adopted in this area are quite clear, problems arise as a result of inadequate implementation in practice and different interpretations. Many public institutions, even new buildings, are not physically accessible to people with disabilities. Buildings, both in urban and rural areas, are inaccessible. Apart from the legal obligation, in practice, ensuring accessibility and availability of buildings for persons with disabilities remains a matter of personal choice for public and private entities. For legislation to have the desired effect on persons with physical disabilities, additional measures should be accompanied, such as raising public awareness, building the capacities of responsible institutions and improving existing policies.

The survey on the topic "How do you experience the architectural / physical environment?" conducted in Skopje, it was shown that the respondents, people with disabilities themselves, feel limited in their ability to move around the city streets (61%), in access to and in public buildings (52%), toilets (65%) and services (74%). To the question "What would you do if you had the power to do something to improve accessibility?", the answers referred to the installation of tactile panels on pedestrian

paths for the blind, ramps and sound signaling at traffic lights and in public transport. (9)

This is precisely an indicator that the current situation indicates the need for amendments to the Law on Construction, which should result from consultations with the National Council of Disability Organizations (NCDO). The contribution of persons with disabilities through their representative organizations in the processes of planning and monitoring of national development, which are largely excluded from the national processes for planning and monitoring of development in North Macedonia, will be useful. People with physical disabilities are still far from the opportunity to improve their own quality of life, because the current systemic solutions, as well as bad practice, do not create an enabling environment for these people.

The areas for pedestrian movement planned in urban plans, namely: sidewalks, pedestrian streets, footpaths, squares, plazas and all other types of pedestrian areas on land for general use, unless this is unavoidable due to the circumstances of the terrain, should not have elevation differences, obstacles, buildings, installations and equipment that may hinder or reduce the accessibility of public pedestrian areas and access to buildings for public use. In addition, when implementing urban plans, it is mandatory to overcome and remove all existing obstacles.

Pedestrian movement surfaces provided in urban plans where the terrain is sloping should be of continuous level without stepped elevations with a desirable longitudinal slope of 5% or in a ratio of 1:20, and in exceptional cases with a longitudinal slope of up to 8.33% or in a ratio of 1:12. The maximum slope of sidewalks and pedestrian paths perpendicular to the direction of movement should be 2%. (10)

The ramp is used as an accessibility element for the needs of overcoming height differences exclusively up to 120 cm, in the interior or exterior space, which, regardless of whether it is located in an interior or exterior space, should be made of materials that prevent any slipping. (3) If public pedestrian areas are on terrain with large height differences that must be overcome with stairs, an alternative connection with a ramp with a maximum longitudinal slope of 5% or in a ratio of 1:20 should be envisaged by the urban plan, and in exceptional cases up to 8.33% or in a ratio of 1:12. This ramp is dimensioned for two-way movement of people in wheelchairs, with its minimum width being 1.65 m, and the optimal width being 1.80 m. In addition, depending on the slope of the ramp, its length is limited to:

- slope of 8.33% or in the ratio (1:12), maximum length of the ramp is 9.00 m,
- slope of 6.66% or in the ratio (1:15), maximum length of the ramp is 12.00 m and
- slope of 5.0% or in the ratio (1:20), maximum length of the ramp is 15.00 m.

In cases where a longer ramp length than the one specified above is necessary, rest areas should be planned, the minimum length of which should be 1.50 m, and the optimal length should be 1.80 m. (Fig.4) The maximum transverse slope of sidewalks and other pedestrian paths that is perpendicular to the direction of movement and the axis of the path is 2%. In addition, the surface of the

sidewalk and pedestrian path should be solid, flat, and slip resistant. All grates, covers and manholes should be safe for the movement of persons with physical disabilities and persons with visual impairments and should be placed flush with the surface of the sidewalk and pedestrian path. (10)

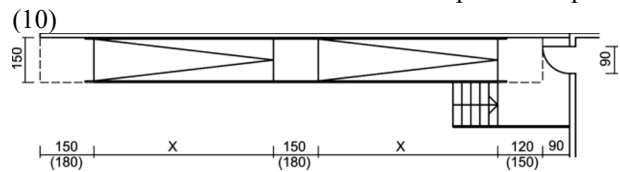


Fig. 4. Possible organization of access with ramps and stairs (9)

When implementing urban plans, ramps should be provided at each pedestrian crossing to overcome the difference in elevation between the sidewalk and the roadway. Ramps to overcome the height difference between the sidewalk and the roadway are usually constructed with special inclined elements of the curbs that are constructed without vertical difference in elevation to the roadway level and in the width of the entire pedestrian crossing. (Fig. 5) The maximum slope of the ramp from paragraph (1) of this article is 8.33% or in the ratio of 1:12, and if this is technically impossible, the slope may be up to 10% or in the ratio of 1:10. (6)

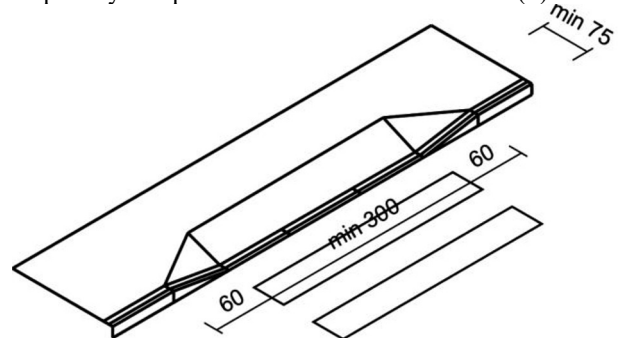


Fig. 5. Method of arranging a crossing to a street (9)

The construction conditions should include access ramps for overcoming the uneven communication surfaces at the entrances of the buildings and internal ramps in public and group rooms as well as meeting rooms, the minimum width of which should be 1.20 m. (6) (Fig. 6)

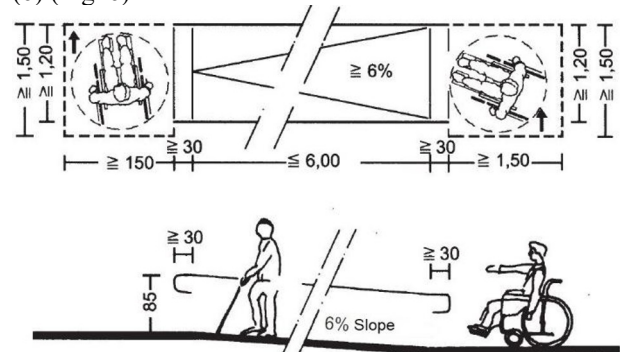


Fig. 6. Ramp (11)

There are no provisions that foresee the sanctioning of non-compliance with the prescribed legal provisions that

regulate the accessibility of persons with disabilities to public areas and spaces in central city areas. Namely, the Law guarantees the right of persons with disabilities to initiate a misdemeanor procedure by submitting a request to a competent court, i.e. a misdemeanor authority, if it is determined that a constructed facility for public purposes does not meet the requirements for unhindered access prescribed by the legal provisions. (4)

If during the construction of new or reconstruction of existing public areas - pedestrian paths in the city center and in parks, a violation is committed in terms of ensuring unhindered access, movement, residence and work to and in the building, as well as other prescribed requirements for the building that relate to ensuring the rights of persons with disabilities, the Law provides for a fine in the amount of 500 euros in denar equivalent for the responsible person in the municipality. (4) The penalties provided for in the Law on Construction are low, and the violations are qualified as misdemeanors, which discourages construction companies, driven by profit, from complying with the legal provisions. (7)

The national penal policy sanctions actions contrary to urban plans, which may constitute a violation of the rights of persons with disabilities through illegal construction, i.e. abuse of official duty by an official in a local government or a state administration body, competent for carrying out works in the field of spatial planning. Namely, the abuse consists of adopting a decision on location conditions contrary to a valid urban plan or issuing a building permit contrary to the decision on location conditions without taking into account the violation of the planned space, and with the aim of obtaining unlawful property benefit or causing damage to another. For these actions a prison sentence of three to eight years is prescribed. In such a case, the constructed real estate is confiscated as objects of the committed criminal offense.

4 Results and recommendations

Persons with disabilities in North Macedonia are not perceived as equal to others in society and still face stereotypes and prejudices, non-recognition of their abilities and their contribution to society. They are systematically discriminated, cannot move and communicate independently in their environment, services are neither fully inclusive nor accessible to them, and their representation and participation are not adequate and meaningful. Investments are needed in several areas relevant to advancing the equal rights of persons with disabilities in the country. An essential starting point for rights holders and duty bearers is to ensure the meaningful participation of persons with disabilities in national processes for planning and monitoring development, as well as in policymaking and capacity-building for non-discriminatory, inclusive and accountable service delivery, also for understanding disability as part of human diversity. The quality of life should allow a person access to the entire environment, to education, to be able to take care of their mental and physical health without

hindrance, as well as to be able to progress in building their social position.

The result obtained by analyzing the presented data allows us to predict the manner of overcoming the detected conditions in a future period of time at a specific location, in order to strengthen the measures and ways of overcoming the insufficiently achieved conditions for unhindered access of people with limited mobility. It will contribute for prevention, identification and protection, in accordance with their best interest and the removal of all obstacles to unhindered access of these persons.

The following recommendations can contribute to solving the identified problems:

- raising collective awareness about the benefits of implementing an inclusive society;
- financial resources for integrating inclusive design solutions;
- implementing universal design principles in the process of designing urban environments;
- including people with disabilities in the planning and decision-making process;
- as well as, improving national regulations towards respecting the rights of persons with reduced mobility and tightening the penal policy.

5 Conclusion

By raising awareness of increasing inclusiveness in all spheres of human life and action, many European cities are making efforts to become more accessible. Such is the example of the Dutch city of Breda, which is the winner of the Accessible City Award for 2019. This has been achieved through a long-term development plan, which has resulted in the accessibility of a large number of catering and public facilities, accessible public transport and services. In this way, awareness is raised about the importance of accessibility in urban environments, which directly contributes to the active participation of people with disabilities in everyday activities.

To create an inclusive urban environment, the active participation of the entire community in the design and creation of public space that will benefit everyone, not just marginalized groups, is crucial. Such an inclusive design can have a positive impact on the local economy, public health and the well-being of all residents equally. An inclusive urban environment is a benefit for all members of the society, where everyone can equally develop their individual potential.

Today, an inclusive living environment should be a reality that we live in, not an unrealized model for which there are theoretical solutions, which are very rarely or not at all implemented in practice.

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