INCLUSIVE EVOLUTION 2023

HANDBOOK ON MOBILITY

INEVO

2023

Babilon Travel

Funded by the European Union

Content

1. EXECUTIVE SUMMARY

The present Handbook of Mobility and the corresponding methodology represents the second deliverable of the third work package of the Civil Society Cooperation 2023 project entitled “Inclusive Evolution 2023” (InEvo 2023), part of the “Inclusive Evolution 2023-2025” program, developed by Asociația Babilon Travel Romania (1).

The aim of this handbook and methodology is to study accessibility and mobility services present in the European countries, mainly focused on accessible travel and mobility, and confront these findings with the needs of visually impaired/blind youngsters.

The corresponding methodology includes a desktop research with the purpose of creating a framework for the handbook of good practices regarding accessible, safe, and secure mobility/traveling of visually impaired/blind youngsters across Europe and actually in the whole world.

The methodology has an innovative value by focusing on accessibility and safety issues during the mobility of visually impaired/blind youngsters. It is intended to be used by interested stakeholders like visually impaired/blind youngsters, accompanying persons, non-profit organizations, educators, public institutions, and the business sector to develop appropriate activities, projects, and strategies meant to promote and sustain mobility and safe accessible traveling of VIP on a local, national and international level.

Starting from the assessment of the situation in Europe in general, the overall conclusion of the present study/handbook is that there are apparent differences regarding inclusive mobilities in different parts of our continent.

Western countries (including France, Germany, Spain, Italy, and other accessible destinations) are much more advanced, creating the context of accessibility and mobility for disabled people and developing adapted opportunities for them.

On the other hand, in many Eastern European countries, including here the Balkans and in some extent Romania, most of the relevant stakeholders (service providers) not even heard/though about accessibility and inclusive services. These countries need to become much more aware about this concept and try to follow the footsteps of their western peers.

1 - Asociatia Babilon Travel

2. INTRODUCTION ON THE INEVO 2023 PROJECT

2.1 Overall Description of the Project

2013 is the year when Babilon Travel NGO was born and had a great vision about each of us having a unique perception of the world we are living in.

Our main target groups and our overall mission are related to promoting social inclusion of youngsters with fewer opportunities through non-formal education, intercultural learning, European citizenship, volunteering, sport and mobilities. Since 2013/2014 we coordinated 5 local/national projects and 14 Erasmus+ projects and were/are partners to over 50 of such projects all focused on youth and social inclusion. We started with 3 staff members and now we work with more than 10 members of staff, most of them on a voluntary basis.

We consider that developing this project is a great opportunity for us to grow and to improve our activities and work, fulfilling our vision and main objectives: personal and professional development of youth with or without fewer opportunities (mostly with disabilities), empowerment of youth participation, quality of youth work and promotion of inclusion. From 2021 we are stressing the topics of sustainability and digital transformation.

For this project for the year 2023, we will coordinate and implement around 10 activities aside from the mobilities from other projects.

Our project is supporting the activities that we are planning to accomplish during the next 3 years (2023-2025).
The activities will develop and improve skills and competencies like:

- Make use of non-formal education methods and tools;
- Understand the needs of the disabled/fewer opportunities for youngsters;
- Use sport as an educational tool for inclusion.
- Develop activities adapted to the needs of youngsters with disabilities;
- Increase self-empowerment and self-esteem.
- Promote intercultural dialogue.
- Multilingual skills.

Develop and construct social links and networks.Gain knowledge about the Erasmus+ Program, the Youthpass, and the key competencies.
Our main target group for 2023 will be the youngsters with and/or without fewer opportunities (mainly with disabilities), youth workers, and decision-makers. The impact of 2023 year project will be also felt by all of our partners we are working with, and new organizations that we will get in our European network.

2.2 Objectives

One of the main aims of Babilon Travel during the years was/is to develop and improve barrier-free traveling and cross-traffic navigation solutions, to encourage mobility of visually impaired/blind youngsters (and not only youngsters), in an accessible and safe environment.

Our InEvo 2023, as part of the 2023-2025 program, aims to improve the mobility and quality of life of these youngsters all around Europe.

General objectives of the project:

O1: Social inclusion of marginalized youth. Removing barriers to active and equal participation in the public life of disabled youth and youth with other fewer opportunities, combating discrimination, increasing their chances on the labor market, and promoting inclusive non-formal and informal education and lifelong learning, in order to empower them to enjoy their fundamental rights and fully participate in society and the economy. This objective is directly targeting visually impaired/blind youngsters and is linked to the needs underpinned by the EU reports, revealing the presence of a consistent gap between the opportunities from which marginalized youngsters benefit and those available for their non-marginalized peers. Relevant differences are present on interpersonal (communication) level, on participatory level (community and democracy), and on personal and on professional levels. These needs require nonformal and informal learning for marginalized youngsters in order to be accomplished and to diminish stereotypes and even prejudices.

O2: Support youth workers to develop quality activities, based on values like equality, equity, inclusion, access to education and culture, democracy and human rights. Improve youth workers abilities to work with mixed groups of disabled and non-disabled youngsters and those with other fewer opportunities to:

- Engage them in the activities within their organization.
- Acquire various non-formal and informal learning methods and tools and find ways to adapt them to the needs of disabled participants.
- Support intercultural learning, active participation in the community on all levels.
- Develop communication, ICT and digital competences in order to promote inclusion, to improve confidence and self-empowerment, and to learn methods of working together in various situations.
- Use accessible sports and outdoor activities as tools for inclusion and for a healthy lifestyle.
- Include topics like environment, eco-friendliness and sustainability in their activities.

This objective is linked to youth workers and their lack of competencies regarding the inclusion of marginalized youngsters in activities and projects on local and international levels.

Asociatia Babilon Travel and its local and international partners experienced that many youth workers involved in such activities are resilient and reluctant in involving marginalized youngsters, and even if they do so, it is more for promotion and visibility reasons and not for real inclusion and participation (Hart's Ladder of Participation)(2). Some youth workers do activities including only disabled youngsters or youngsters with different categories of fewer opportunities and do not realize that doing so they are just widening the gap between these youngsters and their non-marginalized peers.

O3: Strengthen youth work in an inclusive context over Europe. Develop an international cross-sectorial network of professionals, organizations, public and private institutions, and other stakeholders active in the field of youth and social inclusion, capable of exchanging good practices on various related topics like non-formal, informal, and intercultural learning, interpersonal communication, digital competencies, independent and healthy lifestyle in a green, sustainable environment, employability and entrepreneurship.

There are many networks of professionals and organizations across Europe, dedicated to youth work in general but only a few of them are concerned and focused on quality social inclusion. We and our partners started already in previous projects to create and extend such an international and cross-sectorial (NGOs, city halls and other public bodies, educational establishments, private and media companies) network of professionals and related stakeholders, meant to engage in exchanges of best practices and share knowledge of the social inclusion of marginalized youth in their projects/activities.

Apart from our general objectives for 2023-2025 (O1-O3), we established inside our European network of partners some specific objectives for 2023 (SO1-SO5), mainly focused on the European Year of Skills 2023 (3) and the follow-up of the European Year of Youth 2022 (4):

SO1: Promote across our international network of partners, a learning platform already used in many cities/regions, not only in Europe but in the entire world (Cities/Regions of Learning). On the local level (Cluj- Napoca), we will promote and disseminate the Cluj-Napoca City of Learning platform.

2 - Hard's Ladder of Participation

3 - European Year of Skills 2023

4 - European Year of Youth 2022

SO2: Create a link between the educational service providers and the disabled and non-disabled youngsters in the search of such services.

SO3: Promote Open Badges as tools of recognition of non-formal learning outcomes.

SO4: Increase our European Network of partners and continue to develop its cross-sectorial dimension. In order to achieve this objective, we will organize a partnership building activity.
The SO1-SO4 objectives are directly connected to the European Year of Skills 2023, which will be promoted during all activities linked to these objectives.

SO5: Removing barriers to active and equal participation of disabled youngsters and youngsters with fewer opportunities in public life and to combat discrimination. Empower these youngsters to enjoy their fundamental rights and fully participate in society and the economy. To achieve this objective, we will organize an awareness campaign as a follow-up to the European Year of Youth 2022, in the city of Cluj- Napoca, together with the former and current beneficiaries (with and without disability or fewer opportunities in general).

2.3 Expected Results

Over the course of the project's duration (2023-2025), the following results and outcomes are anticipated:

- Innovative strategies to engage young individuals who are blind or visually impaired, by offering more compelling non-formal education and training programs tailored to their unique needs and aspirations.
- Strengthening the abilities of young individuals with visual impairments.
- Implementation of participatory methodologies and ICT-based strategies.
- Development of new or enhanced methods to meet the needs of the disadvantaged.
- Incorporation of established best practices and innovative methods into routine operations.
- Strengthened collaboration with partners across different countries and fields such as non-formal education, travel safety, training, and other socio-economic sectors.
- Enhanced awareness and receptivity towards societal diversity.
- Increased societal participation from young individuals who are visually impaired or blind.
- Enhanced motivation and satisfaction levels among visually impaired or blind young individuals when it comes to living and travelling.
- Promoting the inclusion of individuals with disabilities.

Distinct from other initiatives we have executed or learned about, some of the outputs of this project will be concrete, accessible, and transparent. They will cover a wide array of subjects and will be available to everyone interested in mobility, with a particular emphasis on visually impaired youth.

Starting from the above assumptions, the Inclusive Evolution 2023 project creates four work packages:

1. The first work package is about general project management.
2. The second work package concerns networking and cooperation with local, national, and international stakeholders are a valuable tool for increased success on project and organizational level. Even if Asociatia Babilon Travel (ABT) has extensive and rich partnerships and network, exchanging good practices and sharing information and knowledge is never enough. Furthermore, each project needs specific partners, and it is always a good idea to know them before starting the writing/applying and implementing.

For the year 2023, we established general objectives regarding networking and cooperation:

- Extend local, national, and international cooperation by meeting new possible partners.
- Building new partnerships.
- Consolidate and make the existing European network of partners stronger.
- Improving work within existing partnerships.
- Exchanging good practices with partners and developing with their help new inclusive youth policies on an international level.
- Consolidate the network of European partners with newcomers, meant to bring new ideas, more knowledge and expertise to all our future projects and activities.

Activities related to this work package include on-line and off-line partner meetings and a partnership building event.

3.The third work package is focused on desk research and inclusion, and actually the present Handbook on Mobility, is part of this work package.

For the year 2023, we established general objectives regarding inclusion:

- Empower disabled youngsters to be more active in their communities and to acquire skills connected to active participation, success on the labor market and entrepreneurship.
- Develop a set of good practices for national and international mobilities of visually impaired/blind youngsters.

4. The fourth work package is dedicated to dissemination, promotion, and visibility, aiming:

- Disseminate all tangible and intangible outputs and deliverables to our European network of partners, local interested stakeholders and marginalized and nonmarginalized youngsters, according to the communication and dissemination plan.

- Promote across partners a learning platform already used in many cities/regions, not only in Europe, but in the entire world (Cities/Regions of Learning).

- Link the educational service providers to the disabled and non-disabled youngsters in search for such services.

- Promote Open Badges as tools of recognition of non-formal learning outcomes.

- Remove barriers to active and equal participation of disabled youngsters and youngsters with fewer opportunities in public life and to combat discrimination.

- Empower these youngsters to enjoy their fundamental rights and fully participate in society and the economy.

2.4 The Coordinator - Asociatia Babilon Travel Romania (5)

Asociatia Babilon Travel's main mission is to promote inclusion, intercultural dialog, adaptive sports as instruments of inclusion, active European citizenship among young disabled people and young people with fewer opportunities. It also promotes sustainable tourism, rural tourism, ecotourism, traditions and handicrafts of Romania with focus on the region of Transylvania and the city of Cluj-Napoca, developing tourist tracks suitable for disabled young people. It also organizes sport and outdoor activities that help young disabled people to better integrate in the local, national and international community.

5 - Asociatia Babilon Travel

In their programs, ABT trains youth workers, youth leaders, teachers, educators and volunteers, to be capable to involve people with disabilities in various activities, including educational, sport, indoor and outdoor activities. ABT also trains volunteers to accompany groups of people with disabilities, especially visually impaired, along adapted tourist tracks, that are documented with accessible tourist guides in Braille and large fonts and audio guides. ABT staff provides training, consultancy and advice to those interested in methods and tools of non-formal education, intercultural learning, various forms of inclusion, inclusive and adaptive sports, as tools for inclusion, tourism, rural tourism and conservation, traditions, crafts, gastronomy and related areas.

In its work, ABT is widely supported by the local strategic partners: The High School for Visually Impaired Cluj-Napoca (LSDV), The Tourist Information Center of the City Hall (Cluj-Napoca), The National Association of Blind and Visually Impaired Romania and The Ethnographic Museum of Transylvania.

The main programs ABT is working on, since it was founded (2013), are focused on social inclusion. ABT develops, on local, national and European level, accessible tourist tracks for young people with disabilities, especially those visually impaired/blind (VI). It has in- and outdoor activities and special sport programs, dedicated to mixed groups of VI and non-VI, where sport is used as a tool for inclusion.

Early 2016, due to the immigrants' challenge in Europe, ABT started a program for social inclusion of immigrants in the local hosting communities.

ABT acts as a sending organization especially for its staff, volunteers and staff of its strategic partners, to trainings and events, on national and international level, related to non-formal education (NFE), inclusion, sport, entrepreneurship, intercultural learning, information and communication technologies (ICT) and social media platforms.

For these and for future projects and programs, ABT has built international partnerships and constantly expands its experience and knowledge in NFE methods and tools focused on disabled young people. In its projects, ABT is widely using NFE, ICT and social media platforms for communication, promotion and visibility.

3. SECONDARY GAP ASSESSMENT RESEARCH (DESK RESEARCH)

3.1 Methodology

The desk research phase commenced with an online study using the Google search engine. The aim was to find both institutions and individuals, as well as activities and results, that contribute positively to the visually impaired/blind youth's (and indeed not exclusively the youth) pursuit of safe and as much as possible unaccompanied mobility. Initial apprehension, rooted in the concern of not uncovering enough initiatives by stakeholders addressing this target group's mobility, was quickly replaced by widespread enthusiasm. A wealth of initiatives, activities, and projects are underway aimed at enhancing the lives of visually impaired/blind youth (VIP), many of which are geared towards improving the quality of life, even if they are not all centered on mobility. When it comes to VIP mobility and transport accessibility, the desk research identified several non-profit organizations that have been actively, persistently, and effectively focusing on VIP, producing tangible and commendable results over several years.

The desk research also leveraged information and recommendations from many of our beneficiaries, who over the years have benefitted from services provided by stakeholders we intended to incorporate in our study. This facilitated establishing a direct connection with these stakeholders.

The research compiled results from internet-based studies with numerous stakeholders who have made significant contributions to VIP mobility, thereby facilitating their independent living and travel.

The approach followed for the desk research phase also aimed to compile and summarize all legislation related to accessibility and disability rights, as laws and standards are the foundational elements of accessibility structure. These laws outline the minimum measures to be adopted in infrastructure, transport, accommodation, and services.

The desk research also gathered a range of statistics that highlight the crucial role of travel as a driving force for regional, national, and international economies. Important studies were reviewed during the desk research phase, focusing primarily on how visually impaired individuals perceive mobility/travel and accessibility in Europe, and the significance of people with disabilities as a group.

Travel in general rests upon mobility, which can be considered a fundamental human right. Regarding individuals with disabilities in general and visually impaired/blind
(VIP) in particular, these rights are enshrined at the international level by the UN Convention on the Rights of Persons with Disabilities (6). Equal access to mobility is safeguarded in this international treaty.

At the European level, the leading stakeholder setting guidelines for VIP with respect to mobility and accessibility is the European Blind Union (EBU) (7). According to the EBU, there are three principal domains that contribute to the accessibility and safe, independent mobility of VIP. These domains include:

(1) Regulations and standards.

(2) Physical environment and infrastructure.

(3) Technological solutions.

These are all grounded in the belief that the three areas of regulation, built environment, and technological solutions are intertwined and must be unified to optimize mobility accessibility across Europe.

The structure of our manual is predicated on these three domains.

3.2 Statistical data

Drawing from the desk research, statistics put forth by the European Blind Union, Eurostat's internal data, information amassed by Asociatia Babilon Travel, and field research:

1.A large proportion of visually impaired individuals (VIPs) prefer to travel accompanied. While on the move, they predominantly rely on canes as their assistive tools.

2. Considering technological aids, about 90% of VIPs harness the power of smartphones for navigation.

6 - UN Convention on the Rights of Persons with Disabilities

7 - European Blind Union

3. When it comes to navigation software, a majority of VIPs utilize platforms such as Google maps (8), Lazarillo (9), and Moovit (10), Blindsquare (11); Apple Maps (12), MSInternational (13), Nunav (14), Nearby Explorer (15), Osmand (16), WazeEye-D (17), InfoSTB (18), Google Flight (19), Tandem Navigator (20), Tandem Access (21), InfoFer (22), Step-Hear (22).

4. During their travels, VIPs frequently face impediments related to transport, tourist attractions, and accommodations, including:

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8 - Google Maps

9 - Lazarillo

10 - Moovit

11 - Blind Square

12 - Maps - Apple

13 - International Blind Sports

14 - Nunav

15 - Google Play Application

16 - Osmand

17 - Wayseye

18 - STBSA

19 - Google Flights

20 - Tandem Navigator

21 - Tandem Access

22 - Infofer

23 - Step Hear

Transport impediments:

- Encountering architectural barriers.
- Lack of assistance.
- Absence of established protocols at the national and EU level for VIPs.
- No voice-guided directions in public transportation.
- Non-existence of tactile carpets.

Accommodation challenges: No booking platforms offering audio-based facilitation.

5.All VIPs tend to seek help, support, or guidance from unknown passers-by.

6.The facilities that VIPs found most beneficial during their travels include:

- Tactile carpets.
- Audio guides.
- Audio-enabled traffic signals.
- Buses equipped with voice notifications.
- Tactile layout designs.
- Tactile maps.

7.A considerable number of VIPs revealed that they did not receive any free access or facilities as visually impaired/blind individuals.

8.Some VIPs acknowledged that they had benefited from specialized training courses intended to enhance their field orientation, provided by educational institutions (schools).

3.3 Legislation

According to statistical data, case studies, and a compilation of good practices collected throughout Europe, as well as our own desk research, there are some significant findings to underscore:

The ratification of the United Nations Convention on the Rights of Persons with Disabilities secures equal access to mobility as enshrined in this international agreement. This is an essential precursor to the enjoyment of other rights, as independent and safe mobility is necessary to access employment, recreational activities, and health services.

Most European countries have implemented accessibility legislation, which addresses the built environment through general building regulations, laws, and often specific access legislation for certain sectors of the tourism industry (e.g., hotels). However, it appears that regulations regarding accessibility are primarily applied when planning new buildings, and any compliance assessment procedures generally seem to be weak. The modification of facilities in historic buildings and environments is frequently identified as a significant barrier to improved accessibility, making the process more challenging.

Legislation and standards are the most effective areas assuming they are represented by binding laws to create an accessible environment for VIPs. They need to be robustly implemented and stringently enforced, for instance, with fines. Administrators, planners, public transport personnel, and other staff members must undergo training to understand access needs and accessibility provisions. Only then can a consistent and lasting change be achieved.

The Romanian Institute for Human Rights (Institutul Român pentru Drepturile Omului) has granted us access to the complete legislation governing the rights of persons with disabilities through its brochure "Non-discrimination, autonomy, inclusion - instruments on the rights of persons with disabilities and case law in the matter".

Namely:

Protection of persons with disabilities in the U.N.O.

- The Declaration of Human Rights; (24)
- The International Covenant on civil and political rights; (25)
- The International Covenant on economic, social and cultural rights; (26)

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24 - The Declaration of Human Rights

25 - International Covenant on Civil and Political Rights

26 - International Covenant on Economic, Social and Cultural Rights

- The International Convention on the Elimination of All Forms of Racial Discrimination; (27)
- UNESCO Convention on the fight against discrimination in education; (28)
- Convention on the rights of persons with disabilities. (29)

Protection of persons with disabilities at the level of the Council of Europe

- Convention for the defense of human rights and fundamental freedom (30)
- The European Convention for the Protection of Human Rights and the Dignity of the Human Being with regard to the Applications of Biology and Medicine, the Convention on Human Rights and Biomedicine; (31)
- The European Social Charter; (32)
- Revised European Social Charter; (33)
- Action Plan to promote the rights and full participation of people with disabilities in society: improving the quality of life of people in Europe 2006-2015; (34)
- Recommendation (2011) 14 regarding the participation of persons with disabilities in political and public life. (36)

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27 - International Convention on the Elimination of All Forms of Racial Discrimination

28 - Unesco - Convention against Discrimination in Education

29 - Convention on the Rights of Persons with Disabilities

30 - Convention for the Protection of Human Rights and Fundamental Freedoms

31 - Convention List - Treaty Office

32 - The European Social Charter

33 - Convention List - Treaties

34 - Disability Action Plan 2006-2015

36 - Recommendation CM/Rec(2011) 14 on the participation of persons with disabilities in political and public life

Protection of persons with disabilities within the European Union

- The Charter of Fundamental Rights of the European Union; (36)
- The Community Charter on the fundamental social rights of workers; (37)
- Regulation (EC) no. 1107/2006 of 5.07.2006 regarding the rights of persons with disabilities and persons with reduced mobility during the journey by air; (38)
- Regulation (C.E.) no. 1371/2007 of 23.10. 2007 on the rights and obligations of rail passengers; (39)
- Regulation (U.E.) no. 1177/2010 of 24.11. 2010 regarding the rights of passengers traveling by sea and inland waterways and amending Regulation (C.E.) no. 2006/2004. 178; (40)
- The 2010-2020 European strategy for people with disabilities: a renewed commitment to a Europe without barriers. (41)

Taking Romania as an example, several laws are in place that govern the rights of persons with disabilities, of which several impact mobility and travel. These include:

- LAW No. 448, issued on December 6, 2006, and subsequently updated on February 22, 2019, addresses the protection and advancement of the rights of disabled individuals.

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37 - CHARTER OF FUNDAMENTAL RIGHTS OF THE EUROPEAN UNION
38 - Community Charter of Fundamental Social Rights of Workers
39 - Regulation (EC) No 1107/2006 of the European Parliament and of the Council of 5 July 2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air
40 - Regulation (EC) No 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers' rights and obligations
41 - Regulation (EU) No 1177/2010 of the European Parliament and of the Council of 24 November 2010 concerning the rights of passengers when travelling by sea and inland waterway and amending Regulation (EC) No 2006/2004 Text with EEA relevance
42 - Active and Healthy Living in the Digital World | Futurium

This law governs the rights and responsibilities of persons with disabilities with the objective of fostering their social integration and inclusion. It is based on principles including respect for human rights and basic freedoms; the prevention and elimination of discrimination; opportunity equalization; communal empowerment; societal accommodation for the disabled person; the best interest of the disabled person; the right to make choices and decisions regarding one's own life, services, and types of support; protection against neglect and abuse; and opting for the least restrictive alternative when deciding on the required support and assistance.

According to this law, 'accessibility' is defined as the collection of actions and modifications made to the physical and informational-communication environments to accommodate the needs of disabled persons. This is an essential factor for disabled individuals to exercise their rights and fulfill societal obligations.

Among other areas, Law 448/2006 (43) outlines measures for accessibility and information and communication technology (ICT) mainly overseen by public authorities, with an implementation deadline of December 31, 2007. In 2008, the Ministry of Communications and Information Technology created a guide for public authorities, which established web design standards, including a section devoted to web accessibility for disabled individuals.

- LAW No. 221, enacted on November 11, 2010, ratified the Convention on the Rights of Persons with Disabilities. This Convention was adopted in New York by the United Nations General Assembly on December 13, 2006, opened for signature on March 30, 2007, and was signed by Romania on September 26, 2007. (44)

Romania ratified the UN Convention on the Rights of Persons with Disabilities, which came into effect for the country in January 2011. The Convention presents the most comprehensive and specific definition of 'accessibility', a concept that extends beyond simply making public spaces accessible. It also outlines the obligations of the signatory states in relation to this concept.

- Government Resolution no. 268 dated 14.03.2007, approves the Methodological Norms for the implementation of the provisions of Law no. 448/2006, regarding the safeguarding and promotion of the rights of individuals with disabilities. (45)

43 - LEGE 448 06/12/2006 - Portal Legislativ

44 - LEGE 221 11/11/2010 - Portal Legislativ

45 - HG 268 14/03/2007 - Portal Legislativ

- Government Resolution no. 787 (46) dated 17.07.2007, establishes measures to ensure the application of Regulation (EC) no. 1107/2006, as of 5.07.2006, which pertains to the rights of individuals with disabilities and those with reduced mobility when traveling by air. (46)

- The Normative NP 051 addresses the adaptation of civil buildings and urban spaces to meet the unique needs of individuals with disabilities. It is in line with European requirements in this field and contains a significant section regarding accessibility for the blind. It stipulates the minimum criteria necessary for the accessibility of civil buildings and urban spaces for people with disabilities, (47) inclusive of detailed and illustrative instructions for each type of situation that requires accessibility. Furthermore, it provides an informative, accessibility-check grid (Annex F). As such, there are clear regulations in place to ensure that new buildings and newly developed public spaces comply with accessibility standards.

Despite these laws, the national reality for the mobility/traveling of disabled people in general, and visually impaired and blind people in particular, in Romania is still quite challenging. Young people with visual impairments continue to voice concerns about mobility, accessibility, travel, and access to independent living.

3.4 Built environment and infrastructure

Quality labels, integral to some Accessibility Information Schemes, aim to signify trustworthy compliance with accessibility standards. Such schemes also serve as beneficial business development tools and a guide for businesses to comprehend accessibility. Nevertheless, each new accessibility marking scheme poses a potential issue for the VIP, given that each scheme employs its own terminologies, access norms, user profiles, tactile symbols, and languages. Consequently, the burgeoning of access markers may inadvertently dilute, rather than enhance, the provision of useful and readily accessible information due to the lack of uniformity among well-intentioned standard and system creators.

Some labels target specific impairment groups, which can be a vital incentive for stakeholders to engage with the label and make the initial investment. However, this approach is incompatible with a cross-impairment methodology. Destinations and suppliers must recognize that single-impairment labels (e.g. focusing only on "visually impaired/blind users" or only "wheelchair users") are likely to be inadequate as many customers have multiple access needs that need to be addressed.

46 - HG 787 17/07/2007 - Portal Legislativ

47 - Normativ privind adaptarea clădirilor civile și spațiului urban la nevoile individuale ale persoanelor cu handicap, indicativ NP 051

Current standards and labels have some weaknesses, namely, they need consistent funding, they often fail to be self-sustaining, and thus, often do not extend beyond the pilot phase, failing to achieve the necessary scale and replication to maximize their impact.

In today's interconnected Europe, solutions that can be easily transferred from one national context to another are preferable. This also suggests that accessibility provisions should cater to travelers and not solely depend on digital solutions that are only available to residents. The creation of European Standards could be largely beneficial. However, adaptations across Europe vary by country or even by city. Given the absence of harmonized standards and considering diverse cultural approaches to altering the built environment, a common system across the continent seems unlikely, at least at this juncture. Nonetheless, it is desirable, as predictability and usability for visually impaired pedestrians are vital. There must be a common framework, such as a harmonized "language" of guiding strips or warning signals. This predictability allows for effortless navigation of unfamiliar locations.

Along with predictability, solutions should also be tailored to the local context. Modifications of the physical environment in an ancient town with narrow, cobblestone pavements offer different challenges and demand different solutions than those in a newly constructed suburb. When it comes to infrastructure, existing services influence the design of an accessible solution.

Inclusive, mainstream accessibility solutions are favored over separate solutions created exclusively for visually impaired users. Although there should be European standards for accessibility and mobility, these should also be adapted to the specific geographical context and the situation of limited public transportation infrastructure. In general, mainstream public transportation should be adjusted to achieve full accessibility so it can be utilized by both individuals with disabilities and those without. Moreover, discounted rates for individuals with disabilities or their helpers is a recommended practice to enhance mobility conveniently.

One of the most effective strategies to foster accessible mobility/travel at the destination level is the implementation of physical infrastructure action plans. Investments in the external environment will enhance its appeal.

Accessibility solutions should be designed following the "Design for All" principles, implying they benefit the maximum number of individuals with disabilities as well as those without. While accessibility is a necessity for some, it is beneficial for everyone. Additionally, creating products and services to be accessible from the outset is more cost-effective and straightforward than making adjustments later.

The 7 Principles of Universal Design were formulated in 1997 by a working group comprising architects, product designers, engineers, and environmental design researchers. These principles are intended to guide the design of environments, products, and communications. As per the Center for Universal Design in NCSU (48), these principles "may be used to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments."

Principle 1: Universal Accessibility: The design caters to and is beneficial for individuals with varying abilities.
Guidelines:

- Ensure all users have identical or equivalent means of use.
- Prevent any form of user segregation or stigmatization.
- Accessibility to privacy, security, and safety measures should be evenly distributed among all users.
- Design should appeal to a broad spectrum of users.

Principle 2: Use Flexibility: The design caters to a wide array of individual preferences and abilities.
Guidelines:

- Offer options in methods of use.
- Ensure design caters to both right- and left-handed users.
- Enhance user's precision and accuracy.
- Accommodate user's speed and pace.

Principle 3: Ease and Intuitiveness in Use: The design should be straightforward and simple to use, independent of the user's experience, knowledge, language proficiency, or current level of focus.
Guidelines:

- Avoid unnecessary complexity.
- Ensure the design aligns with user expectations and intuition.
- Cater to diverse literacy and language skills.
- Prioritize and arrange information based on its relevance.
- Offer efficient prompts and feedback throughout and after the completion of tasks.

48 - Center of Universal Design

Principle 4: Clear Information: The design effectively conveys vital information to the user, irrespective of ambient conditions or the user's sensory capabilities.
Guidelines:

- Incorporate various modes (visual, verbal, tactile) for redundancy in essential information presentation.
- Ensure adequate contrast between vital information and its surroundings.
- Optimize the "readability" of essential information.
- Distinguish elements in a manner that can be verbally described to assist with instruction or directions.
- Ensure compatibility with an array of techniques or devices used by individuals with sensory impairments.

Principle 5: Error Tolerance: The design minimizes risks and the unfavorable outcomes of accidental or unintended actions.
Guidelines:

- Organize elements to reduce risks and errors: frequently used elements should be most accessible; hazardous elements should be eliminated, isolated, or shielded.
- Offer warnings for potential hazards and errors.
- Integrate fail-safe features.
- Prevent unconscious action in tasks demanding vigilance.

Principle 6: Minimal Physical Effort: The design allows for efficient and comfortable use with minimal fatigue.
Guidelines:

- Promote a neutral body position for the user.
- Incorporate reasonable operational forces.
- Limit repetitive actions.
- Reduce the need for sustained physical exertion.

Principle 7: Space and Size for Approach and Use: The design provides adequate size and space for approach, reach, manipulation, and use, irrespective of the user's body size, posture, or mobility.
Guidelines:

- Ensure a clear line of sight to vital elements for any user, seated or standing.
- Allow comfortable reach to all components for all users.
- Accommodate variations in grip and hand size.
- Ensure sufficient space for the use of assistive devices or personal assistance.

General and specialized devices (such as smartphones, intelligent canes, smart glasses, etc.) and mobile applications have immense potential but possess one intrinsic limitation: Not all individuals with visual impairments can or choose to depend on mobile services centered around smartphones.

Utilizing a smartphone can be challenging when simultaneously holding a white cane and a bag of groceries. Furthermore, there's a notable risk of excluding those who are elderly or financially unable to afford a smartphone. Additionally, pedestrians should not be burdened with multiple supplementary gadgets to enable their digital solutions, particularly when these are only functional in certain areas.

Digital Solutions encompass a broad spectrum of technologies designed for localization, navigation, control, and information dissemination. While some solutions necessitate specific applications or devices, others are universally accessible.

Nearly any device or display can be made accessible for users with visual impairments. However, it's important to note that adaptations differ for those with partial sight (requiring high contrast values, larger and more readable fonts, etc.) and for those who are completely blind (requiring synthetic speech output, internet accessibility, etc.). Additionally, when an accessible device or application is public-facing, it's crucial to maintain its accessibility features during any updates.

Digital Solutions should be well-planned, predictable, and user-friendly. Wherever feasible, digital solutions and physical infrastructure should supplement each other, such as buses and bus stops in public transportation.

4. BEST PRACTICES

Here are some exemplars of best practices that significantly contribute to the mobility of visually impaired people (VIP) and their ability to live and travel independently.

4.1 Urban Mobility Center (Centrul de Mobilitate Urbană) (49) within the AMAIS Association Bucharest (50)

This organization stands out due to the commitment, constancy, and expertise with which it provides self-help services to visually impaired individuals, enabling them to become largely self-sufficient in their daily activities. This self-sufficiency forms a crucial prerequisite for the desire and capability to travel safely. The association's services manifest in various types of workshops where VIP continuously learn and train, like:

- Mobility workshops focus on teaching how to utilize one's hearing (how sound is reflected), understanding the organization of the city, and learning to use mobile phones and navigation applications. During these sessions, trainers learn how to engage with VIP effectively. Guides for volunteers are also prepared as part of these sessions. Each year's activities culminate in mobility tests involving mixed teams of VIP and sighted individuals who collectively explore certain areas.
- Cooking workshops take place in various locations such as restaurants and bakeries, for both blind individuals and sighted individuals who are blindfolded.
- Echolocation workshops for independent living cover a variety of tasks like using the cane, tying shoelaces, and pouring water into a glass. These workshops teach participants how to use their hearing to detect objects around them and how to use intentional sounds (sonar) to understand how sound propagates. This is where individuals learn to discern the origin of sounds.
- Arts & hobbies: ceramics

4.2 Tandem Association (51)

The association focuses not only on providing accessible transportation solutions for visually impaired people (VIP) but also strives to involve VIP in an active lifestyle

49 - Urban Mobility Center

50 - AMAIS

51 - Asociatia Tandem

through cultural and sporting activities. In terms of travel accessibility, they have implemented several projects, with Tandem Access being the most successful.

The Tandem Access (52) project introduced a navigation and orientation model within subway stations for visually impaired users. This system provides users with notifications containing descriptive information through an app, assisting them in orienting themselves to and from the subway system's platforms and entrances.

This model comprises a network of 1500 iBeacons installed inside the stations that communicate with the user's mobile phone via Bluetooth. The platform can discern the user's movement direction based on the sequence of beacons the mobile device interacts with. Additionally, at intersections, it can notify the user of all potential destinations and the direction to follow to reach them.

Tandem Navigator (53) is an active system that both creates a pedestrian route from the starting point to the destination and signals obstacles and points of interest in public spaces. It is the first urban mobility project in Romania for visually impaired individuals that relies on smartphone usage.

The phone's GPS can be used for everyday trips. The first time the user travels a route, they will create points of interest along the way (for instance, a shop, street corner, intersection, obstacle, etc.). Upon reaching the destination, the user will add one final point of interest and complete the route. Once saved, the route will contain the GPS coordinates for all saved points of interest, along with their descriptions.

Beyond this technology-based project, the association also conducts cultural projects, including theater, modeling, music, and computer competitions in schools for children from blind schools. Recently, efforts have been made toward civic education and the understanding of rights for people with disabilities.

Sporting projects are also undertaken under the banner of **Tandem Arena (54)**. A national tandem bike championship has been initiated and occurs annually. Visually impaired children are brought to a sports facility in Izvorani (near Bucharest), where they participate in swimming, cycling, and athletics training.

52 - Tandem Access

53 - Tandem Navigator

54 - Tandem Arena

4.3 Polytechnic University Bucharest (55)

Prof. Dr. Ing. Alin Moldoveanu (56), who serves as the associate dean of the Faculty of Automation and Computers at Polytechnic University Bucharest, is at the forefront of the technical coordination of the groundbreaking initiative, "Sound of Vision" (57).

This pioneering venture aims to create an apparatus that substitutes one sense (vision) with two others - auditory and proprioceptive senses, consequently enabling visually impaired individuals to move around in a manner akin to the sighted ones.

The Polytechnic University of Bucharest, in collaboration with its Faculty of Automation and Computers and associated partners from four other European nations, has cultivated the most cutting-edge integrated system which empowers the visually impaired to comprehend their surroundings via an alternative interpretation founded on sounds and vibrations. Sound of Vision (soundofvision.net), part of the ambitious Horizon 2020 European project, has set its sights on designing a wearable device. Upon project conclusion, the product, currently in the prototype stage (TRL 8), is a comprehensive solution inclusive of hardware, software, and procedural training.

The system has undergone extensive testing with the participation of a substantial cohort of visually impaired individuals and has been progressively enhanced based on the received feedback. The outcomes are exceptionally promising: trained users can perceive their surroundings and navigate with impressive dynamism using the prototype.

Visually impaired users can discern the objects in their vicinity, thus enabling them to navigate, orient, and move about with ease. The system incorporates a plethora of features, such as specific types of objects that require special attention— doors, stairs, potholes, and head-level obstacles— they are distinctly represented. Moreover, a wide array of other elements that cater to the users' needs have been integrated, such as sidewalk navigation, guides, traffic sign detection, pedestrian crossings, traffic light color, and textual descriptions. By merely pressing a button, the system audibly provides textual information, like "Here's the pharmacy", or "Here's the grocery store".

55 - Politehnica University of Bucharest

56 - Alin Dragos Bogdan Moldoveanu

57 - Sound of Vision project

Solutions to incorporate all these features in a comprehensive, integrative system are in place. We also envisage integrating GPS navigation, potentially enabling the system to become a comprehensive artificial sensory solution.

In a span of 3-5 years, one could envision the device taking the form of eyeglasses, a belt, or a comfortable shirt/vest that is non-intrusive and is used in conjunction with a mobile phone.

Regarding the cost, it is projected not to exceed 1000 euros, with a vision of a downward trend as production scales up.

4.4 OrCam IT Assistant (58)

This highly sophisticated wearable technological aid for the visually impaired and partially sighted not only reads text but also identifies faces, products, and more.

Effortlessly fitting onto any spectacle frame, OrCam's revolutionary transformation of visual data into spoken language allows you to read text, recognize faces, and identify products and currency notes instantly, discreetly, and with ease.

OrCam is an assistive gadget that provides support in an unobtrusive, straightforward, and easy-to-use manner. It gives you a sense of relaxation and increased security, reducing stress. OrCam imparts information, fostering independence.

Features:

- Text Reading
- Capable of reading a variety of texts such as newspapers, books, menus, signs, product labels, and screens.
- Face Recognition
- The device announces the real-time identification of faces smoothly.
- Product Identification
- Recognizes products, facilitating an independent shopping experience.
- Ease of Use
- Responds intuitively to simple hand gestures.
- Portability
- Compact, lightweight, and attaches magnetically to virtually any spectacle frame.
- Universal Utility
- Compact, wireless, and operates independently of an internet connection.

58 - OrCam IT Assistant

4.5 WeWALK Smart Cane (59)

The technology enhances the independence of visually impaired individuals and fosters their full engagement in societal activities. WeWALK Smart Cane is an innovative smart cane designed specifically for the visually impaired. WeWALK seamlessly connects to the conventional white cane, transforming it into a state-of-the-art smart cane. This technology boosts the independence of visually impaired individuals and encourages their complete involvement in society.

WeWALK Smart Cane ensures safer travel for visually impaired people with its obstacle detection feature and simplifies the travel experience with integrations for navigation and public transportation, promoting a higher degree of independence.

WeWALK identifies obstacles above the chest level using an ultrasonic sensor and provides alerts through vibrations.

- Delivers navigation instructions in a turn-by-turn and clockwise manner.
- Enables access to all nearby bus stops and bus schedules.
- Informs you about your surroundings, including popular spots, restaurants, bars, and cafes.
- Interacts with Alexa Voice Assistant

When synced with the WeWALK application, tasks like navigation can be easily executed on WeWALK without the need to use your phone.
Each newly developed integration for WeWALK introduces additional features via software updates. WeWALK is integrated with a Voice Assistant and Google Maps.

4.6 Coordinating a Mobility Journey

Building on Babilon Travel's decade-long experience in managing and overseeing mobility journeys for visually impaired young people, the process can be broken down into two main stages: planning and organizing.

1.Planning:

Plan your travel well in advance. Ideally, reservations should be made six months ahead. Three months in advance often no longer suffices. Booking a hotel online usually comes without cost and allows free amendments until a few days before

59 - WeWALK

check-in. The case is different with air tickets where any changes come at a cost, often substantial.

Attempt to arrange your travel during the off-season, but within a suitable climate period. A successful journey balances relaxation (at the beach, pool, etc.) with the exploration of new territories, whether natural, urban, or cultural.
If the journey is for professional purposes, ensure to schedule at least half a day for sightseeing in the city you are visiting. Otherwise, you risk visiting the same city multiple times without realizing you have been there before (a real-life case, not a joke).

2.Organizing:

If you are a visually impaired youth travelling with or without an escort, the following considerations are crucial:

a. Transport
If you are not changing continents and the countries you aim to visit are within a reasonable distance, the train or bus may be the best options;
For extended distances, an airplane might be a more practical choice. It's important to identify flights that offer the best value in terms of cost and airport location (skyscanner.com).

b. Accommodation
Various online platforms provide you with the option to book a hotel room. Prior to booking, read reviews from other guests who have stayed at the hotel you're considering, paying particular attention to comments about accessibility. It may be beneficial to contact the hotel directly to inquire about the amenities available for blind/visually impaired guests.

If you are travelling by car, consider the availability and cost of parking at or near the hotel. Occasionally, opting for a pricier hotel with complimentary parking may be more cost-effective.

For visually impaired/blind individuals, hotels situated in the city center, especially in historical areas, are often preferable, though access routes to these may be narrow and winding. Consequently, it can be better to choose a hotel located on the city outskirts, which often offers equivalent comfort at a much lower price, and is conveniently located near public transport.

If your stay in a single location exceeds 2-3 days, consider renting an apartment. This option is typically cheaper than a hotel room and offers more comfort, barring room service.

c. Useful Devices and Applications

Almost all blind/visually impaired travellers, whether accompanied or not, utilize various ICT devices and applications that assist in navigation from point A to point B. Some of the most commonly used include smartphones, Google Maps, and Moovit.

5. IMPROVEMENTS REQUIRED

An evaluation of the desk research reveals a clear disparity in the accessibility and inclusivity of mobility across various regions of our continent.

Western nations (such as Spain, France, Italy, Germany, etc.) are significantly more progressive, establishing an environment of accessibility and mobility for the visually impaired/blind community.

Conversely, many Eastern European countries, including the Balkans and Romania, lack awareness about accessible travel. Many of their significant stakeholders haven't even considered this concept. These nations must increase their awareness and strive to emulate the advancements of their Western counterparts.

Broadly, several universal issues require enhancement to boost the mobility of visually impaired/blind youths (and not only youths):

- Implementation of voice-guided directions and maps.
- Creation of tactile paths and solutions to circumvent infrastructure barriers.
- Developing ways to communicate public transportation schedules and directions to visually impaired people in an accessible manner.
- Infrastructure modifications in all railway stations, applying contemporary technologies for information dissemination and escorting.
- Use of auditory signals and directions, and marking central urban areas and public transportation access points with tactile paths.
- Identification of public transport's deficiencies for people with disabilities.
- Development of a strategy that includes recommendations and measures to ease the movement in public transport for people with disabilities.

- Involvement of Associations of visually impaired people in the formulation of these measures.
- Adoption of a strategy by the executive branch for the development of infrastructure projects where accessibility for visually impaired people is one of the key components.
- Mobile applications equipped with voice-guided directions and maps.
- Ticket machines and information panels, especially at bus and railway stations, should be accessible to visually impaired people.
- Training of employees by bus, train, and airline companies on how to interact with people with disabilities.
- Improvement of bus transport structure, so visually impaired people can predict which bus to board, determine if seats are available, and know where and when it stops.
- Substantial enhancements are required at bus stations: all buses should have vocal announcements; they should be equipped with 2-3 loudspeakers, not just at the front.
- Railway stations are highly inaccessible for visually impaired people, the staff lacks training, and announcements are unclear and insufficiently loud. Trains should introduce an announcement system about the next station and current time.
- Delays and the next station should be announced on the train.
- Implement transport accessibility through signage and an acoustic system.
- Resolve the issues concerning guide dogs, enabling their access to buses, trains, and restaurants.
- Maintain and update existing infrastructure to ensure its continued availability for visually impaired individuals.

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