



Co-funded by the  
Erasmus+ Programme  
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# Intellectual Output 1

## Scoping



THE TRANSYLVANIAN  
MUSEUM  
OF ETHNOGRAPHY



UNIVERSITATEA  
BABES-BOLYAI



Eötvös Loránd  
Tudományegyetem



UNIVERSITY OF  
THESSALY



MUSEUM  
OF CYCLADIC  
ART



The project ToMIMEUs: Towards a Multisensory and Inclusive Museum for Individuals with Sensory Disabilities (No: 2019-1-RO01-KA202-063245) has been funded by the Erasmus+ program of the European Union.

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# Structure of Scoping Activity

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## **The objectives of the Scoping are as follows:**

- To realize a literature review regarding the access and inclusion of individuals with sensory impairments to museums and galleries
- To realize a report with a presentation of examples of best practices in policy, practice and programmes in each country referring to access and inclusion of individuals with sensory impairments to museums and galleries
- To explore the needs and challenges of the museum staff regarding visitors with sensory impairments and their perspectives regarding the characteristics of an accessible and inclusive museum.

## **The tasks that need to be carried out within scoping are:**

- T1.1 Needs assessment study and literature review on accessibility in museums and people with sensory disabilities (vision and hearing)
- T1.2. Scope of current and relevant previous EU programmes
- T1.3 Collection of examples of best practices in policy, practice and programmes in each country
- T1.4. Focus group with staff from museums referring to needs and challenges in the domain of museum accessibility

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## I. International legislation and policies concerning rights of people with disabilities, accessibility, methodologies and strategies

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At International and European level, there are initiatives, programs, legislations, organizations, institutions that work on issues related to disability, accessibility, inclusion, rights of people, rights of people with disabilities and other specific and related issues.

The Universal Declaration of Human Rights, adopted in 1948, was the first ever legal instrument to state that education is a human right, to be enjoyed by every person on equal terms.

The UN Convention on the Rights of Persons with Disabilities (UNCRPD) is the first international, legally binding instrument that sets minimum standards for the rights of persons with disabilities and the first human rights convention to which the EU has become part of it. [The Convention on the Rights of Persons with disabilities](#) (CRPD) was adopted in 2006 (so far ratified by 181 governments) and its optional protocol (signed by 96 countries and regional integration organisations), is the first comprehensive human rights treaty of the twenty-first century. CRPD clarifies and qualifies how all categories of rights apply to persons with disabilities, and identifies areas where adaptations have to be made for persons with disabilities to effectively exercise their rights and areas where their rights have been violated, and where protection of rights must be reinforced (UN, n. d.). Article 24 declares that education must be free, accessible and inclusive for students with disabilities, providing all necessary individualised support and accommodations, and declares that 'States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and lifelong learning (CRPD, 2006).

The Commission regularly discusses the implementation of the convention at EU and Member States level in a high-level group on disability issues with: European Commission, experts from EU Member States, Norway, several NGOs at EU level, including organizations of persons with disabilities (DPOs). In addition, an annual working forum brings together those responsible for implementing and monitoring the convention, civil society bodies and organizations of persons with disabilities in the EU and its Member States.

The first of the basic documents on equal access is the Convention on the Rights of Persons with Disabilities and the Optional Protocol, which was adopted by the United Nations on 13 December 2006. The purpose of the Convention is to “promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity”.

According to the UN Convention, not only respect for individual autonomy, but also non-discrimination is a general principle, as is equal opportunities, accessibility and respect for the diversity of persons with disabilities and their acceptance. It is a fundamental principle to respect the evolving abilities of children with disabilities and to respect their rights to preserve their identity.

Article 1 defines the target group as follows: “Persons with disability include those persons who have long-term physical, mental, intellectual or sensorial deficiencies, which could limit the full and effective participation of those persons to society life in equal conditions with the others, interacting with various barriers.”

In order to enable persons with disabilities to exercise all human rights and fundamental freedoms in full, the Convention “recognizes the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication”. It states that the Comprehensive and Single International Convention contributes to “redressing the profound social disadvantage of persons with disabilities and promote their participation in the civil, political, economic, social and cultural spheres with equal opportunities, in both developing and developed countries”.

Article 30 of the Convention mentions the following regulations:

“1. States Parties recognize the right of persons with disabilities to take part on an equal basis with others in cultural life, and shall take all appropriate measures to ensure that persons with disabilities:

- (a) Enjoy access to cultural materials in accessible formats;
- (b) Enjoy access to television programmes, films, theatre and other Cultural activities, in accessible formats;
- (c) Enjoy access to places for cultural performances or services, such as theatres, museums, cinemas, libraries and tourism services, and, as far as possible, enjoy access to monuments and sites of national cultural importance.

2. States Parties shall take appropriate measures to enable persons with disabilities to have the opportunity to develop and utilize their creative, artistic and intellectual potential, not only for their own benefit, but also for the enrichment of society.

3. States Parties shall take all appropriate steps, in accordance with international law, to ensure that laws protecting intellectual property rights do not constitute an unreasonable or discriminatory barrier to access by persons with disabilities to cultural materials.

4. Persons with disabilities shall be entitled, on an equal basis with others, to recognition and support of their specific cultural and linguistic identity, including sign languages and deaf culture.”

Chapter 3 of the Charter of Fundamental Rights of the European Union is about equality. It sets out specifically the principles of equality before the law, non-discrimination, cultural, religious and linguistic diversity, equality between women and men, rights of the child, rights of the elderly and the integration of persons with disabilities. The Charter was formally published in Nice in December 2000

by the European Parliament, the Council and the Commission, and in December 2009, with the entry into force of the Treaty of Lisbon, the Charter gained a binding legal effect in the European Union and the same legal binding to Member States.

[The Academic Network of European Disability Experts](#) (ANED) provides the European Commission data analysis and policies in EU Member States. It manages DOTCOM, a database that monitors UNCRPD-related policy instruments in the EU and in the Member States.

[The European Disability Strategy 2010-2020](#) aims to promote a Europe without barriers and to empower people with disabilities so that they can enjoy their rights and fully participate in society and the economy. It describes a set of goals and actions for implementing the disability policy including the UN Convention on the Rights of Persons with Disabilities (UNCRPD) at EU level. It also supports Member States in implementing the Convention. The Commission has begun its evaluation process in 2019.

[The European Structural and Investment Funds](#) (ESIFs) has the main financial instruments of the EU for strengthening economic and social cohesion. These contribute to ensuring the social inclusion of the most vulnerable citizens, including those with disabilities.

### **Priority areas of the European Disability Strategy 2010-2020**

[The European Disability Strategy](#) 2010-2020 focuses on actions in eight priority areas:

- Accessibility: making goods and services accessible to people with disabilities and promoting the market for assistive devices
- Participation: ensuring that people with disabilities benefit from all the benefits of EU citizenship, remove barriers to equal participation in public life and leisure activities, promote the provision of quality community services
- Equality: fighting against discrimination based on disability and promote equal opportunities.
- Employment: increasing the participation of people with disabilities in the labor market, where they are currently under-represented
- Education and training: promoting inclusive education and lifelong learning for students and students with disabilities and equal access to quality education and lifelong learning allows people with disabilities to fully participate in society and improve their quality of life.
- Social protection: promoting decent living conditions, combating poverty and social exclusion
- Health: promoting equal access to health services and related facilities
- External action: promoting the rights of persons with disabilities within the EU's international expansion and development programs (European Disability Strategy, 2010, European Accessibility Act, 2016)



[The European Agency for Special Needs and Inclusive Education](#) is an independent organization that acts as a collaborative platform for member countries, working to ensure more inclusive education systems. It is the only body at European level maintained by member countries with a specific mission to help to improve the quality and effectiveness of inclusive provision for all students. The permanent network of ministerial representatives decides on the specific priorities for the annual and multiannual work programs. This ensures that the activity is aligned with the priorities of the ministries of education in the member countries of the Agency. All work is in line with and directly supports all international and European Union (EU) education policy initiatives. The Agency aims to ensure fairness, equal opportunities and rights for all students, especially for those who are vulnerable to marginalization and exclusion, such as students with disabilities and / or special educational needs. (*Hungary and Greece are members. Romania, Turkey and Bosnia and Herzegovina are not members*).

The Agency provides countries guidance on how to implement inclusive education, in line with EU policies set out in the [2020 Education and Training program](#), as well as the United Nations Convention on the Rights of Persons with Disabilities (2006), from a quality perspective. It provides information to support the development of evidence-based policies designed to improve the effectiveness and cost-effectiveness of inclusive education systems.

According to UNICEF, worldwide 93 million children live with disabilities, almost 50% of whom do not attend school, and it pinpoints that disability is the most serious barrier to education (UNICEF, n. d.). The idea and practice of inclusive education of all children of diverse racial or ethnic background or disability is far from being a new educational and social concept in many parts of the World.

***Inclusion means that all typical and atypical students are active, equal and valued members of the student community, who all get individualised support in achieving their full potential.*** At the World Conference on Inclusive Education, June 1994, representatives of 92 governments and 25 international organisations adopted the Salamanca Statement, a new framework for the full accommodation of students with SEN in their local educational institutions.



## II. National legislation and policies regarding rights of people with disabilities and legislation on accessibility in project consortium countries

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### II.1. Bosnia - Herzegovina

The Balkan Museum Network (BMN) is a platform for museum professionals to learn, share, and support each other. BMN was developed from the project of the Cultural Heritage without Borders to an independent association of citizens registered in 2015 in Bosnia and Herzegovina. BMN is membership-based organisation that consists of 70 museums, 130 individuals and 3 non-governmental organisations in 12 countries of the Balkan region (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Kosovo, Montenegro, North Macedonia, Romania, Serbia, Slovenia and Turkey) and several EU member states. The mission of BMN is to promote and protect shared and complex heritage of the Balkans. Due to its turbulent history from medieval times to 20<sup>th</sup> century, the Balkan heritage is very often contested and that is evidenced in the interpretation of the museums' exhibitions and collections. Due to conflicts in ex-Yugoslavia in the nineties of the twentieth century, cultural cooperation is still on a low level due to on-going peace-building process.

BMN is mostly supporting middle managers and different professionals who are transforming the museums from within. As public institutions, museums are implementing official cultural policy that is often not supportive of cross-border cooperation. Thus to be the member of the BMN is a political statement and museum professionals often have to attend BMN conferences and workshops during their holiday days. BMN is a member of the Network of European Museum Organisations (NEMO) and the International Coalition of the Sites of Conscience which gives Balkan museums link with European and international partners. The following information is focused on Bosnia and Herzegovina (BiH) where BMN is registered as a legal body (association of citizens) offering context and examples of projects in museums. Access is defined as (1) A way of approaching, or reaching, or entering; (2) The right or opportunity to reach, or use, or visit; (3) Allowing a minority or special interest group inside. Museum access thus entails access to buildings, collections, objects and services for all individuals. Access means Physical access; Sensory access; Intellectual access; Cultural access; Economic access and Attitudinal access.

Bosnia - Herzegovina is a very complex and highly decentralized country that consists of three parts (entity "Federacija BiH", entity "Republika Srpska" and Brčko district) with fourteen parliaments and different level of legislative and executive governments. BiH and its entities have signed a number

of international instruments that address the right of persons with disabilities and they constitute an integral part of the BiH's legislation and have the legal force of the Constitutional provisions. BiH ratified the "Convention on the Rights of Persons with Disabilities and the Optional Protocol" and committed to application of its provisions and thus expressed its intention to actively work and contribute to improvements of the position of persons with disabilities.

The key issues that persons with disabilities are facing in Bosnia and Herzegovina are ("Alternative report on the implementation of the United Nations Convention on the Rights of Persons with Disabilities in Bosnia and Herzegovina", MyRight - EMPOWERS PEOPLE WITH DISABILITIES, April 2014):

- Barriers to social participation and inclusion,
- Discrimination on the basis of cause of disability,
- Poor access to services, particularly in education and healthcare,
- Poverty
- Discrimination by public employees providing services to them.

The number of people with disabilities is on a higher level than the European average due to the war that took place in the period 1992-1995. Social participation and social inclusion mean free access to public institutions and services (education, employment, healthcare or social protection and culture). Accessibility related to museums refers to architectural obstacles, access to information and communication. Persons with disabilities are most burdened with employment issues, material security, and the issues of transport, sport and culture are of less importance to them (From the document "ANALYSIS OF NEEDS, RIGHTS AND POSITIONS PERSON WITH DISABILITY IN BOSNIA AND HERZEGOVINA). From 10 needs that were listed, the need for culture is at the lowest level, while employment is on the first place. The respondents of the survey were stating the following needs based on how important they are to the interviewed persons: Basic needs for self-care (bathing, feeding, personal hygiene); Basic needs for movement - communication, Basic existential needs (food, hygiene products, medicines), Support in education; Employment support; Environmental accessibility; Resolving Housing; Custom transport; Counselling and social services; Sports and culture needs.

Strategic documents exist on the state and entity level. "Strategy for the improvement the social position of persons with disabilities in Republika Srpska 2017-2026" defines strategic goals in nine areas of life of persons with disabilities, and culture and religion are one the areas. Concrete activities in this area are left to the development of annual action and operational plans that competent institutions should continue to work continuously on in the period of ten years. In the Federation of Bosnia and Herzegovina, a strategic document was adopted in July 2011 "Strategy for equalizing the opportunities for persons with Disabilities in the Federation of BiH 2011-2015" specifying measures and activities

aimed at enabling the enjoyment of the rights of persons with disabilities in their full capacity, in all areas of social activity.

Even through [Article 9 of the “UN Convention on the Rights of Persons with Disabilities”](#) does not refer specifically to cultural institutions, the museums, as public institutions, have to fulfil a number of laws regarding physical access to the buildings.

Key documents that regulates this area are:

1. Decree on special standards, urban planning-technical requirements and standards for prevention of creating architectural-urban planning obstacles for persons with reduced physical abilities (Federal Ministry of Physical Planning - FBiH)
2. Regulations on Conditions for Planning and Designing Facilities for Unimpeded Movement of Children and Persons with Reduced Physical Abilities (The RS Official Gazette, edition 44/11)
3. The Law on Spatial planning and Construction (The RS Official Gazette, edition 55/10)
4. Action Plan to Improve the Rights and Positions Of Persons With Disabilities In Sarajevo Canton (2018-2021)

General assessment of all conducted analysis is that very few facilities are accessible, and most of the facilities are completely inaccessible. It is estimated that the lowest percentages of accessibility are in cultural institutions, only around 20%. Accessibility of city streets and public transport is on the very low level as well. The removal of architectural obstacles and adapting of signalling is of at most importance.

Action Plan to Improve the Rights and Positions of Persons with Disabilities in Sarajevo Canton (2018-2021) puts the responsibility on the “Ministry of Education, Science Culture and Sport of Canton Sarajevo” to help museums remove architectural barriers in accordance with the law, but no projects are being initiated, even through the investment of 3,5 mil KM (1 789 521,58 euros) is being made in adjustment of 47 public buildings.

An Access Survey for five museums in Bosnia and Herzegovina was conducted in 2015 as a project implemented by the U.S. Embassy in Bosnia and Herzegovina and implemented by the Foundation Cultural Heritage without Borders in partnership with the Balkan Museum Network. The project titled “Disabled People in Museums” was about training museum and heritage professionals to identify existing barriers based on the social model of disability.

For museum buildings, which are protected by the state as national monuments, appropriate solutions have to be found. One example is how Bitola Institute and Museum (Republic of North Macedonia) is using a ‘liftcar’ for wheelchair users to climb the stairs, as they are not able to install an actual lift in a building, which is the national monument.

The only legally regulated field is the use of sign language. The law on the use of sign language exists on the state level (BiH), entity Republika Srpska and levels of canton (such as Canton Sarajevo)

The following laws in BiH regulate the field:

1. Law on the Use of Sign Language, (BiH Official Gazette, edition 75/09)
2. Law on the Use of Sign Language, in Sarajevo Canton (Official Journal of Sarajevo Canton, edition 11 dated 27<sup>th</sup> April 2011)
3. Law on the Use of Sign Language in Republika Srpska

General conclusions of various studies are that the information tailored to the available techniques for the people with sensory impairments are available at a very low percentage. To improve the social inclusion and participation of PwDs still much needs to be done. In regards to museums is providing government funding to ensure accessibility, including the adaptation of public premises and facilities, continuous monitoring of the enforcement of accessibility standards, provision of sign language interpretation services and signage and other materials in Braille, etc.

“(...) the driving forces for engaging in accessible practice are more likely to be funding, marketing, targeting new audiences or exhibition development. Whilst these are all good reasons, there is no guarantee that they are underpinned by either a strategic or even a genuinely inclusive understanding. This could be, for example, where museums engage in consultation with ‘excluded’ groups which leads to both empowerment of the communities consulted and a deliberate shift towards sharing the museum’s authority.” (Diana Walters - from the conference proceedings “Making Cultural Heritage Truly Common”, 11-12 October 2007 Helsinki)

## II.2. GREECE

Concerning access and persons with disabilities at a legislative level in Greece, the rights of persons with disabilities are recognized and protected by the Constitution of Greece (Government Gazette of the Hellenic Republic 111/A’/9-6-1975). In the relevant amendments of the Greek Constitution it is stated, among others, that “people with disabilities have the right to benefit from measures ensuring their self-sufficiency, professional integration and participation in the social, economic and political life of the Country” (article 21, section 6) (Hellenic Parliament, 2010). Greece ratified in 2012 (Law, 4074/2012) the Convention on the Rights of Persons with Disabilities and the Optional Protocol on the Rights of Persons with Disabilities of the United Nations where issues of access and equal participation to cultural life are clearly stated (UN, 2006, article 30). Also, persons with disabilities - and one escort of them- are entitled to free admission to state museums, monuments and archaeological sites (Ministerial Decision ΥΠΠΟΑ/ΓΔΑΠΚ/ΔΜ/ΤΑΜΣ/Φ32).

Access of all people to museums is a fundamental concept and topic of discussions within museums (see for example: Black, 2005, 2012; Dodd & Sandell, 1998; Weisen, 2008). According the Greek legislation (Law 3028/2002, article 3), audiences' "facilitation of access and communication" at and with cultural heritage – including museums – as well as the "education, the aesthetic education and public awareness" are key components, among others, of the concept of cultural heritage protection. In this framework the access of persons with disabilities to museums is a topic of increasing interest, discussion, relevant practices and legislative initiatives within museums in Greece.

Regarding the built environment it is worth mentioning some important legislative initiatives towards accessibility such as the introduction of relevant legislation and instructions in the 1980s based on the principles of "Design for All" (Polychroniou, 2004). These legislative instructions and the following relevant amendments had a significant impact to all public spaces including museums and consequently to persons with disabilities and their access to these spaces. The principles of "Universal Design" or "Design for All" as well as the term of accessibility are among the basic terms and definitions in the recent legislation "New Building Regulation" (Law 4067/2012). In specific the concept of accessibility is not referred only to physical access but also to the ability of all persons regardless their differences "to be able to access and use independently, safely and easily the infrastructure, the services (conventional and digital) and the goods which are provided in the specific environment" (Law 4067/2012, section, article 2, section 33). Despite progress accessibility issues -especially during the last decades- there are still considerable barriers regarding issues of accessibility due to a number of reasons, such as construction of historical buildings, specific characteristics of monuments, and so on (Naniopoulos & Tsalis, 2017; Polychroniou, 2015).

Museums in Greece have started to develop their educational policies and practices in a more systematic way by the end of 1970s and early 1980s (Hadjinikolaou, 2010; Nikonanou, 2010). During the next decades– 1980s and 1990s - in parallel with the development of educational programs for school groups of general educational settings there were also initiatives for the development and implementation of educational programs for children from special schools, including children with visual impairment as well as on deaf and hard of hearing children (Kanari & Vemi, 2012; Velioti-Georgopoulou & Tountasaki, 1997).

From the 2000s onwards there was an increasing interest on behalf of museums in Greece to issues of access of persons with disabilities in museums. A combination of different events and factors has contributed to this interest, such as a. the proclamation of 2003 as the European Year of People with Disabilities, b. the Olympic and Paralympic Games that were hosted in Athens in 2004, c. the more dynamic role of various associations of persons with disabilities (Argyropoulos & Kanari, 2015; Chrysoulaki, 2004; Tsitouri, 2004), d. the legislation for Special Education, and e. the promotion of inclusive education (Law 2817/2000; Law 3699/2008). All the above that were in line with the general



social and educational changes and the way that disability was interpreted via the social model of disability (Oliver, 1990), brought such fermentations which had a significant impact on public awareness for the rights of persons with disabilities including their rights for access and equal participation in cultural life and of course in museums. Furthermore, the development of Museum Education at academic level and the expansion of museum activities within Greek museums for the audience development had impact on issues of accessibility and relevant initiatives for the access and inclusion of social groups that were traditionally excluded from museum visits (Bounia, 2015; Kanari & Vemi, 2012; Nikonanou, 2010; Tsitouri, 2004).

During the last years, the contribution of Universities and different scientific fields such Architecture and Special Education are also very important for the research, the enhancement of access of persons with disabilities in museums and archaeological sites, the museum staff training, the development and the dissemination of good practices (Argyropoulos, Nikolarazi, Chamonikolaou & Kanari, 2016; Argyropoulos, Nikolarazi, Kanari & Chamonikolaou, 2016; Argyropoulos, Kanari & Chamonikolaou, 2017; Argyropoulos et al., 2017; Naniopoulos & Tsalis, 2017). It is also important to note the role of museum networks and other organizations for the enhancement of access of persons with disabilities to museums as for example the [Balkan Museum Network](#) (BMN) and [Stavros Niarchos Foundation](#) (SNF), a private, international philanthropic organization that makes grants to non-profit organizations including organizations of culture and co-finances relevant projects.

It is worth mentioning that there are also professionals from the private sector who collaborate with various museums and associations for the development of accessible exhibitions, events, reports regarding accessibility, etc. as well as [accessible tourism](#).

### II.3. HUNGARY

In recent decades, the unhindered culture consumption of people with disabilities and access to museums, archaeological excavations and landmarks have become increasingly important worldwide. The European and Hungarian resolutions have also led to major improvements in the field of culture, in the world of museums on equal opportunities and accessibility.

The first of the Hungarian legislation is the Convention on Museum Institutions, Public Library Care and Public Education (1997). The law stipulates, like the Code of Ethics, the obligation of society at all times and that cultural goods in museums are inseparable components of national and universal cultural heritage as a whole, which is widely and equally accessible to the public. On the basis of the legislation in force, it can be concluded that “the legislation aims to enforce the principle of equality, social inclusion, which can only be achieved through conscious support, assistance and cooperation of people with disabilities” in accordance with UN and EU principles. The XXVI. of 1998. Act “a fogyatékos személyek jogairól és esélyegyenlőségük biztosításáról” (on the Rights of Persons with

Disabilities and their Equal Opportunities) defines the concept of disability and speaks as accessibility about the conditions for full social participation, but the concept of equal opportunity was extended more in the Convention adopted in 2007. The laws that deal with this: the 1997 LXXVIII. Act „az épített környezet alakításáról és védelméről” (on the Identification and Protection of the Built Environment), XXVI. of 1998. Act “a fogyatékos személyek jogairól és esélyegyenlőségük biztosításáról” (on the Rights of Persons with Disabilities and their Equal Opportunities) and CXXV of 2003. Act “az egyenlő bánásmódról és az esélyegyenlőség előmozdításáról” (on Equal Treatment and Promotion of Equal Opportunities). CXC. of 2011 Act “a nemzeti köznevelésről” (on national public education) deals tangentially with the provision of conditions for integration.

The National Disability Council (Országos Fogyatékosügyei Tanács) is an organization representing people with disabilities, that was gradually taken over on-site by an Inter-Departmental Committee on Disability (Fogyatékosügyei Tárcaközi Bizottság) and a National College for Disability (Fogyatékosügyei Országos Szakmai Kollégium), based on the 2016 decisions. The law on the cultural rights of the disabled in Hungary is written by the Convention on the Rights of Persons with Disabilities and the Associated Protocol as it is mentioned in Article 30.

There are more fundamental pieces of laws that secure the rights of hearing impaired individuals in EU or in Hungary:

The *Convention on the Rights of Persons with Disabilities* was adopted by the UN in 2006 in New York. It was ratified by Hungarian National Assembly in 2007 (XCII of 2007 Convention on the Rights of Persons with Disabilities and the Optional Protocol thereto ([2007. évi XCII. törvény a Fogyatékossgal élő személyek jogairól szóló egyezmény és az ahhoz kapcsolódó Fakultatív Jegyzőkönyv](#)), and the convention entered into force for the EU on 22nd January 2011.

This Convention emphasizes with accessibility in Article 9 the following: „To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas.” It say: „States Parties shall also take appropriate measures to: Provide forms of live assistance and intermediaries, including guides, readers and professional sign language interpreters, to facilitate accessibility to buildings and other facilities open to the public.

*2010 Brussels Declaration Sign Languages in the EU* states that „Sign language users must have equal access to public life, education, and employment. ... Sign language interpreters (in person or via modern, tailored IT solutions) are one way to assist sign language users in gaining full access.” ([2010 Brussels Declaration Sign Languages in the EU](#))



In Hungary, admission to the permanent and temporary exhibitions of museum institutions is free of charge to persons with disabilities who are nationals of the European Economic Area or to a maximum of 1 person accompanying them. (194/2000. (XI. 24.) Government Decree on Discounts for Visitors to Museum Institutions Section (1) b) c)). (194/2000. (XI. 24.) [Korm. rendelet a muzeális intézmények látogatóit megillető kedvezményekről](#) 2§.1.b)c)

This person can be a communications facilitator/ assistant or a sign language interpreter. In Hungary, hearing impaired people have access to free sign language services for 120 hours a year. (CXXV of 2009 Act on the Hungarian Sign Language and the Use of the Hungarian Sign Language 4§.(1) c), 5§.(1).([2009. évi CXXV. törvény a magyar jelnyelvről és a magyar jelnyelv használatáról](#) 4§.(1) c), 5§.(1).

## II.4. ROMANIA

In the last two decades a series of legislative measures have been taken regarding inclusion of people with disabilities with the respect of fundamental human rights and freedom and equal of chances. Romania signed the Convention at 26th of September, 2007 and ratified it by the Law no 221/2010 published in the Official Monitor of Romania, Part I, no. 792 in 26th of November, 2010 and come into force at 2nd of March, 2011, according to art. 9 of the Order of the Minister of Foreign Affairs no. 331/2011. Article 33 of Convention provides the implementation and monitoring at the national level of the convention. In order to establish the provided mechanisms, the Romanian Parliament adopted the Law no. 8/2016 by which the [Council of implementation](#) monitoring was established, the Mechanism of coordination of measures and Contact points for implementing the Convention. Article 15 that provided the designation of the coordinating mechanism concerning the implementation of the Convention was modified by the Emergency Ordinance no.40/2016 in 28<sup>th</sup> of June 2016 concerning the establishing measures at the level of the central public administration and for modification and completing some normative acts. According to these modifications, “(1) In order to compliance with the provisions of the article 33 align. (1) of the [Convention the National Authority for Disabled Persons](#) is designated as Mechanism of coordination concerning the Convention implementation.”

According to the [Statistic Bulletin](#) on the third trimester, 2019, the total number of disabled persons in Romania, communicated by the National Authority for Disabled Persons within Ministry of Labour and Social Justice was 839632 persons. Of these, 118041 persons are with sensorial disabilities, 23716 persons (21697 adults, 2019 children) are with hearing impairments and 94325 persons (91568 adults, 2757 children) – with visual impairments.

The introduction of National Strategy concerning the social inclusion of the persons with disabilities 2014-2020 reflects the principle “society for all”.

The law no. 448/2006 concerning the protection and promotion of the disabled persons' rights, republished in 2008, is the one that regulates the rights and obligations of the disabled persons, the target group being thus defined: "(1) The persons with handicap are those persons which the social environment not adapted to their physical, sensorial, psychic, mental and/or associated deficiencies totally prevent them or limit their access with equal chances to the society life, some protection measures being necessary in order to support the social integration and inclusion (Law 448/2006, Art. 2. Al.)

The 4th section of the law has measures concerning the access to culture, sport and tourism. Article 21 provides the obligation of the public authorities to support the participation of those targeted to the cultural events and to organise events with this aim. Also this article provides free charge or promotional price at events.

Article no 30 of the Law 221/2010 is the one that refers to the participation at the cultural life, recreated activities, free time and sport. The article 30 provides for the recognition of the disabled persons' rights to participate on equal basis with others, to cultural life, state commitment to take appropriate measures to ensure the accessibility of the disabled persons both in terms of the cultural act and in terms of places designated to them, including museums.

Based on the international treaties and conventions, European directives and recommendations, national normative acts, National Strategies have been elaborated over years aimed at the protection and integration of the disabled persons (Of these, the Decision no.. 1215 in 31<sup>st</sup> of October 2002 for approval of the National strategy concerning the special protection and social integration for the disabled persons in Romania was repealed)

The aim of the National strategy for protection, integration and social inclusion of the disabled persons between 2006 and 2013, "Equal opportunities for disabled persons towards a society without discrimination" approved by the Decision no. 1175 of 29th of September 2005 was "the ensuring the full use by the disabled persons of the fundamental rights and freedoms in order to increase the quality of their life". The national strategy "A society without barriers for disabled persons" 2016-2020, approved by the Decision no. 655/2016 intends to implement the Convention, ratified by the Law no. 221/2010. The strategy aims to "promote, protect and ensure the full and equal use of all human rights and fundamental freedoms by all disabled persons as well as to promote the respect for the intrinsic dignity." Through the strategy "A society without barriers for disabled persons" 2016-2020, it was intended to achieve a unifying framework of all the directions of action addressed in the field of disability.

The general objectives of this Strategy are the following:

- "1. Promoting the access to all the life fields in order to ensure the use of the human rights and fundamental freedoms by the disabled persons.
2. Ensuring the full participation to all the life field of the disabled persons.

3. Eliminating the discrimination and equal ensuring for the disable persons.
4. Ensuring the access of the disabled persons to an open work inclusive and accessible environment, both in the public and in the private sector, at the same time as ensuring their effective access to support services for increasing employment in the labour market.
5. Promoting the education and professional training in favour of inclusion at all levels and learning along the life for the disabled persons.
6. Promoting and protecting the disabled persons' rights to the life decent conditions in order to increase continuously their life quality.
7. Ensuring the fair access of the disabled persons to the services and facilitations of health, quality that pay attention to specific issues, at a reasonable cost and as close as possible to the communities they live in.
8. Substantiating of the policies for the disabled persons based on the information and statistic and research data collected in all the fields of activity."

These general objectives are the basis of the eight directions of action (accessibility, participation, equality, employment, education and training, social protection, health, statistics and data collection), each with a set of specific objectives and measures, expected results.

In Romania there are several museums that provide to the visitors with disabilities access to their exhibits in accessible way. Many of accessible exhibits are designed only for visitors with visual disabilities, and less for the deaf or other categories of special visitors. The National Authority for Payments and Social Inspections had many campaigns for the purpose of evaluating the accessibility of the museum, but many of this activity indicate only the ramp access and an accessible toilet for wheelchair users. In order to increase the degree of access to information, there is a clear need to discuss about the physical accessibility of the building and environment. That's why most actions are to identify problems of access to space and less to information. To provide some recommendations regarding the accessibility of the environment and the information, but without clear guidelines for the museum, there is the law 448/2006 "regarding the protection and promotion of the rights of persons with disabilities", the norm NP051 (2013) "Regulations regarding the adaptation of civil buildings and urban space to the individual needs of persons with disabilities" and the norm GP 088-03 (2003) "Guide regarding the adoption of specific measures for the access of people with disabilities to historical monuments".

## II.5. TURKEY

The most important and comprehensive regulation on disabled people is Law No. 5378 on Disabled People and on Making Amendments in Some Laws and Decree Laws. Date of Adoption: 1/7/2005 (Law 5378/2005).

Article 1- (Amended: 6/2/2014-6518/62) The objective of this Law is to enable and promote disabled people to enjoy the fundamental rights and freedoms, to ensure their full and effective participation into the social life on equal terms with other people by strengthening the respect for their natural dignity and to ensure that necessary arrangements are made for taking measures to prevent the disability (Law 5378/ Amended: 6518/62, 2014).

Article 2- This Law covers disabled people, their families, the establishment and organizations serving towards disabled people and other concerned bodies.

Article 4- (Amended:6/2/2014-6518/64 md.) .) (Law 5378/2014 Section, Article 4)

c) It is essential to provide the equality of opportunity for the disabled to enjoy all rights and services.

d) It is essential to ensure accessibility for disabled people to live independently and to participate fully and effectively in society.

i) It is essential to ensure the participation of disabled people, their families and non-governmental organizations representing disabled people in policy making, decision-making and service delivery processes.

f) Accessibility: It means that buildings, open spaces, transportation and information services and information and communication technology can be accessed and used by disabled people safely and independently.

l) Public Service Buildings: Government buildings, places of worship, special education and private health facilities; cultural buildings such as cinemas, theatres, opera houses, museums, libraries, conference halls and entertainment facilities such as casinos and wedding halls; commercial buildings such as hotels, private dormitories, office buildings, offices, passages, bazaars; sports facilities, public parking and similar public buildings.

One of the most important stages in the process related to the acquisitions about the Persons with Disabilities in the international platform is the Convention on the Rights of Persons with Disabilities and its Optional Protocol adopted by the United Nations on 13 December 2006.

As a signatory of the [Convention on the Rights of Persons with Disabilities](#) and its Optional Protocol adopted by the United Nations on 13 December 2006 and opened for signature on 30 March 2007, Turkey's participation in this process is important in terms of demonstrating its sensitivity and participation in the "equality of opportunity for Persons with Disabilities in the international platform".

Government of the Republic of Turkey shows that it follows a dynamic process in terms of laws and legislation with the Law 5378 on Disabled People and on Making Amendments in Some Laws and

Decree Laws dated 01/07/2005; with the additions and amendments to Law 5378 in 2012 and 2014 at the national level regarding disabled people's access to and improvement of "public transport vehicles specifically", and with its descriptions of implementation. (Law: 5378/2014, Section, Provisional Article 3)

Additionally, the regulation which stands out among the recent regulations on the disabled is the circular dated 28.01.2020 and numbered 2020/01 of the General Directorate of Disabled and Elderly Services of the Ministry of Family, Labor and Social Services.

"2020 - The Year of Accessibility" has been proclaimed in order to implement the accessibility studies to be carried out by all Institutions and Organizations in a planned, systematically way and in accordance with the standards, to accelerate the practices, to provide physical, digital and mental transformation in this field, and to create the culture of accessibility.

In the Marmaray Project which has been constructed by the Ministry of Transport and Infrastructure, a total of 43 stations between Gebze and Halkalı which are operated under the responsibility of Turkish State Railways (TCDD) 1st Regional Directorate have been equipped with escalators, elevators and embossed yellow walking bands within the scope of the Law No.5378. Istanbul Railway Museum, located on the Marmaray route and in the historical Sirkeci Railway Station, has important advantages in terms of transport and accessibility with its unique location within the area of the Sultan Ahmet Mosque, Hagia Sophia Museum, Topkapi Palace which are major destinations for tourists, at the intersection of Marmaray, Topkapi - Kabatas line Tram stop, Ferry ports, tourist bus tours, etc.

TCDD provides convenience for disabled people in terms of accessibility in transportation in its transportation service and in its practices of arranging public spaces related to this service. Although TCDD carries out transportation service, it breathes life into a different area, which is museology, with Istanbul Sirkeci Railway Museum presenting the railway history in Turkey with its original spatial home, original objects and documents. Within the framework of the Tomimeus program, a new awareness will have been introduced with the functions to be developed in the museum concept.

In Turkey, universities, public institutions and associations have scientific researches for people with disabilities: Approaches in Contemporary Museology and Factors Affecting Museum Formation. Assoc.Prof. Berna Okan - Düzce University, Health Services Accessibility and Expectations of Disabled People, Muhammed Arca, Günay Sak eifm.trakya.edu.tr.

### III. Accessibility and inclusion of people with disabilities in museums



The accessibility of a museum is not a barrier to development, but on the contrary, many innovative elements from a methodological and technological point of view will increase the number of visitors and this representing a benefit from both sides. As can be seen throughout this manual, environmental accessibility and information standards are well defined by legislation in all European countries. Each museum must ensure that it covers the accessibility component and the fact that it can provide quality services for all visitors, especially for disabilities visitors.

The data of the Eurostat barometer in 2015 (Eurostat, 2015) show that most of the cultural activities in which young people over 16 participate are the activities of going to the cinema, in relation to visiting a museum or going to the theater. In 2015, some 45.9% of the EU-28 adult population (aged 16 years or older) reported that they went to the cinema during the 12 months, while a slightly lower share of the population visited a cultural site (43.4 %) or attended a live performance (42.8%). Although EU-28 participation rates for these three cultural activities were similar, a range of different patterns existed at a national level. Cultural participation (Eurostat, 2015) was higher among younger (rather than older) people within each of the EU Member States. In 2015, there were only two Member States where fewer than 70.0 % of younger adults reported that they took part in a cultural activity: Bulgaria (52.1 %) and Romania (48.5 %). By contrast, there were six Member States where more than 70.0 % of older people took part in a cultural activity: Luxembourg (70.5 %), the United Kingdom (70.8 %), the Netherlands (76.9 %), Finland (77.8 %), Sweden (78.8 %) and Denmark (80.0 %). The Eurostar barometer for 2015 also shows that the highest rate of non-involvement of young people in the cultural process is in Romania (87%). The causes can be multiple: financial problems, low interest, lack of cultural institutions in the locality or in nearby cities but other multiple reasons.

Sandell (1998) identified three social inclusion strategies for museum outreach: (1) The Inclusive Museum, (2) the Museum as Agent of Social Regeneration, and (3) the Museum as Vehicle for Broad Social Change. As Sandell (1998) explained, the inclusive museum is one that removes any barrier that hinders art museum access. Barriers may be physical, economic, intellectual, psychological, or geographical. In the last decades, museums redefined their relationship with the visitors, accepting the idea that visitors have different needs, ages, biographies and interests and expectations (Hathazi, 2017). Therefore, museums tried to respond to all these demands by introducing different strategies meant to increase accessibility for persons with different disabilities. On the other hand, as showed in a study conducted by McMillen (2015) accessibility or inclusion are no longer only about addressing the physical space and universal design. Access and inclusion have to involve museum policymaking, curating, information access, art practice, new technology, digital media, and partnerships. When museums adopt holistic and emancipator organizational practice and behaviour, they could become even more accessible and inclusive to all visitors, including those who are not able to “see” the world as we do.

The main dimension regarding the access of people with disabilities to the museum is given by **the accessibility of the transport and environment** to the location. The transport can be ensured with the help of:

- public transport, thus increasing the independence of the person with disabilities;
- non-governmental institutions that support different categories of people with disabilities
- schools that can provide transportation to students.

The second dimension is about the **general accessibility of the museum building and environment**. Many of the museums with tradition are in very old historical buildings, with a special architecture, and the implementation of modern standards of accessibility is very difficult, therefore, is necessary to discuss about inclusive design that respects the architecture and cultural heritage. In general terms the visitors with disabilities needs:

- parking places;
- ramps access or elevators;
- wide doors - visible and accessible;
- tactile carpet and indicators for cane users;
- digital indicators that use mobile phone applications;
- accessible toilets;
- rest spaces inside the museum or in open spaces;
- adequate ambient light inside museum;
- visible maps and indicators for easy indoor travel;
- alternative information materials, etc.

In the museum, all spaces and facilities should be marked with clear symbols indicating accessible services and spaces. The experience of visiting a museum must take in consideration the learning style and preferences for learning of each visitor. It should be emphasized that visiting a museum is an experience of intellectual stimulation and constant learning. At each visit, the visitor must learn something new.

The third dimension is given by the **museum staff**. Museums must provide regular training for staff to improve them to provide quality services to visitors with disabilities. As they are prepared to work with children and adults, each museum staff must have minimal knowledge about the most know disabilities and how they should interact and aid in the museum in different situations. These situations can be from minimal sign language symbols with a deaf visitor, accompanying a blind person through the museum or to manipulate a wheelchair. These situations are minimal aspects that are essential to be part of the museum staff training.



The fourth dimension, and perhaps the main source in the accessibility of a museum for visitors with disabilities, consists in the **accessibility of information and access to exhibits**. It is not difficult to have general recommendations, but most adaptations must take into consideration the general theme of the museum, the dynamics of the exhibitions and the target audience, especially when we talk about visitors with hearing impairments (deafness or hard of hearing), intellectual or developmental disabilities, learning disabilities, mental health disabilities, physical disabilities and vision loss. Many times, people with disabilities plan their trips so that all this information is needed to be visible and used for an easy travel.

The website is the first interface with the visitor and it must be accessible according to international standards and recommendations (W3C and WCAG). In a section dedicated for information regarding the accessibility in the museum, the visitor must find general information about:

- methods of transport to the museum;
- the existence of parking spaces reserved for people with disabilities;
- the possibilities to contact the museum staff for more information;
- ways of independent travel within the museum or possibility to request a companion;
- access with guide dogs;
- accessible museum spaces;
- special program;
- activities in relation to different disabilities;
- additional facilities in or near the museum (e.g. restaurants), etc.

All four dimensions (1) access to the museum, (2) general facilities, (3) staff of the museum and (4) access to museum exhibition should not be ignored. None of the four recommendations can work without the other. If there are difficulties in moving from point A to point B, we are not talking about an accessible route. So, in order to build an inclusive museum, we must take into consideration the principles of accessibility and the particularities of the exhibition. If the person with disability cannot go the museum, then the museum should go to the person. This concept can be achieved through activities carried out through special workshops, using modern VR technologies, online access to unique collections using video conferencing and accessible virtual tours.

An inclusive museum is also based on the partnership with local or private public institutions, which can provide specialized consultancy, necessary to create an accessible environment. An accessible museum is defined by standards, ethics, independence, dignity, integration and equal opportunities for all visitors.

### III.1. Accesibility for people with visual impairment

According to one of the main regulations in Italy, mainly the Ministry of Cultural Heritage and Activities (MiBAC) Decree from the 10th of May 2001, museums “have to be accessible and usable to all the visitors, including (1) the design of architectural solutions to overcome the differences in levels (at the entrances and inside the building); and (2) the devices and measures to let people with special needs understand and enjoy the visit (e.g., multisensory sign systems and captions, easily usable reception desks and exhibitions elements, accessible paths, etc.). In the case of blind and visually impaired people, architects and engineers have to take care of the orientation and the spatial perception, together with the tactile and auditory consultation of the exposed works (Auricchio et al., 2017). Tactile maps, models, audio-guide and Braille captions improve the museum’s offer and quality for all, not only for visitors with disabilities.

Tactile maps are representations in relief, with colour contrasts, of buildings and spaces plans, to help the orientation and the places’ recognisability for blind and visually impaired people. They allow people to experience the environment in terms of dimension, proportion, shape and features and to acquire a mental reproduction of it, which is useful to live the space in more safety and autonomy conditions. AM (additive manufacturing) - also known as 3D printing - is an innovative and emerging technology to produce 3D solid objects with a complex shape, starting from a 3D virtual model and obtained through a sequential deposition of layers of material. As mentioned by Auricchio et al. in his study (2017), the most common extrusion-based AM technology is the FDM (fused deposition modelling). In fact, this technology obtains successful results about: 1) details accuracy, fundamental to realize a tactile map with proper and clear information for blind people. In particular, the Braille language requires specific dimensions and features; 2) durability, necessary to guarantee the tactile consultation by hundreds of visitors each day; 3) touch pleasing, fundamental for blind people to use (and enjoy) the tactile map; 4) colours combination, necessary to enlarge the use of the tactile map also for visually impaired people, children and all the interested visitors; 5) time of realization, from the 3D model (CAD), the tactile map is realized into 16 different tiles, because of the dimensions of the printing area, in quite a short time (average of 9h for each tile).

If we take also the example of some Spanish museums, the MGA (Multimedia Guides for All) approach is designed to provide universal access to mobile contents by including sufficient configuration and adaptation features, enabling people with or without disabilities to make equal use of them (Ruiz et al., 2011). A museum is most likely one of the clearest examples of an environment which requires an universal design approach.

The objective of this approach is to provide design guidelines for any mobile or portable device showing multimedia and audio-visual contents, so they can be accessed by people with sensory and cognitive disabilities. The application of MGA in tour guides defines a portable, interactive device that helps and guides visitors through a place of cultural interest such as a museum, transmitting information

through different media (which could be text, images, video, audio, etc.) their use being adaptable to the visitors' different sensory and cognitive conditions. Ruiz (2011) mentions that in the context of MGA, the term "accessibility mechanisms" is interpreted to indicate a tool that makes the contents available to specific users. There are several audiovisual accessibility resources according to the needs of the users that can be integrated in portable devices, and in the future, these will be improved upon and will increase in number regarding museum coverage.

Every device following the MGA approach must provide a single access point with configuration options rather than offering different access types according to the type of user. MGA style devices undoubtedly offer an improved screen size, with the subsequent improvement of the legibility of contents for deaf users, which can read subtitles with ease, as well as for other users with reduced vision or other moderate visual disabilities.

The current approach was developed in the context of an R&D project entitled GVAM (Spanish acronym of Accessible Virtual Guides for Museums). When the user starts using a GVAM, and once the language and accessibility resources have been configured, the user will be able to use it. The user is presented with the basic content that will provide the following basic information.

Multi-sensory communication is still a quite new concept that is meant to change the world of multimedia soon. Sensitizers, smellitizers and sense stimulating gadgetry are already in use in theme parks – e.g. the Horizon experience at Disney's Epcot centre (Epcot Central 2008). However, in practice, visitors are already being offered multi-sensory experiences either through carefully set up exhibitions or through special (live or electronic) guided tours, touch sessions and oriented workshops (Neves, 2012).

Nowadays the most common multi-sensory experiences at museums are made available to visually impaired visitors through one of the following solutions: special exhibits/museums that have been devised with them in mind (e.g. Anteros Museum, in Bologna, or the Museo Tiflológico, in Madrid); special live tours/touch sessions (e.g. V&A or the British Museum in London) that take visitors with special needs as their main addressees; or specific audio guides (e.g. Winston Churchill Museum and recently the British Museum, in London) that have specially made descriptions for blind users.

As mentioned by Neves (2012) not many art galleries offer especially conceived audio guides for visitors with visual impairment. Perhaps this is the case because there is a belief that blind people will not be interested in the visual arts. A sign that things are changing is the fact that more and more museums are being creative and are now providing alternative solutions for visitors with special needs and that commercially based companies providing content for audio guides now advertise specific audio description for blind visitors.

General recommendations that can be implemented in museums in order to develop and adapt exhibitions to the needs of visitors with disabilities may include:

- booklet in accessible format for visitors with hearing impairments, learning difficulties and visual impairment;
- albums with enlarged images of the exhibits;
- Braille and / or enlarged materials;
- panels and display cases located at the appropriate height;
- 3D models size 1-1 or to an efficient ratio in order to be able to be explored by the blind visitors;
- 2D tactile images accompanied by short transcripts in Braille;
- multimedia materials with CC (closed captioning) and audio description;
- portable audio and video multimedia guides that provide information explained according to the needs of the visitor;
- multimedia display in the important areas of the museum;
- QR codes to facilitate access to additional information of the exhibitions;
- I Beacons to identify exhibits and to be a guide inside the museum;
- mobile applications;
- tactile carpets with technology attached to white sticks.

### **III.2. Accessibility for people with hearing impairment**

People with hearing impairment represent a very heterogeneous group, and we must understand their characteristics before exploring accessibility. Hearing impairment is called in mild cases hard of hearing, and in severe cases deafness. The ADA (The Americans with Disabilities Act) defines individuals with disability as having “a physical or mental impairment that substantially limits one or more of the major life activities of such individuals, a record of such an impairment or being regarded as having such impairments” (Harrison & Gilbert, 1992, p. 75). According to this definition, someone with a hearing impairment may be considered to have a physical disability that considerably affects his or her life (Tucker, 1997). As well as defining hearing-impaired individuals as disabled, the ADA also establishes the extent of accommodations that institutions are required to provide for them. For those who are hearing impaired, the ADA requires “services and devices such as qualified interpreters, assistive listening devices, note takers, and written materials” (Harrison & Gilbert, 1992, p. 54).

According to this law, institutions such as art museums are required to provide accommodations for those who are hearing impaired but in a manner that does not excessively inconvenience the institution or force the creation of a separate program for hearing-impaired individuals. However, each institution’s capabilities and resources vary, and therefore the types of accommodations these institutions

provide will differ. For people with disabilities the provision and types of access services offered by a museum will largely influence their decision to visit.

The extent of hearing loss can vary, there are people who have problems only with the perception and understanding of low voices and quiet speech; some people can understand only loud conversations and their problems increase with group conversations and there are people who can hear only a few loud noises or perceive vibration rather than sound. (Farkas & Perlusz, 2000). In many cases, people with hearing impairment have hearing devices to correct their hearing loss. These may be a hearing aid that amplifies and transmits sounds to the ear canal through the middle ear then into the inner ear, or a cochlear implant, an electronic device that replaces the function of a malfunctioning inner ear: converts sounds into electrical impulses and sends them to the brain.

Hearing impairment can occur before or after the language/speech development. If the language/speech is evolved, the hearing impairment appears only on its own (such as old age hearing loss that affects many people). Conversely, if hearing impairment is present in the early years, it will most probably affect language/speech development. If hearing is limited during the period of the language development, the language/speech acquisition will be impaired, resulting in language development a different quality, lagging behind the typical development. The following major difficulties may occur as a result of hearing impairment:

- Pronunciation, emphasis, tone, rhythm, tempo, dynamics, etc. due to the difference, the speech of the hearing impaired person is less comprehensible.
- Vocabulary is below typical contemporary peers: fewer words are understood and used. In particular, it is difficult to capture words that are less frequently used (e.g. terms, old words, expressions) and abstract (visually inconceivable) concepts. Deficiencies in vocabulary affect both expression and comprehension.
- The use of written or spoken language can be inappropriate, or because they do not understand the meaning and meaning-changing effect of grammatical elements, speech comprehension is limited. (Farkas & Perlusz, 2000).

Much of our information in our daily lives and in our education is conveyed through hearing, spoken and / or written language. Thus, you may expect to have inadequate hearing or comprehension of hearing impaired children whose hearing loss is not well-corrected or severely impaired (Braden, 2017).

The main difficulties which are encountered when persons with hearing impairment visit a museum refer to:

- Reduced ability to hear ambient sounds, music and speech.
- Reduced understanding of speech.



- Linguistic difficulties make text information less understandable.
- Language difficulties make it more difficult for them to express themselves through speech.
- Reduced knowledge of the world.

Communication with the hearing impaired can take many forms, depending on the nature and severity of the injury:

- a) Oral/verbal communication using speech or text for communication. The features mentioned above may appear.
- b) If the hearing aid does not improve hearing properly, the hearing impaired person may also rely on lip (or speech)-reading for speech comprehension. When reading from the mouth, the individual visually understands the speech based on the speaker's mouth movements. During mouth reading, face-to-face communication is important, as it is the proper illumination and visibility of the speaker's face and mouth.
- c) Hearing impaired people, usually with severe hearing impairment and limited use of spoken/written language, prefer sign language communication instead of or in addition to verbal communication. (Braden 2017).

Deaf people can face linguistic, educational, and social barriers in museums. Nowadays, more and more museums try to create access to their collection of artworks through programs designed especially for Deaf people, like guided tours in sign language by deaf museum educators or on tablets. (Feenstra, 2015). Outside of the legal reasons, art museums have a responsibility to provide all-inclusive, equal access to the public, especially if they receive any public funding. Because art museums provide specialized programming for various audiences, it is a deaf person's right to have the same access to programs as anyone else. As a result, art museums and other educational institutions must continually strive to include members of the deaf community in their social learning initiatives. Accessibility programming is most effective when created through collaborative means and with institutional commitment (Westerhoff, 2017).

Museums are ideal venues to raise awareness to multiculturalism and cultural diversity. The Deaf Community shares expression through Sign Language – their mother tongue, a feature of personal identity. In museums, exploring the sense of identity is carried out by the way the collections are presented to the public. By promoting activities for the deaf community, museums can increase the sense of belonging for people who are deaf or hard of hearing (Martins, 2016). Exhibitions are a way for museums to create opportunities for deaf visitors to share personal reflections that contribute to the development of their personal identity. Museums have the potential to expand the sign language vocabulary of art terms by using this system of communication.

Martins (2016) argues that museums that use the bilingual model through activities will contribute to the development of new skills in the field of deaf culture and will also bring deaf people to the hearing culture by reuniting deaf and hearing persons in the same space.

According to Johnson (2013) museums should strive to be leaders in promoting the highest standards for access and inclusion. Also, museums should deliver content through multiple sensory channels to provide multiple entries for visitors to choose the channel that suite them best.

#### Reccommendations for communicating with Deaf People

- Use a quiet place to communication, because background noise worse hearing quality.
  - Stand a meter or two away from the deaf person or the group. This is important for hearing-aid users, lip-readers and signers too.
  - Get the visitor's attention before speaking: e.g. tap on his or her shoulder, or use a wave or other visual signal.
  - Make eye contact and keep it while you are talking. If there is more than one person in a conversation, take turns to talk.
  - Facilitate speech reading. Make sure your face is not in shadow. Try not cover your mouth. Speech reading is most effective one-on one. It is less effective in group situations, at large meetings or where the speech reader is far away from the person speaking.
  - Speak clearly, not too fast. Don't mumble, shout or exaggerate – it distorts your lip patterns. Short sentences are easier to understand than long ones.
  - Repeat and re-phrase if necessary. Trying to say the same thing in a different way might help to understand.
  - Non-verbal ways to help communication. Use gestures, body language and facial expression.
  - Write it down or draw to help understanding.
  - Vision is the primary method for receiving information for a deaf or hard-of-hearing visitors. Allow time to read the visual information before or after speaking.
  - When using an interpreter, make eye contact with deaf person, speak directly to her or him.
- (Bird & Mathis (eds) 2003; Westerhoff 2017).

### BEST PRACTICES FOR VISITORS WITH DEAFNESS O HEARING IMPARMENT

#### 1. Tours in sign language

- All over the world, museums are presenting tours in sign language for the deaf people. The importance of having a deaf tour guide resides in the fact that a representative of the deaf community who is promoting events for its members could facilitate a better understanding of the values that form this



culture toward deaf people. It also represents an empowerment for the cultural minorities, such as deaf communities.

- One of the best ways to access the life of a museum is by a tour. There are two modes in which visitors can participate in museum-created tours, the first and most traditional is in person with a museum-trained staff, and the second is using technology. Both modes of engagement have been modified to be accessible for visitors who are deaf or HoH and offer pros and cons for the community. One approach that is centred on Universal Design presents tours with SL Interpreters and include a voice interpreter for any hearing participants. The combination of a SL interpreter and a voice interpreter makes the service accessible to all museum visitors especially groups with any range of hearing abilities. While SL-specific programming is always encouraged and hoped for, the desire for the same spontaneity and educational freedom as ‘traditional’ visitors leaves the Deaf community wanting more.
- Technology-based SL video tours are the most effective way to provide daily accessibility programming for Deaf visitors. There are a few ways in which the content of SL video tours can be created. The most successful way is through collaboration with an external company because they achieve the perfect balance of museum personnel, Deaf community members, and Deaf actors.
- SL video tours provide many of the same benefits of the traditional, in-person tours, such as having information presented in the community’s desired language and feeling as visitors that they are not missing out on information and experiencing individual learning freedom. With SL video content, Deaf visitors are free to access the created material in their own time and order. This type of freedom was not available prior to the creation of these technologies. In addition, most museums use the same devices for video tours regardless of language, allowing Deaf visitors the opportunity to enjoy the museum without any unnecessary or unwanted attention.

## 2. Sign Language Interpreters

Hiring SL interpreters is one of the fastest ways to include the Deaf population in museum programming because it does not require the manipulation or creation of the content provided. SL interpreters can increase understanding and engagement for Deaf visitors when provided for public events including lectures, presentations, ceremonies and tours. For most museums, should a person require a SL interpreter they must contact the museum a minimum of two weeks before the intended date to make specific arrangements. This service is acceptable for groups or individuals with adequate planning time but does little for the spontaneous visitor (Westerhoff, 2017). **Sign Language** can be an accessibility tool for hearing impaired people who use this communication wave. The interpreter interprets between spoken English and Sign Language (SL). The sign language guided tours can be

realized with ICT tools. It may have difficulties because each community (e.g. school) has a different sign language dialects

### **3. Sound audio guides with enhancement system for hard of hearing visitors.**

### **4. Multimedia guides with sign language translations of highlight objects from the museum collection.**

The British Museum in London offers a British Sign Language Multimedia Tour with signed videos of about 200 objects in the museum.

### **5. Assistive listening devices (ALDs) or assistive listening systems (ALSs)**

**Assistive Listening Systems (ALS)** are especially benefit in spaces (concert and lecture halls, live theaters, movie theaters, meeting rooms) that are used for audible communication. The ALS improves the hearing quality by minimizing the background noise, reducing the effect of distance and overriding poor acoustics. The ALDs are: FM systems, infrared systems and induction loop systems (Hearing Assistive Technology, 2013) (Bird & Mathis (eds) (2003). ALDs are useful if the museum staff know where to find them, how to operate them and remember to charge them. Legally, ALS's must be permanently installed in assembly areas that: '(1) accommodates at least fifty people or has an audio amplification system, and (2) have fixed seating' (Goldman and collab. 2003). This most frequently applies to museums that have lecture spaces, movie and live theatres, or large meeting rooms. There are three different types of systems that can be used. They are audio loop, FM, and infrared. All have individual qualities that make them a successful choice, with some being more conducive to portable or permanent installation, as well as the size and function of the room ("Assistive Listening Systems and Devices", National Association of the Deaf). ALS's allow visitors with a range of hearing to participate in programming that is sound amplified, such as lectures, movies, and performances. Systems that are more portable in nature (FM and infrared) can also be used by docents in a 'standard' tour, increasing the everyday accessibility of persons who are hard of hearing. In addition to the access they provide visitors for special and everyday events, Assistive Listening Systems are low maintenance in nature. Once these systems are installed/made operational within a museum, it does not require much monetary or staff upkeep.

- FM receivers pick up specialized radio frequencies that tie into the overall sound system, like the ones used in theatres, or public address systems. The visitor gets a receiver that may be connected directly to a hearing aid or cochlear implant, or the receiver can be used with earphones to amplify sound for people who do not use a personal hearing device.
- Infrared systems transmit infrared light waves, which are picked up by receivers like FM receivers.

- With induction loop systems, wire is installed around the perimeter of areas such as theatres, and is activated when sound is transmitted, creating an electromagnetic field within a specific range of the loop. The system works directly with hearing aids and cochlear implants that have a telecoil setting, which most do. The visitor can adjust the volume on his or her own personal hearing device (Hearing Assistive Technology, 2013).

## 6. Telecommunication Services

One of the oldest telecommunication systems used by deaf and hard of hearing individuals is the Teletypewriter, more frequently referred to as the TTY. It is a technology-based device that allows users to type directly to one another via a phone line. The TTY allows persons who are deaf or hard of hearing to engage in communication with one another or with hearing individuals who have the device. Current devices are small and light weight and may be available in museum ticket offices and information service centres. However, today TTYs are seldom used, often thought of as “old technology.” Instead many deaf persons utilize video relay services (VRS). VRS is a service that connects a Deaf person with a hearing person via a live interpreter situated in a relay call centre. VRS requires no special equipment or training on the part of the museum and is efficient in its delivery.

## 7. Captioning

**Captioning** is another form of accessibility, when speech and other sounds display as readable text. It is benefit for hearing impaired people who have a good understanding of the written language (texts). Captioning comes in three forms: open captions, closed captions, and real-time captions.

- Open captions are constantly present on videos. Open captioning is embedded onto an audio or visual track, making them always visible. Closed captioning is a feature that can be turned on or off through digital or manual selection. In order to see closed captioning, the user must select to view this option, so closed captions must be activated through device settings. Open captions are preferred because they provide instant access, and deaf or hard of hearing visitors will not be required to take extra action to request that staff activate closed captions. Any video produced by a museum should be captioned, if it will be on view for longer than three months, or a verbatim transcript should be available for videos in short-term displays. When using uncaptioned videos produced by outside sources, verbatim transcripts should also be made available. Videos without dialogue should be noted as such, so people who are deaf or hard of hearing do not assume that they are missing out on uncaptioned content (Guidelines for Accessible Exhibit Design, Smithsonian).
- Captioning is the visual display of audio content. Often confused with verbal transcriptions, captioning includes not only spoken words, but speaker identification, sound effects, and musical descriptions. The National Association of the Deaf describes successful captions as: ‘(1) synchronized

and appear at approximately the same time as the audio is delivered, (2) equivalent and equal in content to that of the audio, including speaker identification and sound effects, (3) accessible and readily available to those who need or want them' (Westerhoff, 2017).

- Captioning of audio and visual materials within the museum can increase accessibility and individual engagement for a wide range of visitors, not just those who are Deaf or Hard of Hearing. While both open and closed captioning increases visitor accessibility, the use of open captioning extends the use of the service to unsuspecting users. Children, persons with learning disabilities, and visitors with English as their second language can also benefit from the ability to read alongside the audio track (Westerhoff, 2017).

Open and closed captioning is used on films, or videos, and the-real-time captioning is used to convert the live speech to text. The real-time captioning is sometimes called CART or Computer-Aided Realtime Reporting, mentioned earlier. It can be used for live performances, lectures, presentations and meetings (Bird & Mathis (eds) (2003); Johnson 2016;

## **8. Exhibition videos and films that have subtitles and transcripts**

For many deaf and hard-of-hearing visitors, new handheld technologies offer the first chance to tour museums in complete independence, receiving interpretation about the displays in sign language and/or 'closed captioning' subtitles on a handheld computer or PDA. With the Sign Language Guide, deaf visitors can watch video footage of signed interpretation on a screen-based device that fits in the palm of the hand. The video and multimedia content can also include subtitles. Often the same handheld computers, wireless infrastructure, and even content deployed for multimedia tours can be re-utilized in Sign Language and Subtitled Tours for deaf and hearing-impaired visitors. Sign Language and Subtitled Guides increase access not only to the museum, but also to the fields of study addressed in the museum: by seeing subtitles and/or signs for art and other specialist terms with which they may not be familiar, for example, visitors both learn about the objects on display, and also learn the signs and words necessary to enable them to participate more fully and delve more deeply in these topics (Proctor, 2004).

## **9. Transcripts of audio guides**

## **10. Staff training**

- Training staff on how to be of best service and engage with diverse populations is one of the most important things a museum can do to ensure a welcoming environment. There are two distinct types of training all museum staff should receive. The first is the basics of what the museum offers in the form of services and accommodations for D/deaf and hard of hearing visitors. This includes; where any Assistive Listening Systems are located along with the knowledge of how to operate them, any

telecommunication services, videos that are captioned, and all special programming. Providing museum staff with basic communication skills can instil a sense of empowerment in their ability to accurately accommodate visitors with disabilities. Learning ‘background information on how hearing loss can affect a person’s ability to create a meaningful experience may also be valuable for building a sense of empathy’ (Johnson, 2013). Maintaining an environment where all employees are more informed on the characteristics and needs of disability communities can only result in better practices and a greater sense of accessibility.

The second type of training is about disability awareness and sensitivity training and can be facilitated by a qualified staff member or through consultation with an outside individual or company. It is not always easy to provide disability awareness and sensitivity training to staff. One contributing factor is the relatively high turnover rate in cultural institutions, making it difficult to ensure everyone undergoes training. Having a qualified member on staff that is trained to provide basic awareness training makes the turnover rate less of a problem as an institution can provide on-going training at times that are most convenient.

#### **11. Water for assistance dogs**

#### **12. Some museums provide:**

- a. Hearing loops for talks and films
- b. Sign language interpreted talks and talks in sign language
- c. Live speech to text captioning – a service that converts the spoken word into visible text that appears on a large screen near the speaker.

According to Playforth (2004) a fully inclusive information service (like in museums, libraries) would contain:

- advertising the service;
- notices in Deaf clubs and pubs, social service and audiology departments and within specialist organizations;
- articles and advertisements in media targeted at deaf people, in plain language and clear typeface;
- accessible websites with links to specialist websites;
- video information about the services provided with SL interpretation, a clear soundtrack with no background noise and large clear subtitles, to include directions to different parts of the site;

- museum staff visiting Deaf clubs, lip reading classes, hard of hearing clubs, to personally advertise what is available;
- clarity and patience on the part of staff answering voice phones;
- availability of e-mail, fax, text phones, videophones, and staff able to use them;
- library service signed up to Text Direct (relay service linking text phone and voice phone users) and Hasicom (for deafblind people);
- facility for text messaging via mobile phones;
- clear signage in all areas;
- welcoming reception areas and enquiry desks all with properly fitted induction loops, good lighting, clear backgrounds and good acoustics;
- all staff trained in deaf awareness, able to use basic sign language, with some staff trained to higher standards and in the deafblind manual alphabet;
- all staff aware of specific needs of deafblind people, deaf people with learning difficulties or mental health issues and how to meet them;
- virtual human signing screen on all enquiry points (VISICAST, TESSA);
- all staff know how to contact fully qualified interpreters;
- welcome leaflet with floor plan and information leaflets clearly illustrated.



## IV. Museum accessibility programs, examples of good practices regarding legislative policies, practices and programs existing in the participating countries within the consortium. Examples of museums all over the world

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Accessibility, or make communication in whatever form, plays an important role in creating relationships between museums and individuals with hearing impairments. We can see various efforts to facilitate communication at international institutions.

[Accessible Resources for Cultural Heritage EcoSystems - ARCHES](#) is a European project that seeks to make the museum more accessible to all through technologies and a participatory methodology. Thanks to the support of the European Union ARCHES brought together people with disabilities, technology companies, universities and museums. Together with a group of participants, technological solutions have been developed and tested over three years. European museums without barriers due to EU funding: 3D replicas, mobile phone applications, games and avatars that speak sign language and multi-sensory materials for museums. The technologies have been co-designed and tested by more than 200 people with disabilities in Spain, Austria and the UK.

Museums more Accessible Thanks to Technology: use of ICT, social networks, internet, applications, etc.

**Google Maps**, in combination with the **Google Street View platform**, has allowed to “visit” locations, including an area preview. Thanks to the work of the Google Cultural Institute, which is indeed based on Google Street View, it is possible to see significant cultural landmarks such as the **Palais Garnier opera house in Paris**, the **Berlin Philharmonic concert hall** and the **Teatro Real opera house in Madrid**, using only a screen and an Internet connection. The organization also promotes the accessibility of art collections and museums, such as the ones dedicated to Eleanor Roosevelt, in New York, or African American History, in **Boston**. St. Paul’s Cathedral in **London**, the Coffee Museum in **Brazil** and the **Greek Acropolis** are other places that can be visited from home, thanks to Google’s initiative. The advantage of these systems is that they bring us almost impossibly close, to the details of every work available, so that we can appreciate items that would otherwise have gone unnoticed.

**Sage Travelling** offers truly personalized travel for disabled and elderly guests. It deals exclusively with trips accessible to European destinations and responds to the challenges that disabled travellers may encounter during the trip. It offers comprehensive, detailed and organized travel



information for people with disabilities for accessible European tourist attractions, ports, hotels and transport.

Technology can bring us closer to art through virtual exhibitions or provide additional information on objects, paintings and works of art in a museum. But it also makes these places accessible to the visually impaired: **3D printing** is a tool that can transform the experience of visiting a museum. **The Met Museum in New York** was a pioneer in introducing three-dimensional printers, allowing visitors to take home a souvenir from their galleries because of this technology. In order to make 3D printing more accessible to European museums, the Ambavis project was launched with the support of the European Union. The idea is for 3D printers to recreate "tactile copies" for the visually impaired, so that they can enjoy exhibits as well. **Austria, Germany and the United Kingdom** are some of the countries where this initiative is successfully implemented.

In the same vein, the **Museo del Prado in Madrid** launched the exhibition "Hoy toca el Prado", in collaboration with the AXA Foundation and the ONCE. Thanks to 3D technology, six representative works of different genres were exposed, including Apollo in the Forge of Vulcan, Nobleman with his Hand on his Chest or The Parasol, which could be touched by people with visual disabilities. In this way, visitors could recreate pictures mentally. The exhibition also featured texts in Braille, audio guides and opaque cardboard glasses.

If 3D printing has allowed museums to be accessible to blind people, mobile applications can facilitate visits for people with hearing disabilities. An example of the usefulness of this technology can be found in the museum dedicated to Roald Dahl, the renowned writer and author of children's books such as Charlie and the Chocolate Factory and Matilda. The app Signly, devised by Mark Applin, was created to facilitate the integration of deaf people. The aim of the app is that deaf visitors can enjoy the explanations of traditional audio guides, but using sign language and directly on their mobile phone. As announced in 2015, the Roald Dahl Museum has set up 24 points along the route where Signly can be used to learn more about the life and works of the famous novelist.

People with blindness or deafness can benefit from new technologies to visit museums that were previously inaccessible to them. But what happens to those who, because of a physical disability, cannot leave their home? In addition to the virtual tours Google or the Louvre and Nintendo offer, robotics can also be a great ally for these people. The use of robotics has already been implemented in the de **Young Museum in San Francisco** and the **Computer History Museum in Mountain View (California)**.

**[COME-IN! Inclusive Museums in Europe Project - The COME-IN!](#)** aims at valorizing the Central European cultural heritage, making smaller museums, accessible to a wider public of people with disabilities. The project is funded by the Interreg Central Europe Program of the European Union with a budget of 2.7 Million EURO. The main objective is cooperation for open access to museums towards a wider inclusion (**COME-IN!**) tackled this by **increasing the capacities of small- and**

**medium-sized museums** making them accessible to a wider public of people with different kinds of disabilities.

[Art Beyond Sight](#) is dedicated to empowering and enriching the lives of thousands of children and adults through the life-enriching benefits of art and culture. Art Beyond Sight (ABS) a 501(c)(3) organization supports access and inclusion to arts and culture, recreation, sports, and entertainment, for people with *any* physical or cognitive disability, or mental health condition.

Art Beyond Sight staff worked with faculty, alumni, and students from these museum studies programs:

- Arizona State University, Tempe
- University of Washington, Seattle
- Indiana University-Purdue University, Indianapolis
- University of the Arts, Philadelphia
- Cooperstown Graduate Program, (State University of New York – Oneonta), Cooperstown, NY
- George Washington University, Museum Studies, Washington DC
- Museum Access: Inclusive Practices in Museums

In several Museums across USA offerings for individuals who are blind or partially sighted include large print labels, Braille labels and maps, audio guides, and audio description (descriptive narration of visual elements). There are also different tactile offerings available at museums for these individuals (Braden, 2016). One such offering is a touch tour, in which visitors are encouraged to explore different objects—either real or replicas—through touch (which may or may not involve using gloves).

Offered upon request or sometimes scheduled as a public offering, touch tours can be found at museums ranging from the Metropolitan Museum of Art to the University of Pennsylvania Museum of Archaeology and Anthropology to The Henry Ford. In addition to touch, such tours generally also include verbal description, in which works of art and objects are described by guides in great detail. Touch tours at The Henry Ford include opportunities to touch artefacts, such as the Rosa Parks Bus and Allegheny Locomotive, as well as handheld models of artefacts (such as a Model T die-cast model and 3D printed Dymaxion House) and various historic automobiles while using gloves.

As mentioned in Braden’s study (2016) other offerings for individuals who are blind or partially sighted include tactile diagrams with raised dots and dashes representing outlines of artworks, TacTiles with raised versions of artworks, and objects or models of objects that can be touched and handled. Specialized classes and programs for this audience are also available. One such program offered at the Metropolitan Museum of Art is called “Seeing Through Drawing.” In this program, participants create

works of art inspired by objects in the museum's collection that are described to them by sighted instructors and that they can touch.

According to the American Alliance of Museums, museums “need to innovate in order to successfully navigate the rapidly changing landscape of the 21st century.” Therefore, museums have adapted out of necessity to ever-changing environments. The modern museum is no exception. The technological advances of the new millennium determined another need for change, requiring museums to find innovative ways to stay connected with their visitors.

Accessibility, or make communication in whatever form, plays an important role in creating relationships between museums and individuals with hearing impairments. We can see various efforts to facilitate communication at international institutions.

**The Metropolitan Museum of Art in New York** provides one of the widest repositories of hearing-impaired specific accessibility. The Met already on its website mentions that the museum „welcomes all visitors and affirms its commitment to offering programs and services that are accessible to everyone”. The website provides detailed information on accessibility. The Museum offers opportunities for hearing impaired people according to the severity of their hearing loss: for visitors with hearing loss and for visitors who are deaf. For Visitors with Hearing Loss, the museum recommends a variety of programs with assistive listening devices and real-time captioning. Assistive Listening Devices - Gallery talks, lectures, and symposia with FM assistive listening devices are scheduled on a regular basis. For other programs a limited number of FM assistive listening devices are available. The Museum names exactly which information desk, and admission desk equipped with induction loops, or which auditorium, and centre for education equipped with infrared sound enhancement systems (with headsets and neck loops).

Audio Guide for Visitors with Disabilities Headphones - Audio Guide players have headsets and volume control. A limited number of neck loops for hearing aids with T-switches are available. Audio Guide players are free to visitors who are hard of hearing, deaf, blind, or partially sighted.

Real-Time Captioning - The Museum can provide real-time captioning for lectures on request. The real-time captioning is a communication process, when the trained operator (voice writer) converts speech to text.

For Visitors Who Are Deaf, the Museum offers a variety of programs in American Sign Language, with Sign Language interpretation, and with real-time captioning.

The Met welcomes groups of all abilities in three ways. There are

- a guided visit led by trained Museum staff,
- a self-guided visit, which allows you to lead your own group through the Museum, or

- an [offsite program](#) for people unable to visit the Museum due to disability or medical conditions

**The British Museum in London** has a special service. It involves people with hearing disabilities in accessibility. Here are [deaf-led BSL tour exploring the highlights of the BP exhibition](#). This tour is in British Sign Language and does not include a voice-over.

**The TATE Museum in UK** offers a page on its website, which is called [„disABILITY AND ART”](#), to aim to show “how artists have portrayed the range of human ability through their art”. The page was created with the help of staff and volunteers from Tate’s disABILITY Network. The page recommends videos, articles, artists, artworks connect with disability, including hearing impairment, and you can read the responses to TATE's collection by museum’s disability network too.

In 2018, the **7th edition of Rough Guide to Accessible Britain** was published. “The Guide aims to inspire and support people with diverse needs in enjoying the best of Britain’s attractions – whatever their disability.” “The Guide provides clear and helpful advice to highlight the very best inclusive and accessible days out for people of all abilities, from museums and art galleries, to wildlife parks and gardens.” “Every venue in the Guide is reviewed by Rough Guides’ team of writers, who either have a disability themselves or visited the venue with disabled friend or family member.” In guide, the following universal symbols are used to sign the accessibility for people with hearing impairment: [The Guide is free to download or view online here](#).

**StageTEXT London** makes theatre and culture accessible to deaf, deafened and hard of hearing people providing captioning. The captioning makes it possible for the audience with hearing disability to see and catch every word, because what the actors speak, or sing is displayed as text. StageTEXT shows the experience of hearing-impaired people in a short film attending of captioned theatre performances. You can see it [here](#).

UK regional and national museums are beginning to incorporate open-access tactile and/or auditory facilities within a minor number of their permanent collections (Ginley, 2013; Hirose, 2013; Museums Association, 2017). These types of multisensory exhibits tend to be small additions to the main collections rather than a central feature. VIP and campaigners often comment that this provision is inadequate (RNIB, 2003; Hirose, 2013). Much more could be achieved if curators built intellectual access for blind and partially sighted visitors into the curatorship and design of their permanent and non-permanent exhibitions. Chick (2017) studies the case of the National Centre for Craft & Design (NCCD) whose management planned to improve intellectual access to this visitor group in their Main Gallery.

A summary live working-document was developed with guidance concerning key themes. The NCCD exhibitions team were fully consulted to ensure the content was relevant to a regional venue with

limited resources. Topics covered in this working document include: exhibition design, interpretative panels and object labels; audio descriptors; touch objects; tactile and large print guides; lighting; magnification of objects; magnified images and staff training. The objective revealed by Chick's study (2017) was to use this document as the platform for exploring how to design and curate NCCD's next non-permanent exhibition to have outstanding intellectual access for blind and partially sighted visitors. There were training sessions for the staff in the museum which involved also persons with total and partial sight loss.

The group identified the key topics to address during the co-creation sessions for the non-permanent exhibition as: gallery space way-finding solution, achieving an effective multi-sensory exhibition inclusive to all visitors, interpretive information in audio and identification of appropriate cost effective audio equipment for the NCCD Main Gallery, large-print and Braille brochures, visitor assistance and interpretation by NCCD gallery assistants, guiding a visually impaired person, offering interpretations of exhibits and answering questions at the NCCD reception desk.

The results concerning the co-creation of the exhibition "3D Printing" as mentioned by Chick in her study (2017) consisted in a multi-sensory desk containing handling objects; a trim phone (containing the audio descriptors of particular objects and readings of the wall text panels); exhibit labels; and magnifiers. A demonstration multi-sensory desk and two different way-finder textured floor tiles were placed at the front of the exhibition space, where the gallery assistants were present. The assistant explains to small groups of visitors or individuals the purpose of this desk, including what the different raised disks denote. This desk also contained the large-print and Braille publications. Each desk was positioned near the original exhibit (which was displayed on a plinth or freestanding) so the visitor could relate the contents of the desk to the context of the exhibit.

The aim was to provide true access to the exhibition content an exhibit at a time for blind and partially sighted visitors. On several multi-sensory desks there are objects that can be handled after or before listening to the audio description, and this serves as a valuable complement. This audio technological solution was developed because it was cost effective, easy to install, appropriate answer for the gallery space (which did not contain WiFi) and could be adapted for use in future NCCD exhibitions.

One of these technologies that museums are already using, are 3D printing and scanning, like at The Art Institute of Chicago, where blind and partially sighted visitors can touch three-dimensional replicas of selected objects from the collection, alongside with discussions about the original works of art being promoted by museum staff (Vaz et al., 2018).

Another exhibition, the Hoy Toca el Prado, at the Prado Museum, carried out tactile reliefs of six famous works of art, which could be touched, in order to allow patrons with vision impairment to mentally recreate the paintings by feeling and understanding their depth, perspective and space. One



other example refers to the digital model produced by scanning a 2500-year-old mummy of the Manchester Museum collection, worked upon to recreate half of the sculpture as it would originally have appeared, and the other half as it is nowadays. Inside the replica, there were embedded touch sensitive sensors, that detect the tactile exploration made by visitors and trigger contextual audio-explanations that can be listened through headphones, as mentioned in the study of Vaz et al. (2018).

In its turn, other group of researchers, among them Reichinger (2016) developed a gesture-based interactive audio guide for the relief interpretation of the painting *The Kiss*, that accordingly to a specific region that is being touched, presents audio files to describe the painting. A similar project that comprises both hand-tracking system and an audio device was developed to give access to a bas-relief of the painting *Madonna with Child and Angels*.

## V. National best practices: programs and projects. Museum education activities and programs

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### V.1. Bosnia and Herzegovina (and other BALKAN COUNTRIES)

The Balkan Museum Network (BMN) is a platform for museum professionals to learn, share, and support each other. BMN was developed from the project of the Cultural Heritage without Borders to an independent association of citizens registered in 2015 in Bosnia and Herzegovina. BMN is membership-based organisation that consists of 70 museums, 130 individuals and 3 non-governmental organisations in 12 countries of the Balkan region and several EU member states. The mission of BMN is to promote and protect shared and complex heritage of the Balkans. Due to its turbulent history from medieval times to 20th century, the Balkan heritage is very often contested and that is evidenced in the interpretation of the museums' exhibitions and collections. Due to conflicts in ex-Yugoslavia in the nineties of the twentieth century, cultural cooperation is still on a low level due to on-going peace-building process. BMN is mostly supporting middle managers and different professionals who are transforming the museums from within. As public institutions, museums are implementing official cultural policy that is often not supportive of cross-border cooperation. Thus to be the member of the BMN is a political statement and museum professionals often have to attend BMN conferences and workshops during their holiday days. BMN is a member of the Network of European Museum Organisations (NEMO) and the International Coalition of the Sites of Conscience which gives Balkan museums link with European and international partners.

This report is focused on Bosnia and Herzegovina (BiH) where BMN is registered as a legal body (association of citizens) offering context and examples of projects in museums.

Access is defined as (1) A way of approaching, or reaching, or entering; (2) The right or opportunity to reach, or use, or visit; (3) Allowing a minority or special interest group inside. Museum access thus entails access to buildings, collections, objects and services for all individuals. By access we mean Physical access; Sensory access; Intellectual access; Cultural access; Economic access and Attitudinal access.

Since 2006, the BMN has provided different capacity building activities and improved existing museums infrastructure. Access and inclusion of PwD has been improved using the following strategies:

1. Trainings of museums professionals,
2. Supporting the development of "Access Guide" for museum audience,

3. Establishment and support to the Balkan Museum Access Group (BMAG members act as access consultants),
4. Conducting Access Survey to museum with recommendations and priorities,
5. Funding provided to museums through the small grants scheme to improve infrastructure, purchase ICT technologies, make exhibitions and develop educational activities
6. Production of “Museum in a Suitcase tool” for 11 museums (initial network members)
7. Development of “Disability Toolkit” as free and practical, online resource,
8. Producing publications on this issues,
9. Organising international conferences on this topic (two Balkan Museums without Barriers conferences in Sarajevo (2014) and in Skopje (2018),
10. Mainstreaming access as continues topic on all five BMN organised international museums conferences called “Meet, See, Do”,
11. Providing an award for the best museum project in the area of access and inclusion (2014) and promoting achieved results,
12. Speaking in media on this issue,
13. Promoting partnership with associations of disabled people (several museums signed a Memorandum of Understanding with a local Associations of Disabled people for the long term partnership).

A series of different activities concerning access for disabled people, using cooperation as a framework and based on the local cultural context and collections, has led to improvements in museums’ access facilities. Organised workshops helped museums to have a greater understanding of how their environment, both physical and attitudinal, has to change in order to respond to the needs of all visitors. They helped to implement necessary improvements in facilities and to develop accessible exhibitions and programmes, but also ensured that access was strategically developed across all museum activities.

Competence was built additionally through the implementation of more than 35 pilot projects that received grants as part of an initiative to develop disability inclusion in the Western Balkan museums. This was an opportunity for a variety of ideas to be developed in close partnership with non-museum organisations in terms of outreach or community engagement programmes and the diversification of traditional visitor profiles. The themes related to the involvement and participation in access and inclusion on the part of disabled people, including social justice, storytelling, negotiating the past, cultural tourism and wellbeing. All chosen projects impacted across the museums, encouraging collaboration and bringing new creative energy into everyday museum practices. Using the social model of inclusion as an approach, the museums have opened their doors to many previously excluded individuals and groups. Some of the results of these projects were

presented at an international conference, Balkan Museums without Barriers, held in Sarajevo in autumn 2014.

Today, several participating museums are equipped with improved physical facilities (ramps, lifts, specialised toilets, chairs) and equipment (fusing machine for the production of tactile images, bar code scanners, tablets, museum phones, pottery wheel, TV screens, etc.). More importantly, participating museum personnel have developed more open and inclusive perspectives on visitors and their participation in the work and future of the museums and have established long-term partnerships with non-museum institutions, particularly with disabled people's associations, other non-governmental organisations and artists and craftsmen.

Accessible daily processes have been integrated into the work of museums (such as designing promotional materials, making more accessible web pages and designing leaflets, posters and other visuals readable by the visually impaired). Also, many new museum services have been developed, such as the design of a tactile area containing original and replica museum objects that can be handled alone or with a guide; having 3D printed replicas showing the missing parts and the original shape of an object; offering a tactile map of the museum and its departments; providing more quality audio guides developed together with blind and visually impaired people; producing bar codes readable with a scanner in order to offer audio information about exhibits; and enabling a virtual walk through heritage sites – such as medieval fortresses – on the museum's website.

The strategy to build capacity and not dependence resulted in embedded skills and competence within the museums, allowing them to take a leading role among cultural institutions.

**The Disability Tool Kit** produced by CHwB equipped museums with good practice and easy-to-use strategies for better access, and was developed as a collaborative production by participating museums. Furthermore, through a peer-to-peer model of knowledge transfer, the BMN is training a pool of museum professionals who can pass on skills and knowledge to colleagues and partners. The group is called the Balkan Museum Access Group (BMAG) and consists of access consultants from the museums in the Balkans. By providing advice, skills and on-going support, local experts are able to improve capacity and creativity in western Balkan museums, facilitating the inclusion of disabled children and adults in museums as a crucial foundation for sustainability. This core group of local professionals is one of the great resources of the access and inclusion projects of the network. Those professionals, coming from across the region and working throughout it, are deepening the links between institutions and individuals. These links, established between the museums that engage Access Group members, additionally contribute to developing deeper trust across national boundaries. Access and inclusion activities represent the most visible shift in Balkan museums. The change started by removing physical barriers, continued with the development of participatory

programmes and is resulting in the transformation of attitudes and the challenging of the prejudices of all involved. The inclusion of various previously excluded groups is the starting point for the principal ethic of the Balkan Museum Network – that museums and heritage are for all. The BMN will continue with calls for small projects, especially in the field of inclusion, further embedding access across heritage institutions and contributing at the same time to conditions that promote people's rights to culture.

### **Best practices regarding educational programs and services of the museums referring to accessibility and/or children with disabilities**

Through the Balkan Museum Network in the period 2013-2019 36 small projects were funded to 32 museums in 7 countries of the region, with the investment of 140.000 EUR coming from different grants and funding agencies (Regional distribution per countries is shown in the graph below: Albania (3 project), BiH (8 projects), Croatia (1 project), Greece (1 project), Kosovo (2 projects) North Macedonia (7 projects) and Serbia (10 projects). The grants were ranging from 1.500 to 8.000 EUR and the full list of museums that received grants is available in Annex 1. In the period 2009 – 2011, eleven museums from the Western Balkans developed their own museum in a suitcase and other relevant activities. The example of the National Museum of Bosnia and Herzegovina is included in Annex 2 as a case study from the "BMN Disability Toolkit". Apart from BMN support and funding, there are other projects implemented for persons with sensory disability and two examples are in Annex 4.

**Zenica City Museum** is one of the first museums to start removing barriers and increasing access. The museums has developed the 'museum in a suitcase' tool, tactile replicas, access guide, involved museum pedagogue Lejla Agic in the BMN Access Group, produced video in sign language about the permanent collection, produced tactile images with the fuser, provided chairs in their facilities, used 3D printing models and much more. Zenica City Museum implemented two small grants projects "Stories from the past" and "3D MUSE".

The most recent project is titled "3D MUSE" and it is presents the existing collections using digitization and making it accessible to everyone, especially disabled people. The Museum aims to produce new format of labels that is more interactive and suitable to different audiences, and also to produce 3D models of the specific exhibits. As part of the project, this Museum plans to include disabled people in museum activities, engage museum's staff to present stories of exhibits using technology and to present information on web site and social media channels in a new and more accessible way. We are 3D scanning some of our exhibits from permanent collections and those scans will be presented on tablet computers installed in our permanent exhibitions and on our web page also. The other activity is to make from 3D scan of the con of Stjepan Tomaš and a 3D print/ replica made by the silicon made mould. With



these tools the museum can perform creative workshops of making coin replicas with disabled children from local school for disabled. All of exhibit labels and photographs with texts are available in a digital form on a tablet computers and museum's web page. Manipulating digital copy allows user to zoom in and make content bigger while reading as well as brows at home, when a person is not physically in the museum.

In 2016, Zenica City Museum developed an educational museum corner, situated across the main entrance to the building on ground level without stairs. Children use this space, which is equipped with working sheets, tactile images and different educational tools, which are changed according to the workshop.

“Stories from the past” is another project implemented by Zenica City Museum. This project was focused on increasing inclusion of disabled people in museum's work and encouraging their involvement in community activities as well as increasing public awareness about this population in the society. In this project members of the Association “Lotus” were involved, who are focused on working with children with disabilities, and the Association “Let's be friends”, a daily center for people older than 18 who have certain mental and physical difficulties. During four months of the project, Zenica City Museum organized three workshops, working trip to medieval town of Vranduk and the city of Travnik, as well as a small event where the results of this project were presented along with a short amateur documentary. The Museum organized painting workshop, a workshop of making greeting cards and bookmarks, and a dance workshop. The main theme of all workshops and the project itself was the medieval period in Bosnia and Herzegovina history.

**The History Museum of BiH** implemented the project “Touch the History.” On the beginning of the project, they have significantly reduced the price of the ticket for the persons with disabilities (80% reduction). Together with consultants from Balkan Museum Access group as well as representatives from the organizations of persons with disabilities, History Museum has designed an interpretation panel for blind and partially sighted persons and has created the permanent Tactile Area with 8-10 artifacts from the Museum's three-dimensional objects collection. Also an “easy to read” version of the Museum's website has been made. The Museum has also produce a tactile exhibit – a reconstruction of the DFS 230 glider from the WWII. The model is satiated in the museum's garden.

The main results of the project are: Produced a Tactile Area for visitors with visual impairments, as well as Braille interpretation materials; Increased the number of visitors with disabilities; Increased cooperation between staff/volunteers and persons with disabilities

The main challenges faced during the project implementation have been: 1. Dealing with differing opinions on how persons with visual impairments approach museum collections and interpretation materials; 2. Sourcing materials; 3. Translation to Braille of the materials for users that

have English as a second language, deciding between UEB, SEB and unconstructed Braille. The project has helped the museum to promote itself to persons and groups who may have before felt alienated from the museum and cultural institutions in Sarajevo.

The long term objectives are to sustain the interest of blind and visually impaired to come to the museum and to strengthen museum's partnership to cross-promote ourselves with institutions established for and representing those with visual impairments. The museum staff have realised the benefits of making collections as accessible as possible to the widest number of visitors. Visitors – both with and without disabilities – have realised that the museum has been making efforts to make its collections more widely available, and colleagues from other museums have seen how simple steps can improve accessibility. There has also been a great deal of interest in our Braille interpretation boards from visitors without visual impairments, who have then gone on to ask questions about Braille itself and its use in the region – something that is not so evident in everyday life in Sarajevo.

The museum staff has learned how to accommodate the specific needs of individuals, and volunteers have learned presentational skills in regard to the Tactile Area. Workshop participants have learned about the basics of museology, curatorship, conservation and reconstruction, as well as about the collections of the Museum in general, and the specific histories of the artefacts in the Tactile Area. The project has allowed the Museum to form partnerships with individuals and institutions representing blind and visually impaired persons, thus increasing recurrent visits to the Museum. The Museum, thanks to the reduced admission fee for persons with disabilities, is now able to monitor visitor numbers with regard to disabilities, and will be able to disseminate this information to other cultural institutions. Persons with disabilities have been made more aware about the potential for cultural institutions to become more accessible with relatively easy measures, and we hope this will provide a springboard for advocacy for persons with disabilities within cultural institutions within the region.

**Tešanj Museum** implemented a project called “Children in culture”. The project was created with the intention to include families and children with disabilities and without disabilities in the local community through practical workshops in art pottery. With this project, we contributed to the development of social inclusion in the Museum of Tešanj. Main activities were: 1. Art craft workshops; 2. Public promotion; 3. Art craft exhibition. Public institution Museum of Tešanj with its local partners (Centre for social work Tešanj and CSO of parents, children and youth with disabilities Tešanj) wants to give an active and humble contribution in achieving defined objectives and reduce the challenges that families with children with disabilities are facing everyday. Organize more progressive and active promotion of values and the principles of participation of children with and without disabilities in culture in general; Increase the quantity and quality of practical workshops for adoption of skills in art workshops; Create opportunities for children with and without disabilities for mobility in culture (exchanges, study visits, etc.); Improve and expand inter-sectorial cooperation and partnerships in

development and implementation of social inclusion projects and activities for children with disabilities in culture sector. Objectives of the project Children in culture were: Social empowerment and integration of families with children with disabilities into local community through practical art craft workshops; Create a favourable environment for the social integration and interaction of families with children with disabilities with families with children without disabilities into the local community. After developing detailed activity plan, together with our partner organizations, representatives and external consultant, we have been organizing on a monthly basis a revision meetings where we discussed and exchange ideas and had continuous analysis of the project to assess the execution, identify problems, establish problem areas and recommends correction measures. The sense and understanding of issues and challenges that people with disabilities are facing are increased. Activities oriented toward work of Museum with social inclusion, people with disabilities, reaching and organising activities that are not ordinary work of Museum's have become a strategic focus of Museum of Tešanj work. We are researching public calls for funds for different projects, more involved in project management, networking and establishing partnership with different institutions and civil society organizations with similar work, etc. Visitors are starting to ask about these kind of activities, they like to see something new and different and how we connect tradition and traditional customs with today's life issues and challenges of people in need, how we are becoming an institution that care and resolve these issues and challenges. Communication, active listening, emotional growth in sense of sensibility of their needs from "ordinary" people, they don't have an opportunity to interact in everyday basis. Sense of precision, care, limits, etc. Different processes, actions and using different materials and tools in producing pottery objects.

### **Bosniac Institute – Adil Zulfikarpašić Foundation**

**The Bosniak Institute** is GLAM institute and it implemented the project "Our Heritage: hear and learn" to improve access for blind and visually impaired persons to the collections of the Bosniac Institute through new communication tool - audio guides. For the implementation of the project, Bosniac institute established intersectional cooperation with public and academic institutions and non-governmental organization. Different groups of people were involved: young professional, blind person and student who, respectively, wrote stories about the collections of the institute, proofread and edited the stories and read them audio guide. A particularly positive outcome of this project is established cooperation with the Library for blind and visually impaired persons, who have a credit for the successful implementation of the project. The project "Our Heritage: hear and learn" improved knowledge of project team, and all other employees of the Institute, about disabilities and inclusion of disabled persons. The museum staff became aware of the obstacles for disabled persons that exist and we realized that providing accessibility helps all the visitors, not just disabled persons (in the case of this project visually impaired persons). A member from the Association, young art historian was engaged to select art objects from the collection of the Bosniac Institute and write texts about them. Other stories that were chosen

for the audio guide were selected and written by the project team (employees of the Bosniac Institute), stories about the founders, Gazi Husrev-beg Hammam, Library, Archive and ethnological collection, etc.. During the implementation of the project Bosniac Institute established intersectional cooperation with different institutions and the results of this cooperation were successful and qualitative implementation of activities: Looking at things from the perspective of disabled persons. We learned that their needs are our needs too; Expert selection of the objects and narratives; Well written and creative texts with innovative approach in representing BH cultural heritage; Texts edited and adapted for blind and visually impaired persons; Well-recorded audio material; Partnership with Library for blind and visually impaired person improved implementation of the project. Through this partnership we realized how it is important to invite organizations for people with disabilities in the very beginning, in the writing project proposal phase, to work together on project idea and plan together future activities. Partnership with the Library provided connection with the target group, blind and visually impaired people, and enable sustainability of the Project in the future.

**The list of museums that received the financial support from BMN to improve accessibility**

No.	Name of the institution	Country
1	Art gallery of Fier	Albania
2	Association “Istarsko Ecomuseum Vodnjan”	Croatia
3	Bosniac Institute – Adil Zulfikarpašić Foundation	BiH
4	History Museum of BiH	BiH
5	Institute and Museum Bitola	N. Macedonia
6	Institute for the Protection of Cultural Monuments and Museum of Ohrid	N. Macedonia
7	Museum in Smederevo	Serbia
8	Museum of African art	Serbia
9	Museum of Apollonia Archaeological Park	Albania
10	Museum of Mitrovica	Kosovo
11	Museum of Peja	Kosovo
12	Museum of Tesanj	BiH
13	Museum of the Macedonian Struggle – Skopje	N. Macedonia
14	Museum of Yugoslav History	Serbia
15	National Historical Museum Athens	Greece
16	National Museum in Zrenjanin	Serbia
17	National museum of Leskovac	Serbia
18	National Museum of Macedonia	N. Macedonia
19	OSTEN Skopje, Museum of Drawing	N. Macedonia

20	Regional Museum Gorazde	BiH
21	Shkodra Historical Museum	Albania
22	The Gallery of Matica Srpska	Serbia
23	The Homeland Museum of Knjazevac	Serbia
24	Zenica City Museum	BiH
25	“House of Leaves” The Museum of Secret Surveillance	Albania
26	Vojvodina Museum	Serbia
27	National Museum of Kosovo	Kosovo
28	National Museum of Montenegro	Montenegro
29	Museum of Republika Srpska	BiH
30	Archaeological Museum of the Republic of North Macedonia	N. Macedonia
31	National Museum of BiH	BiH
32	National Historical Museum	Albania

The Balkan Museums Access Group (BMAG) is a permanent working group of the Balkan Museum Network committed to increasing accessibility of museums for everyone, and especially for Deaf and disabled people. BMAG is a peer-learning group of individuals, committed to learning and putting social model of disability into daily museum practices. BMAG is committed to developing accessibility knowledge and to implementing accessibility features in our own museums, supported by two disability consultants and three-year training programme.

The learning is streamlined from an individual to the institutional level. The museums are motivated to include disabled people by providing examples of successful accessible museum practices. Sharing among colleagues is crucial for learning. Museums have opened up, embracing disabled people as partners and experts and revising their approaches to planning and strategy. The success factors refer to reducing isolation, having more information about activities of museums in wider Balkan region inspires others for new activities, new partnerships and participation in international projects. BMAG is funded by the Stavros Niarchos Foundation, a Greek-based philanthropic organization that provides hundreds of grants around the world on topics including arts and culture.

As of late 2017, BMAG started conducting accessibility surveys to identify, prioritize and remove barriers, thereby, increasing accessibility in each museum (National museum of Leskovac; House of Leaves, The Museum of Secret Surveillance; Museum of Vojvodina; and Institute and Museum Bitola) that applied to be the venue of access survey had a privilege to host BMAG in a mission to survey, identify and propose actions to reduce barriers. The teams of two access consultants from BMAG spent three days in each museum looking at different physical, sensory, attitudinal, intellectual and



cultural barriers. Surveying is done in a participatory way, discussing the existing barriers for disabled people in partnership with the host museum, both management of the museum and the staff. The process will result with the report and an overview of the current situation with recommendations for the improvements.

This was a pilot phase and BMAG members will continue to offer access survey services to member museums of the Balkan Museum Network. Helping museums become more accessible for disabled people is the strategic focus of BMN. The process of access surveys is part of the project “Stories of the Balkans – Building capacity of museum professionals in interpretation and access to museums” funded by Headley Trust from UK.

### **BMAG received The Zero Project’s award**

Balkan Museum Access Group (BMAG) has been recognized as an innovative practice by the The Zero Project, an initiative of the Essl Foundation that focuses on the rights of persons with disabilities globally. The Zero Project provides a platform where the most innovative and effective solutions to problems that persons with disabilities face, are shared. The model of BMAG is recognized as an innovative practice of the Zero Project 2018 and it will be featured in an annual report, promoted on the Zero project website together with other innovative practices as well as presented at the international conference in front of experts and leaders in the field of disability from around the world. It is great that dedicated work and efforts of BMAG towards more accessible museums in the Balkans has been recognized as innovative practice.

### **Excerpt from the “BMN Updated Disability Toolkit” Michèle Taylor, May 2018**

*Western Balkans Case Study / Producing an Audio Guide*

*“The cooperation of CHwB (Foundation Cultural Heritage without Borders) and The Stavros Niarchos Foundation with The National Museum of Bosnia and Herzegovina helped to make the first steps towards improving the accessibility of one of the oldest institutions in Bosnia and Herzegovina.*

*There were two projects:*

- *“Audio guide for blind and partially sighted people“ and*
- *“Museum in the Suitcase“*

*“Audio guide for blind and partially sighted people“*

*The first step was to research technical solutions available for blind and partially sighted people, searching the internet and reviewing other museums accessibility projects. After gathering a large amount of information, one conclusion was inevitable: “I don't have any criteria for choosing the best*

solution“! So, I educated myself about the needs of blind and partially sighted people from experts who are working in that area at the library and a school. I found:

- one of the most important facts that I've learned is that Braille can be read only by people who were born blind or who lost their sight at a young age. That had a crucial influence on the best solution.
- it is important to gather information from institutions that support blind and partially sighted people at a professional level
- it is important to compare different sources
- it is vital to include blind and partially sighted people in every step of the project as a best source of information and best critics of the process.

The aim of this project is to enable partially sighted and blind people to visit the museum's existing collections independently, as well as to understand what is exhibited.

In order to really make our museum **museum4all**, it was important to include all ages and groups of blind and partially sighted visitors. Accordingly we can say that we have a “general” type of exhibition or “intro”.

Understanding access needs made me aware of how big the intervention in the museum needed to be: the museum was made “not to be touched“! At the same time I've become aware that it is not possible to do it all. Plans have to be made, this project should be a good basis for further improvements which, I presume, will be much easier to do than this first step.

The technology

Finally, an “I.D.Mate“ barcode reader was chosen as the best and simplest solution and most importantly, a solution that will work for everybody.

I.D Mate is a portable “all-in-one” talking bar code scanner that helps people identify items via the product's bar code or UPC. Using text-to-speech and digital voice recording technologies, it allows users to access an on-board database of product descriptions, along with a tailored set of recorded voice messages.

Since all information is held on a small memory card, this little gadget could be used in various situations, the audio guide could be in different languages or used for various purposes. All it takes is to change the memory card.

Now the museum has three barcode readers, because there are three departments in the museum. These can also be used in case of a visit by the large group so we can divide visitors into three groups in order to make their experience better.

A possible problem could be that, after all, this is the gadget; no one wants to be held responsible for it or wants to learn “new and complicated stuff” (even though it is not complicated). The answer to this problem is to tag the bar code to the reader with detailed instructions for the gadget.

*It was important to make the first museums tactile exhibition for blind and partially sighted people real together with curators and conservators who made a selection of museum items which will form the tactile collection.*

- *In the Archaeological department we have used exhibited items from existing collections.*
- *The Ethnological department used originals from the stores and some new items were bought and made for this purpose.*
- *The biggest problem was the Natural History department, because all the exhibitions are behind glass, so we made all new items suitable to be made into tactile models and exhibited them beside the originals.*

*Some of my new knowledge needed to be passed on to curators, because they had to make a descriptive story about the tactile items to make sure that everybody has the possibility to fully understand what is exhibited. If you educate or inform all your colleagues (from curators to craftsmen) about your work, it will make it easier to accomplish your goals. Maybe, as in my case, an official letter from director of museum will be helpful because it will make people understand the importance of your work.*

*One of the most important things that will connect all the parts into one whole is to make tactile maps and to make an accessibility guide. It is a crucial piece of information for the visitor:*

- *making a detailed tactile map of the museum with the positions of tactile exhibits and*
- *making an accessibility guide that can be read on our web page.*

*I attended tactile image training at the Royal National Institute of Blind People in Birmingham, UK, provided by Cultural Heritage without Borders. This was important in helping me to realise this project. Only after this training I began to understand what makes a good tactile image and immediately I could recognise all the mistakes that I have made in making my map pretty and technically correct!*

*CHwB provided equipment for making tactile images and four of my colleagues and I gave tactile image training to professionals from 11 different museums from Balkan Museum Network.*

*One target group – One promotion*

*Promotion of both projects was done through media (radio, journals and internet portals), through presentation of the project in the “Centre for blind and partially sighted people” and by informing schools about educational workshops. A major promotion was held in the National Museum of Bosnia Herzegovina. It is very important is to understand that workshops held in schools are educating future independent museum visitors.*

The exhibition “Space, Shape, Touch”, a project of the **Museum of Contemporary Art of the Republic of Srpska (MSURS)** in Banja Luka, is a specialised exhibition for the blind and visually impaired, the first of its kind ever staged in Bosnia and Herzegovina, which consists of prints, paintings, drawings and sculptures from the MSURS collection. The exhibition was first organised to mark 40 years since the foundation of the art group “Space-Shape”, who introduced abstraction to Bosnia and Herzegovina art back in the 1970s. The project was conceived and carried out with the professional assistance of the Typhlological Museum in Zagreb, with the aim to present to the public abstract works of art, part of the great cultural heritage kept at the Museum of Contemporary Art of the Republic of Srpska, in accordance with the latest standards of museological presentation and in a way that would make them accessible to the blind and visually impaired.

The exhibition was first staged at MSURS in November 2015, during the Sixth Regional Museum Meeting held on the topic “Social Inclusion and the Contemporary Museum”. This conference, which brought together museum professionals from across the region, was organised by MSURS in association with the Regional Alliance of ICOM for South-East Europe and the National Committee of ICOM Bosnia and Herzegovina, and supported by the UNESCO Regional Bureau for Science and Culture in Venice. The efforts to foster regional cooperation put in after the conference resulted in the exhibition visiting the Typhlological Museum in Zagreb, the National Museum of Montenegro in Cetinje and the Gallery of Matica srpska in Novi Sad in 2017. This is yet another indicator of the efforts devoted by MSURS to inter-institutional and inter-sectoral networking and to the creation of a web of museums, with the aim to use specially organised programmes and the latest museological presentation techniques to help integrate blind and visually impaired persons in the cultural life of communities.

The art group “Space-Shape” was founded in 1975 and comprised nine prominent artists (Vojo Dimitrijević, Tomislav Dugonjić, Bekir Misirlić, Enes Mundžić, Nikola Njirić, Edin Numankadić, Ljubomir Perčinlić, Mustafa Skopljak and Radoslav Tadić). The exhibition “Space, Touch, Shape” was conceived and curated by Dr. Sc. Sarita Vujković and Žana Vukičević, and staged with the assistance of the curatorial team of MSURS.

**Art Gallery of Bosnia and Herzegovina** organised the Exhibition "Touch Art: Touch is Not Just a Screen" was for the students of the Center for the Blind and Visually Impaired. An exhibition of sculptures from the collection of the Art Gallerys, which were tactile and had legends written in braille language which were made by the Center and blind and partially sighted children. Implementation of three workshops with children in collaboration with the artist Nela Hasanbegovic from the Academy of Fine Arts at the University of Sarajevo. The students were taken through the exhibition, touching the exhibits. The curators followed the tour with a presentation. There is also a tactile picture in the Art Gallery by Ljubomir Naumovic that was used for the occasion only. Aida Sarac used a tactile box as a

didactic aid, as part of the ‘Blue Artism’ program that she developed. The programme works with children from the Autism spectrum.

In 2016 the **Institute and Museum Bitola** purchased LIFTCAR, ramps and wheelchair and solved the problem with physical obstacles (steps), which previously made the Institution unapproachable for disabled people. This was not an ideal solution, but as such was chosen through consultation with the local Association of disabled people “Mobility”, and was positive example for many other institutions in Macedonia that even monuments of culture of first category can be made accessible if there is a will. This was just one obstacle toward our goals for accessibility and this positive example has shown us that close cooperation with the relevant stakeholders is the right approach. By trying to find the right approach and in order to identify the needs of disabled persons, expectations and possibilities for collaboration, in 2016, the Institute and Museum Bitola have signed memorandums for collaboration with the Association of blind people, Association of disabled people “Mobility”, Special school for deaf children Koco Racin, Primary school Gjorgi Sugarev, Resource centre in Trifun Panovski school and Homeland Museum of Knjazevac. Up until last year during “Museum 4 all –Museum 2 all” (Project implemented in partnership with Homeland Museum from Knjazevac, supported by BMN and CHwB), there have never been organized workshops or guided tours for disabled people. These recent experiences have showed us that through increased cooperation with the local organizations and institutions, we are managing to create a friendlier image about the museum, and to minimize the “distance” between our museum exhibition and disabled people, in a same time by raising the awareness about the accessibility in general. Recently, we recorded sign language video for our web site. Several visits and workshops were organized for disabled people, deaf children, using Museum in a suitcase, toolkit, texts with different stories on Braille, and very attractive tactile images prepared on our Piaf fuser financed by BMN / ChwB.

**The Homeland Museum of Knjazevac** has been working on accessibility projects and has been implementing small programs and activities for disabled children in primary schools for more than 15 years. Museum space and our gallery served as a classroom, theatre, playground and simulative working environment. Museum has been working on the development of projects on access and inclusion from 2015. Our project Museum4all helped us to establish cooperation and partnership with MS association and Disabled people association that lasts and develops still. Museum cooperated with associations from Nis and Zajecar for blind and deaf people. Museum has mobile ramps, application for deaf people, guides in Braille letter, tactile maps, web site for disabled people etc. We have established partnership with MS and main association of disabled people in Macedonia and together with local, partner and colleagues from Museum in Bitola we organized workshops, public events and lectures. Our common goal was to



increase the awareness of local communities on the importance of accessibility and inclusion. In 2016, the Museum has implemented Museum4all-Museum2go project and we are still working on its development in communication with local partners. There is an on-going program called Social entrepreneurship as a model for protection of intangible heritage that includes marginalized groups, unemployed women and sensitive groups, disabled people and user of the Care center. The souvenir program is called “Purchase for a Cause!”

### *Conclusion*

- The number of persons with disabilities is higher in Bosnia and Herzegovina than the European average,
- There are no reports, research activities and analysis that specifically investigate the access concerning culture and heritage sector and the fulfilment of the needs in culture,
- Strategic documents and laws exist but they are not implemented as financial resources are not allocated in order to increase the accessibility to cultural institutions,
- Museums, as public institutions, must fulfil several laws regarding physical access to the buildings, as well as implementation of the law on the use of Sign Language,
- It is estimated that the lowest percentages of accessibility to public institutions is to the cultural institutions, only around 20%.
- Museums see the importance of this topic and are ready to engage in implementation of different activities in this area (training of staff, inviting the process of access survey of their institution, prioritizing removing of the existing barriers and similar),
- The information tailored to the available techniques for the people with sensory impairments are available in BiH cultural institutional at a very low percentage,
- Museums need to work on adaptation of public premises and facilities to ensure physical access, implement international accessibility standards for museums and cultural institution, provide the sign language interpretation, as well as signage and other materials in Braille language.
- The Balkan Museum Network used the combination of different capacity building strategies since 2006,
- Better promotion of the museum services that are available to disabled visitors is needed. Existing analysis and reports in the field do not include cultural institutions and their efforts as this data is not publicly available. Better promotion of the projects and their results is necessary both to PWDs and the public,
- It is necessary to ensure sustainability of actions taken by making sure that museums are truly inclusive by (1) Strategically integrating access and inclusion as the question of the

- museums' top management; (2) Making access the responsibility of all museum staff and (3) Making access and inclusion museums' core activity,
- Museums in Bosnia and Herzegovina that implemented educational programmes and developed services for PwDs used different tools, but mostly usage of Braille alphabet; Production of tactile replicas, Audio information; Video in sign language; Tactile representation of images and art paintings; Usage of simple applications and Hands-on workshops for children,
  - Providing funding for small scale projects is beneficial on different levels (1) Competency of the Staff; (2) Improvement of infrastructure; (3) Establishing partners; (4) Mainstreaming access in all museum's activities.

## V.2. GREECE

The first museums in Greece have been established in the 19th century during the same period of the foundation of the new Greek state. The protection of the antiquities, at that time, was a fundamental priority for the Greek state (Gazi, 1999; Nakou, 2001), and according to Gazi (1999) Greek museums were founded primarily as public spaces that are generally open to all. During the 20th century more and more museums have been founded in Greece. Nowadays, it seems that amongst a big variety of museums, such as ethnographic, industrial museums, science museums, galleries, etc., the dominating category of museums in Greece is the archaeological one (Chourmousiadi, 2006). One of the core discussions that take place during the last decades is the educational role of the Greek museums and in specific the type of relationship that is developed amongst museums, cultural heritage and education. Indeed the educational activities of the Greek museums have been more systematic in terms of policies, initiatives and practices during the last decades of the 20th century focusing mainly on school groups (Hadjinicolaou, 2010; Nikonanou, 2010).

The constantly increasing interest for the educational and social role of museums, the social changes and the demand for equal access and participation of all people in all sectors of social life have led Greek museums to take initiatives for the development of programs and other facilitations that aim to provide access to cultural goods of museums to persons with disabilities (see for example: Argyropoulos et al., 2017; Bounia, 2015; Kanari & Vemi, 2012; Chrysoulaki, 2004; Tsitouri, 2004; Velioti-Georgopoulou & Tountasaki, 1997). However, there are differences among museums and over time regarding the level of access, the range, the type and the systematic character of relevant facilitations and activities for persons with different disabilities as for example for persons with sensory

disabilities (see for example: Argyropoulos & Kanari, 2015; Kanari & Argyropoulos, 2014; Kanari, 2015; Nakou, 2010; Nikolarazi, 2017).

In the **Museum of Cycladic Art**, visitors may use a smart phone to choose an exhibit that wish to know, and the app provides navigation instructions by taking advantage of passive infrared (PIR) motion sensors embedded in the room (Anagnostakis et al., 2016). When arriving to the object it is possible to touch it. The interaction is detected by five capacitive sensors, connected to a microcontroller that sends data to the smart phone, playing the audio files. In general, the visitors' experiences about using these techniques were very positive, but future studies must contemplate the integration of Braille signs, as well as develop accessible information for deaf visitors. Additionally, the designed solution did not provide knee clearance for wheelchair users, so future exhibitors must focus on the design for all approach.

The Museum of Cycladic Art, between the years 2014-2017, participated at the Erasmus+ Project with the title: Bridging the Gap between Museums and Individuals with Visual Impairments.

As the most popular collection of the MCA is the Cycladic one and especially the marble figurines, a museum kit was created that would act as the basis for a series of multi-sensory activities and information about the Ancient Cycladic Civilization, 3rd millennium BC, in general and more specifically the marble figurines with direct and indirect references for the Cyclades and their history.

The target group were the students of the School for the Blind in Athens, aged 8-12. Throughout the project they participated in different programs and the feedback we received from both the students and their teachers was very helpful at all stages of designing the educational material.

Furthermore, the accumulated knowledge from partners and especially the Universities that participated at the programs, as well as the training workshops organized by the University of Thessaly for both the staff and the education department of the Museum, were very beneficial.

The research conducted by the working group was expanded to the following sectors in order to achieve a successful design and development of the project:

- a. The accessibility of the museum collections in relation to the special needs of the low vision or blind visitors.
- b. The multisensory narratives and the experiential performance of the historical and sensorial information.
- c. The design of various tactile educational models/games and audio material that should support the suggested narratives.

### **Description of the Multisensory Museumkit- The Cyclades through touch**

The museum kit aims at providing an experiential representation of the historical and sensorial information highlighting the ancient Cycladic civilization and contains:

- A marble figurine of the folded arm type
- An embroidered map of the Cyclades. that shows the tactile shape of the islands as seen from above
- A tactile water map, that is a round tin filled with water that depicts the geographical relief of the Cycladic Islands.
- Pebbles and minerals of different shapes, such as marble, obsidian, emery, pumice, cinnabar in the role of the different islands.
- A puzzle consisting of broken parts of a marble figurine, which the children are invited to put together
- A Book, with the title “Close your eyes, The Cyclades through touch” that offers multiple interpretations about different subjects (such as the sea, the figurines, the marble, the islands etc.), encouraging the reader to enrich their reading through touch. The book is written in both braille and typical writing and
- A tutorial video

When the Erasmus+ project was accomplished we offered one of the museumkits at the School for the Blind, using the other two for awareness programs in schools, for students with learning and development disabilities, for communities in need such as hospitals or home shelters for the elderly.

People with disabilities were always welcome at the educational programs of the MCA. The programs were organized by the Education Department and the accumulated experience was very helpful for the development of the programs.

We offered guided tours to people with learning and development disabilities, to deaf or hard of hearing and to the students of the School for the Blind.

In the spring of 2017, the MCA in collaboration with the Museum of Modern Art in Thessaloniki organized an exhibition on Russian Avant-Garde Paintings from the Kostakis Collection. It was the first time that in the galleries of the museum the original paintings were presented along with the tactile ones, specially produced for the exhibition. Furthermore, a seminar about people with VI was offered for the staff of the museum. The Education Department organized programs for people with VI, although the attendance of the public was not satisfactory, most probably due to lack of information. Programs were also organized for children with no visual problems to raise awareness on the subject.

The accumulated experience from all these years and with the opportunity offered by the ToMiMEUS project we are participating at this moment, led us to the decision to improve the accessibility of our website for people with sensory disabilities as well as to develop a multisensory experience at the Cycladic Collection of the MCA.

### **Individuals with visual impairment and their access to museums in Greece**

Some recent studies in Greece revealed the fact that some museums developed activities for people with visual disabilities, for example: educational programs for school children with disabilities, accessibility programs, participation to international initiatives, such as “Art Beyond Sight Awareness Month” of the International Organization Art Education for the Blind (AEB), temporary tactile and multisensory exhibitions and programs, touch guided tours and permanent touch tours (Argyropoulos, Kanari, 2015). As the authors mentioned it is very important to say that that museums requires to collaborate with associations for the blind and individuals with visual disabilities, so that some programs could be developed, some services or materials that are accessible to blind visitors, such as information in Braille, tactile diagrams, touch tours and other facilities.

In the following sections are described representative, indicative examples of practices within Greek museums regarding the access of persons –adults and children – with visual impairments and Deaf and hard of hearing persons.

As it was mentioned above during the 80s museums in Greece have started to develop their educational activities in a more systematic way. In the same period some museums in Greece have made efforts to design and develop educational programs for children with disabilities including children with visual impairments (Kanari & Vemi, 2012; Velioti-Georgopoulou & Tountasaki, 1997). Representative examples may be the Museum of Modern Greek Culture (former Museum of Greek Folk Art) in collaboration with the Lighthouse for the Blind of Greece (Antzoulitou-Retsila, 1997), the Benaki Museum (Destouni-Giannoulitou, 2010), or the Department of Educational Programs and Communication of the Ministry of Culture (Chrysoulaki, 1997), etc. The main considerations of museum professionals during that period included issues such as the lack of infrastructure, the lack of knowledge regarding disability, the need of adaptations and appropriate material (e.g. replicas, tactile material, information in Braille), the need of collaboration with special education teachers, issues of preparation of children before the visit with relevant material (e.g. museum kits), etc. (Kanari, 2015; Kanari & Vemi, 2012).

Another important initiative for the access of persons with visual impairments was the foundation of the Tactual Museum in Athens during the 1980s by the Lighthouse for the Blind of Greece (Benaki, 1991). The exhibits of the Tactual Museum (<http://www.tactualmuseum.gr/>) are replicas of representative artefacts from different historical periods of Greek cultural heritage that are displayed in different museums in Greece or abroad (e.g. a replica of the statue of Aphrodite of Melos displayed in Louvre). The Tactual Museum offers guided tours and educational activities and programs not only to adults and children with visual impairments but also to sighted audience in order to provide access to copies of artifacts through touch to all and increase disability awareness (Geroulanou, 2010).



Gradually more museums started to develop educational programs for adults or for children with visual impairments from special schools such as the Byzantine and Christian Museum in Athens (Gotsis, 2004), the National Archaeological Museum – it is worth noting that since 2006 it participates in the international initiative “Art Beyond Sight Awareness Month” of the International Organization Art Education for the Blind (AEB) (<https://www.namuseum.gr/education/atoma-tyfla-i-me-chamili-orasi/>) - , the archaeological site of Acropolis (Georgaka & Gavalas, 2015), and so on.

During the 2000s there was the first permanent tactile route in Byzantine and Christian Museum in Athens with selected original exhibits, Braille labels and audio description (Konstantios, 2008). The example of the Byzantine and Christian Museum in Athens has followed also the Museum of Byzantine Culture in Thessaloniki in 2015 with the creation of a tactile route for persons with visual impairments and their escorts. The touch route has been created in collaboration with the Centre for Education and Rehabilitation of the Blind in Thessaloniki and the Regional Association of Central Macedonia of the Pan-Hellenic Association. The route and the action entitled “Touch and discover Byzantium” includes fifteen selected original exhibits in different galleries of the museum, a portable audio guided system in four languages (Greek, English, German and Russian) and a leaflet for the escorts also in four languages. The leaflets for the escorts [can be downloaded from the website of the museum](#). Another museum that provides audio guides for persons with visual impairments is the Corfu Museum of Asian Art (<http://www.matk.gr/>) which has a [multilingual audio guide with digital signage and information in Braille](#).

In the **Acropolis Museum in Athens**, according to [the official website of the Museum](#) there are various facilitations and services for visitors with disabilities. For example there are ramps for wheelchairs and strollers at the entrances of the Museum, elevators, accessible toilets, etc. All the public areas of the Museum are accessible to wheelchair users. Also there are wheelchairs available for use free of charge if it is needed. Museum Guides are available in Braille in English and Greek. Guide and assistance dogs are allowed in the Museum according to the Greek legislation for the guide dogs in all public spaces, services, transport and private facilities (Law, 3868/2010). Another service in the Museum of Acropolis is about the Museum’s Archaeologist-Hosts. An Archaeologist-Host is available at a specific location in the Museum three days per week (Tuesdays & Wednesdays 10 a.m. - 2 p.m. and on Saturdays 11 a.m. - 2 p.m) where visitors can look and handle materials, tools, ask questions, make comments, etc (<https://www.theacropolismuseum.gr/en/content/visitors-disabilities>).

It is also important to mention some other important initiatives that have been taken from 2000s onwards for the enhancement of access of persons with visual impairments to museums in Greece such as temporary touch and multisensory exhibitions and programs. An example of these initiatives was the accessibility program entitled “Touching the Art” for persons with visual impairments developed by the State Museum of Contemporary Art in Thessaloniki with temporary touch exhibitions. The touch

exhibitions were organized in different museums in Greece as for example in the Museum of Cycladic Art in 2008 (Plati & Markou, 2009), in the State Museum of Contemporary Art (Zarkali, 2015) and in other museums (for more information about the touch exhibitions of the program “Touching the Art” see the website of the State Museum of Contemporary Art: <https://www.greekstatemuseum.com/kmst/education/accessibility.html>). It is important also to mention that museums seek to collaborate with associations for the blind and individuals with visual disabilities for the development of accessible materials (e.g. information in Braille, etc), or other activities, programs, etc. (Argyropoulos & Kanari, 2015).

Other examples of similar initiatives were the temporary touch exhibition entitled “People and things” in the **Museum of Folk Art and Tradition “Aggeliki Chatzimichali”** (Chaitas & Trada, 2010), the accessible version of the temporary and travelling exhibition “Myrtis: Face to face with the past” (Kalou, 2012), the temporary touch exhibition and the educational program for individuals with visual impairments entitled “The pre-columbian art in Benaki Museum” (Emmanouil & Avgoulas, 2011) and the temporary touch exhibition “Touching the democracy” in the Museum of Ancient Agora in Athens (Klontza, 2013).

The **Museum of Cycladic Art** also provides many facilitations and services for persons with disabilities such as educational programs for children with disabilities, temporary touch exhibitions, educational material like multisensory museum kits (Argyropoulos et al., 2017; Plati, 1997; Plati & Markou, 2009). Visitors also may use a smart phone to choose an exhibit that wish to know, and the app provides navigation instructions by taking advantage of passive infrared (PIR) motion sensors embedded in the room. When arriving to the object it is possible to touch it. The interaction is detected by five capacitive sensors, connected to a microcontroller that sends data to the smart phone, playing the audio files (Anagnostakis et al., 2016). Generally speaking, it seems that devices and practical techniques occupy a vital role in the access of museum visitors who have sensory disabilities. Researchers such as, Vaz, Fernandes, and Rocha Veiga (2018) highlight the following:

“In general, the visitors’ experiences about using these techniques were very positive, but future studies must contemplate the integration of Braille signs, as well as develop accessible information for deaf visitors. Additionally, the designed solution did not provide knee clearance for wheelchair users, so future exhibitors must focus on the design for all approach” (p.568).

During the current decade the development of partnerships between different institutions, universities, museums, schools, associations for the blind and museum networks has contributed to the enhancement of access of persons to culture in general with the development of differentiated educational programs, educational material, museum staff training and other facilitations. Such an example was the Erasmus + Programme entitled “BaGMIVI: Bridging the Gap between Museums and Individuals with Visual Impairments” (<http://bagmivi-project.eu/>) (2014-2017) with coordinating

organization the University of Thessaly (Argyropoulos, Nikolarazi, Chamonikolaou & Kanari, 2016). In specific, the Museum of Cycladic Art, as partner of the BaGMIVI project, has developed educational programs with school children from the Special School for the Blind in Athens and a multisensory museum kit (Argyropoulos et al., 2017). Another example was the project “A touch of history” developed in 2017 by the National Historical Museum of Greece. The project was designed and implemented in collaboration with the Lighthouse for the Blind and the Tactual Museum of Greece and it was co-founded by the Stavros Niarchos Foundation through Cultural Heritage with Borders Bosnia & Herzegovian/Balkan Museum Network. Many accessible means were designed and developed in this project, such as tactile tour with selected artifacts, handling sessions, information in braille as well as large print (Mazarakis, Kachrilas & Stamatelou, 2018). An audio narration of the touch route is available on [the official website of the National Historical Museum of Greece](#).

To sum up, during the last years museums seek to adapt their educational programs in order to include children or adults with visual impairments, other museums organize occasional events such as touch guided tours and in other cases museums seek to provide educational programs for individuals with visual impairments in a more systematic way as for example [the Benaki Museum does](#). Furthermore the Ministry of Culture has provided guidelines regarding access to museums for visually impaired persons such how to grant permission for touch selected exhibits, for having guide-dogs in museums, or information in Braille, etc. Nevertheless, it seems that there are still many contradictions between law and reality because persons with visual disabilities confront different type of barriers during their museum visits (Argyropoulos & Kanari, 2015; Kanari, 2015).

### **Deaf and hard of hearing individuals with hearing impairment and their access to museums in Greece**

The interest of museums in Greece for Deaf and hard of hearing individuals has been expressed with the design and implementation of educational programs for school groups of Deaf and hard of hearing students at about the same period of the development of educational programs for school groups and especially during the 90s (Kanari & Vemi, 2012; Velioti-Georgopoulou & Tountasaki, 1997).

Some of the museums that first implemented educational programs for Deaf and hard of hearing individuals were **the Museum of Cycladic Art** (Plati, 1997), the Numismatic Museum of Athens (Galani-Krikou, 1997) and the Department of Educational Programs and Communication of the Ministry of Culture (Chrysoulaki, 2004). These educational programs were implemented with the collaboration of schools and institutions of Deaf and of course with the collaboration of sign language interpreters. Other material used during these educational programs was cards with key words, pictures, etc (Kanari & Vemi, 2012). The use of museum educational material such as museum kits was also important for the preparation of Deaf and hard of hearing children before their visit in the museum. Such an example

was the visit of the students of the Special School of Deaf and hard of hearing students of Philothei in 1998 in the Acropolis. The students first worked at school with two museum kits and then they visited the archaeological site of Acropolis (Voutsas, 2011).

The most important and widely known initiative in Greece for the access of Deaf and hard of hearing persons to museums was the development of the educational program entitled “The eye is listening” in the National Archaeological Museum in 1998 (Chrysoulaki, 2004). The program “The eye is listening” for Deaf and hard of hearing students from Primary and Secondary Education was designed and has been implemented for many years by Dimitra Kokkevi Fotiou, a Deaf archaeologist who was working in the National Archaeological Museum (Kokkevi-Fotiou, 2004). She also was offering guided tours in American Sign Language and in International Signs to foreigner Deaf visitors. She has also collaborated with other museums that had organized educational programs for Deaf as for example with the Museum of Cycladic Art (Plati, 1997), the Numismatic Museum of Athens (Galani-Krikou, 1997), etc. It is worth mentioning that Ms Kokkevi Fotiou is still guiding groups of Deaf individuals on volunteer basis (Zabetaki, 2018). Her work and contribution is not limited only in Greece. She has also designed programs for the Greek ancient civilization in the Rochester School for the Deaf in USA (“Adventures in education”, 2014, p. 14).

In the following years there were museums that have implemented educational programs for Deaf and hard of hearing students as for example the Byzantine and Christian Museum in Athens. In this case the special education teachers were the sign language interpreters. In order to respond better to Deaf audiences a member of the museum staff has learned the Greek Sign Language (Gotsis & Vosnidis, 2011). Other museums organize occasional guided tours in Greek Sign Language as for example [the Archaeological Museum of Thessaloniki](#) which has organized [guided tours](#) in Greek Sign Language on the occasion of the International Museum Day in 2016 in collaboration with the Hellenic Federation of the Deaf or the Corfu Museum of Asian Art in 2014. Regarding other facilitations and interpretive means there are some examples of temporary exhibitions accessible to Deaf audiences such as the exhibition “Myrtis: Face to face with the past”. The accessible version of this exhibition apart from provisions for visually impaired people (see above) had also screens with information by a Sign Language interpreter (Kalou, 2012).

Initiatives for the access of Deaf and hard of hearing persons to cultural heritage there are also by other agencies such as the HandsUp which is an agency of Sign Language Interpreters in Greece (<https://hands-up.org/>). Among other services the HandsUp agency provides on its website videos in Greek Sign Language and written text for [various museums](#) and archaeological sites in Greece. Also the HandsUp agency in collaboration with other associations and museums has also organized [visits in museums and archaeological sites](#) in Greece for groups of Deaf and hard of hearing persons.

Generally there are museums in Greece that are willing to provide guided tours or to offer their programs to Deaf audiences with the precondition of a Sign language interpreter. However, according to Nikolarazi (2017) based on the websites of the museums it seems that provisions for Deaf audience are rare. Also in some cases of schools of Deaf and hard of hearing students in museums the Sign language interpreters are the special education teachers who know the Greek Sign Language (Moustakidou, 2016).

The examples are indicative since the relevant published studies are limited regarding the educational activities or other facilitations for the Deaf audiences such as assistive listening devices, etc. On the other hand as Nikolarazi states (2017) museums' websites in Greece do not always provide information regarding visits of schools of Deaf and hard of hearing and consequently it is not possible to know the frequency or the facilitations provided in these visits.

### ***Conclusion***

During the last decades many museums in Greece have made efforts to provide access to their spaces, collections and programs to persons with disabilities, especially to those who have sensory disabilities (i. e. persons with vision disability and Deaf or hard of hearing persons). However, persons with sensory disabilities still experience many barriers or obstacles during their museum visits such as, limited availability of permanent facilitations or lack of adapted or differentiated activities in conjunction with appropriate material (see for example: Argyropoulos & Kanari, 2015; Kanari & Argyropoulos, 2014; Kanari, 2015; Nakou, 2010; Nikolarazi, 2017). Many of these initiatives are temporary or occasional events while issues such as appropriate infrastructure, museum staff training in disability issues, funding resources, etc, constitute significant barriers (Argyropoulos, Kanari & Chamonikolaou, 2017; Argyropoulos & Kanari, 2015; Kanari, 2015; Moustakidou, 2016; Nikolarazi, 2017). Another important factor is that the relevant published studies refer mainly to groups with persons of sensory disabilities (e.g. groups of persons with visual impairments or groups of Deaf and hard of hearing persons) although people with disabilities may visit museums with persons without disabilities (friends, family, etc) (Argyropoulos & Kanari, 2015; Nikolarazi, Kanari & Marschark, under publication).

This is very important if we consider the promotion of inclusive education and that many children with sensory disabilities attend general educational settings (Kanari & Argyropoulos, 2014; Kanari, 2015). Issues of differentiated educational programs, permanent facilitations, evaluation of the existing museum-educational programs, interdisciplinary approaches and collaborations integrated in a systematic policy of accessibility in museums are still an open field for relevant research and practices.

### **V.3. HUNGARY**



### **Inclusive education in Hungary: general considerations**

In Hungary, like in the neighboring countries, the segregated education of almost all students with disabilities was common practice until the 1990s. It was widely accepted that teaching is most effective in homogeneous groups of students with the same disability. The legislative pathway for inclusive education opened up as a result of the 1993 modification of the Law on Public Education, which declared that parents have the right to decide which school their children attend. The 1990s were suitable for such a fundamental change, because schools were in a need of students due to a general decrease in the school-aged population (Bánfalvi, 2008). Children with severe disabilities are counted as three students, which means all inclusive classes are smaller in number than classes without students with SEN. Another significant consequence of the growing number of students with SEN in mainstream education was the obvious decrease of students in segregated institutions. Currently, around 67% of Students with SEN study in mainstream institutions (Perlusz, 2019). However, since 1993, no comprehensive national research has investigated the implementation of inclusive practices in Hungarian schools (Perlusz, 2019). Students in mainstream schools are either assisted by SEN teachers, working full or part time in the school, or, more characteristically, itinerant SEN teachers visit the student and provide counseling for the school staff. The 2003 amendment of the Public Education Act allowed establishing Unified Special Education Methodological centres (EGYMI) as a school unit in segregated schools. EGYMI staff support the education of children with SEN in integrated settings. The services offered by EGYMIs are counselling, early development and care, development support/training, speech therapy, conductive pedagogical care and physical education. Further, itinerant SEN teachers provide general teachers educational information on how to best accommodate a student with SEN, while they are also responsible for teaching disability-specific skills to students.

In Hungary, the education of general teachers and SEN teachers is fully separate. In the times of segregated education of all students with disabilities, this was surely a useful practice. However, as inclusive education is gaining ground, it has become clear that SEN-related educational content should form part of the formation of general teachers, while institutions responsible for SEN teacher training must also shift their focus from segregation to inclusion. At present, teachers are trained in the following schema: Lower elementary teachers are trained on bachelor level, in 8-semester higher education courses, and are qualified to teach all school subjects in Grades 1-4. SEN teachers may specialise in working with one or two different SEN populations. Students, who are already qualified teachers, may get a BA in special education in 6 semesters, while two specialisations are acquired in 8 semesters. Eötvös Loránd University of Sciences (ELTE) Bárczi Gusztáv Faculty of Special Needs Education is the only institution which provides specialisation in the education and rehabilitation of all sorts of disabilities. Since 2017, nine other institutions of higher education offer SEN teacher training, typically

for intellectual disabilities, speech and language disorders and emotional and behaviour disorders (Felvi, 2020). So far, ELTE is the only university which educates qualified teachers of the visually impaired (QTVI) and of the hearing impaired. Though the number of universities training SEN teachers is growing, there is still a high demand for qualified professionals all over the country.

### **Inclusive education of students with blindness or visual impairment**

In Hungary, the formal and organised education of students with blindness or visual impairment (BVI) started in 1827, thanks to the efforts and advocacy of a teacher, Rafael Beitel. By 1836, the number of students grew from the initial 3-4 to twenty, and the first school building specifically for BVI students was opened. The institution kept growing, and in 1907 the first group of kindergarten-aged children was admitted (Pajor, 2017). The Kindergarten, Primary and Vocational School, Unified Methodological Centre and Child Home for blind students is currently a complex segregated educational institute, which supports blind and deafblind students and those with multiple disabilities and VI (MDVI), serving the whole country as the only institution of its kind. The first separate school for low-vision students opened in 1956 in Budapest, and the second one in 1972 in Debrecen (Eastern Hungary). Due to a severe decline in the number of students, the latter one is currently an inclusive school, open for all sighted and visually impaired students. Another institution, the Rehabilitation Centre, Kindergarten and Primary School and Dormitory for Students with VI was opened in Pécs (South Hungary) in 1990, by Világ Világossága Foundation. Similarly to the institution in Debrecen, this school has been broadening its student profile, due to the decline in the number of students with VI. It currently serves a wide SEN population, and vocational education is also available since 1994 (Világ Világossága Foundation, n. d.). In Hungary, primary education is eight years long. In the 1990s, after parents were given the right to choose a school for their child with BVI (preferably near their home), students characteristically joined mainstream institutions in upper primary school (grade 5 or older), after completion of the first four years in a segregated institution. Other families chose to send their children to a segregated school for the first two years, and went on to mainstream settings once the child has gained proficiency in adapted reading and writing (i.e. braille, large-print or use of CC-TV, magnifiers or magnification softwares) (Somorjai, 2008). Mainstreaming in secondary education, without specialised support, was characteristic long before EGYMIs were founded, since there were no segregated secondary schools or special classes for students with BVI (Schiffer, 2005).

Although inclusive education is widely investigated, there is a small number of BVI-specific research, all of which work with small samples. Somorjai (2008) investigated factors supporting the integrated education of students with BVI. Interviews were made with 12 students, 12 parents and 12 general teachers. Students accounted for no severe difficulties in their everyday work, and felt they were able to learn the study material and meet requirements. Students felt their knowledge was assessed on

equal terms with their sighted peers, and accounted for more challenges in their social life than in learning. Parents underlined that the regular support of their children in their daily preparation for school was necessary, and was a challenge for the families. Teachers said the greatest challenge was modelling in sciences, and agreed that work is generally slower in an inclusive classroom. The number of exemptions (i.e. the blind student does not participate in a school subject) was low, and was not at all part of the practice in five of the schools which the responding students attended. The author underlined that successful inclusion is what a blind student, parents and general teachers are happy with, which is sometimes different from what an itinerant SEN teacher would consider a success. Somorjai believes, the most important component in successful mainstreaming/inclusion is the blind student's personality.

In a survey (N=14) on general teachers' attitudes towards the inclusion of pupils with blindness, Schiffer (2005) found that teachers expressed their need for written support material, which would provide them easy access to methodological knowledge on the education of individuals with BVI. Vargáné (2013) found that general teachers had no BVI-specific knowledge, and felt inclusion was their lonely struggle, and they had no one to turn to with their questions. This is important because the majority of teachers are open to broadening their knowledge on special education and inclusion (Papp, 2011).

Sümeği (2012) in her research aimed at understanding the sociometric status of 8 students with BVI (4 blind, 4 VI), and surveyed their teachers' attitudes. The research concluded that students with BVI felt their teachers had the same expectations towards them as those towards their typical peers. Students also underlined that they spent more time learning at home than their non-disabled classmates, which inhibited inclusion in the class community.

In a recent qualitative research, Füller (2019) attempted to get a comprehensive picture of secondary-school students with BVI, exploring factors which influence their choice of school, assessment patterns, subjects which they are partly or fully exempted from, their difficulties in getting access to study material and their overall access to school facilities. The research showed that secondary schools are chosen by the students and their parents together, meaning the students' opinion also counts. An important factor in the decision is geographical closeness. Information students get from their teachers is mostly verbal, access to interactive materials or printed images is eventual. Similarly to Somorjai's research (2008), Füller a decade later still found that access to digital or braille course books is, in many cases, problematic, e.g. students get their adapted books months after the academic year started. This may be the reason why most students learn exclusively from the notes they take during the lessons. Füller's research shows a frightening tendency: whilst a decade earlier Somorjai found that blind students were occasionally exempted from certain school subjects, Füller found an alarming proportion of students not participating in different school subjects, or being partly or fully left out of assessment, due to their VI.

	No participation required	No assessment	Partial exemption from assessment	No participation in primary school either
<b>Maths</b>	<b>6 students:</b> 3. 12. 17.18. 22. 23.	<b>5 students:</b> 1. 15. 16. 19. 24.	<b>5 students:</b> 2. 4. 5. 6. 8.	<b>2 students:</b> 2.
<b>P. E.</b>	<b>15 students:</b> 1. 3. 4. 7. 8. 9. 12. 14. 15. 16. 17. 18. 20. 22. 24.	<b>1 student:</b> 2.	<b>2 students:</b> 5.6.	<b>5 students:</b> 2. 3. 7. 15. 17.
Physics, chemistry	<b>1 student:</b> 3.		<b>11 students:</b> 1. 2. 4. 6. 8. 9. 12. 13. 14. 18. 19.	<b>1 student:</b> 2.
<b>English</b>		<b>1 student:</b> 2.		
<b>Arts, art history</b>	<b>10 students:</b> 3. 4. 5. 6. 8. 9. 12. 14. 17.18.	<b>1 student:</b> 15.	<b>1 student:</b> 19.	
<b>Biology</b>	<b>1 student:</b> 3.			
Geography, history			<b>7 students:</b> 8.13.14. 15.16. 18.22.	<b>1 student:</b> 15.
<b>IT</b>	<b>6 students:</b> 4. 10. 12. 14. 15. 23.		<b>2 students:</b> 6.18.	
<b>Music</b>		<b>1 student:</b> 6.	<b>3 students:</b> 18. 20. 22.	

*Table 1: Number of students with BVI exempted from secondary-school subjects*

Füller (2019) concluded her research by asking respondents to give younger fellow BVI students advice on how to get on in inclusive settings. Their advice goes as follows:

- Initiate communication with your classmates and teachers
- Be open to clarify issues related to your VI as early as possible
- Don't hesitate to ask for help. Be patient, most people will simply know nothing about BVI
- Be as independent as possible
- Advocate for yourself
- Be proficient in using technical aids (i.e. laptop, scanner, smart phone) and digital materials
- Be ready to type/write a lot and quickly
- Try yourself in many different things, be part of the community.

Inclusive education is a multifactor process. As success depends on many human (student, parents, teachers, classmates, itinerant SEN teacher) and material (access to the school building, access to study materials, access to special aids) factors, it is evident that in such a complex process any of the elements may be dysfunctional. It is therefore crucial to understand the complexity of inclusive education, and identify the roles and duties of all participants of the process. There is an urging need for a deep understanding and comprehensive investigation into the practices of mainstreaming/inclusion, because services may not be improved without mapping gaps in the support system.

A key to inclusion is sharing good practices. In Germany the ISAR project (<https://www.isar-projekt.de>) was developed with the aim of giving general teachers a database and online resource pool of good practices they can implement in their work with students with BVI. In 2018, the Hungarian Federation for the Blind and Partially Sighted (MVGYOSZ) launched a project titled 'Future Perspectives', based on the experience of the ISAR project (Prof. Emmy Csocsán PhD is a cofounder and professional leader of both projects). Both databases are increased with the help of SEN teachers and general teachers, who have good practices in working with students with BVI.

In Hungary, there is an initiative to implement the universal design in botanical gardens and arboretums. E.g. an induction loop must be built for hearing impaired people at the ticket office and information desk; and it offers alternative information; lightings must be accessible; no need to put pieces of furniture into a line because this solution is better for people with hearing disabilities. (Fördős-Hódy, Fekete, Tóth, Nagy, 2019).

### **Hungarian museum integration programmes for the blind and visually disabled**

An accessible museum means access to art, exhibition space and exhibition information for disabled visitors. Based on the above considerations, we can look at domestic projects for the disabled (Káldy, 2010). The Universal Design is a design strategy which - from the very beginning of the design process - considers the different capabilities of users, so the special needs of people with disabilities too.

### **Accessibility for objects**

Tactile exhibitions have been present in Hungary since the 1970s. Among other things, Budapest History Museum – Kiscell Museum and then Skanzen in Szentendre came up with exhibitions of this type in the 1990s. In 2005, the Museum of Fine Arts organized a tactile exhibition in connection with its temporary exhibition (After the Pharaohs – the treasures of Coptic art from Egypt), and then regularly every year (Tactile exhibitions of the Museum of Fine Arts, 2005 *“A fáraók után, a kopt művészet kincsei Egyiptomból”* (After the Pharaohs , treasures of Coptic art from Egypt); 2006 *“Luxenburgi Zsigmond”* (Zsigmond Luxemburg exhibition); 2007 *“...és akkor megérkeztek az inkák”* (...and then the Inks arrived ); 2008 *“Reneszánsz a fáraók Egyiptomában”* (Renaissance of the Pharaohs in Egypt); 2008 *“A Mediciek fénykora”* (The Medici's HeyDay); 2013 *Miro.*). At the Miro exhibition of the Museum of Fine Arts, embossed rasters were created with tactile images for the blind. The most frequently used elements are tactile reproductions, such as the vacuum-curved version of 13 Vasarely's paintings in 1989, or works of art produced for a permanent archaeological and medieval exhibition in the National Museum's Touching Program.

In 2007, the Dr. Batthyány-Strattmann László Museum in Körmend, in a cross-border (Croatian-Slovenian-Hungarian) cooperation ("Interreg" programme), placed in an exhibition rhythmically



reproduced artworks related to the Batthyány family, such as the Baroque Wig, the Golden Wool Order badge, replicas of treasure trove plates, mace, rabbit handles, cannon.

Reflecting on the “*Van új a föld alatt...*” (There is something new under the ground...) exhibition in the Dirke building of the Budapest Museum of History - Aquincum Museum, 2009 opened a palpable room for the blind and partially sighted. This is where magnification was used for the copies of the works, so here you can find a roman coin or a magnified version of the avar belt that shaped the griffin (Domokos, Dóra, online 2020).

From May 2011, in the *Nyíregyháza-Sóstó Museum*, a TAMOP competition has provided the visually impaired people with tangible objects of folk crafts. The models of the farmers', the objects of herding and the various knowledge associated with the folk construction, including roof shells and wall types, could also be taken into the hands, process of ironing with mangle, and using wahing bat (Szoleczky, Emese, online, 2020). The items with a wide range of materials and shapes that can be taken into hand, were the most popular among visitors at tactile exhibitions. A professional discussion conducted in 2017 revealed that "tactile exhibitions designed specifically for the blind and partially sighted are perhaps not the only good way to make art and exhibitions accessible to the blind and visually impaired. It should be borne in mind that the effect on many senses gives a more complex experience, it provides more information than focusing only on tactility (Dabi-Farkas, Rita, 2018)

There are also cases where a museum has less valuable pieces that can be taken into hands is possible at the *Herendi Porcelánművészeti Múzeum*, according to an in-depth research on the *Múzeumi és könyvtári fejlesztések mindenkinek* (Museum and Library Improvements for All) project in 2017 (Dabi-Farkas, Rita, 2018).

These exhibitions can be useful for anyone who has intellectual disabilities, learning disabilities distractions, and concentration problems are not sufficient to capture knowledge with verbal information, things that they see.

### **Accessibility for the physical environment**

When creating equal opportunities for people with disabilities, we should also consider access to the museum and its accessibility in the IT area (accessible museum website), as well as facilitating on-site information. At the Institute for the Blind it is possible to order a "loud map", but this is mostly used by theaters, museums less often or almost not at all. In several cases, leading paths or audible warning devices are used. During physical accessibility, it is necessary to make sure that installations and exhibits not hinder the free movement of visitors.

In hungarian practice, the MP3 device can be rented on site free of charge at the Hungarian National Museum, which uses three distinctive sounds to help disabled people discover independently in three areas: a loud map to independent orientation and in the rooms; the second voice gives general

information and knowledge of the era presented in the hall; and the third tells about the curiosities of interactive presentations.

The website of the *Balatoni Museum* not only contains technical information for disabled people, but also provides visually impaired visitors with a narrative about the means of transport to get to the museum building, where audio-narration also helps the visitor. For the visually impaired, the pictograms that assist in orientation and large texts, can be important.

### **Accessibility with regard to the transmission of information**

At the *Dr. Batthyány-Strattmann László Museum* in Körmend, the visually disabled are given a description of the current object from a wireless headset through the motion sensor above the installation elements.

At the Museum of Fine Arts, subtitles have also been published in Braille and it is possible to download audioguide soundtracks.

The first initiatives were spatially separated temporary exhibitions for the visually and hearing disabled. Later, exhibitions were published which included the integration e.g. *Szépművészeti Múzeum* “...és akkor megérkeztek az inkák. Kincsek a spanyol hódítás előtti Peruból” (Museum of Fine Arts “...and then the Incas arrived. Treasures from pre-Spanish conquest of Peru”). Here the tactile objects were located in the main exhibition. This also gave the typical a new experience, and the visually disabled and their accompanying person did not have to break apart, and they could learn about the exhibition together. Special attention was paid to accessibility: the road was marked by a carpet or a rim.

In many cases, in the implementation of integration and the implementation of the infrastructure background, museums engage in cooperation to promote efficiency. In 2002, the National Museum entered into a cooperation agreement with the Lions club. They expanded the permanent archaeological exhibition of the history of the Carpathian Basin with 35 tactile artifacts, including a copper-age car model, a two-wheeled Celtic ornamental replica, and the full armament of a Roman warrior with fabric samples made of contemporary technique and a copy of a reflex bow. In addition, a sound map helps to navigate.

With the support of the *Fogyatékos Személyek Esélyegyenlőségéért Közalapítvány* (Public Foundation for Equal Opportunities for Persons with disabilities) now known as *Fogyatékos Személyek Esélyegyenlőségéért Közhasznú Nonprofit Kft.* (The Disability Equal Opportunities Nonprofit Ltd.), an archaeological exhibition was opened in Győr in November 2006 at the János Xantus Museum. This tactile exhibition was especially for visually disabled visitors.

From May 3 to 26, 2013, the exhibition of the Museum of Fine Arts "Tangible art for everyone - in each other's hands" featured thematic works by contemporary artists, applied artists, visual-, hearing-, and mentally disabled people with a special focus on the diversity and tactility of the materials. Visually

disabled people led the visitors around and took the exhibits and works of art in their hands. In this way, they could not only get to know each other through of trust between the visually disabled and visitors, but also gain new experiences of themselves.

### **Museum education activities and programs**

In addition to exhibitions, museums' educational activities may also facilitate the transmission of information by museums when the museum educator can help to lead. They can be aimed at promoting equal opportunities for people with disabilities, social sensitization or integration.

On November 8, 2012, members of the *Vakok és Gyengénlátók Csongrád Megyei Egyesülete* (Csongrád County Association of the Blind and Visually Disability) were able to receive a special guided tour in the *Interaktív Természetismereti Tudástár* (Interactive Science Knowledge Library). In the program introduced the Biological Repository of the Knowledge Base from a taxonomic point of view, followed by a game of animal sound recognition and finally herbal recognition (Bohádi, Dóra – Mihályfi, Judit., 2015). For example, during the “*Láss a kezeddel, hallj a szemeddel*” (“See Your Hand, Hear Your Eyes”) workshops at the *Skanzen Néprajzi Látványtár Tapintható Tárlat* (Ethnographic spectacle warehouse Tactile Exhibition) in Szentendre, visitors could taste the bread, smell various soaps, and so on. And at the end of the interactive exhibit, everyone could make a descriptive carton of hand-held objects with a Braille typewriter (Dabi-Farkas, 2018).

At the Ludwig Museum camp in June 2009, elementary and high school students created a tactile exhibition of the museum's contemporary collection. This was tested on the last day by an adult group from the *Vakok Intézete* (Institute for the Blind). The finished items were later re-created by a team of experts to match the exhibition and the expectations. The museum regularly hosts guided tours for the blind and visually disabled and organizes a tactile drawing competition every year. Their sensitivity program was launched in 2016 with the title “*Az öt érzék*” – *születésnap party* (“The Five Senses” – birthday party). Which is aimed at developing tolerance, empathy among healthy children. It is so successful with children that one in three people chooses this program to try. Two works were selected from the collection: Joe Tilson's series “Five Senses”, and Gábor Koós's Budapest Diary XIII. (print and woodcut). The first part of the program is the interactive activities (2 hours) and the second is a traditional party (1 hour).

The first part of the session is a lead-in game where children have to walk through an obstacle course blindfolded eyes with the help of a partner. Everyone has the opportunity to experience both the helper and the supported part. Teamwork, cooperation, cooperative skills, tolerance and expressiveness are also important. From the drama pedagogical methods there appears the method of the games of space use and orientation, which serve to make our own space, the limits of our body conscious. After discussing the experience, they spend half an hour in the exhibition. They first sit in front of Joe Tilson's

"Five Senses". The work depicts five senses on five serigraphy. The museum educator leads the discussion in a frontal way but with interactive communication; just asking questions, the answers should be given by the children. Advanced skills: attention, concentration, autonomy and opinion forming. The second work: Gábor Koós Budapest Diary XIII. On this woodcut the building on the Kodály körönd is black and white. Here, they also try to depict the picture through an entertaining conversation. Then comes a sound game. Everyone tries to imagine a real tour on the busy Andrassy street, with voices, and then, with control of the museum educator, they make a real noise (e.g. siren, bus flick etc). In the end, the full sound of the busy street is completed. This is followed by a discussion of what happened, summarizing what it feels like to gather and pass on information with different senses. Tools used: Drama pedagogical methods, games of sensory refinement, memory and fantasy games (Dabi-Farkas, Rita, 2018).

An innovative project collaborating with the blind, a winner of the CAPP 2017 project, was also implemented at the Ludwig Museum in Budapest by the Department of International Relations, rather than the Museum Education Department. The Ludwig Museum has been participating in an international collaboration called the Collaborative Arts Partnership Program (CAPP), sponsored by the European Union Creative Europe Program, from autumn 2015. The aim of the three-year program is to develop new methods that help to rethink the role of art in society and create the conditions for social participation. Many European partners work together in the program, including Agora Collective (Germany), Create (Project Manager, Ireland), Hablanerarte (Spain), Heart of Glass (United Kingdom), Kunsthalle Osnabrück (Germany), Live Art Development Agency (United Kingdom), Ludwig Museum - Museum of Contemporary Art (Hungary), M-cult (Finland) and Tate Liverpool (United Kingdom). During the first two years of the programme, [the Ludwig Museum undertook to organise a workshop](#). In 2015 and 2016, issues of participation, community building and social dialogue were examined, with the first year focusing on social theater and drama pedagogy, and the second year focusing on community architecture.

It is also important to mention an initiative that helps to build relationships between blind, visually disabled people and seeing people, promotes overcoming stereotypes, showing the obstacles a blind and visually disabled must handle. The "*Láthatatlan Kiállítás*" (Invisible Exhibition) opened its doors in Budapest in 2012. Visitors are guided by a blind person in a completely dark room with different objects, thus reflecting the obstacles Boháti, Dóra – Mihályfi, Judit, 2015

The *Fény a Sötétben Alapítvány* (Light in the Dark Foundation), set up at the *Vakok Állami Intézete* (State Institute for the Blind), highlights the problem of the social inclusion of visually disabled people in their Preamble and sets the goal to be achieved so that both typical and people with different obstacles can enjoy the museum learning and entertainment in an integrated way. The aim is to improve the quality of life of the disabled, to build mutual acceptance, to build trust, to develop empathy, and to

create museums accessible to all. In addition, promoting access to culture for the visually disabled getting to the institution - audio maps made by professionals on the institutions website; ISO-standard accessible website; employing visually disabled people in museums or in sensitization programs (even on a voluntary basis); and the sensitivity of front staff and museum workers.

The *Szabadtéri Néprajzi Múzeum* (Open-Air Museum) will host the Integrated Camp every year since 2014, where disabled and healthy young people work together. The typical community service students can meet children with disabilities here. The camp is preceded by a training day where children can experience communication with people with disabilities through the involvement of a specialist. When designed the programs, it was important to provide a success experience for all participants, and that everyone is free and happy to participate. Campers work in pairs or do group activities, eg. making music, crafts, animal care, baking, etc.

### **Hungarian museum integration programmes for deaf and hearing disabled**

A great deal of knowledge is achieved through verbal communication. This makes it more difficult for person with hearing impairment to gain access to knowledge due to hearing and language barriers. Museums can help with this, especially by addressing special needs and reducing communication difficulties due to hearing loss and language disadvantage. The visual information provided by various means and methods, and the experiential experiences gained during the sessions can all support their acquisition of knowledge and the long-term preservation.

Cultural institutions, including museums, are increasingly focusing on the visitors, on the social and educational roles of the institutions, and providing programs that require interactive participation, such as public programs, guided tours, hands-on activities, and more. But without alternative methods of communication, visitors with hearing impairments will not have the opportunity to participate in these socially enriching activities (Johnson, 2013).

In Hungary, the services of museums are often used by schools in connection with school curricula. The same is true of **special schools for hearing impaired children**. If the museum does not provide accessibility, it is done by teachers accompanying the children. They help the children with understanding, interpreting what has been seen, simpler language, and, if possible, sign language communication.

Fortunately, many initiatives have now been launched in museums and cultural institutions to reach hearing impaired children, or adults.



The **Ludwig Museum - Museum of Contemporary Art, Budapest** is a „barrier-free museum”, [as the museum’s website is writing](#). The Museum Education Department runs *integrated weekends* as well as special programs for children living with various kinds of disabilities.

These „Integrated Family Mornings” are not necessarily favored by families with children with disabilities. Reasons for parental aversion, e.g. that he/she do not want his/her child to be stared at; that his/her child does not understand what typical child can grasp faster; the parent has a bad experience of putting his/her child in the background of integrated programs. Because of this, Ludwig Museum introduced two versions of the session: the first program of the month was segregated (only for family of child with disability) and the second program is integrated. Based on the experience of this solution, there are changes in the attitudes of families, because there are families who initially participated only in segregated programs, and then, with the increase and deepening of trust, they started attending the integrated program too (Dabi-Farkas, 2018).

The **Skanzen, Open-Air Ethnographic Museum in Szentendre** has one of the main missions the accessibility. In addition to allowing sign-in interpretation in advance, the museum also offers museum education sessions for people with physical, communicative or intellectual disabilities. The workshops make folk culture accessible and enjoyable through special methods and playful activities that involve several senses. [On the museum's website](#) you can find which programs are accessible for hearing impaired children and the museum does not have assistive listening devices. The Skanzen has been organizing [an integrated camp](#) several times in the summer since 2014, in which uniquely healthy and disabled youth work together. e.g. making music, crafts, animal care, baking, etc.

**History Museum of Janus Pannonius Museum** in Pécs began organizing regular programs for deaf and hard of hearing adults in 2010. The work was assisted by the Baranya County Organization of Sinosz (National Organization For The Deaf And Hard Of Hearing). Éva Gál (2011), the museologist of the museum, completed a sign language course to conduct guided tours and museum activities for hearing impaired people. Interestingly, the workshops took place at two venues, in the museum and sometimes "went home" to the hearing impaired community in the Sinos Club. The programs were realized with the help of various tools and methods: guided tours, film club, slideshow presentation, complex activity. The complex sessions were interlaced with introductory lectures, learning about objects and crafting. According to Gal, it would be important (1) to continue the programs for the Deaf community based on the experience that can be drawn from the satisfaction questionnaires; (2) lift the experience in university education; (3) organize common programs for hearing and hearing impaired people to help integrate people with disability.

The description of the program and methodology is extremely interesting and useful for those who plan for the above target group.

For guided tours and slide shows, it was considered that communication is different from the usual:

1. It is important to stand in front of the group, not pointing back and forth during signaling, because then it is more difficult to understand the signal and to read from the mouth. Do not over-articulate, talk naturally.
2. The signal person should stand in a well-lit area, in a neutral suit, as the face and hands should be clearly visible to the audience.
3. After giving oral information, should allow time to look at the objects. The installation should take care to use the correct text information, visual tools to help you understand, in terms of formal and content.
4. For sign language interpretation, the information should be clear and easy to understand.
5. Slideshow presentation requires sufficient lighting for high visibility, and could be useful a whiteboard to write down the complex words and short explanations.

The complex activity in this case was the preparation of cologne water, with the perception of different scents and also with a self-made label, which was associated with an Easter-related lecture. The idea was given by Gyöngyvér Pál student of the *Pécsi Tudományegyetem* (University of Pécs). At the film club, the group watched a film from 1939 by Antal Hamari ("One Day In Pécs") and then they watched a film from 2006 by Pécs Tv which reflected about the old city movie. The last program was about the contents of a contemporary booklet in the museum collection. The topic was the communication with the famous gloves of Pécs. The language of the glove communication is aligned with the sign language. The aim was to demonstrate the diversity of communication (Gál, Éva, online 2020)

The **Hungarian Theater of Pest** in Budapest, has been committed to the accessibility for years. One of its main aims is to give people with disabilities equal access to culture. In the theater's grand hall, the children or adults with hearing impaired can take part performances, with the help of assistive listening devices (Phonak Roger system) and live sign language interpretation. [The theater for its own production](#) offers a 50% discount on tickets for visitors with disability and a 25% discount for the accompanying persons.

The theater's website provides detailed information on the available accessibility options, but also draws attention to anticipated difficulties. For example, it mentions to persons with hearing impaired that ticket purchase can be difficult by the glass wall of the ticket office, or the poor illumination (this complicate the lipreading) and the lack of an induction loop. At the same time, they emphasize that tickets for theater performances can be purchased online. Upon request, [the theater broadcasts performances with sign language interpretation](#). The theater offers several performances for the school age group and connect them drama pedagogical classes, unfortunately yet without accessibility.

Hearing impaired people who are involved in the accessibility of occupations and cultural events have an important educational and social role. They can be helpers, educators and positive social role models. In 2012, professional deaf musicians led under the title „Palace Delights –Sound and sign” a *music workshop for deaf and hard of hearing children* at the **MŰPA** (Palace of Arts) in the framework of the weekend program series "Interactive activities for children and adults wishing to learn". During the program, the three deaf musicians from UK, - Danny Lane (pianist), Ruth Montgomery (flautist) and Paul Whittaker (pianist and organist) - gave a presentation on music education for the hearing impaired children and held a session on music methodology for hearing impaired children and music educators. [The event was created within the framework](#) of the 90 dB projects mentioned above .

You can see two videos about the workshop here: [video one](#) and [video two](#).

In Hungary, in most museums, information in sign language is the accessibility for hearing impaired people. For example, in the **Hungarian National Gallery of Budapest**, a volunteer sign language interpreter assists the museum visit on an occasion announced in advance. For several years, the **Hungarian Press Photo Exhibition** has hosted [a special guided tour with sign language interpreting](#).

The **Museum of Fine Arts of Budapest** [unveiled an app](#) for smart phones and tablets in 2013, aimed at deaf visitors. The *app* called *SzépMu SL (Sign-Language)* was developed by [90 decibel Project](#), which aims to make arts more accessible to deaf and blind people, in co-operation with MSL Accessibility. The app provided videos in sign languages about 150 paintings from the museum's collections, and about the building and history of the museum. An interactive map and QR codes helped the visitors the orientation. Scanning the QR code the app provided instant sign language information on the exhibited item. The unique application in Europe was available free for Android, iPhone and iPad. The online publication of the British magazine The Guardian in April 2013 - referring to the application – mentions the Museum of Fine Arts, Budapest as one of „the world's best museums and galleries online”, giving it the title of „Best for accessibility”(Barnett L. 2013). Unfortunately, the app is not available now.

In the Museum of Fine Arts, the possibilities of technical development were used, and a downloadable app for deaf people was developed. The smart phone or tablet's camera must be pointed to a special (QR) code next to the artwork: the technical device will then identify and play the video for the selected artwork. The museum also thought of visitors without a smart phone: [deaf people at the information desk can borrow tablets free of charge](#) for which sign language accessibility has already been installed.

### **Museum integration methodology**

The museums and exhibitions to be developed for people with sensory disabilities need to consider many aspects in order to provide an effective learning space for the target group. Several factors have already been listed in the presentation of good practices, so here are some methodological issues that have not yet been mentioned. “The priority for the development of orientation paths is physical accessibility (cornering road, staircase, slope, door, wall, sharp objects, low airspace, etc). From arrival – from the starting point – to the placement of ourselves in space and then along the exhibition/activities route, we must use various signal systems and markings.” (Kustánné Hegyi-Füstös, 2009). The accessibility should be gradually implemented, expanded and improved. “There are several aspects that play a role in the selection of objects on tactile exhibitions, the most important of which is not only the worthy representation of the material of the main exhibition, but also the diversity of form and material.” (Bartos, 2009, p.14). In many cases, it is worth to think about the aspects of the objects more than once (for example the ability to be copied, the costs involved and their usefulness for the purpose). The selected object may have a harmonious pattern from an aesthetic point of view, it may reveal less information about itself when handed over than a less aesthetically pleasing but more diverse version in its material, form and pattern. “An important consideration when designing a tactile exhibit of the future is the comment of a teacher accompanying a blind group of students that, in addition to experiencing interesting forms, children like to be "answered" by the object, "placed in a box with a lid removable object is more exciting than a perfect but static sculpture copy.” (Bartos, 2009, p.14)

Methodologically practical and increasingly widespread practice for museums to use audioguide tool for the blind. Audio is recommended for use to give general information about the exhibitions and the exhibition area, which “from the entrance provide important reference points for visitors who are blind and visually disabled. [...] In the description of objects, the principles of professionalism and conciseness dominate. Experts familiar with this issue maintain 250-300 words to be optimal as descriptions and audio for up to one and a half minutes.” (Bartos, Zoltán , 2009, p.15). It is worth considering the length of time that visitors are attentive. The duration of concentrated attention for an average visitor is around 50 minutes when driving the audioguide, compared to a child's less focused attention. “In museum educational classes, the number of visiting groups is advisable to maximize it to 8 to 10 people, because in the case of a larger staff, the waiting time between the information on the object and the actual perception of the object may be too long.” (Bartos, Zoltán , 2009, p.15). In the case of guided creative and creating activities, the smaller group is also recommended, as the shared attention of the supervisor results in more efficient work when fewer children are to be led.

Communication with hearing disabled visitors can take many forms, with many ways to guide them and provide them with information through the exhibition. “The key is recognizing which combination of techniques is most effective.” (Kádárné Szabó, 2009, p.22). When communicating with

the hearing impaired, it is worth considering some tips in addition to those we have already mentioned. From a museum professional, here are some tips for a tour guide:

- “When presenting a lecture or movie, it is advisable to make short content, sketch and hand it over.
- Do not move while speaking as it is difficult to read your mouth. Do not speak and write at once, but write or draw on the board and then turn to the group to explain.
- Use an illustrative device wherever possible. Vision is the recording channel for primary information of hearing disabled. Take advantage of the tools available (laptop, projector, diagrams, whiteboards).
- Always give enough time to read the captions before explaining them.
- Give time for questions as well.” (Kádárné Szabó, 2009, p.22).

The duration of the attention should also be borne in mind when visiting the museum for the hearing impaired. Shorter breaks in workshops, guided tours, and interactive conversations are worthwhile.

When planning an activity, a museum project or an exhibition, it is necessary to define the exact objectives, to define the topic and to clarify the framework of feasibility. Methods used may include: a projected presentation; self-study; interactive object descriptions; role-playing, games and guided creating activity. (Csesznák, Éva, 2009, p.28)

### **The completed programme of the Hungarian Applied Folk Art Museum**

**The Hagyományok Háza – Magyar Népi Iparművészeti Múzeum (Hungarian Heritage House – Hungarian Applied Folk Art Museum)** has won 20 million HUF under the *Új Magyarország Fejlesztési Terv – „Múzeumok Mindenkinek”* (New Hungary Development Plan “Museums for All”) programme. The significant amount of support has enabled the development and implementation of museum educational programmes based on the museum collection, which are closely linked to school needs and curricula, for children's and youth target groups.

Museum activities, museum classes, workshops, free university presentations, special and thematic activities, museum day, family day programs were attended by students from seven schools, including the *Vakok Speciális Szakiskolája* (Special School of the Blind).

For one year (2010-2011), in the framework of experience-oriented, active workshops, they became acquainted with the museum's material, the concept of folk art and folk crafts, and more broadly the traditional culture of the Hungarians.

The variety of thematic activities for the blind and visually disabled was given by the fact that the museum's staff took turns dealing with children, both in the school environment and in the museum. In terms of themes, they explored the types of folk instruments; wear and related dances; holidays and



customs of the year; peasant architecture and pottery characteristics; folk poetry as well as object making activities (objects made of fibrous material, woven fabrics). A total of 8 workshops were carried out with the museum staff at the Special School of the Blind and were 2 times at the Museum of Hungarian Applied Folk Art. The theme of the workshops was developed and directed by 7 museum professionals, including ethnographer, museologist and music teacher. The topics were not built on one another. 10-15 children were participated in one workshop. In every workshops children had opportunities to examine tactile objects (see photoes in [Appendix](#)).

A workshop on 19th-century Hungarian peasant architecture presented the following:

Folk architecture is highly dependent on the natural conditions of the immediate environment (building materials are locally located, or largely adapted to climatic features such as roof pitch, lack of heating). Technical innovations in architecture (e.g. smoke drainage) are only widespread in the peasants for financial reasons, due to legal restrictions and limited technical knowledge. The relationship between the construction and the natural environment, the types of raw materials and masonry, and the roofing and roof structure were discussed, but even the types of houses per landscape. The workshop used a detachable (top-opening) dwelling house model made by a folk craftsman that could be touched and felt by tactile by children. In the interior of the dwelling house, objects such as carpets, rugs, paint, towels, tablecloths, bedspreads, etc., other furniture and furnishings of the peasant dwelling were presented as additional objects.

The lesson about pottery reviewed the main pottery centers to answer the questions: What do we call a pottery center? What types of pots are potters made and what are the pitchers and bowls? From all the ceramic items in the museum's collection, objects representing all areas and groups of objects were handed over to the children so they could sense the differences between the products. They were able to sense the shape, material quality, weight and decoration techniques of each item by touch.

On the occasion of the folk instruments, the museum carried out a workshop combined with performance, conversation, live music, singing, the palpation and sound of musical instruments. The tactile and audible presentation of a group of wind instruments, from simple whistles to different flutes to the bagpipe. The performance was about the spread of these instruments and their use. He clarified, among other things, the difference between a block flute and a shepherd's flute and answered the questions: What is a long flute? What is the Hungarian goat bagpipe?

It is worth mentioning that outsourced occupations were also based on tactile objects. The activities held in the school environment can be practiced in the museum.

#### **V.4. ROMANIA**

The museum is a public cultural institution that „gather, preserve, research, restores, communicate and exhibit for the purpose of knowledge, education and recreation material and spiritual testimonies of existence and evolution of the human communities, and of the environment (Law of museums and public collections no. 311/2003). In their turn, these institutions must assume the task to ensure the accessibility of the disabled persons to the cultural act, to adapt their offer and conditions of participation to their special needs. In the last decade, more projects that aimed to create a cultural offer and an infrastructure that allow the access of the sensorial disabled persons to the cultural act offered by the museum were implemented.

The Romanian experience concerning the accessibility of museums and galleries is quite recent with a real improvement in the last decade. Most of the accessibility stages are done through local financing or projects. Investments in general, because this is how we should consider cultural and access to culture, an investment for all, are made especially on the part that belongs to the users of wheelchairs (ramps and toilets). Due to the lack of vision and involvement of young people in the act of museum culture, an aspect highlighted by the EUROSTAT, young people must be involved in culture and the school must provide at least one semester visit to a museum. Most of the websites of the museums are not accessible and it is very difficult to identify an online area with services for potential visitors with disabilities, and information about the possibilities to reaching at the museum. Most of the museums in Romania do not have permanent or temporary sections dedicated to visitors with disabilities

The statistical data of the National Institute of Statistics from Romania (INS, 2019) show that the network of museums and public collections in Romania included in 2018 a number of 457 basic units: 403 museums, 7 monuments, 22 botanical gardens, zoos, aquariums and 25 natural reservations. The activity of the museums was carried out both at the headquarters of the museum units, as well as in their 330 branches and sections. The number of visitors to museums and public collections, registered in 2018, was 17.610.000 people, up 10.5% (16.690.000 people) from the previous year. Of the total visitors, 12.977.000 people (73.7%) visited museums and monuments, and 3.346.000 people (19.0%) visited the botanical, zoo and aquariums, and 1.287.000 people (7,3%) visited the nature reserves. Of the total number of visitors 20.6% were granted free access during the year, in this category of free being included adults with disabilities and accompanying persons, preschool children, children up to 18 years. The future of museums is one based especially implication of the schools and young children and using modern technologies such as virtual reality, haptic interaction activities, artificial intelligence and 3D technologies. But all this is to attract visitors, most often ignoring the demands of an environment accessible to users of wheelchairs or with sensory disabilities. The museum must become an attractive and innovative cultural space, but accessible to all.

From the analysis of the accessible sections within the national museums, very few of them offer detailed information about the physical accessibility of the museum: access ramps, tactile carpets, NFC

or Bluetooth navigation system. Many museums in Romania use for internal navigation their own or general mobile applications (TripAdvisor), but that does not very accessible using a smartphone.

Most projects started in the field of accessibility of the museum offer for sensorial disabled persons are the programmes financed by the **program “World through Colour and Sound”** belonging to Orange Foundation. This programme “aims to contribute to the improvement of the life quality for the persons with visual and hearing impairments by supporting projects including the culture, aiming to ensure an independent life and to improve their social integration”. The program has reached in 2019 the 7<sup>th</sup> edition, four of the winning projects aimed the social integration of the sensorial disabled persons.

Another project from 2013 is “Feel Art in 6 Museums” within the Asociatia Pentru Dezvoltare Urbana, a project supported financially by Orange Foundation aimed the inclusion of equipment and adapted services for persons with disabilities (Braille maps, tactile carpets, audio guides), the organization of visits and workshops and to increase awareness and accessibility in museums for persons with visual impairments. The museums on the list were the national Museum of the Romanian Villager, the National Art Museum, the National Contemporary Art Museum, the National Military Museum, the Art Museum Timișoara and the Museum Casa Mureșenilor in Brașov. Among the project activities we can mention the creation of accessible reproductions of sculptures, miniatures, collages, three dimensional reproductions that the persons with visual impairments could explore. One other aim of the project was to realize audio guides and Braille catalogues for museums and for schools.

In 2014, also the **Romanian National Museum of Art** was the beneficiary of the project “ARTmobile”. The project aimed to optimize the Museum’s website by integrating the new technologies: collections’ tour in audio-video format with powerful magnification function and presentation in mimic-gestural language. The application ARTmobile – A handy museum, made within the project could be used as an audio-video guide by all the museum visitors, too.

Other works in the European Art Gallery that benefit from multimedia applications are Saint Francis and Saint Benedict listening to a musician angel by Guercino and the Gate (Saint-Tropez) by Paul Signac. Accessible on touchscreens located near the paintings, the two applications provide information on the composition elements - plans, characters, light sources (Guercino) and on the correspondence between sounds and colours (Signac). In addition, students from the Polytechnic University of Bucharest created, under a voluntary regime, the Signac and Guercino applications. They provide audio information in Romanian, English and French, complemented by suggestive musical fragments for the subject of each painting.

Applications can be downloaded for free from the AppStore and Google Play by following the links for [Brueghel's painting](#), [Signac's painting](#) and for [painting Guercino](#) or scanning QR codes that includes three multimedia and augmented reality applications, tactile replicas, textile samples, a "sound library" and an "olfactory library", which have the role of making accessible works of famous artists and

stories beyond the picture. The works accessible through digital technology are representative of the museum's collections, each is approached from a new perspective and allows connections to other works in the museum's collection.

One of the projects that created the first virtual library of accessible pictures for persons with visual impairments was **Tactile Images**, within **Docuart Fest**. The exhibition was in one of the museums in Bucharest Sutut Palace with a multimedia component which includes accessible images using specific form reinterpretation techniques printed on a special paper along with accurate descriptions on the mobile phone. The drawings were realized by students in Romanian art schools and professional artists according to the accessibility criteria. The images consisted of subjects related to important events of the Romanian history and culture. The images were printed on special paper and they were exposed in different museums such as the Art Museum in Iași, the Museum Casa Mureșenilor in Brașov, the National History Museum and at the end of the project they will donate the drawings to other museums and to special schools for children with visual impairments from all the country. In the same time, the 500 drawings will be scanned and will be posted on the project's web site with an audio description so that anyone has the opportunity to download them and to get them printed on simple paper in order to create tactile drawings. This will help people with visual impairments to understand and to "see" these images.

[The National Natural History Museum Antipa](#) in Bucharest is one of the oldest museums in Romania, founded in 1834. Inside (România Pozitivă, 2012) the museum the visitor with visual disability can move to the exhibition area from the basement using tactile floor indicators for orientation, and in certain species areas on the wall information in Braille and dioramas which are located in the specific areas of the natural areas and the fauna presented. The NFC system is very well developed which can be used as a complementary solution by the blind visitors or, they can ask at the museum reception for guides in Braille, that containing information about exhibits or an audio guide. Hearing impaired visitors can use the available electronic displays to read more information about each animal or natural area.

**The Feel the Art (Simte Arta) Project** - Facilitating access for people with disabilities in two museums in Bucharest, co-financed by the Administration of the National Cultural Fund and realized by the Association for Urban Development in partnership with the Natural History Museum "Grigore Antipa" and the Romanian Peasant Museum (Muzeul Țăranului Român) has greatly improved the system of information for people with disabilities in these museums.

The Feel the Art (Simte Arta) Project - Facilitating access for people with disabilities in two museums in Bucharest started in May 2012 and has been carried out so far at the Antipa Museum during the following activities:

- creativity workshop at the Antipa Museum, painting and sculpture, beneficiaries being children from ASCHF-R.

- visit to the Antipa Museum, the beneficiaries were the students from the "Elena Doamna" Focsani School Centre.
- visit to the Antipa Museum, beneficiaries were adults enrolled in the National Association of the Deaf in Romania (ANSR).
- improving the museum collection with exhibits adapted to people with disabilities.

Visitors were provided with specialized guidance, mimic-gestural interpreters were used, bas-reliefs as well as exhibition information written in Braille, as well as facilities adapted to the specific needs of the target group were found.

The museum had no other project, "Sensory Visits" which was proposed in order to continue the accessibility actions for persons with visual impairments. It consisted in building up special spaces for exposing some shells, feathers, pieces of fur, belonging to local and international species; this way visitors with visual disabilities have the possibility to interact with exponents that are usually not available to be touched. The project provided also something new, a presentation guide for the permanent collection of the museum, with embossed images and explanations in Braille.

Between 2007-2010, the **Art Museum in Cluj** carried out more projects entitled "Touch, feel, look!", initiated by the Special Highschool for Visual Impairments Persons in Cluj.

The **County Museum of History and Archeology Maramures** carried out in 2010 and 2011 two projects financed by AFCN: "Museum without barriers – The access to museum culture of disabled persons" (2010) and "The joy of touching – the access of persons with visual impairments to the museum culture", 2<sup>nd</sup> edition (2011).

**The Museum of National History and Archeology in Constanța** is the first museum in the Dobrogea area that offers the possibility for visitors with disabilities to visit their exhibition. As part of a project funded by the Orange Foundation (ArheoTACT)(2017), ArheoTACT project - facilitating the access of people with visual impairments regarding the historical and archaeological heritage of Dobrogea within the Constanța museums, the Histria Museum Complex and the Trajan Adamclisi Tropaeum Museum, interior routes were made using tactile carpet, audio guides both through dedicated application (Ghid audio izi.travel ), but also audio-guides, tactile maps and images, reproductions of full-size exposures for tactile exploration by the visitors (România Pozitivă, 2017).

The three accessible museums are part of the total of six museums from the heritage of the Museum of National History and Archeology. This project is funded by the Orange Foundation under the program "The World through Colour and Sound"

Objectives: Increasing the visibility of the cultural needs of the visually impaired public by increasing the awareness of the community and the authorities regarding the educational and cultural needs of this target group. This specific objective will be achieved by developing a campaign in the media to promote the project and its activities (press releases, conferences); initiating a cultural



volunteering program to help visually impaired people and their families, which will also include training for the staff of the 6 museums; dissemination at local, regional and national level of informative and promotional materials, as a result of the project.

Implementation of an adequate museum infrastructure and creation of tourist routes specially designed for the visually impaired. This objective will be achieved by implementing, in all 6 museums involved in the project, an adequate infrastructure: marked routes (tactile carpets), panels, signs and labels written in Braille, embossed representations and models carved from heritage pieces. Also, new media technologies (audio guides, etc.) will be implemented, along with informative materials, guides and catalogues written in the Braille alphabet.

Implementation of a non-formal educational program for the visually impaired (especially children and young people, but not only), who will acquire new skills and modalities of cultural and artistic expression, organizing a creative workshop (ceramic restoration) called "The Forms Vibration"

[The National museum of Art](#) in Bucharest had a permanent section dedicated to visitors with visual impairment and hearing difficulties. The visitor can watch online audio transcription and movies explain in sign language. The tours dedicated to people with disabilities are multi-sensory tours using 3D images on the tablet, in which visitors with disabilities can explore different exhibit from the gallery, with the help of multimedia and augmented reality applications, replicas and tactile samples, as well as the "sound library" and the "olfactory library".

The exhibits accessible from the museum was developed within the ARTtouch project (2014), funded by the Orange Foundation Romania between 2014-2016. The accessible exhibits (2014) include description for paintings by Bramantino, Brueghel, Cranach, El Greco, Guercino, Hemessen, Licinio, Mignon, Rembrandt, Rubens, Signac, Snyders, Tintoretto, Vlaminck but also a work by Rodin. The visitor can use free applications (MNAR – ARTMobile ) that allow them to find out more about exponents directly on their mobile phone. If the visitor inside the museum use dedicated apps, the online visitors can hear the description of the exhibit and watch a video that includes a presentation in the sign-language. Accessible on touchscreens located near the paintings, the applications provide information on the composition elements - plans, characters, light sources (Guercino) and on the correspondence between sounds and colours (Signac). Applications can be downloaded for free from the AppStore and Google Play by following the links: [bit.ly/MNAR-ARTtouch](http://bit.ly/MNAR-ARTtouch) (for Brueghel's painting), [bit.ly/MNAR\\_Signac](http://bit.ly/MNAR_Signac) (for Signac's painting) and [bit.ly/MNAR\\_Guercino](http://bit.ly/MNAR_Guercino) (for painting Guercino) or scanning QR codes that includes three multimedia and augmented reality applications, tactile replicas, textile samples, a "sound library" and an "olfactory library", which have the role of making accessible works of famous artists and stories beyond the picture. The works accessible through digital technology are representative of the museum's collections, each is approached from a new perspective and allows connections to other works in the museum's collection.

The National Museum of Art's website there are more offers for sensorial disabled persons: in the video gallery one could watch/listen 17 films interpreted in mimic-gestural language, 40 audio descriptions, 15 audio dramatizations and explore three tactile diagrams.

In March 2019, the **National History Museum of Romania** ([www.mnir.ro](http://www.mnir.ro)) in Bucharest inaugurated an intelligent system to increase the level of accessibility of the permanent exhibition of the museum. Thus, visitors with visual impairment will be able to use a cane with an integrated GPS system, which transmits the current position to a mobile phone application (t-Go ). Depending on the geographical position in the interior of the museum recorded by the GPS system of the phone, the application knows where the visitor is, so that the pre-recorded audio information for orientation and information messages can be transmitted. The route consists of tactile floor indicators with NFC technology, with longitudinal ribs that indicate the direction of travel and warning markings that inform the viewer of potential dangers and obstacles. The purpose of this system is to help orientation, especially in open spaces and is built only for the ground floor of the museum. The tactile carpet can be felt with the stick but also with the foot. The website of the Museum does not offer a special section dedicated to visitors with disabilities.

Since 2017 the [Astronomical Complex of Baia Mare](#) offers to the visual impairments visitors a special exhibition to exploring the sky, the constellations. Their exploration is possible using an audio guide on mobile terminals, but also through the tactile exploration of the tactile maps. The section within the museum dedicated to the visual impairment visitors was realized within the project “Heaven in Your Hands II - Planetarium for the blind”, a project co-financed by the National Cultural Fund Administration (Planetarium, 2017).

In 2012, the **National Museum of Eastern Carpathians** carried out two projects, the one initiated by the institution, the other by on NGOs, both of them being financed by AFCN. The project “Touch the History” – museum exhibition for blind people” and “Feel the literature” aimed to create some temporary exhibitions made with models and replicas in natural size.

At **Buzau County Museum** “the Open Museum” project started in December 2018 with the aim to make two special exhibitions, one tactile exhibition of 50 artefacts, original and replica, entitled “Museum from the box) and an exhibition VR Hightech Museum.

In 2019 the **Oltenia Museum** made the project “I can see the museum’s world, as I have never seen it, in colours” with assistive technologies for persons with visual impairments.

**The Museum of the Traditional Popular Civilization ASTRA** from Dumbrava Sibiului (Muzeul Civilizatiei Populare Traditionale ASTRA din Dumbrava Sibiului) made accessible a large amount of information contained in the museum complex, both for people with disabilities and for the general public. Additional information to the current context was created including the important elements through play, experience and interaction, while stimulating the imagination and other senses.

Another activity is the Camp for children with disabilities “Without Borders - Together in Tradition” (“Fără Limite – Împreună întru Tradiție”). Within the "Without Borders - Together in Tradition" Camp, nearly 30 beneficiaries of the associations in Sibiu (Diakoniewerk, UCOS) and the Blijdorp Center in Suceava, aged 7-23, with multiple disabilities (autism, motor and mental disabilities) learns traditional crafts (weaving, embroidery, pottery: potter's modelling and wheel, making dolls, stitching, etc.) in one of the museum households (monument no. 97, Whistling workshop-workshop, Hodac, Mureș county), thus succeeding to create objects of traditional inspiration and to carry on the tradition. This offers an accessible, mobile, multisensory playground.

The museum organised several workshops for accessibility of cultural activities for people with disabilities. The goal is to create community access and opportunities for children with diverse sensory and cognitive abilities: create meaningful learning opportunities for children and their families, provide solutions and consultancy to arts organizations at regional, national and international level in accessing shows of theatre, music, dance, visits to the museum and zoos, understanding the functions of cognitive and sensory processing and the impact that the adapted shows have sensory / friendly atmosphere, understanding the evidence regarding the results of such shows, understanding the procedures and of the basic activities for designing a sensory / friendly atmosphere adapted experience, developing and practicing professional consulting skills, designing materials to be distributed before visits, implementing staff training and education sessions public action, creation of communication and marketing agendas, development of a program evaluation system.

[The Ethnographic Museum of Transylvania in Cluj-Napoca](#) is the first museum with the longest experience in accessing the museographic space for visitors with sensory disabilities since 2009 (Muzeul Etnografic, 2009). In the last decade, at the Transylvanian Museum of Ethnography, there were organised a series of activities that aim to create and improve the cultural offer for inclusion of persons with sensorial disabilities in the cultural act.

The first project started in 2009, a tactile exhibition "Touch and understand - the tactile message of traditional peasant objects" was realized with the support of the National Cultural Fund Administration (AFCN), within the framework of the project "Equal opportunities in access to culture. Museum techniques of cultural integration for disabled persons ".

The main objective was to create a permanent tactile exhibition that approaches the same important fields of traditional culture as the basic exhibition but which is accessible to the public also through a special perception: the tactile one. The preparation of this exhibition did not mean only the creation of the “content” but also the creation of an infrastructure to facilitate the individual orientation in the exhibition space. For this purpose, the layout of the space was realized, the pedo-tactile strips were put up, explanatory labels in Braille. In order to ensure the physical security of all beneficiaries, auxiliary materials were designed (furniture, panels, floorboards, supports). The access to information was

ensured by two means: Braille alphabet writing and regular print. The permanent, tactile exhibition is equipped with tactile orientation carpet, informative texts in Braille and enlarged print, but also an audio guide and tactile images. Is the singular exhibition who has a play area for children to experience contact with traditional toys and materials. Within the museum visitors with visual impairment can explore various traditional objects and the layout a model of a peasant house realized through funds from an Erasmus project.

In order to expend the cultural offer for the public with visual disabilities, besides the guided tours in the tactile exhibition, Sensory Theatre sessions were organised over the years (2013, 2014, 2015, 2016, 2017, 2018).

After 2009, the museum initiated two new (2013, 2017) projects that aimed to create an offer for the children with hearing and verbal communication impairments. Both projects aimed also to raise the awareness of regular visitors to the special needs of the disabled persons, which is why both projects worked with mixed groups, children with and without hearing and verbal communication deficiencies, of same age (7-11 years old) from several Cluj schools.

Within the first one (2013) entitled: “Silence – a surmounted barrier”, there were organised four activities, with topics related to traditional bee keeping, traditional agriculture, domestic animal breeding, homemade textile industry and its products, each of them aiming to outline the peasant universe as an organic, closed to nature whole.

Between the two mentioned projects, the museum participated as a partner in the project Erasmus+ [“BaGMIVI PROJECT: Bridging the Gap between Museums and Individuals with Visual Impairment”](#) (2015-2018). This project offers the museum’s staff the opportunity to extend the activities for visual impairments persons, to know the activities of other partner museums and to receive speciality support/help from the teachers of the Special Education Department in Babes-Bolyai University. The museum intended to make the activities of museum pedagogy to complete the tactile exhibition and to create the opportunity to know also the open-air section of the museum. First topic was about the traditional peasant house. A peasant house was selected, a characteristic and of optimal complexity dated 1841, coming from Bistrita-Nasaud County, Telciu village, which is in the Ethnographic Park “Romulus Vuia”. An asset was represented by the good accessibility of the farmstead in the park. In the first activity, the participants investigated tactile the model of the house focusing on materials, structure, functions. To complete the sensorial experience including the smell and sound, there were brought two traditional hemp mattresses filled with hay and straw, by which the participants could experience into a ludic moment the traditional way of rest within the peasant farmstead while listening traditional whistle music.

The second activity was organised in the open-air section of the museum where there is the explored house, the participants going around the house in order to raise awareness the real sizes. The

second activity had the topic the traditional clay processing. For choosing the workshop's theme it was important to connect it of the term open air museum and the previous topic (traditional house and clay recipients' roles in the traditional house). Before organising the workshop, there was prepared a tactile guide entitled "The potter's farmstead – his work and products".

Following the experiences gained within the project Erasmus+, the museum staff initiated a new project entitled "Discover, learn, play!", implemented in 2017 for children with and without hearing and verbal communication deficiencies. The topic was expended with four new subjects (farmstead, spontaneous flora, traditional costumes, children games) within eight activities. The gained experience and the materials made for all the projects are the basis of museum pedagogy activities offered both to sensorial disabled children and to the other children.

The museums In Romania that are accessible for Visitors with hearing impairment

1. Muzeul National al Taranului Roman, Bucuresti – National Peasant Museum, Bucharest
  - Sign Language video with the presentation of the museum and its exhibits.
  - Sign Language interpreters
2. Muzeul National de Istorie Naturală Grigore Antipa, Bucuresti – National Museum of Natural History Grigore Antipa, Bucharest
  - Sign Language video with the presentation of the museum and its exhibits
  - Sign Language guided tours
  - Sign Language interpreters
3. Muzeul National de Arta al Romaniei – Romanian National Museum of Art, Bucharest
  - Multisensory tours for hearing impaired individuals
  - Multimedia apps available constantly at The European Art Gallery on touchscreens
  - Sign Language videos for 3 paintings in The European Art Gallery

#### **V.5.TURKEY. Best practices regarding educational programs and services of the museums referring to accessibility and/or children with disabilities**

When museum services for museum visitors who have disabilities in general and museum visitors who are deaf or have hearing impairment (HI) in specific are evaluated, it is seen that there are less opportunities in Turkey compared to other countries. Although some technological equipments have been supplied for museum visitors who are deaf or have HI in some state museums, it is seen that these supports do not have sustainability. The projects which were started with short term goals also did not have continuation (Külük, 2019). A study conducted in 2014 showed that the arrangements for people



with disabilities (PwD) in museums are still in the process of formation and there still is a need to focus on (Şen, Çelik-Yetim and Bilici, 2014).

Erbay (2017) emphasizes that there are limited number of projects for the museum visitors who have HI than the ones who have VI (visual impairment). One of the projects which related to the visitors who have HI, ‘Accessible Museum Project (Erişilebilir Müze Projesi)’, was conducted in 2015-2016 by Bursa Metropolitan Municipality and the Governor of Bursa to ensure that people with disabilities (PwD) can be more actively engaged in socio-cultural activities. 25 staff who were working in the museums in Bursa were trained to assist the visitors who are deaf or have HI. This project also involved 240 students from the school for the deaf/HI. Although the project has achieved its objectives, it unfortunately has not been sustained for financial reasons (Külük, 2019; Erbay, 2017). According to Erbay’s study there are some movements for museum visitors who have visually or any other kind of impairment but there are more projects needed yet to come. The study of Sen, Çelik-Yetim and Bilici (2014) highlighting that some museums all around Turkey were under the formation processes and improvements were needed.

There are more studies on museum visitors with VI comparing with HI. In 2009, Buyurgan (2009) studied on “how museums contribute to their learning and what those students expect to gain from their visits to the museums in Turkey and thus, to enable them to have more valuable experiences” with qualitative research method. She interviewed five university students with VI, enrolled in Department of the Education of Visually Impaired in Gazi Faculty of Education of Gazi University. Two of them were totally blind from birth. The one lost her visual ability at the age of two and these three students suffer from 100% visual loss. Two of them has low vision. One of them can see 15% in daylight whereas at night she can see only 5% (nyctotaphlosis). The other one’s right eye does not have any visual perception whereas her left eye has a perception of 1/10 (nyctagmus). Buyurgan organized a museum visit for them but the museum was not designed for people with VI. Although the visit was beneficiary for them, they experienced some serious problems about no wall tracing, curving style of the stairs (because they are obstacles to their sticks) and too many columns in the museum and they also wanted the toilets to be located in an easy access. They demanded some copy models and reliefs of the works with explanation in Braille alphabet. The low vision students wanted to have more spacious and well-lighted atmosphere in the museums, contrasting colours in the exhibitions, and large scripts on contrasting colour surfaces. The colour of the floor is very important for people who have low vision or who can see only the light. According to the recommendations of the study, there should be educational departments in the museums with a capability of giving service to VI people, and new physical arrangements and opportunities should be provided such as important information should be supplied in large scripts and Braille alphabets, tactile collections and catalogues should be prepared in the Braille

alphabet. There should be relief maps and guiding inside the buildings. Colour contrasts and lighting should be considered inside the museum and in the exhibitions for the low vision people.

Yesilyurt, Kirlar, and Lale (2014) evaluated the museums located in Izmir in terms of accessibility for people with VI. This study was conducted in two stages. In the first stage, 15 museums were examined for convenience from the point of people with VI. In the second stage, focus group interviews have been made with 7 people with VI to determine the problems and expectations intended to museums. The results of the study showed that there was no museum to comply with all the criteria in terms of accessibility for people with VI. Individuals' requests, expectations and problems separate according to the type of VI and the reason that they cannot visit museums is mostly because of several problems summarized in Table 1 below.

Structural/Constructional Problems	Personal Problems	Interpersonal Problems
There is no model of the arts or the provided model is low quality	Fear of damaging	Indifference and insensitiveness of official institutions
Cannot touch arts	Discouragement	Lack of knowledge of staff
Lack of enough information	Psychological pressure	Ignorance
Arts are exhibited behind a protecting glass	Financial problems	Prejudice of social environment
No guidance	Prejudice	Uneasiness of attendants
No description		
Lack of introductory documents		
Quietness in museum		
Necessity of an attendance		
Lack of or carelessly technology exploitation		
Design or decoration problems		

*Table 1. The problems of visitors with VI in museums (Yesilyurt, Kirlar, Lale, 2014, p10)*

The expectations of the museum visitors with VI were summarized in Table 2 below.

Structural/Constructional Expectations	Expectations for Experiencing
Walking parkours and additional platforms	Touching arts
Level and not slippery grounds	Voice guidance
No handicaps in walking areas	Narration
Universal design approach	Descriptive narration
Up-to-date mentality	Braille documents
Social inclusion “museums for all”	Good quality models
	Relief map

	Well trained and sensible staff
	Technological equipment
	Up-to-date implementation

*Table 2. The problems of VI visitors in museums (Yesilyurt, Kirlar, Lale, 2014, p13)*

In addition to all of these, there was a decision about PwD and museums in the report of Cultural Heritage, Museums and Archaeology Action Plan of National Cultural Council. According to the report, facilities such as voice description and touch navigation for visitors with VI, sign language tours for individuals with HI and spatial arrangements to facilitate access for people with physically disabilities will be increased (Okan, 2018).

Special designs for individuals with disabilities (especially the necessary arrangements of common areas for the citizens such as public buildings, libraries, museums, schools, malls, parks, playgrounds, public transportations and etc.) started before 90s in all over the world. Soon, it was observed that these arrangements did not meet the needs of all PwD, but a specific user profile. However, the designs for the PwD should have been support the quality of life, improve their health, safety and well-being at the highest level and it should not be only for one group of people but everyone (Demirkan, 2015). After, the term 'inclusion' is mentioned in Salamanca Statement (1994), more importance was given to diversity in designs (spatial, educational, social, legal) for PwD. For instance, after the 'Universal Design' approach which emerged in the field of architecture has been adopted worldwide, it has soon important reflections on environmental, social and educational arrangements. The 'Universal Design' approach aims to coexist all people of all different features, it has also been called 'Inclusive Design' or 'Design for All' in some countries (Mace, Hardie and Place, 1996; CAST, 2018).

Accessibility should provide opportunities for people with different needs to move comfortably, safely and as independently as possible, in indoor and outdoor environments, while they are doing their daily and formal works. Accessibility for the participation of all individuals in social life involves taking all necessary physical and architectural preventions. It is also very important to take accessibility measures for sidewalks, pedestrian crossings, parks, playgrounds, all public buildings and public services and transportation services for PwD, elderly, pregnant women, children and the other people who have different physical challenges (gigantism, obesity and etc.) (Demirkan, 2015).

Today, museums carry out both scientific transfer and informing the society through the visitors, by providing modern education methods (Erbay, 2017). On the other hand, PwD have a lot of challenges in order to go out their homes, enter the other buildings, using the stairs and elevators (most of the buildings have no elevators and ramps) (Mamatoğlu, 2015). Since 2000, the educational activities such as making reproductions of the works, examining them closely by touching copy imitation objects,

learning through visual holograms and touch screens, using technology-supported tools are presented to visitors who have disabilities (Erbay, 2017).

**The "Project of Feeling The Colours"**, which offers visitors the opportunity to touch, listen and perceive reliefs prepared for the individuals with VI, through colour-specific scents has been started in 2010 and since then its products travels from country by county (Umurbilir, 2015). Another important step for the inclusive museum is 'Accessible Tourism, Barrier-Free Istanbul II Project'. This project is presented by **Istanbul Metropolitan Municipality** and **Istanbul Development Agency** within the scope of "Global Tourism Centre Istanbul Financial Support Program" and construction of replicas belonging to 4 museums, shooting of promotional films, preparation of accessibility technical reports, accessibility determination studies of public institutions, preparation of digital accessibility map are carried out. The installation of the museum disability card recognition system was also the other output of the project. In this project the studies which try to make 21 museums, including the museums listed below, accessible are still continued: Topkapı Palace, Hagia Sophia, Istanbul Archaeology Museums, Kariye Museum, Great Palace Mosaics Museum, Turkish Islamic Arts Museum, Islamic Science and Technology History Museum, Rahmi M. Koç Museum, Istanbul Modern Art Museum, Aviation Museum, Sakıp Sabancı Museum, Istanbul Toy Museum, Yıldız Palace Museums, Galata Mevlevihane, Miniaturk, Panaroma 1453 History Museum, Basilica Cistern, City Museum, Firefighter Museum, Aşçıyan Tefvîk Fikret Museum, Cartoon and Humor Centre. The "Barrier-Free Museum Guide" prepared by the Istanbul Health Museum, is very helpful to provide and support accessibility of disadvantaged museum visitors (IBB, 2014).

**Istanbul Modern** organised the first multimedia tour in Turkey, the exhibition of "Venice-Istanbul" which included guidance system providing visitors with audio tours, exhibition visuals and documentaries, while sharing information about artefacts for visitors who have VI and HI (Istanbul Modern 2006 as cited in Külük, 2019). This exhibition was held by Istanbul Modern which also organised workshops in painting studios and museums for visitors who have hearing impairment in 2017. Istanbul Modern hold another exhibition for visitors with disabilities in 2018-2018 named 'The artist and his time (Sanatçı ve Zamanı)' which facilitates access to the museum and provides detailed information about the art works without the need for a sign language interpreter (Istanbul Modern 2018 as cited in Külük, 2019). Istanbul Modern organized also "Colour You Touch" for visually impaired and partially sighted children and young people including exhibition tours accompanied by experts, art practices in the workshop and film shows with audio description. Children and young people interpret the art works in exhibition tours based on the description of the art works, strengthen their hand skills in workshops using various materials and analysing the films by participating in the animation screening with audio description.

**Pera Museum**, an art museum in Turkey, offers social services and continues to apply its activities in Istanbul. One of the current program of Pera Museum's is, 'Barrier Free Pera Museum (Engelsiz Pera Müzesi)' which serves dance workshops, guided tours with sign language and "Deaf/Coffee/Talk (Sağır/Kahve/Sohbet)" activities free of charge (Külük, 2019; Erbay, 2017).

A year after Buyurgan's 2009 study, "The Accessible Museums and Palaces Project" was started by The Spinal Cord Paralytics Association of Turkey. The project aims to make the most important historical and tourist locations in the city more accessible for people with disabilities First, **Hagia Sofia Museum** was accessible for all disadvantaged groups and it was followed by Archeology Museum, Topkapı Palace Museum, Museum of Turkish and Islamic Arts, Museum of the History of Science and Technology in Islam, Yıldız Palace Museum, and Rumeli Fortress Museum (Yazman 2012 as cited in Erbay, 2017). This project was continued by new projects such as Kariye Museum, Koc Museum, Miniaturk, Istanbul Panaroma Museum in Istanbul (Erbay, 2017). It is also intended to make a documentary film at the end of the project available to other museums and centres which want to make their spaces accessible for the public with special needs.

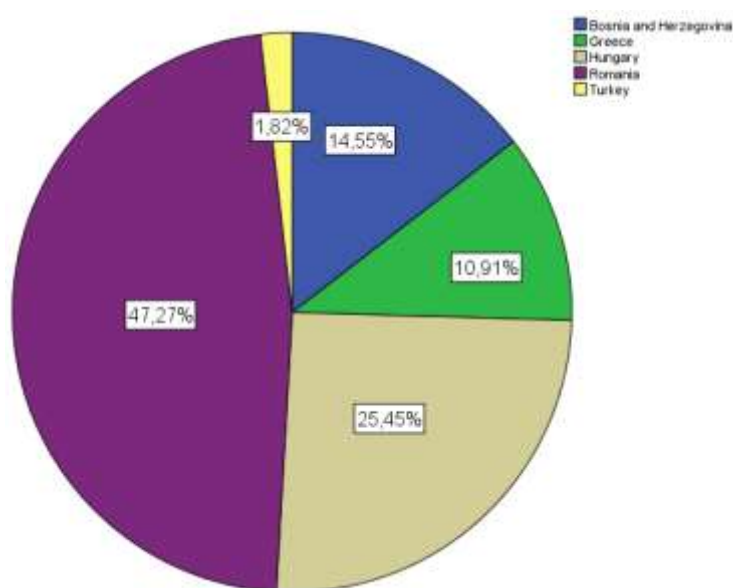
**Batman Museum** is one of the most important museums of the region where hundreds of artefacts from the Palaeolithic Period to the Mediaeval Age are exhibited. Visually impaired people can easily walk in the museum through the yellow road from the outer door to the exhibition halls. Thanks to the voice steps application, the museum area can be navigated with the voice guidance system, and when the works are approached, the voice description system is activated.



## VI. Analysis of survey results in Erasmus + TOMIMEUS project

The main objective of the present survey was to gather information from staff members of museum about the extent to which museums and cultural institution embrace the principles of accessibility and universal design for visitors with sensory impairments, but also about their capacity to organize inclusive activities. In analyzing the results we used a qualitative and a quantitative approach.

The number of participants in the study was N = 55, from 5 countries (Bosnia and Herzegovina, Turkey, Greece, Hungary and Romania), with the average age of 46 years (minim 26 – 63 maximum), of which 11 men and 44 women. In graphics 1 we present the country percentage of participants. And in table 1 there are the frequencies of the participants according to gender and country.

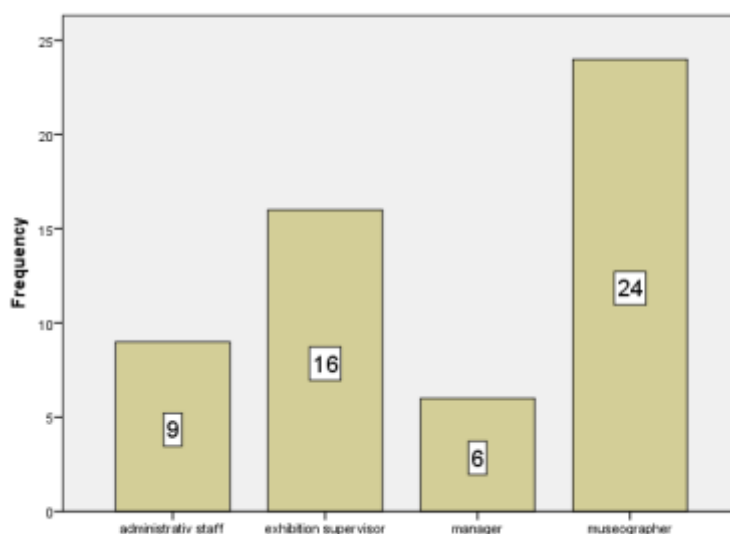


Graphic 1. Percentage of study participants according to country

Table 1. Distribution of participants according to gender variable and country.

	Male	Female
Bosnia and Herzegovina	1	7
Greece	1	5
Hungary	4	10
Romania	5	21
Turkey		1
	<b>11</b>	<b>44</b>

In *graphic no.2* the frequencies of position of the participants in the museum are presented and in *Table 2* we put these are assigned to each country.

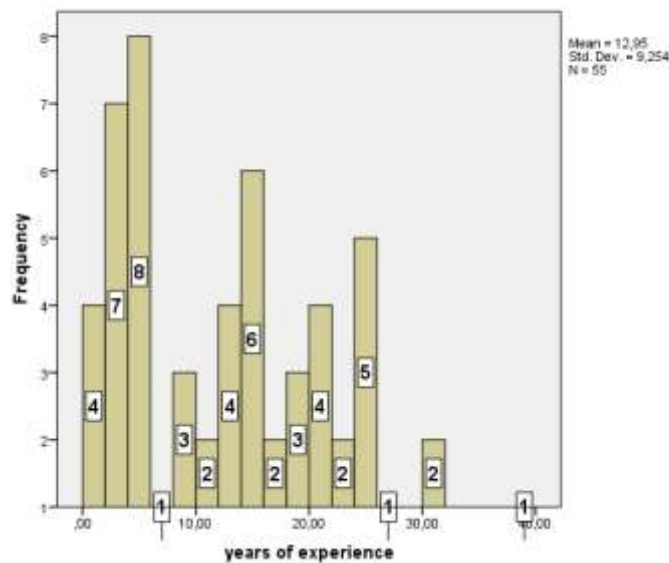


**Graphic 2. Frequency of response - position in the museum**

**Table 2. Frequency of response - position in the museum / country**

	exhibition supervisor	administrative staff	museographer	manager
Bosnia and Herzegovina	2	2	4	
Greece		3	3	
Hungary		3	6	5
Romania	14	1	11	
Turkey				1

The average age of experience in the museum is 13 years (1 - 38). The frequencies are presented in diagram 3.



**Graphic 3. The frequency of work experience**

In the opinion of the participants, the most used **expressions associated with disability** (question 1), are:

<i>access</i>	<i>human rights</i>	<i>smart applications</i>
<i>barriers</i>	<i>ignore</i>	<i>special needs</i>
<i>cultural needs</i>	<i>inaccessibility</i>	<i>solidarity</i>
<i>difficulties</i>	<i>inclusion</i>	<i>specificity</i>
<i>discrimination</i>	<i>integration</i>	<i>tactile objects</i>
<i>diversity</i>	<i>mobility</i>	<i>understanding</i>
<i>empathy</i>	<i>movement disability</i>	<i>victimization</i>
<i>fragility</i>	<i>obstacles</i>	
<i>haptic</i>	<i>sign language</i>	

As we can see, most of the words indicated by the participants correlate with *disability*, focus on importance of accessibility, the need to respect of the rights of each individual, the integration of the person with disabilities, accessibility and the need to use technology to increase the degree of integration / inclusion.

Most of the difficulties identified by the participants as **real problems faced by people with sensory, visual and hearing disabilities in their participation in cultural activities** (question 2, 3 and 4) refer to the problems of environmental inaccessibility, poor communication, lack of public policies

and collaboration between institutions, lack of specialized staff in sign language communication and reduced adequate explanations for blind visitors, etc.

We referred to a joint analysis of the three items in the questionnaire, because most of the participants indicated approximately similar problems, specific only to the type of disability. We present the answers with the highest frequency, indicated by the participants:

- *difficulties communication between museum staff and people with disabilities, especially deaf visitors*
- *few accessible exhibits*
- *few tactile materials that can be reached*
- *inaccessible information - web pages or information directly inside museums*
- *lack of accessible transport facilities*
- *lack of audio guides, videos or information materials in accessible formats to all visitors with disabilities*
- *lack of cultural programs adapted to people with hearing disabilities*
- *lack of interpreters in sign language*
- *lack of orientation marks in the museums*
- *lack of technologies needed to visit the spaces of the museum*
- *low developed autonomy of the persons with disabilities*
- *lower level of strategies in the cultural policies for planning activities that would facilitate the access of people with various disabilities*
- *transportation difficulties*
- *very low collaboration between educational institutions for students with hearing disabilities and museums, having closer relationships with non-governmental organizations*
- *very small spaces and inaccessible to people with physical disabilities*

Regarding the existence of a protocol / procedure / guidelines which are implemented by the museum for visitors with disabilities (question 5 and 6) the results are in table 3a and 3b.

**Table 3a. Frequency of responses regarding the existence of protocol / procedure / guidelines for visitors with disabilities in the museum**

	yes	no	n/a
<b>accessibility of parking</b>	16	35	4
Bosnia and Herzegovina (N=8)	4	3	1
Greece (N=6)	2	4	
Hungary (N=14)	1	11	2

Romania (N=26)	8	17	1
Turkey (N=1)	1		
<b>ramps and walkways</b>	42	12	1
Bosnia and Herzegovina (N=8)	4	4	
Greece (N=6)	5	1	
Hungary (N=14)	7	8	1
Romania (N=26)	25	1	
Turkey (N=1)	1		
<b>entrance</b>	40	14	1
Bosnia and Herzegovina (N=8)	6	2	
Greece (N=6)	6		
Hungary (N=14)	10	3	1
Romania (N=26)	17	9	
Turkey (N=1)	1		
<b>corridors</b>	24	29	2
Bosnia and Herzegovina (N=8)	3	4	1
Greece (N=6)	1	5	
Hungary (N=14)	3	10	1
Romania (N=26)	17	9	
Turkey (N=1)		1	
<b>hallways</b>	24	28	3
Bosnia and Herzegovina (N=8)	4	3	1
Greece (N=6)	2	4	
Hungary (N=14)	5	8	1
Romania (N=26)	17	9	
Turkey (N=1)			1
<b>indoor design</b>	11	41	3
Bosnia and Herzegovina (N=8)	2	6	
Greece (N=6)	1	5	
Hungary (N=14)	2	10	2
Romania (N=26)	6	20	
Turkey (N=1)			1
<b>lighting</b>	8	42	5
Bosnia and Herzegovina (N=8)	2	5	1
Greece (N=6)	1	5	
Hungary (N=14)	1	9	4
Romania (N=26)	3	23	
Turkey (N=1)	1		
<b>signposted routes</b>	19	33	3
Bosnia and Herzegovina (N=8)	2	6	
Greece (N=6)	1	5	
Hungary (N=14)	1	10	3



Romania (N=26)	15	11	
Turkey (N=1)		1	

**Table 3b. Frequency of responses regarding the existence of protocol / procedure / guidelines for visitors with disabilities**

	yes	no	n/a
<b>accessibility of exhibition objects and their interpretation</b>	33	19	3
Bosnia and Herzegovina (N=8)	4	3	1
Greece (N=6)		6	
Hungary (N=14)	4	8	2
Romania (N=26)	24	2	
Turkey (N=1)	1		
<b>approaches to increase the accessibility of publications panels</b>	14	37	4
Bosnia and Herzegovina (N=8)	3	4	1
Greece (N=6)		6	
Hungary (N=14)	7	4	3
Romania (N=26)	3	23	
Turkey (N=1)	1		
<b>identification labels, audio and tactile information and experiences</b>	35	16	4
Bosnia and Herzegovina (N=8)	5	3	
Greece (N=6)		6	
Hungary (N=14)	3	7	4
Romania (N=26)	26		
Turkey (N=1)	1		

Regarding the implementation of the procedures / protocols / guidelines necessary to increase the level of accessibility for visitors with different disabilities, according to the participants, they result is modest, we can say a *middle level*. Most participants declare that there are no procedures or solutions regarding the existence of (a) *parking spaces for visitors with disabilities*, (b) *indoor design*, (c) *lighting* and (d) *accessibility of publications panels*.

In terms of access to the building (ramps, entrance, corridors, hallways, labels, audio and tactile information and experiences) this is at a moderate level. And about the accessibility of the information,

the answers to this question do not correlate with most of the problems indicated above in the questionnaire.

Regarding the necessity to use protocol, procedure or guidelines for guided tours, workshops or educational programs for visitors with disabilities (question 7) the participants' answers are very positive, especially from the participants from Bosnia and Herzegovina and Romania, but not in all cases. Thus, they state that:

- *collaboration with higher education institutions*
- *methodology for children within autistic spectrum*
- *specifically, designed programs/workshops or part of exhibitions/interpretation in appropriate formats (large letters, high contrast, audio guides, tactile images, sign language guides, etc.) to make museum institution accessible and inclusive*
- *the fact that there are tactile images, audio and video files that can facilitate the visit*
- *there is a special cooperation with the nongovernmental organizations that accompany the visitors with disabilities within the museum*
- *visitors with physical disabilities are assisted for easy access to the museum*

According to the participants, one of the major problems is that the sign language interpreter is missing from most of the museums (question 8), only participants from Turkey, Greece and Hungary partially confirmed that they have some collaboration with NGO who offer their services for deaf visitors.

Regarding the accessibility of the web pages, (question 9), the participants' answers are highlighted in table 4.

**Table 4. Frequency of responses regarding the accessibility of web pages**

	yes	no	n/a
<b>allows change of contrast</b>	7	43	5
Bosnia and Herzegovina (N=8)	3	4	1
Greece (N=6)	6		
Hungary (N=14)	2	9	3
Romania (N=26)	2	24	
Turkey (N=1)			1
<b>enables text enlargement</b>	15	35	5
Bosnia and Herzegovina (N=8)	4	4	
Greece (N=6)	6		
Hungary (N=14)	9	1	4
Romania (N=26)	2	24	

Turkey (N=1)			1
<b>is organized properly</b>	30	20	5
Bosnia and Herzegovina (N=8)	5	2	1
Greece (N=6)	1	5	
Hungary (N=14)	4	7	3
Romania (N=26)	20	6	
Turkey (N=1)			1
<b>the menu is visible</b>	41	10	4
Bosnia and Herzegovina (N=8)	7	1	
Greece (N=6)	1	5	
Hungary (N=14)	8	4	2
Romania (N=26)	25		1
Turkey (N=1)			1
<b>the information is well delimited</b>	37	13	5
Bosnia and Herzegovina (N=8)	6	2	
Greece (N=6)	5	1	
Hungary (N=14)	7	4	3
Romania (N=26)	24	2	
Turkey (N=1)			1
<b>the articles are structured correctly</b>	36	10	9
Bosnia and Herzegovina (N=8)	4	1	3
Greece (N=6)	5	1	
Hungary (N=14)	8	2	4
Romania (N=26)	24	2	
Turkey (N=1)			1
<b>can navigate with the keyboard</b>	30	12	13
Bosnia and Herzegovina (N=8)	4	1	3
Greece (N=6)	5	1	
Hungary (N=14)	5	1	8
Romania (N=26)	21	5	
Turkey (N=1)			1
<b>is responsive from the mobile phone</b>	42	7	6
Bosnia and Herzegovina (N=8)	6	1	1
Greece (N=6)	1	5	

Hungary (N=14)	10	4	
Romania (N=26)	25	1	
Turkey (N=1)			1
<b>the files are accessible</b>	40	7	8
Bosnia and Herzegovina (N=8)	6	1	1
Greece (N=6)	1	5	
Hungary (N=14)	8	6	
Romania (N=26)	25	1	
Turkey (N=1)			1
<b>the images have a description</b>	33	17	5
Bosnia and Herzegovina (N=8)	2	5	1
Greece (N=6)	2	4	
Hungary (N=14)	7	4	3
Romania (N=26)	22	4	
Turkey (N=1)			1
<b>the videos have subtitles / cc</b>	6	41	8
Bosnia and Herzegovina (N=8)	1	6	1
Greece (N=6)	1	4	1
Hungary (N=14)	3	6	5
Romania (N=26)	1	25	
Turkey (N=1)			1
<b>tickets can be purchased online</b>	10	42	3
Bosnia and Herzegovina (N=8)	6	2	
Greece (N=6)	2	4	
Hungary (N=14)	8	6	
Romania (N=26)		26	
Turkey (N=1)			1
<b>the contact forms are visible</b>	42	10	3
Bosnia and Herzegovina (N=8)	4	2	2
Greece (N=6)	2	4	
Hungary (N=14)	12	2	
Romania (N=26)	24	2	
Turkey (N=1)			1
<b>uses captcha codes</b>	1	41	13

Bosnia and Herzegovina (N=8)	1	3	4
Greece (N=6)	5	1	
Hungary (N=14)	7	7	
Romania (N=26)		26	
Turkey (N=1)			1

From the analysis of the answers we can identify a high level of accessibility of web pages of the museum from countries that provided answers to questions, especially relating to adapting the (a) contrast and the possibility of (b) adjusting the text magnification. The online information is (c) organized, with good (d) visibility, the information is (e) well organized, (f) delimited and (g) structured accordingly. However, in the opinion of the participants, the video information is not accessible for the visually impaired and deaf online visitors, the movies posted on the institution's website do not have subtitles (closed captioning) or an alternative text version. The museum that have specific apps to accompany the visitor with disabilities in the museum (question 10), but some of them have discussion to develop accessible apps for smart devices.

Referring to the accomplishment of specific activities for the visitors with sensory disabilities (question 11) or together with other visitors (question 12), we observe that the museum is involved in activities for children with visual impairment. Most of the joint activities are carried out with support from non-governmental organizations and the special schools from which students with disabilities come, but these activities are rarely performed, not being reported regular activities.

*Table 5. Activities with people with disabilities*

N=55	yes	no
adults with visual impairments	30	25
children with visual impairments	27	28
deaf or hard of hearing adults	17	38
deaf or hard of hearing children	26	29

In the activities offered by their institution, the participants mentioned, to a small extent, the fact that they used *various experiences in a form of multisensory experience to access museum services and exhibitions* (question 14), such as:



- *audio and video interpretation and tactile experience; possibilities for tactile and sensory (sound, smell, degustation, etc.) in Bosnia and Herzegovina*
- *museum kit specially designed for people with visual impairments in Greece*
- *listen animal sounds and then we are looking for motives of animals on objects, tactile objects in Hungary*
- *tactile exhibition in Romania*
- *tactile models in Turkey*
- *In order to support the activities mentioned above (question 15, 16), the staff museum use:*
- *in Bosnia and Herzegovina - a manual, interactive educational kit, museum "suitcase", tactile copies, mobile devices to support interpretation of the cultural heritage / objects, stories, customs are used*
- *in Greece - the multisensory museum kit comprises of multi-sensory activities and information on the Ancient Cycladic Civilization in general and more specifically the marble figurines with direct and indirect references to the Cyclades and their history*
- *in Hungary - games as puzzles, sudoku, interactive tools*
- *in Romania - musical instruments, computers, textiles*

The participants' recommendations to increase the accessibility of museums (question 18) are:

- *all-inclusive activities, trained staff*
- *Braille texts to the exhibitions*
- *direct cooperation between institutions and persons with sensorial disabilities, creation of social and cultural programs/activities in which to be involved persons with this type of disabilities*
- *electronic accessible display panels*
- *first learn employs about accessibility, its importance for museum and community*
- *improvements collaboration with the municipality*
- *making all the places accessible - galleries, coffee shop, shop, WC*
- *more material and financial fund*
- *organize seminars, workshops in museums about accessibility*
- *respect universal design for museum*
- *signs on the floor to help blind visitors*
- *tactile exhibitions, audio soundtracks*
- *to educate staff and workers in museums about accessibility so they could make better plans and protocols that consider accessibility for everyone*
- *to hearing disabled visitors, we could put videos to help learning about objects*

- *website adapted to the needs of persons with visual and hearing impairments*

Half of the participants (N=25) mentioned that they never attended a training about the accessibility of the environment and information, and how to interact with a person with disabilities in the museum. The participants (N=30) who attend in courses dedicated to museum inclusions, mention that this course was supported in universities, experts in accessibility and museums experts.

The participant who have not yet attended to a course would like to learn and find more information about:

- *accessibility*
- *assisted communication*
- *assistive technologies and different apps*
- *communication with people with disabilities*
- *how to organize inclusive activities and guided tours*
- *inclusion*
- *principle of museum accessibility (information and environment)*
- *sign language*
- *technological equipment*
- *universal design*
- *who to apply in the museum the social model of disability*

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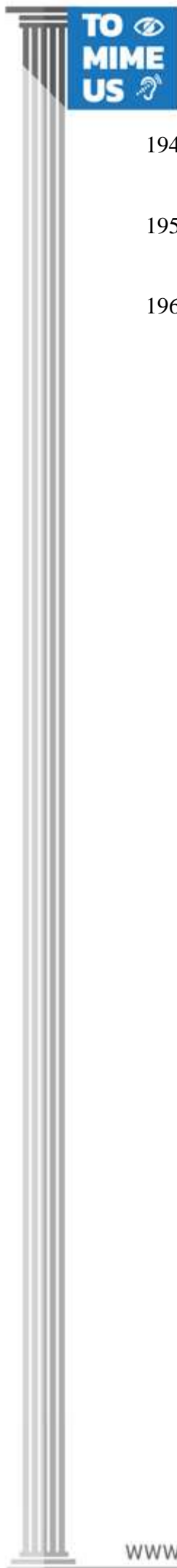
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