

Post-training bulletin

# Blind and visually impaired museum visitors



Stalowa Wola 2014

**Training:**

Increasing the accessibility of Polish and Ukrainian Museums  
for the professional service for the blind and visually impaired  
Regional Museum in Stalowa Wola, 10<sup>th</sup> and 11<sup>th</sup> February 2014

**Project:**

Museums without Barriers – Coalition of Polish and Ukrainian Museums  
for Provision of Professional Service to Disabled Visitors  
Cross-border Cooperation Programme Poland-Belarus-Ukraine 2007-2013

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# Introduction

The training courses on provision of service and education for the people with disabilities were aimed at museum guides and museum educators from Poland and Ukraine. The objectives of the training courses were not only to educate but also to indicate new solutions, to formulate the educational programmes and to increase the sensibility and understanding of the problems and the expectations of the people with disabilities. The training courses were conducted in the form of workshops and were attended also by the people with disabilities.

The training course on provision of service to the blind was held on 10<sup>th</sup> and 11<sup>th</sup> February at the Regional Museum in Stalowa Wola. It was conducted by Marcin Szeląg PhD, an art historian, and a researcher at Adam Mickiewicz University of Poznań, the Head of the Education Division of the National Museum in Poznań. He was accompanied by Kinga Malik-Gunia, Paulina Szeląg and Ewa Woźniak, who conducted the practical workshops.

The training course was based on both practical and theoretical background. The development of museology was discussed from the perspective of the wider access to exhibitions. Moreover, an interesting project was introduced, namely, the exhibition held by the National Museum in Poznań entitled "5 senses - Audio-description".

The introduction to the theory of a participatory museum was an important part of the training course. This theory is the foundation of the innovative educational programme devised by Mr Szeląg for the project "Museums without barriers". The second part of the training was also attended by the blind and visually impaired and some of the principles of the aforementioned educational programme were put into practice.



# About the lecturers

## dr Marcin Szelağ

– an art historian, and researcher at Adam Mickiewicz University of Poznań, the Head of the Education Division of the National Museum in Poznań. He specialises in the contemporary museology and museum education theory. The co-author of the first Polish anthology of texts devoted to museum education *Edukacja muzealna. Antologia tłumaczeń [Museum education. The anthology of translations]* (2010), the author of the idea of the research entitled: *Raport o stanie edukacji muzealnej w Polsce [The report about the state of museum education in Poland]* (2009-2012) and the editor of the text: *Edukacja muzealna w Polsce. Sytuacja, kontekst, perspektywy rozwoju, [Museum education in Poland. State, background, development perspectives.]*, summarising the research (2012). His experience within the field of innovative educational programmes, including these addressed to the people with disabilities, inter alia includes: being a co-author of the exhibition and the educational programme *5 senses. Audiodescription* (2011), preparing the conception of rendering the permanent exhibition available at the National Museum in Poznan (2012), preparing a participative exhibition entitled: *What's got the lace to do with the windmill? The Netherlands* (2013). At present, he implements the research project *Educating at the art gallery* financed by Narodowe Centrum Nauki [the National Science Centre] in Kraków.

## Kinga Malik-Gunia

– graduated from the Pedagogical University of Cracow, she studied pedagogy with the specialisation: oligophrenic pedagogy. For the past nine years she has been working with the people with intellectual disability at Zespół Szkół Specjalnych nr 103 named Maria Grzegorzewska [Maria Grzegorzewska Special School Complex no 103] in Poznań. She is a specialist in alternative communication and an assistant at the Special Olympics Wielkopolskie - Poznań. The co-initiator of the school project "Spacer z sztuką" ["Strolls with art"], encouraging the young people and their families to active participation and creation of the cultural life in Poznan. The co-author of the film projects (in collaboration with Centrum Sztuki Dziecka [the Centre of Children Art]) dedicated to the people with disabilities.

## Paulina Szelağ

– an art historian, museum educator, curator of the Division of Textiles, Miscellanea and Miniatures at the Museum of Utilitarian Arts in Poznan. Her interests revolve around history of museology, theory of museum education and the art of arranging exhibitions. She is an author of numerous publications and educational programmes. For six years she has been implementing the project "Sztuka życia" ["The art of living"] dedicated to the students of Zespół Szkół Specjalnych nr 103 named Maria Grzegorzewska [Maria Grzegorzewska Special School Complex no 103] in Poznań.

## Ewa Woźniak

– graduated from Adam Mickiewicz University of Poznan, where she studied special pedagogy; she specialises in alternative communication. For the past 15 years, she has been working with intellectually disabled youth at Zespół Szkół Specjalnych nr 103 named Maria Grzegorzewska [Maria Grzegorzewska Special School Complex no 103] in Poznań. She is a co-author of many projects engaging the students of special schools in participating and creating culture. She is, among others, the co-author of the project "Sztuka życia" ["The art of living"], that has been implemented since 2008 in collaboration with the National Museum in Poznan and the project "Wielka przygoda z filmem" ["Big adventure with film"] implemented jointly with Centrum Sztuki Dziecka [the Centre of Children Art] in Poznań.



Dr Marcin Szeląg

# Museum accessible for the blind and visually impaired

## United Kingdom

- Population: 58.4 million
- 6.4 million people are disabled (about 11% of the population)
- 2.4 million disabled are of working age
- 69% of the disabled of working age are unemployed

## Poland

- Population: 38.5 million
- 4.7 million people are disabled (about 12% of the population)
- 0,5 million people are partially sighted or visually impaired
- It is estimated that about 90 thousand people are blind
- 2 million of the disabled are of working age
- 73% of the disabled of working age are unemployed
- Out of nearly 80 thousand members of Polski Związek Niewidomych [Polish Association of the Blind], only about 5 thousand people (approx. 6%) are employed.

## United Kingdom

### People over 16

- 1.1 million people have severe vision impairment, which qualifies them to be registered as partly sighted or blind
- 1.7 million people are visually impaired to the extent that does not allow them to freely read a standard typed text, much more people are facing difficulties of low vision
- 4% of the blind do not have any sensation of light
- 19 thousand (about 2%) of the registered as visually impaired read Braille
- 24% of the visually impaired use audio recordings
- 97% of the people over 65 wear glasses
- 90% of the people with eye disorder are over 60



## The classification of visual impairments of the WHO is based on three main parameters of vision

- Vision acuity, i.e. central vision – a medical parameter determining the ability to perceive details from a given distance
- Field of vision, i.e. peripheral vision – medical parameter determining the ability to perceive the field with both eyes in both horizontally and vertically
- The functioning of the eye, i.e. the manner of using sight in daily life, work, social and cultural aspects.

The functional parameter distinguishes three techniques of functioning of the sense of vision, which correspond to the three groups of visually impaired people:

- seeing-hearing-touching techniques
- Hearing-touching-seeing techniques
- Hearing-touching techniques – the techniques that do not use the sense of sight

completely blind people, i.e. the people that do not have the sensation of light, apply the techniques that do not use the sense of sight

## Sight defects and diseases

### Refraction defects:

- hyperopia,
- myopia
- astigmatism (simple, compound, mixed)

### Diseases:

- cataract
- glaucoma
- age-related macular degeneration (AMD),
- retinitis pigmentosa (RP)
- diabetic retinopathy
- Retinal detachment

### Eye movement disorders:

- strabismus (estropia, eotropia, hypertropia, hypotropia, paralytic squint)
- nystagmus (central, peripheral, spontaneous)



**Widzenie w normie**



**myopia**



**AMD – early stadium**



**AMD – central scotoma  
– advanced stadium**



**glaucoma**





**retinal detachment**



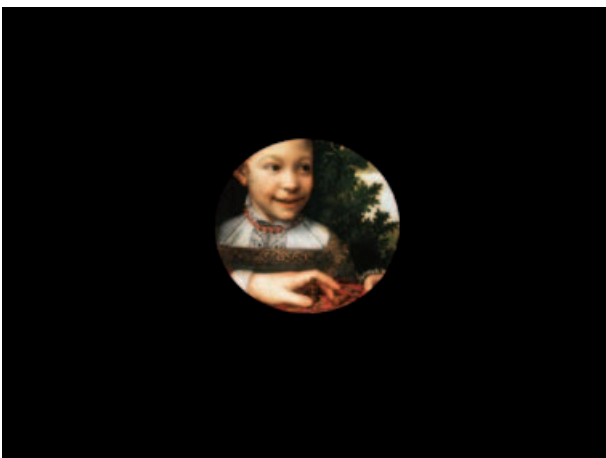
**diabetic retinopathy**



**diabetic retinopathy  
– scattered scotomata**



**cataract**



**retinitis pigmentosa  
– tunnel vision**



**strabismus**

# Access to the Museum

## Door

### swinging door

– this kind of door is particularly dangerous for visually impaired people, which is why one should avoid installing such door. In the case of entrances, it is advisable to install additional throw-open door or sliding door.

### rotating door

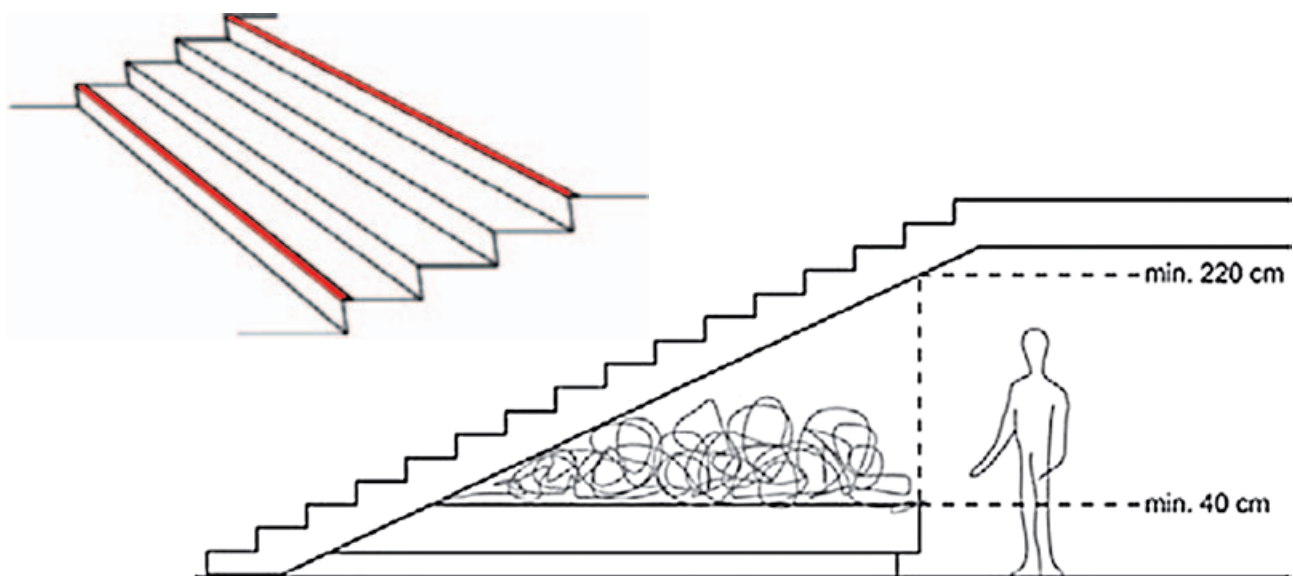
– generally assessed as inaccessible for the people on wheelchairs and for the people with vision dysfunctions. In the case of entrances – see the above.

### semi-automatic door

– they open after pushing the handle or pressing the button. It is significant to properly place the buttons (at the height between 0.8 and 1.2m above the floor, provide access for the people on wheelchairs). Visually impaired people may face some problems trying to find the buttons and therefore it is vital to mark the buttons and make them visible.

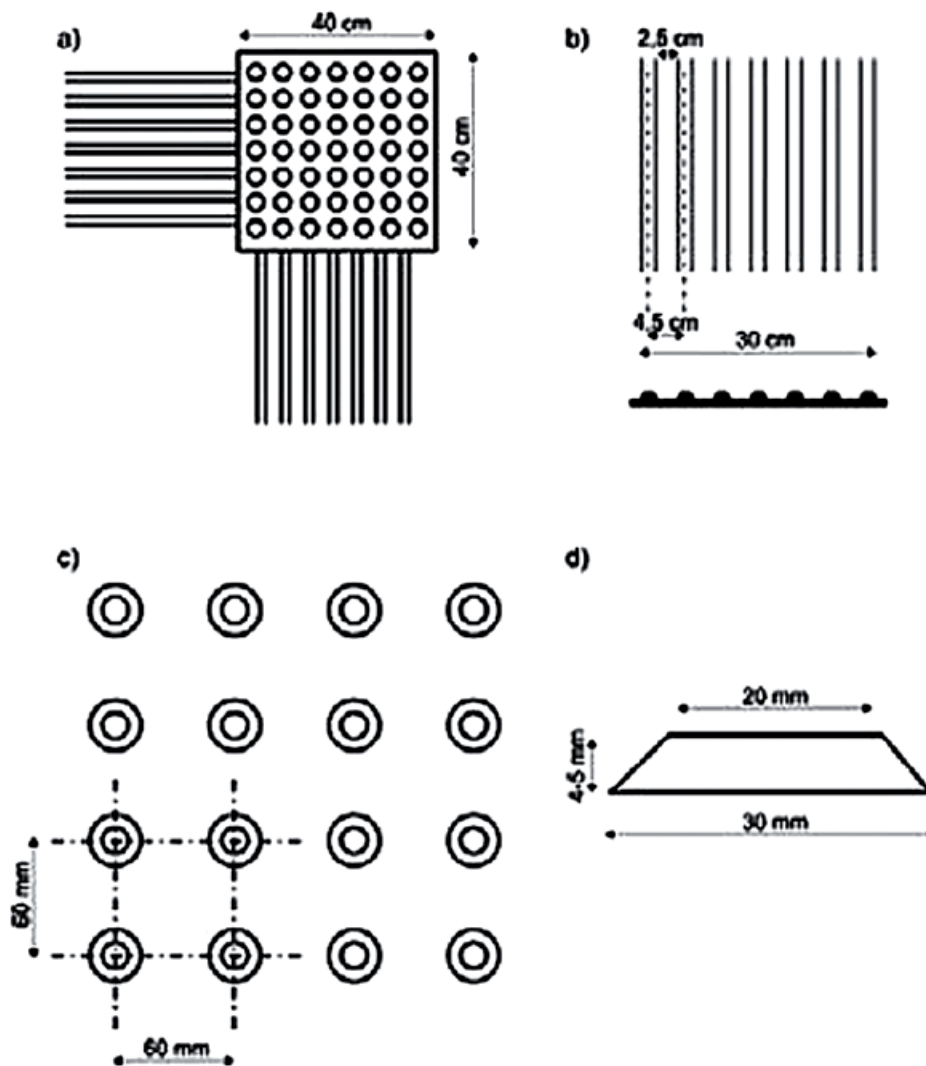
All door and transparent compartments in the building, including the entrance, should be clearly marked in order to prevent the visitors from bumping into a transparent wall.

- For the visually impaired people it is particularly significant to mark the first and the last step within every flight of stairs
- Please, note: Such a kind of marking the stairs is inconsistent with the Polish building law and requires special permits.
- In the case of staircases and escalators it is important to bar the space under the flight of stairs, in order to prevent the visitors from entering it and to protect them from bumping their heads.
- Such protection should be installed in all rooms that are lower than 2.20m.



## Tactile Paths

- Tactile paths should first and foremost lead from the entrance to the museum to the closest point where a disabled person will be able to gain all necessary information.
- The tactile paths can also lead to the important places such as toilets or coffee shops, restaurants. In the case of permanent exhibitions, the tactile paths can also lead an impaired person through the respective points of the exhibition.
- Nonetheless one has to remember that the tactile paths as such do not provide information about their destination, which is why it is vital to provide additional information e.g. in a form of tactile typhographic plans, which will make it possible for the visitor to learn the scheme of the objects and the trail of the tactile paths.

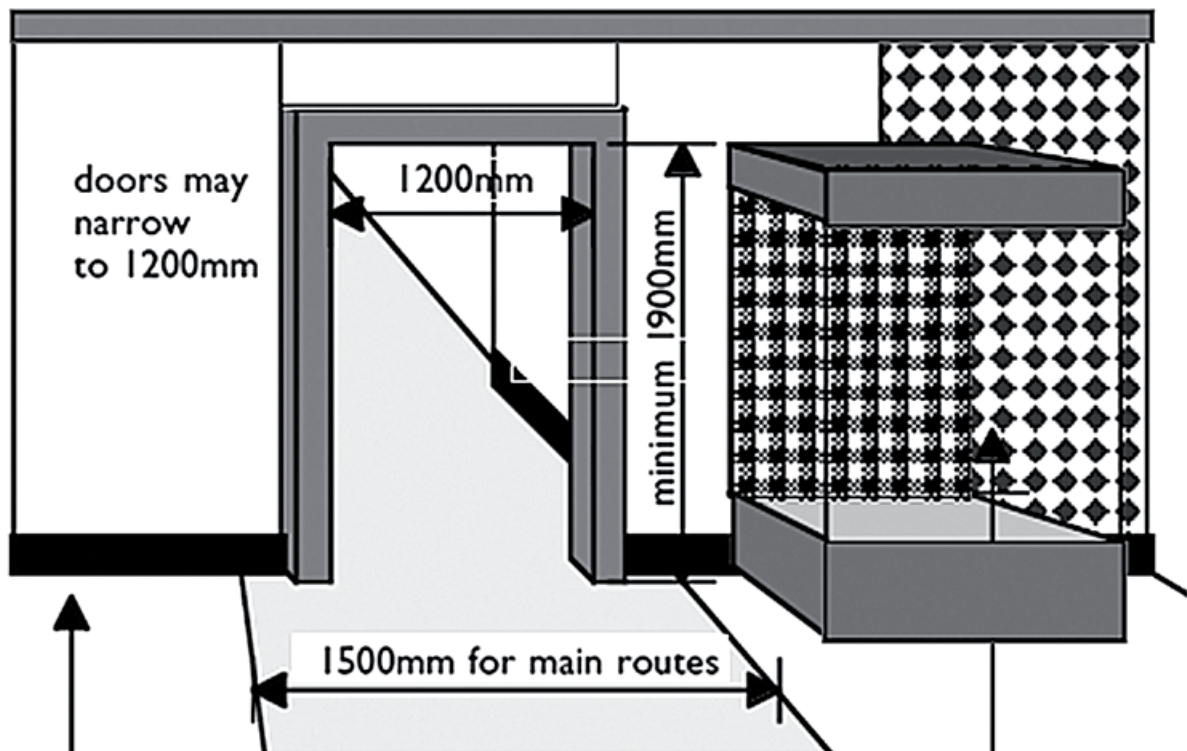


## Lifts

- Steering panels outside and inside of the lift should be installed at the height of 0.08-1.2m above the floor in the lift or above the floor of the storey and the board inside the lift can be installed not closer than 0.5 m away from the corner of the lift.
- Steering panels should be labelled in a manner proper for the visually impaired as well as they should contain voice information.

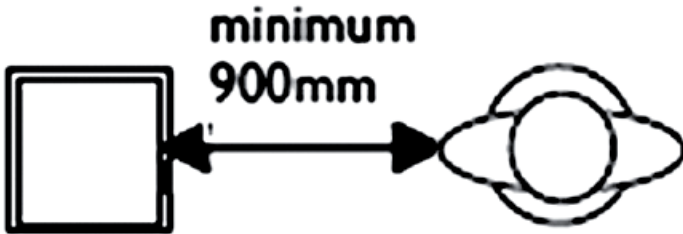
- It is recommended to use Braille alphabet to mark the lift and also apply embossed Arabic numerals.
- In addition, it is worth to distinguish the button of the floor, on which there is the exit from the building (using colour or embossing).
- It is a good practice to place the inscriptions informing about the functions of the respective floors next to each button. Such information should also be provided in a spoken form every time the lift stops on the respective storeys.
- Steering panels should have traditional buttons, it is unacceptable to apply touchpad panels, since they
  - A sound signal should be audible over the entrance to the lift, signalling the arrival of the lift. Such information is particularly important for the visually impaired people and helps them find the way towards the entrance of the lift.

- Main routes and emergency roads should have the width of 1.5m for main routes (but it can be narrowed down to 1.2m in the passages between rooms).
- It is important to provide a sequence announcements. They should be as easy as possible and the equipment and furnishing should be placed in a clear and legible way, within the one strictly protected way (the so called one line rule).
- Avoid the complicated or winding routes or 'dead-ends', where one would have to turn back.



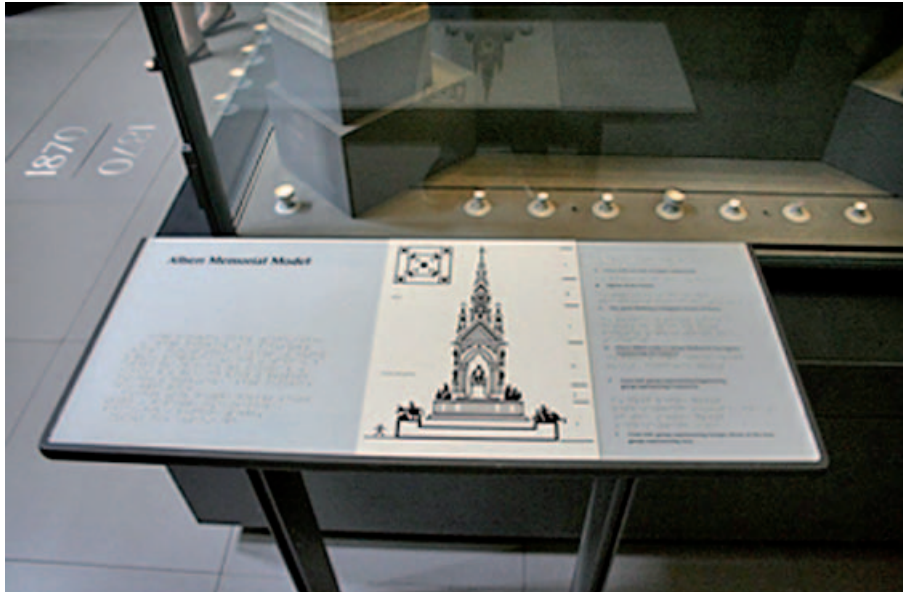


- The space around the display cabinets or exhibit screens should have over 0.9m.
- Pavement, gravel and thick carpets hamper the movement on wheelchairs .
- In order to support the sense of direction, contrast the planes (colour, decoration, material) – between walls, floor, exhibits, overhangs and other potential threats.
- The surfaces of the floors should be matt in order to avoid reflexes.

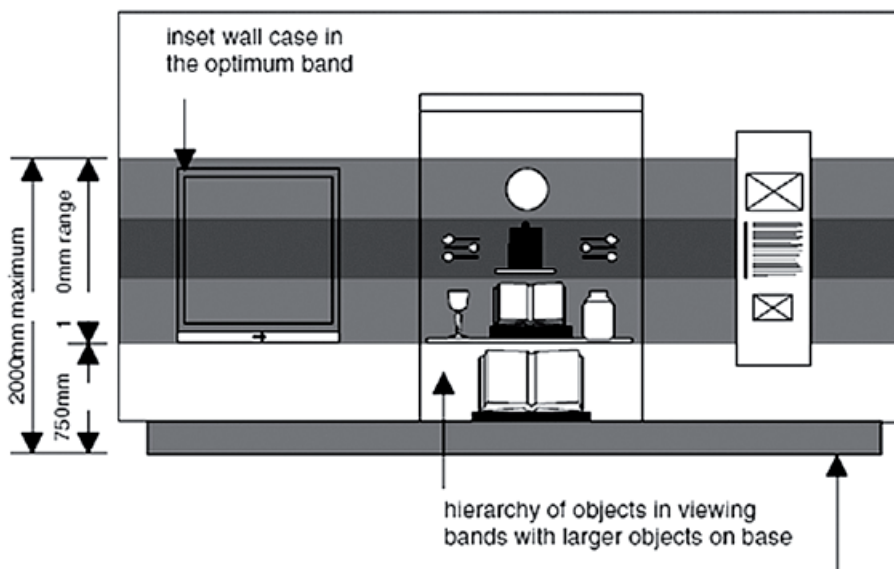


## Typhlographic Plans and Models

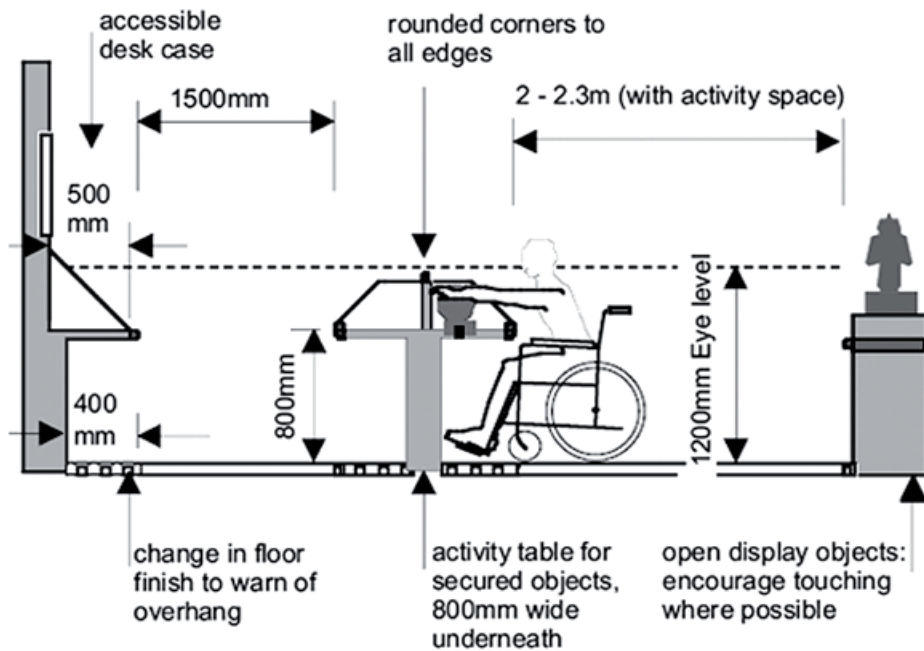
- Typhlographic plans make it possible for the visually impaired who can read typhlographics to get acquainted with the plan of the building or exhibition.
- The plans should be designed by specialists cooperating with the visually impaired. It is also vital to find the balance between the shared information and the maximum simplicity of the plans.
- It is recommended to apply a system of plans together with other tactile markings e.g. tactile routes, tactile markings on the guardrails, etc.



- The exhibits should be presented at an optimal height, i.e. 0.75 – 2.0m above the floor.
- Smaller exhibits requiring a much closer glance and also the most important descriptions should be placed within a narrower range from 1.2 to 1.6m above the floor.
- Please, note: make sure that the exhibits are visible for one sitting on a wheelchair.



- The display cabinets should not be higher than 0.8m above the floor and with the minimum of 0.4m space underneath to park the wheelchair. Similarly, the computer stations should not be higher than 0.8m above the floor to be fully accessible for the parked wheelchair (without fronts or fixed obstacles such as a desk).



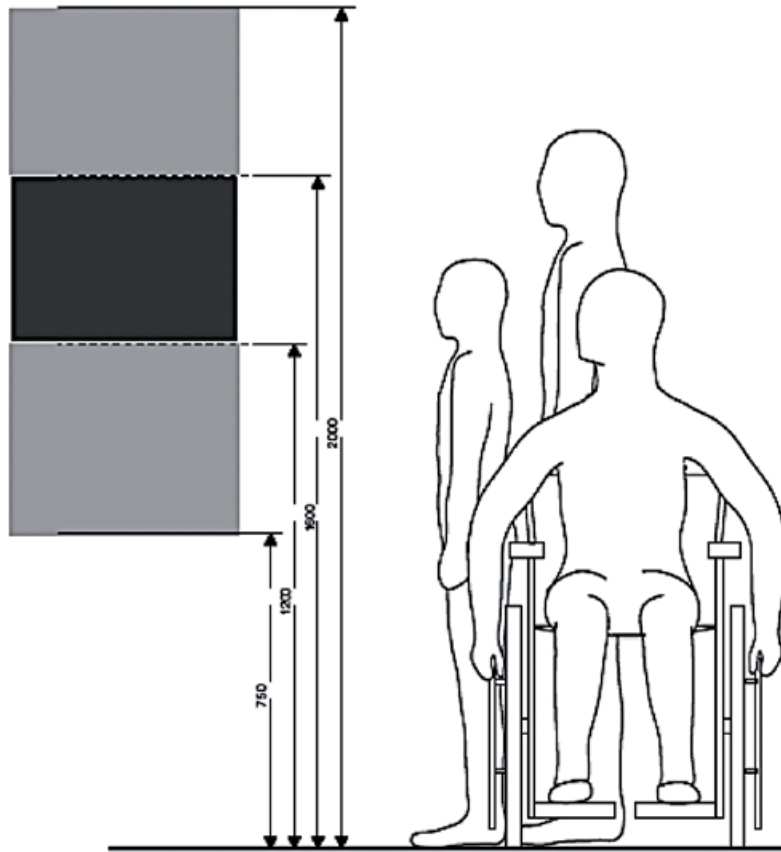
- The visitors should be clearly invited to use the objects available for them to be touched. Those in turn should be displayed in such a way as to be fully accessible from a wheelchair.
- The labels written in Braille alphabet are recommended to be placed flatly and at the angle of 45°. Moreover, depending on the needs, it should be considered to provide the possibility to use the sense of smell, place e.g. the jars full of spices, dried flowers, scented sachets, etc.
- Big objects, photographs and pictures should be placed in bigger rooms, in order to avoid congestion. It is also advisable for the big objects to be accompanied by three-dimensional or typhlographic tactile models.







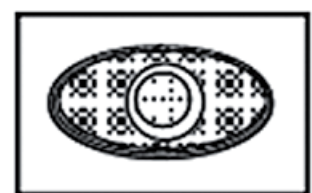
## Inscriptions, texts, graphics in the exhibition

- Inscriptions should be placed 90° from the viewing line and as close to the visitor as possible. The inscriptions should also be legible and visible for the people in wheelchairs.



-  optimum general viewing band 750-2000mm from FFL
-  optimum detailed viewing band 1200-1600mm from FFL

- Inscriptions and exhibits should be visible from the very same viewpoint. Clear and visible numeration should be applied.
- Small or complicated elements on an enlarged photography.







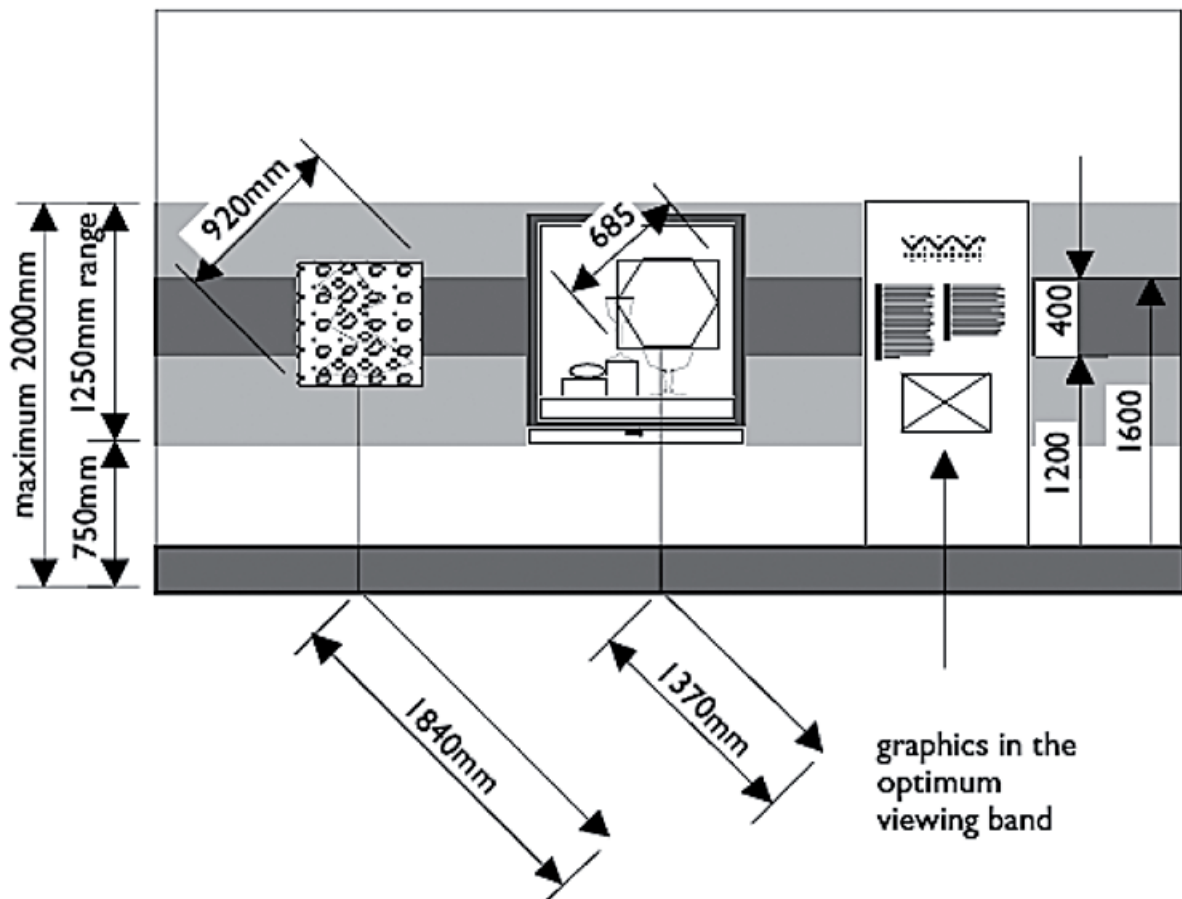
An optimal placement of a simple, graphic silhouette of the described exhibit.



- Use simple layouts with a clear structure: title, main idea, additional information, signatures, sources.
- Minimal size of the text 18-36 PT in the inscriptions of the exhibits (tombstones)
- Smaller font-size of 14 PT whenever there is a big contrast between the text and the background and the distance from the label is not smaller than 0.5m and the optimal height at which it can be hung is 1.2-1.6 m above the floor.



- Photographs and graphics as well as other visualisations should have matt surfaces.
- A picture should be bright and of a clear contrast and be as huge as possible.
- The exhibit should be presented in such a way, so that one can approach it at the distance at least twice as big as its diagonal.
- A similar principle applies, whenever possible, to bigger exhibits.





- According to the goals and personal preferences one can use serif or non-serif fonts. In some typefaces one has to consider whether some letters are not too similar, e.g 3 and 8 or 6 and 0.
- Try not to overuse capital letters (they influence the shape of the word and are therefore difficult to decipher).
- Avoid strange, unconventional and decorative typefaces.
- Use the typeface in its actual shape; special effects such as shadow or outline are to be avoided at all cost.

AaBbCc

AaBbCc

*what to avoid when choosing a font*

*what to avoid when choosing a font*

WHAT TO AVOID WHEN CHOOSING A FONT

**WHAT TO AVOID WHEN CHOOSING A FONT**

**what to avoid when choosing a font**

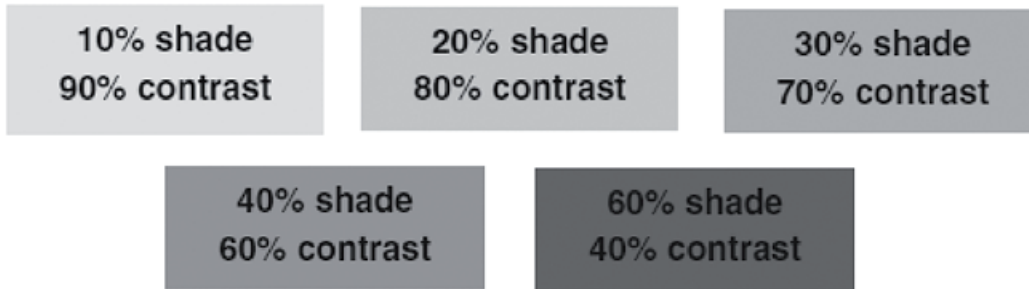
WHAT TO AVOID WHEN CHOOSING A FONT

Outline

Shadow



- Another crucial feature of the legibility of the text is the contrast between the text and the background.
- It is recommended to maintain the contrast between the text and the background at the level of at least 70%.

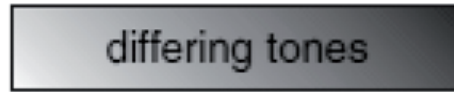
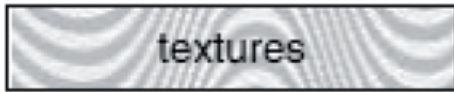


- The combination of colour of the background, text and the typeface should all account to high contrast and bright, legible text.
- Use dark colours for the text and bright colours for the background.
- Do not use yellow (unless that is the colour of the background for the black text).
- Avoid pale colours on unsaturated colourful background or similar colours e.g. grey on blue.
- Similar rules apply to contrasting graphics and background.





- Printing on textures, multi-coloured or gradient surfaces may affect legibility. The contrast between the background and the text is pivotal.
- The 'halo' effect makes the reversed text seem bigger.



**Reversed**

**Non-Reversed**

- Leading and space between the letters are one of the most important factors influencing the legibility of the text. It is advisable to prepare several samples and choose the most appropriate ones.
- The length of the line 50-75 signs with spaces.
- Try to avoid separating the words at the ends of verses and separating the sentences within pages.
- Disable the function of automatic division of words in the used word processors.
- If the text is too long to be fit within the space, try to find bigger surface and do not decrease the size of the text or increase its density. Consider also the possibility of shortening the text

example of very little leading which  
 reduces legibility example of very little  
 leading which reduces legibility example  
 of very little leading which reduces legibility

condensed lettering

s t r e t c h e d l e t t e r i n g





- The information should be offered in an alternative form (big, black print, typhlographics, embossed print, Braille alphabet, induction loops, audio recordings).





Category	Material / exhibit
resistant to light exposure	metals, ceramics, stone, glass, glaze
sensitive to light exposure	oil paintings, wood, ivory
deeply sensitive to light exposure	fabrics, most of works on paper, furs and feathers, pelt

Space	Level of the light
exhibits (sensitive to light exposure)	50 lx (deeply sensitive) up to 150 lx (sensitive) depending on the material
exhibits (resistant to light exposure)	maximum level of light undefined
marking and inscriptions in the exhibition	50 lx above the level of light in the room
workplaces (in general)	300-400 lx (additionally: light on assignments)
workplaces (specifically)	400-1000 lx (additionally: light on assignments)

## Publications

- The publications should also be accessible for the visually impaired.
- The rules that apply to texts on exhibitions should also be applied to posters, leaflets and invitations, etc. They all should be written in big, clearly legible typefaces, and whenever it is not possible, different, alternative formats should be offered, depending on a target group.
- They should contain symbols proving the accessibility of the institution.





- The information should be offered in an alternative form (big, black print, typhlographics, embossed print, Braille alphabet, induction loops, audio recordings).



- Signifies that the building, exhibition, lecture is accessible for the people in wheelchairs.



- Signifies that there is a platform for wheelchairs in front of the building.



- Signifies that the texts or information is accessible for the visually impaired.



- Signifies that the museum can be visited with seeing eye dog.



- Signifies access with the determined number of steps.





## Inscriptions, texts, graphics in an exhibition

- According to the research of PISA (the Programme for International Student Assessment) and the OECD (the Organisation for Economic Co-operation and Development) about 40% Poles do not understand what they read, and 30% understand it only to a limited extent.
- The research carried out by the OECD shows that every sixth person with M.A. degree is a functional illiterate.

### For this reason...

- One should use the common Polish language adjusted to the comprehension level of an average 12 or 13 year-olds, in the case of basic information, and to the comprehension level of 15 year-olds in the case of additional pieces of information.
- In the publications in the English language there are special tests assessing the level of text comprehension. A special computer programme measuring the difficulty of texts has been designed in Poland.
- Such a text does not have to be simplistic or condescending, nonetheless it is easily understandable for the hearing impaired, whose first language is sign language and for people with learning difficulties and foreign visitors.

### Preparing the visitor-friendly inscription:

- One should first determine the appropriate content-related level of the inscription, so that it is fully understandable.
- Writing in a clear and comprehensible way does not at all have to mean oversimplifying the text. Rather, it implies writing for the people who are not experts in the given field.
- On preparing an inscription, one has to start with the pieces of information that are closely and directly connected to the exhibit as well as with the things the visitors can see, smell do or experience in the visited place.
- The length of the sentences is also to be taken into account. The length of the sentence should be from 2 or 3 up to 25 words. The optimal length of a sentence amounts to 10-15 words.
- Instead of long chunks of information it is better to use short paragraphs. Dividing the text into paragraphs helps in dividing the thoughts and gives the chance for short breaks between the separate threads of the text. Furthermore, it allows to freely move on to the next thread of a description and confronting the interpretation with the text.
- The metaphors, which are kindly welcomed in different types of texts, should be rather avoided in the captions. Similarly, the jokes, and exclamation marks should be sparsely used.
- The quotations should only be the case when they are absolutely necessary and their usage is beneficial for the quality of the caption.
- The title of a paragraph should inform about its content. The most often mistake is using catchy titles which have nothing in common with the content of the caption.



## Guide to the method of Margareta Ekar

- Use simple language to express intricate thoughts.
- Use simple, spoken word order.
- One, main thought per a verse convergent with the end of a phrase.
- Verses of approx. 45 signs, the text divided into short paragraphs including 4-5 verses.
- Use active verb forms and place the subject at the beginning of the sentence.
- Avoid subordinate clauses, complicated constructions, useless adverbs, dividing the words at the end of a verse.
- Read the text out loud and pay attention to the natural pauses.
- Adjust words, punctuation, so that it reflects the rhythm of speech.
- Talk about the text with your colleagues and take their comments into consideration.
- Make the written text consistent with the project of the exhibition.
- To assess the effect, place the project of the text at its destination.
- Constantly correct and enhance the word choice.
- Make the meaning concise to a nearly 'poetic' level.

## Guide to the number of words in the information materials presented at the exhibition.

- The captions introducing the exhibition: max. 100 words
- The captions containing the information about the specific subject or section of the exhibition: max. 150 words
- The captions containing the information on subsection or introduction of a particular issue: max. 200 words
- The captions under the exhibits: optimum 25-50 words, maximum: 75 words

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