Pilot Actions Evaluation Report

Žilina Airport

Implementation of TWSIs in Žilina Airport

Innovative transportation services for blind and partially sighted passengers in Danube region
DANOVA

November 2022

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INTRODUCTION

People with visual impairments may feel disabled if they do not have adequate access to supports and services and face barriers such as discrimination or inaccessible buildings or transportation. It has been estimated that 96% of the transport system in the EU is still not fully accessible to blind and partially sighted people (European Blind Union) and that accessibility is extremely low in many countries in the Danube Region. Furthermore, significant differences in the level of accessibility between countries and also between cities/regions within a country have been identified. As a result, over 30 million blind and partially sighted people cannot travel independently.

For blind and partially sighted passengers, the lack of accessibility features such as tactile surface indicators (TWSI), tactile orientation maps, large print and Braille signage, audio signage, screen reader friendly websites and applications makes it extremely difficult and, in some cases, impossible to use conventional transportation systems (airplanes, buses, trains, public transportation). In these cases, they rely on the assistance of a sighted person (their personal assistant, member of a staff or a random passer-by), which ensures their ability to travel, but still imposes some limitations compared to the travel experiences of sighted people.

The DANOVA project aims to improve the accessibility of airports, seaports, train stations and bus terminals for blind and partially sighted people by developing a range of new services and skills to enable full access to all transport information, facilities, and services. Within DANOVA project several steps were undertaken in order to improve accessibility:

➢ International investigation and collection of best practices
➢ Local assessment of infrastructure accessibility and web page accessibility for each transportation partner within DANOVA project. Assessment was performed according to prescribed Assessment methodology which was produced by University of Maribor in co-operation with technical partners. Croatian Blind Union (CBU) and Austrian Federation of the Blind and Partially Sighted (BSVO),
➢ International Call for ideas in which total of 22 ideas for improvement of accessibility of infrastructure for blind and partly sighted people have been submitted. Three best ideas were selected and chosen by the Call for ideas Jury,
➢ Implementation of pilot actions,
➢ Training programme for employees of infrastructure providers and stakeholders

According to the Local assessment done by each transportation partner, implementation measures or fields of intervention for pilot actions were identified and prioritised in three categories: high, medium, low.

The first step of WP T3 was achieved – Action Plans of sites where the testing will be implemented were prepared by each Pilot Partner. The international investigation and its summary in the Capitalization Strategy (WPT1), Local assessment report (WP T1) as well as and inputs collected during the development of the concept of a totally accessible facility (WPT2) were used in the Pilot Plans.

Core phase of the WP T3 is the testing phase, where the Action Plan is put into practice, PPs perform testing & consecutive feedback. Implementation aims to show the feasibility, effectiveness & replicability of solutions, operative procedures, technological innovations. PPs already identified several fields of intervention; new topics could be added on the basis of results obtained from investigations and development of a totally accessible transport facility.

Deliverable D.T3.2.1 is the Appraisal Report on testing.

The testing pilot action is completed by an evaluation report to give feedback on action's performance and to show how the blind and partially-sighted passengers benefited from these initiatives. The evaluation report is crucial for the analysis of transferability and adaptability of the solutions. This document contains a Pilot action process evaluation(P1) and a Pilot action evaluation grid (P2). One report is to be done per each testing site.

Table of Contents for Part 1 of the Evaluation report – Process Evaluation

1. PROCESS EVALUATION

This chapter provides the evaluation of the pilot action planning and implementation process. Costs, problems and barriers encountered during the project life, and successes achieved with the pilot action in Dubrovnik Airport.

1.1 BRIEF DESCRIPTION OF PILOT ACTION SITE

Location

Žilina Airport is located in the village of Dolný Hričov, 10 km west of Žilina. The connection between the airport and the city centre is provided by a motorway D1 or road E50. Public transport services to/from the town include bus, taxi and train.

The airport is used for air transport of Slovak and foreign airlines, flights of corporate and private aircraft, flight training and sport flying, ambulance flights, special aviation work and the activities of the Slovak Army Air Force. Commercial use, provision of operational services and technical services of Žilina Airport are performed by Letisková spoločnosť Žilina a. s., which is the operator of the airport. The airport also serves the needs of the University of Žilina.

The airport was developed and built in 1970s as a replacement of Brezový Majer Airport, where the construction of a new town district began in that period.

Infrastructure

The passenger terminal building was constructed in the 1970s as a replacement for the Brezový Majer. The terminal at Žilina Airport is single-storey and has barrier-free access for disabled passengers. Its size is approximately 1,100 m2. The annual capacity of terminal is around 20 000 passengers.

There is an entrance hall, passenger and baggage check-in, security control, Gate 1, Gate 2, VIP Gate, arrival hall, direct access to apron from the departure hall with subsequent entry to the aircraft, toilets, and snack bar. The layout of the terminal is suitable for visually impaired and blind passengers and the big advantage is complete barrier-free accessibility in every part.

Accessibility for blind and partly sighted

Currently Žilina Airport has not implemented adequate infrastructure and equipment for the accessibility of blind and partly sighted passengers. However, based on Local Assessment report results, we found out it has suitable design for blind and partially sighted based on its shape simplicity but the advanced infrastructure and equipment implementation is necessary for sufficient orientation inside the terminal.

Žilina Airport has established service for disabled persons and persons with reduced mobility based on EU regulation because all passengers including passengers with medical disability should have comparable air transport options to those of other citizens. These rights are ensured by "Regulation of the European Parliament and the Council (EC) No. 1107/2006 of July 5, 2006 on the rights of disabled persons and persons with reduced mobility in air transport."

Žilina Airport provides an assistance service for disabled persons and persons with reduced mobility free of charge through its employees. Our employees try to ensure, in the interest of social inclusion, that appropriate care is provided to the persons concerned. The carrier will then provide everything necessary to ensure this service and confirm the service.

Žilina Airport has been equipped and based on this regulation provide this service:

Žilina Airport has 2 marked reserved parking spaces for disabled persons and for persons with reduced mobility.

In airport entrance hall is contact point where anybody can ask for help or assistance.

An airport employee help register and pick up your luggage at Žilina Airport if necessary.

All areas of the airport are barrier-free and allow free movement of the passenger from the entrance hall, departure hall to transfer to the plane.

Airport employees provide help with a wheelchair, other medical devices and assistance with moving to the toilet.

All services are provided both on arrival and departure from/to Žilina Airport.

The assistance especially focused for blind and partially sighted hasn´t been provided until the project implementation started.

1.2 DETAILED DESCRITPION OF ACTIONS TAKEN

Assessment of Žilina Airport accessibility to blind and partly sighted passengers has been performed in August 2021 according to prescribed methodology. Recommendations and measures for improvement are prioritised in three main categories, high, medium and low priority. Within DANOVA the assessment is organized within modules making assessment process as well as outcomes easier to understand. There are two distinct parts of the assessment – the off-site and on-site assessment. The former is composed of eight modules related to access to information and rules of conduct, while the latter deals with built environment and is composed of eleven modules. Assessment process was divided in three main steps:

a) Review of national environment (regulations),
b) Off site assessment which included eight modules: review of existing site accessibility policies, disability training programme, customer service standards and pre-post travel access to information
c) On site assessment which includes eleven modules: approach and departure to and from the site, entrance to the site, inside circulation, security screening and custom, sanitary facilities, waiting areas, departure and arrival pints, evacuation routes and exit from the site

Each of these modules is built using DANOVA building blocks: parking (car, taxi), public transport, wayfinding (signage and displays), horizontal and vertical circulation, counters, machines, sanitary facilities and evacuation routes.

Accessibility of each area has been assessed in scale from 1 (Hazardous, inaccessible, and unsatisfactory) to 5 (Accepted as a Best Practice). According to performed assessment, improvement areas and type of interventions were identified which were divided in three categories: High, Medium and Low priority type of interventions.

There were total of 2 High, 6 medium and 2 Low priority type of interventions identified for Žilina Airport out of which Žilina Airport has implemented 8 of them.

Priority of intervention	Total recommendations	Implemented within DANOVA
High	2	2
Medium	6	5
Low	2	1

Table 1. Comparison of number of recommendations implemented according to priority of intervention

1.2.1. Type and reason for pilot action intervention

According to the assessment performed, Žilina Airport has identified following pilot action interventions to be implemented within DANOVA project:

➢ Installation of Outdoor TWSI from parking, taxi and bus stop to terminal (highest priority measure 1),
➢ Installation of Indoor TWSI for departure and arrival points and for internal circulation (highest priority measure 1 and measure 2),
➢ Tactile plan with Braille and audio guidance (medium priority measure 2),
➢ Display height and font size (medium priority measure 2),
➢ Toilet marking and accessibility (medium priority measure 2),
➢ Audible warning carousel for baggage (medium priority measure 2),
➢ Audible warning for gates (medium priority measure 2),
➢ Braille output marking (medium priority measure 2),
➢ Web page accessibility check and update of web page according to accessibility check results (low priority measure 3 and measure 5),
➢ Creation of smartphone-app (low priority measure 3 and measure 5),

Interventions to be implemented within pilot action were chosen according to their priority (high and medium), according to estimated budget of Žilina Airport within project DANOVA and according to prioritization of measures done by Žilina Airport management. In process of determining which interventions are most critical for Žilina Airport to implement. Significant influence had UNSS (Slovak Union of Blind and Partially sighted)

1.2.2 Implementation process

These interventions were divided in few separate public procurement processes for each item inside redescribed procurement groups as follows:

Public procurement group	Public procurement estimated amount	Start date of procurement	Date of contract	Date of service performed / equipment installed
External expertise Website audit and adaption, Software engineering of ZOM03S	6.385 EUR	September 2022	October to December 2022	October to December 2022
Equipment TWSI´s Outdoor, TWSI´s Indoor, Braille Marking of doors, Orientational Braille Map, ZOM03S Orientational Beacon	36.475 EUR	October 2022	October to December 2022	October to December 2022
TOTAL	42.860 EUR			

Table 2. Pilot action procurement and implementation timeline

Largest public procurement was for implementation of item TWSI´s Indoor. During the preparation of procurement, we asked Department of prevention of architectural and traffic barriers of UNSS for preparation of technical solution and documentation which meet national TP048/2019 and EU regulation and calculation of supply volume of interior TWSI. Installation of equipment was finalized in December 2022 and assessment of current situation and improvements in accessibility of Žilina was developed by Department of prevention of architectural and traffic barriers of UNSS who is also designer.

1.2.3. State before and after the implementation

Evaluation of pilot action intervention has showed significant improvement in accessibility of Žilina Airport infrastructure for blind and partially sighted as follows:

- ➢ 2 out of 2 high priority measures were implemented,
- ➢ 5 out of 5 medium priority measures were implemented.

Most significant measure implemented relates to installation of TWSI's which were installed in following areas:

- ➢ In exterior, front of main entrance connecting entrance hall and drop point of bus, taxi and parking, used for departures and arrivals.
- ➢ In interior, inside the entrance hall, check- in, security and passport check area, Gate area and Arrival area.
- ➢ Marking of doors and entrances which improves sectional orientation.
- ➢ Braille Map implemented in entrance area in cooperation with ZOM03S orientational beacon, which both in cooperation make great tactile and acoustic orientational imagination for blind and partially sighted passengers.

According to finalised works and equipment installed following quantities were implemented:

Type of equipment	Prior to implementation (piece or metres)	After the implementation (piece or metres)
Outdoor TWSI's in front of the main entrance	0 m	2,4 m
Indoor TWSI's (entrance hall, check in,)	0 m	130 m
Total TWSI's	0 m	132,4 m
Tactile warning fields - outdoor	0	1
Tactile warning fields - indoor	0	9
Tactile orientation plans (Orientational Braille Map)	0	1
Braille signage on doors	0	23

Table 3. Pilot action improvements

Photos of implemented equipment:

Picture 1: Outdoor TWSI

Picture 2: Braille marking on doors

Picture 3: Orientational Braille Map (example, will be delivered 27.11.22)

Picture 4: ZOM03S Orientational Beacon

Picture 5: Indoor TWSI (example, will be delivered during December 2022)

1.3 COSTS

Pilot action costs reported in D.T.3.3.1. amounted to 38.496 EUR, please see attached table:

Category of funding	Expenditure Amount (EUR)
External expertise Website audit and adaption, Software engineering of ZOM03S	3.568
Equipment TWSI´s Outdoor, TWSI´s Indoor, Marking of doors, Orientational Braille Map, ZOM03S Orientational Beacon	34.928
TOTAL	38.496 EUR

Table 4: Pilot action actual costs

The total costs encountered during the pilot life cycle are equal to 38.496 EUR, which is below final expected budgeted amount for implementation of pilot action of 42.860 EUR. Difference occurred due to the fact until the end of all procurements, the final price couldn´t be accurately estimated. During the project implementation preparation the was budget changed many times, because in the beginning of project we didn´t have clear idea about prices of equipment and services and also before the first stakeholder meeting we didn´t have idea what kind of equipment and services we will implement.

The funding sources are:

➢ ERDF contribution 85% - 51.000 EUR
➢ Žilina Airport contribution 15% - 9.000 EUR

Such costs are in line with the costs foreseen in the AF.

1.4 PROBLEMS FACED

There was delay in delivering of Indoor TWSI's to the pilot action site caused by delay in public procurement and delivery of equipment. Original deadline was set until the end of November, however due to delay in procurement which wasn´t caused by the Žilina Airport and also the delivery time of material was extended due to long delivery from China.

1.5 GOOD POINTS / SUCCESS OF THE IMPLEMENTATION PROCESS

Implementation of Outdoor and Indoor TWSI's was the most effective and irreplaceable implementation because they formed the basis for the implementation of other equipment, without which the remaining equipment would be difficult to use.

UNSS really appreciate combination of Braille map and ZOM03S Orientational Beacon because it gives outstanding orientational perspective to blind and partially sighted passenger, who use Žilina Airport.

1.6. TRANSFERABILITY POTENTIAL AND ADAPTABILITY

Žilina Airport participation in DANOVA project and implementation was really appreciated by UNSS and also by Ministry of Transport because the accessibility of transport infrastructure is a problem which hasn´t been solved for many years. The truth is that the transport infrastructure which has been newly built or reconstructed in period of last three years is usually equipped only with TWSI´s but the implementation at Žilina Airport was the first of its kind in Slovakia because any transport infrastructure in Slovakia did not implement so high level of accessibility for blind and partially sighted which comes from complexness of infrastructure and equipment installation especially associated with trained staff.

Experience of the Žilina Airport and other DANOVA partners can be used in similar or other environments, following crucial points are to be considered in implementation of such practices according to Žilina Airport expereince:
- ➢ Performing assessment of the current status of accessibility for blind and partly sighted.
- ➢ Prioritization of interventions to be implemented.
- ➢ Consultation with UNSS and their department such as Department of prevention of architectural and traffic barriers
- ➢ Expected costs and timeline for implementation of TWS's and tactile orientation plans.
- ➢ Problems occurred during the installation and after the installation.
- ➢ Benefits for blind and partly sighted passengers after the pilot action implementation.

1.7 OVERALL CONCLUSION ON THE EVALUATION OF THE PILOT ACTION PROCESS

After implementation Žilina Airport infrastructure is more accessible to blind and partly sighted passengers. Before pilot action implementation there weren´t any TWSI´s or other implementation which would be helpful for blind and partially sighted. After the pilot action implementation there are total of 132,4 metres of TWSI's in outside and inside sections of Airport Terminal, All doors in public space are marked with Braille and in entrance area of Departure and also Arrival section is Orientational Beacon implemented. For Departure section was also implemented Braille orientational map.

Also, as web page is considered to be starting point of each travel, Žilina Airport has performed web page accessibility audit and has implemented recommendation and updated web page, for it to be fully accessible to blind and partly sighted.

Expected impact of Žilina Airport pilot action and DANOVA project can be summarised as follows:

Project and Policy instrument	Goal	Impact	Indicator
Danova – Danube Transnational Programme	Increase competences for business and social innovation - Developing innovative social services able to better meet social needs and to provide services in general interest	DANUBE region and other interested parties	Transnational concept for accessibility for blind and partly sighted that is to be developed based on Capitalisation strategy, collection of best practices, call for ideas' selection and stakeholder engagement
	Improvement in accessibility for blind and partly sighted passengers of Žilina Airport	All Žilina Airport passengers	132,4 metres of TWSIs that are installed 23 Doors with Braille marking 2 ZOM03S Orientational Beacons 1 Braille orientational map
	Improvement in level of service to blind and partly sighted passengers	Žilina Airport employees and blind and partly sighted passengers	All operational employees and part of management employees attend the local training session.

Table 5. expected impact of Žilina Airport pilot action and DANOVA project

Table of Contents for Part 2 of the Evaluation report – Evaluation Grid

1. NATIONAL ENVIRONMENT

1.1. National regulations

Did the pilot action include any improvements on this matter?	NO			

Title/Name	Year adopted	Compulsory or recommended[1]	Related to EU/global standard (Yes/No)	If yes, specify which one
Regulation on the rights of disabled persons and persons with reduced mobility	2006, 2013	Compulsory	YES	Regulation of the European Commission No. 181/2011

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[1] If the document is of mandatory nature (meaning that it is compulsory) please state *"Compulsory"*. If the document provides guidelines/recommendations and it is not obligatory to comply with it, please state *"Recommended".*

2. OFF-SITE ASSESSMENT

2.1. Site policies, service standards and awareness training

Disability awareness training			Evaluation	Comments
Did the pilot action include any improvements on this matter?	YES	All operational employees and part of management employees attend the local training session mediated by UNSS	N/A	
Is disability awareness training of staff members performed?	YES	The operational employees have periodical PRM trainings outgoing from legislative	4	
Is every staff member trained?	YES	All operational employees including firefighters, security, handling dispatching are trained. Only management employees are not trained	4	
Which aspects are covered in training?	• Legislation - employment and customer service • Challenging stereotypes and assumptions • Relating to people with disabilities - language and etiquette (how to adequately communicate, support and guide a person with disability) • Working with people with disabilities - practical skills and use of equipment • Inclusive information - removing barriers in communication and information provision		4	

Are specialized staff trainings performed (e.g., support for blind and visually impaired persons, for people with hearing disabilities, support for persons with reduced mobility etc.)?	YES The staff is trained: PRM, periodically Visually impaired, first training 25.11.2022	4	
Is visual impairment awareness training implemented?	YES Training is provided by Slovak Blind Union, UNSS which has specialized trainings in their portfolio and have with them many years experience.	4	

2.2. Pre- and post-travel access to information

Website		Evaluation	Comments
Did the pilot action include any improvements on this matter?	YES Website audit of www.airport.sk has been done by UNSS and the modifications are in progress	N/A	
Does the pilot site have its own website (stand-alone website)?	YES www.airport.sk	4	
Is website of the audited site compliant with W3C levels A/AA or AAA? (for stand-alone websites expert assessment is mandatory, for webpages within corporate websites, online tools can be used https://www.experte.com/accessibility to check accessibility of main webpage)	NO	2	Audit meet compliance with national regulations with Act no. 95/2019 on information technologies in public administration and on amendments to certain laws and Decree no. 78/2020 of the Office of the Deputy Prime Minister of the Slovak Republic for Investments and Informatization of March 16, 2020 on standards for public administration information technologies.

Does the website provide information on the building (including accessible paths and facilities, etc.) in suitable format (text)?	NO Only in JPEG format	2	
Are there any online services accessible (e.g., live chat online)?	NO	3	
Are there any services offered at the pilot site for blind and partially sighted persons) that can be booked online (e.g., personal assistance?). Is the application for booking them fully accessible	YES The service is provided, but the online application form is not possible , only by e-mail or by phone is possible to order this service.	3	
If forms need to be filled in, they can be filled electronically through an accessible software.	NO	2	

3. ON-SITE ASSESSMENT

3.1. Approach and departure to and from the site

PARKING - CAR		Assessment	Comments
Is a car-park available for visitors?	YES	5	car-park is free
Is the car-park clearly signed?	YES	5	
Are there accessible parking bays reserved for persons with disabilities?	YES	5	2 parking bays reserved for persons with disabilities
Are the bays located at the main (or accessible) entrance?	YES	5	
Is there TWSIs guidance in the parking area? Routes guiding from parking area to entry points of buildings and emergency routes.	YES	5	
Is lighting adequate with no glare?	YES	5	

PARKING - TAXI		Assessment	Comments
Are there accessible taxi parking bays reserved for persons with disabilities?	YES	5	2 taxi parking bays reserved for person with disabilities
Are the bays located at the main (accessible) entrance?	YES	5	
Are the bays compliant with national regulations in terms of: - size - location - signage	YES	5	
Is there TWSIs guidance in from taxi parking? Specifically, routes guiding from parking area to entry points of buildings and emergency routes.	YES	5	
Is lighting adequate with no glare?	YES	5	

3.2. Entrance to the site

DOORS		Evaluation	Comments
Did the pilot action include any improvements on this matter?	YES	5	Outdoor TWSIs and Indoor TWSIs
Are automatic (preferably sliding) doors provided?	YES	5	
There are no thresholds present at the door (ISO standard: less than 15 mm high).	YES	5	
Do doorframes contrast with the wall?	YES	5	Transparent glass parts of doors are marked with yellow tape
In case the doors are glass doors – do they have colour contrasting edging and door handles?	YES	5	Transparent glass parts of doors are marked with yellow tape
Are Braille and tactile signs (TWSIs) provided at a door?	YES	4	TWSIs are appropriately installed, guiding from main entrance to gates and from arrival entrance to main entrance which is used as exit as well. At main entrance is Braille map of t All doors except automatic sliding doors have Braille marking
Are Braille signs appropriately placed and of standardized size?	YES	5	

3.3. Inside circulation

SIGNS - TACTILE ORIENTATION PLAN	Evaluation	Comments
Did the pilot action include any improvements on this matter?	YES	4	Orientational Braille Map in main entrance area describes the whole terminal area together with Orientational Beacon ZOM03S
Are the new visual directional signs placed in a way to constitute a logical orientation sequence from the starting point to different points of destination?	N/A		
Are the new visual signs easily understandable (designed to be simple and easy to interpret, the message is unambiguous)	N/A		
Are the new visual signs readable and legible for people with visual impairments?	N/A		
Are the new visual signs well illuminated with no glare?	N/A		
Is sufficient and adequate tactile guidance (e.g., TWSIs) provided along the relevant paths?	YES	4	TWSIs lead along whole terminal and pass around all important points of interest
Are orientational signs accompanied with signs/information in relief (raised lettering)?	N/A		
Is information in relief (raised lettering) appropriately placed and of standardized size?	N/A		

Are orientational signs accompanied with signs/information in Braille?	YES	4	All doors are equipped with Braille marking
Are Braille signs appropriately placed and of standardized size?	YES	4	Braille sings are placed in compliance with national regulation TP 048/2019
Is a complementary audible information system provided?	YES	5	Orientational Beacons ZOM03S audible describe the terminal at departure and arrival entrance

PATHS, CORRIDORS		Evaluation	Comments
Did the pilot action include any improvements on this matter?	YES	4	TWSIs in whole terminal
Is the floor slip-resistant in both wet and dry conditions?	NO	2	
Is the floor level or with gradient according to regulations or standard (gentle slope (EN standard) or slope no more than 1:12 or a cross slope no more than 1:50 in the pathway (ISO standard))?	YES	4	
Is there a colour contrast between the floor, walls, doors, and the ceiling?	YES	4	There are white walls in all accessible rooms for passengers and in perimeter of rooms are dark tiles
Is there adequate light and no glare?	YES	5	
Is the path free of any barriers or obstacles?	YES	5	

Are the paths maintained and kept free of unwanted barriers such as furniture, plants etc.?	YES	5	
Is the path equipped with adequate tactile guidance (e.g., TWSIs) including directional, hazard warning and positional tiles provided for independent navigation?	YES.	5	TWSIs in whole terminal
Is the path equipped with acoustic guidance?	NO	3	At the beginnings of paths are used Orientational Beacons ZOM03S which describes paths in advance.

COUNTERS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	4	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal area together with Orientational Beacon ZOM03S
Does the counter contrast in colour with the adjacent background?	YES	4	Counters are blue with yellow sign on white background
Is the counter-top adequately illuminated?	NO	3	Counter-top isn´t illuminated, but the sign on the top is yellow, so markedly visible
Is the counter to surface non-reflective?	NO	5	
Is there sufficient visual guidance (signage, visibility of the doors etc.) available to detect and identify the counter easily?	NO	3	Small size of font, but very significant colours are used for marking
In case of glass empanelled counter is there a microphone that is used by the staff?	YES	4	
Is there live assistance available at the counter to guide persons to their destination?	YES	4	

TWSIs lead directly to the counters – or – there is one counter designated to all people with disabilities and it is equipped with accessibility features?	YES	5	Designated to all people with disabilities. TWSIs lead from entrance to counters

TOILETS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Accessible toiles are available on all floors of the building?	YES	5	The terminal is single storey
Accessible toilets are clearly marked?	YES	4	Font size and marking should be improved in future, but the toilets are marked in Orientational Braille Map in main entrance section properly and also on the doors is marking with Braille.
The accessible toiles have signs in Braille?	YES	5	
Toilet door must be outward opening, double hinged or sliding type.	YES	5	
The floor-surface of the toilet is non-slippery?	YES	5	
The toilet is well illuminated with no glare?	YES	5	
There is a colour contrast between the floor, wall and sanitary fittings?	YES	5	
Is there an alarm system within easy reach to alert persons outside, in case of emergency?	NO	3	
The door can be locked from inside but also released from outside in case of emergency	YES	4	
It is kept clean and well-maintained.	YES	5	
Is there sufficient visual guidance (signage, visibility of the doors etc.) available to detect and identify the toilets easily?	YES	3	From close distance yes, font size should be improved, the toilets are marked in Orientational Braille Map in main

			entrance section properly and also on the doors are marked with Braille.

3.4. Security screening and customs

4. SIGNS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Are visual directional signs placed in a way to constitute a logical orientation sequence from the starting point to different points of destination?	YES	4	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Are visual signs easily understandable (designed to be simple and easy to interpret, the message is unambiguous)	YES	3	
Are visual signs readable and legible for people with visual impairments?	YES	3	
Are visual signs well illuminated with no glare?	YES	3	
Is sufficient and adequate tactile guidance (e.g. TWSIs) provided along the relevant paths?	YES	4	
Are orientational signs accompanied with signs/information in relief (raised lettering)?	NO	3	
Is information in relief (raised lettering) appropriately placed and of standardized size?	NO	3	
Are orientational signs accompanied with signs/information in Braille?	YES	4	
Are Braille signs appropriately placed and of standardized size?	YES	4	
Is a complementary audible information system provided?	NO	3	At the beginnings of paths are used Orientational Beacons ZOM03S which describes paths in advance.

COUNTERS		Assessment	Comments
Does the counter contrast in colour with the adjacent background?	NO	2	
Is the counter-top adequately illuminated?	NO	2	
Is the counter to surface non-reflective?	NO	3	
Is there sufficient visual guidance (signage, visibility of the doors etc.) available to detect and identify the counter easily?	NO	2	
In case of glass empanelled counter is there a microphone that is used by the staff?	YES	4	
Is there live assistance available at the counter to guide persons to their destination?	YES	5	
TWSIs lead directly to the counters – or – there is one counter designated to all people with disabilities and it is equipped with accessibility features?	YES	5	designated to all people with disabilities

4.1. Sanitary facilities

TOILETS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Accessible toiles are available on all floors of the building?	YES	5	The terminal is single storey
Accessible toilets are clearly marked?	YES	4	Font size and marking should be improved in future, but the toilets are marked in Orientational Braille Map in main entrance section properly and also on the doors is marking with Braille.
The accessible toiles have signs in Braille?	YES	5	

Toilet door must be outward opening, double hinged or sliding type.	YES	5	
The floor-surface of the toilet is non-slippery?	YES	5	
The toilet is well illuminated with no glare?	YES	5	
There is a colour contrast between the floor, wall and sanitary fittings?	YES	5	
Is there an alarm system within easy reach to alert persons outside, in case of emergency?	NO	3	
The door can be locked from inside but also released from outside in case of emergency	YES	4	
It is kept clean and well-maintained.	YES	5	
Is there sufficient visual guidance (signage, visibility of the doors etc.) available to detect and identify the toilets easily?	YES	3	From close distance yes, font size should be improved, the toilets are marked in Orientational Braille Map in main entrance section properly and also on the doors are marked with Braille.

4.2. Departure point(s)

PATHS AND CORRIDORS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Is the floor slip-resistant in both wet and dry conditions?	YES	3	Floor doesn´t have anti-slippery design for wet condition. Floor with gradient has improved anti-slippery design
Is the floor level or with gradient according to regulations or standard (gentle slope (EN standard) or slope no more than 1:12 or a cross slope no more than 1:50 in the pathway (ISO standard))?	YES	4	

Is there a colour contrast between the floor, walls, doors and the ceiling?	YES	4	There are white walls in all accessible rooms for passengers and in perimeter of rooms are dark tiles
Is there adequate light and no glare?	YES	5	
Is the path free of any barriers or obstacles?	YES	5	
Are the paths maintained and kept free of unwanted barriers such as furniture, plants etc.?	YES	5	
Is the path equipped with adequate tactile guidance (e.g.TWSIs) including directional, hazard warning and positional tiles provided for independent navigation?	YEs	4	
Is the path equipped with acoustic guidance?	YES	5	Orientational Beacons ZOM03S audible describe the terminal at departure and arrival entrance

4.3. Arrival point(s)

DOORS		Evaluation	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Are automatic (preferably sliding) doors provided?	NO	3	Due to unlawful intereference, the automatic doors can´t be used because it is located in air side area, but during exit of passengers this doors are opened and don´t a
There are no thresholds present at the door (ISO standard: less than 15 mm high).	NO	2	
Do door frames contrast with the wall?	YES	4	Transparent glass parts of doors are marked with yellow tape
In case the doors are glass doors – do they have colour contrasting edging and door handles?	YES	4	Transparent glass parts of doors are marked with yellow tape
Are Braille and tactile signs (TWSIs) provided at a door?	YES	4	There are TWSIs and doors have Braille marking
Are Braille signs appropriately placed and of standardized size?	YES	4	Braille sings are placed in compliance with national regulation TP 048/2019
Is a complementary audible information system provided?	YES	4	Orientational Beacons ZOM03S audible describe the terminal at departure and arrival entrance

SIGNS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to this section, Braille marking, Orientational Braille Map in main entrance area describes the whole terminal including this accessories.
Are visual directional signs placed in a way to constitute a logical orientation sequence from the starting point to different points of destination?	YES	4	Yellow signs, Arrivals-Baggage-Exit

Are visual signs easily understandable (designed to be simple and easy to interpret, the message is unambiguous)	YES	3	Insufficient font size for observing from further distance, but Orientational Beacons ZOM03S help a little
Are visual signs readable and legible for people with visual impairments?	NO	3	Small font size, but Orientational Beacons ZOM03S help a little
Are visual signs well illuminated with no glare?	YES	3	
Is sufficient and adequate tactile guidance (e.g. TWSIs) provided along the relevant paths?	YES	4	
Are orientational signs accompanied with signs/information in relief (raised lettering)?	NO	2	
Is information in relief (raised lettering) appropriately placed and of standardized size?	NO	2	
Are orientational signs accompanied with signs/information in Braille?	YES	4	
Are Braille signs appropriately placed and of standardized size?	YES	4	Braille sings are placed in compliance with national regulation TP 048/2019
Is a complementary audible information system provided?	YES	4	Orientational Beacons ZOM03S audible describe the terminal at departure and arrival entrance

PATHS, CORRIDORS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead to exit, Braille marking, ZOM03S Orientational Beacon
Is the floor slip-resistant in both wet and dry conditions?	NO	2	Floor doesn´t have anti-slippery design for wet condition. Floor with gradient has improved anti-slippery design
Is the floor level or with gradient according to regulations or standard (gentle slope (EN standard) or slope no more than 1:12 or a cross slope no more than 1:50 in the pathway (ISO standard))?	YES	4	
Is there a colour contrast between the floor, walls, doors and the ceiling?	NO	3	
Is there adequate light and no glare?	YES	5	

Is the path free of any barriers or obstacles?	YES	5	
Are the paths maintained and kept free of unwanted barriers such as furniture, plants etc.?	YES	5	
Is the path equipped with adequate tactile guidance (e.g.TWSIs) including directional, hazard warning and positional tiles provided for independent navigation?	YES	4	
Is the path equipped with acoustic guidance?	NO	3	At the beginnings of paths are used Orientational Beacons ZOM03S which describes paths in advance.

4.4. Evacuation routes

5. EVACUATION ROUTE	Assessment		Comments
Did the pilot action include any improvements on this matter?	YES	4	Staff Training, Indoor TWSI
Does emergency evacuation provision consider people with disabilities?	YES	4	
Are evacuation plans and building maps available in tactile braille formats?	NO	2	
Are evacuation plans prominently displayed on all floors?	YES	4	
Are the plans of right size and easy to read (font, contrast, illumination)?	YES	4	
Do the plans contrast well against the background wall?	YES	4	
Do the plans have "you are here" point identified on it?	YES	4	
Are accessible evacuation routes and the refuge points shown on the plan?	YES	4	
Is there a step free or ramped accessible evacuation route identified?	YES	5	Airport Žilina has not stairs and ramps
Is accessible evacuation route equipped with TWSIs?	YES	4	
Is the alerting system both visual and audible?	YES	4	
Are the routes clear and unobstructed?	YES	5	
Are tactile markings provided on handrails and walls on the evacuation route on stairway and corridors to guide persons with vision impairments to the final exit door?	YES	4	

5.1. Exit from the site

6. DOORS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	4	Outdoor TWSIs and Indoor TWSIs
Are automatic (preferably sliding) doors provided?	YES	5	
There are no thresholds present at the door (ISO standard: less than 15 mm high).	YES	4	
Do door frames contrast with the wall?	YES	4	
In case the doors are glass doors – do they have colour contrasting edging and door handles?	NO	5	
Are Braille and tactile signs (TWSIs) provided at a door?	YES	3	All doors from arrival to exit section except main entrance(exit) doors are equipped with Braille signage
Are Braille signs appropriately placed and of standardized size?	YES	4	Braille sings are placed in compliance with national regulation TP 048/2019

SIGNS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead from arrival section to main exit, Braille marking, ZOM03S in arrival section.
Are visual directional signs placed in a way to constitute a logical orientation sequence from the starting point to different points of destination?	YES	4	Yellow signs, Arrivals-Baggage-Exit
Are visual signs easily understandable (designed to be simple and easy to interpret, the message is unambiguous)	YES	3	Insufficient font size for observing from further distance, but Orientational Beacons ZOM03S help a little
Are visual signs readable and legible for people with visual impairments?	NO	3	Small font size, but Orientational Beacons ZOM03S help a little

Are visual signs well illuminated with no glare?	YES	3	
Is sufficient and adequate tactile guidance (e.g. TWSIs) provided along the relevant paths?	YES	4	
Are orientational signs accompanied with signs/information in relief (raised lettering)?	NO	2	
Is information in relief (raised lettering) appropriately placed and of standardized size?	NO	2	
Are orientational signs accompanied with signs/information in Braille?	YES	4	
Are Braille signs appropriately placed and of standardized size?	YES	4	Braille sings are placed in compliance with national regulation TP 048/2019

PATHS, CORRIDORS		Assessment	Comments
Did the pilot action include any improvements on this matter?	YES	5	TWSIs which lead from arrival section to main exit, Braille marking, ZOM03S in arrival section.
Is the floor slip-resistant in both wet and dry conditions?	NO	2	Floor doesn´t have anti-slippery design for wet condition. Floor with gradient has improved anti-slippery design
Is the floor level or with gradient according to regulations or standard (gentle slope (EN standard) or slope no more than 1:12 or a cross slope no more than 1:50 in the pathway (ISO standard))?	YES	4	
Is there a colour contrast between the floor, walls, doors and the ceiling?	YES	4	there are white walls in all accessible rooms for passengers and in perimeter of rooms are dark tiles
Is there adequate light and no glare?	YES	5	
Is the path free of any barriers or obstacles?	YES	5	
Are the paths maintained and kept free of unwanted barriers such as furniture, plants etc.?	YES	5	

Is the path equipped with adequate tactile guidance (e.g.TWSIs) including directional, hazard warning and positional tiles provided for independent navigation?	YES	4	
Is the path equipped with acoustic guidance?	NO	3	At the beginnings of paths are used Orientational Beacons ZOM03S which describes paths in advance.

7. EVALUATION CRITERIA

1. **Hazardous, inaccessible, and unsatisfactory**
   If the evaluated element is dangerous and poses a hazard to blind and/or partially sighted persons, and, if the rated element is inaccessible, and if it is rated unsatisfactory by blind and/or partially sighted persons, the element receives the lowest rank (1). Note that all three conditions must be met in order to assign the lowest rank 1.

2. **Inaccessible and unsatisfactory**
   If the rated element is inaccessible and assessed as unsatisfactory by blind and/or partially sighted persons, but does not pose a hazard to passengers with visual impairments, the element is rated with rank 2.

3. **Unsatisfactory but acceptable**
   The element is rated unsatisfactory by blind and/or partially sighted persons, but does not pose a hazard to passengers with visual impairments nor is the element inaccessible. The element is evaluated with rank 3.

4. **Accessible and acceptable**
   The element is rated as acceptable and accessible to blind and partially sighted persons; the element is rated with rank 4.

5. **Accepted as a Best Practice**
   The element is rated as acceptable and accessible to blind and partially sighted persons and shows an exemplary way of implementing standards. It is very important that the expert or representative of the visually impaired rate the element as exemplary. It is very important that the element works for the intended user(s) - if the solution is very innovative but does not work for visually impaired people (e.g. due to its complexity), it cannot be given the highest rank. The solution is something that works and can/should be transferred and implemented elsewhere; the element is evaluated with rank 5.

Evaluation rank	Evaluation Criteria	Symbol	Priority for intervention
1	Hazardous, Inaccessible and Unsatisfactory		Highest
2	Inaccessible and Unsatisfactory		High
3	Unsatisfactory but acceptable		Moderate
4	Accessible and Acceptable		Low
5	Accepted as a Best Practice		None

8. IMPROVEMENT AFTER IMPLEMENTATION OF THE PILOT ACTION.

Please, based on the evaluation grid, describe

- **Whether the problems you tackled with the Pilot Actions are dealt with?**

The problems detected by the accessibility assessment were solved by implementing pilot action in such a way as to ensure accessibility for blind and partially sighted people to the to the extent necessary so that they as air passengers could participate and use the service in question more equally. By implementing mentioned 2/2 high priorities and 5/6 medium priorities, the accessibility standards have been met and required facility for blind and partially sighted have been ensured.

Žilina Airport has identified following pilot action interventions to be implemented within DANOVA project:

- Outdoor and Indoor TWSIs (high priority measure 1 and 2)

- Orientational Braille Map, Braille Marking, Orientational Beacons ZOM03S (medium priority measure 2)

- Website audit (low priority measure 3 and measure 5),

- **What is the accessibility improvement (one evaluation rank higher equals 20% improvement)?**

It is very difficult to measure improvement by percentage, but all authors of this document agreed that the expected improvement is around 70%.

- **How that corresponded to the Pilot action plan – was it fulfilled as planned?**

We believe we implemented everything what is necessary to ensure at least sufficient accessibility for blind and partially sighted. We also plan to implement another mentioned equipment in future, with lower priority, after project.

Based on stakeholder feedback we can confirm that the implementation was made excellent, and accessibility is outstanding compare to facilities which haven´t implement any equipment or services for blind and partially sighted.

Local UNSS very appreciated implementation of equipment, namely the ZOM03S because their members used to use it and this implementation was very useful for them.

- **What were the reasons behind the success / unsatisfactory result?**

We are pretty sure that the main reason for the success of implementation was close cooperation with Slovak Blind Union because their members are really skilled in solutions for blind and partially sighted. Whole success began during the First Stakeholder meeting, during which we found out that the Slovak Blind Union has many departments with wide range of fields, from architectural and urbanism up to website accessibility. Employees of this departments have long year experience, so the concept of implementation has very high level and it´s really useful for blind and partially sighted passengers.

- **What are the lessons learned?**

We learned that if we are implementing the solutions for some exact group of passengers it´s necessary to closely cooperate with members of the group and cooperation makes whole implement process effective.

Besides that the project gave to whole Žilina Airport employees a reminder about the blind and partially sighted passengers has a special needs and implementation improved their experience and skills with Blind and Partially sighted, what makes the service level of Žilina Airport improved.

- **Would you consider this Pilot action can be replicated in a similar transport node – yes/no, why?**

Yes, we are really sure about that this concept and pilot action can be easily implemented in another transport facilities such as train or bus stations. Replication can be easily implemented because the whole concept is once developed and almost all problems or complications which may occur have been identified.

We hope the other transport facilities in region will use implementation as example and in the soon future there will be bigger number of accessible facilities for Blind and Partially sighted in Žilina Region.

- **What will you advise the management of other transport modes which are going to implement similar Pilot action?**

The advice would be to cooperate closely with Slovak Blind Union, because their members and employees can easily developed the whole concept from infrastructure up to website. Also we would like to remind the problem which can be faced with delivery of Indoor TWSI, because it´s price is relative high and in case of implementation of sufficient amount will be necessary to use public procurement process which consume enormous amount of time and the delivery of material which is usually produced in China can take around 3 months so shortly said: Procure Indoor TWSI as soon as possible.