



2020  
**CiViTAS**  
Cleaner and better transport in cities

**DESTINATIONS**



## Measure Evaluation Result

### LIM 3.2 - Accessibility for disabled and visually, hearing impaired

Project Acronym:	DESTINATIONS
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## Executive Summary

This measure provided the opportunity to people with disabilities to enjoy their vacations in the city of Limassol. After DESTINATIONS, people with physical limitations were able to enjoy the city centre more, as they were able to have access to the beaches and explore the city with safety. Limassol city centre became a more attractive destination for people with disabilities due to the leisure services that have been supplied.

With the support of this measure, a strategic plan was developed including the identification of key actors. A series of surveys were conducted to quantify the satisfaction level people have towards the public transport (PT) system, the accessibility perception, and the road safety perception. Moreover, the baseline collection, the identification of access points, and feasibility analysis have followed. An integrated mobility solution was undertaken with signage and information services for people with disabilities.

For safety and leisure, the number of access points to the beaches were increased, and connected to the PT system, with proper signage also installed. The access points were included in the new application created in another measure of DESTINATIONS (LIM 7.4). Limassol Municipality added 1 point with crossing controllers at the main traffic lights in the tourist area which includes a crossing for people with disabilities, 1 ramp that provides access to the beach, and 2 wheelchairs for people with disabilities to enter the water.

The activities developed under this measure demonstrated the importance of increasing the accessibility for disabled and visually or hearing impaired residents and tourists of the Limassol region. The determination of requirements of the measure implementation, economic factors, and planning and understanding of user requirements, worked as drivers for the implementation of this measure. In addition, the lack of tenders did not stop the implementation of this measure.

With the actions carried out under this measure, the satisfaction level of people with disabilities towards the transport system has increased. The satisfaction level of disabled people with the mobility system of Limassol was relatively low (5% during low season and 15% during high season) at the beginning of the measure, while these numbers have significantly increased with the implementation of this measure, now reaching 40% and 50% for low and high seasons respectively.

Overall, this measure has been a big success and, in the future, meetings with Local Authorities will take place for supervising the installations to ensure that the measure continues to run smoothly.

## A Description

The aim of this measure was to make Limassol an attractive and safe destination for tourists with disabilities. For the first stage, a planning strategy has been developed by Stratagem Energy Ltd with the collaboration of Limassol Municipality, in which the location of the access points was identified. There was also a close collaboration with organisations of people with disabilities located in Cyprus. Stratagem Energy Ltd and Limassol Municipality developed and integrated the accessibility points of the existing systems for blind and deaf people at the main traffic light crossings in the touristic area (1 main crossing). This measure was very important for safety and security, especially for people with disabilities.

Additionally, the number of access points to the beaches and proper signage was increased and subsequently connected to the PT system through the step-free bus stops at the specified spots. Limassol added 1 point in the touristic area where the proper integrated mobility solution for accessing and using the beaches was installed.



**Figure 1:** Installation of Ramp, Wheelchair, and Traffic Signal Systems

### A1 Objectives and outputs

#### City policy level objectives

This measure was in line with Limassol Municipality's Strategy according to the measure 'Sustainable Tourist Mobility Action Plan', contributing to the below objectives:

- Improved urban accessibility for people with disabilities
- Enhancement of social cohesion
- More attractive tourist destination
- Improve and facilitate leisure services and trips
- Further safety and security for people with disabilities, and eliminate accidents
- Increase the number of disabled tourists visiting Limassol

#### Measure Specific objectives

- Provide an integrated mobility solution, including signage and information services for people with disabilities to access public beaches
- Provide a destination that is more attractive to people with disabilities
- Increase the safety of people with disabilities in accessing the beach areas

## Outputs

- Development and integration of the accessibility points of the existing systems for blind and deaf people at the main traffic light crossings in the tourist area (at 1 main crossing)
- Increase by one the number of access points to the beaches for achieving safety and leisure, and subsequently connect to the PT system (with step-free bus stops at the specified spot)
- Limassol added 2 points in the tourist area where the proper integrated mobility solution mentioned above (for accessing and using beaches) was installed
- A new sign has been placed to the referred bus stop

## Supporting activities

In order to enhance the impact of the measure, Limassol Municipality cooperated with the Public Works Department for the preparation of procurement documents regarding the improvement of crossings for people with disabilities. The Association of People with Disabilities indicated locations of access points for the implementation of the measure. The Electro-Mechanical Service department provided guidance and permissions for the implementation of this measure. Limassol Municipality collaborated with Limassol Tourism Board to disseminate and promote the measure.

## A2 Inter-relationship with other measures

The measure shares synergies and has a strong interaction with LIM 7.4 - *Mobility application and travel planner for smart phones to provide real time information*, as the disabled and the hearing impaired people can find the locations of the accessibility points to the beaches through the app.

## A3 Target groups and/or affected part of the city or region

This measure targeted the disabled users, residents, and tourists, moving around the Limassol region.

## A4 Stakeholders: CIVITAS project partners and other important actors

Stakeholder name	Activities description
Disabled people organization	Promotion of the measure, indicate location of access points
Chamber of Commerce	Promotion of the measure

**Table 1:** Stakeholders: CIVITAS project partners and other important actors

## B Measure Implementation

### B1 Situation before CIVITAS

Before DESTINATIONS, the Limassol region already provided some accessibility infrastructure dedicated to disabled, visually, and hearing-impaired citizens and tourists. However, it was not enough just to provide safe conditions to move around the city centre. Limassol is a highly touristic destination, which yearly receives the majority of the 3.5 M tourists which visit Cyprus (source: [YSTAT](#)). Therefore, there was a need to have a city that would be more inclusive for all, especially considering that a lot of tourists that visit the island are disabled and face difficulties in accessing some of the main touristic attractions.

### B2 Innovative aspects

- **New conceptual approach** – With the new installations, a solution was given to solve the issue of disabled people not being able to access Limassol beachfront and the beach.
- **Targeting specific user groups** – The signalisation systems, as well as the infrastructure for accessing the beaches, offers the opportunity to people with disabilities to enjoy their vacations on the island with more comfort by offering more accessible beaches and better and safer access and movement around the city center of Limassol.

### B3 Technology development

The technology developed within the measure consisted mainly of providing signage information for people with disabilities regarding the locations of the systems for blind and deaf people at traffic light crossings, and signal systems for people with disabilities.

### B4 Actual implementation of the measure

Field work has been developed in collaboration with the local associations of disabled, blind, and hearing impaired citizens. As a result, the location of the access points was identified, as well as signage for people with disabilities regarding the locations of systems for blind and deaf people at traffic light crossings, PT services for people with disabilities, and information about route accessibility.

During July 2018, local partners proceeded with the installation of 1 point with crossing controllers at the main traffic lights in the tourist area which included a crossing for people with disabilities, 1 ramp for people with disabilities that provided access to the beach, and 2 wheelchairs for people with disabilities to enter the water.

The actions carried out under this measure were very important for safety and security especially for people with disabilities. Limassol became a more attractive and safer place for tourists with disabilities. For safety and leisure, the number of access points to the beaches have been increased and connected to the PT system, with proper signage also being installed.

## C Impact Evaluation

### C1 Evaluation approach

#### Expected impacts and indicators

Impact category	Impact indicator	Unit of measure
Society	1 - Disabled people satisfaction with transport system	%
Society	2 - Perception of accessibility level of service	N <sup>o</sup>
Transport system	3 - Road safety audit	N <sup>o</sup>

**Table 2:** Expected impact and indicators

#### Method of measurement

Impact indicator	Method*	Frequency			Target Group	Domain (demonstration area or city)
		Bef.	Dur.	Aft.		
1 - Disabled people satisfaction with transport system	S	n.a.	n.a.	33-37	Disable, (residents and visitors) PT customers	demonstration area
2 - Perception of accessibility level of service	S	n.a.	n.a.	33-37	Disable (residents and visitors) service users	demonstration area
3 - Road safety audit	S	n.a.	n.a.	33-37	Disable residents and tourists	city

\* (Data collection (DC), Estimation (E), Survey (S))

**Table 3:** Method of measurement

#### Detailed description of the indicator methodologies

**1 – Disabled people satisfaction, 2 – Perception of accessibility levels, and 3 – Road Safety Audit** – The responsibility for collecting these indicators lies in LIMA and STRATA. These indicators were evaluated through surveys. The survey assessed the understanding, usefulness, and willingness regarding the actions carried out. The survey findings were related to questions about the current situation of the transport system in Limassol city centre, their satisfaction about the mobility modes of transportation, how accessible Limassol city centre was, as well as accessibility of the beachfront and the beach, and how safe they feel moving around the roads. The survey was applied to 59 disabled citizens (41 citizens) and tourists (18 tourists) in Limassol city center and beachfront. For indicator 1, the % of people satisfied with the public transport

system was assessed; for indicator 2, their "accessibility perception" on a scale from 1 to 5 was asked; and for indicator 3, their "Road safety perception" on a scale from 1 to 5 was asked.

### The Business-as-Usual scenario

Not applicable for the indicator evaluated, as this was a new initiative.

## C2 Measure results

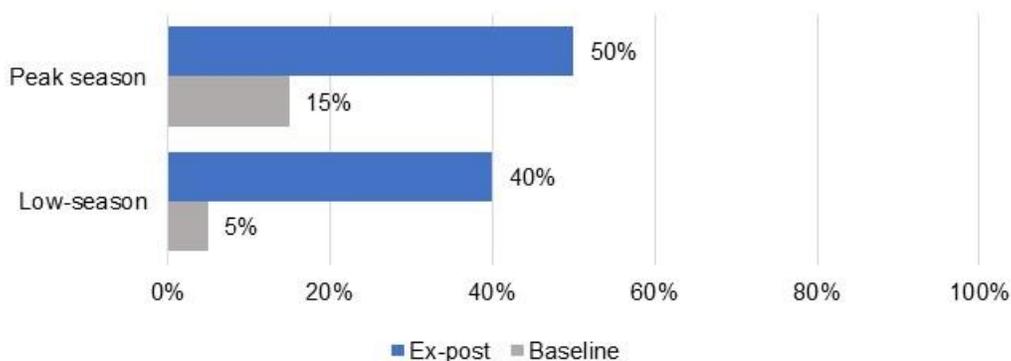
Impact category	Impact indicator	Unit of measure	Baseline	Ex-Ante	Ex-Post
Society	1 - Disabled people satisfaction with transport system	%	5% (low season) 15% (peak season)	20% (low season) 30% (peak season)	40% (low season) 50% (peak season)
Society	2 - Perception of accessibility level of service	Nº	1	4	4
Transport System	3 - Road safety audit	Nº	0	3	3

**Table 4:** Measure results

### C.2.1 Society

#### 1 - Disabled people satisfaction with transport system

The satisfaction level of people with disabilities towards the mobility system of Limassol was relatively low (5% during low season and 15% during high season) at the beginning of the measure. These numbers have significantly increased with the implementation of this measure, now reaching 40% and 50% for low and high seasons respectively.



**Figure 2:** Satisfaction level of people towards the transport system during Low and High Seasons

## 2 - Perception of accessibility level of service

The perception of disabled people towards accessibility level of service was measured as very Low (Index 1 in 5-point scale) in 2016, with the aim to reach an Index 4 (on a 5 point scale – high perception) after implementation of the measure was achieved.

### C.2.2 Transport System

#### 3 - Road safety audit

The Road Safety perception among disabled people increased during the CIVITAS DESTINATIONS project, through the implementation of the measure, and reached an average perception of 3 (on a scale of 1 to 5).

## C3 Quantifiable targets

No.	Target	Rating
1	*Improve urban accessibility for people with disabilities by 20% (low season) and 30% (high season)	**
2	Increase the safety and security for people with disabilities by 5%	**
3	Enhancement of social cohesion	**
4	More attractive tourist destination	**
5	Further safety and security for disabled people: 4 less accidents	N/A
6	Attract disabled tourists to visit the beach: 200 disabled people	**
<b>N/A = Not Assessed   0 = Not Achieved   * = Substantially achieved (at least 50%)  ** = Achieved in full   *** = Exceeded</b>		

\*New target, not in GA

**Table 5:** Assessment of quantifiable targets

Targets 2 to 6 were planned in the Grant Agreement. Target 1 was defined during the project implementation.

Target 1 has been fully achieved, as results from surveys revealed that disabled tourists and residents feel more satisfied with the transport system. Satisfaction levels are now 40% in the low season and 50% in the peak season, compared to before the improvements in Limassol city center (5% in low season and 15% in peak season). People are more satisfied with the mobility modes of transportation, and city center and beach accessibility after the implementation of the

measure. People with disabilities feel more safe and secure after the implementation of the measure.

Target 2 was fully achieved. The results of the measurements revealed that the safety and security for people with disabilities reached an assessment of 3 on a 5-point scale. Prior to the implementation of the measure, disabled people were feeling unsafe and insecure when moving around the city. After DESTINATIONS, people feel safer to move around, making Limassol city a more attractive destination.

Target 3 was achieved in full, with the development and integration of the accessibility points at the main traffic light crossings in the tourist area. In addition, the increase in the number of access points to the beaches for achieving safety and leisure, connection to the PT system, and new signs placed at the bus stop, also helped achieve this measure.

Target 5 was not possible to be assessed due to the limitation of having such statistical data. Although the target to increase the safety and security for people with disabilities has been fully achieved, it is very difficult to know the exact number of accidents that occurred during the project period.

Target 6 was fully achieved, as survey results revealed that the perception of disabled people towards accessibility level of service reached an Index 4 in a 5-point scale (high perception).

In the same sense, and by considering the full achievement of all the other targets, Target 4 has also been fully achieved. Disabled people find it more comfortable and safer to move around the city. Additionally, the infrastructure at the beach enabled them to better enjoy their leisure time.

## **C4 Up-scaling of results**

Not applicable

# **D Process Evaluation Findings**

## **D1 Drivers/Enablers**

The determination of requirements for the measure implementation, economic factors, and planning and understanding of user requirements were some of the drivers for this measure. In Limassol, for LIM 3.2, the pedestrian crossing controllers comply with the provisions of TR2500: Specification for Traffic Signal Controller of the Highways Agency UK, Department for Transport, and with the requirements of European Standard EN 12675: 2001: Traffic safety signals, and EN 50293: Electromagnetic Compatibility Road Traffic Signal Systems Product Standard, and the harmonised standard BS 7987: 2001 Road Traffic Signal Systems.

The regulators are connected with the UTC / SCOOT Regional Traffic Control System, and an ultra-low voltage regulator (ELV 48V lamp drive system) has been installed for the control of traffic vehicles and pedestrians in staggered dual pelican crossing (dual streams).

## D2 Barriers

The main barrier regarding the development of this measure was the lack of tenders during the first procurement. This caused a small delay, but Limassol Municipality offered a revised tender call which has been successfully completed, allowing the evaluation of this measure to be undertaken.

## D3 Main Lessons Learned

With the implementation of this measure, the local partners understood that the involvement of stakeholders from the beginning of the action is essential, to ensure everyone's agreement and support towards the action, and also to assess all the needed requirements.

Having a city that is inclusive for all provides benefits at an economic level, by attracting additional citizens and tourists to the city. People with disabilities have the opportunity to enjoy their vacations on the island with more comfort by offering more accessible beaches and better access to Limassol city centre.

# E Evaluation conclusions

The 'Association of People with Disabilities in Cyprus' has provided all information needed for the implementation of the measure and determined the needs and requirements of disabled people. Moreover, Limassol Municipality's mayor has promoted the measure through several interviews and on local and national radio stations. All outputs have been completed on time and evaluation of the measures has been successfully completed. The transport system in Limassol has been improved. More specifically, tourists with disabilities have better access to the beach as well as increased safety when crossing the roads, due to the leisure services that have been supplied within the city centre.

# F Additional information

## F1 Appraisal of evaluation approach

Data was successfully collected, allowing the evaluation for this measure to be completed on time, although a second survey was planned to observe the impact of the measure in 2020 and how it evolved from 2019 but it was cancelled due to COVID-19 situation.. Initially, the plan was to assess the number of accidents that were expected, with this to be limited to 4, due to further safety and security measures taken to protect disabled people. Unfortunately, it was not possible to assess this target due to the limitation of having such statistical data and the difficulty in knowing the exact number of accidents that occurred during the project period. However, the target to increase the safety and security for people with disabilities has been fully achieved.

## **F2 Future activities relating to the measure**

Future activities related to this measure includes meetings with Local Authorities for supervising the installations to ensure that the measure continues to run smoothly.