Measure Evaluation Result

LIM 7.4 - Mobility application and travel planner for smart phones to provide real time information

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Executive summary

Before the project implementation, tourists and residents lacked the means to find in an integrated way all the relevant mobility information about the Limassol city. Hence, the local partners identified the need and an opportunity to improve such information and developed the "Mobility Limassol" application, which provides all necessary information for tourists and residents.

The mobility application allows travellers to determine the nearest bus stations, bike rental stations, bike sharing stations, airport shuttle service, intercity buses, urban and rural bus routes, arrival times at the bus station and electric car charging stations. It also provides options of cycling, walking and hiking routes, with description regarding distance, level of difficulty, kind of bicycle required and others. Information regarding points of access to the beach for disabled people and landmarks in the region are included in the application. Travellers can also leave their comments for the mobility products/services they used.

The application is available for i-Phones and Androids, free of charge and provides real time information and feedback options. Both residents and tourists can download the application and search for all the available information. The application is focusing on the effective use of sustainable mobility modes by both target groups.

The application was promoted in the airports, buses, e-car stations and hotels. A video has also been prepared and distributed in social media, describing the use of the "Mobility Limassol" application: https://www.youtube.com/watch?v=ZwtMgttsGb4.

The key stakeholders played a significant role. More specifically, the Department of Public Transport of the Ministry of Transport Communication and Works provided all the necessary information and mapping of Bus Stops, while Limassol Municipality provided information related to municipal parking and accessible public spaces for disabled persons, allowing the data for the evaluation to be successfully gathered.

The interactive mobile application was very well accepted by residents and tourists. It has been downloaded by 6.000 users, who rated the application with 3.5, in a scale from 1 to 5. In addition, based on 175 surveys addressed to tourists and residents, the local partners verified that 84.5% were aware of the mobility application while 56.4% were using it.

Overall, the activities carried out under this measure, together with the other measures, made Limassol a more attractive tourist destination. The measure added value to the city: with the mobility application people became more aware about sustainable mobility traveling options, contributing to a city centre with less pollution and noise. In addition, the new tool allowed visitors to organise their trips in advance and, therefore, allowed them to better plan their journey and in general contributes to plan their trips according to their needs.

The application will be promoted after the completion of the CIVITAS DESTINATIONS project in order to ensure its effectiveness and wider usage. Moreover, the local partners foresee improvements to boost its usage.

A   Description

The main goal of this measure was the development of a mobile app, the "Mobility Limassol". The application is downloadable and user friendly for both smart phones and tablet users. The application is targeting both residents and tourists focusing on the effective use of sustainable mobility modes by both target groups. For residents, it enables planning their trips and commuting with PT and other sustainable mobility modes. For the visitors, it is a tool to plan their travelling around town and to the different attractions using sustainable mobility modes and enriching their experience.

Figure 1: Limassol Mobility Application

A1   Objectives and outputs

City policy level objectives

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

- Less CO_2 emissions
- Less traffic noise in the city centre
- Less energy consumption
- Save fuel/money
- Public health and safety
- Increase the total share of citizens that use sustainable mobility modes
- More Attractive tourist destination
- Change habits of local people and tourists

Measure Specific objectives
- Provide a tool for people to make their travel plans more efficient
- Provide real time information to travellers

- Promote sustainable mobility modes through the app
- Promote integrated products / services for tourism and mobility
- Collect visitor comments and rating for sustainable mobility services to improve
- Improve the visitors' experience

Outputs[1]
- Interactive Application providing real time information
- Downloadable maps
- Travel planner
- Feedback and ratings from users
- * Radio spots to promote the campaign

Supporting activities
Limassol Tourism with the Limassol Municipality and other local authorities was necessary to provide information concerning municipal parking, and accessible public spaces for the disabled. The Limassol Bus Company is a major player in maintaining the system in the long run. The Road Transport Department and the Ministry of Transport, Communications and Works provided all the necessary permits, approvals and specification for the design of application as well as all Limassol bus stops locations through the Cyprus National system (bus stop mapping).

A2   Inter-relationship with other measures

LIM7.4 has strong interaction with other DESTINATION measures:

- **LIM 3.1:** *Increase cycling and walking in combination with special interest tourist activities as an integrated product*, as the bicycle parking facilities, the new cycling lanes, walking and hiking routes developed under measure 3.1 are included in the Mobility application.
- **LIM 3.2:** *Accessibility for disabled and visually, hearing impaired*, as the disabled and the hearing-impaired people could find through the app, the locations where accessibility to the beaches would be easier for them.
- **LIM 4.1:** *Electric car rental connecting Limassol town with airport and port,* uses information for the location of EV-charging stations from the application developed under measure 7.4.
- **LIM 4.2:** *Expansion of public bike sharing system, include e-bikes,* as the expanded public sharing system is incorporated in the developed application.
- **LIM 6.2:** *Combined tourist and mobility products: Green Label Award and Tourist Mobility Card.* The application developed for the needs of measure 7.4 enhance the promotion of the use of sustainability mobility modes and the use of the Tourist Mobility Card among tourists which is the aim of the measure 6.2.
- **LIM 7.1:** *Improvement of PT routes, timetables, ticket procedure and bike transportation on buses to make the service more attractive*, as the free Wi-Fi services on buses will make easier the usage of Mobility Limassol Application to plan the next destination.

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[1] * Extra output with DESTINATIONS budget

- **LIM 7.3:** *PT traveller information system*, as both measures aim to help travellers to plan more efficient their trips by PT and improve their experience.

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

Tourists and residents moving across the region were the most influenced by the measure.

A4   Stakeholders involvement

Stakeholder name	Activities description
Limassol bus company	Bus stop and routes information included in the app
Bike sharing company	Bike sharing stations and information included in the app
Bike rental companies	Bike rental points and information included in the app
Local authorities	Available parking areas included on the app
Ministry of Interior	Acquire maps
Airport express	Airport shuttle service information included in the app
Intercity buses	Intercity bus service information included in the app
Bike maintenance stations	Bike maintenance stations included in the app
e-car sharing	e-car sharing stations and info included in the app
Electricity authority of Cyprus	EV chargers' locations included in the app
Limassol Cycling Club and Cyprus Cycling Association	To determine information such as level of difficulty for cycling routes, kind of bicycle required, kind of equipment required, etc
Hiking tour guides	To determine information such as level of difficulty for hiking routes, kind of equipment necessary (if any) etc
Local authorities	Information on accessibility of people with disabilities was also included, such as access points to the beach. Information about parking places was included in the app.

Table 1: Stakeholders involvement

B Measure implementation

B1 Situation before CIVITAS

Before CIVITAS DESTINATIONS project it was a lack of information regarding the location of bus stops and relevant routes, bike sharing stations, EV–charging stations, bike rentals as well as walking and cycling paths and routes and generally information for tourists to design their leisure trips in Limassol region. The development of the "Mobility Limassol" application provides all necessary information for tourists and residents to make their trip more pleasant.

B2 Innovative aspects

The lack of real time travelling information is a negative factor for people exploring the region using sustainable mobility modes. this is an obstacle also for locals to use sustainable mobility modes in their everyday lives. The most innovative aspect of this measure is linked to a **new conceptual approach**. This newly developed application was a totally new approach introduced in Limassol city. The mobility application enables people to use real time information and plan their travelling accordingly. It also provides tourist information that can be useful in ensuring an enriched tourist experience.

B3 Technology development

The interactive application provides real time information, GIS mapping with a travel planner being incorporated in the service. The application is securely connected to this system to retrieve all the updated information needed for its operation. It operates offline since it includes a system to store the data on the device supporting an offline mode. A GPS system is incorporated in the application to allow users to locate information (maps, etc.) related to the current location. A push notifications service is supported on all devices based on automatic mechanisms that are triggered by the user's options.

B4 Actual implementation of the measure

During the implementation phase, the Limassol Tourism Company (LTC) held several meetings with the Ministry of Transport, Communication and Works to design the technical specifications of the mobile application. The Department of Public Transport played a significant role by providing all the necessary information and mapping of Bus Stops in Limassol region. The Limassol Municipality provided information concerning municipal parking, and accessible parking spaces for the disabled.

After the procurement procedure and the signing of the contract, LTC held several meetings with the selected company to ensure the good operation of the application in line with the contractual agreement. Text/descriptions and relevant information (distance, level of difficulty) for the

application were prepared. Also, maps have been included in order to be downloaded from the system. In April 2018, a pilot test of the application was undertaken and the mobile app was officially launched in May 2018. All the required corrective actions followed and the application is fully operational as of December 2019.

The user is able to access all application tabs containing information of the Limassol Region. The navigation menu starts with the map of the Limassol area where the thematic section icons are clearly displayed. The mobile app provides the following main characteristics:

- Travel Planner – User can guide through the map, using the faction "near me"

- Bike routes – User can find all bike routes of Limassol

- Public transportation – User can find the bus stops

- Parking places – User can guide to find parking in the city

- Beach access – User can find which beaches have ramp access

- EV-Charging stations – User can find the charging stations for electric vehicles

- Landmarks – Users and especial tourists can review the map and find the Limassol landmarks

- Bike sharing – Users can find the bike staring stations around the city

- Timetables – Are available for shuttle bus for the airport and urban area

Both residents and tourists can download the application and search for all the available information. The app is focusing on the effective use of sustainable mobility modes by both target groups (residents and tourists).

The application is available for iPhone and android free of charge and provides real-time information and a feedback option. In addition, the application was updated with new functionalities and connected to the National System with real-time information after receiving extra ERDF Funding, through the EY-KINISI project (Interreg V-A, Greece – Cyprus Programme "2014-2020").
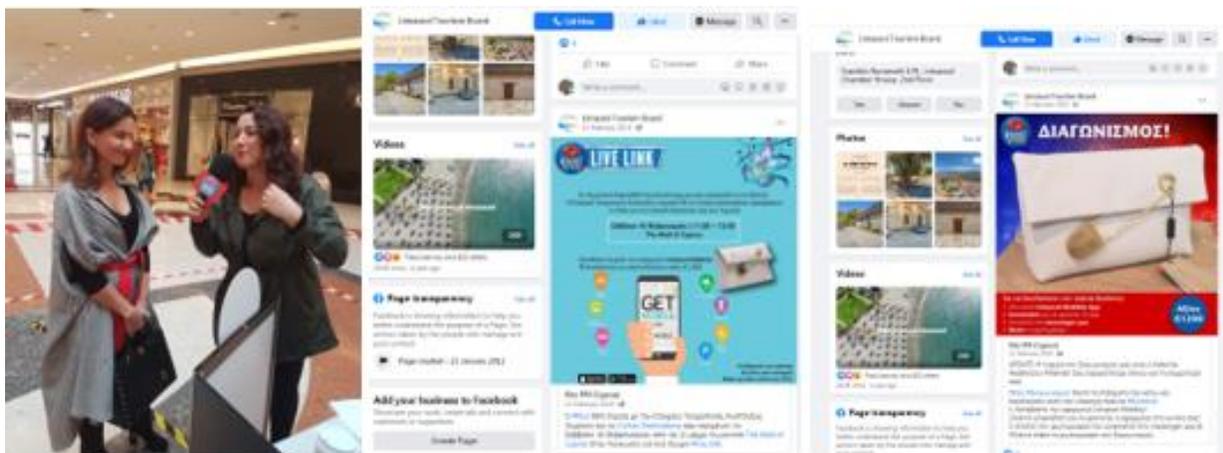

Figure 2: Communication campaign

A communication campaign and a competition were organised during February 2019 in order to increase the awareness and the number of users. During the same month, radio spots were broadcasted in order to promote the campaign and a competition to the public. Web promo banners and articles were published to promote the app, a Google Play campaign was also carried out to increase the users of mobile devices. After the campaign 6,000 users downloaded the application.

C Impact evaluation

C1   Evaluation approach

Expected impacts and indicators

Impact category	Impact indicator	Unit of measure
Society	1- Number of downloads of "Mobility Limassol" app	Nº
Society	2- Satisfaction rate with the "Mobility Limassol" mobile app	5-point scale
Society	3- Awareness level about the "Mobility Limassol" app	%
Society	4- Acceptance level about the "Mobility Limassol" app	%

Table 2: Expected impact and indicators

Method of measurement

Impact indicator	Method*	Frequency (Months)			Target Group	Domain (demonstration area or city)
		Before	During	After		
1- Number of downloads of "Mobility Limassol" app	DC	n.a.	n.a.	51	Residents and Tourists	City
2- Satisfaction rate with the "Mobility Limassol" app	DC	n.a.	n.a.	55	Residents and Tourists	City
6- Awareness level about the "Mobility Limassol" app	S	n.a.	n.a.	34-41	Transport service operators	Demonstration area
7- Acceptance level about the "Mobility Limassol" app	S	n.a.	n.a.	34-41	residents and tourists	City

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

Table 3: Method of measurement

Detailed description of the indicator methodologies

- **1 Number of downloads of "Mobility Limassol" app** – This indicator is related to the number of downloads of the "Mobility Limassol" app. The data were collected from the database of the mobile application.
- **2 Satisfaction rate with the "Mobility Limassol" application-** The data for this indicator were collected directly from the recording data of the application, from the Play Store and are based on the rating that the users attribute to the app. The rating was collected on 17/03/2021.
- **3 Awareness level about the "Mobility Limassol" app and 4 Acceptance level about the "Mobility Limassol" app** – These indicators were calculated based on the 175 surveys carried out to assess the understanding, usefulness and willingness, regarding the actions related to the mobility application. Survey findings were related to questions about the current situation of the available traveling information. The surveys carried out in 2019 involved 172 tourists and 3 residents in the Limassol city centre. The related questions explored the knowledge of the existence of the application, if the canvassed persons were using the application, how often and what was the experience.

The Business-As-Usual (BAU) scenario

If DESTINATIONS would have not been implemented, tourists and citizens in Limassol would remain with limited tools to access mobility information about Limassol city and therefore would lack benefits of the Mobility Limassol application.

C2   Measure results

Impact category	Impact indicator	Unit of measure	Baseline	Ex-Ante	Ex-Post
Society	1- Number of downloads of "Mobility Limassol" app	Nº	n.a.	3.000	6.000
Society	2- Satisfaction rate with the Mobility Limassol mobile app	5- point scale	n.a.	3	3.5
Society	3- Awareness level about the "Mobility Limassol" app	%	n.a.	40	84.5
Society	4- Acceptance level about the "Mobility Limassol" app	%	n.a.	40	56.4

Table 4: Measure results

C2.1 Society

1 - Number of downloads

The interactive application has been downloaded by 6.000 users as of November 2020. The result is considered very positive by the local partners as it exceeded the expectations of 3.000 downloads. Since May 2018, tourists and citizens enjoy a new integrated tool that provides all the relevant mobility information about Limassol city. The promotional campaigns were a decisive activity to disseminate and promote the use of this new tool.

2 - Satisfaction rate with the Mobility Limassol app

Considering the rate attributed to the app by the users through the Play Store, it is understood that users are satisfied with this new app, rating it with 3.5 in a scale 1 to 5. However, in a logic of continuous improvement, the local partners believe that an improvement of the satisfaction can be achieved once the local partners plan to include improvements on the app in the future.

3 and 4 - Awareness and Acceptance levels about the "Mobility Limassol" app

The surveys aimed to understand the levels of acceptance, awareness and usefulness of the application between the 172 tourists and 3 residents. The results revealed that during the implementation of the measure the awareness about the mobility application and the acceptance of its use was very positive, as the application was accepted and adopted very fast from the Limassol tourists and residents. In 2019 84.5 % of the surveyed people were aware of the existence of the application, while 56.4% were using the application.

Between the users that were using the application, 84.4% have used the application at least once and 15,6 % answered that had used the application 2-3 times while on holidays. Finally, 88.6% of the people that used the application answered that the application is very good and the other 11.4% answered that the application is good (choices for answers: very good, good, neither good or bad, poor, very poor).
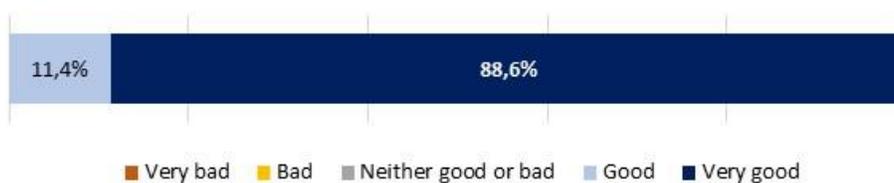

Figure 3: Classification of the "Mobility Limassol" app

C3   Quantifiable targets

No.	Target	Rating
1	*Number of downloads: 3000	★★★
2	*Achieve a satisfaction rate of 3 (scale 1 to 5) with the "Mobility Limassol" mobile app	★★★
3	*Increase the awareness and acceptance levels of people by 50%	★★★
4	Less CO_2 emissions: 121,95 tCO_2	N/A
5	Less traffic noise in the city centre: 12 dB	N/A
6	Less energy consumption: 202,5 MWh	N/A
7	Less fuel costs: 27.900 €	N/A
8	Less fuel consumption: 22.500 L	N/A
9	Public health and safety	★
10	Change habits of local people and tourists	★
11	More attractive tourist destination	★
N/A = Not Assessed 0 = Not Achieved ★ = Substantially achieved (at least 50%) ★★ = Achieved in full ★★★ = Exceeded		

*New targets, not in GA

Table 5: Assessment of quantifiable targets

Targets 4 to 11 were planned in the Grant Agreement, but Targets 1,2 and 3, were new targets adapted to the scope of the measure. In the evaluation phase, after having implemented all the actions envisaged in the measure, it became clear that the impacts indicated in the GA were not quantitatively measurable, although they would have been reached to a certain extent.

Target 1 was exceeded. The statistical data extracted directly from the mobile application revealed that the number of people downloading the app had doubled compared to the expected value. It is a very positive result as it shows the very good acceptance and use of the new tool.

Target 2 was exceeded. The results were extracted directly from the Play Store, and the rating of 3.5 out of 5.0 attributed by the users was considered positive. On the other hand, people who were not so satisfied with the functionalities of the app, asked for more details on the bus routes timetables, which was also very important information to guide the local partners to identify improvement opportunities.

Target 3 was exceeded. During the surveys carried out to 172 residents and 3 tourists, it was understood that 84% of the residents and tourists surveyed were aware of the app and that 56.4% were using the application for planning their leisure trips.

Target 4 to 8 were not assessed specifically under this measure because it was not possible to monitor the reduction of fuel consumption, fuel costs, CO_2 emissions, energy consumption and noise pollution related to the users that started using sustainable modes/public transport because of the app which provides mobility information for tourists and residents. However, considering the adherence to the "Mobility Limassol" application, it was understood that, indirectly, the measure also contributed to the improvement/reduction of the common indicators related to CO_2 emissions, energy consumption, fuel consumption, fuel cost and noise pollution, by making public transport and other sustainable options more attractive. It is noted that the local partners evaluated these indicators specifically under LIM 3.1, LIM 4.1, LIM 4.2, LIM 5.1, LIM 6.3 and LIM 6.4. It should also be noted that the results achieved at site level for these indicators reflect the cumulative effect of the implementation of all DESTINATIONS measures.

Target 9 was not possible to be quantified, but the local partners consider that the target was at least substantially achieved. It is expected that public health and safety is improved through the achievement of the implementation of the interrelated measures referred to in section A2. All these targets worked to reduce air and noise pollution along with energy and fuel consumption. Additionally, the achievement of target 3 increased the awareness and acceptance levels of people which consequently led to the improvement of public health and safety, as the sustainable mobility modes for leisure trips are preferred at the expense of conventional mobility modes.

Although Target 10 was not possible to be quantified, it is expected that the developed mobility application designed to attract and inform people to use sustainable mobility modes for leisure trips contributed to change the habits of locals and tourists. Additionally, the results of the rest of indicators and more specific indicator 3, reveal that people are more aware and accept the sustainable mobility solutions for their leisure transportation.

As with targets 9 and 10, target 11 was also not possible to be quantified. However, it is expected that all the activities carried out under this measure and the interrelated measures (analysed in section A2) implemented during the CIVITAS project made the Limassol a more attractive tourist destination. The measures added value to the city as through the mobility application people became aware about traveling around for leisure trips using sustainable mobility modes resulting in improved air and noise pollution of Limassol city centre. Additionally, the existence of an application assists visitors in organising their trips before even visiting the place. The app enables them to plan the time to visit other places, their budget, and in general contributes to better programme their trips according to their needs, an important advantage for visiting a destination.

C4   Up-scaling of results

Not applicable

D Process Evaluation Findings

D1 Drivers

The application and travel planner provide the visitors with new possibilities. The key stakeholders are playing a significant role. More specifically the Ministry of Transport Communication and Works, department of Public Transport provided all the necessary information and mapping of Bus Stops, while Limassol Municipality provided information regarding municipal parking, and accessible public spaces for disabled persons, successfully collecting data for the evaluation .

D2 Barriers

No barriers were identified for this measure. The measure has been implemented on time and data have been gathered and analysed successfully.

D3 Main Lessons Learned

This application can be easily downloaded, allowing people to organise their trips and get important information regarding the mobility in Limassol. This action is a strong business case. Even though the application is available for free, once a large number of downloads has taken place, it can promote products and services close to the traveller's location, creating income that covers the updating and upgrading of the application in the long term.

E Evaluation conclusions

The interactive application has been downloaded by 6.000 users until today and provides real time information and GIS mapping with a travel planner being incorporated in the service. The application is securely connected to a system to retrieve all the updated information needed for its operation. The measure was successfully implemented and its evaluation was undertaken on time.

F Additional information

F1 Appraisal of evaluation approach

Data was successfully collected, allowing the evaluation for this measure to be completed on time.

Indicators 9,10 and 11 were not possible to be quantified but are expected to be achieved both due to the successful implementation of the measures   LIM 3.1, LIM 4.1, LIM 4.2, LIM 5.1, LIM

6.3 and LIM 6.4.and through the achievement of the rest of the indicators achieved in the examined measure.

Indicators 4 to 8 were not assessed specifically under this measure because it was not possible to monitor the reduction on fuel consumption, fuel costs, CO_2 emissions, energy consumption and noise pollution related to the users of the developed app. However, it is expected that these indicators have been achieved through the implementation of the other interrelated measures in section A2.

A third survey was planned to occur between M44 and M47 to observe the impact of the measure in 2020 and how it evolved from 2019. Unfortunately, due to the COVID-19 pandemic, the arrival of tourists in Limassol as well as the residents' journeys in the region decreased dramatically. Therefore, the data resulting from surveys in 2020 would not have been representative and it was decided, for impact evaluation purposes, to only consider the results of the 2019 survey.

F2   Future activities relating to the measure

The application will be promoted after the completion of the CIVITAS DESTINATIONS project in order to ensure its effectiveness and usage in the long term. In addition, local partners foresee the inclusion of improvements to boost the use of the app in the future.