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CIVITAS
Cleaner and better transport in cities

DESTINATIONS



D6.3

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Abstract

By identifying cross-sector common interests, it is possible to forge new partnership-working between municipal, transport and tourism authorities as well as local business, chambers of commerce and ministries. This “win-win” approach has been used to integrate the tourist sector and local business with public transport and sustainable mobility services, supporting economic growth whilst pursuing climate objectives. This approach to mobility demand management can be applied to tourist towns across the European Union.

Project Partners

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Câmara Municipal do Funchal	CMF	PT
Secretaria Regional da Economia Turismo e Cultura	SRETC	PT
Agência Regional para o Desenvolvimento da Investigação, Tecnologia e Inovação	ARDITI	PT
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Municipality of Limassol	LIMA	CY
Stratagem Energy Ltd	STRATA	CY
Dimos Rethimnis	RETH	EL
The Research Committee of the Technical University of Crete	TUC	EL
Comune Di Rio	Rio	IT
Comune Di Portoferraio	PF	IT
MemEx S.R.L.	MEMEX	IT
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Valletta Kunsilli Lokali – Valletta Local Council	VLC	MT
Universita ta' Malta	UoM	MT
Ministry of Tourism	MOT	MT
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Glossary

eBike	Electric bicycle
Gamification	Use of game or competition elements within non-game contexts (such as transport apps), incentivising behaviour change.
EV	Electric Vehicle
LEZ	Low Emission Zone
SULP	Sustainable Urban Logistics Plan
SUMP	Sustainable Urban Mobility Plan

Executive Summary

This is the final demonstration report for all delivered measures targeted to mobility demand management and increased awareness for sustainable mobility as per the outputs of T6.4, T6.5 and T6.6. It collates the learning from the individual demonstrations and draws common conclusions for further action. It is pitched to a city audience and can be used as part of the evidencing and business model for future investment.

Chapter 1 introduces the WP6 objectives, those of D6.3 and an overview of the measures per cluster category.

Chapters 2, 3 and 4 present the demonstration of each individual measure, grouped into the three identified clusters. This structure allows for immediate comparisons to be made about the demonstration phase work in different sites and hence experience and knowledge to be exchanged. This is captured in the three Cluster Analysis sections which include recommendations for transfer and uptake of DESTINATIONS measures to other tourist and non-tourist towns.

In the majority of cases, measures successfully identified and presented a win-win model for the transport and tourism sectors - and their component organisations - to gain their interest and collaboration. Tourism stakeholders saw the economic value of a city improving the tourist experience, through sustainable mobility. This is the DESTINATIONS approach which can be exported to other tourist cities in the EU.

Hotels and businesses were receptive to promoting their environmental image – such as through green awards, bike share and bike challenges - linking to local SUMP and global Net Zero Carbon objectives. There is potential to roll out similar measures to hotels elsewhere, and as a quick win, to those with the same management as in the DESTINATIONS sites.

Transport authorities successfully attracted the participation of local businesses and tourist attractions in Green Credits and Loyalty Schemes through the allure of their advertising potential. This constituted a win-win partnership.

The success of gaining the participation of residents and tourists was boosted by a combination of social media, internet, radio and other publicity events with the support of local and transport authorities, businesses and hotels.

Across all these measures, new technology was a real enabling factor for new mobility behaviour. New apps were developed, driven by common objectives of transport authorities, tourist authorities and municipalities, and the processes followed were boosted by cross-site exchanges.

Technology such as traffic sensors, parking sensors and ANPR is helping cities to provide decision makers with the data to consider the merits of parking control and Low Emission Zones.

1 Introduction

1.1 Overall DESTINATIONS Objectives

DESTINATIONS will demonstrate and evaluate the effectiveness of innovative sustainable mobility solutions in six tourist cities with different characteristics but sharing common challenges. DESTINATIONS will develop an innovative holistic approach to building sustainable urban mobility systems for both residents and tourists. The project impacts will make a positive contribution to demonstrating how this can achieve growth and therefore provide a benchmark for other EU tourist cities.

1.2 WP6 Objectives

WP6 sees the Design, Implementation and Demonstration (Operation) of a package of measures comprising mobility management, behaviour change, low emission zones and parking management. They are designed for both the needs of tourists and residents and therefore make better use of transport capacity.

1.3 Tasks 6.4, 6.5 and 6.6

These tasks comprise the Demonstration or “Operations” phases of the site measures. They take place following the Design and Implementation stages and see measures being taken up by residents and tourists. They cover the following three clusters:

- Task 6.4 Demonstration of Mobility management and travel plans
- Task 6.5 Demonstration of measures targeted to behavioural change through competition
- Task 6.6 Demonstration of measures targeted to mobility demand

1.4 Del 6.3 Objectives

This report presents the details of the measures demonstrated which have targeted mobility demand management and increased awareness for sustainable mobility. It collates the learning from the individual demonstrations and draws cross-site conclusions for further action by cities across Europe to be used as part of the evidencing and business model for future investment.

2 Mobility Management and Travel Plans Implementation (Task 6.4)

2.1 MAD 6.3 - Mobility planning for tourism related companies

The main objective was to promote sustainable mobility from tourist operators to the end-users and to prepare tourist operators to be ambassadors for sustainable mobility. To reach this objective the local team worked in four steps: Study tourist mobility behaviour; stakeholder engagement; training and information; and communication campaigns.

Annually, HF performs surveys to understand tourist mobility behaviour, studying the: Mode of transport used for each tourist attraction; use of technologies; levels of satisfaction; and suggestions for public transport and soft modes.

It has resulted in various recommended actions: Reinforce the communication strategy; improve the quality of the information at the bus stops; and improve the information provided by the employees.



Figure 1: Stakeholder meeting

The engagement of stakeholders was important to the development of this measure and will be scaled up after the end of DESTINATIONS. Meetings with stakeholders were organized in conjunction with the development of the SUMP-ARM (Sustainable Urban Mobility Plan for all the municipalities of Madeira) and meetings with the project DESTI-SMART (Interreg Europe project).

These activities provided the following lessons learned:

- Hoteliers are very participative in these meetings. However, it was found that taxi companies often give large incentives to hotel staff so that they recommend their services (instead of public transport). This was considered an extra challenge in the fight to promote sustainable mobility.
- There is a general opinion from the hotel industry regarding the need for more action by the politicians in terms of implementing hard measures.
- Technicians need to demonstrate to politicians how the activities planned to improve the sustainable mobility will benefit the residents, and how residents will be aware about these benefits.

As a tourist destination where visitors frequently ask for directions, HF offered English training to the public transport staff (drivers and front office), with the support of ERDF. Front office staff also received training in customer service and care. Between 2017 and 2019 there was a 17% increase in the number of tourists rating the information provided by the PT staff as “Very Good”. Also, there was a 27% increase in the tourist rating the politeness of the public transport (PT) staff as “Very Good”.



Figure 2: English training classes

Hotel managers supported the activity, however when a large number of hotels guests gathered in the lobby at the same time, there was not always enough time to inform everyone checking in about their travel alternatives. This raised the importance of having a paper guide to hand over quickly.

HF staff visited numerous hotel reception desks to explain in detail which PT services connect that site, the different fares, how to purchase tickets, use the mobile application and use of Google Maps to assist exploring of foot. It was considered that by briefing the hotel staff in this way they would be more inclined to recommend public transport to tourists, especially if they have experience themselves. This approach reaped good results in the past when applied to all the PayShop Agents in the city sailing points.

Despite many tourists being keen to use new technologies in their mobility choices, it was found that a large proportion of tourists still prefer to have the information in paper format (notably older generations). Therefore, a bus guide was produced, with timetables and information on how to use PT in general across the island.

The local team has developed various communication campaigns to incentivise the use of more sustainable modes amongst tourists. This included an animation video which was produced, tailored to that audience, showing the advantages of using more sustainable modes of transport. The video was shown on the outdoor screens in the city centre in order to reach the tourist audience and is available on:

<https://www.youtube.com/watch?v=JvagQc32B7M&feature=youtu.be>

After analysing the results of the tourist surveys and stakeholder meetings, it was concluded it was necessary to provide additional public transport information. Brochures and posters were developed and distributed to hotels (e.g. Figure 3) to remind guests of their sustainable



Figure 3: PT poster in hotels

transport options during their stay. This also provided hotel staff with the materials they could use to grab their attention.

2.2 LIM 6.1 – Awareness on the use of sustainable mobility modes for leisure trips

This measure increased awareness of sustainable mobility options for leisure trips in the city. It consisted of a number of promotional campaigns and competitions.

The event called ‘Cycling of Love’ was delivered over two consecutive years in November 2018 and November 2019. More than 250 people took part giving them the opportunity to cycle along the sea front of Limassol. The event was broadcasted on local radio with several live links to the event where organisers and participants were interviewed. The radio station ran a competition where the winner was offered a new bicycle. This was an effective means of raising awareness to large numbers of residents and encouraging their participation at the event.

During the event two racing campaigns were organized one for ride bikes (81 km) and one for all participants (9 km).

Additionally, two city-wide campaigns were organized in May 2019. The first was entitled ‘Awareness on the use of Sustainable Mobility Modes for Leisure trips’. During the campaign a total of 50 tourists had the opportunity to walk in the city centre of Limassol and be informed about sustainable mobility modes during leisure trips. Tourists were invited from local hotels and were keen to participate.

The other campaign promoted the hiking route ‘Genesis Aphrodite’s Trail’ in the Limassol region attracting 45 visitors. The hiking trail was signed posted and mapped with CIVITAS DESTINATIONS logos. Furthermore, a cycling/hiking route to promote leisure trips was created. The route included Arsos, Omodos, Vasa Koilaniou, Platres, of Limassol Region with total length of 22 km.

Informational and promotional material was distributed during the campaigns, events and competitions.

The level of participation by tourists and residents in the campaigns and events showed that there was an increase in awareness of the use of sustainable mobility modes for leisure trips. Stakeholder engagement and support played a significant role for the success of the measure, for example working with hotels in order to approach tourists. However, partnership-working was much broader and involved active participation of the Deputy Ministry of Tourism, Community Councils, Next Bike Cyprus, Local and national media, Local Authorities, Non-Government Organizations, Council for the Promotion of Cycling, Office of the Environmental Commissioner and Tourist information offices. A multi-sector approach – with support at local and national levels - was one of the key success factors.

The unique environment of the island gives the opportunity to sign, map and create specific hiking and walking routes to attract more tourists and organize campaigns to promote the

landscape in the specific area of Limassol region. After this success, there are plans to expand the walking and cycling options for visitors and continue the promotion of existing options through communication activities and working with the tourist sector.

Through the implementation of this measure residents and tourists have been encouraged to use sustainable mobility modes in their leisure trips in Limassol. New routes have been created and people have more opportunities for walking and cycling in Limassol region.

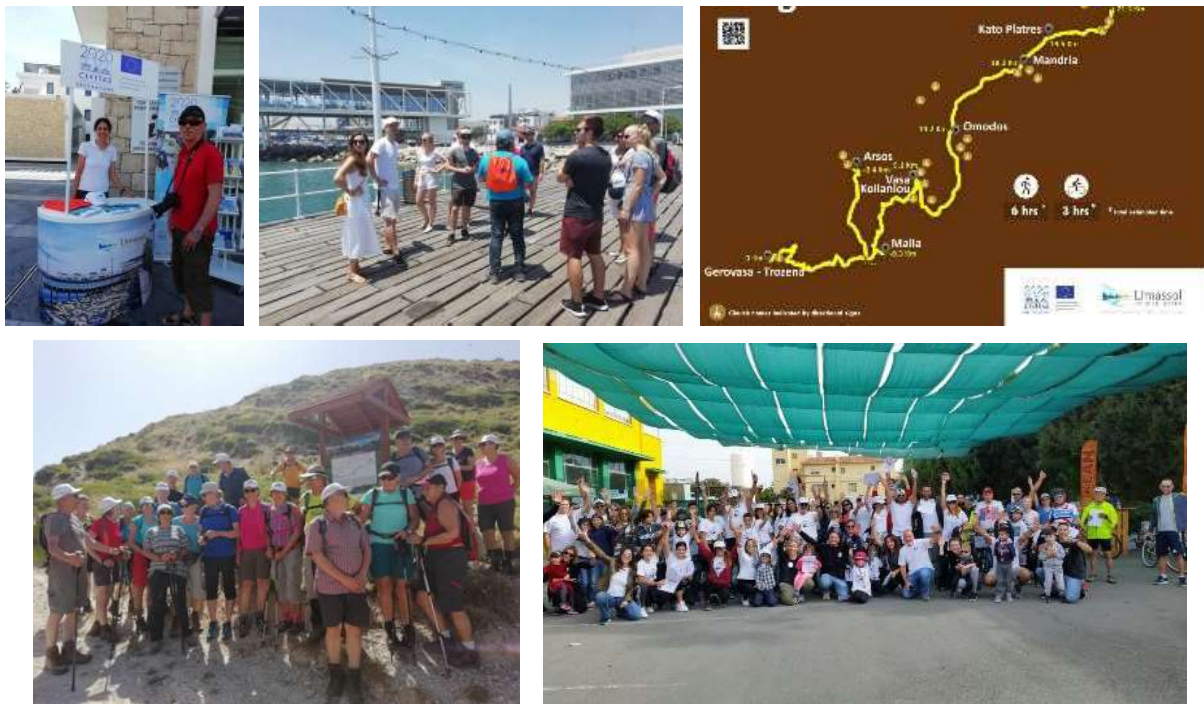


Figure 4: City-wide campaigns promoting sustainable mobility for leisure trips

2.3 LIM 6.2 - Combined tourist and mobility products: Green Label Award and Tourist Mobility Card

Tourism and leisure transport have been enhanced by the actions within this measure. The Tourist Mobility Card assists in increasing the number of leisure trips with the use of sustainable mobility modes by tourists and residents. The supporting ‘Green Label’ provides a distinction to those hotels committed to promoting sustainable mobility, making the hotels more attractive to tourists and incentivising hoteliers to become partners in this effort.

During the operations phase meetings took place with 25 hotels and 30 companies to present the CIVITAS DESTINATIONS project and promote the measure. Incentives were given to hoteliers and companies to improve their services and to promote sustainable mobility modes to their clients. In total 16 hotels in the Limassol tourist area decided to participate and promote the Mobility Card and 22 businesses offered discounts which were made available to tourists using the card.

With the implementation of this measure hotels were committed to encourage the use of sustainable mobility modes by their guests, to share links with sustainable mobility information, to offer sustainable mobility promotional material in their lobby, to offer bike rentals and packages with excursions by bike and to promote the sustainable mobility application. Furthermore, the Card assists travellers to do their planning based on sustainable mobility modes and help them discover both modes and sites they might wouldn't have discovered without this tool.

A supporting brochure was designed and delivered which helped to promote the Mobility Card to hotel guests. The Green Label logo, flags and trophies were all delivered for the Green Label Award. A video was developed as an additional way of promoting both these schemes which successfully raised awareness and participation. In July 2019 the award ceremony took place where the 16 hotels received their awards.

As the main users of the mobility card, tourists seemed to be sensitive about environmental issues and appreciated the link with 'Green Hotels'. Furthermore, employees of tourist sector were very responsive in the scheme, by promoting the mobility card and sustainable mobility options. This in turn increased the number of users of public transport and bike rentals as well as the number of visitors to the 22 participating businesses offering discounts. This represents a win-win model for transport and tourism sectors which can be exported elsewhere. Participating stakeholders included the Limassol Bus Company, bike sharing company-NextBike Cy, bike rental companies, hotels and tourist information offices.

At the political level the Green Label award generated particular support with all mayors of the Limassol regions participating in the award ceremony, and interest to expand the label scheme to hotels outside of the city.

As a result, the Green Label will be maintained by the Limassol Tourism Board in the long run, and the Deputy Ministry of Tourism and regional tourist companies will be encouraged to introduce it to all regions.

The Tourist Mobility Card is a business case which significantly increases the number of bus trips, encourages bike trips and also upgrades the tourist experience. In cooperation with the Limassol Bus Company this action will be maintained in the long run.



Figure 5: Green Label award ceremony

2.4 MAL 6.1 Green Mobility Hotel Award

The Green Mobility Hotel Award and Labelling Scheme is a pilot initiative that focuses on operational practices adopted by the hotel industry which encourage green mobility, and which relates to customers, employees, suppliers and other stakeholders who service the hotel industry.

The main aim of this pilot project was to reduce traffic in the most traffic congested part of the island. It also contributed to the promotion of good environmental practices by tourist enterprises by encouraging actions that improve the travel experience, contribute towards improved transport management and mitigate the tourism carbon footprint.

One of the criteria to be eligible for both the Labelling Scheme and the Award was for the hotels to provide a Green Mobility Plan. The Plan presents the sustainable measures the hotels have in place already in relation to Green Mobility, whilst also indicating any future initiatives that the hotels planned to undertake.

The Award was designed to also encourage partnership applications; an innovative aspect locally. This allowed neighbouring hotels or hotels owned by the same management company to come up with collaborative projects.



Figure 6: Publicity brochure for the Green Mobility Hotel Award and Labelling Scheme

Two events were organised to launch the Green Mobility Hotel competition and Labelling Scheme while other promotional activities were carried out to create awareness and acceptance among the eligible hotels. These attracted approximately 25 representatives from the sector. One-to-one meetings were also organised with interested hoteliers to further encourage hotels to participate.

The grants - which were awarded to the winners of the competition - funded measures such as electric passenger vans, the installation of bicycle racks and made bicycles available onsite for hire through a mobile app with helmets and lockers. Such measures included benefits for tourists, the hotels' employees and the local community, all with the scope of maximising sustainable and alternative transport modes and the general public to consider green transportation as opposed to the conventional mode of transport.

It was important that the grants on offer were applied in a way that benefitted as many people as possible. Hotels gathered feedback from their guests (and their own staff and local residents) regarding what was lacking in terms of mobility services. This information was integrated into their Green Mobility Action Plans, so that it was clear what priorities existed, and so that the grant was used strategically, adding maximum value to tourists, residents and employees.

Two presentations were delivered during the launch and information seminars. These presentations focused on guidance on the Green Mobility Plan. Hotels which did not yet have a Green Mobility Plan were encouraged to pool together as much information as possible to create a Plan for their hotel and thus be eligible to apply for both the Labelling Scheme and the Competition. The other presentation gave guidance to hotels with regards to the application form and the evaluation process to help on the administrative side.

During the initial stages, the Ministry for Tourism met with stakeholders, including the Malta Hotels and Restaurants Association whereby the project objectives and scope of the measure were explained. MHRA provided practical support such as promotion of the project (including the dissemination of emails) to encourage participation from hotels. Such meetings also helped to increase awareness of this initiative, incentivise the industry to apply for the Green Mobility Hotel Award while also facilitating the dissemination of outcomes of the project.



Figure 7: Launch and information seminar

The Ministry and the mentioned stakeholders worked closely through the development and implementation of this project, ensuring that recommendations and feedback were sought given their expertise in the tourism and hotel industry while also keeping a close working relationship with Transport Malta and the University of Malta as local partners in this project. This approach added to the measure's success.

The Ministry for Tourism obtained a list of licensed hotels located in the inner and outer part of the Valletta Harbour. Licensed hotels in this area were eligible and were sent several emails and followed up with phone calls to ensure that the hoteliers received the information on the Award and the organised information sessions. There was interest amongst the hotels to 'think

green' on the basis that it would assist sustainability and had the potential to lower costs for the business.

Interest was also received positively from hotels which were not located in the area of this pilot initiative, such as those operating by the same management. If this measure were to be repeated, it would possibly receive much more interest should it be open nation wide, rather than for hotels in the Valletta region only.

2.5 RET 6.1a Sustainable mobility agency for tourists/visitors & RET 6.1.b: New products combining tourism and mobility

The measure focuses on the design and promotion of new quality products and services for sustainable tourist mobility and transport. It offers accurate information related to alternative mobility options, aiming to raise awareness on environmentally friendly transportation and to improve the quality of the overall service offered to tourists by enhancing the quality of environment, mobility and accessibility of the city. The measure delivered:

- A new facility, the Sustainable Mobility Agency which is now in operation. It is incorporated into the Municipal Technical Services Department structure;
- A study on mobility patterns of visitors and citizens;
- Design of new services and travel plans to key tourist attractions;
- Content development, web design and back-end operations of a mobile application to promote sustainable mobility options before travelling to the destination;
- Promotional campaigns and material to promote available alternative transportation modes (social media campaign, new maps of walking and cycling routes combining tourist attractions).

The Agency – the first of its kind at regional level - coordinates all transport activities in collaboration with tourism stakeholders. An online platform to support sustainable mobility plans for selected routes, accessible through web/mobile devices, is being developed, aiming to achieve a modal shift towards cycling, walking and PT. It supports the take-up of the new mobility services for greener transport offered by the municipality, such as the new electric bus. So far, the Agency has overseen an increase (month by month) of new shared mobility systems and new public transport services (like the e-bus) based on monitoring sheets fulfilled daily from e-bus driver and the new service performance monitoring.

This visible commitment of collaboration between municipality and tourist authorities through the Agency can be considered an important factor in micro-mobility companies deciding to launch scooter and eBike schemes in the city.

The Mobility Agency successfully collects and combines into a single platform all information coming from different sources and operators with regard to the available alternative transportation modes in Rethymno. This has enhanced the visitors' experience when planning their journeys in the area, especially when combining sustainable mobility services.

Initially, the Sustainable Mobility Agency was planned to operate as an independent service. After examining different scenarios for this option, it was decided to incorporate the agency into the Technical Services Department existing structure in order to ensure long term viability and sustainability of the Agency after the end of DESTINATIONS funding.

One of the success factors for this measure lies in a coordinated and cross-sector partnership established with relevant local authorities and stakeholders, from tourism and transport sectors, providing their consent, consultation, support, funds, and content needed to launch such an innovative service in Rethymno. The active engagement of the stakeholders was the result of a sequence of bilateral meetings, consultation events, workshops, and living labs.

The cross-sector stakeholder groups included local authorities and urban planners, tourism associations, transport providers, NGOs, Chamber of Commerce, Traffic Police Department, Municipal Tourism Office, Hoteliers, Tourism Agencies, Public Transport Operator (KTEL), Bike rental companies, Sharing Mobility Systems operators, Atlas Cycling Union, Association of Active Citizens, Initiative of Citizens for Road Accident Prevention and the Promotion of Road Safety.

These stakeholders were already involved in the consultations relating to the revised SUMP also being conducted through DESTINATIONS. They were motivated to join forces for the scope of the Agency, as each organisation shared an interest in enhancing the image of the city as a sustainable tourist destination, supporting their long-term business objectives.

The nature, influence and level of power of each stakeholder defined also the level of involvement to the measure development.

The strong support at political level, in order to achieve the stakeholder engagement was fundamental. Demonstrating to the stakeholders that there is a robust political will towards to innovate and support strategic actions to achieve the vision of sustainable mobility was another decisive factor.

The identification of targeted messages to engage each of the different stakeholders' groups attracted their interest and fostered their willingness to participate the development process. For example: *environment-public health* was the key message in the discussion with the "Association of Active Citizens", *better tourism experience-better services* was the message for tourism agencies and hoteliers, *modal shift-encouragement towards more sustainable travel modes* was defined as the link with bike renting companies and cycling associations.

The Municipal Tourism Board has proved the most active stakeholder. Having a direct relation with the measure implementation a strong partnership has been formed with the Municipal team. The Municipal Tourism Board has embraced and supported the sustainable mobility concept. The close relationship and continuous support during dissemination activities, consultations events and new services design is considered an important success factor.

The PT operator has also been very active, providing all relevant information required for the platform content as well as routes, itineraries and potential improvements. Also, the active participation of the local unit of the Technical Chamber of Greece, built from the first step,

played an important role during the consultation workshops providing its experience and advice on appropriate mobility solutions.

Regarding transport safety, surveys conducted during the summer of 2019 found that visitors generally expressed a higher level of satisfaction than the residents. Tourists and local pedestrians were the most satisfied user group concerning perceived safety levels.



Figure 8: Sustainable mobility campaign for citizens and visitors, “Design days” open air, drop-in labs, eco-driving events

Tourists and citizens were involved in a number of “design days” under the theme “Learn – Share – Inspire – Change”. These took the form open-air, drop-in, interactive workshops, delivered by Technical University of Crete, with large thematic exhibition boards placed at central locations. Participants learned about new installed infrastructure and mobility services and were invited to share their preferences on alternative routes, new mobility services, via feedback forms, structured questionnaires and to “vote-by-pin”. Feedback was gathered and fed into the planning of multiple DESTINATIONS measures including:

- new walking/biking/PT routes;
- EVs charging and parking slots;
- new e-bike and e-scooters sharing systems;
- designated routes and services for disabled people;
- car-free zones;
- preferred route for the first mini e-bus.

Overall, the Agency has had a cumulative effect on enabling the uptake many of these supporting measures.

2.6 ELB 6.1 - Combined products for tourism and mobility: the accommodation and mobility package

The aim of this measure is to promote integrated packages for Elba's hoteliers, combining accommodation with sustainable and shared mobility services, in the so-called "tourism + mobility" package. The core aspect of this measure is that tour operators/hotels/camping sites make an agreement with transport operators, in order to offer special tourist packages that include accommodation and transport services. This includes public transport rides, taxis, bikes and shared vans. This initiative was realized with the main objective of obtaining a significant increase in the number of tourists coming to the Elba Island without their private cars or, at least, not using their cars for travelling within the island. This contributed to reducing air and noise pollution, CO2 emissions, traffic congestion, energy consumption, and improving the quality of life in general.

The efforts of both the Municipalities of Portoferraio and Rio in this direction have produced the following outputs:

- Surveys amongst hoteliers in order to know tourist mobility needs on the island;
- E-bikes rental:
 - Launch of two different calls for tender in order to select the rental operator and the hoteliers; then, signing of Agreements with 11 Elba hotels and the bike rental operator Gallo Auto, in order to rent 40 e-bikes with the long-term formula destined to hotel guests;
 - 40 electric bikes rented by the hotels, with the economic support of the Municipalities for the first year (activation of the service, maintenance and rental service). The amount for the second year was covered by the hotels, with the possibility to redeem the e-bikes at the end of the entire period.
- Public Transport and seasonal ticket promotion:
 - Meetings with the Elba Hoteliers' Association, the local public transport company CTT Nord and the hoteliers to promote the new seasonal ticket "Elba Card", resulting in an agreement between them to purchase the Card on consignment in order to sell it directly to their guests;
 - Possibility for the tourists to buy various forms of subscription to the public transport services (i.e. "Elba Card"), directly in the hotels.

Some hoteliers confirmed, at the end of the trial, that they wanted to redeem all the bikes they had rented, whereas others only wanted to redeem some of them. This is a positive outcome and showed that this service has been attractive to guests. The trial also showed that mountain bikes would also make a suitable model for the terrain and mix of users and so next year a

mixture of bikes are expected to be rented. A few hotels found that they were not best located for bicycle access and would not take part in future.



Figure 9: eBikes in Elba

One successful approach – to attract hotel participation - was to hold a meeting with the Hoteliers’ Association and Trade Associations before the tourist season started to showcase the proposed eBike service in order to get advice on how best to implement and their support to communicate to the hotels. Stakeholders could appreciate the economic value of cycling mobility to the tourist sector and were very supportive.

The Hoteliers’ Association were also instrumental in promoting public transport services on the island thanks to several meetings with the local PT Operator. Here the new SMS bus ticketing system and seasonal ticket “Elba Card” were presented. During the meetings, flyers and information material was distributed and hoteliers were invited to promote the public transport service among their guests, pursuing the goal of fostering sustainable mobility discouraging the use of private cars. In addition hoteliers were asked to provide PT information and tickets to tourists through their receptions, working as official PT offices.

During the first year campaign, hoteliers accepted to give information to their guests and incentivize the use of public transport, but only a few decided to sell tickets.

In the following year, some selected hoteliers were asked to purchase the seasonal ticket “Elba Card” on consignment; this solution was very suitable for hoteliers as they would be reimbursed for any unsold cards. Most of them, in fact, accepted the proposal. The Hoteliers’ Association participated in the whole process facilitating the relationship with individual hoteliers.

TAKE A BUS, LEAVE YOUR CAR.

ELBA ISLAND BY BUS
 You can see the whole island from the city center to the main places of interest. So you can travel at any time, with benefits and no stress. So you can avoid parking problems and you travel respecting the environment.

CHECK THE TIMETABLES ON
www.livorno.cttnord.it
 Or download the free apps

tesep CTT Nord.it **B On Time**

WHERE CAN I BUY A TICKET?
 At every authorised retailer

Via SMS
 Send an SMS to 488096 writing:
 ELBA 1€ - one-day bus up to 100km/20 min - € 1,00
 ELBA 2€ - one-day bus up to 200km/30 min - € 2,00
 ELBA 3€ - one-day bus up to 300km/40 min - € 3,00
 ELBA 4€ - one-day bus up to 400km/50 min - € 4,00
 + SMS cost

WHAT IS ELBACARD?
 A special ticket that allows you to use all the buses of the urban and extra-urban network for 1 or 6 days at a special price.

WHERE CAN I BUY ELBACARD?
 At Portoferraio bus station, some authorised retailers and affiliated hotels and campsites

1 day €10,00 - 6 days €25,00

Ticket price from Portoferraio to the main destinations (for any more destinations visit our website)			
	One-day ticket	Tablet or Board	Ticket via SMS
Marina di Campo	2,00	4,00	2,90
Marciana Marina	2,00	4,00	2,90
Marciano	3,00	6,00	3,80
Portoferraio	3,00	6,00	3,80
Capoliveri	2,00	4,00	2,90
Porto Azzurro	2,00	4,00	2,90
Rio	3,00	6,00	3,80
Cape	3,00	6,00	3,80
Capraia	2,00	4,00	2,90
Laocaia	2,00	4,00	2,90

NETWORK OF EXTRA-URBAN LINES

Portoferraio - Porto Azzurro
 Rio - Rio Marina
 Cape (via disonazione Capoliveri)

Portoferraio - Marciana Marina
 Portoferraio - Marina di Campo
 Portoferraio - Capoliveri, deviation to S. Ilario

Portoferraio - Portoferraio - Leccia
 Portoferraio - Rio Marina
 Portoferraio - Rio Azzurro
 Portoferraio - Rio Marina
 Portoferraio - Porto Azzurro
 Portoferraio - Capoliveri

Portoferraio Bus Station - Viale Elba, 20 - Tel. 050 884000 - www.livorno.cttnord.it

Promotional campaign: meeting with hoteliers in order to promote public transport and Elba Card to tourists

TAKE A BUS, LEAVE YOUR CAR.

ELBA CARD

What it is? A travel ticket that allows you to use all the buses of the urban and extra-urban network for 1 or 6 days at a special price.

What it costs?
 One day 10 euros
 Six days 25 euros

Where can I buy? At Portoferraio bus station, some authorised retailers and affiliated hotels and campsites.

IT'S CONVENIENT WITH CTT NORD!

Figure 10: Public transport flyers and campaign meetings

The most innovative aspect of this measure is the “win-win approach” for both Municipalities and hotels, whereby, thanks to the shared cost model, more hotels could afford to participate and rent the eBikes. The selection of eBike over a normal bike was an important success factor as it attract a larger demographic of users, with varying levels of age and physical abilities, especially on hilly terrain.

Thanks to the well coordinated engagement of stakeholders and the selection of an attractive product and shared cost model, this measure received a warm welcome by both the hoteliers and the tourists using the e-bikes.

This was underpinned by press releases and posts on Facebook and Twitter as well as the social media and websites of the hoteliers themselves.

One of the hoteliers in the Portoferraio area explained, for the accommodation facilities that are located in isolated neighbourhoods, not served by public transport, the electric bicycle could be an indispensable means of transport on the island. Especially in the summer months where there is little space for car parking.

2.7 Cluster analysis

2.7.1 Recommendations for enlisting hotel participation

Many measures in this cluster saw project partners successfully enlist the participation of hotels in different types of activities promoting sustainable mobility amongst guests and local residents.

Measures ELB 6.1, MAL 6.1 and LIM 6.2 all devised terms and conditions which obliged hotels to strengthen their overall sustainability policies as part of participating in the Awards and Combined Mobility Package. For Elba this meant hotels signing agreements to promote public transport to their guests. In Malta, hotels were required to develop or improve their Green Mobility Plan and provide additional energy efficient service alternatives. In Limassol, hotels had to offer the new sustainable mobility application to guests and promote local bike sharing services.

This was considered a successful way of guiding the sector in the right direction for long lasting impact. In order to reduce the bureaucracy of the scheme Malta provided hands on support for completion of application forms. Both Malta and Limassol found that hotels within the same chain were keen to enlist the participation of some of their other sites in the Award: a very efficient way to expand the scheme.

There is more potential here to roll out to hotels of the same management in different cities and countries.

The key success factor for Limassol in attracting 16 out of 25 hotels to join the Green Label Award was the intervention of the tourist board who used their established relations to send one to one emails to hotel managers strongly encouraging them to complete the application forms. Hotels were also attracted by the new Mobility Card concept, a first for the country.

In Elba, hotel interest was secured thanks to meetings before the tourist season with the umbrella Elba Hoteliers' Association to gain their support. Then the bike rental company was selected before one to one meetings with hotels using good practices and showing the precise eBike model on offer, along with the cost structure. A simple application form was also important. The shared rental cost model has proven to be a successful way of reaching out to multiple hotels.

Driving factors from the hotel differed, where in Malta the cash grant to buy sustainable mobility facilities was a strong lure, whereas in Limassol, the main interest from hotels was the Award itself and the related publicity which in turn generated political interest.

All these approaches were important in gaining hotel participation. Feedback from the sites did indicate the large amount of staff time needed before during and after the two award schemes and the eBike rental to keep hotels informed, active and committed as well as communication in the press. However, the potential long-term impact is high, as a result, Limassol saw a bike share company set up a stand outside a hotel as a result of the publicity of its award. Further, the award will continue thanks to interest generated with the local mayors. In Elba, many hotels have since confirmed they will purchase the eBikes to take the scheme forward. These approaches could be replicated in other tourist towns.

Madeira was also successful in gaining hotel interest in MAD 6.3 by offering a specific service, namely, to train up staff on how to use the new travel information tool and paper guides. Hotels were responsive to the direct approach and the HF drew on its commercial team to deliver this service which was a success factor. One useful finding was that taxi firms incentivise hotels to promote their services, and so this is an area to be considered when approaching all stakeholders.

2.7.2 Stakeholder Engagement and Communication

It was proven throughout that it was possible to enlist interest from multiple sectors – many who had not previously communicated together - to deliver a measure by finding common areas of vested interest. In Rethymno, the required stakeholder cooperation and data sharing to enable the Mobility Agency was only made possible thanks to a sequence of bilateral meetings, consultation events, workshops, living labs via a cross-sector partnership. Tailored messaging to different audiences such as public health, environmental and economic benefits was also a key success factor.

The success of attracting residents and tourists to awareness-raising events in LIM 3.1 was due to a combined approach of social media, internet, radio publicity activities enhanced by the support of the Ministry of Tourism. This combination of social media and ministry support was also instrumental in gaining the interest of hotels to participate in Malta's Green Mobility Hotel Award MAL 6.1. The hotels in ELB 6.1 were also very keen to use their social media channels to promote the eBikes. This is a common finding which should be noted when taking such measures forward.

Each measure in this cluster successfully identified and presented a win-win model for the transport and tourism sectors – and their component organisations – to gain their interest and support. This means that tourism stakeholders saw the economic value of a city improving the tourist experience, specifically through sustainable mobility. This is ultimately the DESTINATIONS approach, and it can be exported to any tourist city in the EU.

2.7.3 Checklist

In order to win the interest of hotels, restaurants and attractions to participate in combined transport and tourism services, it is recommended that municipalities should:

- Hold individual meetings and those with associations to understand tourist sector needs, mutual interests and barriers to cooperation. Identify win-win scenarios. Such meetings can be more successful when held at touristic areas, creating the best environment for discussion about the promotion of sustainable transport.
- Underline the environmental (image / publicity) and economic (more tourists) benefits of participation, linking to local SUMP and global Net Zero Carbon objectives.
- Enlist high level support of tourist ministries or tourist boards who can help influence tourist organisations.
- Joined up promotional activities harnessing press, radio, internet, social media, animated videos and big screens in public areas to capture resident and tourist market
- Tailor and offer a combination of services (e.g. training to hotel staff on journey planning tools), award schemes (e.g. for green travel plans) and grants (e.g. cash to provide bike rental) so that hotels become the 'front of house' for city's public transport promotion
- New technology like journey planning apps can offer some tourists a handy tool, but many still prefer paper-based information which needs to be taken into account

3 Behaviour Change Through Competition (Task 6.5)

3.1 MAD 6.1 - Gamification as a way to induce behavioural change in Mobility

The measure's main goal was to promote sustainable transport modes, the public transport in particular, through games and interactive innovative experiences. **Two main outputs** were produced, the MARGe mobile application (MadeiRA Gamified experience) and the interactive bus stop prototype. The design of the both solutions required the assessment and analysis of different existing solutions, with HF support, aiming to change the waste of time perception to an enjoyable one and, thus, encourage users to try the public transport.

Both main actions were **innovative** in that they made the public transport experience more entertaining, challenging by playing games while waiting for the bus, and also educational through the surveys that were included. In both solutions, the main innovative component was the use of gamification approach, which is based on the use of game elements in non-game contexts, by turning regular activities into engaging ones.



Figure 11: MARGe Application

From the initial design to the final version, the approach and the technologies used to develop the **MARGe app** have changed due to the need for several functional, technical and communication adjustments. Overall, the game intended to encourage the passenger to use the public transport to reach the main touristic sights and, as such, test their knowledge about these attractions, and in so doing, collect points.

The initial approach was based on a cheaper and more limited beacon technology (Estimote beacons). The beacons allowed for a precise control of user location (e.g. to be sure that the user is certainly inside a bus or next to a specific bus stop), and for the adventure game to

proceed through to the final destination. During 2018 the first pilot version was developed in gamification and by the end of the year, the first tests with the app started. In May 2019 the installation of the equipment started with 4 beacons at each of the main bus stops, 20 beacons on 10 buses and 6 beacons at the tourist attractions. At this point the solution covered only 2 adventure games. It transpired that the beacons weren't robust enough for the public transport operation, due to the signal strength and the durability of the batteries, and that the mobile app had also several functional constraints.

To overcome this, ARDITI studied and acquired a new set of beacons that had better durability and performance characteristics (iBeacon protocol with Sensoro smart beacons). In August 2019, the new beacons were installed and the test resumed with HF support. The new beacons worked correctly, but besides the successful tests with the new equipment, it was decided to drop out the beacon approach, because it would require the installation in all buses, which wasn't financially possible within the short timeframe.

To proceed with the game, it was decided to move forward with a simpler solution that didn't require the beacon to detect the passenger inside the bus, but only the GPS to detect the touristic destinations (bus stop). This approach allowed the MARGe app to cover the adventures/touristic points in all the city of Funchal (not only 2 adventures, as initially) and as such, have a more interesting gamification app. The final version was made available for public demonstration in March 2020. After the conclusion of the app, it is planned to be promoted among tourists in the visit Madeira website, and among residents in the website of Horários do Funchal.

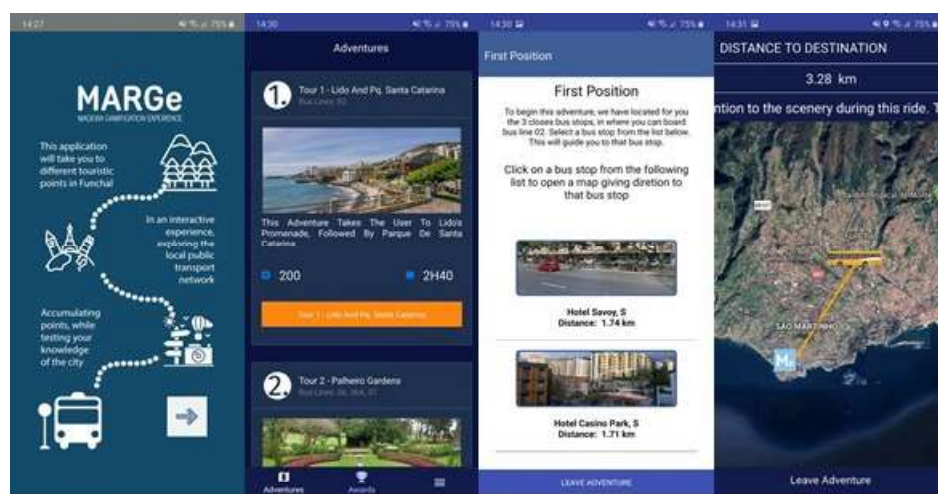


Figure 12: MARGe Application: main screen, adventure selector, start and guiding (English version, in Android).

The **interactive bus stop prototype** is due to be launched in July 2020. Firstly, other examples were reviewed by ARDITI and HF before cooperating with M-ITI (Madeira Interactive Technologies Institute) to launch a “Bus Stop Design Challenge” to university students. The goal was to (re)design a bus stop able to improve the citizen and tourist experience in using public transport.

During December 2019 ARDITI initiated the required developments for the game. The prototype included a touch screen installed at a school premises close to the bus stop. The game besides having a didactic component, intended to promote the use of public transport while entertaining the students while waiting for the bus.

The plan is to have a game that comprises the personification of the city of Funchal, in a simple map, where the students, in a competition base, can manage the traffic and the traffic lights to ensure the bus arrives on time to the destination. A simple scoring system will be included to induce competition between students, according to factors of the game such as the waiting time for the bus, or the number of modified traffic lights.

Both activities promoted the **involvement** of residents, tourists and other regional and international stakeholders. The development of these entertaining tools was shared in detail with project partners (Malta and Rethymno). It is considered transferable to other sites, installing back office and creating new adventures.

3.2 MAD 6.2 - Green credits: A Business Model for Mobility, Sustainability and Tourism.

Since October 2019 passengers of the public transport operator, Horários do Funchal, have had access to a selection of benefits. This is an initiative called “Public Transport Friend” <http://www.horariosdofunchal.pt/amigos/?lang=en>. Also, the employees of Horários do Funchal (HF) have access to these discounts.

By March 2020, HF had welcomed 27 businesses to this network and continues to promote and enlarge it.



Figure 13: Advertisement in bus door

The promotion of this initiative to passengers and potential business partners started in September 2019. For the communication strategy Horários do Funchal sent updates via their Facebook and Instagram accounts attracting a younger demographic whereas it targeted older residents via local newspapers and flyers. Tourists was targeted via its posters in hotels.

In addition, the businesses participating in this initiative promoted the use of public transport via their communication channels. This was the most innovative part of this measure, having multi-sector entities (with a broad variety of customer contracts) promoting and encouraging the use of public transport. This cross-sector working can benefit the public transport operator, acting as a win-win with “free” advertising and reaching out to both local and tourist groups. This approach can be transferred to other similar sites.

This measure started with two parallel paths. One was the beginning of the establishment of a partnership with local businesses. Another was the technical study to develop the system.

Commercial agreements were set up regarding promotional fares, discounts and combined products for both, residents and tourists. An agreement was reached with "Frente Mar" (the local municipal company responsible for managing the local beaches) to provide discounts for monthly pass passengers.

This enrolment of local business was necessary to create the network of Public Transport Friends. The website of this initiative allows to a business owner to apply to the system themselves.

The best way to reach agreements is via direct personnel contact with the business owner, explaining the benefits of the initiative and using the opportunity to promote other HF services, such as the bus door advertisement, in this way negotiating the best solution for HF and the business owner. Five restaurants were reached as well jewellers, opticians and a pharmacy offering a mix of tourist and resident interests.

Several interactions were carried out to perform the design of commuting green credit platform solution and development of Business Plan. An analysis was performed on existing solutions to track user mobility patterns and gain points, including meetings with industry providers BetterPoints, LuxMobility and PostitiveDrive.

HF, with the support of ARDITI and the University of Madeira, defined the technical requirements for the Green Credit Scheme, considering the link with the HF systems, and all types of ticketing systems of the local business (small and large companies) It also considered the public transport user needs and their preferences.

However, the development of the Green Credit Scheme has a strong dependence on the ticketing system (measure MAD 7.4). The current ticketing system does not allow a connection to a new Green Credit Scheme, and the new ticketing system installation for all the bus fleet will only be complete in 2021 with European Regional Development Funds.

To overcome this problem, HF decided to reformulate a tool developed in a former project SEEMORE (Intelligent Energy Europe). With some improvements, the website for the "Public Transport Friend" was launched on October 2019.



Figure 14: Publicity of the initiative in the social media of a partner



Figure 15: PT customer having a discount in one of the initiative partners

This measure also has a strong connection with other measures more related to dissemination and promotion of public transport use (MAD 2.1 and MAD 7.2). For example, in measure MAD 2.1, to promote the use of public transport, for the Valentine's Day, HF developed a photo contest, couples should take a photo inside the bus, and the 3 best photos won a gift from the partners of the Public Transport Friends.

Two months after launching the initiative, HF surveyed its customers in the most frequented selling points. It was found that 23% already knew about this initiative. HF continues to establish contacts with the current partners to find out how customers are joining and what can be improved. This measure has been a big success, with 27 businesses brought on board, high public awareness, cross sector working, the approach for which is transferable to other similar sites, without huge technical effort.

3.3 LIM 6.3 - Bicycle challenge: competition between employees of companies

The 'Bicycle Challenge' campaign, took place in 2017 and 2019 lasting three months each year, in order to promote cycling in everyday life and particularly from home to work. Several meetings took place with the companies to inform them about the campaign. Presentations were delivered on the benefits of cycling followed by discussions with management and employees. During the meetings, ideas and suggestions were exchanged about the typical routes that were followed from home to work as well as safety concerns.

The participants used their own bikes for the competition, using mobile applications to record the distance travelled each day, the cycling time and the route. Upon completion of the campaign, information was collected and each participant received a certificate as well as a prize depending on the longest distance covered.

The companies that participated in the campaign during 2017 included BSM Cyprus, Polyclinic Ygeia, KEO Ltd, MAM Baby and Marlow Navigation Co Ltd, while in 2019 included CASSIOPEIA Shipmanagement Ltd, KEO Ltd, Elias Neokleous & Co LLC, and Intership Navigation Co Ltd. Participants were interested in taking part in view of the environmental, health and other benefits that emerged from meeting discussions.

This measure aims to change the habits of locals and support them to become actors in their own town by promoting cycling in their daily life. The employees that participated in the bicycle challenge had a positive experience and became more aware of using cycling as a mode of transportation.



Figure 16: Participants of the campaign 'Bicycle Challenge'

The campaign generated a high level of awareness of the bicycle as a valid mode of transport with acknowledgement especially of the health benefits, hence shifting traditional cultural values. After the completion of the campaign most participants expressed that they would like to keep cycling to work. Following our communication, most of the participants continue to use their bike to get to work.

There was a very good collaboration between various key stakeholders which was a factor in the success of the campaign. The Limassol Chamber of Commerce, Limassol Tourism Board, the KMeaters Cycling Club, Limassol Cycling Club and Limassol Municipality promoted the campaign and motivated employees to use bicycles to commute to work.

The combination of this campaign along with the extension of cycling routes and bicycle parking facilities has had a cumulative effective on increasing the visibility of cycling as a real transport mode.

3.4 LPA 6.1 - Green Credits Scheme

Guaguas Municipales has been working to introduce a loyalty system scheme to encourage citizens to adopt more sustainable lifestyle patterns by providing tangible economic rewards. Hearths (Points) are accumulated as rewards for using public transport that can be used to acquire products or services at a variety of places, such as shops, museums and theatres.

The loyalty system scheme is an innovative approach to attract citizens towards sustainable modes of transport and the same time as boosting the local economy by pushing users to purchase products and services at a variety of places. The development of this measure took place within the DESTINATIONS business development sessions, where technical, commercial and financial issues were discussed.

It is all about creating a Win-Win strategy benefitting both the urban public transport company and local business through better, cleaner and friendlier city.

This loyalty system is called “**Guaway**” and was ready to be launched at a public event on 31 March 2020.

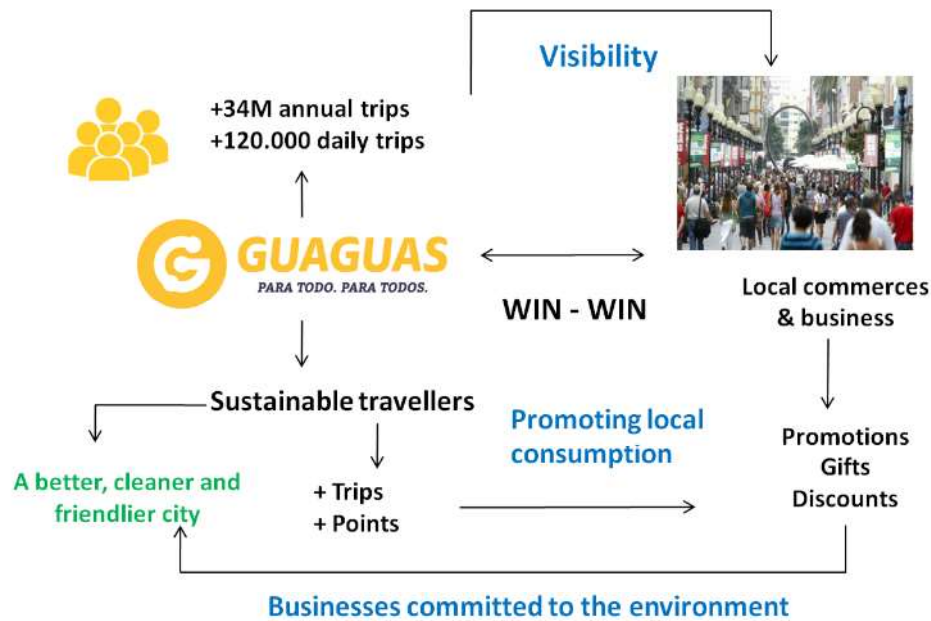


Figure 17: Scheme of Loyalty system

Las Palmas de Gran Canaria disposes a contactless smart card system that allows customers to pay for urban public transport trips. There are several kinds of bus cards and tickets that offer prepaid as well as social discounts (students, elder people, unemployed).

GuaguasMunicipales has developed the loyalty system in two different parts making use of trip data that can be easily consulted.

The first one is a front office system based in a webpage with the following features:

Customer features

- It allows customers to register in the system by linking their contactless smartcard with their personnel data profile so each public transport trip will be added to their loyalty system account.
- Customers see which kind of offers and discounts are available and the businesses taking part
- Customers are able to check the number of points accumulated and decided when to convert points into promotions or discounts
- Customers are able to take part in monthly raffles.

GuaguasMunicipales features

- GuaguasMunicipales can manage the businesses participating and the offers and discount available

- GuaguasMunicipales can manage and validate the customer profiles and the correct association among customer and contactless smartcard.

Business features

- It allows businesses to manage and amend the offers and discounts that they are making available in the loyalty system.

The second part is a back-office system that connects with the contactless smartcard database. This reveals the number of trips of each individual contactless smartcard such that the points earned by each registered customer are updated within 48 hours.

A process diagram illustrates the loyalty system as shown below.

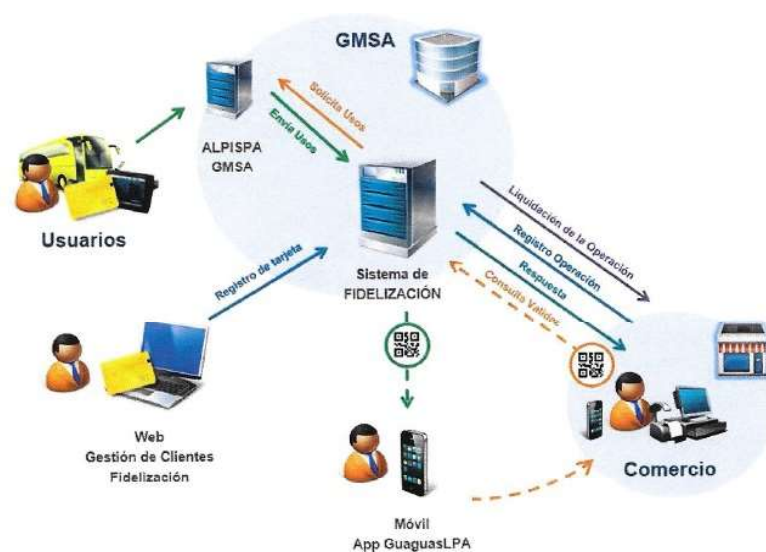


Figure 18: GuaguasMunicipales loyalty system diagram process

During the first operation stage, the loyalty system will be based on a webpage, but at the second stage, the current GuaguasMunicipales App will be included as a platform.

This improved app will have four essential purposes:

- Real time information about urban public transport;
- Real time information about the main events, shopping discounts and other highlights;
- Become a tool to change mobility behaviour;
- Provide a positive impact in order to promote local commerce.

Commercial issues

This is the first time a loyalty system is being developed for an urban public transport company in Las Palmas de Gran Canaria. To help make it a success, GuaguasMunicipales has used its

annual customer survey to ask passengers for suggestions on the kind of discounts or promotions that would be of most interest to them.

Guaguas Municipales has met with local business and commerce in order to arrange their commitment to take part by offering promotions, gifts and discounts (all of them related to sustainable, healthy or cultural activities) through the loyalty system. As such these businesses are promoting to their customers, the public transport services in the city.

Businesses quickly saw the win-win scenario of taking part considering the potential advertising power of Guaguas Municipales who will also promote these discounts through its webpage, social media and at related events. With 38 million customers per year this has a potentially large outreach.

In order to carry out this project, Guaguas Municipales started to meet at high level (Gran Canaria tourism board, tourism department from Las Palmas de Gran Canaria Municipality, business associations, etc) to present the idea of a loyalty system for the urban public transport in order to look for adequate partners. After the initial meetings, Guaguas Municipales was put in touch with local business that could be interested in taking part in the project.

In order to be allowed to take part, businesses (as well as individuals) must show that they are committed to at least one of the following topics. This is a smart way of ensuring participants are reminded of the bigger picture to their mobility behaviour:

- Less pollution, that means a cleaner air and environment (prizes are related to outdoor activities such as trekking, paragliding and so on);
- Less traffic jam, that means less noise in the city (prizes are related to entrees for concerts, theatre and so on);
- Less rubbish, that means a cleaner city and ocean (prizes are related to water activities such as kayak, scuba diving, surf and so on);
- Less stress, that means healthy citizens (prizes are related to healthy experiences such as healthy restaurants, yoga, spas and so on).

3.5 MAL 6.3 - Promoting sustainable mobility among tourists

A Sustainable Mobility app was created, MyMaltaPlan, which informs tourists of the location of the main tourist attractions on the Maltese Islands and how to get there using sustainable mobility options, such as bus, ferry and on foot. It aims to improve the visitor experience, whilst also collecting data about tourist mobility behaviour to assist long term tourism transport infrastructure planning.

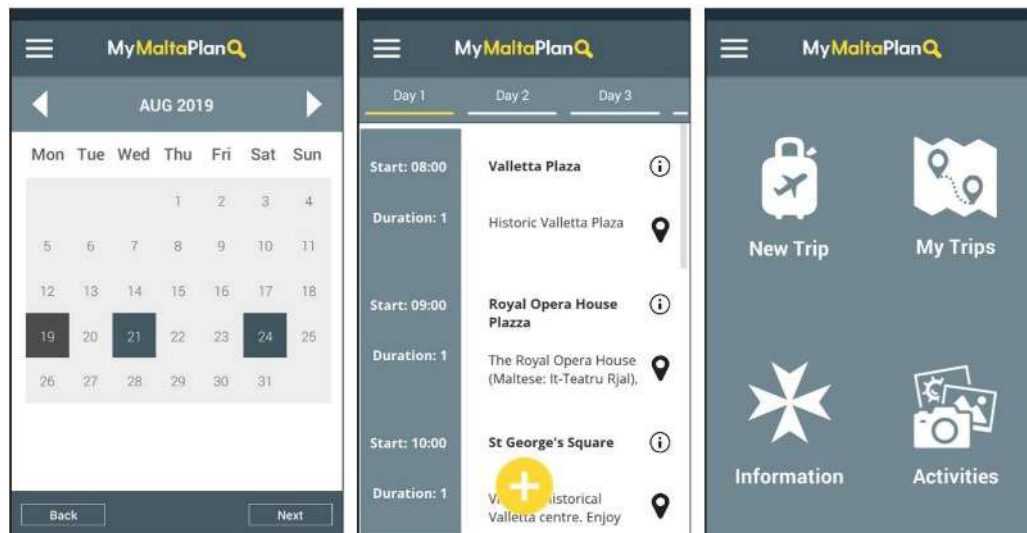


Figure 19: Screenshots from MyMaltaPlan

The novel contribution of the MyMaltaPlan app lies in the creation of a random customized trip timetable, based on the user's preferences, dates of arrival and departure, and opening hours of activities.

The development and deployment of the Sustainable Mobility app was supported by a series of workshops with Tourist Operators as well as the implementation of a marketing campaign. There was also collaboration and knowledge exchange between project partners, through site visits and work placements between UM (Malta) and ARDITI (Funchal, Madeira). During these exchanges, the possibility of a credit system to be incorporated was studied. Throughout the work placement, HCI Design methodologies were used to identify different ways in which the problems identified in each respective island could be tackled. The HCI methodology used included identifying the initial problem, identifying the intent of the project, acknowledging the target audience, developing the context and finally framing the solution. This was brought forward through the use of a process used in HCI where ideas and keywords are first generated to identify key concepts and then cohesively mapped to identify the final solution that can be adopted in the project.



Figure 20: Information session held at Transport Malta, promoting MyMaltaPlan

A survey to better understand tourist mobility on the Maltese Islands was designed and delivered to capture the baseline. The second and final survey is planned for April 2020 to assess the impact of the app and identify any change in the modal shift from the baseline.

The app has been well-received by the Ministry of Tourism. This measure is a good example of a successful collaboration between DESTINATIONS partners.

Ties have been strengthened with tourism operators through the organisation of a series of workshops to promote the app and show operators how to contribute information about their tourism operations.

Meetings with the stakeholders were then held to identify user needs and compile the baseline scenario with data about current tourist transport. This initial phase assisted the developer in designing the specifications of the app taking into consideration how the tourists will access it, how it will gather data without infringing data protection laws and the software which will need to be installed at Transport Malta to host the app. During these same stakeholder engagement meetings, it was identified that a similar app is being developed by the Malta Tourism Authority. Initially, attempts at coordinating and integrating the two apps were made however through further discussions, it was decided that the apps would be developed separately.

3.6 RET 6.3 - Green mobility card

The measure assesses a business model for the establishment of a “green mobility card” as a type of reward scheme aiming to encourage tourists and citizens towards a more sustainable, car-independent lifestyle. A business plan for a sustainable green mobility card is under development. Discussions have taken place with stakeholders to identify interest and appropriate motives for developing such a scheme.

Rethymno is gaining from lessons learned, and experience obtained, from the other DESTINATIONS sites who have themselves developed similar schemes for green credits. A review has also taken place into good practices from other Greek and EU cities. During the process, one significant challenge to address was the legislative framework which does not

support the private and public organisations business partnerships for the development of such a scheme. Alternative solutions are being examined during the study development.

Stakeholders involved include the Tourism Board, the Public Transport Operator, the e-scooter Operator, local shops/restaurants, tour operators and travel agencies, leisure and tourism attractions. Rethymno Municipality developed a close cooperation with the Public Transport Operator (KTEL), during the analysis of different scenarios for setting up and maintain such a Green Mobility awarding scheme at regional level.

3.7 Cluster analysis

Transport authorities can successfully attract the participation of local businesses to take part in Green Credits and Loyalty Schemes through the allure of their advertising potential. With millions of passengers each year, these customers will be reminded week after week via social media, websites and using public transport of the partnerships with named shops, museums and hotels in the scheme.

This is another win-win partnership between transport and business sector which was effective in the schemes in Madeira (MAD 6.2) and Las Palmas (LPA 6.1). Businesses responded well to the economic potential of such a collaboration, namely additional customers. Equally, public transport authorities saw the benefit of advertising their services directly to the customers of participating businesses. This model can be replicated in both tourist and non-tourist towns.

An important success factor for both was strong existing relations with the business sector. Face to face meetings with potential businesses was important to convey the message, create momentum, and understand what businesses will respond to.

Companies were also successfully attracted to the Bike Challenge in Limassol (LIM 6.1) by working with the chamber of commerce who were able to recommend those most interested from the environmental, health and economic angles. Face to face meetings were once again crucial to tailor and explain the benefits of participation. Mobile phone applications were an integral part to allow the tracking and competition between staff members.

MAL 6.3 used their tourist mobility app not only to improve the visitor experience but also to collect data about tourist mobility behaviour to assist the city with long term planning. These experiences have been very useful for the development of Rethymno's Green Mobility Card study.

Across all these measures, new technology was a real enabling factor for new mobility behaviour. New apps were shown to be realisable by transport authorities, tourist authorities and municipalities from different countries who, through their shared objectives, were able to strengthen the app development process through cross-site exchanges (Madeira and Malta).

Social media was equally effective in promoting app-based measures as they naturally go hand in hand, offering exponential amount of awareness raising, tapping into large numbers of followers.

4 Low Emission Zones and Parking Management (Task 6.6)

4.1 MAD 6.4 - Low emission zones and smart parking management

Aimed at assessing the feasibility of introducing bus lanes, reversible circulation and traffic light priority, this measure was also geared towards renewing the traffic light system through the purchase of enhanced controllers and a management platform. The traffic simulation revealed that implementing bus lanes would not be suitable even leading to a disruption of public transport given the existence of several junctions throughout the target area. Despite this, the activity was important to acknowledge the relevance of simulation tools to assess, prior to the implementation, the impacts upon traffic. As for the traffic light renewal, DESTINATIONS enabled the development of a global, sectorial and local strategy that stressed the existence of several related issues such as the technical limitations to give priority for buses.

DESTINATIONS played a crucial role towards the purchase of more technologically advanced traffic light controllers as well as the acquisition of a platform in which technicians can now remotely access the equipment and improve the traffic flow through simulation and upload of specific traffic sequences accordingly to different traffic patterns. Considering the importance of the traffic light system within the mobility strategy in managing the traffic flow in the city core, the Municipality of Funchal is now in the process of replacing all the traffic controllers towards more a more advanced system that can also be bridged with the other ITS components be pursued beyond DESTINATIONS.



Figure 21: Innovative traffic light pilot project to reinforce road safety and accessibility to PT main catchment area



Figure 22: Left: Type of traffic light controller that requires a technical upgrade. Right: Upgraded traffic light controller acquired by the Municipality of Funchal.

To test other solutions related to traffic light, the Municipality of Funchal also implemented an innovative traffic light pilot project to reinforce safety and facilitate the accessibility to the main catchment area for public transport users. This solution, entitled “Smart Cross” was very well accepted by both tourists and residents and improved the attractiveness of the area as well as improving road safety.

This measure also relied upon the pursuing of a regulatory tool aimed at managing touristic operators in Funchal. Although some guidelines were drafted, in order to avoid the same issues felt by other cities when it comes to managing mobility shared services, the Municipality of Funchal, seeking for expertise, launched a procurement to set the cycling strategy in Funchal that includes also the drafting of a regulation to manage these kind of services.

Another achievement that was enabled by DESTINATIONS was the creation of several low traffic zones (through ERDF additional funding) which contributed to increase attractiveness as well as to boost revenues – according to a survey with local traders. The methodology to assess the local economy following the implementation of mobility related measures was praised by ELTIS that included Funchal as a good practice concerning evaluation and monitoring.

As for implementing bus corridors, the micro modelling study also stressed that implementing this solution in Funchal is not viable even for the public transport which would lead to a decrease in speed. This is due primarily to the road network configuration that is marked by the existence of several junctions and the technological limitations of the traffic light network. In order for the bus corridors to be successful, it will be important to define an integral political strategy that is able to reach out to other stakeholders such as the parking lot owners, local traders, touristic operators, among others in order to disincentivise the use of individual motorized vehicles in Funchal. In order to reach that aim, the implementation of legal tools will be required to achieve better results. This includes the regulation for parking (which is actually under public consultation) and other legal tools that are often complex to draft. The difficulty also lies within these stakeholders that are driven by specific needs which makes it very difficult for them to commit themselves to the mobility strategy envisioned by the Municipality. Despite the efforts to bring them together through meetings and awareness actions, there will be the need to reinforce the communication approach after DESTINATIONS.

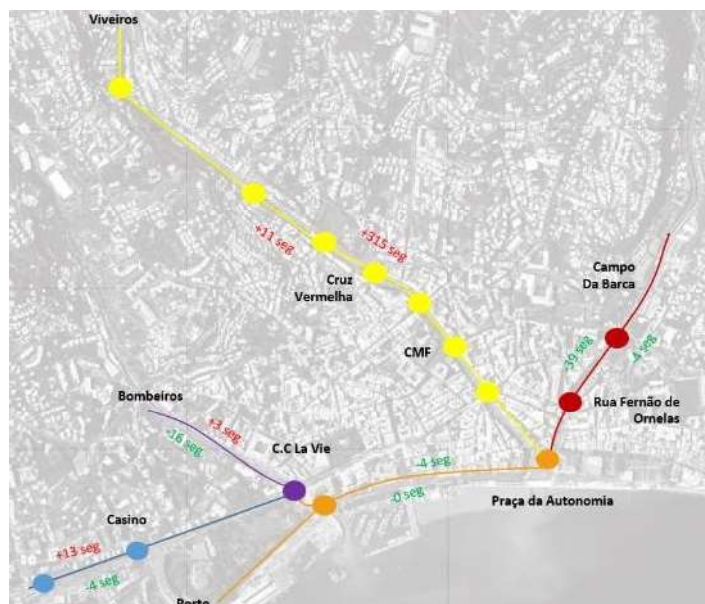


Figure 23: Micro modelling related to bus corridor and estimation of service speed impact (afternoon peak hour). The increase of speed is marked as green while the speed reduction is marked at red.

4.2 LIM 6.4 - Smart parking guidance system

This measure concerns the implementation of the smart parking guidance system technology in public car parks in Limassol city centre. It aims to inform drivers about the parking availability before reaching the parking places, by providing real-time information regarding the availability. Smart sensors have been installed in 7 municipality-owned car parks, which transfer (in real-time) spaces availability data to a central server and by extension to smart phone applications. Also, seven guidance signs have been installed along key boulevards in the city indicating parking place availability to reduce circulating traffic. The innovation in this measure relative to Limassol, is that it is the first time that parking places will count the availability and make it visible to the public in Limassol main roads that lead to the city centre and online.



Figure 24: Smart Parking Guidance System

The main barrier faced during this implementation, was the infrastructure of the municipality's parking places. The decisive point was the engagement of municipal engineer, which led the actions for upgrading the existing parking places and to fix the infrastructure, making that spaces ready for the installation of the sensors and to proceed with the right counting of parking spaces.

Adding value was the support of the public works department (part of the Ministry of Transport, Communication and Works), as well as the support of the Limassol Tourism Board. They agreed to show parking availability on their website, and application respectively. Thus, if we had to repeat again this measure, we would aim to first fix and upgrade the infrastructure and then to proceed with the research, strategic plan and preparation of tender for its implementation.

Through this measure, Limassol Municipality has enhanced its relations with the Ministry of Transport, Communications and Works, and its collaboration with the Municipal traffic police department.

It is believed that through real time availability information, circulating traffic in search of parking will reduce with positive impacts on traffic jams, noise pollution and CO₂ emissions. The aspiration that it will be extended to the Limassol region.

4.3 MAL 6.2 Testing a Low Emission Zone and Introducing Emissions Alert App



Figure 25: Innovative traffic light pilot project, Traffic light controller and programming platform

The aims of this measure are to reduce transport related emissions within the region, to encourage sustainable mobility use, and specifically to test the feasibility of LEZs within the context of the Valletta region.

Low Emission Zones have never been tested in Malta. Using insights obtained from stakeholder consultation and a gap analysis, a pilot LEZ was designed.

Already operational in Valletta was a road pricing scheme called the Controlled Vehicular Access (CVA) System. This system charges vehicles for the duration of their stay within the city boundary. The Low Emission Zone (LEZ) feasibility pilot builds on the CVA system in partnership with the operating company making use of existing and new camera infrastructure on the approach roads leading to Valletta which monitor vehicles entering and leaving the identified zone.

The CVA's ANPR camera's and billing technology was modified so as to be able to detect cars, identify their number plate and process billing according to the emission levels of the vehicle based on the engine type – the higher the emissions, the higher the fee. The system is modified so as to test how vehicles can be charged depending on their emissions rather than for the duration of stay, thus essentially transferring a road toll system to a LEZ.

During the project, since this is a pilot, a system of phantom billing will be adopted. As per agreement, Transport Malta will have the facility to tweak the billing parameters to test multiple scenarios. The results will then identify the potential revenue that could be generated should such a system of reducing emissions in a sensitive area as Valletta, be implemented.

SMS emissions alert system

This measure also involves the revamp of the SMS emissions alert system for high-polluting vehicles through the addition of an Emissions Alert App functionality which allows for easier

reporting by the public, next to the existing SMS service, and fully automated processing of the reports through the back-end of the app. This represents an improvement on the current manual process. The Emissions Alert System integrates with the Malta Roads Traffic Updates (MRTU) app, which has 37,000 downloads and is very popular.

The number of reports made in 2019 (23,246 reports) showed a 24% growth compared to 2018 which is a much bigger increase than recent annual averages of between 6-8%. In half a year, from the start of operation of the app in June 2019 until the end of the year, 3,323 reports had been made through the app.

Two surveys were held to evaluate the general population's awareness and acceptance of the emissions alert system through SMS and the app, before and after the introduction of the new reporting interface. There was a notable increase in the percentage of respondents that believed the emissions alerts system can be effective in removing polluting vehicles from the roads: from 54% of respondents in the baseline survey, to 73% of respondents in the follow-up survey.

4.4 MAL 6.4 Smart parking management system for Valletta

The measure includes the installation of sensors in a specific off-street parking area in the city of Valletta (Hastings Parking) to test out an innovative method of managing demand and supply of parking in the city.



Figure 26: Hasting Parking in Valletta

The aims of this measure are to reduce cruising for parking and journey times in the city and thus to improve air quality. In the months preceding the tender publication, meetings with stakeholders were held in order to refine the measure. Parking in Valletta was analysed with the aim of identifying the areas where the installation of sensors should be prioritised and thus included in the DESTINATIONS project. The results from the on-site parking surveys were presented during these stakeholder meetings where, with the support of experts, the various parking management options for Valletta were presented. The outputs from these meetings were invaluable in the preparation of the tender specifications.

The measure which envisages the implementation of an overall solution with sensors, wireless technology, and servers and software able to handle the parking management of part of the city parking spaces will be tested through a pilot at Hastings Parking. Innovative parking

management systems such as these are not currently used in Malta, and the results of this pilot can be useful to inform the design and implementation of the management of parking areas across the Maltese Islands.



Figure 27: The parking sensors to be installed in Valletta

The implementation of this measure has suffered delays, because of a court case between tender applicants, and subsequently because of Local Council elections. However, TM has met with the new Mayor to establish an efficient way forward for this measure and the Valletta Local Council have recruited a new staff member to work on this project, which has eased the communication and cooperation with the other project partners on this measure. Following a court decision, the tender has been redrafted and is currently being evaluated, after which implementation can commence.

4.5 RET 6.2 - Low emission zones study

Rethymno is developing a strategic study aiming to shape future policies to introduce Low Emission Zones in the historic city centre and in areas that are negatively affected by heavy traffic congestion, particularly in areas where there is a considerable influx of tourism.

The study is assigned to the Sustainable Mobility Unit of the National Technical University of Athens and is currently under development. Initial stakeholders' working meetings have been conducted to involve residents, businesses operating in the area, and groups affected by the restriction. The study is expected to assess also social and economic impact.

The study will be linked to the SUMP, and it is expected to propose interventions and regulation changes to be integrated into future transportation policies.

In Rethymno's historic centre, there is a time related car access restriction policy operating during the touristic period, but it is the first time that Rethymno is investigating the development of a Low Emission Zone through a participatory approach involving the interested stakeholder group.

The LEZ study takes into consideration the surrounding area, parking capacity, alternative transport modes, introduction of a new circle bus lane, location of taxi parks and highlights the

need of new regulation, ensuring that provision will be taken to exclude negative impacts on vulnerable road user groups.

The time expansion for a car-free zone in the historic centre all over the year is currently examined as an initial measure of this study. The measure aims to overcome time-consuming barriers such as legislation modification, in order to expand the period of cars' prohibition within the historic centre.

A Low Emission Zone and car-free area in the city centre targets to further enhance the touristic experience and promote Rethymno as a sustainable destination.

The study uses data collected from the surveys conducted in the framework of CIVITAS DESTINATION project. The data collected from dedicated surveys to citizens and tourists focused on capturing their travel habits, expectations, commuting choices, and satisfaction from the Public Transport services use. Environmental indicators are also taken into consideration to define the urban micro-climate conditions and the impact from a Low Emission Zone.

Through CIVITAS DESTINATIONS, the Municipality of Rethymno had the opportunity to foster a close cooperation with the Old Town residents and the retailers operating in the area. These two stakeholder groups have a large number of people who were informed about the Low Emission Zone concept and car-free area scenarios. They had significant participation in the consultation process. The working group also involved actively the Municipal Tourism Board, Hoteliers Association and the Chamber of Commerce of Rethymno.

The Union of Rethymno Old Town residents has an upgraded role within the measure as one of the main engaged stakeholders for the study development.

The stakeholders' involved includes:

- **Local authorities:** Municipal Tourism Board, Municipal Port Authority, Regional Unit of Rethymno, Municipal Technical Services and Development;
- **Business sector:** Retailers operating in the area, Chamber of Commerce of Rethymno;
- **Tourism-related associations:** Hoteliers Association, Suppliers;
- **Communities and other:** Citizen volunteering teams, Union of Rethymno Old Town residents;
- **Transport operators:** Taxi Association

The Low Emission Zone study has cumulative effect together with the measure RET 2.1 for the SUMP development and the proposed regulation changes can be incorporated into future transportation policies. The measure is also in conjunction with Sulp development that focused on logistics management for key tourist areas and the historic city centre (RET 5.1).



Figure 28: Low Emission Zone Study - Stakeholder consultation

4.6 Cluster analysis

New technology such as traffic sensors, parking sensors and ANPR is helping cities to give decision makers the data to justify bringing forward parking control and Low Emission Zones. This can help overcome some sensitive political issues of restricting car use and parking. It is necessary to work collaboratively with private parking operators from the outset to assess wider impacts and overcome barriers.

EU projects can help justify pilot level schemes to test an approach to overcome short term political hurdles. The emergence of net zero carbon objectives at national and local level may offer greater public and hence political support for such measures, especially if they can be linked with improving air quality, public health and road safety.

Rethymno has shown that a long-term approach can be effective. The historic centre currently enjoys a car free zone during the summer months to preserve the quality of urban environment and make it more attractive, relieving pressure for residents and visitors. Having been considered popular, a political decision is currently pending to extend to all year round, using air quality sensor data to project future pollution issues if nothing is done. This shows that access and parking restrictions can garner political support over time, if supported by a long-term stakeholder engagement process including local authorities, business sector, tourist sector, community groups and transport operators.

The LEZ pilot in Malta takes place along the backdrop of increasing public support for removing polluting vehicles from the roads. Usage of the SMS emission alert app by the general public has increased by 24% (with 23,000 vehicles reported in 2019). A success factor so far has been that the LEZ pilot has built on the existing Controlled Vehicular Access System, and thus has been able to make use of existing and new ANPR infrastructure.

Low Emission Zones are not always the immediate solution however. In Madeira it was found that a move towards a LEZ would in the immediate term create new congestion elsewhere without an integrated strategy with private parking companies, including pricing strategies. It is recommended to pursue, in this case, by integrating with the overall SUMP. A supporting

survey which drew a positive correlation between pedestrianised areas and an increase in business sales offers useful data to justify future access restrictions to multiple audiences.

The smart sensor technology employed in municipal car parks in Limassol has proven successful and popular in reducing cruising for parking bays and hence in reducing congestion and emissions.