2020 CiViTAS
Cleaner and better transport in cities

DESTINATIONS

D3.3

Demonstration report on measures for safety & accessible public spaces

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Abstract

Innovative sustainable urban mobility demonstrations can only be assured with good planning and sound foundations. In this regard, CIVITAS DESTINATIONS measures are delivered through a tried and tested approach comprising three stages: Design, Implementation and Operation. This report focuses on the third of these and hence updates on the details of measure demonstration across the six sites.

Project Partners

Organisation	Abbreviation	Country
Horários do Funchal, Transportes Públicos, SA	HF	PT
Agência Regional da Energia e Ambiente da Região Autónoma da Madeira	AREAM	PT
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
Limassol Tourism Development and Promotion Company Ltd	LTC	CY
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
Authority for Transport in Malta	TM	MT
Valletta Kunsilli Lokali – Valletta Local Council	VLC	MT
Universita ta' Malta	UoM	MT
Ministry of Tourism	MOT	MT
Guaguas Municipales Sociedad Anonima	Guaguas	ES
CINESI S.L consultoria de transport	CINESI	ES
Ayutamiento de Las Palmas de Gran Canaria	LPGC	ES
Ingeniería Electrónica Canaria S.L	INELCAN	ES
Sociedad Municipal de Aparcamientos de Las Palmas de Gran Canaria	SAGULPA	ES
Istituto di Studi per l'Integrazione dei Sistemi	ISINNOVA	IT
European Integrated Project	EIP	RO
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Executive Summary

This report details the results of demonstration setup, implementation activities, ITS deployment and supporting actions for all the sites as outputs of T3.4, T3.5, T3.6 and T3.8. It also looks ahead to the demonstration phases of the various measures across the six project sites and within the measure categories.

Chapter 1 introduces the WP3 objectives and peculiarities and provides a description of the measures per cluster category.

Chapters 2, 3 and 4 present the demonstration of each individual measure, grouped into the three identified clusters, along with the challenges faced and key lessons learnt. At the end of each chapter, a cross-site comparison of all site measures for the identification of similarities and differences is included, as well as main recommendations for other European cities and the CIVITAS Community.

During measures implementation, all sites successfully proceeded with necessary activities to design and plan all procedures to follow and to avoid the risk by finding solutions on time for the good completion of all measures. The good collaboration with key stakeholders and their involvement in all stages, the innovative solutions they used in the most of the actions, led the most of outcomes of the measures, to be characterized as Best Practices for other EU cities.

All necessary authorities, involved to facilitate all procedures for the new infrastructure installed and interventions developed . Residents and tourists showed their interest by participating in organized events and campaigns dedicated to this new sustainable mobility system. New technologies used, such as the new traffic modelling software and the use of Scout cameras for traffic data collection in Las Palmas, the installed system in traffic lights for disabled people in Limassol and Rethymno, and the new lighting system in Madeira. Additionally, Madeira and Rethymno, developed a new application, based on common objective to change behaviour and to be used and a behavioural change tool.

School Communities, were very supportive to DESTINATIONS partners and adopted procedures for changing mobility behaviour of students and parents. Students participated actively in all workshops and events organized, in the context of DESTINATIONS project. It is remarkable the interest of students and their involvement in all activities.

All new approaches adopted, gives priority to cyclists, pedestrians and disabled people to facilitate their everyday life and to live or travel in an eco- friendly environment.

1 Introduction

1.1 Overall DESTINATIONS Objectives

WP3 aims at designing, implementing, and demonstrating measures to increase traffic safety and personal safety as well as implementing actions to increase the attractiveness of tourist points of interest. The concrete objectives for WP3 are:

1) To design, implement and demonstrate: traffic safety measures specially focused on cycling and walking routes/lanes (Rethymno, Elba, Limassol); car drivers (Limassol) and pupils and students (Madeira, Rethymno, Limassol); specific technological and design solutions targeted at people with disabilities (Madeira, Rethymno, Limassol, Elba); and attractive and accessible public spaces combining an integrated set of actions (Madeira, Las Palmas, Limassol, Rethymno, Elba).
2) To adopt stakeholder engagement strategies and the implementation of specific promotional measures to support the demonstration set up and operation.
3) To carry out data collection for WP9 evaluation (ex-ante, process, ex-post).
4) To derive cross-site evidence and conclusions for the set of measures addressed in this WP in terms of business and replication/transferability potential (as input for WP10).

1.2 WP3 Objectives

Overall, WP3 activities are broken down into several cross-site and vertical tasks addressing the specific phases and operations of the piloting life cycle:

- Task 3.1 Cross-site coordination of pilots targeted to increase travel safety and accessible public spaces.
- Task 3.2 User-needs analysis, stakeholders' involvement, service requirements and supporting technologies design for pilots targeted to increase travel safety and accessible public spaces.
- Task 3.3 Site preparation, solution deployment, supporting actions and demo setup of pilots targeted to increase traffic safety and create accessible public spaces.
- Task 3.4 Demonstration of pilots targeted to increase traffic safety and improve disabled accessibility.
- Task 3.5 Demonstration of pilots targeted to increase attractiveness of accessible public spaces.
- Task 3.6 Demonstration of pilots targeted for safe routes to schools.
- Task 3.7 Data collection for ex-post, process and impact evaluation for pilots targeted to increase travel safety and accessible public spaces.

- Task 3.8 Local dissemination and communication for pilots targeted to increase travel safety and accessible public spaces.

1.3 Del 3.3 Objectives

In this context, Deliverable D3.3 will detail the results and work carried out for the implementation of all the WP3 measures in each site in terms of procedures and resources involved in the operation of services, user's acceptance, services and ITS performances, critical factors and organisation impacts.

The main objective of the deliverable is not only to describe the **achievements** and **results** during the implementation phase, but also the underlying **main challenges**, and to present **success stories** that other cities can follow. Specific **lessons learnt** and **recommendations** can be considered as an example for other interested cities and the CIVITAS Community.

WP3 implemented measures are grouped into three cross-site clusters related to three tasks as follows:

a) **"Increase traffic safety and improve disabled accessibility"**, includes measures for the improvement of cycling, walking and accessible public spaces for all (tourists, residents and disabled people) in three sites (Rethymno, Elba and Limassol):

   - **LIM 3.2:** Limassol Municipality created **new infrastructure on accessible beaches** for disabled people and **integrated the existing blind and deaf people systems** at main traffic lights.
   - **ELB 3.1, ELB 3.2:** Portoferraio supported by Rio Marina **planed**, **designed, and introduced interventions** to increase safety for pedestrian and cyclists on the routes and **enhanced innovative safety ICT devices** at crossing points.
   - **RET 3.1a, RET 3.1b**: Rethymno Municipality and TUC **introduced interventions in services and infrastructure** of the existing cycling and walking network and **improved accessibility** in attraction points for impaired people.

b) **"Attractive and accessible public spaces"**, incudes measures to improve infrastructure for a sustainable mobility system in four sites (Elba, Limassol, Las Palmas and Madeira):

   - **MAD 3.1**: **Improved public transport accessibility** and **implemented an innovative integrated system** for road safety.
   - **LIM 3.4**: Limassol Municipality planned to create an **ecological route** for residents and visitors, giving the chance to the people to commute in the city centre by using different mobility modes of transport.
   - **ELB 3.3**: Portoferraio **implemented a set of interventions** for requalifying the main taxi station to improve the accessibility and quality of this urban area.

- **LPA 3.1**: LPCG supported by Guaguas, SAGULPA and CINESI **improved accessible public spaces** and **set a Laboratory area** to foster a sustainable mobility system in the city of Las Palmas.

c) **"Integrated mobility and tourism information and payment services"**, includes measures to change behaviours towards sustainable mobility and create new policies to improve sustainability in the three cities of Limassol, Madeira and Rethymno:

- **MAD 3.2:** AREAM supported by CMF, SRETC and HF **deployed** and **developed** an **action plan** for safer routes in six pilot schools with significant traffic problems in peak hours and **created an application** aiming to reduce congestion in pick hours.
- **LIM 3.3:** STRATA and LTC **organised workshops** with the use of supporting tools, aiming to educate elementary students on road safety and sustainable mobility, in more than 10 schools.
- **RET 3.2:** Rethymno Municipality and TUC **designed, organised and developed a mobility action plans** for more than 10 schools and the University and performed behaviour change campaigns, including parents. In addition, a **thematic application** designed and developed serving as a tool to raise awareness and change behaviours.

2 Increase Traffic Safety and improve disabled accessibility (Task 3.4)

2.1 LIM 3.1 - Increase cycling and walking in combination with special interest tourist activities as an integrated product

Within this measure, Limassol expanded the walking and cycling network in Limassol Region aiming to increase the interest of residents and tourists to use sustainable modes of transport.

Within this measure the following activities were delivered:

- 8 routes (cycling and walking) in Limassol region were mapped and designed
- 4 signs for walking routes in Limassol region were installed
- Guides in electronic and printed format have been printed and distributed (5.000)
- 2 bike lanes have been created in Ypsonas Municipality of Limassol region
- 3 short videos (for National TV channels) were created to promote cycling in Cyprus and create awareness about the new law for cyclists (launched in October 2018)
- A National Seminar was organised to inform about the new law for cycling, cyclists' responsibilities, and their rights
- Public awareness (among the general public) regarding the new law for cyclists reached approximately 3.000

Figure 1: New cycling lane in Ypsonas Municipality & promotion of new walking route in Limassol Region

The new cycling and walking lanes aim to increase the attractiveness of specific destinations in Limassol Region and to improve the quality of life for residents. Furthermore, by taking into account tourists' and residents' needs, new routes and bike lanes were created after consultation through successful meetings with key stakeholders.

Moreover, LTC played an important role in the creation of the New Law for cycling, cyclists' responsibilities and rights, after its participation in the Advisory Committee for the promotion of cyclists in Cyprus. During the consultation period, LTC held several meetings with key stakeholders in order to discuss issues related to cycling and to make suggestions in the Advisory Committee for the New Law. Finally, LTC organised meetings with the Member of the Parliament to to ensure their support.

Due to the island's nature, Cyprus gives the opportunity to design, map and create specific hiking/walking and cycling routes to attract more tourists and organise campaigns to promote the landscape in the specific area of Limassol region.

The activities related to this measure generated a high level of awareness regarding options for cycling and walking in Limassol Region. Material with specific information provides opportunities for using sustainable mobility modes in combination with special interest tourist activities.

During the implementation of the measure, LTC faced difficulties to gain the appropriate permissions for the construction of the 2 bike lanes. The close cooperation with Ypsonas Municipality and involved authorities determined the completion of the activity.

During the implementation of this measure, visitors and locals have been encouraged to add cycling, walking and hiking to their leisure trip itineraries. Experts in the tourism sector as well as interested locals were educated about the new tourist products (during workshops) in order to promote them to their customers, under WP10 (site-visits). Participating stakeholders included the Bike sharing Company Nextbike Cy, Ministry of Transport Communications and Works, Cyprus Cycling Federation, Limassol Cycling Club, Council for the Promotion of Cycling, Municipality of Ypsonas, Community Councils, Local Authorities, Commissioner of the environment, Tourist Information offices and Hotels.

Furthermore, Limassol, combining measures related to the increase in interest for walking and cycling (LIM 3.1), extension of bike sharing services, installation of new infrastructure to combine cycling and PT (LIM 7.1), as well as actions to increase awareness on the use of sustainable modes of transport for leisure trips (LIM 6.1), affected the modal shift in transportation in Limassol Region by increasing the interest of residents and tourists to use walking and cycling in combination with PT services.

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

During the implementation of this measure, actions to improve accessible public spaces for disabled people were successfully completed, to give them the opportunity to enjoy their vacations on the island with more comfort by offering more accessible beaches and better access to the city centre of Limassol.

Limassol Municipality has installed one access point to the beach on the Limassol coastal front (traffic lights crossing for visually impaired people), while a ramp for the disabled was placed at the start of the beach. Limassol Municipality has also purchased two floating wheelchairs, aiming to give the opportunity to people with disabilities to safely enter and enjoy the water. In

addition, the new infrastructure and services were promoted by the Limassol Municipality's Mayor through press releases and interviews at a Local and National level.

Figure 2: Equipment installed at the seaside

It must be mentioned that upgrading infrastructure to ensure accessibility for all will keep offering the opportunity to people with disabilities to enjoy their vacations on our island safely and comfortably. People with disabilities are a very significant tourist market, always looking for destinations that provide the right product.

Furthermore, this measure is a service for residents and tourists, focusing on people with disabilities, and as a result the success of the measure depends completely on them. Therefore, a promotion and communication plan has been created for the organisation of an event and the design and production of brochures to inform about the new services.

Limassol Municipality collaborated successfully with the Ministry of Transport, Communications and Works to gain the specifications regarding the system of the traffic lights to be compatible with the specification used for all of Cyprus. Moreover, Limassol Municipality developed good relations with the organisation for people with disabilities during the research for their needs as part of the strategic plan created during the implementation phase of the project.

2.3 RET 3.1a - Active healthy and inclusive mobility for all

Rethymno enhanced the existing services and infrastructure for cycling and walking, aiming to motivate citizens and visitors towards active mobility and a "car-free" lifestyle.

The measure delivered:

- Assessment studies of the current walking and cycling network, including recommendations for the expansion of the cycling network, and complementary provisions to link public transport with cycling and walking infrastructure.
- Improvements of walking and cycling facilities at selected settlements within the municipality. Three new cycling facilities studied: i) along the coastline from Perivolia to Sfakaki (hotel/touristic area), ii) link of the University with the city centre, and iii) from

Atsipopoulo (suburbs area) to the city centre. The three routes are combined with improved PT routes and buses equipped with bike racks.

- Maps/leaflets of Public Transport services and cycling facilities for trips connecting peri-urban areas with the city centre, and maps for city centre walking routes.

The new infrastructure and services aim to transform Rethymno into an attractive tourist destination and to improve residents' quality of life.

Targeted to meet residents' and visitors' needs, the study on new walking and cycling infrastructure has taken into account the demand driven by the population fluctuation due to incoming tourism (peak, off-peak period). The analysis of users' perceptions provided fundamental information for choosing priorities and helped to increase users' acceptance and satisfaction levels. A participatory approach was accomplished through consultation meetings with the key stakeholders. Promotional activities and events were organised to encourage behavioral change amongst citizens and visitors. A thematic application, an extended version of an app initially developed for schools' communities, serves as a mindset tool, aiming to promote sustainable mobility modes by comparing the environmental and financial benefits of eco-friendly daily transportations.

Figure 3: Improvement of existing services (bicycle lanes & walking routes) and public promotion of new mobility services and facilities

A comprehensive action plan was developed as result of extensive research on existing best practices and the findings of the user needs analysis. The close cooperation of Rethymno Municipality with the PT operator, urban planners and local associations throughout the design

and implementation phase was considered a key determinant for the successful implementation of the measure. To ensure the acceptance and viability of the measure, the development and distribution of high-quality informative materials is not enough; great efforts need to be allocated to inspire and continuous motivate a residents' mindset change.

The connection of key attractions and unique sightseeing in touristic cities with sustainable transport modes is marked as a promising solution to challenge tourists' modal shift. Rethymno has improved and expanded the cycling and walking paths which connect historic/touristic landmarks and worth-visiting locations (traditional settlements, valleys, rivers, caves), targeting to attract more tourists that are interested in eco, active, and wellness vacations.

The measure's successful implementation depends on residents' and tourists' acceptance. Therefore, numerous interactive workshops and activities were organised to inform about new services and infrastructure and motivate the use of bicycle and walking. Residents and tourists actively participated in "design days" (open-air laboratories), informational activities and promotional events that aimed to motivate bottom-up behavioural change, collect perceptions and views that are pivotal for the measure's evaluation.

The stakeholders' involved within RET 3.1a include:

- Local authorities and urban planners: Technical Chamber of Greece-local unit, Chamber of Commerce, Police Traffic department of Rethymno
- Tourism stakeholders: Municipal Tourism Office, Hotels Association, Tourism agencies and Hoteliers
- Mobility providers: Public transport operator (KTEL), Bike renting companies
- Cycling and sports groups: Atlas Cycling Union
- Citizens and local community groups: Association of Active Citizens, Initiative of Citizens for Road Accident Prevention and the Promotion of Road Safety

The involved stakeholders' group has actively participated in the SUMP consultation events, during which, committed to contribute to the new walking and bicycle route design and to support the promotional activities planned.

Among them, the PT operator, KTEL, and the Atlas Cycling Union showed an increased interest during the measure implementation, being also highly supportive of the measure dissemination. Rethymno Municipality has an effective and more close cooperation through DESTINATIONS with the local unit of Technical Chamber of Greece, the Municipal Tourism Office, Associations of Active Citizens SYNPOLIS, and the Tourism agencies and Hoteliers.

RET3.1a, together with measures related to PT and sharing mobility services (RET7.1-Introducing electric vehicle for PT, RET7.2-Improved PT for tourists and citizens, and RET4.2-Building a sharing mobility culture), affected the modal shift in Rethymno by encouraging and promoting walking, and bicycle use in combination with PT services, instead of private car trips. RET3.1A is connected with the SUMP development, in terms of upgrading the existing services and infrastructures, stakeholders' engagement and cooperation with urban planners and the PT operator.

It must be pointed out that the Technical Department of Rethymno Municipality has ensured funding of 750.000€ by the Regional Development Fund of the Region of Crete to implement

a technical study about new infrastructure for pedestrians to link the University with the city centre.

2.4 RETH 3.1b - Enhancing and promoting systems and services for the physically impaired

The accessibility of people with disabilities, older and vulnerable residents and visitors, is an essential priority for Rethymno. Building on previous experience, the city introduced a new mobility strategy and new infrastructure for the physically impaired to further improve accessibility for all.

The measure delivered:

- 24 countdown timers at traffic lights in the city centre, to assist people with disabilities at 5 main road crossings.
- Improved accessibility to beaches with new infrastructure; two beach locations equipped with ramps from the parking facilities to the sea level. Two “SEATRAK” systems (automated railed chairs for disabled people to enter the sea), and one sea guidance system for people with visual impairments.
- Reserved parking spaces for disabled people according to the European standards regarding on-street signage.
- Design of new integrated touristic day routes especially for disabled people; locals and visitors. The route for locals connects the city centre to main commercial streets, the route for visitors covers the seaside avenue, the city centre across the municipal garden and a part of the Historic City passing museums and historical landmarks.
- Promotional activities to motivate bottom-up behavioural change amongst all age groups.
- A tailored map, in English and Greek, including the routes for disabled and the infrastructure/interventions available to enhance accessibility. Distribution of the map to the Association of Disabled People, Hoteliers Association and touristic information points.

Increased accessibility and safety for the disabled have been achieved due to the installation of new appropriate beach infrastructure. The installation of the first SEATRAK system in Rethymno (fixed track mechanism with wheelchair entering the water), innovates at local level allowing people with disabilities to enter the sea safely. In addition, the first countdown timers in the city were installed through RET3.1b.

According to data collected during summer 2019 (30 July-4 September 2019), the average uses of the SEATRAK system installed in Perivolia beach were 30 per day. Aiming to increase awareness and consciousness of the difficulties faced by disabled people during daily commuting, interactive awareness activities, “Get-In-Their-Shoes”, were held for the general public, in cooperation with the Association of Disabled People of Rethymno.

Figure 4: Countdown timers on city centre traffic lights (LEFT), the SEATRAK system (MIDDLE), ramps and facilities for disabled people at the city's beach (RIGHT).

Structured interviews with representatives of the disabled people association helped to better define their needs, guiding towards the selection and implementation of the most suitable solutions. The regulatory framework for safety at the beaches was a challenge for the measure implementation; due to unforeseen changes it was required to remove the lifeguard towers from the beach. Nevertheless, after consultations with relevant stakeholders and the Local Port Authority, the difficulties were addressed and the appropriate provisions were taken in order to have both ramps and the lifeguard towers at the beach, ensuring the accessibility and safety for the disabled and for all.

A thorough research and location study is mandatory before the installation of the systems, to ensure the technical viability of the intervention; unexpected weather conditions or geomorphological changes, e.g., on the beaches, can cause damage to the systems.

Rethymno has plenty of historic/touristic landmarks that, following the EU guidelines for public/touristic points, are fully accessible for disabled people. Furthermore, the development of specialised packages for daily routes and accessible beaches has indicated the need for developing tailored informational maps.

During the measure implementation, residents had the opportunity to be informed through informational events and open-air interactive labs (design days), press releases, and social media campaigns. The participation of the general public and school communities in interactive activities organised in collaboration with Disabled People Association during the EU Mobility Week 2017, 2018 and 2019, empowered raising awareness among the local society of Rethymno. Motivating a behavioural change which aims to build up a culture of respecting the needs of disabled people for daily transportation, is a great challenge for the Greek cities.

The stakeholders' involved within RET 3.1b are:

- Authorities**:** Municipality Tourism Board, Port Authority

- Tourism Related Associations: Association of Travel and Tourist Agencies of Rethymno, Hoteliers of Rethymno
- Communities and other: Association of Disabled People, Technical Chamber of Greece, Chamber of Commerce and Industry, Taxi Unions and Private Transport services, schools' community

A fruitful and robust cooperation was developed amongst Rethymno Municipality and the Association of Disabled People for the last three years. Due to the measure's nature and the involved target group, the society of Rethymno has been sensitised and supported the actions implemented so far. The Municipal Tourism Board, the Hoteliers of Rethymno and the schools' community had close cooperation with Rethymno Municipality and Association of Disabled People and have been proved to be the most active stakeholders.

The outcomes of this measure (RET3.1.b) combined with measures which include the introduction of e-bikes for disabled people (RET4.2) and the accessible mini electric bus (RET7.1), increase the accessibility and satisfaction of residents and visitors with disabilities providing solutions for safe daily transportation.

The Municipality accomplished to ensure ERDF Funds of 145.000€ to enhance beaches' accessibility for disabled by installing the SEATRAK and sea guidance systems. Equipment to enhance the disabled peoples' convenience has also been installed; WC facilities, changing rooms and appropriate corridors.

Figure 5: Experiential raising awareness activity during EMW2019 with participation of Association of Disabled People and the general public.

2.5 ELB 3.1 - Increased level of safety for pedestrian crossing

As part of Work Package 3, demonstrative actions were taken to improve soft mobility in Portoferraio and Rio. The aim was to encourage pedestrian and cycle mobility to the detriment of private cars, increasing the level of safety on the streets. To this purpose, experimental interventions were made or even designed and planned along urban routes and on pedestrian crossings.

With regards to the latter, both the Municipalities of Portoferraio and Rio have implemented demonstrative actions in two spots that are considered to be very crucial, as they are located in potentially dangerous places, very much frequented and crossed by vehicles all day long and, in addition, particularly important for pedestrians as they easily connect the city centre with other neighbourhoods of the city. In addition, other pedestrian crossings were secured with minor infrastructural works in both the Municipalities. Other interventions already designed could be implemented in the next months.

Interventions on pedestrian crossings, afferent to measure ELB3.1, are in general very much related with measure ELB 3.2.

Specifically, in Rio, a pedestrian crossing has been installed with the aim of safely connecting the two main neighbourhoods of the city, that are actually separated by a very crowded and relevant road, the SP 26 (provincial road), the unique connection for Rio with the rest of the island.

Other flat pedestrian road crossings have been renewed near the sea, using a particular painting with the aim to make it more visible.

Figure 6: Raised pedestrian crossing in Rio

In Portoferraio, a general renewal of the “Porta a Terra” area (Via Senno) has included the implementation of two pedestrian crossings. The Porta a Terra area is currently the only way out of the historical city centre for vehicles so it is actually very much travelled by cars; in addition it is also very much frequented by pedestrians, especially tourists, as it is one of the

best way to reach some of the most important cultural heritage of the city. The design has been developed to guarantee a good level of safety and to make access into the historical city centre easier. Both a raised and illuminated pedestrian crossing and a flat one have been developed in the area.

In addition, the Municipality of Portoferraio worked on the design of several pedestrian crossings in the port and rear port areas and some of them have been also implemented. Four flat pedestrian crossings and one roundabout have been introduced with the cooperation of the Port Authority.

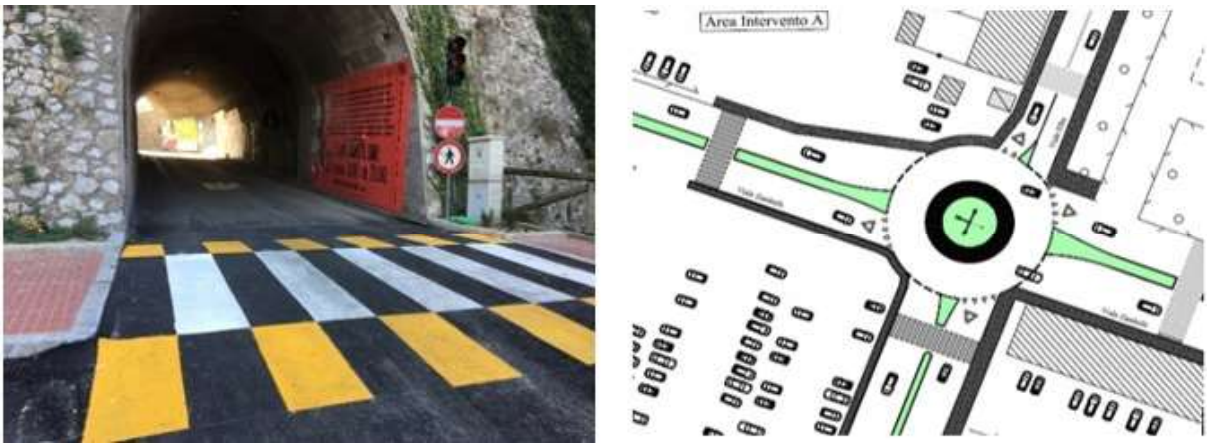

Figure 7: Raised pedestrian crossing in Portoferraio & Design of one of the roundabouts and of pedestrian crossings in the rear port area in Portoferraio

In Rio, an innovative material was used for the raised pedestrian crossing: a hard recycled rubber that is very resistant to vehicular traffic and easily visible by drivers; this characteristic is very important taking into account that the road in question is travelled daily by trucks, buses and cars as it is the unique connection among the Rio Marina Port and the rest of the island.

In Portoferraio, the two pedestrian crossings nearby Porta a Terra (Via Senno) are quite innovative at local level: one of them is raised and equipped with little lights on the floor visible from the approaching vehicles; vertical and horizontal signs and a light on the top complete the infrastructural facilities of the area. The other one is flat, painted on a pavement gradually descending from the sidewalk towards the street floor, so, it results to be a very accessible pedestrian crossing.

The methodology adopted to define the priority interventions is also interesting and new for the local context. Not only the previous planning of viability but also statistical data on accidents and near accidents were taken into consideration.

Figure 8: Flat & gradually descending pedestrian crossing in Portoferraio

The need to generically improve accessibility and encourage walking and cycling throughout Elba Island has emerged during the participatory process carried out in preparation of the SUMP (ELB2.1), that involved citizens and relevant stakeholders.

A new active involvement of stakeholders in the design of infrastructural works included in ELB3.1 and ELB3.2 measures was not really necessary, but technicians took in good consideration what emerged during the mentioned participatory process and also their previous knowledge about some specific characteristics of the areas involved in the measures: for instance, concerning the Porta a Terra area technicians already knew that it is usually crossed by tourists, very often in groups of 20-30 people, because it is one of the most beautiful ways to reach the historical heritage of the old city; so the need to widen the pedestrian route and make pedestrian routes and crossings more accessible and safe was very clear.

In addition, the Chief Traffic Warden of both the territories of Portoferraio and Rio and their staff have been consulted as viability experts, in order to receive practical indications on infrastructure, and suggestions for technical details, according with national regulation.

Furthermore, The accurate initial design of many pedestrian crossings in the city resulted to be very useful: it led to a good and detailed analysis of viability and road structure and to an estimate of the level of safety for pedestrians and cyclists in many areas of the city. Following this, the intervention priorities were defined, and some specific areas were selected to be implemented first; then, the concrete development of the measure was made.

2.6 ELB 3.2 - Sustainable and safe accessible bike and pedestrian route design

Within the CIVITAS DESTINATIONS project, several demonstrative actions have been undertaken in order to make the mobility for pedestrians and cyclists easier and safer in urban and extra-urban areas in Portoferraio and Rio. Although these are small territories, the use of private cars even for short distances is still very common. For this reason, it is important to

encourage walking and cycling, trying to make passages for pedestrians and cyclists safer and less fragmented. This measure is very much related with ELB3.1.

In Rio, many interventions have been carried out to eliminate any architectural barrier in the city centre (rear port areas); it must be specified that the historical centre of Rio is characterised by numerous stairways, very beautiful and pleasant, but rather tiring and inaccessible for elderly people, disabled and strollers. For this reason, different types of walkways and ramps have been installed, suitable for each individual passage: a very useful support for people with reduced mobility; even cyclists use it often. The implementation has been carried out in the framework of the current “Design renewal of the backstage harbour areas” project funded with other already-secured financial resources.

Figure 9: Installation of ramps in the city centre of Rio

In addition, to support pedestrians and highlight the paths, an electronic panel (totem) has been installed in Rio, in order to supply information about the localisation of the most important points of interest of the city.

In Portoferraio, infrastructure works have been done in some sections of the “Cammino della Rada” route, an ancient extra-urban path: interventions were aimed to improve accessibility and safety in some critical passages.

In addition, the Municipality was committed in the development of several infrastructure works in the urban area of the city. First of all, interventions concerned securing the pedestrian and cycle passage along the quay of the ancient Medici port. In addition, a pedestrian path with two sidewalks was built in the “Porta a Terra” area, in continuity with both the existing and new pedestrian crossings and routes. A section of Via Vittorio Emanuele II, previously used as a secondary passage and parking, has been also pedestrianised and equipped with a ramp for strollers and disabled people.

Figure 10: Examples of safety implementations on pedestrians' and cyclists' routes in Portoferraio: the quay of the ancient Medici port (on the left) and Via Vittorio Emanuele II pedestrianized (on the right).

In Rio, it has been possible to develop interventions highly appreciated by the population through simple, intelligent, and inexpensive solutions. The installed ramps are not very expensive, yet they have offered citizens a great service, allowing an easier access to the city streets. The difficulties of elderly, strollers and people in wheelchairs to travel these streets were known both by politicians and technicians and by the population itself, so this made the measure easily acceptable.

In Portoferraio, the innovation of the measure consists in the adoption of an approach that gives priority to the mobility of cyclists and pedestrians to the detriment of cars. The interventions in fact included the elimination of some car parks and the pedestrianisation of road sections. In addition, the works, intended as a whole, have connected already existing paths or pedestrian areas with each other, which was previously a very fragmented and uncomfortable route. This general approach was supported by the previous political administration of the Municipality and well accepted also by the current one, who took office in May 2019.

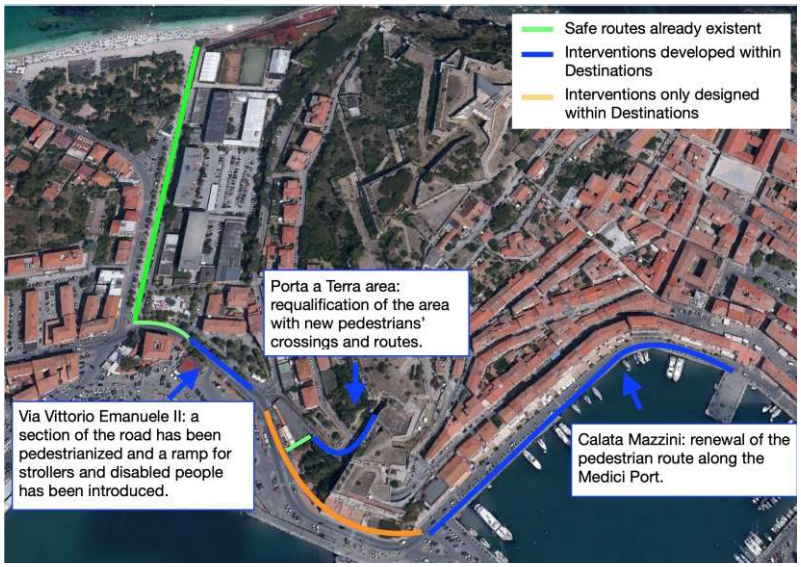

Figure 11: Overview of the interventions developed and designed in Portoferraio aimed at reducing the pedestrian routes' fragmentation.

The need to generically improve accessibility and encourage walking and cycling throughout Elba Island has emerged during the participatory process carried out in preparation of the SUMP (ELB2.1), that involved citizens and relevant stakeholders.

In general, giving priority to soft mobility and restoring space for pedestrians and cyclists can improve the liveability of cities and makes them more attractive from a tourist point of view.

2.7 Cluster analysis

Destinations sites completed activities for this cluster, mainly to improve infrastructure for cycling and walking targeted to increase traffic safety and improve disabled accessibility for residents and tourists. The success of all activities implemented, based on the efficient and close cooperation with main stakeholders as well as the demonstration actions completed to improve infrastructure, **contributed to integrate mobility products and to motivate residents and tourist to change behaviour towards sustainable modes of transport**.

All cluster sites adopted the appropriate technologies and services in order to improve their infrastructure (Limassol, Rethymno and Elba) and used similar approaches to raise awareness and motivate the target groups of resident and tourist to change mobility habits (Limassol and Rethymno).

Furthermore, Rethymno (RET 3.1b) and Limassol (LIM 3.2), with similar equipment, improved the accessibility of disabled people and the traffic light system on main pedestrian crossings. For the case of Rethymno, the installation of the SEATRACK system (fixed track mechanism with wheelchair entering in the water), was an innovative solution at the local level, as it was the first installed in the prefecture. On the other hand, for both sites, Limassol and Rethymno, the installation of the new equipment in the traffic lights of both cities, which, assists people with disabilities, was also, an innovative solution at local level to facilitate impaired people needs. In addition, the good cooperation with key stakeholders leaded both sites to implement their measures successfully.

It is remarkable, the great success Rethymno has been made, through the development of a thematic application for schools' communities that serves as a mindset tool for the use of sustainable modes of transport (RETH 3.1a). This application could be, successfully replicated to another city of CIVITAS Family.

In all three sites, promotional events, information and awareness campaigns, seminars, and interactive workshops helped to promote measure activities and attract more people to use sustainable modes of transport. Also, in Rethymno and Limassol, promotional activities contributed to as a tool for change mobility habits.

Moreover, Limassol, Rethymno and Elba promoted walking and cycling with expansion or intervention in the cycling and walking network of their cities (LIM 3.1, RETH 3.1a, ELB 3.2), according to their needs, by following different approaches and solutions. In Rethymno, an assessment study, was created, to estimate the current situation including recommendations for the expansion of cycling network and its link with PT and walking infrastructure (RETH 3.1a). Furthermore, in Limassol, the biggest success was LTC's participation in the Advisory

Committee for cycling in Cyprus, with suggestions for the introduction of the New Law for cycling in Cyprus. (LIM 3.1).

In Elba, a similar success of measures activities occurred with interventions for easing mobility of pedestrians and cyclists in Rio Marina and Portoferraio (ELB 3.1. ELB 3.2). It must be pointed out that in Elba, a new innovative material has been used, for the creation of pedestrian crossings, a hard-recycled rubber, resistant to vehicular traffic and easily visible to drivers (ELB 3.1).

Conclusively, the following recommendations have been noted in order for the measures to be adopted by other cities:

- Identification of the common interest across sectors and creation of long lasting partnerships between Local Authorities, Ministries and Association and Unions of disabled people which can lead to the development of integrated plans for public spaces, accessible to all, including disabled people.
- Development of infrastructure for tourists that offers integrated tourist and sustainable mobility information, encouraging and facilitating sightseeing with the use of bicycle and walking.
- Creation of new infrastructure, facilities, and specific guides regarding accessibility of the cities for attracting disabled tourism.

3 Attractive and accessible public spaces (Task 3.5)

3.1 MAD 3.1 - Innovative solutions for safe and secure public spaces

Within MAD 3.1, CMF, the Municipality of Funchal, successfully achieved the goals which comprised of improving accessibility for public transport, elaboration of an urban renovation plan to increase attractiveness, implementation of an integrated system that bridged energy efficiency and road safety and a road safety monitoring GIS (Geographic Information System) database.

As for the accessibility for public transport, together with the public transport operator HF, 21 sites were identified in which it was necessary to improve the accessibility conditions. Under these improvements, the deployment of 4 new public transport shelters was also achieved, alongside improvement of pedestrian accessibility with new sidewalks (a total extension of 564,13 m^2) and enlargement of sidewalks according to national guidelines (82,2 m^2). These civil works are jointly connected with MAD 7.2, given the similar scope between these two measures. As an extra output, CMF had also received a grant from REDF to increase bike path and pedestrian accessibility in the western part of the city. The public works are expected to be launched before the end of DESTINATIONS.

Regarding the safety inside the bus, HF installed in one bus one surveillance camera that also allows for counting passengers. Analysing the passengers' behaviour on board and the accidents on board, a communication campaign was defined directed towards the passengers paying more attention inside the bus, and promoting the bus safety rules.

An urban renovation plan was concluded which supported the type of equipment to be acquired. The renovation plan focused on a territorial, demographic, sectorial and accessibility/mobility overview of the target area, also including an assessment in terms of public lighting efficiency and road accidents and interventions to mitigate these problems. The plan was crucial in order to gather the baseline data, identify the issues and outline the strategy that was already implemented. Besides local authorities that shared the data related to road accidents, the development of the study was also supported by the regional public-private company responsible for electricity distribution who shared the information related to the public lighting system in the area.

An advanced public lighting system powered by renewable energy was purchased, combining energetic efficiency with road safety. The system started operation in April 2019 and was installed in 5 places, allowing the reinforcement of pedestrian safety on the pedestrian crossing by incorporating intelligent lighting, that is, when detecting a pedestrian that intends to cross, the light on the floor and the upper illumination are automatically activated, increasing the visibility of pedestrian crossing for drivers. The system was very well accepted and praised internationally and is now a good practice highlighted by the Interreg Europe (www.interregeurope.eu/policylearning/good-practices/item/2821/intelligent-crosswalks-energetic-efficiency-and-road-safety/).

During DESTINATIONS, CMF developed a road accident database resulting from a statistical sharing protocol with the Police authority (PSP). This information was crucial for the identification of the places that need intervention. The monitoring action is performed through data that are submitted by police every six months. The data refers to the type of accidents, namely run over and collisions, indicating the street where it occurred. This information was also useful for the measure evaluation.

Additionally, this measure enabled a more active engagement of stakeholders in which the main actors were the police that made the data available related to road safety and the local electric company that supported the development of the solution related to the public lighting renewal.

The main barriers identified within this measure concerned the technical complexity of implementing the renewed public lighting system. Regarding the civil works to improve public transport accessibilities, given the spatial constraints, it was technically unfeasible to deploy shelters and to implement sidewalks in some areas. As for the learning lessons, this measure proved to showcase the importance of innovative and integrative actions in order to achieve better results and has contributed to promote Funchal as an exemplary city when it comes to mobility related and ITS solutions. It is expected that this measure could be further replicated in other areas of the city. The tools to increase awareness of the measure concerned exhibitions (displayed during the EWM), local press and the application of this measure as a good practice to Interreg Europe within the theme of low-carbon economy that enhanced the visibility of the measure.

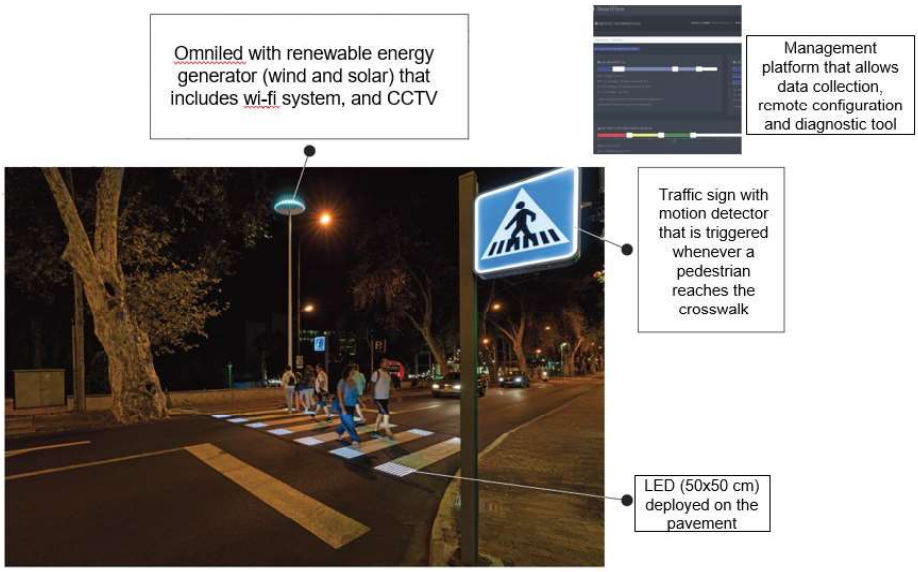

Figure 12: Integrated system implemented in Funchal that bridges energy efficiency and road safety

Figure 13: Improvement of public transport accessibility (before and after) also bridged with MAD 7.2

3.2 LIM 3.4 - Attractive and accessible public spaces to promote intermodal leisure trips

This measure will give the opportunity to Limassol visitors to enjoy an ecological and people-friendly city tour, sharing ecological means of transport without strict time frames. It aims to create a route of approximately 2km within the city centre, containing several points of interest and sights for tourists in order to give the opportunity to them to explore the city centre and allow them to visit the most attractive spots in the city. Three collection points will be developed, where all necessary works and infrastructure will be developed / constructed (such as covered waiting area, toilets, bike sharing system), providing those services to visitors and helping users to change from one mobility mode to another having a “base” in each connection point.

The main barrier faced during this implementation was the infrastructure of those three municipal’s collection points and the lack of interested individuals in this implementation. This led to a significant delay in the implementation and it was needed to simplify some information regarding the plan and the procurement.

The stakeholders involved for the development of the “ecological route” is the company that undertook the research and the study visit part, Ioakim and Loizias Architectures, as well as the company that will undertake the implementation and the upgrade of the three connection points. Additionally, Limassol Municipality performed several communications with the Electricity Authority of Cyprus, who is responsible for all electricity matters of the island and in our situation is the only supplier for the electric vehicle charging points in Cyprus. Also, Next Bike CY, the bike sharing company, will support the action.

This measure can be combined with LIM 6.4 as the 3 parking involved for the creation of the ecological route are the same used for the installation of the Smart Parking Guidance System (LIM 6.4) with real time information for the availability of Municipal’s parking places.

3.3 ELB 3.3 - Requalification of the main taxi station area in Portoferraio

The main taxi station in Portoferraio is currently located opposite the ferry landing. This entails interferences with vehicles that disembark from the ferries and go towards other locations of the island and generates safety problems in traffic flow, especially in summer. In addition, the station is located in front of the main ferry ticket office and therefore hinders the passage of pedestrians and the short-term parking due to purchasing tickets.

The plan is to move the station to an adjacent area in order to obtain an increase in security and also an embellishment of the taxi station itself. However, as yet, no definitive agreement has been found with taxi drivers on the matter and this is leading to delays in the measure. The new political administration really cares about the matter and is analysing it carefully and re-opening the discussion with taxi drivers.

The design of the new taxi station has been completed, as well as the first implementation works, such as the creation of the stalls and construction of a basement for shelter for waiting passengers. Although the project and the works have been agreed with taxi drivers, to date the station has not yet been moved and since the election of the new City Council (April 2019), a new analysis of the measure itself is ongoing.

Since the beginning, taxi drivers were highly involved in the discussion about how to make the area more accessible and safer. In addition, other stakeholders have been heard and involved, such as the owners of the nearest shops and bars. The Port Authority is in addition another relevant interlocutor that has been considered. Because of the lack of unanimity on this matter, the new politicians of Portoferraio Municipality are new re-opening the discussion with stakeholders in order to better understand their needs and to find the best way to improve the accessibility and the attractiveness of the area.

Figure 14: Actual taxi station in Portoferraio

3.4 LPA 3.1 - Attractive, safe and accessible public space at major attractions

Thanks to the CIVITAS DESTINATIONS funding it has been possible **to draft a Mobility Plan** to assess the impact of the new Aquarium in the current mobility system of the northern area of the city and to foster a balanced development of all relevant transport modes by setting the following specific objectives: (1) To reduce car use; (2) To encourage a shift towards more sustainable modes; and (3) To tackle traffic congestion.

The geographic scope of this plan is the northern area of Las Palmas de Gran Canaria (the *Isleta-Puerto-Guanarteme* district). The **Laboratory Area –** the surrounding area of the new Aquarium – is located within this district and includes some of the most important touristic hotspots of the city (the Cruise Terminal, a shopping mall, the main bus station and the new Aquarium).

Then, an effective package of measures built on discussion with key stakeholders was selected, considering experience from other places with similar policies, ensuring value for money and exploiting as much as possible synergies between measures. The project supported the design and feasibility study of these integrated set of technical, infrastructure, policy-based, and soft measures but did not fund their implementation.

Up to now, the following actions have been implemented during the operational stage of this measure:

- A **new walking path** that connects the study area with the main promenade (the public investment has been of over 3.6 M€):

Source: José Carlos Guerra.

Source: : Las Palmas de Gran Canaria

Figure 15: New Walking Paths in Las Palmas de Gran Canaria

- **Actions to improve accessibility** (sidewalks, crosswalks in all street crossings, curb ramps for pedestrians in all crosswalks, etc.):


Source: Las Palmas de Gran Canaria


Source: Las Palmas de Gran Canaria.

Figure 16: Accessibility improvements (sidewalks, street crossing, ramps)

- **Two stations of the new bike sharing scheme** (called Sítycleta and partially funded by the CIVITAS DESTINATIONS project through the measure LPA4.1):


Source: Las Palmas de Gran Canaria


Source: Las Palmas de Gran Canaria

Figure 17: Two Bike Sharing Stations

- **A new taxi station and loading/unloading bays for coaches:**


Source: Las Palmas de Gran Canaria


Source: Las Palmas de Gran Canaria

Figure 18: Taxi station and loading/unloading bays for coaches

- **A new walking and cycling connection to overcome the GC-1 highway**. This new walking path connects the new Aquarium with “La Isleta” neighbourhood and some touristic hotspots such as the “Mercado del Puerto”, “Castillo de la Luz” and Las Canteras beach. The public investment for this new infrastructure reached 2,3 M€:

Source: Las Palmas de Gran Canaria

Source: Municipality of Las Palmas.

Figure 19: New walking & cycling connections

- **An EV charging station in one public parking facility**. This EV charging station has been funded by the CIVITAS DESTINATIONS project (LPA4.2):

Source: Sagulpa.

Source: Sagulpa.

Figure 20: EV Charging Station in public parking

There have been some innovative issues related to this measure. First of all, to set up a Laboratory Area in the city to implement pilot measures to foster a sustainable mobility system in the city and to evaluate their effectiveness. Secondly, to use a traffic modelling software to assess the current mobility situation in this area. This software has been used to assess the impact analysis of the future scenarios (do-nothing-scenario, business-as-usual scenario, BRT scenario, etc.). Thirdly, the use of Scout cameras for the traffic data collection, the industry leading traffic counting devices, built for reliable, unattended field operation for days at a time. They provide the optimal setup for a variety of traffic studies and are easy and safe to setup and operate at the roadside. And last but not least, it has been the first time that a sustainable mobility approach has been applied to assess the impact of a new touristic hotspot (the new Aquarium).

The main result of this measure is having found solutions to the opposed interests of a wide range of local stakeholders (Port of Las Palmas Authority, Gran Canaria Tourism Board, new Aquarium, cruise companies and tour operators).

Despite the success involving all key local stakeholders in the mobility planning of this new area of the city, there have been some obstacles and barriers for its success. On the one hand, that decision making processes of Public Administrations have quite different characteristics (pace, deadlines, paperwork, etc.). On the other hand, an important part of this area is located within the Las Palmas harbour, which depends directly from the National Government and has special urban regulations.

The Mobility Plan includes actions to improve accessibility and sustainable mobility options for both tourists and residents. On the one hand, the Mobility Plan includes actions to improve sustainable mobility of tourists by creating new walking paths and enlarging the bike lane network to connect all touristic hotspots in the norther area of the city. Besides these actions, the Mobility Plan also foresees a new coach parking facility and a new signpost system addressed to tourists with information about touristic hotspots. On the other hand, the Mobility Plan is also addressed to residents and includes a wide range of measures to lower car use, promote sustainable mobility and reduce traffic congestion.

The improvement of sustainable mobility in the Laboratory Area is the result of the cumulative effect of a wide range of measures and actions. Thanks to this approach, the Laboratory Area has become a traffic-calmed area, very attractive for pedestrians and cyclists. The combination of push and pull measures addressed to the specific needs and requirements of both residents and tourists has helped to settle a sustainable mobility system in this area.

The Mobility Plan has been the key planning tool that has integrated all previous projects into a single sustainable mobility vision and goal.

3.5 Cluster analysis

In terms of this cluster, all sites completed most of the activities to **improve infrastructure by adopting innovative solutions, in order to increase the attractiveness of public spaces, to secure safety for residents and tourists and to improve sustainable mobility options**.

At the beginning, both sites Las Palmas and Madeira focused to create a plan, adjusted to their needs, to collect necessary information for the successful completion of their activities. In the case of Las Palmas, CIVITAS DESTINATIONS gave the opportunity to draft a **Mobility Plan** and to gather data for identifying the impact of targeted area in relation to the existing mobility system and to adopt sustainable mobility options. The Mobility Plan was the base for the implementation of a **Laboratory Area** in the city, an innovative issue that includes activities to improve sustainable mobility services and the use of an **innovative modelling software** for evaluation of sustainability transport. On the other hand, Madeira developed an **Urban Renovation Plan**, with the support of specific equipment, to collect the baseline data for identifying appropriate solution for the installation of an innovative public light system. Furthermore, the lighting system was one of the innovative aspects of the cluster, as the system combines energetic efficiency with road safety. This system has an international recognition and Madeira can be promoted as an exemplary city as it is a good example for Interreg Europe.

In Las Palmas de Gran Canaria, several innovative aspects have been identified, firstly the setup of a Laboratory area to foster a sustainable mobility system in the city has been

implemented. Furthermore, the use of a traffic modelling software to assess the current mobility situation has been developed in Las Palmas de Gran Canaria and the use of Scount Camera for the traffic data collection; all these aspects provide the ideal conditions for traffic studies, and additionally are considered as simple and safe to setup and operate at the roadside (LPA 3.1). The new technology, used in Las Palmas de Gran Canaria, such as the traffic modelling software and the Scount cameras, can be adopted from other cities as Best Practices.

In reference to the above observation, Las Palmas de Gran Canaria experienced obstacles in decision making processes related to Public Administrations and National Government as well (specific characteristics such as deadlines, paperwork, and special urban regulations) (LPA 3.1). These problems considered to be significant barriers in order to proceed with measure implementation.

Moreover, a common barrier identified in all DESTINATIONS sites is the lack of a common framework for accessibility at EU level, in order to improve accessibility in touristic destinations. The improvement of accessibility cannot be built upon the basis of the "legal responsibilities" of each public authority or public body involved in this issue. That approach usually leads to coordination problems and, ultimately, to a neglect of duties.

In the case of Elba. delays were experienced due to the lack of agreement between the actors involved. New politicians of Portoferraio Municipality are re-opening the discussion with stakeholders in order to better understand their needs and to find the best way to improve the accessibility and the attractiveness of the area (ELB 3.3). Limassol faced delays regarding the first procurement process since no tenders have been received (LIM 3.4).

Both Madeira and Limassol have been faced difficulties related to technical issues. Specifically, in Madeira difficulties were related to the technical complexity of implementing the renewed public lighting system, the activities to improve public transport accessibilities and implementing sidewalks in some areas (MAD 3.1). On the other hand, Limassol faced barriers regarding the infrastructure of three municipal points for planning the ecological route (LIM 3.4).

The success of these measures resulted from the high involvement of key stakeholders at local and national level. In all sites, authorities such as port authority, electricity authority, police authority contributed highly for the implementation of the measures. In addition, the tourism sector such as cruise companies, tours operators and Tourism Board contributed to the success of the measure (LPA 3.1). Thus, the role of stakeholders as well as their involvement may influence the project process and inputs. Based on our discussions, an overall plan regarding stakeholders' role is required by each partner.

4 Demonstration of Integrated Mobility and Tourism Information and Payment Service (Task 3.6)

4.1 MAD 3.2 - School and foreign students awareness campaign package

This measure resulted in the following outputs: school mobility studies and improving measures for the six pilot schools; improvements in school surroundings; one mobile application "Pick-Up and Ride" to speed up the pick-up of children at school and decrease traffic constrains, and one awareness raising campaign about sustainable mobility and safety in schools.

In the scope of this measure, six schools were selected, with different contexts: four schools from second to high degree and two primary schools. In July 2017, a preliminary survey was addressed to the public transport operator (HF) and six schools aiming to characterise the starting point of PT services and identify the main problems and needs. Between November 2017 and February 2018, a total of 8811 surveys were carried out, addressed to the six schools' communities, including pupils, parents and school workers, to characterise the mobility patterns and define the baseline.

AREAM developed a fact sheet concerning surrounding areas, access streets and bus stops to evaluate the quality and safety on the public space surrounding the six schools. The results are reported in the mobility schools' studies, represented by a map with the identification of areas with three levels of hazards and intervention needs (concluded in June 2019).

The reports were disseminated among CMF, HF, transport regional authority and schools' board directorate. They were used as reference documents for debate among stakeholders about the intervention needs to improve mobility and safety.

The school's mobility planes are also considered in the SUMP of Autonomous Region of Madeira approved by the Regional Government, elaborated in MAD2.1.

Traffic calming and traffic management measures: CMF made interventions in four schools: creation of kiss and ride areas, implementation of speed bumps, elevated crosswalks, and traffic calming measures.

Bus stops: CMF improved the accesses and conditions in bus stops in two schools.

Public transport fair reduction: Related with measure MAD2.1, Regional Government implemented a new regional public policy to promote PT, making it more attractive and competitive. This initiative provides the free use of PT for children up to 12 years old and at a monthly cost between 12 and 23 euros for students up to 23 years old "Sub23 Pass".

Mobile application "Pick-Up and Ride": In articulation with measure MAD2.2, AREAM is developing a mobile application, based on a GPS system, that helps the communication between parents and school concierge or children, managing the pickup in a faster way. This

App aims to contribute to the reduction of the congestion caused by the pickup of students after school classes. In August 2019, meetings were held with the schools where the application will be tested. It is expected to be completed in March 2020, and demonstration will occur in two schools. The app has an innovative approach, and was presented in Austria, by Dobsware, the company developing it, in a contest of ideas addressed to start-up companies, to solve transport poverty.

For evaluation purposes, in June 2020, a survey will be addressed to a small sample of students of pilot schools in order to verify the impact of implementing some initiatives such as public transport fair reduction and traffic calming.

AREAM, with the support of HF and CMF, held about 20 awareness raising actions with the participation of about 140 teachers and 400 pupils, in 13 schools. There were organised activities with an innovative approach, that consisted of the following actions: lectures, observation and evaluation of the public space and participative actions, addressed to pupils of third level school and teachers. The outdoor activities and the participative actions were enthusiastically welcomed by students and teachers.

With the support of the Regional Education Secretariat, AREAM launched a campaign for the school year 2019/2020, to carry out awareness raising actions on the theme of sustainable mobility and safety in schools, reaching the whole region. It addressed the promotion of sustainable mobility and safety in schools among 16 teachers of 11 schools, so they could include this issue in their education plan.

Sustainable mobility and safety were promoted in schools through several events at regional, national, and European level, such as the National Programmes “Eco-Escolas” and “Educação Rodoviária”, Energy Day, European Mobility Week, and a TV show “Alerta Verde”.

In September 2017, HF started the campaign “By bus to school”, in Portuguese “De carreira à escola”, composed by a set of promotional materials: flyers, brochures posters. This campaign targeted the elementary schools and provided simple information to students, to inform which bus routes are near their schools. A campaign with the same structure was also launched in partnership with the Regional universities, promoting the monthly Sub23 Pass.

Moreover, it was the first time that work was carried out that gathers the assessment of mobility patterns and needs, the adequacy of the public transport services and the quality of the surrounding public space, applied in a place with such a diverse and vulnerable population. The discussion and actions implementation processes showed to be very complex, as it brings together many variables and stakeholders to be involved. The main actors, as well as the school communities, generally acknowledge the problems and its urgency in solving them, but have a huge difficult in acting, due to the complexity of the solutions. This was, somehow, a pioneer work in Madeira Region, and local the team believes that it will have a long way to go and goes beyond the lifetime of the CIVITAS DESTINATIONS project.

The engagement of stakeholders started with the involvement of Regional Educative Authority, for the selection of pilot schools, and with the involvement of main actors in mobility, which are partners of the Destinations Project, namely DRET, CMF and HF. Then AREAM made contacts with the six selected schools, which embrace the proposed Programme to develop mobility studies to identify the main problems and needs, and promote the discussion among

stakeholders, to find solutions to improve sustainability and safety in schools for daily access from several transport modes.

Figure 21: Awareness raising campaigns

4.2 LIM 3.3 - Safe routes to school

This measure focuses on delivering workshops at primary schools with the aim to educate children on road safety and the use of alternative sustainable mobility modes to commute to school.

Workshops were implemented during the academic period of 2017-2018, 2018-2019 and 2019-2020, and included presentations about road safety, cycling, walking, carpooling and the use of public transport. During the workshops, experimental games have been organised with reference to the benefits of walking and cycling and included road sign games, stimulation of traffic parking, a cycling park arena with walking and cycling activities, and a pedestrian crossing zebra with guidance outside schools. Additionally, a video was prepared and presented to students, during workshops, included guidelines for road safety and how to use sustainable modes of mobility.

A total number of 46 primary schools of Limassol Region have shown their interest in undertaking the workshops and being more aware about how to get to school with safety using sustainable mobility modes.

Figure 22: Cycling Activities, Presentations and Workshops in Primary Schools

Limassol city spreads across a wide area in the Region and it is very difficult to commute without a mode of motorised transport. Unfortunately, the use of PT and other sustainable modes of transport is not very popular on the island. Through the DESTIANTIONS project, the opportunity was given to increase awareness and to use workshops as a tool for behavioural change, especially to students and encourage them to use bicycle, PT and walking for their daily transportation.

Moreover, the efficient and resulted cooperation with stakeholders, especially with schools' communities resulted to the successful implementation of the measure.

It must be pointed out that at the beginning of the implementation the main barrier was the difficulty in gaining the necessary approval by the Ministry of Education and Culture in order to be able to implement the workshops in primary schools. Through efficient cooperation with already authorised organisations, the risk was addressed.

During the implementation of workshops, a questionnaire was prepared for parents regarding students' accessibility to school. The aim of the questionnaire was to promote sustainable mobility modes and to give real information about the way students are going to school such as the duration of their journeys, the reason for their chosen modes, their concerns regarding using cycling and walking to school and evaluation of solutions. The questionnaires were distributed to parents through schools during the academic period 2017-2018 and 2019-2020

and a comparison will be made in order to observe any changes regarding the mobility modes of students through the project.

For the implementation of LIM 3.3, the Police-Traffic Department contributed material and support as well as participation in the campaign. The presentations/workshops have been organised with the support and participation of the Parents' and Teachers' Associations of the schools involved.

It must be pointed out that implemented activities cannot be considered only as activities for safety but also activities for changing the modal split. Tourists and residents will be encouraged to use sustainable mobility modes to explore the region according to their special interests.

4.3 RET 3.2 - Mobility Plan for schools and university communities

Rethymno is combining new infrastructure and strategic plans around schools and the university, including a concrete team of public stakeholders' engagement, also integrating behavioural change activities to increase safety and the use of sustainable transport modes within the schools' community.

The measure delivered:

- Elaboration of Mobility Plans for 11 school districts (18 primary and secondary education schools in Rethymno), and the University.
- Designing, organising and developing a two-year plan, including experiential road safety and behavioural change activities; networking and competition, thematic events and workshops for the schools' community.
- Design and development of a thematic application for tablets and smartphones targeted to children and adults, serving as raising awareness and behavioural change tool.
- Development of a school network of 30 schools and more than 4.500 students involved so far.

The measure applies an innovative approach towards school communities through an action plan co-created with active engagement and support of all involved stakeholders. An extensive awareness raising campaign of two-years duration was conducted, involving so far more than 4.500 students, and creating a network of 30 primary and secondary education schools. The elaboration of mobility plans, aiming to increase road safety and enhance walking, the use of bicycle and public transport services, was expanded to include 18 primary and secondary schools of Rethymno.

TUC, aiming to build the capacity to the young generation to use sustainable transport modes, demonstrates a tailor-made application, to serve as a behavioural change tool towards car independence lifestyle, and promote the environmental benefits of sustainable mobility, both to children and adults. It has been tested and used during numerous events; one-week campaign "Road Safety Week", EU Mobility Weeks 2018 and 2019. The app calculates the direct CO_2 emissions from daily routes to/from school or the workplace,

illustrating practically the benefits of choosing an alternative commute instead of the car, using bicycle, Public Transport, walking, or shared vehicles.

The behavioural change activities plan of Rethymno has also been replicated in other municipalities/regions in European counties through the CIVITAS DESTINATIONS Replication Funding.

Rethymno is a small insular city where students and parents are required to cover short distances to/from schools. Many school districts are located in the city centre, encouraging the use of bicycle and walking for daily transportation.

The targeted step by step planning during the design phase, the stakeholders' engagement that resulted in a concrete working team development, the continuous and efficient cooperation with schools' and university communities (directors, teachers, students and parents, university students and staff), along with the elaboration of mobility plans for the schools and the University, led to a successful result.

The Mobility Plans consist of a key segment of the wider Sustainable Urban Mobility Plan for the city of Rethymno with interventions both short term (0-5 years for implementation) and long term (5-15 years), targeting to an integrated strategic plan for schools. The proposed interventions and measures to increase road safety were set under consultation, together with the SUMP, achieving public and stakeholders' engagement.

During the planning and designing phase, the main difficulty identified was the pre-authorisation requirement to enter the school classes, delivered as legislation from the Ministry of Education. Through efficient cooperation with already authorised organisations, the risk was addressed.

During the implementation of the measure, residents, particularly the students' parents, were actively involved by participating in the mobility patterns survey and the interactive informational and awareness workshops. Activities for the general public were also implemented during the weekly campaign "Road Safety Week", organised by TUC with the support of engaged stakeholders, and a series of informational and awareness events; road safety workshops and public first-aid seminars.

The key stakeholders were identified, contacted, and engaged at a very early stage, both for the mobility plan development, and the 2-year holistic plan organisation and initiation. Among them are included the Directorates of Primary and Secondary Education, the Municipal Department of Education and Lifelong Learning, the Road Safety Institute "Panos Mylonas", the Traffic Police and the Union of the Associations of Students' Parents. A solid and supportive working group has created within the DESTINATIONS project for the past three years together with TUC and Rethymno Municipality.

RET3.2 aims to affect the modal split of students' daily transportation to/from schools, increase road safety and reduce road accidents around the schools' areas. Furthermore, it targets to have a positive impact on the students' parents and teachers' mindsets towards sustainable transportation choices. RET3.1 development is in conjunction with the revised SUMP of Rethymno (RET2.1).

The Municipality of Rethymno has been accepted to receive 400.000 euro national funds for road safety interventions around schools and is planning to implement the mobility plans for schools in the city centre developed within the measure.

Figure 23: Mobility Plans for schools (left) and behavioural change activities and tools (right) for the schools' community

4.4 Cluster Analysis

Rethymno, Madeira and Limassol have organised awareness raising campaigns involving students and parents. **Campaigns resulted as one of the main success factors in sites** since locals have been informed about sustainable mobility and safety.

More specifically, in Rethymno a campaign of 2 years duration involving a network of 30 primary and secondary schools took place. Similarly, in Limassol interactive workshops have been implemented for three consecutive academic years (2017-2020), 46 primary schools and totally 2450 students participated actively. Interesting to note that in Limassol the number of schools increased from 30 schools to participate in the measure (as indicated in the GA) to 46 schools, given the fact that more schools expressed their interest to participate in the measure (LIM 3.3). Also, in Madeira, 400 pupils of 13 schools participated in various activities. Conclusively, as observed in all three sites campaigns and interactive activities effectively influence the school community, students, teachers, and parents and all were very participative.

In all three sites, an integrated communication strategy took place in order to organise the activities. The communication strategy included several meetings with key stakeholders such as school principles', parents and teachers' association involved to the implementation of activities (LIM 3.3, MAD 3.2, RETH 3.2). Furthermore, in Rethymno, an elaboration of Mobility Plans involving 18 primary and secondary schools and the University has been organised (RETH 3.2). The mobility plans aim to increase road safety and enhance walking as well as the use of bicycle and public transport services.

Both in Rethymno and Madeira an application has been created as a tool to motivate behavioural change. In Rethymno, the application estimates calculations of CO2 emissions from daily routes to/from school or the workplace, highlighting on the use of sustainable modes of mobility (RETH 3.2). In Madeira, the application refers to a GPS system that supports

communication between parents, managing the pickup of students in a faster way. The aim of this application is to contribute to the reduction of the congestion caused by the pick-up of students after school classes (MAD 3.2). These tools are considered as innovative aspects for the project and other sites can replicate these applications.

Another innovation that took place in Madeira is the development of fact sheet to evaluate quality of life and safety of public spaces surrounding schools (MAD 3.2). In addition, surveys have been carried out addressed to pupils, parents and school workers aiming to characterise the mobility patterns. Similarly, in Limassol, a questionnaire has been distributed to parents regarding students' accessibility to school. The aim of the questionnaire was to collect information regarding modes of transportation to/from school as well as identifying the barriers that may be faced. Conclusively, results of both questionnaires in the two different sites can be used effectively in further research and analysis.

In Madeira, the improvement of access and conditions at 2 bus stops in two schools contributed significantly to the success of the measure (MAD 3.2). Improving accessibility at bus stops promoted the use of public transport to students. This success can undeniably apply to other cities as well by motivating people to use public transport (MAD 3.2). Following the same aspect, a new regional public policy has been implemented promoting Public Transport with the involvement of Regional Government (MAD 3.2). This initiative offers the free use of PT for children up to 12 years old, therefore several actions have been taken to support measure's implementation.

In Limassol, difficulties were faced to receive approval from the Ministry of Education and Culture in order to be able to access schools and implement workshops in schools, this caused delays to measure implementation. But when the approval received schools were very positive for implementing activities in their schools.

In Madeira, a challenge during measure implementation focused on key stakeholders' cooperation. Since different stakeholders were involved, difficulties were faced in order to coordinate the discussion among stakeholders to find solutions to improve sustainability and safety in schools' daily access using several transport modes (MAD 3.2).

All sites were helped by awareness raising campaigns and the support received by key stakeholders. In Limassol, the school community, Ministry of Education and Culture, Parents and Teachers Association, Police-Traffic Department played an important role for the success of the measure. Similarly, key stakeholders were involved in Madeira as well as the Regional Educative Authority. In Rethymno, the directorate of Primary and Secondary Education, The Municipal Department of Education and Lifelong Learning, The Road Safety Institute "Panos Mylonas", Traffic Police, and the Union & Association of Students' Parents highly contributed to the implementation of the measure.

Limassol, Rethymno and Madeira all are promoting modal shift with the active involvement of students and parents during workshops where they are encouraged to use sustainable mobility modes to travel to and from school (instead of private cars). This can be a recommendation that can be applied to other towns. Given that fact that children are the future citizens focusing on this age group and promoting sustainable mobility can contribute significantly to behavioural changes regarding the choice of sustainable modes of transportation.

Madeira developed a fact sheet concerning surrounding areas, access streets and bus stops to evaluate the quality and safety on the public space surrounding the six schools. The results are reported in the mobility schools' studies, represented by a map with the identification of areas with three levels of hazards and intervention needs. The developed fact sheets can be used for anyone to evaluate the quality of public spaces around schools in other cities.

Additionally, another recommendation is focusing on the use of smart technologies to serve as a behavioural change tool towards car independent lifestyle and promote the environmental benefits of sustainable mobility both to children and adults. Both Rethymno and Madeira by creating innovative applications supported this behavioural change. Specifically, in Rethymno a thematic application for schools' communities, served as a mindset tool to promote the use of eco-friendly daily transportation. This application worked very well and can be used in other cities as a good practice.

Conclusively, in this cluster, by focusing on sustainable mobility in school communities, a different target group was reached and sent various messages such as using alternative mobility modes instead of private cars, as well as the benefits that could be gained and a different lifestyle. As observed, the success of this cluster lies on the fact that integrated mobility is promoted through the three sites' activities as well as the active involvement of the general public.