Project co-financed by the European Regional Development Fund

LCTPs of the international replications

LOCATIONS – Low Carbon Transport in Cruise Destination Cities
WP5 – Capitalising
Activity 5.3 Capitalizations of LOCATIONS results in new countries of the MED area
Deliverable 5.3.4 Six new LCTPs in 5 new MED countries

Lisboa E-Nova, AREA, AIT, CIRCE, REAK

Work package 5

Deliverable D5.3.4

Index

1. Introduction

This report corresponds to the Deliverable 5.4.2 and presents the results of the Activity 5.3 “Capitalizations of LOCATIONS results in new countries of the MED area”.

In this activity, with a transparent procedure, the LOCATIONS technical partners have selected 6 experienced replicating organizations, that were capacitated by participating in a capacity building programme and in an international mutual learning workshop to be empowered with the know-how necessary to transfer LCTP tools to 6 cities of new countries of the MED area not involved in the LOCATIONS consortium.

The cities of new countries of MED area to promote the International Replication of the LCTP and the selected replicating organisations are presented in the following table:

Table 1: International replication cities of the LCTPs, respective replication local organizations and twin partners

Country	Replicating City	Name of organization	Twin partner
Greece	Igoumenitsa	Premium Consulting	AIT
Greece	Thessaloniki	Aristotle University of Thessaloniki	AREA
Cyprus	Limassol	CIVINET CY-EL	AREA
France	Sète	Edenway S.L.	CIRCE
Malta	Valletta	Paragon Europe	Lisboa E-Nova
Slovenia	Koper	GOLEA (Goriška lokalna energetska agencija)	REAK

Therefore, this deliverable presents the English version of the international replication LCTPs produced by the replicating organizations with the LOCATIONS methodology and support of the technical partners.

2. LCTP of Igoumenitsa

Project co-financed by the European Regional Development Fund

LCTP for Igoumenitsa – Final Activity Report

Full Version

LOCATIONS - Low Carbon Transport in Cruise Destination Cities

September 30th, 2019

Created by Premium Consulting

Abbreviations

LCTP	Low Carbon Transport Plan
GNTO	Greek National Tourism Organization
IPA	Igoumenitsa Port Authority
SUMP	Sustainable Urban Mobility Plan

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1. Introduction

1.1. The city of Igoumenitsa

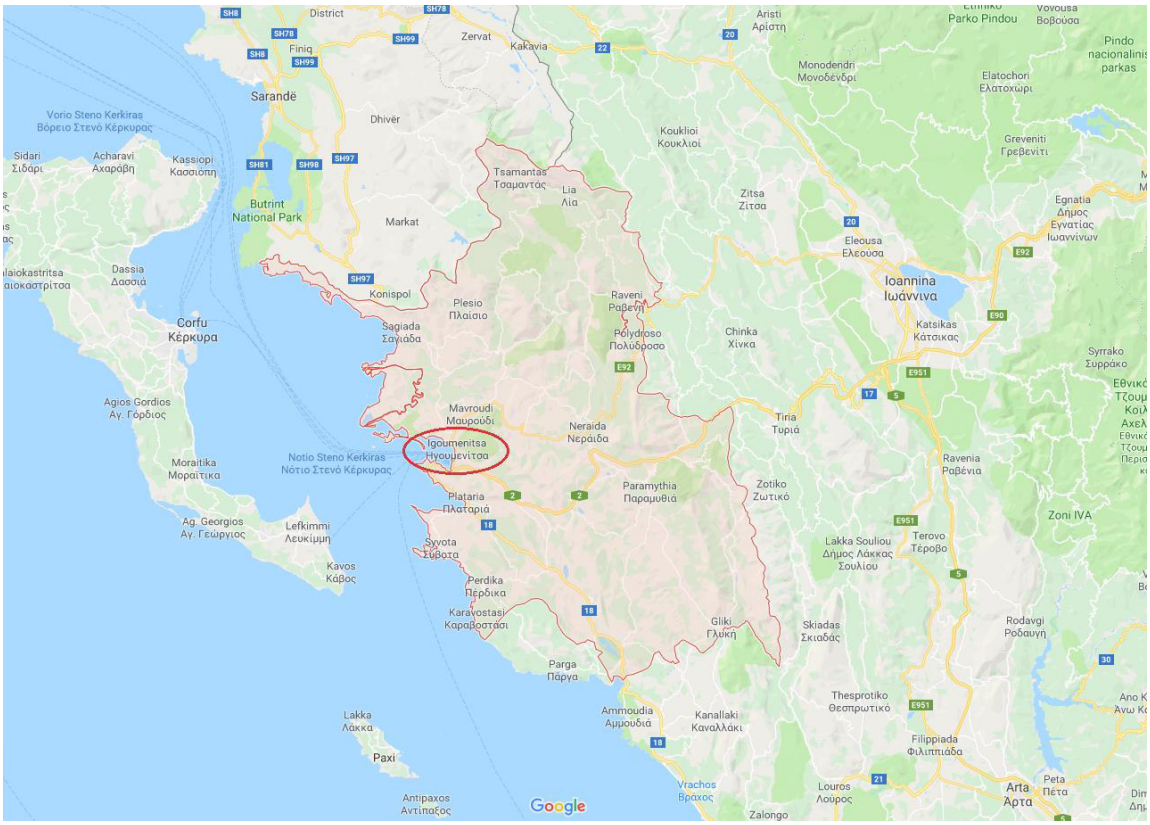
Igoumenitsa is the capital city of Thesprotia Regional Unit, in Epirus, Greece. The city includes the chief port of Thesprotia and Epirus, and one of the largest passenger ports of Greece, connecting northwestern Mainland Greece with the Ionian Islands and Italy. The city is built on easternmost end of the Gulf of Igoumenitsa in the Ionian Sea and primary aspects of the economy are maritime, transport, services, agriculture and tourism. The 670 km (420 mi) long Egnatia Highway, which serves northern Greece, terminates at Igoumenitsa, making it a popular starting point for tourists coming from Europe and ending point for trucks from Turkey.

Igoumenitsa features many shops, schools, offices and cargo storages, some departments of the University of Ioannina, a library, an archeological museum, several sport stadiums and tennis courses, a courthouse and a medical clinic. The Thesprotia Police Headquarters and the Municipal Sailing Club are located here. The city itself is built on the slopes of a forested mountain and expands perimetrically around the gulf.

The City of Igoumenitsa

The 2011 census recorded 25,814 inhabitants for the wider Municipality, of which 9,820 in the municipal unit of Igoumenitsa proper. Igoumenitsa is known for being surrounded by several forests and for its blue waters. The nearby Drepanos Beach is one of the longest sand beaches in the region, with a length of over 7 kilometers.

Satellite Photo of Igoumenitsa



Map of Thesprotia Regional Unit (Region of Epirus)

1.2. The port of Igoumenitsa

1.2.1. History of the port

The port of Igoumenitsa (panoramic view)

Although the area of Thesprotia was inhabited since prehistoric times, there is no archaeological evidence to support the existence of settlements in the current region of Igoumenitsa and its port. It seems that these areas were inhabited much later.

There is no information about the Port during the Archaic, Classical and Hellenistic periods. There is only a reference to the settlement of Ladochori, as testified by archaeological finds from the Roman era. The area's port however seems to be used only as an occasional anchorage. The next references come from 1285. During the Ottoman Empire, a small fort was built in Grava; this played an important role in the Turkish – Venice wars and was blown up by the Venetians in 1685. The area's port was not deemed important and thus marked no growth until 1908.

In 1912, Thesprotia was integrated into the Greek state, with its provinces shared between the prefectures of Ioannina and Preveza. New arrivals gradually settled in the town until the 1930s, which in 1936 had around 750 residents.

The town's location as a port opposite Corfu attracted ship owners. They thus included stops at Igoumenitsa twice a week in their itineraries. In the absence of port facilities, passengers were transported by boat and the goods were loaded and unloaded using barges.

In 1925, the residents asked for the port's connection via a highway with the city of Ioannina and in 1928 the government decided to build the port of Igoumenitsa. Emergency Law 353 of 1936 founded the prefecture of Thesprotia, with Igoumenitsa as capital. The port had a small jetty for the mooring of motorboats, barges and boats and a shed for the storage of goods.

The situation remained unchanged until 1950 when the ferry boat connection of Greece and Italy via the Patras-Igoumenitsa-Corfu-Brindisi line was decided. The works for the further development of the port began in 1958 and were delivered in 1960.

Until 1996, this natural harbor in the cove of Igoumenitsa bay was bounded by two piers, one in the north and one in the south. The north pier was 100 meters long and 30 meters wide. That is where the ferries on the Greece – Italy line anchored.

The south pier was 100 m long and 125 m wide and was the main pier of the port. It served both ferries on the Greece-Italy line and the tankers and cargo ships arriving at the port. Between the two piers there was a 480 m-long breakwater. Day-boats and excursion boats on the Corfu – Igoumenitsa line, as well as tourist and fishing vessels (mainly in the northern coastal zone) moored at the coastal platforms. The until recently existing channel (water channel) was approximately 9 meters long, which was sufficient for the crossing of the ferries, but was of limited width, allowing passage in only one direction each time.

Igoumenitsa Port Facilities

This port is the existing “Old Port” that served domestic and international routes. The first ship to be used on the route was the “EGNATIA” of the Greek company ELMES (Ellinikai Mesogiakai Grammai). In this framework, a year later, in 1961, the newly built ARRIA of ADRIATICA was used. And not competitively, but as a consortium. The choice of names was not random; the ships bore the names of the two great routes of the Roman Empire. APPIA was the route connecting Rome to Brindisi, while EGNATIA was the route connecting Durres to Istanbul.

EGNATIA was built in France in 1960. It was 115.42m long, 17.3 wide and had 4.11m draft, reaching a speed of 18 miles/hour. It could carry 115 cars. The route was very busy and, thanks to its size and luxury, Egnatia caused the admiration of all who saw or travelled on it, enjoying its amenities. Until the end of the 1980s, it performed the Igoumenitsa – Corfu-Brindisi route and twice weekly it stopped at the port of Patras.

1.2.2. Key Elements

Igoumenitsa port is geographically the closest port of Greece with Italy and the Balkan countries of the Adriatic Sea, thus becoming a major bridge of people and goods to and from Western Europe. Annually, 2.5 million passengers and approximately 250,000 trucks are moving from the port of Igoumenitsa to and from ports both, domestically and abroad. The main ports are the Italian ports (Bari, Brindisi, Ancona, Venice, Trieste and Ravenna) and the island of Corfu.

The port of Igoumenitsa is an important link of South East Europe Motorway of the Sea (MoS) connecting the Adriatic Sea with the Ionian Sea and the Eastern Mediterranean, including Cyprus.

The Corridor allows for the connection of the four TEN-T corridors:

1) Scandinavian Mediterranean Corridor

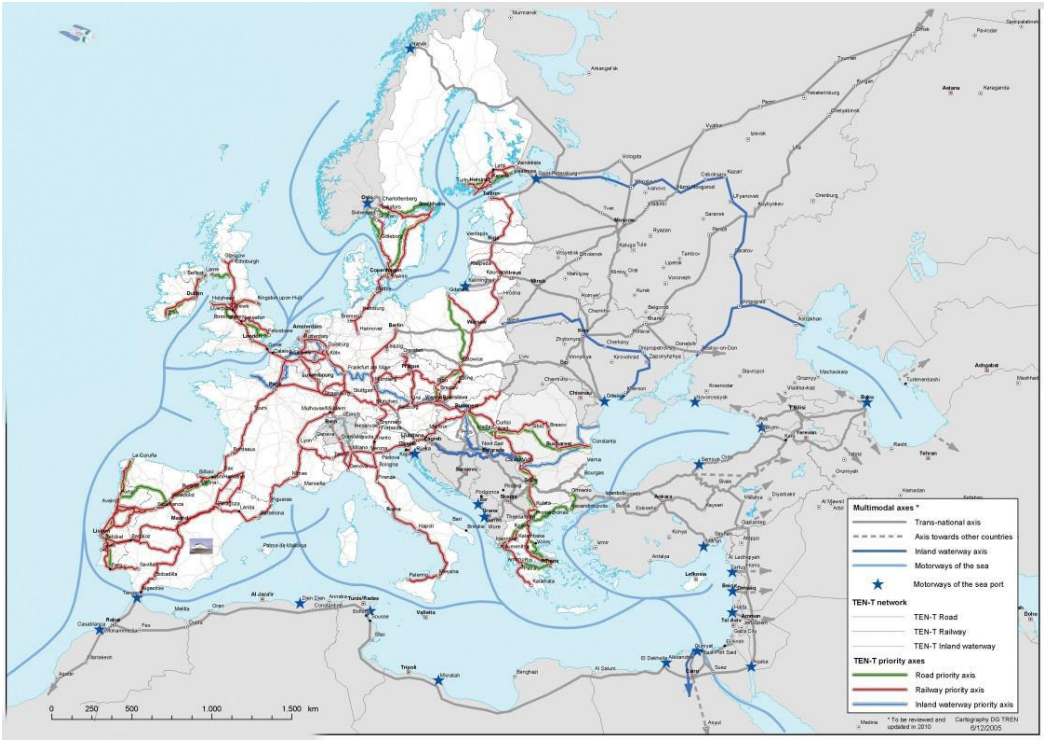
2) Orient East Med Corridor

3) Baltic Adriatic Corridor

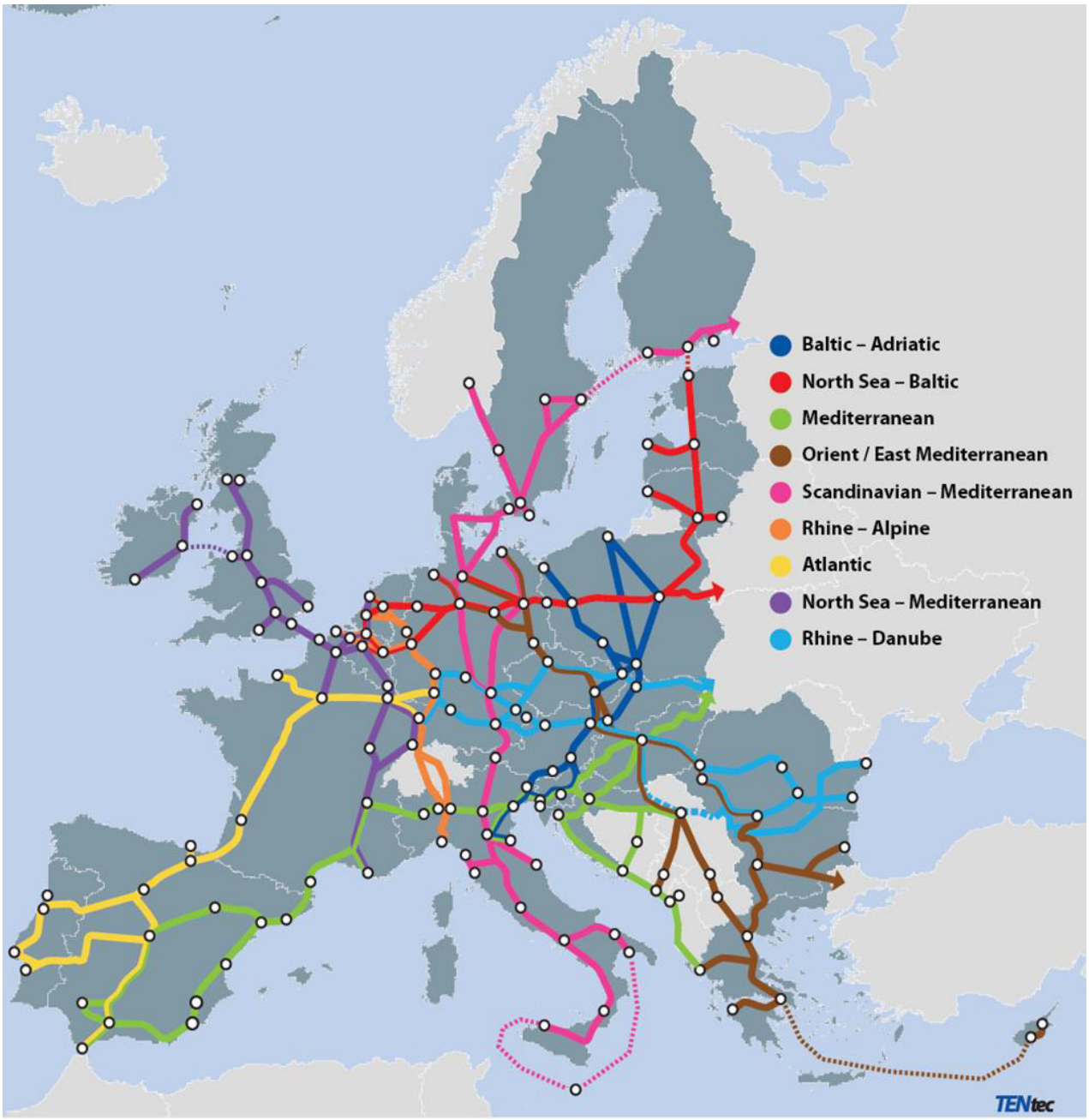
4) Mediterranean corridor

Constituting one of the main ports of the TEN-T network and is strategically positioned in the realization of a sustainable and efficient maritime transport artery.

The port of Igoumenitsa is basically the main gateway to Northern and Central Greece for the movement of passengers and goods to and from the EU through Italy, thus providing sea links to all ferry ports (Ro – Ro) on its eastern coasts Italy. Our goal is to provide transit connection for freight transport between the EU and the Middle East.



Map of Multimodal and TEN-T axes



Note: the nine TEN-T core network corridors are based on the CEF and TEN-T Regulations (1316/2013 & 1315/2013); they have been created as a coordination instrument to facilitate the completion of major parts of the core network of strategic importance.
Source: European Commission, Directorate-General for Mobility and Transport, TENtec Information System

TEN-T Core Network Corridors

2. Low Carbon Transport Plan

2.0. Step 0: Work plan and team

The **1st activity report**, concluded in the first two months of the project, includes a Gantt chart with the timeframes of the foreseen activities and the project's milestones. Finally, it also includes the translations from English to Greek of the Capacity Building Manual, of the Set of 14 modular packages to foster replication, Video subtitles, Leaflet and poster.

The first activity report was concluded with the translation, in Greek language of the following:

- LOCATIONS D 3.3.1 - Capacity Building Manual
- LOCATIONS D 4.3.2 - Set of 14 modular packages to foster replication
- LOCATIONS Video subtitles
- LOCATIONS Leaflet
- LOCATIONS Poster

The work team of Premium Consulting has undertaken to do the quality check of the above mentioned documents translated in Greek language. During the 1st activity report PC evaluated the translated video, mentioning some minor changes. When we received the rest of the translations, we proceeded to their quality check as well and we ensure that they are correct and with the use of the precise and accurate terminology.

The **2nd activity report**, includes the depiction of the current state of the city of Igoumenitsa, where the LCTP will be developed. For this purpose, of high importance was the first participatory activity with local stakeholders, who enabled us to gather very useful information regarding the needs, problems, potential and existing opportunities in the city.

The **3rd activity report**, is based on the info provided by the 1st and 2nd activity reports and performs the first approach of the LCPT.

The **4th activity report**, includes the work done during the previous reports as well as the second version of the LCTP, the results of the second participatory activity and a Synthetic version of the LCTP.

The **5th activity report** includes the full and final Low Carbon Transport Plan (LCTP) and all work that led to its creation, from the diagnosis up to finalization. For this diagnosis, the work team had an in depth literature research, studied all the up to date EU, national and regional policies related to the cruise sector, CO_2 emissions, mobility strategies, transportation policies, etc., and organized bilateral meetings with key stakeholders related to the cruise sector and decision making organizations, in order to collect, evaluate and present some facts and data related to the current state of the art, negative impacts, strength and other information linking the cruise sector

with the city of Igoumenitsa. In addition, in Step 3 the goals of the LCTP for the city of Igoumenitsa were presented, along with concrete and measurable actions for the completion of the recommendations. The resources needed and the funding opportunities are also presented in continue, along with the potential collaborations which will further enhance the implementation of the LCTP. Two participatory meetings were organized in Igoumenitsa in order to inform the local stakeholders about LOCATIONS project and the importance of the LCTPs and the continuous communication with them enabled the work team to depict the stakeholders' opinion and recommendations about the challenges set by cruise-related traffic flows and sustainable connections needs between city and port of Igoumenitsa. In Step 4, measures, actions and funding prospects were analyzed and elaborated, thus concluding the creation of the LCTP. In this report, the final LCTP, after updating, feedback and final additions, is presented.

Working Team

The initial working team was:

- Dr Emmanouil Nikolaidis (Premium Consulting), Economist PhD, Project Manager
- Marina Maniati, PhD, (Premium Consulting), Manager, Economist PhD, Assistant Project Manager
- Tilemachos Bourtzis, PhD, (Premium Consulting), International Studies, MSc Environmental Policy and Management
- Christina Danai Koukouletsou, MSc, Economist – Statistician – Econometrician
- Anna Koukouletsou, Economist BSc, Project management

In the above working team, two experts with long experience at relevant projects, were added and their participation was agreed with the contracting authority, because they had organised the visit and the meeting with the Municipality of Igoumenitsa on August 2018. Namely:

- Prof. Chrysostomos Stylios, Dr. Electrical & Computer Engineer
- Ms. Eleni Arvaniti, MBA, BSc Business Administration

Ms. Eleni Arvaniti, (BSc, MBA) member of the working team, participated in the 2-day training course organized under LOCATIONS project at Lisbon (18 and 19 October 2018). During the meeting, Ms Arvaniti presented the proposed plan for the replication and the main characteristics and data for the target of replication, the city of Igoumenitsa, Greece, proving Premium's Consulting knowledge and expertise on the specific theme.

Gantt Chart of Activity Reports and LCTPs

Tasks	Sub tasks	2018			2019								
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1st Activity Report	Project preparation												
	Set up project team and Gantt chart												
	Quality check of the translation of the tchnical and dissemination documents												
	Attend 2-day training course in Lisbon												
2nd Activity Report	LCTP Diagnosis -Context Analysis												
	Data Collection												
	Organization of first participatory activity												
3rd Activity Report	1st Version of the LCTP												
	first version of the LCTP												
	web conference an International mutual learning workshop:r 16th May 2019.												
4th Activity Report	2nd Version of LCTP and Synthetic Report												
	Organization of second participatory activity												
	Synthetic version of LCTP & Evaluation by technical partners												
5th Activity Report	Final LCTP												
	Final Versions of the full LCTP and Synthetic												

2.1. Step 1: Initial assessment

2.1.1. Context analysis

1. EU, national, regional and local framework of reference.

- **European Strategy on Coastal & Maritime Tourism**

In 2012, European ports had 29.3 million passenger visits, a 75% increase over 2006. These arrivals generate wealth and business opportunities but also represent big challenges for the receiving ports. For coastal regions it is not always easy to capture economic benefits generated by cruise tourism, while pressures to invest in port infrastructures and to preserve the environment are increasing. That is why the Commission proposes promoting a pan-European dialogue between cruise operators, ports and coastal tourism stakeholders.

The natural resources and beauty of coastal areas have made them popular destinations for visitors. A healthy natural environment is a huge asset but tourism generates lots of pressures on local environment and ecosystems, such as higher water use, increased waste generation and accumulated emissions from air, road and sea transport in peak seasons.

The Commission has identified 14 actions which can help the sector grow sustainably and provide added impetus to Europe's coastal regions. The Commission will work with Member States, regional and local authorities and the industry to implement these actions.

For example, the Commission proposes to:

- Develop an online guide to the main funding opportunities available for the sector (particularly SMEs).
- Promote a pan-European dialogue between cruise operators, ports and coastal tourism stakeholders.
- Develop a coastal and maritime focus, where appropriate, in EU tourism initiatives, including promotional and communication campaigns.
- Support the development of trans-national and interregional partnerships, networks, clusters and smart specialization strategies.
- Stimulate innovative management schemes through the ICT4 and the Tourism business portal.
- Seek to improve data availability and completeness in the coastal and maritime tourism sector.
- Promote ecotourism and encourage linking to other sustainability actions.
- Promote strategies on waste prevention, management and marine litter to support sustainable coastal and maritime tourism.

- Undertake research to understand how to improve island connectivity, and design innovative tourism strategies for (remote) islands accordingly.
- Identify innovative practices for marina development through a specific study.
- The proposed strategy framework offers a coherent response to the challenges facing the sector by complementing and adding value to existing initiatives by Member States, regions and other stakeholders.

Member States, who have the primary competence on tourism, are invited to develop and implement national and regional strategies, make use of the available funds, and exchange best practice.

The strategy seeks to promote transnational and inter-regional partnerships, dialogue and cooperation, whilst building coastal and maritime tourism issues into existing programmes and policies.

The industry and stakeholders are invited to develop new business models as well as innovative and diversified products to strengthen the sector's response capacity and growth potential. The proposed actions also aim to enhance the accessibility, connectivity and visibility of the tourism offer and to promote sustainability by curbing the environmental impact of tourism activities.

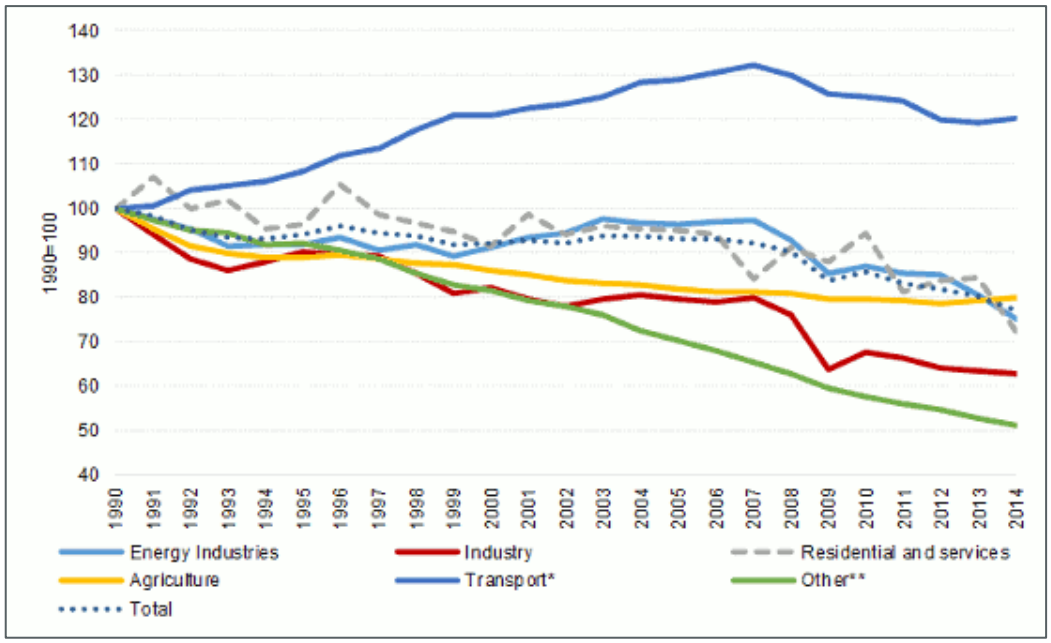
❖ **European Strategy on Transport Emissions**

Transport represents almost a quarter of Europe's greenhouse gas emissions and is the main cause of air pollution in cities. The transport sector has not seen the same gradual decline in emissions as other sectors: emissions only started to decrease in 2007 and still remain higher than in 1990 (see graph below). Within this sector, road transport is by far the biggest emitter accounting for more than 70% of all GHG emissions from transport in 2014.

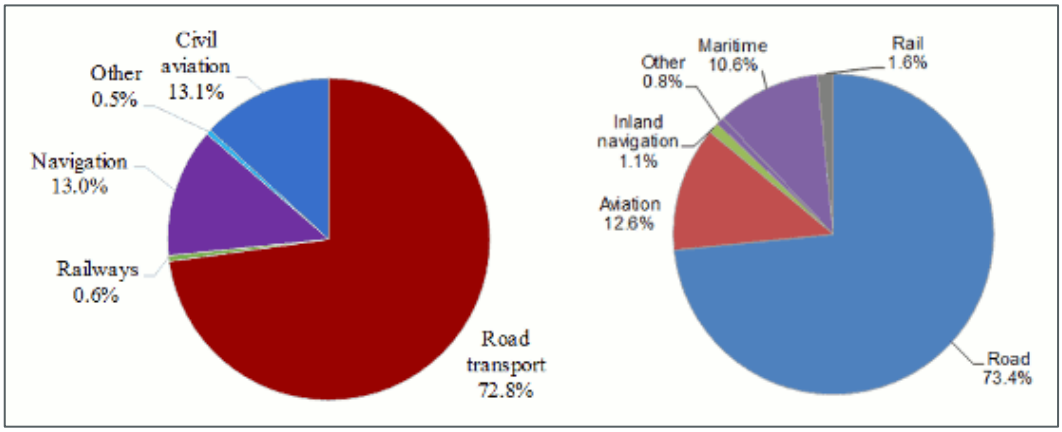
With the global shift towards a low-carbon, circular economy already underway, the Commission's low-emission mobility strategy, adopted in July 2016, aims to ensure Europe stays competitive and able to respond to the increasing mobility needs of people and goods.

Europe's answer to the emission reduction challenge in the transport sector is an irreversible shift to low-emission mobility. By midcentury, greenhouse gas emissions from transport will need to be at least 60% lower than in1990 and be firmly on the path towards zero. Emissions of air pollutants from transport that harm our health need to be drastically reduced without delay.

The strategy integrates a broader set of measures to support Europe's transition to a low-carbon economy and supports jobs, growth, investment and innovation.



CO_2 Industries Emissions 1990-2014



GHG from Transport 2014 (%)

The strategy will benefit European citizens and consumers by delivering improvements in air quality, reductions in noise levels, lower congestion levels and improved safety. Consumers will benefit from less-energy consuming cars, from better infrastructure for alternative fuels, better links between modes of transport and better safety and fewer delays thanks to the roll-out of digital technologies.

The Communication identifies three priority areas for action:

- Increasing the efficiency of the transport system by making the most of digital technologies, smart pricing and further encouraging the shift to lower emission transport modes

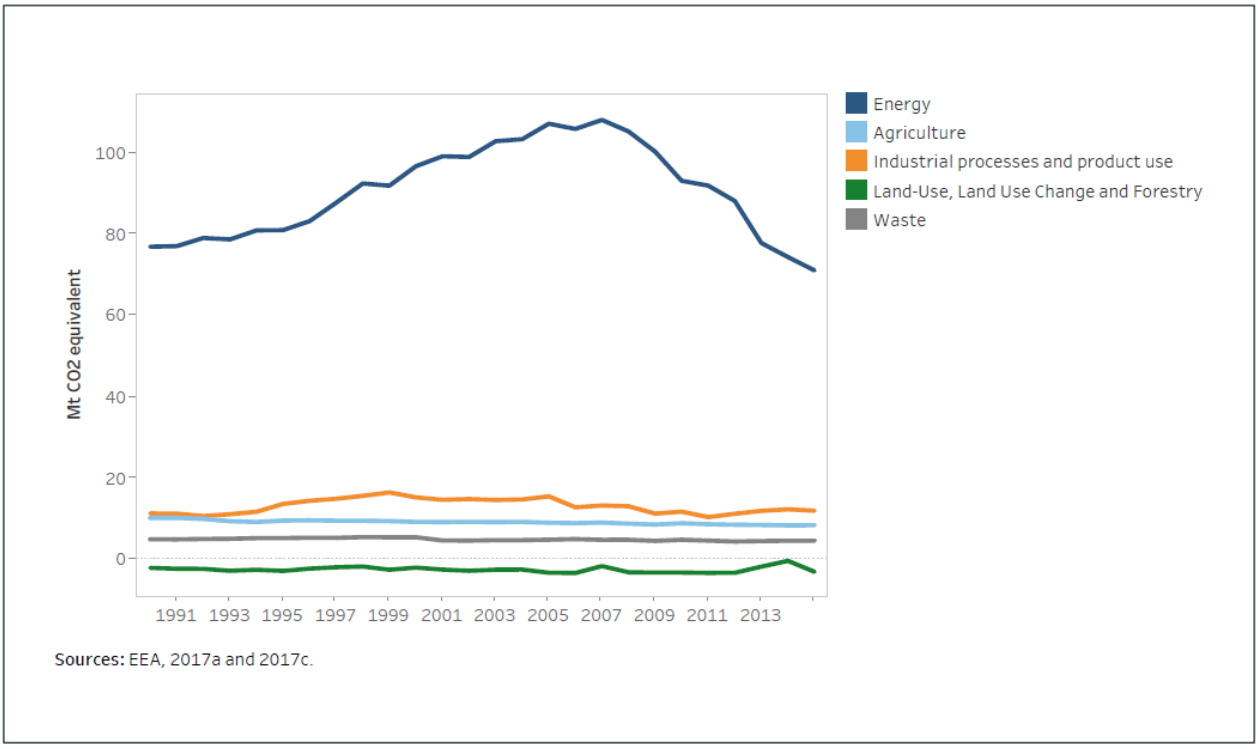
- Speeding up the deployment of low-emission alternative energy for transport, such as advanced biofuels, electricity, hydrogen and renewable synthetic fuels and removing obstacles to the electrification of transport

- Moving towards zero-emission vehicles. While further improvements to the internal combustion engine will be needed, Europe needs to accelerate the transition towards low- and zero-emission vehicles.

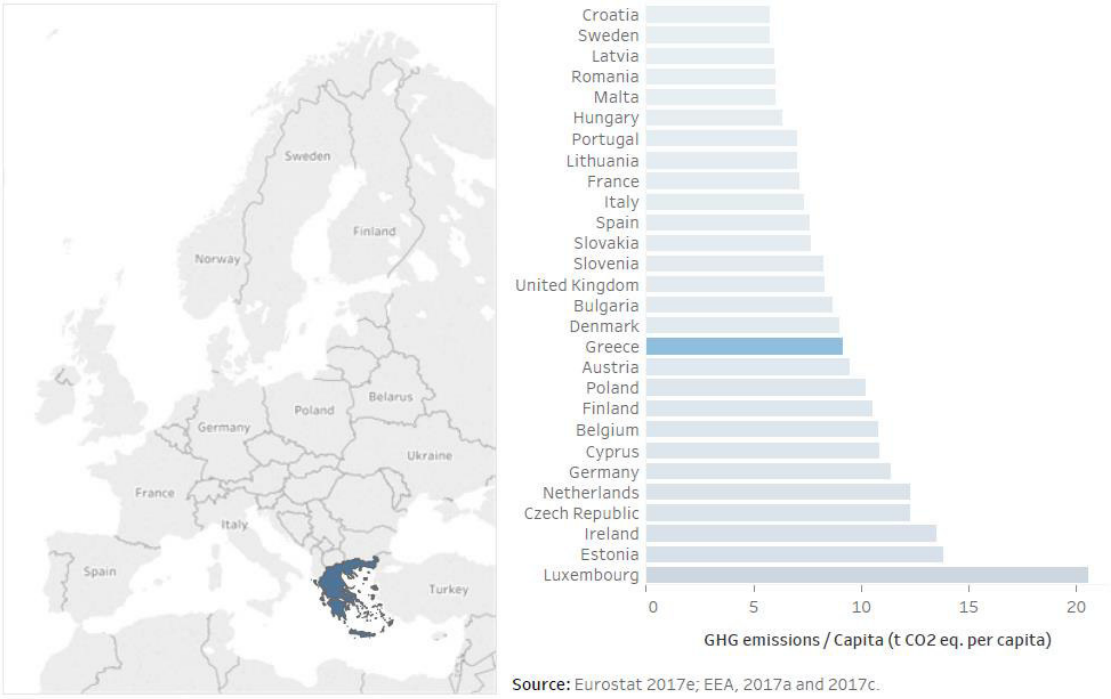
Cities and local authorities will play a crucial role in delivering this strategy. They are already implementing incentives for low-emission alternative energies and vehicles, encouraging active travel (cycling and walking), public transport and bicycle and car-sharing /pooling schemes to reduce congestion and pollution.

❖ Greece's status in GHG and Energy Consumption

National emissions are reported for every year since 1990. They constitute emissions from Energy Use and Supply, Industrial Processes and Product Use, Agriculture, Land-Use, Land Use Change and Forestry and Waste. A large amount of greenhouse gases is the CO_2 emitted by various activities, such as the ones mentioned above.



Greenhouse Gas Emissions by Economic Sector in Greece



Greenhouse Gas Emissions per capita (2015)

❖ South-East Europe 2020 Strategy (SEE 2020)

SEE 2020 has set up some ambitious targets for the transport sector, including:

- Decrease of the cost of transport per unit of transport service for 20%, and decrease in TEU transport costs to the EU average ;
- Improve transport infrastructure utilization rates to over 40% of designed capacity;
- Higher energy efficiency by decreasing energy consumption per unit of transport service for 20%; and
- Increase railway/ waterborne share to country specific targets to be defined in the national Action Plans and
- Facilitate air transport

❖ European Union Strategy for the Adriatic and Ionian Region (EUSAIR)

The EUSAIR Strategy released in 2014, sets outs the needs and potential for smart, sustainable and inclusive growth in the Adriatic and Ionian Region. Regarding Transport, EUSAIR highlights that the Region has significant infrastructure deficits, notably between long-established EU Member States and the other countries, resulting in poor accessibility. The Strategy is based on the pillars of Blue Growth, Connecting the Region (transport and energy networks), Environmental quality and Sustainable tourism.

❖ Greek Strategy in Cruise

In 2010, as part of the national economy's fiscal adjustment programs, tourism and cruise sectors have emerged as strategic priority areas, with the respective sectoral policies being considered appropriate for economic growth and extra revenue. Depending on the dynamics of the cruise industry, the result has been the activation of several Greek ports towards the development of practices to further promote the cruise to Greek destinations. At the same time, the institutional framework regulating the supply and reception of cruise services was at the center of interest.

More specifically, in 2010, procedures for changing the country's regulatory framework for cruise offer began, with the main goal the facilitation and development of Greek cruise ports as home-ports. However, the institutional interventions that have taken place proved inadequate to stimulate the relevant activity, since the increase in home-porting in all Greek cruise ports has not been achieved.

In several countries whose ports have been operating on the cruise market, the regulatory framework for many years has included national policies usually guided by protectionism, according to which foreign cruise ships' activities were not acceptable to the same extent as those of the cruise ships carrying the national flag. This protectionism took the form of a limitation of the privilege to carry out cruises by passenger ships with capacity of 49 passengers or more ("cruise") within the territory exclusively to vessels under the national flag (cabotage).

The limitation in the supply of cruise and marine services offered within national territory has traditionally been a practice widespread in traditional shipping states which served specific purposes, such as, inter alia, the need to preserve national fleets and protect the seafaring profession. This practice was also applied in Greece until recently.

In fact, up until 2012, it was one of the main arguments of cruise companies as to the reasons for the non-selection of Greek ports as the port of departure for the tours they offer.

The relevant reform of the regulatory framework was completed in 2012, with full liberalization of cabotage on the cruise, when Law 4072/2012 was put in force.

❖ National Strategy of the Greek National Tourism Organization (GNTO)

In 2017, a new framework was set for the promotion of tourism by the GNTO in the fields of communication, dissemination and marketing. The general framework for promotion for the period 2017-2018 includes the following communication objectives:

- Upgrading sea and sun to a higher level
- Promotion of new and unknown Greek all-year round destinations on the international market

- Dynamic re-launch of the tourist branding of Greece as a top destination target country
- Highlighting Greece as a top, safe, polynesic destination offering authentic thematic tourism experiences 12 months a year, the most competitive in Europe
- Enhance promotion as the top choice of "Worldwide Destination": sea and sun, luxury vacation, cruise and yachting
- Targeted and competitive promotion of thematic tourist experiences 365 days a year as well as the City Break of Athens and Thessaloniki
- Empowerment and dynamic promotion in new markets such as UAE, Saudi Arabia, Egypt, China, India, Korea, South America

The synergy of tourism activities with culture and the promotion of the rich cultural heritage and identity of the country, combined with sporting and other international events, will contribute to the upgrading and distinction of the tourist product.

In terms of communication positioning, the aim is to make Greece a top tourist destination for sea and sun, as well as alternative tourism, offering unique authentic travel experiences per destination - 365 days a year, always focusing on the authentic Greek hospitality - identity.

Dissemination and marketing actions include co-advertising, cooperation with tourist organizations and agents, social media use, on-line and off-line ads, leaflets, maps, participation in Tourism Exhibitions and publicity actions, familiarization trips, market research and analysis et al.

Furthermore, the upcoming strategic action plan that the Ministry of Tourism is currently planning includes:

- Direct promotion of the identity of Greece as a unique, safe, polynesian destination in marine tourism
- Emerging of new Greek destinations and their inclusion in the cruise services
- Creation of unique authentic thematic experiences for cruise passengers
- Close cooperation with the private sector to conclude new strategic partnerships with cruise companies abroad and strengthen existing / networking actions abroad
- Political initiatives to develop partnerships and bilateral actions with countries in the wider region, and joint actions to attract visitors from distant markets
- Aiming at the immediate improvement of the tourist product competitiveness and the modernization of the ship service chain in all ports
- Strengthening the international presence of Greece through specialized tourism exhibitions, with the GNTO booth

- Strengthening of the direct air links which in the case of cruise, are the key to its development
- Consolidation of Greek ports as ports where cruises will start and not just as stopovers

Regarding cruise, the Ministry of Shipping and Island Policy and the Ministry of Tourism have jointly approved the establishment of the National Cruise Coordinating Committee (E.S.E.K.), an important institutional tool aimed at cooperation and synergy between the cruise operators to develop a common and comprehensive strategy, promoting the necessary measures/incentives for improvement and development of international European and National cruise by submitting proposals for solving problems that are identified each time. The Committee was established in 2016.

❖ **Igoumenitsa Port Authority Strategy on tourism and cruise**

One of the main strategic goals of the Igoumenitsa Port Authority is setting the port of Igoumenitsa as a port of call for cruise ships and ensuring its integration within the destinations of the major cruise market companies in the Mediterranean. The main strategic objectives of Igoumenitsa Port Authority and the strategic directions for achieving these objectives include:

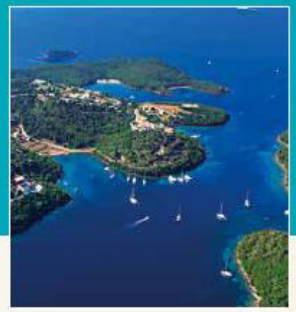
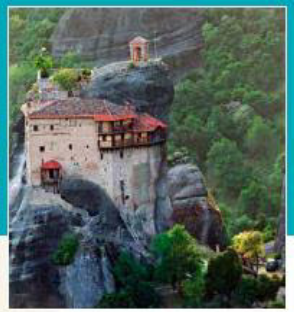
- *Passenger Traffic*

The aim is to enhance the internal and external passenger traffic by taking advantage of the positive prospects of tourism for the coming years and the significant increase in the number of ships that will use the port as point of departure, significantly improving the revenues of port from passenger service and from vessel mooring. A crucial factor for the realization of this goal is the expansion of port infrastructure – Phase B and Phase C (currently under construction) and the general upgrading of port services. At the same time, the development of the tourist activities of the port (Cruise Terminal) is also a major impetus for the passenger traffic of the port.

- *Tourism Port activities and strengthening of tourism development prospects in Thesprotia*

The aim is to increase the tourist traffic of Thesprotia, to attract “high level” tourism, on the one hand to the exploitation of important assets of the organization and on the other hand to increase the passenger traffic generated by the development of the tourist prospects of the region.

Igoumenitsa’s Port Authority philosophy regarding cruise is based on flexibility and willingness to customize services to each different brand, working closely with operators to achieve their fullest possible satisfaction.

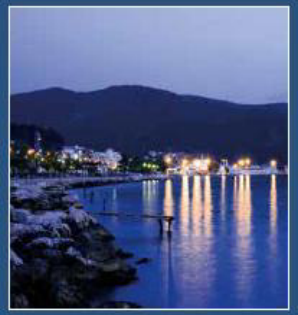




Located on Greece's northwestern frontier and just a short distance from the island of Corfu, the port city of Igoumenitsa opens up a whole new Greece waiting to be discovered.

Capital city of the Prefecture of Thesprotia, today's Igoumenitsa is a modern town largely rebuilt after its complete destruction in the Second World War. It became significant as the ferry connection between Greece, Italy and the Balkans grew in importance.

From this friendly port you can choose amongst an impressive array of tour possibilities covering every period of East Mediterranean history. There are unusual ancient sites, mystical monasteries, medieval and Ottoman monuments, spectacular landscapes, yacht havens and stunning mountain villages. Just follow the "winding" road and through the pine-clad mountains beyond discover many new wonders.....

IGOUMENITSA

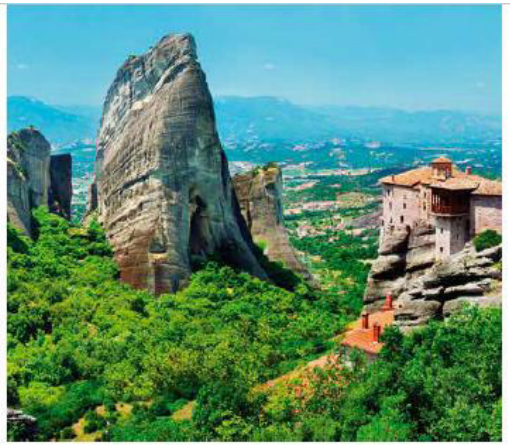




GREECE'S NEWEST CRUISE PORT

IPA Dissemination Material for Cruise – Extract

Distances from Igoumenitsa

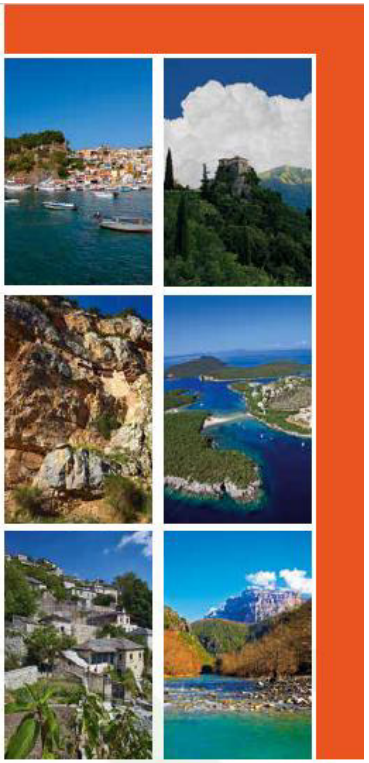
PORT	NAUT. MILES	PORT	NAUT. MILES
BARI	190	KATAKOLON	133
CORFU	18	MESSINA	268
DUBROVNIK	222	PATRAS	123
DURRES	129	VENICE	525



Central and Eastern Mediterranean cruise itineraries that include ports in the Adriatic and Ionian Seas can be further enhanced with the addition of a call at Igoumenitsa. Cruise ships have been plying these waters for many years, sailing within a short distance of this busy ferry port. It was with the completion of the new highway system which starts at Igoumenitsa that the potential for very exciting shore excursions emerged.

Some very famous landmarks of Greece's mainland can now be accessed from the west, presenting operators with a perfect opportunity to incorporate a totally new call, conveniently located on highly popular cruise routes.

The short distances between ports make Greece an itinerary planner's dream. Combinations are numerous and offer immense variety for all travelers to see both a "postcard" and an "unknown" Greece.



Igoumenitsa is strategically located on very popular cruise routes and provides prime access to a uniquely fascinating new destination

IPA Dissemination Material for Cruise – Extract

- **Igoumenitsa Mobility Strategy**

In the scope of controlling, realizing and reducing carbon impact in the area, Igoumenitsa has manufactured a **Sustainable Urban Mobility Plan (SUMP),** derived from the immediate need of a small city that besides the citizens' daily mobility needs, desires to serve also thousands of visitors' trips disembarked in its port which connects the inland national area with Ionian Islands and the rest of Europe. Igoumenitsa's SUMP, with a 20-year horizon, focuses on passengers. SUMP as a strategic plan that takes into account the principles of integration, participation and continuous evaluation-monitoring-feedback cycle, meets real needs by providing a long term vision and a clear step-by-step implementation plan.

2. Current cruise-related flows features, trends, etc.

- **The cruise ports in general**

A cruise port is categorized (i) as a home port when a cruise ship uses port facilities for cruise departure and termination services, (ii) as an intermediary port of call or transit port when used for docking and stay of cruise ships for a certain period of time (transit), (iii) as a hybrid cruise port which for some cruises and for a corresponding subset of cruise passengers, operates as a port-starting point while for other cruises and passengers as an intermediate port.

Each option is accompanied by similar functions, planning and port development strategy. The ports of departure are in general in locations with large airports, good road access, adequate hotel capacity and adequate port facilities. The attractiveness of the site (eg a city with a tourist 'brand name') strengthens the prospects of the port-starting point, but its choice by the cruise companies is linked to a number of conditions for access to and service of the ship and passengers in the port, but also to the more general service conditions at that destination. Correspondingly, the intermediate ports are close to historic or recreational sites giving incentives to tourists to visit region, with ships remaining at each destination for a specific, short space.

Being a home-port involves significant benefits for the port, the associated economy, and the neighboring interest points of cruise passengers. The cruise companies estimate that the cost per passenger in home ports is three times greater compared to intermediate ports cost. Multiple benefits are generated on the one hand by the arrival / stay of passengers before / after the start / finish of the cruise and, on the other hand, by the multiplicity of services offered during the extended periods of cruise ships stops, both for passengers and crew.

The last decade, the cruise market is expanding. According to forecasts regarding the year 2017, more than 25.3 million citizens around the world, nearly 4% more than 2016, were expected to make over 140 million visits to cruise destinations. It is a unique industry as it has moved upward on an annual basis for three decades with a total increase of 62% in the 2007-2016 decade.

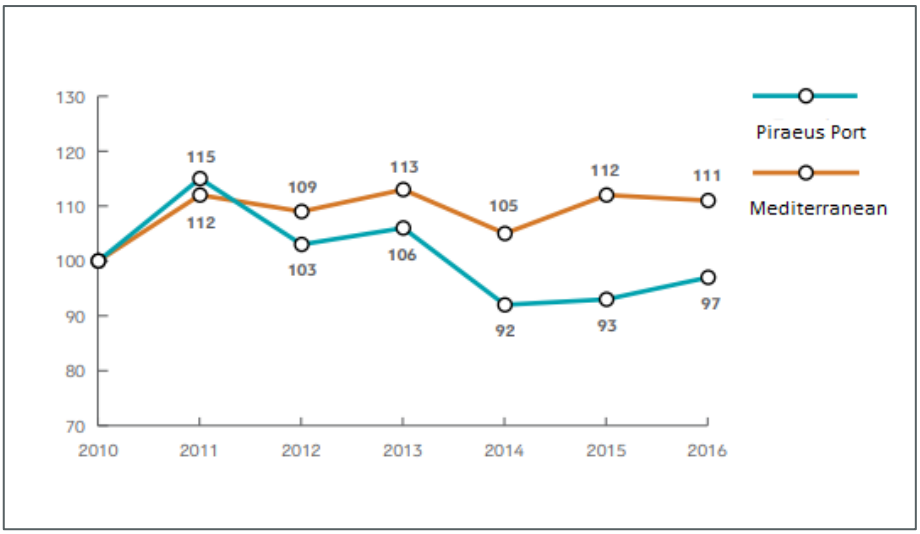
❖ Cruise in the Mediterranean Region

Cruise in the Mediterranean region experienced significant increase in the first decade of the 21st century. During the years 2012-2016, the total number of cruise passengers who visit the Mediterranean region annually, has stabilized at unprecedented levels, more than 25 million passenger movements per year, but without retaining the dynamics of the previous years. In 2016, cruise ports in 20 different countries in the wider Mediterranean region received 8 million more cruise passengers in 2016 than in 2007.

In the following chart, the cruise passenger movements in the Mediterranean for the years 2000-2016 are presented:

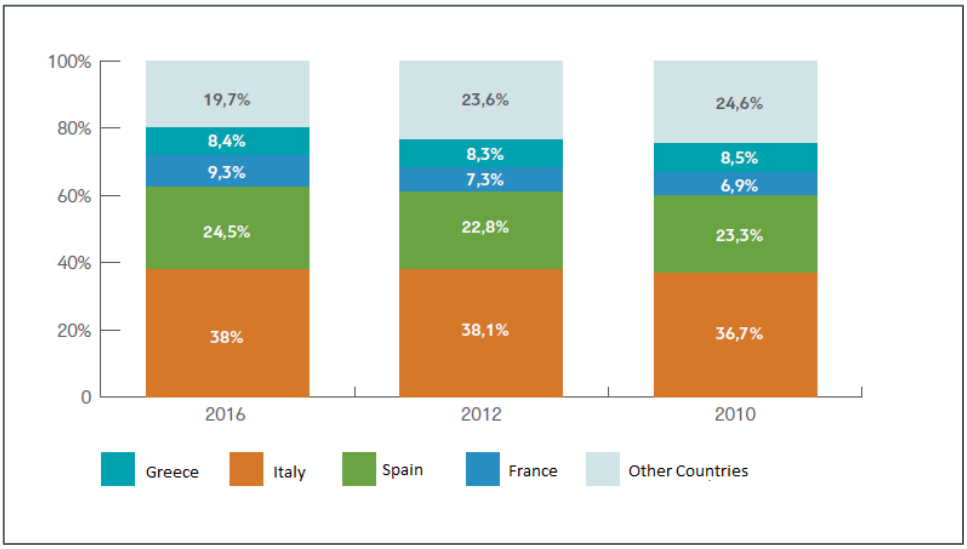
Cruise passenger movements in the Mediterranean (2000-2016)

Also, there is a chart that compares cruise passengers development in the port of Piraeus and the Mediterranean ports in general. The year 2010 indicator reference value is set in 100.



Cruise Passengers Development Indicators for the years 2010-2016 (2010 = 100) – Comparison of Piraeus Port and the Mediterranean

Furthermore, in the next chart, the distribution of cruise passengers in Mediterranean countries for the years 2010, 2012 and 2016 is presented:



Cruise activity per Mediterranean country for the years 2010, 2012 and 2016

❖ Passenger movements in Greece

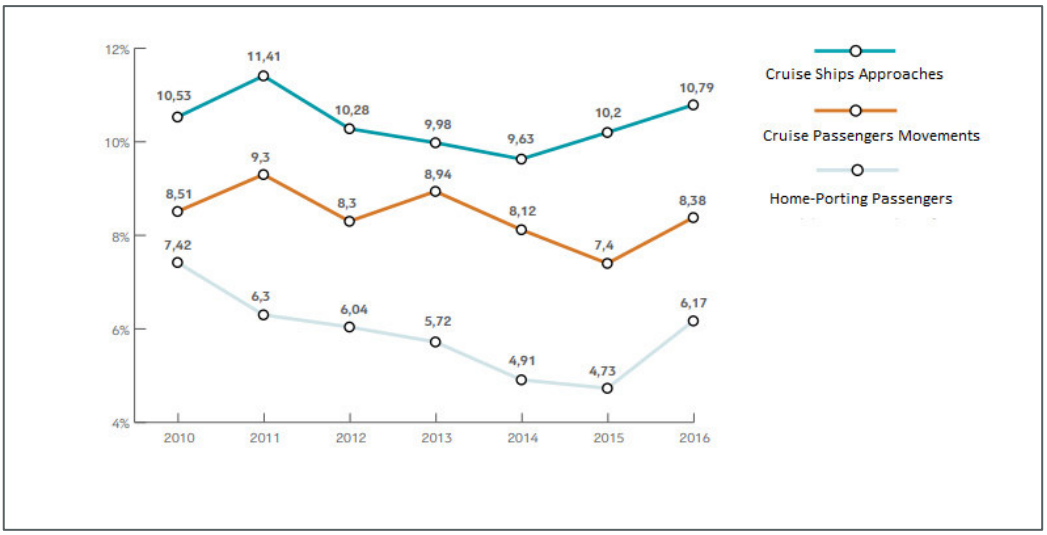
A total of 42 ports in Greece host 5.2 million cruise passenger movements each year and 4,300 cruise ship approaches. Eight (8) Greek ports receive more than 100,000 cruise guests a year, with significant benefits for local economies.

In total, during the five-year period 2012-2016 in Greece more than 26 million cruise passenger movements were reported in 42 different Greek ports. Although the number of tourists who choose Greece as a cruise destination is important, the most recent trends are not very encouraging.

In addition, the development so far does not justify the efforts made: cruise industry has grown in the wider region of Greece - and world-wide - at remarkable rates, but Greek ports and destinations host a declining rate of home-porting activities taking place in the broadest Mediterranean region.

❖ Cruise in Greek ports

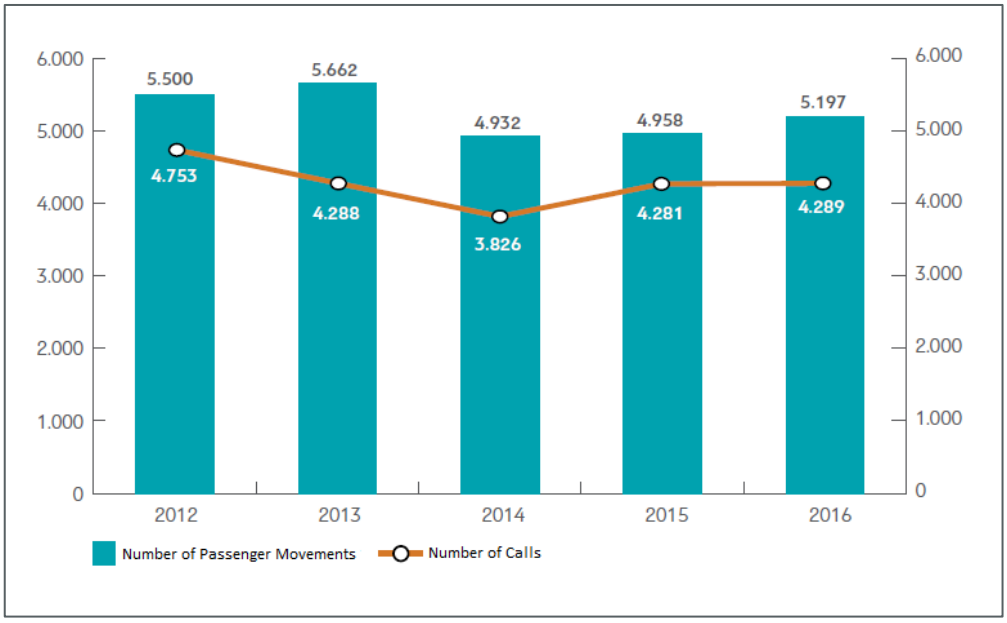
In the following chart, we can see the part of the Mediterranean Cruise Market that refers to Greek ports for the years 2010 to 2016 (%):



Share (%) of Greek Ports in the Mediterranean Cruise Market

About the use of Greek ports as home-ports, data is discouraging. The number of cruises starting from a Greek port is small and keeps decreasing. In 2016, home-porting was just 468,000. The relative traffic is recorded in six (6) cruise ports (Piraeus, Corfu, Rhodes, Heraklion, Lavrio, Thessaloniki) with the number of passengers starting their cruise from a Greek port significantly decreased in relation to the respective sizes recorded in the dawn of the decade.

In the following chart, the total of cruise passenger movements and cruise calls in the whole of Greece is presented in a common figure:



Cruise passenger movements and cruise calls in Greece (2012 - 2016)

❖ Cruise financial data

The main sources of income from cruise are the expenses of cruise ships and the companies managing them and the expenses of passengers and cruise ships crew members. The positive economic impact of cruise relates to a large part of the economic system at local and national level.

In Greece, the Bank of Greece estimates that the total financial impact of cruise exceeds 500 million €, but there are significant indications, including case-study data in Greece, that this is a conservative estimate. A recent study at the Port of Barcelona argues that each cruise ship dock produces an average of € 1 million in revenue, contributes € 500 million to the wider economy and generates nine jobs. The increase in the economic impact of cruise in Europe is multiplicative: within this decade, direct cruise costs in Europe increased by 19%, while its overall economic impact has increased by 27.3%.

❖ Igoumenitsa as a Cruise destination

According to the Port Authority of Igoumenitsa, the aim is that the port of Igoumenitsa will become a cruise destination in the following years, thus highlighting the beauties of Thesprotia, as well as the areas of tourist interest and special natural beauty of the wider region of Epirus.

The completion of the 2nd Port Development Phase and the progress of the 3rd Phase, have given the port of Igoumenitsa the infrastructure that makes it possible to fully achieve cruise related goals:

- 118 ha of land area
- Opening of a straight waterway 170.0 m wide, 1700 m long and with a useful depth of 10.50 m
- Terminal Station no. 2 Building: 3,041.46 m2 (complete)
- Terminal Station no.3 Building: 2,324.80 m2 (to serve controls required by the Schengen Convention and to be a cruise ship terminal - under construction)
- A 197.60 m long sideboard berth capable of mooring 300,000 DWT ships (227 m long and a load draught of 9.40m - under construction) (complete)
- Connection platform 371.0 m long with a useful depth of 10.20 m.

The Port Authority of Igoumenitsa is also a member at the MEDCRUISE Mediterranean Cruise Port Association. The request was accepted at the 37th General Assembly held in Cannes. The MEDCRUISE Association founded in 1996 in Rome, counts 55 members representing 78 ports around the Mediterranean and the Black Sea region, and 20 members representing tourism companies or cruise ship brokers. Its mission is to promote the cruise in the Mediterranean and the adjacent seas and provide its members with help in networking in the area, as well as the dissemination and promotion of their activities.

❖ Igoumenitsa Port Authority Cruise Data

In the following tables, we can see the statistics that were collected by the Port Authority of Igoumenitsa, regarding cruises. Specifically, the year, the name of the ship, the number of passengers and the arrival date are available:

Igoumenitsa Port Authority Cruise Statistics (2010 - 2017)

IGOUMENITSA
PORT AUTHORITY S.A.

IGOUMENITSA PORT
CRUISE STATISTICS

CALLS 2017		PASSENGERS	Arrival Date
1	Thomson Spirit	1215	16/5/2017
2	Thomson Spirit	1221	30/5/2017
3	Thomson Spirit	1212	27/6/2017
4	Thomson Spirit	1235	25/7/2017
5	Thomson Spirit	1217	22/8/2017
6	Silver Spirit	536	30/8/2017
7	Thomson Spirit	1221	19/9/2017
8	Thomson Spirit	1235	17/10/2017
	Total	9092	

CALLS 2016		PASSENGERS	Arrival Date
1	La Belle De L' Adriatique	185	17/4/2016
2	Thomson Celebration	1239	31/5/2016
3	Thomson Celebration	1233	28/6/2016
4	Thomson Celebration	1259	26/7/2016
5	Thomson Celebration	1251	23/8/2016
6	Thomson Celebration	1229	20/9/2016
7	Thomson Celebration	1227	18/10/2016
	Total	7623	

CALLS 2015		PASSENGERS	Arrival Date
1	COSTA neoCLASSICA	719	10/4/2015
2	ARTEMIS	44	9/8/2015
3	ARTEMIS	43	27/8/2015
4	Prinsendam	651	6/10/2015
5	Marina	1231	8/10/2015
6	SAGA PEARL II	402	17/10/2015
	Total	3090	

CALLS 2014		PASSENGERS	Arrival Date
1	Costa Classica	1257	6/4/2014
2	M/Y Corinthian	90	29/4/2014
3	Seabourn Spirit	204	12/6/2014
4	Seabourn Spirit	208	30/6/2014
5	M/Y Corinthian	80	7/7/2014
6	Seabourn Spirit	207	21/7/2014
7	M/Y Corinthian	80	21/7/2014
8	La Belle De L'Adriatique	167	24/7/2014

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9	M/Y Corinthian	80	2/8/2014
10	La Belle De L'Adriatique	114	12/8/2014
11	Seabourn Spirit	198	1/9/2014
12	Seabourn Spirit	210	22/9/2014
13	Seabourn Spirit	201	13/10/2014
	Total	**3096**	

CALLS 2013		PASSENGERS	Arrival Date
1	Seabourn Spirit	188	21/4/2013
2	Seabourn Pride	207	28/4/2013
3	Seabourn Spirit	211	15/6/2013
4	Corinthian	85	17/6/2013
5	Seabourn Spirit	204	6/7/2013
6	Seabourn Spirit	199	27/7/2013
7	Seabourn Spirit	206	17/8/2013
8	Seabourn Spirit	199	7/9/2013
9	Quest of adventure	405	17/9/2013
10	Prinsendam	734	24/9/2013
11	Seabourn Spirit	200	28/9/2013
12	Seabourn Spirit	202	9/10/2013
13	Seabourn Spirit	188	19/10/2013
14	Grand Holiday	1422	5/11/2013
	Total	**4650**	

CALLS 2012		PASSENGERS
1	Arion	131
2	Salamis Filoxenia	400
3	Seabourn Odyssey	450
4	Costa Voyager	846
	TOTAL	1827

CALLS 2011		PASSENGERS
1	Hanseatic	180

CALLS 2010		PASSENGERS
1	Bremen	135

2 / 2

Igoumenitsa Port Authority Cruise Data for 2018

ΠΡΟΣΕΓΓΙΣΕΙΣ 2018											
Α/Α	Όνομα Πλοίου	Εταιρεία	Συνολική χωρητικότητα σε επιβάτες	LOA (m)	DRAFT (m)	Ημερομηνία άφιξης	Άφιξη	Αναχώρηση	Λιμένας	Προηγούμενο Λιμάνι	Επόμενο Λιμάνι
1	Marella Celebration	Marella Cruises	1264	214.7	7.5	15/5/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
2	Marella Celebration	Marella Cruises	1264	214.7	7.5	29/5/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
3	Marella Celebration	Marella Cruises	1264	214.7	7.5	26/6/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
4	Seabourn Odyssey	Seabourn	450	198.0	6.5	3/7/2018	8:00	17:00	Ηγουμενίτσα (Σύβοτα)	Κατάκολο	Μπρίντεζι
5	Marella Celebration	Marella Cruises	1264	214.7	7.5	24/7/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
6	Seabourn Odyssey	Seabourn	450	198.0	6.5	31/7/2018	8:00	17:00	Ηγουμενίτσα (Σύβοτα)	Κατάκολο	Μπρίντεζι
7	Marella Celebration	Marella Cruises	1264	214.7	7.5	21/8/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
8	Seabourn Odyssey	Seabourn	450	198.0	6.5	28/8/2018	8:00	17:00	Ηγουμενίτσα (Σύβοτα)	Κατάκολο	Μπρίντεζι
9	Marella Celebration	Marella Cruises	1264	214.7	7.5	4/9/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
10	Marella Celebration	Marella Cruises	1264	214.7	7.5	18/9/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ
11	Seabourn Odyssey	Seabourn	450	198	6.5	25/9/2018	8:00	17:00	Ηγουμενίτσα (Σύβοτα)	Κατάκολο	Μπρίντεζι
12	Azamara Pursuit	Azamara Cruises	670	180	5.6	7/10/2018	7:30	18:00	Ηγουμενίτσα	Ζάκυνθος	Ντουμπρόβνικ
13	Marella Celebration	Marella Cruises	1264	214.7	7.5	16/10/2018	8:00	17:00	Ηγουμενίτσα	Αργοστόλι	Κότορ

ΣΗΜΕΙΩΣΗ:

Η παραπάνω λίστα αναμένεται να τροποποιείται κατά διαστήματα.

Θα ενημερώνεστε για την επικαιροποίησή της, καθώς και σε έκτακτες ανακοινώσεις αφίξεων.

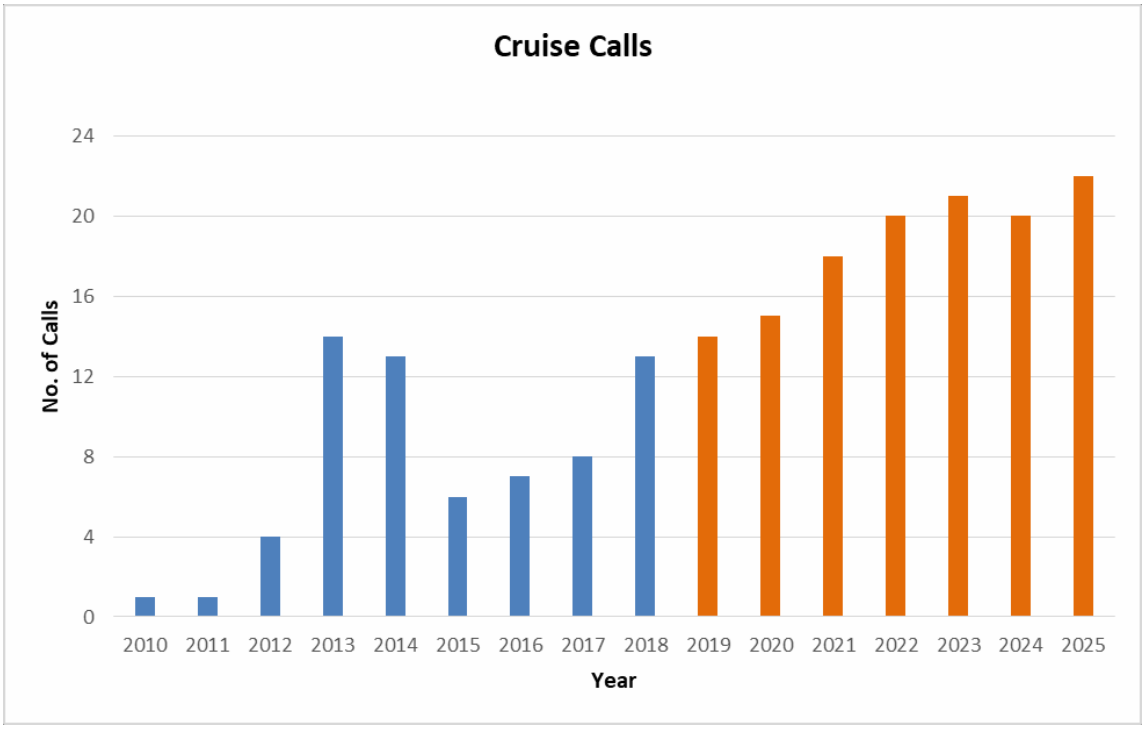
(In the 2nd column we can see the name of the ship, in the 4th column the passenger capacity and in the 7th column the date of arrival. Additionally, in the last two columns we can see the previous and next port of the corresponding cruise ship)

In the city of Igoumenitsa, there are available transport services for the traveler to use, such as suburban busses that connect the city with close points of interest and the entire country, but also bus lines to Albania, Northern Macedonia, Bulgaria etc. The suburban bus station is in the central part of the city, very close to the old port. Moreover, there are many taxi, mini-van and mini-bus services in Igoumenitsa, that connect the port and the city with airports, ports, marinas, hotels, local sites and points of interest. Some transfer services offer full-day and half-day tours with organized schedules for site seeing, sports and summer activities. Finally, there are services of motorbike and car rental in the city for business and tourism activities.

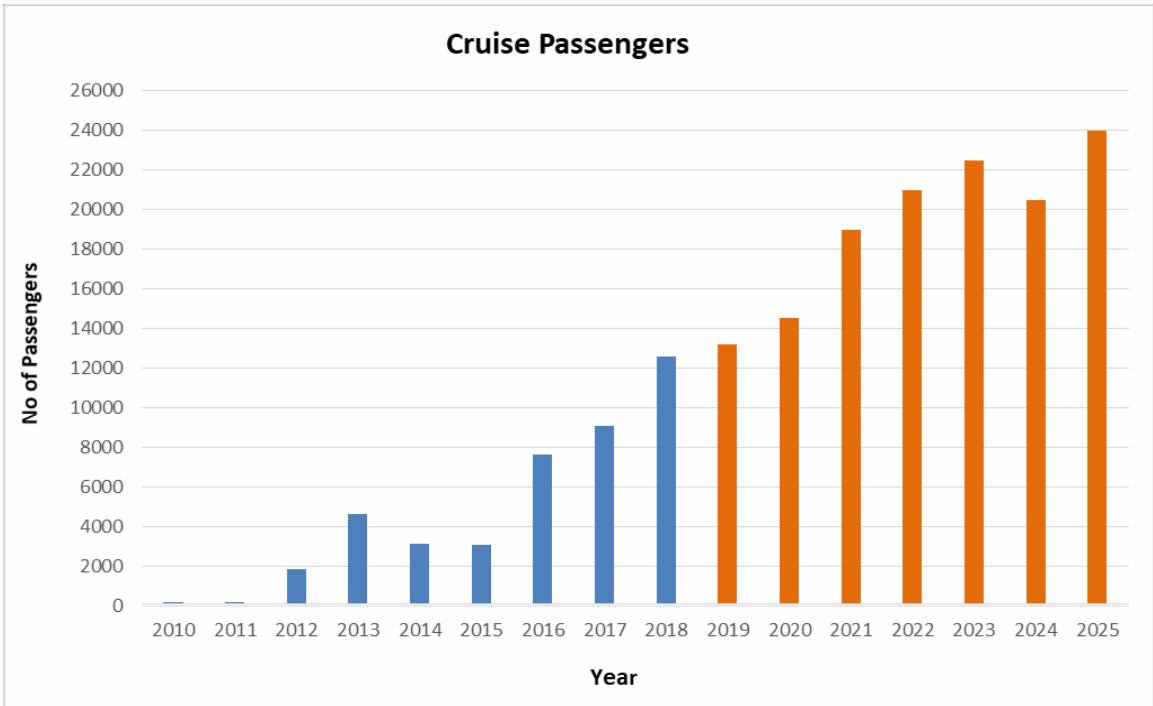
When the cruise passengers arrive, depending on the tourist package they have, either they stay for about 5-6 hours in the city and visit local museums and other sights (using the local means of transportation and taxi) or visit other regional touristic places (Meteora, Parga, Zagori, etc.), where tourist buses undertake to drive them to the selected destinations. In this case, the city traffic is increased due to the large amount of vehicles in the central roads of Igoumenitsa.

3. Cruise-sector mid- to long-term (5 to 10 years) development trends

In the following charts, we can see the cruise calls reached the port of Igoumenitsa from 2010-2018 (blues columns) as well as the estimated development trends up to 2025(orange columns) in terms of cruise calls and cruise passengers flows:



Number of cruise Calls/year in Igoumenitsa Port



Number of cruise passengers/year in Igoumenitsa Port

During the years 2015-2016, the Port Authority of Igoumenitsa made an effort in enhancing cruise related flows in the port, and as it is shown in the charts, there is an increasing number of cruise calls and passenger numbers in the years that followed, indicating that the endeavor was fruitful. The cruise sector keeps growing in the port and, even though there are no official data and estimations on the matter for the upcoming years, the strategy of the Port Authority and the tendencies so far show the expected rise in the sector.

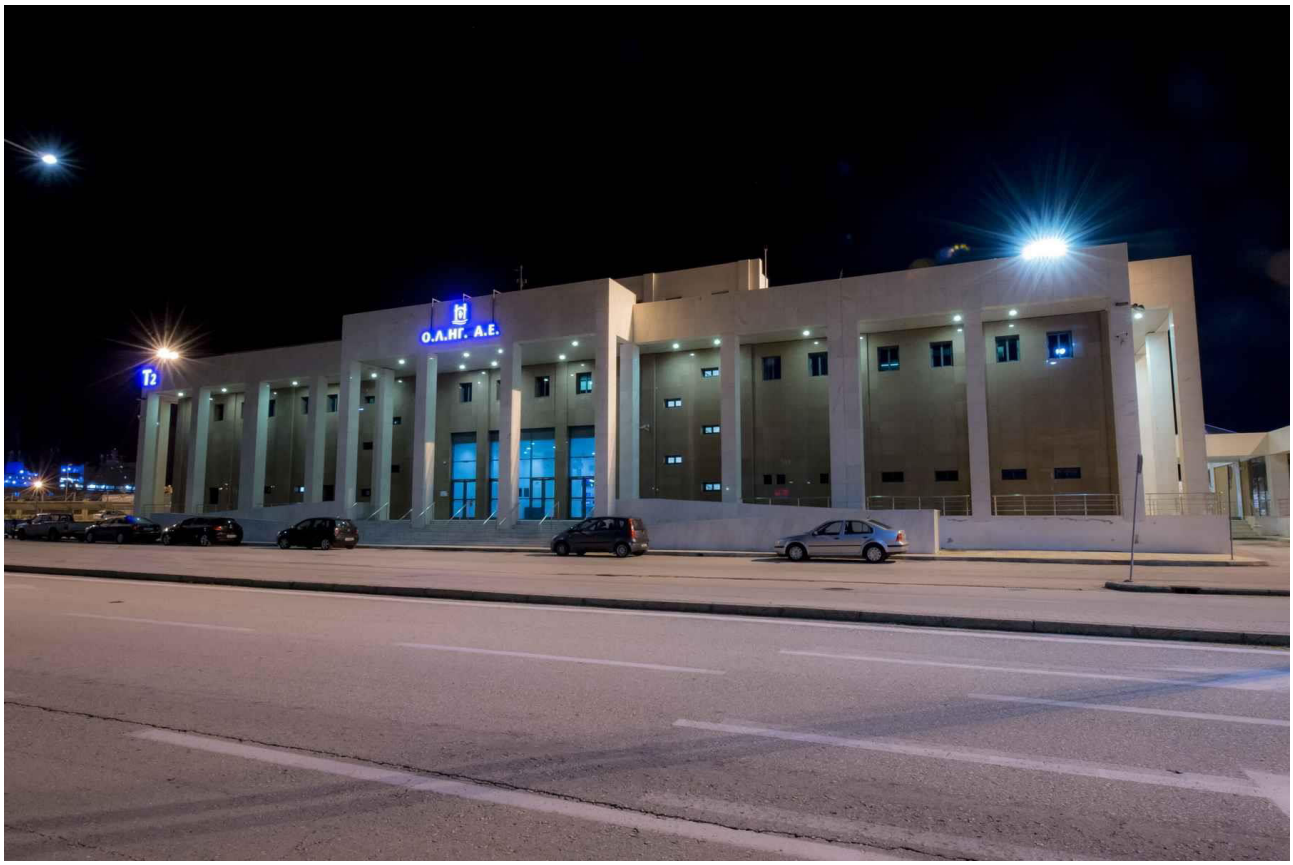
4. Current cruise-related mobility and transport management policies and public & private initiatives addressing the existing flows.

General Information

The port of Igoumenitsa is currently the main gateway to northern and central Greece for the movement of passengers and goods to and from EU countries via Italy, thus providing sea connections to all ports (Ro - Ro traffic) of the eastern coast of Italy. It is a transit center for freight between the EU and the Middle East. The port has two terminals.

The city of Igoumenitsa and its market, museums etc. are close to the port, in a walking distance. If the cruise passengers have sufficient amount of time, close destinations (mentioned below) are easier to be visited and usually tours are organized by the local tourism professionals. If the passengers are to stay in the port for only a few hours, the attractions nearby are a better option, with the city market, the Archaeological museum and the byzantine churches of Thesprotia being preferable.

Terminal T1



Terminal T2

Passenger Services

The passenger terminals in Igoumenitsa Port include:

- Waiting area/room
- Waiting seats for passengers
- Toilet facilities
- Food and beverage area (bar, restaurants, etc.);
- First aid equipment
- ATM point
- Air conditioning

In addition, on the ground floor of the new Terminal T2 at Igoumenitsa Port, all shipping companies' offices have been fully operational since 2017 and check-in for cargo vehicles to the ports of Ancona, Venice and Trieste is being served. A Duty Free Shop also operates in addition to shipping companies. Furthermore, the new passenger station was equipped with all the necessary for the control of safe traffic, in accordance with the rules laid down in the International ISPS Code. The necessary itinerary screens, info-kiosk with tourist information and any useful information for the passenger, video display and photographic display with sights of the Prefecture and surrounding areas have also been installed. Also, there are automatic luggage storage lockers.

The station also has a Free Wireless Network, as well as an Internet Point, where three computers and charging stations are available to the public.

The interior of Terminal T2

Mobility Services & Close Destinations

The port is close to the city, but there is no urban bus line or train that connects the port with the city. Most passengers use their private car to move in the area or services such as taxis and mini-vans. Cruise passengers usually move with taxis, rented vehicles and buses for excursions. Using these alternatives, the visitors can reach a number of destinations in a relatively small distance. When a visitor reaches Igoumenitsa, there is a variety of attractions in the area, which include:

- METEORA: A unique site of geological and religious interest, with many Byzantine monasteries
- ZAGORI & VIKOS GORGE: Superb natural setting and magnificent mountain villages
- IGOUMENITSA & THESPROTIA: Archaeological museum, monasteries, byzantine churches ea.
- IOANNINA: Lakeside setting, beautiful city castle, many museums & lake island village
- ARTA: Byzantine Arta and stone bridge of the city

Needs & Prospects

Igoumenitsa does not have an airport or a train station, which makes it difficult for passengers to move towards the mainland or another country. The suburban bus station is in the city of Igoumenitsa and there is no direct connection from the port. For that reason, there is lack in terms of intermodality. Access for passengers of reduced mobility is in a medium status and is planned to be improved in the upcoming years.

Cruise infrastructure is currently not serving the purposes of the port, and for that reason a new terminal, Terminal Station T3 with a building of 2,324.80 m2 is under construction.

This terminal is to serve controls required by the Schengen Convention and to be a cruise ship terminal, in order to establish Igoumenitsa Port as an international, contemporary cruise port and further increase cruise calls and cruise ship stay in port. This will allow cruise-related flows to be treated as such and creates new prospects in the connection of the city with the cruise terminal and the creation of new mobility services especially for cruise passengers.

The Port of Igoumenitsa

5. Weighted list of negative impacts linked to cruise-related flows

Several concerns arise from the cruise-related flows in cruise ports, especially when it comes to traffic and mobility issues. Below, are presented the major negative impacts.

- Increased size of cruise ships can cause congestion of port facilities, in-port and local road network and urban settings.
- Traffic congestion multiplies CO2 emissions and environmental impacts and lowers the quality of transport and mobility in the area.
- Infrastructure of port and local community can be burdened with great numbers of visitors, resulting to costs related with improvement of transportation services, police and traffic control, road maintenance etc.
- Alteration of local community characteristics and culture
- Increased use of public facilities and networks (water supply, waste management etc.)
- Lower activity in the accommodation sector, since visitors spend the night in the ship.
- The local community avoids to be in the city center when cruise passengers arrive because the roads are full of people

6. Existing road network, transport services and infrastructure in the city/ port

In the city of Igoumenitsa, the incoming traveler has a variety of choices regarding transport and mobility. There are available transport services, such as suburban busses that connect the city with close points of interest and the entire country, but also bus lines to Albania, Northern Macedonia, Bulgaria etc. The suburban bus station is in the central part of the city, very close to the old port, making it easy for the travelers to reach it and continue their movements in the area. Moreover, there are many taxi, mini-van and mini-bus services in Igoumenitsa, that connect the port and the city with airports, ports, marinas, hotels, local sites and points of interest. Some transfer services offer full-day and half-day tours with organized schedules for site seeing, sports and summer activities. Finally, there are services of motorbike and car rental in the city for business and tourism activities.

The city of Igoumenitsa is connected with the national road network and the Egnatia highway. More specifically, the Egnatia highway exit is very close to the new port and the city, allowing to private and public cars to easily access the national road network and move through a closed motorway towards Ioannina, Thessaloniki, Kavala and other destinations in Western & Central Macedonia. Furthermore, through the Egnatia highway and later through the national road network, the visitor can reach Meteora. Finally, there is another closed motorway in a close distance, Ionia highway that connects the regions of Western Greece and can be used for trips to Agrinion, Patra, Athens ea.

Nevertheless, during the arrival of cruise ships and passengers it has been observed the **problem of people movement**. When up to 13.000 passengers and a large number of crew members descend on the small city of Igoumenitsa over the course of the summer months, a people movement problem is inevitably generated. Short visits to city's downtown core and to other major tourist attractions require the use of a number of transportation modes. Some of these modes of transportation, such as large tour buses that run through residential neighborhoods, are more disruptive than other modes to the quality of life within these neighborhoods. Small motor vehicles, pedi-cabs, pedestrians, and marine transit modes are less disruptive to the lives of residents. When cruise ships are in port, additional vehicle movements are generated. A considerable proportion of the additional vehicles are not motor cars. Rather they are large highway tour buses. Many of these traffic movements occur late at night as passengers return to their cruise ships prior to the scheduled departure time. In addition, traffic volumes expand along various interior streets. Traffic speeds in excess of posted speed limits are frequently observed. Pedestrian and street safety is compromised by higher traffic volumes, excessive speed, and the absence of controlled intersections and crossings.

Aside from the ships (water waste and air pollution), the **passengers themselves have a very large environmental footprint**. As they disembark and board, large groups put pressure on the carrying capacities of the local environment. Due to the time constraints from the cruise operators and the emphasis on making money, these shore side excursions rarely focus on sustainable ecotourism, where a concentration on education, conservation, and environmental awareness is primary.

2.1.2. SWOT/CAME analysis

Attempting to summarize and gather all our observations, and further analyze in order to end up in conclusions related to cruise flows in the port of Igoumenitsa, the following **SWOT analysis** was formed. Both of the following analyses were conducted with the contribution of the stakeholders, from literature review, bibliographic research regarding the policies and regional strategies and from interviews with representatives from entities related to the cruise sector.

SWOT Analysis

INTERNAL FACTORS	
STRENGTHS (+)	**WEAKNESSES (-)**
- Adequate infrastructure for large vessels - Contemporary port facilities - Extensive passenger handling experience - Connection to highways Egnatia & Ionian Odos - Closeness to various short-visit points of interest	- Little experience in cruise management - Lack of ramps for people with disabilities - Lack of dissemination and promotion of the close tourist attractions in an international level - Heavy traffic flows along the coastline

EXTERNAL FACTORS	
OPPORTUNITIES (+)	**THREATS (-)**
- New infrastructure for mobility-impaired people within the port and in the city - Creation of thematic touristic products - Improvement of existing mobility infrastructure	- Deterioration of traffic flows in the area - Problems in port operation during cruise calls

CAME Analysis

INTERNAL FACTORS	
Maintain STRENGTHS (+)	**Correct WEAKNESSES (-)**
- Adequate infrastructure for large vessels ✓ Maintenance and further expansion of existing port infrastructure (Phase C) **- Contemporary port facilities** ✓ Constant upgrading of facilities & services provided **- Extensive passenger handling experience** ✓ Defining of good practices and further adjustment & implementation on cruise sector **- Connection to highways Egnatia & Ionian Odos** ✓ Road maintenance, connection at Greek highways (Egnatia & Ionian) and neighboring countries (e. Albanian) **- Closeness to various short-visit points of interest** ✓ Cooperation with managing institutions & local stakeholders to facilitate best transport circumstances towards points of interest.	**- Little experience in cruise management** ✓ Training actions for staff & local professionals by other port experts in order to learn how to manage cruise flows etc. **- Lack of ramps & special infrastructures for people with disabilities** ✓ Plan for new infrastructures within port for people with mobility problems **- Lack of dissemination and promotion of the close tourist attractions at an international level** ✓ Communication & cooperation with local & national authorities for the creation of new marketing strategies, campaigns, etc. **- Heavy traffic flows along the coastline** ✓ New traffic regulations within port ✓ Plan of the Municipality on mobility issues outside port area

EXTERNAL FACTORS	
Explore OPPORTUNITIES (+)	**Adapt to THREATS (-)**
- New infrastructure for mobility-impaired people within the port and in the city ✓ Funding opportunities for the implementation, through interregional programmes (E.g. INTERREG Programme, etc.) **- Creation of thematic touristic products** ✓ New combination packages of touristic services, facilitating the tourist flows and passengers' choices **- Improvement of existing mobility infrastructure** ✓ Analysis of current status & plan on improving it, with the participation of local & regional authorities & the public.	**- Deterioration of traffic flows in the area** ✓ Training actions on the use of alternative means of transport ✓ Monitoring of situation with state-of-the-art equipment, to prevent incidents & congestion, through customized traffic management. **- Problems in port operation during cruise calls** ✓ Staff training actions on handling cruise flows. ✓ Enhancement of existing staff and services of the port, in the scope of cruise.

2.2. Step 2: Participatory process

2.2.1. Stakeholders identification

When it comes to stakeholders and entities involved in cruise, here are some of the parties that are interested on the matter and have the power to influence or diversify its current status:

- Igoumenitsa Port Authority
- Municipality of Igoumenitsa
- Region of Epirus
- Adjacent Municipalities
- Ministry of Shipping and Island Policy
- Chamber of Commerce of Thesprotia
- Ministry of Tourism
- Greek National Tourism Organization
- Travel agencies and Travel service providers
- Local community
- Hellenic Coast Guard

Furthermore, the stakeholders related to transport and mobility are:

- Ministry of Infrastructure, Transport & Networks
- Ministry of Environment & Energy
- Egnatia Odos S.A.

Igoumenitsa Port Authority

The Port Authority of Igoumenitsa basically provides services regarding the mooring of vessels and the transport of passengers and vehicles. It is also responsible for the aesthetic formation and the smooth functioning of the port's ground marine belt and the collection of waste inside the harbor zone. At the same time, it leases estates and open-air areas which are property of the Port Authority. The port also provides parking areas for the citizens of Igoumenitsa. The place is located inside the city of Igoumenitsa, at the port's harbor area.

For matters concerning the city and its greater area, the Port Authority of Igoumenitsa collaborates with the users of the port, the local authorities and the authorities of the first and second degree administration, since the Organization's success in its new role presupposes the equal development of Thesprotia.

Beyond that, special emphasis is being given to the area's tourist exploitation. The Organization has under its jurisdiction the harbor belts of Sivota and Sagiada, locations of extreme

beauty, where there is a possibility for the development of a marinas' network. There is also a declared intention for collaboration on works with the city of Igoumenitsa as the city and the port may have common points of development.

Igoumenitsa Port Authority (IPA) logo

Municipality of Igoumenitsa

The present municipality Igoumenitsa was formed at the 2011 local government reform by the merge of the following five (enpe) former municipalities, which became municipal units:

- **Igoumenitsa**
  - Agia Marina
  - Agios Vlasios
  - Graikochori
  - Igoumenitsa
  - Kastri
  - Kryovrysi
  - Ladochori
  - Mavroudi
  - Nea Selefkeia
- **Margariti**
  - Eleftheri
  - Karteri
  - Katavothra
  - Margariti
  - Mazarakia
  - Mesovouni
  - Spatharaioi
- **Parapotamos**
  - Drimitsa
  - Geroplatanos
  - Koritiani
  - Parapotamos

- **Perdika**

- **Syvota**
    - Argyrotopos
    - Faskomilia
    - Plataria
    - Syvota

The municipality has an area of 428.353 km2. The municipal unit of Igoumenitsa has an area of 111.752 km2.

View of Igoumenitsa

Region of Epirus

The Region of Epirus is one of the 13 regions of Greece. It is administratively a secondary governmental organization, and is geographically identified with the homonymous department.

It occupies an area of 9,203 sq. Km. and its population is 336,856, according to the latest NSSG inventory (2011). Larger city and its capital is the city of Ioannina, in the mainland of Epirus.

Regional Units:

- Regional Unit of Arta
- Regional Unit of Thesprotia
- Regional Unit of Ioannina
- Regional Unit of Preveza

Epirus' rugged terrain makes agriculture difficult. Sheep and goat pastoralism have always been an important activity in the region (Epirus provides more than 45% of meat to the Greek market) but there seems to be a decline in recent years. Tobacco is grown around Ioannina, and there is also some farming and fishing, but most of the area's food must be imported from more fertile regions of Greece. Epirus is home to a number of the country's most famous dairy products' brands, which produce feta cheese among others. Another important area of the local economy is tourism, especially eco-tourism. The outstanding natural beauty of the area as well as its picturesque villages and traditional lifestyle, have made Epirus a strong tourist attraction.

Around 350,000 people live in Epirus. According to the 2001 census, it has the lowest population of the 13 Regions of Greece. This is partly due to the impact of repeated wars in the 20th century as well as mass emigration due to adverse economic conditions. The capital and largest city of the Region is Ioannina, where nearly a third of the population lives.

The Region of Epirus is quite active in the field of development and future potential enhancement. Currently, the operational program of the Region for the period 2014-2020 is in effect. Also, the Region has participation in a number of past and present projects associated with interregional cooperation, economic development, monitoring, thematic tourism, sustainable energy and mobility, culture preservation et al.

The Region has also received certificates and awards regarding good practices, and interoperability solutions of public administrations in the last five years.

Interest & Influence of stakeholders

Level of Interest and influence of each stakeholder

2.2.2. Participatory process design and implementation

In order to collect as many information as we could from the key stakeholders related to the Cruise Sector of Igoumenitsa, we aimed to organize bilateral meetings with selected stakeholders, who have a crucial position in the decision making process related to the cruise sector. For this purpose, we created **questionnaires** with some major questions and the answers enabled us to collect useful information for the elaboration of the LCTP for Igoumenitsa. Prior to our meetings, we sent information about the project and the questionnaires, so as the stakeholders to have plenty of time to think about these questions, as well as any additional issues they would wish to arise and include them in our report.

In the bilateral meetings, we had a **presentation** about the project, its objectives, the LCTPs that would be created and the importance of the stakeholders' active participation and provision of feedback. The meetings were very fruitful as we managed to have the stakeholders' opinions about advantages and negative effects of cruises for their city, if the existing infrastructures are adequate to serve the passengers' needs, transportation facilities, mobility issues, interventions, activities implemented in order to improve existing problems and future plans.

We decided to organize the meetings in Igoumenitsa, at the stakeholders' premises in order to be more convenient for them. The selected stakeholders are:

- Representative from the Municipality of Igoumenitsa,
- Representative form Port Authority of Igoumenitsa,

- Representative from the local chamber of Commerce
- **Representative from the Region of Epirus- Department of Transportation and Communication**
- **Representative from the tourism sector**, who organizes short time excursions of the cruise passengers to nearby sites of cultural interest
- Representative of the University of Ioannina

The 1st participatory meeting was organized in the beginning of February 2019 at the premises of Municipality of Igoumenitsa, where representatives from the abovementioned organizations and entities participated. The feedback from the organized meetings are depicted in the abovementioned SWOT and CAME Analysis, as their content, apart from the literature research, is also based on the feedback we had from the meetings/interviews with the stakeholders. In general, the stakeholders are very satisfied by the fact that the cruise calls and passengers have been increased during the last five years and the estimations for the next years are very promising. The existing mobility scenes have to be improved as well as the transportation network, in order to be able to serve the vast amount of cruise passengers arriving in the port respecting in the same time the environmental regulations. Additional infrastructural port works, and works in the city center are essential for the mobility improvement of citizens and passengers

The event and its conclusions were disseminated through local and regional media in the targeted and wider public (see Annex).

The 2nd participatory activity was organized in July 29th, 2019 in Igoumenitsa and again the representatives of the organizations that have participated in the 1st meeting came to be informed of the LCTP and discuss new developments. The results of the analysis based on the 1st event were presented and the stages of the LCTP completed up until then were discussed. The participants had the chance to learn more about goals and actions proposed in the LCTP and help improve the planned strategies for completing them. Indicators that were afterwards used to measure the effectiveness of the proposed actions and future scenarios were defined. Finally, the meeting closed with prospects on funding and description of the upcoming steps of the process.

Photos from the meeting are included in the Annex.

2.3. Step 3: Draft of the operational model

2.3.1. Design of the plan

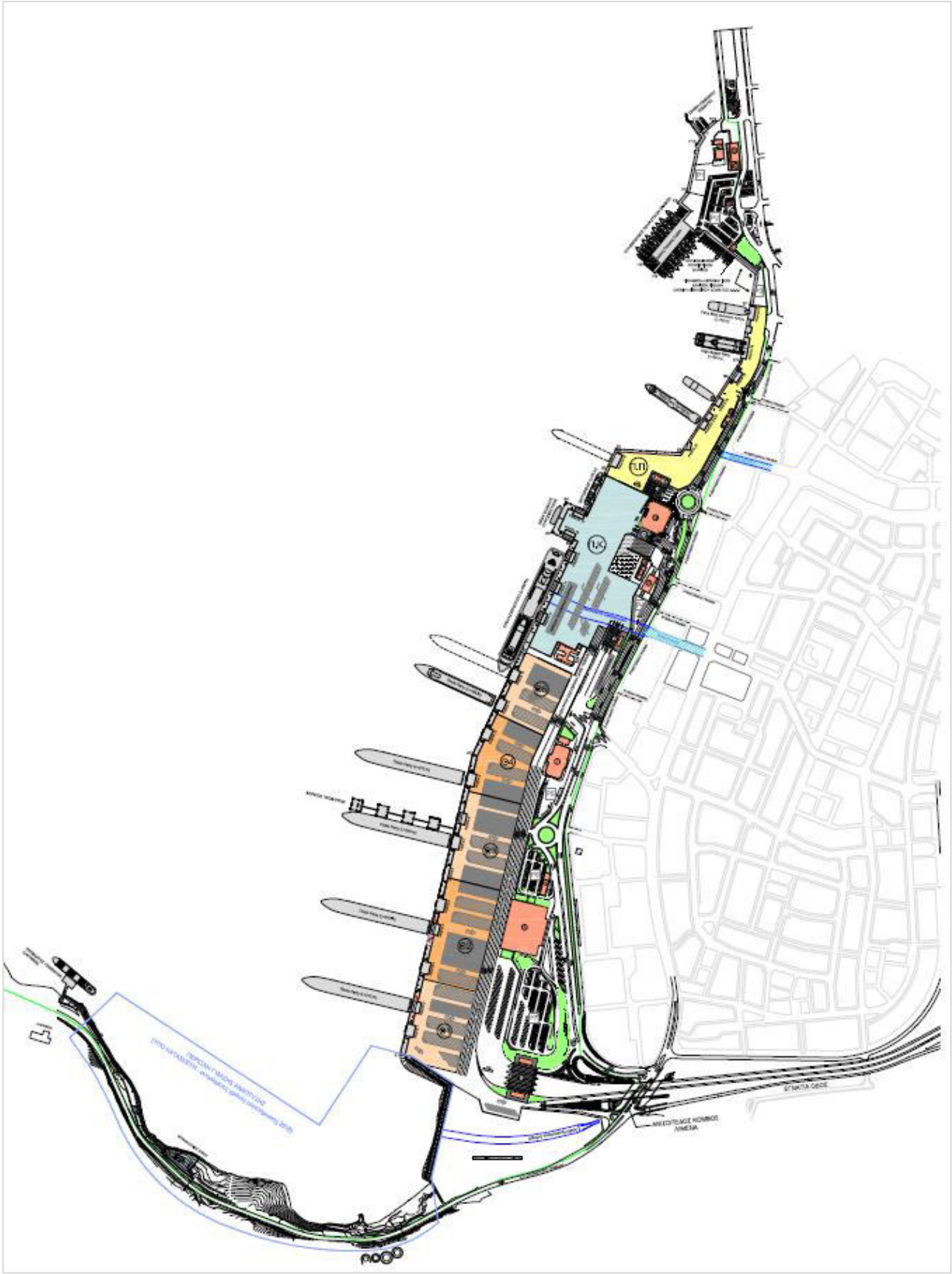
1. The current situation

To improve the mobility and quality of life for its citizens, the city of Igoumenitsa developed a **Sustainable Urban Mobility Plan (SUMP)** to meet the mobility needs of residents, businesses, and the region. Igoumenitsa's SUMP derives from the immediate need of a small city that, besides the citizens' daily mobility needs, desires to serve also thousands of visitors' trips disembarked in its port which connects the inland national area with Ionian Islands and the rest Europe. Although Igoumenitsa is located to a geographically strategic point, it has not yet been developed as a touristic center or as a "destination" point for visitors. Both the lack of appropriate infrastructure that could promote the city as an attraction pole and the lack of alternative, to private car, transport modes are the main weaknesses of the city.

As analyzed in the previous steps, one very important aspect of the current situation in Igoumenitsa is the transition towards the full construction of the port, which will include a cruise terminal. The completion of the 2nd Port Development Phase and the progress of the 3rd Phase, has given the port of Igoumenitsa the infrastructure that makes it possible to fully achieve cruise related goals. More specifically, the works include:

- 118 ha of land area
- Opening of a straight waterway 170.0 m wide, 1700 m long and with a useful depth of 10.50 m
- Terminal Station no. 2 Building: 3,041.46 m2 (complete)
- Terminal Station no.3 Building: 2,324.80 m2 (to serve controls required by the Schengen Convention and to be a cruise ship terminal - under construction)
- A 197.60 m long sideboard berth capable of mooring 300,000 DWT ships (227 m long and a load draught of 9.40m - under construction)
- Connection platform 371.0 m long with a useful depth of 10.20 m (complete)

The Port Authority of Igoumenitsa is also a member at the MEDCRUISE Mediterranean Cruise Port Association. These developments show that the need for turning towards low carbon cruise is essential, since in the upcoming years, the infrastructure will enable the port and the city to receive, manage and channel major cruise related touristic movements. This can create extensive changes in GHG emissions in the area and significant traffic issues, both for residents and travelers.



Port Master Plan

2. Vision and objectives

Vision: to transform the complex of port and city of Igoumenitsa into a smart destination in terms of mobility and environmental footprint, which will become home-port for cruise ships in a long term horizon.

The **general objectives** that are in focus for the area are:

1. Better and more efficient transport and mobility options for cruise passengers in the area
2. Increase of number of tourists through more cruise calls
3. Adoption of an environmentally friendly and sustainable mobility culture, thus reducing CO_2 emissions

3. Goals, actions and indicators

Igoumenitsa Port and city mobility is characterized by:

- Low number of cruise calls, in comparison to other cruise ports in Greece and the Mediterranean
- Prospects are optimistic for increasing the number of cruisers and daily tourists, due to new infrastructure
- Existing urban mobility related study (SUMP).
- Lack of Cruiser liners and business operators coordination
- Low spending time of cruise tourists within the city
- Lack of public and stakeholder awareness on cruise related matters (benefits, issues etc.)
- Accessibility problems regarding the connection of city center with the port

Taking under consideration the current status and the upcoming changes, a strategic vision and a set of objectives is defined to guide the development of the LCTP. The specific target groups are not only cruise passengers but daily tourists and other visitors.

Goals

One of the main aspirations of the Igoumenitsa Port Authority (I.P.A) is setting the port of Igoumenitsa as a port for cruise and ensuring its integration within the destinations of the major cruise market companies in the Mediterranean. The main strategic goals of Igoumenitsa Port Authority and the strategic directions for achieving this include:

- **Sustainable Passenger Mobility.** The aim is to enhance the internal and external sustainable passenger mobility by taking advantage of the positive prospects of tourism for the coming years and the significant increase in the number of ships that will use the port as point of departure, significantly improving the revenues of port from passenger

service and from vessel mooring. A crucial factor for the realization of this goal is the expansion of port infrastructure – Phase B and Phase C (currently under construction) and the general upgrading of port services. At the same time, the development of the tourist activities of the port (Cruise Terminal) is also a major impetus for the passenger traffic of the port.

- **Cruise and tourism strengthening in the port area, Thesprotia & Region of Epirus.** The goal is to increase the tourist traffic of Thesprotia, to attract "high level" tourism and to exploit important assets of the organization and on the other hand to increase the passenger traffic generated by the development of cruise tourist prospects of the region. I.P.A. philosophy regarding cruise is based on flexibility and willingness to customize the offered services.

Actions & Indicators

The **actions** that need to take place in Igoumenitsa, in order to move towards the goals mentioned earlier are proposed to be:

In terms of **Sustainable Passenger Mobility:**

1. **Organized plan for improving the mobility of passengers/tourists at the ferry/cruise terminal**

The concept of better mobility of passengers and tourists in the port, and specifically in the terminals will be implemented through the creation of an organized action plan. The plan will include recommendations for the **valorization of the port infrastructures** and the corresponding upgrade of the **municipal road infrastructures** in order to be able to support the following actions/measures:

- The pedestrian and vehicle transit will be simplified with the upgrade and renovation of the **pedestrian routes and bicycle paths.**
- Giving **incentives to the locals to reduce the use of cars** in the port area and around is also another measure to control traffic flow.
- Simplifying the pedestrian and vehicle transit through the Port areas with the improvement of existing **signage** close to port entrance and terminal, using IoT technology with on time information regarding the traffic, bus routes etc.
- The plan will also include recommendations for the use of eco- friendly means of transportation, such as **electrical buses, common bicycles and electric ones.**
- Improve the **parking management** within the port area with the use of mobile applications, in order the local busses and the busses from hotels and tourist agencies transferring passengers from and to the port, not to block the traffic flow.

Indicators *for monitoring the action*

- Increase of transportation options that will facilitate the pedestrian and vehicle movements in the port and city area, and especially in the cruise terminal
- Increase of **traditional and electronic signals** in the terminal area providing information to passengers about the traffic, best way to access the city etc.
- Usage of the parking management app

2. **Plan for the increase of citizens' awareness regarding the environmental issues and adopting of sustainable mobility policies in the port and city area**

The Municipality will include in the action plan awareness actions, presentations, open events, workshops etc. in order to raise citizens' awareness on the idea of sustainable mobility in the port and city area. Experts from other port cities will be invited to **present good practices** and useful & smart applications that will motivate citizens' towards this new attitude. Communication with the public and the cruise professionals is a priority, because all actions programed will be substantially more effective if the people understand and support the concept. It is crucial for the citizens to understand in depth the importance of making our culture and habits more environmentally friendly.

Indicators *for monitoring the action*

- Increase of raising awareness actions and events addressed to stakeholders and residents regarding the benefits of cruise for Igoumenitsa and minimizing its environmental impacts

In terms of **Cruise and tourism strengthening in the port area, Thesprotia & Region of Epirus**

1. **Develop a free mobile application for cruise tourists with info, points of interest and activities in the wider area**

Internet provides tourists with huge possibilities for searching interesting information and planning their activities. Mobile applications from "Location-Based Services" category provide the tourists context-based information based on their location (e.g., map and navigation services, services that provide information about hospitals, police phones, places of cultural interest, neighbor places of interest and how to access, restaurants and other facilities etc). On a local level, the points of interest and activities available in the wider area of Igoumenitsa will be incorporated, in coordination with stakeholders, local actors etc. The application will be available for free for all cruise tourists, but can also prove useful for tourists in general and even passengers that have Igoumenitsa and the Port as an intermediate stop. The application will gradually include more points of interest from the entire Region of Epirus, thus expanding the area covered and increasing the users' options. (Parga, Arta, Preveza, Syvota, etc).

Indicators *for monitoring the action*

- Number of downloads of the application
- Elaboration of the application with additional places of interest from the wider area
- Increasing the internet traffic to links through app

2. **Organization of visits in neighbor places of interest**

The recommended action that needs the contribution of the local tourist agencies is the **organization of short excursions (5-6 hours)**, depending on the passengers' available time. The passengers shall be aware of these options prior to their cruise, in order to organize their schedule (more details in the ANNEX).

Indicators *for monitoring the action*

- No. of cruise passengers who select the short excursions in neighbor cities, areas of interest
- No. of places of interest included in the app

3. **Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay**

Precondition for the second action is to ensure that the cruise ships will stay in the port for more hours than the usual, so as the cruise passengers to have enough time to visits the places of interest. The role of tourist agencies, Municipality and the Port Authority is crucial. For example, the local tourist agencies in collaboration with the cruise organizers can offer **attractive travel packages**, so as the cruise ships to remain more time in the port of Igoumenitsa and the passengers to be able to experience the abovementioned services. In addition to this, the Municipality has to organize a **dissemination campaign** in the countries of origin of the cruise passengers about the area, the aesthetic value of the places of interest, the natural and cultural heritage. Finally, Igoumenitsa Port Authority shall consider a **berth tax discount** for the cruise ships that will stay overnight in the area.

Indicators *for monitoring the action*

- Increase staying time of cruise ships in the port up to 24 hours

Summing up the analysis, the results are gathered in the following table:

GENERAL OBJECTIVE	PROBLEM	SPECIFIC GOALS	ACTIONS	INDICATORS
Better and more efficient transport and mobility options for cruise passengers in the area & Adoption of an environmental and sustainable mobility culture, thus reducing CO_2 emissions	#Cruise passengers don't have enough transport options # Need for the improvement of (eco - friendly) mobility in port terminal and city and eco-friendly culture	**Sustainable Passenger Mobility**	**Organized action plan for improving the mobility of passengers/tourists at the ferry/cruise terminal** # Upgrading and renovation of the pedestrian routes and bicycle paths. # Incentives to the locals to reduce the use of cars # Improvement of existing signage close to port entrance and terminal with use of IoT # Use of electrical buses, common and electric bicycles (including provision for charging infrastructures) # Improve parking management with the use of mobile applications	# Increase of transportation options that will facilitate the pedestrian and vehicle movements in the port and city area, and especially in the cruise terminal # Increase of traditional and electronic signals in the terminal area providing information to passengers about the traffic, best way to access the city etc. # Usage of the parking management app

			Plan for the increase of citizens' awareness regarding the environmental issues and adopting of sustainable mobility policies in port and city area (awareness actions, presentations, open events, workshops etc.)	# Increase of raising awareness actions and events addressed to stakeholders and residents regarding the benefits of cruise for Igoumenitsa and minimizing its environmental impacts
Increase of number of tourists through more cruise calls	# Cruise tourists numbers are relatively low # Cruise ships stay in port for a few hours only # Low number of cruise calls in Igoumenitsa, in comparison to other cruise ports in Greece and the Mediterranean	**Cruise and tourism strengthening in the port area, Thesprotia & Region of Epirus**	**Develop a free mobile application for cruise tourists with info, points of interest and activities in the wider area**	# Number of downloads of the application # Elaboration of the application with additional places of interest from the wider area # Increasing the internet traffic to links through app
			Organization of visits in neighbor places of interest.	# No. of cruise passengers who select the short excursions in cities in proximity to the port # No. of places of interest included in the app

			Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay (attractive travel packages, dissemination campaign, berth tax discount)	# Increase staying time of cruise ships in the port up to 24 hours

4. Future scenarios

Base Line: Current situation (Year 2019).

BCS Scenario: Normal Trend without project implementation ("Business as usual scenario");

Scenario 1: "Most positive possibilities foreseen actually occur" In this Scenario all the actions/measures will be implemented.

Scenario 2: "Unexpected events or circumstances": *In this scenario*, we expect that only 2 actions will be fully implemented. These actions need small investment. Four other actions/measures are expected to be partially implemented and some of them within the frames of SUMP.

Scenario 3: "Most likely scenario": In this scenario, 5 actions/measures will be implemented and 4 actions/measures will be partially implemented, as shown in the following table.

NO	MEASURES	BCS SCENARIO	SCENARIO 1	SCENARIO 2	SCENARIO 3
1	Upgrade and renovation of the pedestrian routes and bicycle paths	x	✓	partially implemented	✓
2	Incentives to the locals to reduce the use of cars	x	✓	✓	✓
3	Improvement of existing signage close to port entrance and terminal, use of IoT	x	✓	x	partially implemented
4	Use of electrical buses, common and electric bicycles (including provision for charging infrastructures)	x	✓	partially implemented	partially implemented
5	Improve parking management with the use of mobile applications	x	✓	✓	✓
6	Awareness raising actions, (presentations, open events, workshops etc.) regarding the environmental issues and adopting of sustainable mobility policies in port and city area	x	✓	partially implemented	✓
7	Develop a free mobile application for cruise tourists with info, points	x	✓	partially implemented	✓

	of interest and activities in the wider area				
8	Organisation of visits in neighbor places of interest	x	✓	x	partially implemented
9	Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay	x	✓	x	partially implemented

Explanations for Scenario 2

X ***Not implemented***

X *Improvement of existing signage close to port entrance and terminal, use of IoT*

This action demands investment and especially demands the collaboration of several different organizations and authorities as well as IT experts, who will undertake to use IoT technologies for the real time information in electronic signs regarding the traffic and other information. In this scenario, the collaboration and the flow of information between the different actors is difficult.

X *Organisation of visits in neighbor places of interest*

It has to be ensured that the cruise passengers will have plenty of time in order to participate in this kind of excursion. In this scenario, the extension of stay is not ensured.

X *Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay*

This action needs investment and a well -designed collaboration of the municipality, port authority and travel agents in order to be able to offer to the cruise companies the abovementioned incentives (attractive travel packages, dissemination campaign, berth tax discount). This effort need much time and negotiations.

~ ***Partially implemented***

~ *Upgrade and renovation of the pedestrian routes and bicycle paths*.

This action belongs to the priorities of the Municipality of Igoumenitsa and is part of the SUMP priorities.

~ *Use of electrical buses, common and electric bicycles (including provision for charging infrastructures)*

Bicycles and the corresponding parking places will be placed in the port and city center. The use of electric busses and bicycles is expected to be delayed, as it is a considerable investment and

demands a series of supplementary actions (public procurements, establishment of charging infrastructures etc.).

- *Awareness raising actions, (presentations, open events, workshops etc.) regarding the environmental issues and adopting of sustainable mobility policies in port and city area*

Some information events will be organized, such as workshops, presentations etc. Invitation to experts, who have deep knowledge about this issue with tangible examples demand research and networking , facts that might be deterrent for this. Indeed, the Municipality of Igoumenitsa is in close collaboration with the University of Ioannina (participation in common projects), and will co-organise awareness raising workshops for the promotion and adoption of innovative ICT technologies that will facilitate eco-friendly transportation.

- *Develop a free mobile application for cruise tourists with info, points of interest and activities in the wider area*

The application will be partially implemented in scenario 2, only including points of interest and activities in Igoumenitsa and the port area, while in scenarios 1 and 3 it will include points of interest from the region.

2.4. Step 4: Monitoring and sources for funding

2.4.1. Monitoring LCTP implementation

The implementation of the LCTP is defined in the following phases:

1. Acceptance of the plan by the Municipality of Igoumenitsa
2. Creation of co-working team that will be responsible for LCTP related issues
3. Application for funding by Region of Epirus OP 2014 – 2020 by the Municipality of Igoumenitsa
4. Coordinator appointment. The LCTP proposes the coordinator is an employee or an associate from the Municipality of Igoumenitsa, responsible for the development of low carbon cruise ship tourism and improvement of existing transport infrastructure in Igoumenitsa port and city for cruise passengers and other users of the port within the given timeframe
5. Monitoring and control of the implementation of measures. The Municipality of Igoumenitsa is in charge of monitoring and controlling the implementation of measures. Its main task is to monitor the work of the coordinator and co-working team and support the implementation of measures
6. Monitoring and assesment of results. Examination and evaluation of capitalization prospects

In the following table, the work plan which includes deadlines and responsibilities is presented:

Complete work plan with deadlines and responsibilities:

General Objective 1 - Better and more efficient transport and mobility options for cruise passengers in the area General Objective 3 - Adoption of an environmental and sustainable mobility culture, thus reducing CO_2 emissions								
Specific Goal No.	**Specific Goal**	**Start/ deadline**	**Outcomes**	**Indicators**	**Data source**	**Responsibility for monitoring**	**Monitoring schedule**	**Description and methodology**
1	**Sustainable Passenger Mobility**	**10/19-12/21**	**Improvement of passenger mobility in sustainable terms**	**- Transportation options** **- Signals in terminal area** **- Raising awareness actions**	**- Municipality of Igoumenitsa** **- IPA**	**Municipality of Igoumenitsa**	**Every 6 months**	**- Action plan** **- Good practices presentation**
Action No.	Action	Start/ deadline	Outcomes	Indicators	Data source	Responsibility for monitoring	Monitoring schedule	Description and methodology
1.1	Organized plan for improving the mobility of passengers/tourists at the ferry/cruise terminal	10/19 - 12/21	- Renovation of pedestrian routes and bicycle paths. - Incentives to locals to reduce the use of cars in the port area and around - Improvement of existing signage close to port entrance and terminal, using IoT technology - Increase in use of eco- friendly means of transportation (electrical buses/ bicycles)	- Increase of transportation options that will facilitate the pedestrian and vehicle movements in the port and city area, and especially in the cruise terminal - Increase of traditional and electronic signals in the terminal area providing information to passengers about the traffic, best way to access the city etc. - Usage of the parking management app	- Municipality of Igoumenitsa - IPA	Municipality of Igoumenitsa	Every 3 months	- Creation of an organized action plan

			- Improve parking management within the port area with the use of mobile applications					
1.2	Plan for the increase of citizens' awareness regarding the environmental issues and adopting of sustainable mobility policies in port and city area	01/20 - 06/21	- Awareness actions, presentations, open events, workshops etc. in the action plan	- Increase of raising awareness actions and events addressed to stakeholders and residents regarding the benefits of cruise for Igoumenitsa and minimizing its environmental impacts	- Municipality of Igoumenitsa	Municipality of Igoumenitsa	Every 3 months	- Presentation of good practices

General Objective 2 - Increase of number of tourists through more cruise calls								
Specific Goal No.	**Specific Goal**	**Start/ deadline**	**Outcomes**	**Indicators**	**Data source**	**Responsibility for monitoring**	**Monitoring schedule**	**Description and methodology**
2	**Cruise and tourism strengthening in the port area, Thesprotia & Region of Epirus**	**01/20 - 09/22**	**Establishment of Igoumenitsa as a cruise destination and further enhance cruise and tourism potential in the area**	**- Increase of cruise calls, visitors and tourism in the area**	**- Local tourist agencies - IPA**	**Municipality of Igoumenitsa**	**Every 6 months**	**Periodical collection of recorded data in collaboration with local tourist agencies, with Regional and National authorities and Igoumenitsa Port Authority**
Action No.	Action	Start/ deadline	Outcomes	Indicators	Data source	Responsibility for monitoring	Monitoring schedule	Description and methodology
2.1	Develop a free mobile application for cruise tourists and all visitors of the area with info, points of interest and activities in the wider area	03/20 - 03/21	- Application available for free	- Number of downloads of the application - Elaboration of the application with additional places of interest from the wider area - Increasing the internet traffic to links through app	- Application	Municipality of Igoumenitsa	Every 6 months	- Application development

2.2	Organization of visits in neighbor places of interest	01/20 - 06/22	- Cruise passengers visit neighbor cities and areas of interest	- No. of cruise passengers who select the short excursions in neighbor cities, areas of interest - No. of places of interest included in the app	- IPA - Local tourist agencies	Municipality of Igoumenitsa	Every 6 months	- Organization of short excursions (5-6 hours
2.3	Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay	01/20 - 09/22	- Cruise ships will stay in the port for more hours than the usual	- Increase staying time of cruise ships in the port up to 24 hours	- IPA	Municipality of Igoumenitsa	Every 6 months	- Local tourist agencies in collaboration with cruise organizers can offer attractive travel packages - Municipality will organize a dissemination campaign in countries of origin of cruise passengers and will participate in international tourist exhibitions on cruise - Igoumenitsa Port Authority shall consider a berth tax discount for cruise ships that will stay overnight

Gantt chart with deadlines and milestones for monitoring:

SPECIFIC GOALS	ACTIONS	MONTHS																																					
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1. Sustainable Passenger Mobility																																					
	1.1 Organized plan for improving the mobility of passengers/tourists at the ferry/cruise terminal																																				
	1.2 Plan for the increase of citizens' awareness regarding the environmental issues and adopting of sustainable mobility policies port and city area																																				
2. Cruise and tourism strengthening in the port area and Thesprotia																																					
	2.1 Develop a free mobile application for cruise tourists with info, points of interest and activities in the wider area																																				
	2.2 Organization of visits in neighbor places of interest																																				
	2.3 Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay																																				

Monitoring:	●
Completion:	★

2.4.2. Funding

1. Estimation of needed resources:

Item	Description	Start / Deadline	Funding	Cost Category				Total
				Investments	Description	Sub-contracting	Description	
Action 1.1	Organized plan for improving the mobility of passengers/tourists at the ferry/cruise terminal	10/19 - 12/21	Amount (€)	90,000	Signage, materials, electric buses, bicycles, meetings	280,000	Plan design & implementation, construction works, e-parking app	370,000
			Source of funding	- Municipality of Igoumenitsa - Region of Epirus				
Action 1.2	Plan for the increase of citizens' awareness regarding the environmental issues and adopting of sustainable mobility policies port and city area	01/20 - 06/21	Amount (€)	0		40,000	Plan creation, awareness actions, presentations, open events, workshops etc.	40,000
			Source of funding	- Municipality of Igoumenitsa - Region of Epirus				
Action 2.1	Develop a free mobile application for cruise tourists and all visitors of the area with info, points of interest and activities in the wider area	03/20 - 03/21	Amount (€)	8,000	App development	35,000	Update and maintenance for 5 years	43,000
			Source of funding	- Municipality of Igoumenitsa - Region of Epirus				
Action 2.2	Organization of visits in neighbor places of interest	01/20 - 06/22	Amount (€)	27,000	Meetings with tourist agencies (local & international & cruise organizations)	29,000	Information kit (publications, material, gadgets etc)	56,000
			Source of funding	- Municipality of Igoumenitsa - Region of Epirus				

Action 2.3	Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay	01/20 - 09/22	Amount (€)	11,000	Meetings with local tourist agencies & stakeholders, open events, meetings with IPA etc.	25,000	Dissemination actions in the countries of origin of the cruise passengers, participation in touristic exhibitions for cruise in Greece and abroad	36,000
			Source of funding	- Municipality of Igoumenitsa - Region of Epirus				
Total Cost of Actions		**10/19- 09/22**	**Amount (€)**	**109,000**		**177,000**		**286,000**

2. Funding opportunities:

Already achieved funding

Because of the ideas presented in the framework of LOCATIONS project and the collaboration with University of Ioannina, Municipality of Igoumenitsa has presented a proposal for the funding of the measures regarding Cruise and tourism strengthening in the port area, Thesprotia and Region of Epirus and the project is going to start this October. The project concept was based on the needs that came up during the design of the LCTP and it wishes to combine the cultural characteristics of the wider area of Igoumenitsa and Thesprotia with touristic and cruise opportunities that were defined within the LCTP, through innovative strategies.

The title of the project is "**Support stakeholders tackle strategic innovation in tourism in peripheral, remote & sparsely populated areas with resilient heritage offers and place based investments in the Cultural and Creative Industries**" or **SMARTiMONY**.

SMARTiMONY will be implemented in the frame of the cross-border cooperation programme "Interreg-IPA CBC Greece – Albania 2014-2020". The total budget of the project for the Municipality of Igoumenitsa is 260,520.96 €. The project includes actions such as applications with replication potential, surveys, plans, studies, strategies etc.

More specifically, through this opportunity, there will be funding of the actions described in the LCTP regarding cruise and tourism strengthening in the port area and Thesprotia, which are:

- The development of a free mobile application for tourists with info, points of interest and activities in the wider area
- Organization of short excursions in neighbor places of interest
- Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay through enhancing and promoting the touristic product of the area, the aesthetic value of the places of interest, the natural and cultural heritage etc.

Through SMARTiMONY, the actions that will be implemented in the frame of the LCTP will eventually address a larger target group, in particular all visitors in the area. This will help disseminate the concept of Igoumenitsa as a low-carbon cruise destination even further, promote sustainable tourism and create potential for future interventions, setting the basis of an organized system for the sustainable and low-carbon management of tourist flows and capitalizing to the maximum the results of LOCATIONS for Igoumenitsa.

Operational Program of the Region of Epirus 2014-2020

For the funding of the measures mentioned above regarding Sustainable Passenger Mobility, the Call 81/2018 "Interventions contributing to the energy efficiency of urban transport and centers", of the Operational Program of the Region of Epirus 2014-2020 is now open and its potential beneficiaries are:

- Municipality of Arta
- Municipality of Igoumenitsa
- Municipality of Ioannina
- Municipality of Preveza
- The municipal enterprises of the above mentioned municipalities

This action can include interventions related to transport and mobility improvement, such as:

- Creation of walkways
- Road formation in mild traffic roads
- Geometric redesign of key junctions and construction of roundabouts,
- Creation of outdoor parking spaces.
- Interventions to ensure mobility for disabled people.
- Interventions for the construction / design / signage of bicycle lanes

Furthermore, the following interventions related to energy efficiency can be funded:

- Integrated interventions in the municipal lighting and signage system of urban centers (indicatively, there will be actions such as replacement of conventional lamps with low-power lamps, adoption of automation for 'smart' lighting management, use of photocells, utilization of photovoltaic collectors in street lights).
- Bioclimatic interventions in the surrounding area of selected buildings and squares which may include:
    - use of cool coating materials,
    - planting area increase
    - increased shading (natural and artificial) during the summer months
    - use of wind protection and sound protection elements
    - use of water elements for natural cooling
- Installation of photovoltaics in municipal buildings.
- Installation of energy management equipment for municipal buildings.
- Replacement of municipal vehicles with new energy efficient and low-emission vehicles.
- Interventions to improve the energy efficiency of water and sewage pumping stations.

The submission period lasts from 22/7/2019 to 01/11/2019 and the total budget of the call is 12,217,735.00 €. The Municipality of Igoumenitsa based on the results from LOCATIONS project will prepare a proposal that will realize all the relevant actions proposed in the LCTP, asking for funding.

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ANNEX

I. LCTP measure description

1) Organized plan for improving the mobility of passengers/tourists at the ferry/cruise terminal

References taken from LOCATIONS Low Carbon Transport Plans

The plan will be created by the Municipality of Igoumenitsa, using information from municipal and port data, touristic agents, cruisers, locals and stakeholders, incorporating the needs of passengers, community and professionals in the area. It is very important to combine all information available, in order to achieve a functional and integrated plan, applicable in the case of Igoumenitsa and especially the port terminal.

The action plan will focus on the valorization and upgrade of existing port infrastructures as well as the ones of the municipality. Specifically:

- The pedestrian and vehicle transit will be simplified with the upgrade and renovation of the **pedestrian routes and bicycle paths.** Indeed, steps towards this direction have been made but the completion of the pedestrian and bicycle paths throughout the whole coastal area (from the port to Drepano/camping area) and the spatial connection of bicycle paths in a common network, will contribute significantly in the improvement of the passengers' mobility.
- Giving **incentives to the locals to reduce the use of cars** in the port area and around is also another measure to control traffic flow. On the one hand, the entrance of cars within the port shall not be allowed during the embark and disembark of cruise ships. On the other hand, coupons with discount in the bus ticket shall be given to residents, who desire to move around the port area. This measure not only will contribute to the improvement of passengers' mobility but also to the decrease of CO_2 emissions, as cars will be used less.
- Simplifying the pedestrian and vehicle transit through the Port areas with the improvement of existing **signage** close to port entrance and terminal, using IoT technology with on time information regarding the traffic, bus routes etc.
- The plan will also include recommendations for the use of eco- friendly means of transportation, such as **electrical buses, common bicycles and electric ones** etc., that will enable the cruise passenger to access the city and vice versa in a fast, safe and environmental friendly way. The Municipality will provide the buses and bicycles and the corresponding parking places in the port and in the city center. The latter measure demands also **charging infrastructures** that have to be established with the collaboration of the Port Authority and Municipality of Igoumenitsa.
- Improve the **parking management** within the port area with the use of mobile applications (e-parking), in order the local busses, busses from hotels and tourist agencies transferring passengers from and to the port, not to block the traffic flow. A mobile application that can show all available parking spots, free or with charge in the area of the port and the city can help reduce the time that drivers spend on road in the process of finding a parking spot and thus improve mobility and reduce traffic. Such apps exist and operate

successfully in several cities around the world. For example, some apps, like ParkMe or Parker help find a parking spot in the city, while others like SpotHero can help find parking close to airports, saving the drivers' time and money and helping cope with mobility problems in high-traffic areas like city centers or transportation hubs.

2) Plan for the increase of citizens' awareness regarding the environmental issues and adopting of sustainable mobility policies port and city area

References taken from LOCATIONS Low Carbon Transport Plans

At a local level, the Municipality will create a plan that will include awareness actions for citizens. These actions will be events open to the general public, presentations regarding sustainable mobility, presentation of good practices form experts, information events in public spaces. It is really important to realize that the people of Igoumenitsa are not familiar with sustainability and how mobility and transport facilitation can be linked to it. Transport for the residents of Igoumenitsa is mostly based on private cars and buses. The results of traffic both practically and environmentally are known, but there is need for further sensitization on sustainable practices and the role of every citizen towards their implementation. The plan will adapt to the particularities of Igoumenitsa, a city which combines the rural character of the area with the existence of an important port that connects the entire western part of Greece to many European countries, also taking in mind the nearby motorway of Egnatia Odos which connects Igoumenitsa to Northern Greece. Communication with the public and the cruise professionals is a priority, because all actions programed will be substantially more effective if the people understand and support the concept. The plan aims to set the basis for improved & sustainable mobility for cruise passengers, tourists and local community.

3) Develop a free mobile application for cruise tourists and all visitors of the area with info, points of interest and activities in the wider area

References taken from LOCATIONS Low Carbon Transport Plans

This action will incorporate a large amount of information relevant to points of interest, activities, and archaeological sites, available in the wider area of Igoumenitsa. This will be achieved through information collection and collaboration with local actors, stakeholders, public actors etc. The application will be developed for cruise tourists that visit the area and, based on the criteria inserted by the user, it will make suggestions and show points of interest including info such as their address and contact information, a short description of the place, other relevant places etc. Moreover, the app will be in English, making it friendly to most users, especially European passengers.

The implementation of this action mainly depends on the information gathered and the development of the application. Also, it is important to make the app known to cruise passengers, so that they are aware of its existence and the way it works. Applications have proved to be very successful and easy to use for most of the people that own a smartphone or a tablet, facilitating their access to information and services in many cases. Especially cruise passengers, which have little time available to explore Igoumenitsa and the wider area, are in need of concentrated information, in a

form adapted to their usual technological habits, and a tool to help them make better choices or provide choices they did not know about. The application will gradually include more points of interest from the entire Region of Epirus, thus expanding the area covered and increasing the users' options.

The app will also be available for cruise tourists on board, where they will be able to learn more about it. Furthermore, besides cruise passengers, everyone will be able to download it for free. Every visitor of the area, as soon as he has access to Wi-Fi, will receive a message to his mobile device with information on the app and how he can download it.

4) Organization of visits in neighbor places of interest

References taken from LOCATIONS Low Carbon Transport Plans

Usually the cruise passengers, when arriving in a port for a few hours, they visit the city center and the places of interest close to the port. It has been observed that the cruise passengers often are wondering in the street in their free time, while they could visit cultural and historical places located in close distance (Arta city, Parga, Preveza, etc.) with the use of car or bus. The recommended action that needs the contribution of the local tourist agencies is the **organization of short excursions (5-6 hours)**, depending on the passengers' available time. The passengers shall be aware of these options prior to their cruise, in order to organize their schedule. For this purpose, the travel agents should contact and inform the cruise agents for the best organization of this action. The neighboring Municipalities could support this action with the provision (if possible) of busses, or tourist guides etc. for the cruise passengers who will visit their places. This action has multiple benefits: a vast number of passengers will move from the port in another area (in this case, only the existence of busses should be allowed in the port and not cars or trucks), decreasing the traffic flow in the city center, while in the same time, neighboring areas will host tourists who will advertise their place all over the world and support these places financially, as they will spend money for shopping, at restaurants etc.

5) Collaboration of the local authorities and tourism professionals in order to provide incentives for the extension of cruise ship stay

References taken from LOCATIONS Low Carbon Transport Plans

For this action, the coordination and communication of municipality, tourism companies and local authorities is very important, attempt that can sometimes prove difficult, but is vital for effective cooperation and tangible results. Offering incentives for the extension of cruise ship stay to approximately 24 hours in the port can lead to many benefits for the local and regional economy, but it also demands a series of actions that will ensure the proper mobility of passengers and controlled vehicle and citizens' traffic in the port and city roads. In addition, a cost benefit analysis might be necessary in order to examine if the invested money for the advertisement campaign, tax discount etc. will be covered by the expected income of cruise passengers due to their extended stay. At this point we have to mention that the social and tourism added value of this action should be taken under consideration.

Moreover, Igoumenitsa can participate in international touristic exhibitions regarding cruise that take place abroad, mainly in the United States of America, in order to disseminate the concept of Igoumenitsa as a modern cruise port and destination in the cruise passengers' countries of origin. The Municipality and the Port Authority of Igoumenitsa will be cooperating in this direction since, in the past the Port Authority has participated in such events in the US with an exhibition booth.

II. Participatory Activities

a. 1st Participatory Activity

Agenda

Project co-financed by the European Regional Development Fund

LOCATIONS- Low Carbon Transport Plan

1st Participatory Activity,

Municipality of Igoumenitsa

Agenda

09:00-09:15	**Welcome** Ioannis Lolos, Mayor
09:15-09:45	**Presentation of project LOCATIONS** Chrysostomos Stylios
09:45-10:15	**Presentation of the main conclusions of the partners' LCTPs created within LOCATIONS** Eleni Arvaniti, Premium Consulting
10:15-10:30	**Presentation of the state of the art in Igoumenitsa in terms of mobility related to cruise sector** Telis Karapiperis, Municipality of Igoumenitsa
10:30-12:30	**Open Discussion** - Presentation of stakeholders - Discussion with the stakeholders about identified problems, needs, recommendations related to mobility of vehicle and passengers due to cruise arrivals - Discussion about the Questionnaires delivered to stakeholders

Publication of the press releases related to the 1st participatory activity

Website: Igoumenitsa.gr

https://igoumenitsa.gr/

Δημότης Επισκέπτης Ενημέρωση

Ο Δήμος Διοίκηση

ΝΕΑ - ΑΝΑΚΟΙΝΩΣΕΙΣ

ΣΥΝΕΡΓΑΣΙΑ ΤΟΥ ΔΗΜΟΥ ΗΓΟΥΜΕΝΙΤΣΑΣ ΜΕ ΤΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ ΓΙΑ ΤΗ ΒΕΛΤΙΩΣΗ ΤΗΣ ΠΕΡΙΒΑΛΛΟΝΤΙΚΗΣ ΠΟΙΟΤΗΤΑΣ ΚΑΙ ΤΗ ΒΙΩΣΙΜΟΤΗΤΑ ΤΗΣ ΠΟΛΗΣ

ΔΕΛΤΙΟ ΤΥΠΟΥ

«Συνεργασία του Δήμου Ηγουμενίτσας με το Πανεπιστήμιο Ιωαννίνων για τη βελτίωση της περιβαλλοντικής ποιότητας και τη βιωσιμότητα της πόλης»

Πολύ παραγωγική και με χρήσιμα συμπεράσματα ήταν η συνάντηση στελεχών του Δήμου Ηγουμενίτσας με ερευνητές από το Πανεπιστήμιο Ιωαννίνων, η οποία πραγματοποιήθηκε στο Δημοτικό Μέγαρο Ηγουμενίτσας. Η συνάντηση μεταξύ του Δημάρχου Ηγουμενίτσας, κ. Ιωάννη Λώλου και στελεχών από το Δήμο με τον Καθ. Χρυσόστομο Στύλιο και την ερευνητική του ομάδα του Εργαστηρίου Γνώσης και Ευφυούς Πληροφορικής, από το Τμήμα Πληροφορικής & Τηλεπικοινωνιών του Πανεπιστημίου Ιωαννίνων, επισφράγισε τη συνέχεια της ήδη πολύ καλής μεταξύ τους συνεργασίας σε θέματα που αφορούν την αναβάθμιση της πόλης με τη αξιοποίηση νέων τεχνολογιών.

Η συνάντηση είχε σαν κεντρικό θέμα την πόλη της Ηγουμενίτσας και την **υιοθέτηση καινοτόμων εργαλείων** από τους τοπικούς φορείς για την **κατάρτιση και ανάπτυξη των ικανοτήτων τους** ως **μέτρο πρόληψης για την περιβαλλοντική επιβάρυνση αλλά και τη διατήρηση των φυσικών θαλάσσιων πόρων, που είναι από τις βασικές επιταγές της** Γαλάζιας Ανάπτυξης (Blue Growth), κύριο αντικείμενο της στρατηγικής της Ευρώπη. Το θέμα αυτό πραγματεύεται το Έργο **ECOPORTIL - Environmental Protection of Areas Surrounding Ports using Innovative Learning Tools for Legislation»** στο πλαίσιο του «INTERREG Βαλκανική-Μεσόγειος 2014-2020» (www.ecoportil.eu), στο οποίο το Τμ. Πληροφορικής & Τηλεπικοινωνιών του Πανεπιστημίου Ιωαννίνων είναι επικεφαλής εταίρος.

Η συζήτηση εστίασε επίσης στο **Σχέδιο Μεταφοράς Χαμηλού Ανθρακικού Αποτυπώματος**, το οποίο θα δημιουργήσει η ερευνητική ομάδα του Πανεπιστημίου Ιωαννίνων με την υποστήριξη του Δήμου. Η συγκεκριμένη μελέτη είναι πάρα πολύ σημαντική για το Δήμο διότι θα εμπεριέχει **ολοκληρωμένες προτάσεις για τη βελτίωση της κινητικότητας των ανθρώπων και των αγαθών που σχετίζονται με τις ροές κρουαζιέρας** και το πώς θα γίνει πιο ελκυστική η πόλη στους τουρίστες της κρουαζιέρας διασφαλίζοντας ταυτόχρονα τη βιωσιμότητάς της. Η μελέτη αυτή υλοποιείται στα πλαίσια του ευρωπαϊκού έργου LOCATIONS- INTERREG Mediterranean (www.locations.interreg-med.eu)

Ο Δήμαρχος ευχαρίστησε τον Καθ. Χρυσόστομο Στύλιο και την ερευνητική του ομάδα, η οποία είναι σε στενή συνεργασία με το Δήμο με στόχο την αξιοποίηση από πλευράς Δήμου και άλλων τοπικών φορέων των Νέων Τεχνολογιών, Ευφυών μεταφορών και τη μετατροπή της Ηγουμενίτσας σε μία Έξυπνη πόλη βασισμένη στα νέα ευρωπαϊκά πρότυπα.

Website: e- igoumenitsa.gr

www.e-igoumenitsa.gr/news/press-releases/synergasia-dimou-igoumenitsas-me-to-panepistimio-ioanninon-gia-ti-veltiosi-tis-perivallo...

e-igoumenitsa NEWS

HOME ΗΓΟΥΜΕΝΙΤΣΑ ΘΕΣΠΡΩΤΙΑ ΗΠΕΙΡΟΣ ΑΘΛΗΤΙΚΑ ΕΛΛΑΔΑ ΟΙΚΟΝΟΜΙΑ ΧΡΗΣΙΜΑ ΨΥΧΑΓΩΓΙΑ ΠΕΡΙΣΣΟΤΕΡΑ

ΔΕΛΤΙΑ ΤΥΠΟΥ

Συνεργασία Δήμου Ηγουμενίτσας με το Πανεπιστήμιο Ιωαννίνων για τη βελτίωση της περιβαλλοντικής ποιότητας και τη βιωσιμότητα της πόλης

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Website: epirus.blogspot.com

epirusin.blogspot.com/

epirusin

εδώ μιλάμε κυρίως για την Ήπειρο

τοπικά νέα & πολιτική

ελεύθερη ενημέρωση
ελεύθερη ενημέρωση
ελεύθερη ενημέρωση

επικοινωνία:
Γιώργος Νικόλαος Παππάς
epirusin1@gmail.com

Ήπειρος

Συνεργασία του Δήμου Ηγουμενίτσας με το Πανεπιστήμιο Ιωαννίνων για τη βελτίωση της περιβαλλοντικής ποιότητας και τη βιωσιμότητα της πόλης

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Η συνάντηση μεταξύ του Δημάρχου Ηγουμενίτσας, **Γιάννη Λώλου** και στελεχών από το Δήμο με τον...

Καθ. Χρυσόστομο Στύλιο και την ερευνητική του ομάδα του Εργαστηρίου Γνώσης και Ευφυούς Πληροφορικής, από το Τμήμα Πληροφορικής & Τηλεπικοινωνιών του Πανεπιστημίου Ιωαννίνων, επισφράγισε τη συνέχεια της ήδη πολύ καλής μεταξύ τους συνεργασίας σε θέματα που αφορούν την αναβάθμιση της πόλης με τη αξιοποίηση νέων τεχνολογιών.

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Το θέμα αυτό πραγματεύεται το Έργο ECOPORTIL - Environmental Protection of Areas Surrounding Ports using Innovative Learning Tools for Legislation» στο πλαίσιο του «INTERREG Βαλκανική-Μεσόγειος 2014-2020» (www.ecoportil.eu), στο οποίο το Τμ. Πληροφορικής & Τηλεπικοινωνιών του Πανεπιστημίου Ιωαννίνων είναι επικεφαλής εταίρος.

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Website: thesprotia24

https://www.thesprotia24.gr/archives/101569

ΘΕΣΠΡΩΤΙΑ

«Συνεργασία του Δήμου Ηγουμενίτσας με το Πανεπιστήμιο Ιωαννίνων για τη βελτίωση της περιβαλλοντικής ποιότητας και τη βιωσιμότητα της πόλης»

Από thesprotia24

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b. 2nd Participatory Activity

Agenda

Project co-financed by the European Regional Development Fund

LOCATIONS- Low Carbon Transport Plan

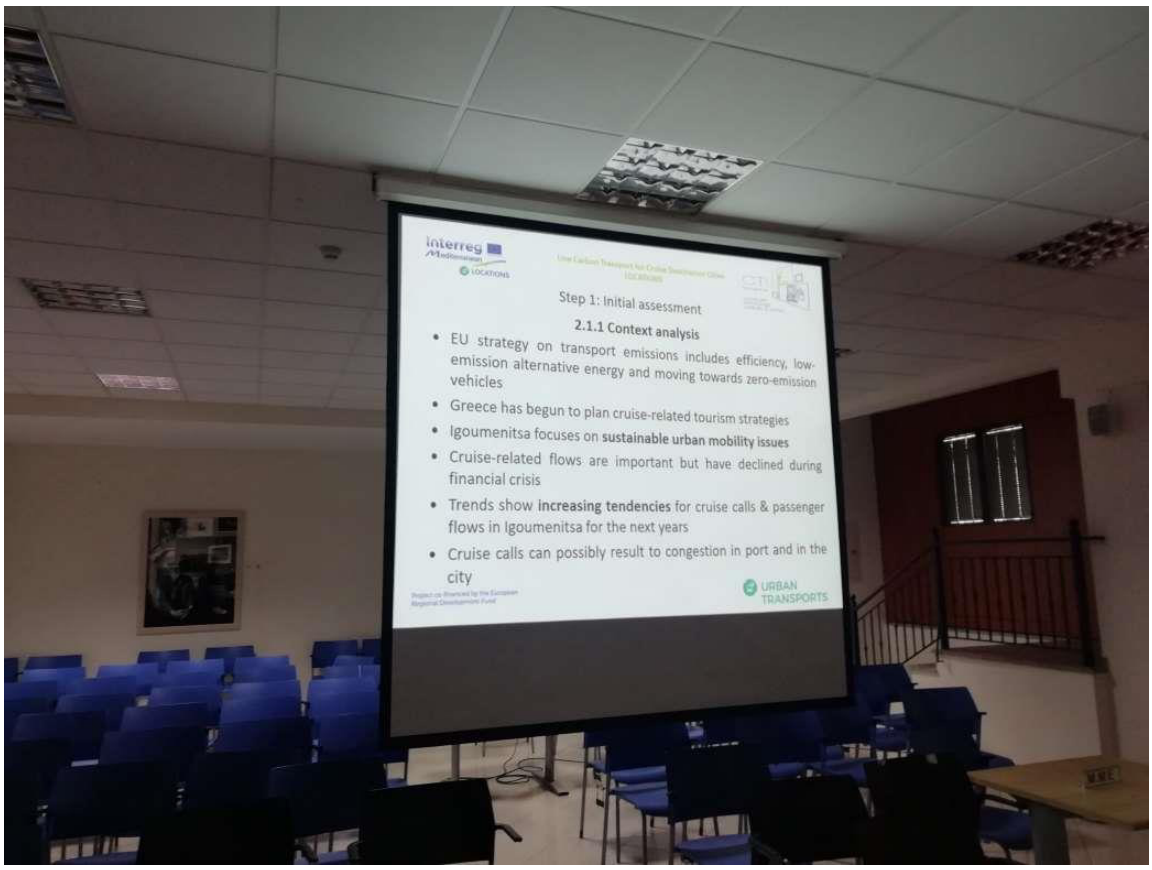
2nd Participatory Activity,

Municipality of Igoumenitsa

Date: 26.07.2019

09:00-09:15	**Welcome** Ioannis Lolos, Mayor
09:15-09:45	**Presentation of the main points of the previous Activity Reports** Chrysostomos Stylios
09:45-10:00	**Presentation of the key (mobility) priorities of the Municipality** Telis Karapiperis, Municipality of Igoumenitsa
10:15-10:30	**Presentation of the mobility, priorities related to the cruise sector as already expressed by the stakeholders** Eleni Arvaniti, Premium Consulting
10:30-12:00	**Open Discussion** -Discussion with the stakeholders about ideas, recommendations measures to be integrated in the LCTP -Challenges, problems , opportunities


LOCATIONS
2nd Participatory meeting
Development of the LCTP of Igoumenitsa
Igoumenitsa, 30th July 2019
URBAN TRANSPORTS
M.M.E


Interreg
Mediterranean
LOCATIONS
Step 1: Initial assessment
2.1.1 Context analysis
• EU strategy on transport emissions includes efficiency, low-emission alternative energy and moving towards zero-emission vehicles
• Greece has begun to plan cruise-related tourism strategies
• Igoumenitsa focuses on sustainable urban mobility issues
• Cruise-related flows are important but have declined during financial crisis
• Trends show increasing tendencies for cruise calls & passenger flows in Igoumenitsa for the next years
• Cruise calls can possibly result to congestion in port and in the city
URBAN TRANSPORTS

III. Questionnaires addressed to stakeholders

Project co-financed by the European Regional Development Fund

1st Participatory Activity

Questionnaires for the key stakeholders related to the cruise sector in Igoumenitsa

1. **Have you noticed any problems in mobility after passenger arrival?**

   ……
   ……
   ……

2. **Is the existing infrastructure status (road network, transport services etc.) satisfactory?**

   ……
   ……
   ……

3. **Which are the transport choices for passengers arriving in the area?**

   ……
   ……
   ……

4. **Do you know any measures taken for the reduction of CO_2 emissions in the area? If yes, please name them.**

   ……
   ……
   ……

5. **Do you think that the increase of cruise calls will deteriorate the current mobility status?**

   ……
   ……
   ……

6. **Do you think that the increase of cruise calls will increase CO_2 emissions in the area?**

   ……
   ……
   ……

7. **In your opinion, what actions can improve the current mobility status of the area?**

   ……
   ……
   ……

8. **In your opinion, what actions can improve the current CO_2 emissions status of the area?**

   ……
   ……
   ……

9. **Do you think that mobility improvement can also improve port operation?**

   ……
   ……
   ……

10. **Can the port infrastructure meet the needs that occur with cruise passengers' arrival?**

    ……
    ……
    ……

11. **Can the transport infrastructure in the area meet the needs that occur with cruise passengers' arrival?**

    ……
    ……
    ……

12. **Do you think that better mobility can reduce CO_2 emissions and help the environment? If yes, please name how his can happen.**

    ……
    ……
    ……

IV. Igoumenitsa Port Data

IGOUMENITSA PORT AUTHORITY S.A.

IGOUMENITSA OPENS UP A WHOLE NEW GREECE

IGOUMENITSA PORT DATA

Name of Port: IGOUMENITSA - GRIGO0003
Date Information Provided: Octomber, 2017
Name and Title: Andreas Ntais (President and Managing Director of Igoumenitsa Port Authority S.A.)

Item	General Port Information
Prevailing Weather	Winds: 1] The whole year, usually, var. prevailing winds with low intensity [15kn] 2] From April - October has been observed, squalls with NW winds, force up to 30kn 3] From November - March has been observed, squalls with W –NW winds, force up to 30kn
	Currents: N/A
	Other:
Location(s) of pilot boarding areas	N / A
Approach channel width & depth at chart datum	Channel length : 1 nm Channel depth : 10.5m Channel width : 170m Channel passage speed 11 kn The channel in the 'axis' [middle of the channel] has been observed in the past, that congregate sand and creates sand mounds up to 2.5 meters. The channel is newly dredged [2015] and the 60000 cm of sand removed. Currently the ships which call the port have max draught of 7.5m, except the Cruise ship MARINA with draught 7.4m/ Thomson Celebration with draught 7.8m/ Thomson Spirit with draught 7.7m. The channel's depth is controlled and approved by the hydrographic service of the Greek Navy. That will be frequently done so we can ensure the safe navigation/passage.
Distance from pilot Sta. to dock/anchorage	Distance: Channel East entrance to the cruise pier 2.7nm

Estimated time from pilot station to dock/anchorage at max. speed allowed by port authority	Maximum channel passage speed as in the bay as well 11kn. [by calm seas and low wind force] Estimated Channel passage and approach about 30'- 45'
Depth at chart datum and diameter of turning basin	Not specific turning basin available – its open bay
Air draft restrictions	N / A
Depth alongside **pier at chart datum** and uninterrupted length for which this depth occurs	Depth all the way along the port and alongside 10.5m
Port Established Max. draft	10.5m
Port established Max. LOA	Total Pier Length 1197m - Cruise Pier Length 420m
Range of Tides & Max. Currents	Currents: N/A – Tide range max [+- 40cm]
Name/Draft/LOA of largest ship to *safely* call at port	Last call was the: MARINA [Oceania cruises] – LOA: 239 – Draught: 7.4m Thomson Celebration –LOA: 214.66 - Draught: 7.8m Thomson Spirit - LOA: 214.7 - Draught 7.7m
Power, type and number of tugs available	t/b THYELA [build 1962] POWER: 954 HP

Item	General Port Information
Are the tugs local (within 30 minutes from the port?)	Tug Boat compulsory STBY if any vessel approach in progress
How far in advance do tugs have to be ordered?	Tug info due to ' Igoumenitsa Traffic'
Item	**Dock Information**
Names, lengths, and minimum depths for all cruise ship suitable **berths**	The port is mainly divided by two sections as per follow: 1] Ferry port from ramp 1 – 12 – total length 775m [Ferries alongside by the stern only] 2] Cruise port ramp 12 – 18 – total length 420m 3] Pier depth all the way along / alongside 10.5m

	1] ARCH Fenders 420 KN x M Every group has [4] fixed ARCH fenders every 1.5m – distance between the Fender groups about 35m 2] 6 x new YOKOHAMA [2.5m / 50 KN x M] Fenders available [movable according the vessel needs] Pics attached
	Bollards are from Cast Steel made. Bollard spacing 30m Bollard strength / pull : 100 Ton and 200 Ton available
	N / A
	Cement surface – 21000 sqm [pic attached]
TYPE and Spacing of Fenders	Both sides available
Bollard Spacing and bollard pull/strength	Height from flat surface 1.6m from the sea level Height from ramp surface 1.9m from the sea level [pic attached]
Type and Number of Shore Gangways	Ramps with height: 30cm from
Type and surface of dock	
Preferred side of ship alongside	
Height of dock surface above **charted** low water datum	
Pier Obstructions	
Other	

V. ADRI-UP Project

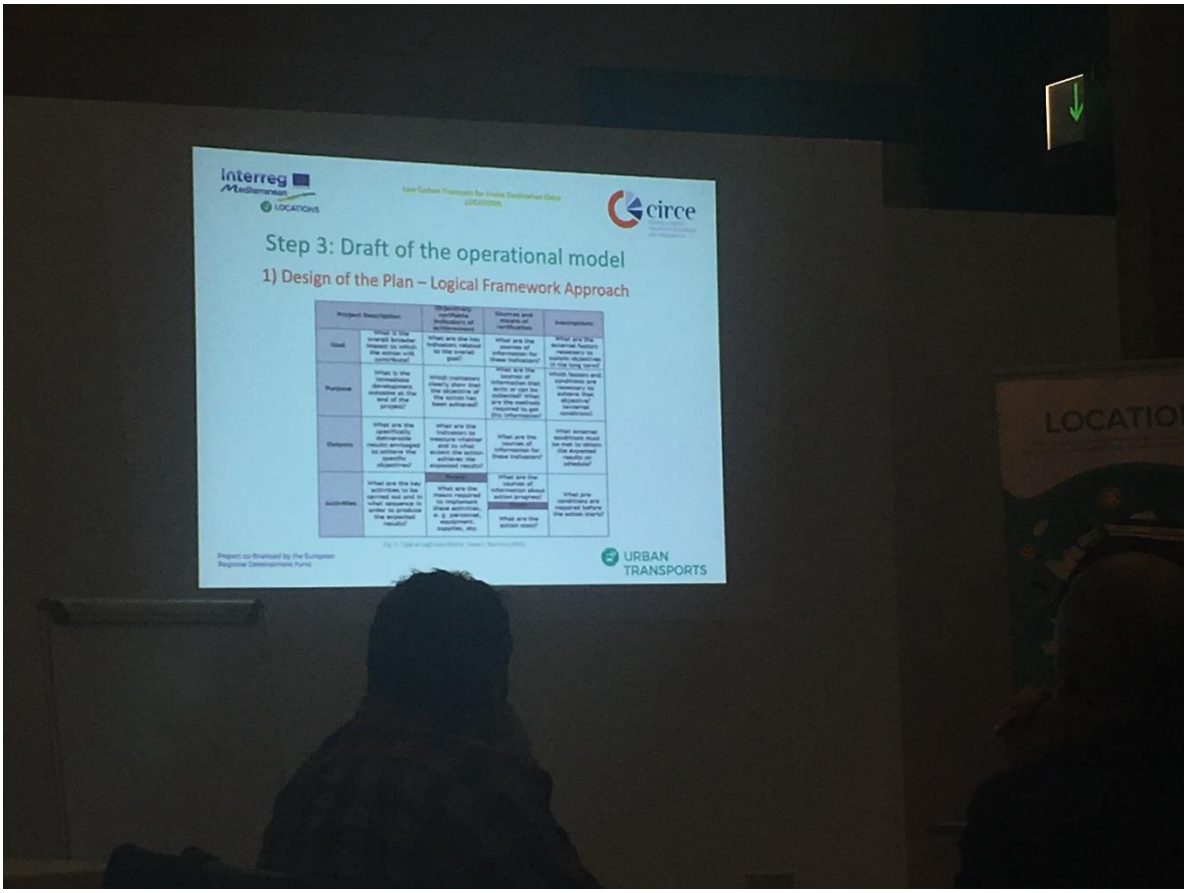
ADRI-UP, CEF cofinanced Action nr 2015-EU-TM-0310-M, contributes to the development and the upgrading of the MoS corridors in the Eastern Mediterranean Area, specifically of the MoS link Trieste-Ancona-Igoumenitsa, by boosting the development of port infrastructures in the ports of Trieste, Ancona and Igoumenitsa and on the RRT of Fernetti and Igoumenitsa, as well as supporting facilities for their further integration, to fully integrate the MoS corridor in the freight supply chains, thus increasing European competitiveness and trade with South–East Mediterranean area, and contributing to the fulfillment of TEN-T priorities.

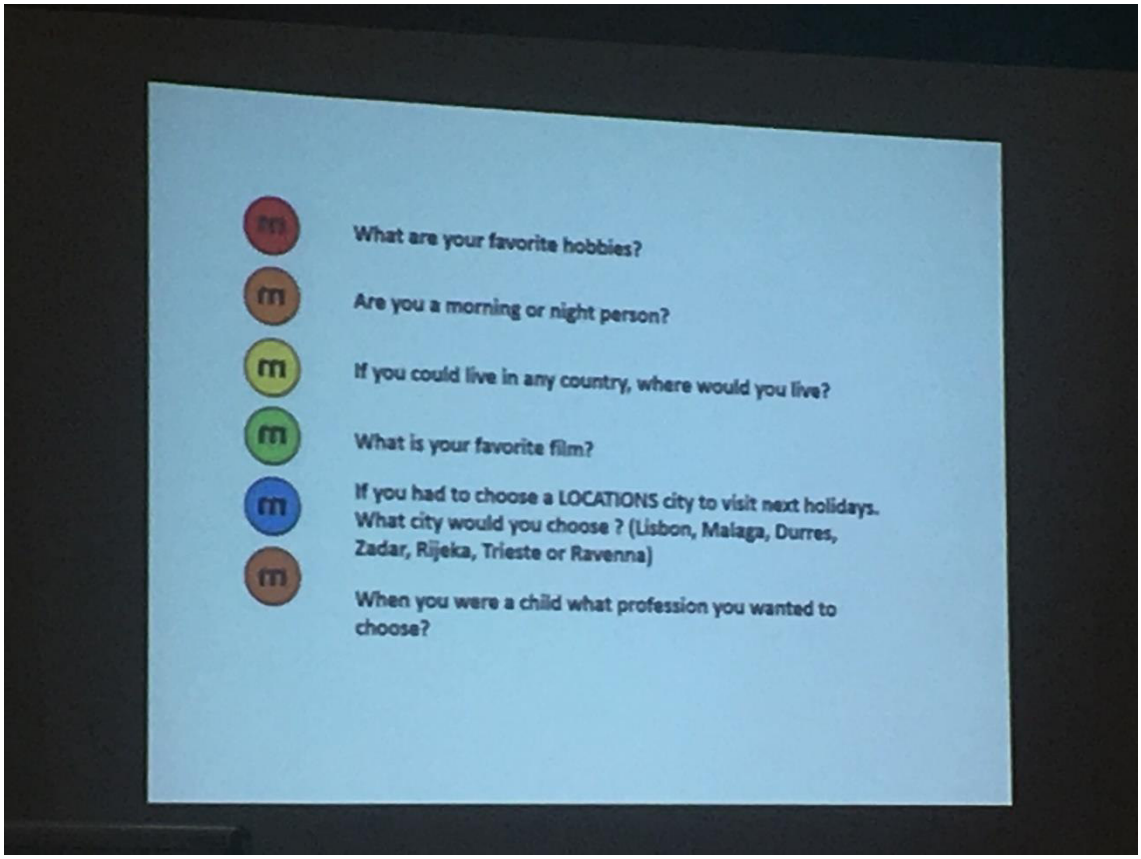
The Adriatic-Ionian intermodal corridor is amongst the most utilized ones within the wider area of the Eastern Mediterranean and is characterized by the extensive and long standing provision of Ro-Ro and Ro-Pax services. The improved port infrastructures will allow the concentration of the traffic flows, with a consequent increase in the throughput and its related market area, promoting modal shift and efficient connections among ports and hinterland nodes. Moreover, the Action supports the priority for reduction of emissions, by increasing the environmental sustainability of the Igoumenitsa-Ancona-Trieste maritime link through the modal shift from road to maritime and rail transport. The combination of these activities will enhance the cooperation among the ports, essential for the establishment of an efficient and sustainable MoS link, fully integrated in the EU supply logistic chain.

Igoumenitsa Port Authority is the Lead Partner of ADRI-UP.

VI. Capacity Building Seminar, Lisbon, October 2018

Mrs Eleni Arvaniti, representing Premium Consulting, the replicating entity which undertook to create the LCTP for the city of Igoumenitsa based on the corresponding LCTP of the Albanian partners, participated in the Capacity Building Seminar which was organized in Lisbon on 18-19 October 2018. In this seminar all the replicating entities were in close collaboration with the corresponding project partners, who provided guidelines and directions regarding the creation of the LCTPs. Specifically, were created drafts of Gantts charts, list of crucial stakeholders and each replicating entity had a short presentation of the city for which the LCTP would be created, a short SWOT analysis, major problems in terms of passengers' mobility, cruise trend, potential etc. The main objective of this seminar was the replicating entities to understand the structure of the LCTP and how they are going to create it under the guidance of each project partner.





Photos from the Capacity Building Seminar

Agenda

LOCATIONS

Low Carbon Transport in Cruise Destination Cities

Capacity Building Seminar - 2-day training course
18th and 19th October 2018

Paços do Concelho, Praça do Município, 1100-365 Lisboa
Lisbon - Portugal

18th October

09.00	Welcome, brief presentation of the LOCATIONS Project and developed work, review of the meeting agenda and state of the art of the project
	LISBOA E-NOVA & AREA
09.30	Presentation of the WP5 – Capitalization LISBOA E-NOVA
09.40	Review of the international replication tasks LISBOA E-NOVA
10.00	Presentation of the full LCTP and Synthetic LCTP indexes CIRCE
10.20	*Coffee break*
10.40	Presentation of the D 3.3.1 – Capacity Building Manual CIRCE
11.30	Presentation of the LCTP Evaluation criteria CIRCE
12:00	*Lunch*
13.00	Presentation of the Deliverable 4.3.2 – Set of 14 modular packages to foster replication
	AREA
15.00	*Coffee break*
15.15	Presentation of Lisbon LCTP + Q&A (15 min. of presentation + 15 min. of Q&A)
	LISBON MUNICIPALITY
15.45	Presentation of Ravenna LCTP + Q&A (15 min. of presentation + 15 min. of Q&A) RAVENNA MUNICIPALITY
16.15	Presentation of Málaga LCTP + Q&A (15 min. of presentation + 15 min. of Q&A) PORT OF MÁLAGA?
17.00	Final discussion
17.30	End of the meeting

19th October

09.00	Draft plan for the definition of the LCTP (practical work - exercise) LISBOA E-NOVA
09.45	Outline of the definition of the participatory process (practical work - exercise) LISBOA E-NOVA
10.30	*Coffee break*
10.50	Data to collect (practical work - exercise) LISBOA E-NOVA
11.30	Technical partner working individually with the replicating organization ALL TECHNICAL PARTNERS (Part I)
12:30	*Lunch*
13.45	Technical partner working individually with the replicating organization ALL TECHNICAL PARTNERS (Part II)
14.45	*Coffee break*
15.00	Presentation of individual plans (10 minutes each city)
16.00	Final discussion
16.15	End of the meeting

https://www.google.com/maps/place/C%C3%A2mara+Municipal+de+Lisboa/@38.7081851,-9.1396594,369m/data=!3m1!1e3!4m5!3m4!1s0xd19347bfb45b911:0x750a43b88e175947!8m2!3d38.7081851!4d-9.1385651

http://www.cm-lisboa.pt/fileadmin/MUNICIPIO/imagens/_ASC-0682-P-Concelho.jpg

VII. Capacity Building Manual Greek translation

Project co-financed by the European Regional Development Fund

ΕΓΧΕΙΡΙΔΙΟ ΑΝΑΠΤΥΞΗΣ ΙΚΑΝΟΤΗΤΩΝ

LOCATIONS – Μεταφορά Χαμηλού Ανθρακικού Αποτυπώματος σε Πόλεις – Προορισμούς Κρουαζιέρας

Πακέτο Εργασίας 3 – Έλεγχος (Testing)
Δραστηριότητα 3.3 Ανάπτυξη ικανοτήτων για εταίρους για τη γεφύρωση των κενών
Παραδοτέο 3.3.1

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Πακέτο Εργασίας 3

Παραδοτέο D3.3.1

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1. Εισαγωγή

1.1 Στόχος

Η τελευταία δραστηριότητα που παρέχει εργαλεία και τεχνογνωσία πριν από την υλοποίηση των πιλοτικών δράσεων του Σχεδίου Μεταφοράς με χαμηλό ανθρακικό αποτύπωμα (Δράση 3.4), αποτελείται από ένα τριήμερο σεμινάριο ανάπτυξης ικανοτήτων για τους εταίρους, το οποίο αποσκοπεί στη γεφύρωση των κενών και στη χορήγηση μιας κοινής βάσης, τη μεγιστοποίηση της εναρμόνισης των διαδικασιών, τη δυνατότητα μεταφοράς και την δυνατότητα αναπαραγωγής των προσεγγίσεων και των αποτελεσμάτων στην εφαρμογή του λειτουργικού μοντέλου.

Η κοινή διεθνική ανάπτυξη ικανοτήτων, βασισμένη σε ένα εγχειρίδιο που αναπτύχθηκε για το σκοπό αυτό, παρέχει στους εταίρους μια πιο λεπτομερή και πρακτική προσέγγιση στο επιχειρησιακό μοντέλο και την τεχνογνωσία για την υλοποίησή του με πρακτικά μαθήματα από εμπειρογνώμονες σε συγκεκριμένους τομείς (συλλογή και επεξεργασία δεδομένων, θέσπιση στόχων και επιλογή δεικτών, σύνταξη σεναρίων, οργάνωση συμμετοχικών διαδικασιών κ.λπ.).

Ο στόχος του Παραδοτέου 3.3.1 είναι, συνεπώς, η ανάπτυξη του Εγχειριδίου που απαιτείται για την υποστήριξη του Σεμιναρίου Ανάπτυξης ικανοτήτων. Εκτός αυτού, το Εγχειρίδιο γίνεται ένα εργαλείο που μπορεί να χρησιμοποιηθεί από οποιοδήποτε θεσμικό όργανο που σχεδιάζει να συμμετάσχει σε ένα παρόμοιο έργο, καθώς παρέχει πρακτικές και εύκολες στην τήρηση οδηγίες σχετικά με την αποτελεσματική και επιτυχημένη υλοποίηση ενός συμμετοχικού έργου.

1.2 Περιγραφή παραδοτέων

Το παρόν έγγραφο έχει σχεδιαστεί με στόχο την υποστήριξη οποιουδήποτε προσώπου, ομάδας ή οντότητας που επιθυμεί να ξεκινήσει μια διαδικασία στρατηγικού σχεδιασμού που θα οδηγήσει στην ανάπτυξη ενός Σχεδίου Μεταφοράς Χαμηλού Ανθρακικού Αποτυπώματος. Από αυτήν την άποψη, το Εγχειρίδιο αναπτύχθηκε με τη συμβολή των τεχνικών συνεργατών στο έργο, με μια μάλλον πρακτική προσέγγιση, που περιλαμβάνει όσο το δυνατόν περισσότερα παραδείγματα, ώστε να μετατραπεί σε πρακτικό εγχειρίδιο.

Το Εγχειρίδιο αποτελείται από δύο βασικά μέρη:

- Ένα βήμα προς βήμα οδηγό που περιγράφει λεπτομερώς και με πρακτικά παραδείγματα βασισμένα σε πραγματικές περιπτώσεις, τη διαδικασία που πρέπει να ακολουθηθεί για την παραγωγή ενός υγιούς και αποτελεσματικού Σχεδίου Μεταφοράς Χαμηλού Ανθρακικού Αποτυπώματος (LCTP).
- Μια συλλογή διαθέσιμων αναφορών και εργαλείων τα οποία μπορούν να χρησιμοποιηθούν για την υποστήριξη των LCTP σε κάθε στάδιο σχεδιασμού και ανάπτυξης.

Εκτός αυτού, παρουσιάζονται σε ολόκληρο το έγγραφο μια σειρά από βέλτιστες πρακτικές και συμβουλές, με σκοπό την απεικόνιση με πρακτικά παραδείγματα των εννοιών.

2. Εγχειρίδιο Σχεδίου Μεταφοράς Χαμηλού Ανθρακικού Αποτυπώματος

2.1 Βήμα 0: Σχέδιο εργασίας και Ομάδα

Το Επιχειρησιακό Εγχειρίδιο βασίζεται στη διαδικασία και τις δραστηριότητες που πρέπει να πραγματοποιηθούν, ώστε να μεγιστοποιηθούν οι πιθανότητες να καταρτιστεί ένα αποτελεσματικό, φιλόδοξο και ρεαλιστικό Επιχειρησιακό Σχέδιο για Μεταφορές Χαμηλού Ανθρακικού Αποτυπώματος σε πόλεις – προορισμούς κρουαζιέρας. Ωστόσο, προτού ξεκινήσει κανείς τις δραστηριότητες και τα βήματα του εγχειριδίου, συστήνεται ιδιαίτερα να δημιουργηθεί η ομάδα των ατόμων που θα είναι υπεύθυνα για το έργο και να προγραμματιστούν μία ή περισσότερες συναντήσεις, έτσι ώστε να οριστεί το πρόγραμμα εργασίας, τα ορόσημα, οι άνθρωποι που θα εμπλακούν, τα καθήκοντα, οι προθεσμίες κ.λπ.

Επιπλέον, μπορεί να κριθεί σκόπιμη η εκπαίδευση όσων συμμετέχουν στην Ομάδα, ιδιαιτέρως μοιράζοντας αυτό το Εγχειρίδιο μαζί τους και διασφαλίζοντας ότι υπάρχει κοινό έδαφος και κατανόηση για τα σημαντικά βήματα και τη συνάφεια κάθε πτυχής που περιλαμβάνεται

Αυτό το προκαταρκτικό βήμα μπορεί να αποβεί βοηθητικό στην αποφυγή παρεξηγήσεων, αλληλοεπικάλυψης και απογοήτευσης, ενώ ταυτόχρονα συμβάλλει στην ομοιογένεια ως προς το σκεπτικό του έργου, τους στόχους και τους διαθέσιμους πόρους.

2.2 Βήμα 1: Αρχική εκτίμηση

2.2.1 Ανάλυση πλαισίου

Μια προσεκτική αξιολόγηση του πλαισίου εντός του οποίου θα υλοποιηθεί το LCTP είναι απολύτως απαραίτητη, διότι θα καθορίσει τη γραμμή βάσης, καθώς και τη συνάφεια των προτεινόμενων μέτρων και στόχων. Παρουσιάζεται ένας κατάλογος με διαφορετικά θέματα και στοιχεία που θα βοηθήσουν να χαρακτηριστεί το πλαίσιο της υπό μελέτη πόλης – προορισμού της κρουαζιέρας:

1	**Ευρωπαϊκό, εθνικό, περιφερειακό και τοπικό πλαίσιο αναφοράς**
2	**Χαρακτηριστικά, τάσεις κ.λπ. της τρέχουσας ροής που σχετίζεται με την κρουαζιέρα στην πόλη/λιμάνι**
3	**Εκτίμηση και βάρος μεσοπρόθεσμων και μακροπρόθεσμων αναπτυξιακών τάσεων**
4	**Λίστα τρεχουσών πολιτικών/δημόσιων & ιδιωτικών σχετικών πρωτοβουλιών**
5	**Σταθμισμένος κατάλογος των αρνητικών επιπτώσεων που συνδέονται με τις ροές που σχετίζονται με την κρουαζιέρα**
6	**Υπάρχον δίκτυο, υπηρεσίες και υποδομές στην πόλη/λιμάνι**

1. **<u>Ευρωπαϊκό, εθνικό, περιφερειακό και τοπικό πλαίσιο αναφοράς</u>**

Προκειμένου να αναπτυχθούν πολιτικές τοπικών αειφόρων αστικών μεταφορών με μεγαλύτερη εμβέλεια, η αναφορά θα θέσει το έδαφος σε ευρωπαϊκό πλαίσιο, αλλά θα περιλαμβάνει και εθνικούς κανονισμούς, περιφερειακό και τοπικό πλαίσιο για την εξασφάλιση της οριζόντιας και κάθετης ενσωμάτωσης μεταξύ

κυβερνήσεων πολλαπλών επιπέδων. Για να είναι η βιώσιμη κινητικότητα ένα θέμα πολυεπίπεδο, θα ληφθούν υπόψη διάφοροι τομείς ρύθμισης (περιβάλλον, μεταφορές, χωροταξικός σχεδιασμός κ.λπ.). Ως εκ τούτου, θα καταρτιστεί κατάλογος με τα βασικά κανονιστικά στοιχεία που επηρεάζουν τη βιώσιμη κινητικότητα και θα επικαιροποιηθεί δεόντως εάν είναι απαραίτητο για την εκπόνηση του τοπικού σχεδίου μεταφοράς χαμηλού ανθρακικού αποτυπώματος..

2. **Χαρακτηριστικά, τάσεις κ.λπ. της τρέχουσας ροής που σχετίζεται με την κρουαζιέρα στην πόλη/λιμάνι**

Θα διεξαχθεί εκτεταμένη συλλογή αξιόπιστων δεδομένων αναφορικά με τα χαρακτηριστικά που σχετίζονται με την κρουαζιέρα, από τις ναυτιλιακές στατιστικές εμπορευματικών και επιβατικών στατιστικών στοιχείων και από άλλες σχετικές πηγές. Για κάθε προορισμό, θα συγκεντρωθούν πληροφορίες (σχετικά με την κυκλοφορία επιβατών και εμπορευμάτων, εναλλακτικές λύσεις για τις αστικές/υπεραστικές μεταφορές, τη συλλογή αποβλήτων, την παροχή υπηρεσιών κλπ.), προκειμένου να καθοριστεί το σημείο εκκίνησης του σχεδίου μεταφοράς χαμηλού ανθρακικού αποτυπώματος και να χρησιμεύσει ως βάση για μελλοντικές εκτιμήσεις τάσεων σε περαιτέρω βήματα.

3. **Εκτίμηση και βάρος μεσοπρόθεσμων και μακροπρόθεσμων αναπτυξιακών τάσεων**

Θα προβλεφθούν μεσοπρόθεσμες έως μακροπρόθεσμες προβολές τάσεων των χαρακτηριστικών ροών που σχετίζονται με την κρουαζιέρα σε κάθε πόλη και θα καθοριστούν διαφορετικά σενάρια: το πιο πιθανό συμβάν, η χειρότερη περίπτωση και το βέλτιστο σενάριο. Οι εκτιμήσεις της τάσης θα βασίζονται σε αξιόπιστες σχετικές στατιστικές πηγές, σε διαβουλεύσεις με εμπειρογνώμονες ή σε άλλη έγκυρη μεθοδολογία σύμφωνα με τα πρότυπα που θα θεσπιστούν από κάθε πόλη. Αυτές οι υποθέσεις μαζί με την τρέχουσα στατιστική κατάσταση που προέρχεται από διαθέσιμες πηγές, θα αντιπροσωπεύουν το τρέχον πλαίσιο δράσης του τοπικού σχεδίου μεταφοράς χαμηλού ανθρακικού αποτυπώματος. Αυτές οι εκτιμήσεις τάσεων θα αναθεωρηθούν σε περαιτέρω βήματα του έργου για να μπορέσουν να προσαρμοστούν σε περίπτωση που συμβούν γεγονότα με υψηλό αντίκτυπο.

Αυτά τα σενάρια μπορούν επίσης να χρησιμεύσουν ως σημείο αναφοράς για την αξιολόγηση του αντίκτυπου των επινοημένων πρωτοβουλιών LCTP σε τοπικό επίπεδο για θέματα ενέργειας, μεταφορών και περιβάλλοντος.

4. **Λίστα τρεχουσών πολιτικών/δημόσιων & ιδιωτικών σχετικών πρωτοβουλιών.**

Τα υφιστάμενα προβλήματα και οι αναδυόμενες προκλήσεις οδηγούν σε μια ποικιλία πρωτοβουλιών που αντιμετωπίζονται με διαφορετικές προσεγγίσεις και πηγές. Ως εκ τούτου, θα καταρτιστεί ένας κατάλογος που θα συλλέγει τις τρέχουσες δημόσιες και ιδιωτικές πρωτοβουλίες που λαμβάνουν χώρα σε εθνικό, περιφερειακό και τοπικό επίπεδο και θα επηρεάσει τους κύριους τομείς που απασχολούν τα LCTP. Σκοπός είναι να διερευνηθούν οι σχετικοί μηχανισμοί και να εξεταστεί η προηγούμενη εμπειρία.

Ο κατάλογος θα περιλαμβάνει πληροφορίες για τους συντελεστές, τις καινοτόμες συνεισφορές, το επίπεδο συμμετοχής των πολιτών και τον ενδεχόμενο αντίκτυπό τους, καθώς και τα διδάγματα που αντλήθηκαν.

5. **Σταθμισμένος κατάλογος των αρνητικών επιπτώσεων που συνδέονται με τις ροές που σχετίζονται με την κρουαζιέρα**

Ο τουρισμός που σχετίζεται με τις κρουαζιέρες στα λιμάνια αναχώρησης και στα λιμάνια – ενδιάμεσους σταθμούς, οδηγεί συχνά σε σειρά επιπτώσεων και εξωτερικών παραγόντων που μπορούν να είναι θετικές και αρνητικές. Μερικές από τις ευρέως γνωστές συνέπειες της κυκλοφορίας κρουαζιέρας είναι:

- Οδική συμφόρηση
- Η ρύπανση του αέρα και του θορύβου
- Αυξημένη κατανάλωση εδάφους για χώρους στάθμευσης και οδικές υποδομές
- Μειωμένη οδική ασφάλεια
- Άγχος για την τοπική κοινότητα

Αυτοί οι εξωτερικοί παράγοντες συνδέονται με τα περιβαλλοντικά ζητήματα, την αστική κινητικότητα, την προσβασιμότητα, την κοινωνική συνοχή, την πολιτιστική κληρονομιά κλπ. και ο ρόλος που διαδραματίζουν σε κάθε πόλη πρέπει να καθοριστεί για κάθε συγκεκριμένη περίπτωση.

Μόλις προσδιοριστούν οι επιπτώσεις που σχετίζονται με τον τουρισμό κρουαζιέρας σε έναν προορισμό, οι οποίες εστιάζουν στη συγκεκριμένη περίπτωση κάθε πόλης, πρέπει να καθοριστεί μια ιεραρχική σειρά. Αυτό θα επιτρέψει να δοθεί προτεραιότητα στους στόχους και τα εμπόδια που πρέπει να αντιμετωπιστούν στο πλαίσιο του τοπικού σχεδίου μεταφοράς χαμηλού ανθρακικού αποτυπώματος. Για το σκοπό αυτό, θα δοθεί βάρος σε κάθε αρνητική επίπτωση που διαπιστώθηκε. Αυτό θα μπορούσε να γίνει από τους τεχνικούς της πόλης ή ζητώντας τη συμβουλή μια σειρά εμπειρογνωμόνων, οι οποίοι, μέσω μιας έρευνας, θα επισημάνουν τις πιο σχετικές αρνητικές επιπτώσεις και θα τους αποδώσουν ένα συγκεκριμένο βάρος.

6. **Υπάρχον δίκτυο, υπηρεσίες και υποδομές στην πόλη/λιμάνι**

Στόχος αυτού του βήματος είναι να παρουσιάσει μια εικόνα των δικτύων, των υπηρεσιών και των υποδομών στην πόλη και να εντοπίσει πιθανά κενά/ευκαιρίες, ευνοώντας τα συστήματα μεταφοράς χαμηλού ανθρακικού αποτυπώματος και την πολυτροπική σύνδεση, ιδιαίτερα με βασικές υπηρεσίες και κύρια αξιοθέατα. Αυτός ο κατάλογος θα είναι καθοριστικός για την πρόσληψη της κίνησης του τουρισμού και της κρουαζιέρας ως στρατηγικών πόρων.

Μόλις η συλλογή δεδομένων και πληροφοριών θεωρηθεί επαρκώς αντιπροσωπευτική του πλαισίου, μπορεί να ληφθεί μια ολοκληρωμένη εικόνα μέσω ενός πίνακα SWOT.

Η ανάλυση SWOT (Δυνάμεις, Αδυναμίες, Ευκαιρίες και Απειλές) είναι ένα εργαλείο που επιτρέπει τον εντοπισμό της φάσης μιας δεδομένης κατάστασης λαμβάνοντας υπόψη τις αρνητικές και θετικές πτυχές του περιβάλλοντος και της οργάνωσης ή του έργου, στην περίπτωση αυτή, της κατάστασης της πόλης αναφορικά με τις αστικές μεταφορές που σχετίζονται με τον τουρισμό κρουαζιέρας.

SWOT	ΑΡΝΗΤΙΚΕΣ ΠΛΕΥΡΕΣ	ΘΕΤΙΚΕΣ ΠΛΕΥΡΕΣ
ΕΣΩΤΕΡΙΚΗ ΑΝΑΛΥΣΗ	ΑΔΥΝΑΜΙΕΣ: Έλλειψη πηγών και ικανοτήτων, χαμηλή προσαρμοστικότητα	ΔΥΝΑΜΕΙΣ: Ικανότητες Πλεονεκτήματα Πηνές
ΕΞΩΤΕΡΙΚΗ ΑΝΑΛΥΣΗ	ΑΠΕΙΛΕΣ: Ρίσκα και απρόβλεπτα γεγονότα	ΕΥΚΑΙΡΙΕΣ: Νέες τεχνολογίες Στρατηγικός σχεδιασμός

Η ανάλυση SWOT ακολουθείται από μια ανάλυση CAME[1] σε περαιτέρω βήματα, η οποία είναι ένα χρήσιμο εργαλείο για τον καθορισμό στρατηγικών και δράσεων από τα αποτελέσματα του πίνακα SWOT. Το κλειδί είναι να επικεντρωθεί κανείς στις πιο σχετικές αδυναμίες, τις δυνάμεις, τις απειλές και τις ευκαιρίες και, στη συνέχεια, να συσχετιστούν οι ενέργειες για τη Διόρθωση, Προσαρμογή, Διατήρηση και Εξερεύνηση κάθε προσδιορισμένης κατάστασης.

CAME	ΑΠΕΙΛΕΣ	ΕΥΚΑΙΡΙΕΣ
ΑΔΥΝΑΜΙΕΣ	Προσαρμοστική στρατηγική *'Αντιστέκομαι'*	Διορθωτική στρατηγική *'Λήψη ευκαιρίας'*
ΔΥΝΑΜΕΙΣ	Στρατηγική συντήρησης *'Συνεχίζω'*	Διερευνητική στρατηγική *'Μεγιστοποίησης'*

Τόσο η ανάλυση SWOT όσο και η CAME είναι αποτελεσματικά εργαλεία τα οποία από μια λογική προσέγγιση παρουσιάζουν το είδος της στρατηγικής που πρέπει να υιοθετηθεί σε κάθε περίπτωση. Διαφορετικές στρατηγικές μπορούν να ακολουθηθούν ταυτόχρονα, στοχεύοντας σε διαφορετικούς στόχους και καταστάσεις. Σε κάθε περίπτωση, πρέπει να δοθεί προσοχή στους εμπλεκόμενους φορείς, ώστε να προβλεφθούν οι προσδοκίες και οι ανάγκες, καθώς και να μεγιστοποιηθεί η συμμετοχή.

2.2.2 Συμμετοχή των ενδιαφερόμενων μερών

Η αναγνώριση και η συμμετοχή των ενδιαφερομένων είναι ένα κρίσιμο ζήτημα που θα επηρεάσει σημαντικά τη μελλοντική αποδοχή του Σχεδίου. Ένας αξιόπιστος προσδιορισμός και εμπλοκή των ενδιαφερομένων φορέων είναι υψίστης σημασίας για την επιτυχή καθιέρωση συμμετοχικής προσέγγισης.

[1] Η CAME αναφέρεται στον πίνακα για τις πιθανές στρατηγικές SWOT (Διόρθωση, Προσαρμογή, Συντήρηση και Εξερεύνηση)

Η διαδικασία χορήγησης επαρκούς επιπέδου συμμετοχής των ενδιαφερομένων βασίζεται σε δύο διαδοχικές φάσεις: Ταυτοποίηση και Διάλογος.

Αναγνώριση:

Από γενική άποψη, τα ενδιαφερόμενα μέρη θα είναι όλα εκείνα τα άτομα ή οι ομάδες που επηρεάζουν ή επηρεάζονται από το έργο που διεξάγεται. Αυτός ο ορισμός περιλαμβάνει τις παρούσες και τις μελλοντικές ενέργειες που απορρέουν από το σχέδιο, επομένως, πρέπει να λαμβάνεται υπόψη ένα ευρύ φάσμα επιλογών κατά την επιλογή των πιθανών ενδιαφερομένων. Σε αυτό το στάδιο, τρία κύρια ζητήματα θα καθορίσουν τη σημασία κάθε ομάδας ενδιαφερομένων, καθώς και τη στρατηγική για τη συμμετοχή τους στο πρόγραμμα:

- Πόσο σημαντική είναι η συμμετοχή του ενδιαφερομένου στο έργο;
- Πόσο σημαντικός/ισχυρός είναι ο ενδιαφερόμενος για το έργο;
- Ποια συμβολή/ανατροφοδότηση περιμένουμε από τον ενδιαφερόμενο;

Οι δύο πρώτες ερωτήσεις είναι αυτές που καθορίζουν τον τρόπο με τον οποίο θα προσεγγιστούν οι ενδιαφερόμενοι από την ομάδα του έργου. Ένα συχνό εργαλείο για την εκτίμηση τόσο των μεταβλητών, της σημασίας/ενδιαφέροντος και της επιρροής/ισχύος, συνίσταται στην κατάρτιση ενός πίνακα τεσσάρων κελιών που συνδυάζει και τις δύο μεταβλητές στα δυο πιθανά επίπεδα (χαμηλό - υψηλό) και έτσι αποκτά τέσσερις διαφορετικές κατηγορίες ενδιαφερομένων:

Επιρροή/Ισχύς	Χαμηλή	Υψηλή
Υψηλή	***Δυνητικός Αντιρρησίας*** **Διατηρείται ικανοποιημένος**	***Βασικός Παίκτης*** **Διατηρείται σε κοντινή απόσταση**
Χαμηλή	***Δευτερεύων Παίκτης*** **Παρακολουθείται και Συμβουλεύεται**	***Δυνητικός υποστηρικτής*** **Διατηρείται ενημερωμένος**

Χαμηλή ***Υψηλή***

Σημασία/Ενδιαφέρον

Όσοι συμμετέχοντες έχουν προσδιοριστεί και οι οποίοι θεωρούνται Βασικοί Παίκτες, πρέπει να συμμετάσχουν και να εμπλακούν στο έργο το συντομότερο δυνατόν, ώστε να βασιστούμε στην υποστήριξη και τη συμβολή τους. Για όσους συμπεριλαμβάνονται στα κελιά Δυνητικού Αντιρρησία και Δυνητικού Υποστηρικτή, οι στρατηγικές που ακολουθούνται συνεπάγονται την καθιέρωση αποτελεσματικών γραμμών επικοινωνίας, καθώς και μεγάλη προδιάθεση για λήψη σχολίων, προτάσεων και συμβουλών. Τέλος, όσοι συμπεριλαμβάνονται στο λιγότερο σχετικό κελί, θεωρούνται ως Δευτερεύοντες Παίκτες, θα πρέπει να παρακολουθούνται και να συμβουλεύονται, προκειμένου να αποκτηθεί η υποστήριξή τους και να αποφευχθεί η αναβάθμισή τους στο κελί του Δυνητικού Αντιρρησία.

Το τρίτο ερώτημα, που σχετίζεται με την προσδοκώμενη συνεισφορά κάθε ενδιαφερόμενου, θα καθορίσει τη στιγμή και τον μηχανισμό που συνδέεται με τη συμμετοχή τους. Η διαδικασία του έργου περιλαμβάνει

το σχεδιασμό του σχεδίου, την απόκτηση πολιτικής στήριξης, τη συμμετοχή τοπικών αρχών, την εξασφάλιση ανθρωπίνων, τεχνολογικών και οικονομικών πόρων, τη μετάδοση του σχεδίου στους πολίτες κλπ. Η δυνητική συμβολή κάθε ενδιαφερόμενου μπορεί να συνδέεται με μία ή περισσότερες από αυτές τις φάσεις του έργου και θα πρέπει να σχεδιαστεί αναλόγως. Επομένως, είναι χρήσιμο να οριστεί μια συντονισμένη διαδικασία εμπλοκής των ενδιαφερομένων, δηλαδή μια στρατηγική εμπλοκής των ενδιαφερομένων μερών. Μόλις καθοριστεί η στρατηγική εμπλοκής, ξεκινά η φάση του Διαλόγου με τους Ενδιαφερόμενους.

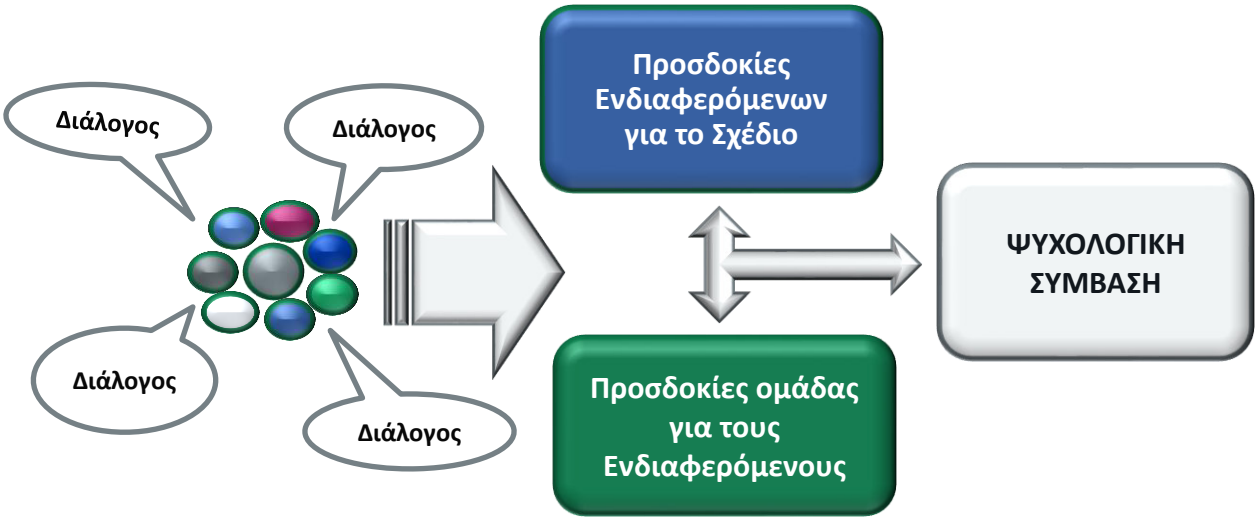
Ο δήμος Tillburg ζήτησε βοήθεια από την ερευνητική εταιρεία TMO για τη σύνταξη του SUMP. Πρώτον, διεξήχθη μια τοπική συνεδρία η οποία περιελάμβανε εμπειρογνώμονες από διάφορους τομείς, όπως, οι μεταφορές, το περιβάλλον, οι κοινωνικές υποθέσεις, η οικονομία, η επιστημονική κινητικότητα, η ψυχολογία και η μοντελοποίηση. Από τη συνάντηση αυτή, καθορίστηκαν μετρήσιμοι δείκτες. Μετά από αυτό, με το εργαλείο μοντελοποίησης της TMO -Αστική Στρατηγική-, ελέγχθηκαν διάφορα σενάρια τα οποία συνέβαλαν στη διερεύνηση της σημασίας των δεικτών. Πραγματοποιήθηκε μια δεύτερη συνάντηση με τα μέλη του δημοτικού συμβουλίου και τους εμπειρογνώμονες από την προηγούμενη συνεδρίαση για να φέρει τη διαδικασία SUMP στο πολιτικό επίπεδο. Η προσέγγιση αυτή θεωρήθηκε επιτυχής, δεδομένου ότι συγκεντρώθηκαν τα πρώτα αποτελέσματα σχετικά με την επίδραση διαφορετικών σεναρίων και μέτρων. Επισημαίνεται ότι ένα από τα πλεονεκτήματα του έργου ήταν η υιοθετημένη συμμετοχική προσέγγιση. www.eltis.org/discover/case-studies

***Διάλογος**:*

Παρόλο που κάθε συγκεκριμένη διαδικασία ενδέχεται να παρουσιάζει ειδικά χαρακτηριστικά που επηρεάζουν τη στρατηγική εμπλοκής των ενδιαφερομένων, ως γενικό πρότυπο, είναι σκόπιμο να ακολουθήσετε τα τρία βήματα που παρουσιάζονται στη συνέχεια:

1. Επικοινωνήστε με τους ενδιαφερόμενους, ενημερώστε τους για το έργο, τους στόχους και τη διαδικασία.
2. Παρουσιάστε τις προσδοκίες σας σχετικά με τη συμβολή, τη συνεισφορά, τη συμμετοχή κλπ., ζητώντας τα σχόλια και τις εντυπώσεις τους σχετικά με αυτό και συμφωνώντας σχετικά με τη μελλοντική σχέση.
3. Να ζητήσετε εγκαίρως τη συμφωνηθείσα συνεισφορά (όποια και αν είναι). Η συνεισφορά αυτή μπορεί να ποικίλλει βαθιά ανάλογα με τον τύπο του ενδιαφερόμενου και τον ρόλο του στο έργο. Ωστόσο, μόλις συμφωνηθεί η συμμετοχή κατά τη διάρκεια του δεύτερου βήματος, είναι πολύ σημαντικό να συνεχιστεί η διαδικασία, ζητώντας τη συνεισφορά ή, σε περίπτωση που δεν χρειάζεται πλέον, να επικοινωνήσετε με τον ενδιαφερόμενο για να εξηγήσετε τις νέες περιστάσεις.

Η όλη διαδικασία επιτυχούς συμμετοχής των ενδιαφερόμενων φορέων βασίζεται στην ιδέα της «ψυχολογικής σύμβασης» που δημιουργείται ουσιαστικά μεταξύ της ομάδας και των ενδιαφερομένων μέσω ενεργού διαλόγου:



Από τη στιγμή που έχει επιτευχθεί η δέσμευση, η ομάδα του έργου πρέπει να αναλάβει ότι αυτή η δέσμευση θα διαρκέσει μέχρι το τέλος του έργου, υποδηλώνοντας τακτική επικοινωνία και ενημέρωση σχετικά με την πρόοδο, ακόμη και όταν η συμμετοχή των ενδιαφερομένων έχει ήδη τελειώσει. Είναι χρήσιμο να τηρούνται αρχεία όλων των επικοινωνιών και δραστηριοτήτων που σχετίζονται με τους ενδιαφερόμενους, καθώς και να τους δίνεται η δυνατότητα να δουν ότι τα στοιχεία τους και οι απόψεις τους έχουν ληφθεί υπόψη.
Υπάρχουν πολλές διαφορετικές τεχνικές οι οποίες έχουν σχεδιαστεί για να προσελκύσουν και να ενισχύσουν τη δέσμευση των ενδιαφερομένων, συμπεριλαμβανομένων των δημόσιων διαβουλεύσεων, ερωτηματολογίων, ερευνών, κοινωνικών μέσων ενημέρωσης, εργαστηρίων, ανοικτών συζητήσεων, μαζικής επικοινωνίας, συμμετοχικών δραστηριοτήτων στην πόλη κλπ. Ξανά, κάθε τεχνική πρέπει ν σχεδιαστεί και να προσαρμοστεί, έχοντας κατά νου ποιος είναι ο στοχευμένος ενδιαφερόμενος, καθώς και η συνεισφορά που θέλουμε να λάβουμε από τη δραστηριότητα.

Οι πολίτες της Λισαβόνας μπορούν να προτείνουν έργα για την πόλη σε αρκετούς τομείς όπως οι μεταφορές, η κινητικότητα, το περιβάλλον, η ενέργεια, ο πολιτισμός, η εκπαίδευση ή η αποκατάσταση αστικών κέντρων έως 500.000 €, τα οποία αναλύθηκαν από τις τεχνικές υπηρεσίες του δημοτικού συμβουλίου και, στη συνέχεια, ψηφίστηκαν από τους πολίτες. Οι επικυρωμένες προτάσεις στη συνέχεια επικυρώνονται και τίθενται σε εφαρμογή. Από τότε που άρχισε μέχρι σήμερα (2008-2016), έχουν υποβληθεί 5770 προτάσεις, από τις οποίες 105 έχουν κερδίσει τον διαγωνισμό τους και έχουν ήδη ολοκληρωθεί ή βρίσκονται στο στάδιο της ολοκλήρωσης. Από οικονομική άποψη, αυτό σημαίνει ότι έχουν δαπανηθεί 17 200 000 € για πλήρη έργα και άλλα 14 105 000 € πρόκειται να δαπανηθούν για έργα που βρίσκονται σε εξέλιξη. Όσον αφορά τον πρώτο συμμετοχικό προϋπολογισμό, συγκεντρώθηκαν μόνο 1101 ψήφοι, ενώ κατά τον τελευταίο (2016), ο αριθμός καθορίστηκε σε 51591 ψήφους. www.lisboaparticipa.pt/home; https://factsreports.revues.org/3363

Υπάρχει περίπτωση, ένας ή περισσότεροι ενδιαφερόμενοι να έχουν ήδη συμμετάσχει σε σχετικά προηγούμενα σχέδια, αφήνοντας ένα ιστορικό συμβολών, προσπαθειών, δυνητικών απογοητεύσεων, προσδοκιών κλπ. Σε αυτές τις περιπτώσεις, πριν από οποιαδήποτε άλλη πρόοδο με τα ενδιαφερόμενα μέρη, συνιστάται να συγκεντρώνονται όλα οι σχετικές πληροφορίες για τα προηγούμενα έργα στα οποία εμπλέκονταν οι ενδιαφερόμενοι και να γίνει κατανοητή η πραγματική κατάσταση στον δήμο, έτσι ώστε να αποφευχθεί η παρεξήγηση, η δυσπιστία και η δυσαρέσκεια για την επίτευξη των στόχων μας.

Σε αυτές τις δύο περιπτώσεις, συνιστάται να επικοινωνήσετε με την προηγούμενη ομάδα και να συγκεντρώσετε όσο το δυνατόν περισσότερες πληροφορίες, να επικοινωνήσετε και να ζητήσετε σχόλια από

άλλους σχετικούς ενδιαφερόμενους και, εάν είναι δυνατόν, να προσπαθήσετε να αξιολογήσετε μέσω ερευνών ή άλλων παρόμοιων μέσων εάν η κοινή γνώμη και οι προσδοκίες ταιριάζουν με αυτά που θεωρείτε λογικά σε αυτό το στάδιο. Εάν τα αποτελέσματα της αξιολόγησης δεν αντιστοιχούν σε αυτό που θα έπρεπε να είναι φυσιολογικό, ορισμένα θέματα ή άγνωστοι παράγοντες μπορεί να έχουν υποτιμηθεί, περιορίζοντας τις μελλοντικές πιθανότητες επιτυχίας.

Αν και οι φάσεις ταυτοποίησης και διαλόγου είναι διαδοχικές, θα πρέπει να ανταλλάσσουν πληροφορίες μεταξύ τους, δεδομένου ότι ο διάλογος με τα ενδιαφερόμενα μέρη μπορεί να φέρει σχετικές πληροφορίες για ενδιαφερόμενους που δεν έχουν ακόμη ληφθεί υπόψη ή άλλα σχετικά δεδομένα. Ως γενική προσέγγιση, η διαδικασία συμμετοχής των ενδιαφερομένων πρέπει να πραγματοποιείται μέσω των ακόλουθων τεσσάρων βημάτων, ώστε να διασφαλίζεται ότι έχουν συγκεντρωθεί όλες οι σχετικές πληροφορίες και έχουν εμπλακεί όλοι οι σχετικοί ενδιαφερόμενοι:

1	**Αναγνώριση ενδιαφερόμενων και πρώτη δύναμη κατά πίνακα ενδιαφέροντος**
2	**Διάλογος μεταξύ ενδιαφερόμενων. Προσδοκίες**
3	**Πληροφορίες και πηγές δεδομένων που συνδέονται με τους ενδιαφερόμενους**
4	**Τελικός πίνακας σχετικότητας ενδιαφερομένων & ψυχολογική σύμβαση**

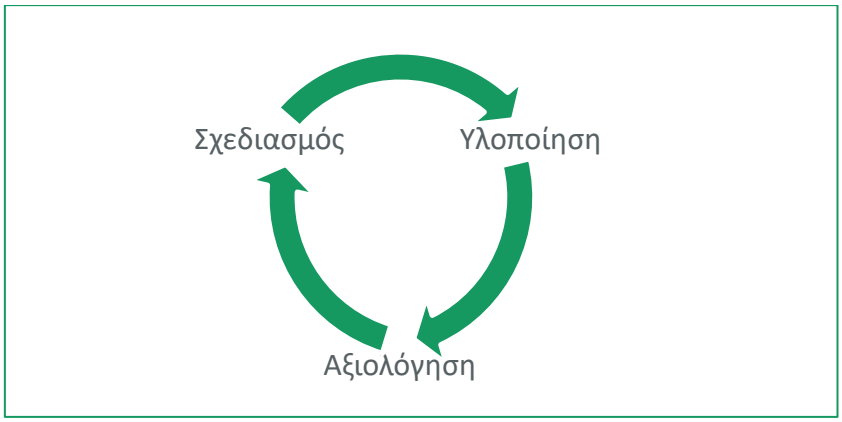
Όταν τόσο η ανάλυση του πλαισίου όσο και οι φάσεις συμμετοχής των ενδιαφερομένων είναι πλήρεις, το στάδιο της αρχικής αξιολόγησης έχει λήξει και μπορεί να αρχίσει η φάση της συμμετοχικής διαδικασίας.

2.3 Βήμα 2: Εμπλοκή ενδιαφερόμενων

2.3.1 Εμπλοκή ενδιαφερόμενων:

Μια συμμετοχική διαδικασία συνεπάγεται τη συμμετοχή «του κοινού» στις διαδικασίες λήψης αποφάσεων. Ο ορισμός του «κοινού» εξαρτάται από το θέμα που πρέπει να αντιμετωπιστεί. Ως εκ τούτου, οι συμμετοχικές διαδικασίες μπορούν να στοχεύσουν σε διάφορα είδη «κοινού», όπως, τους πολίτες, τους ενδιαφερόμενους σε ένα έργο ή πολιτική, τους εμπειρογνώμονες και ακόμη και μέλη της κυβερνητικής και ιδιωτικής βιομηχανίας (Slocum, N. 2003).

Γενικά, οι διαδικασίες λήψης αποφάσεων, όπως οι αποφάσεις που απαιτούνται για τα LCTP, συνεπάγονται έναν κύκλο τριών βημάτων σχεδιασμού, υλοποίησης και αξιολόγησης για τις οποίες οι συμμετοχικές διαδικασίες μπορούν να χρησιμοποιηθούν σε μερικά από αυτά τα βήματα (Εικ.1).



Εικ. 1- Συμμετοχική διαδικασία για πολιτικές λήψης αποφάσεων. Πηγή: Διασκευή από (Slocum, N. 2003).

Θεωρώντας ότι η ανάπτυξη ενός LCTP συνεπάγεται μια συνεχή διαδικασία λήψης αποφάσεων, πρέπει να εξεταστεί η συμμετοχή διαφόρων τύπων ενδιαφερομένων σύμφωνα με το στάδιο του σχεδίου. Υπογραμμίζουμε ότι στην περίπτωση της διαδικασίας λήψης αποφάσεων, συνιστάται γενικά να εμπλέκονται οι υπεύθυνοι χάραξης πολιτικής όσο το δυνατόν περισσότερο και σε πρώιμο στάδιο της διαδικασίας που θα αυξήσει την πιθανότητα υποστήριξής τους στη διαδικασία και στο αποτέλεσμα (Slocum, N. 2003).

Με σκοπό την υποστήριξη του προσδιορισμού των διαφόρων ομάδων ενδιαφερομένων και του ρόλου τους στο έργο, χρησιμοποιήσαμε ένα συγκριτικό διάγραμμα για συμμετοχικές μεθόδους (Πίνακας 1).

Πίν. 1- Συγκριτικό διάγραμμα για συμμετοχικές μεθόδους.
Πηγή: Διασκευή (Slocum, N. 2003).

Μέθοδ	Στόχοι	Θέμα*				Συμμετέχοντες	Χρόνος		€
		Γνώση	Δημιουργία	Συμμετοχικότητα	Αντιφατικό-τητα		Συμβάν	Σύνολο	1-4
Charrette	Δημιουργία συναίνεσης μεταξύ διαφόρων ομάδων ανθρώπων και διαμόρφωση ενός σχεδίου δράσης.	+/-	+/-	-	+/-	Μέσοι πολίτες ή ενδιαφερόμενοι. Οι υπόλοιποι δίνουν τη γνώμη τους	1-5 μέρες	2-3 μήνες	**3**
Πολίτες Ένορκοι	Μια απόφαση που αντιπροσωπεύει τους μέσους πολίτες που είναι καλά ενημερωμένοι για το θέμα. Στόχοι	+/-	+/-	+/-	+	12-24 τυχαία επιλεγμένοι πολίτες. Ειδικοί, ενδιαφερόμενοι & πολιτικοί δίνουν τη γνώμη τους.	3 μέρες	4-5 μήνες	**4**
Συναίνεση Συνέδοι	Συναίνεση και απόφαση σε ένα αμφιλεγόμενο θέμα.	+	+/-	+	+	10-30 Μέσοι πολίτες ή ενδιαφερόμενοι. Οι υπόλοιποι δίνουν τη γνώμη τους	3 εβδομάδες	7-12 μήνες	**4**
Delphi	Έκθεση όλων των απόψεων και επιλογές σχετικά με ένα πολύπλοκο ζήτημα.	-	-	+	+/-	Ειδικοί	Μεταβλητό	Μεταβλητό	**1-3**
Πάνελ ειδικών	Σύνθεση ποικιλία εισροών σε ένα εξειδικευμένο θέμα και δημιουργία προτάσεων.	-	-	+	+/-	Ειδικοί	Μεταβλητό	Μεταβλητό	**2**
Ομάδα εστίασης	Αποκάλυψη των απόψεων διαφορετικών ομάδων σε ένα ζήτημα και γιατί υφίστανται (συλλογιστική)	+/-	-	m	+/-	Ενδιαφερόμενοι ή/και πολίτες	2 ώρες –1 μέρα	1 μήνας	**1**
PAME	Αξιολόγηση και μάθηση.	+/-	+/-	+/-	+/-	Όλοι οι ενδιαφερόμενοι	Μεταβλητό	Μεταβλητό	**Var**
Κελιά σχεδιασμού	Οι πολίτες μάθουν και επιλέγουν μεταξύ των πολλαπλών επιλογών σχετικά με ένα επείγον και σημαντικό ζήτημα. Ανάπτυξη σχεδίου δράσης.	+/-	-	m	-	25 μέσοι πολίτες. Ειδικοί & ενδιαφερόμενοι παρουσιάζουν θέσεις.	5 μέρες	5 μήνες	**4**

Σενάρια	Προγραμματισμός και ετοιμότητα για αβέβαιο μέλλον. Όραμα-οικοδόμηση.	-	-	+	+/-	Οποιοσδήποτε	2-5 μέρες	6 μήνες	**1-3**
World Café	Δημιουργία και ανταλλαγή ιδεών	+/-	-	-	+/-	Οποιοσδήποτε	4 ώρες –1 μέρα	1 μήνας	**1**

Υπόμνημα: Εξήγηση των συμβόλων του διαγράμματος:

***Θέμα**	**+**	**m: Μέτριο**	**-**
Γνώση	Υπάρχει πολλή κοινή γνώση.		There is little common knowledge.
Ωριμότητα	Οι περισσότεροι άνθρωποι έχουν ήδη διαμορφώσει άποψη για το θέμα		The subject is new; people are still forming their opinions.
Συνθετότητα	Πολύ περίπλοκο ή τεχνικό		Not very complex or technical
Αντιφατικότητα	Πολύ αμφιλεγόμενο		Not very controversial

Σημείωση: +/- σημαίνει ότι η μέθοδος μπορεί να αντιμετωπίσει τα θέματα είτε + είτε –.
€:1 = οικονομικό; 2 = μέτριο; 3 = ακριβό; 4 = πολύ ακριβό

Όπως απεικονίζεται στο διάγραμμα, οι μέθοδοι είναι μεταβλητές σύμφωνα με τους στόχους και τον τύπο των συμμετεχόντων. Για παράδειγμα, αν ο στόχος είναι να αποκτηθούν εξειδικευμένες πληροφορίες και συστάσεις από εμπειρογνώμονες, οι μέθοδοι που εφαρμόζονται είναι η Delphi ή η Expert Panel, οι οποίες απαιτούν ιδιαίτερα πολύπλοκες και τεχνικές γνώσεις. Αυτός ο τύπος πληροφοριών είναι ιδιαίτερα σημαντικός να αποκτηθεί στο αρχικό στάδιο μιας διαδικασίας λήψης αποφάσεων η οποία απαιτεί το σχεδιασμό ενός τεχνικού σχεδίου. Κάθε διαδικασία λήψης αποφάσεων έχει αντίκτυπο σε διαφορετικές ομάδες ανθρώπων και σε διαφορετικές οικονομικές δραστηριότητες, επομένως, η μέθοδος εστίασης είναι μια πολύ κοινή μέθοδος αφού μπορεί να καλύψει διάφορους τύπους ενδιαφερομένων και πολιτών, δεν είναι δαπανηρή και είναι βραχεία σε διάρκεια.

Ένα άλλο παράδειγμα που θα μπορούσε να έχει σχέση όταν αντιμετωπίζουμε την αβεβαιότητα, όπως συμβαίνει με την περίπτωση ενός LCTP, είναι η εφαρμογή μιας μεθόδου που βασίζεται σε σενάρια όπου μπορεί κανείς να συμμετάσχει, αλλά τα σχετικά έξοδα μπορεί να είναι μεταβλητά και ακριβά. Συνολικά, είναι σημαντικό να αναλυθούν προσεκτικά οι μέθοδοι που προτείνονται στο σχήμα 2, να επιλεγούν μία ή περισσότερες μέθοδοι ανά στάδιο του έργου, ο τύπος των ενδιαφερομένων που επιθυμούμε να συμπεριλάβουμε, οι στόχοι και ο διαθέσιμος προϋπολογισμός.

Όταν υιοθετείται μια συμμετοχική μέθοδος, υπάρχουν συγκεκριμένοι τρόποι επικοινωνίας και ανταλλαγής πληροφοριών μεταξύ των συμμετεχόντων, οι οποίοι είναι καθοριστικοί για την επιτυχία της συμμετοχικής διαδικασίας. Η γλώσσα που χρησιμοποιείται και το βάθος του περιεχομένου πρέπει να προσαρμοστούν στους συμμετέχοντες. Για παράδειγμα, σε μια ομάδα εστίασης, είναι σημαντικό να χρησιμοποιήσετε μια ανοιχτή γλώσσα εμπιστοσύνης για να δημιουργήσετε γρήγορα συνέργειες και να εξασφαλίσετε τη συνεργασία μεταξύ των συμμετεχόντων.

ΣΥΖΗΤΗΣΗ

- Τι είδους ενδιαφερόμενους θα επιλέγατε να συμμετάσχουν σε κάθε στάδιο (προγραμματισμός, υλοποίηση και αξιολόγηση) μιας συμμετοχικής διαδικασίας για αποφάσεις λήψης αποφάσεων, όπως είναι ένα LCTP;
- Επιλέξτε μερικές από τις συμμετοχικές μεθόδους που απεικονίζονται στο Σχήμα 2 και κατανείμετέ τις σε κάθε στάδιο μιας LCTP.

2.3.2 Ανάπτυξη συμμετοχικής διαδικασίας

Η ανάπτυξη της συμμετοχικής διαδικασίας μπορεί να χωριστεί σε τέσσερις φάσεις: φάση προετοιμασίας, φάση δημοσίευσης, φάση διαλόγου και φάση αντίδρασης (Krywkow, J. 2008).

Η φάση προετοιμασίας περιλαμβάνει:

1. Καθορισμό του σκοπού και των στόχων της στρατηγικής.
   Ο σαφής ορισμός των στόχων είναι καθοριστικός για την επιτυχία του έργου. Είναι σημαντικό να εξεταστεί η τρέχουσα πολιτική κατάσταση σχετικά με το υπό μελέτη θέμα. Η κατανόηση του πολιτικού πλαισίου και της συνάφειας του θέματος θα αυξήσει την πολιτική επιρροή.

2. Καθορισμό του πεδίου εφαρμογής μιας διαδικασίας συμμετοχής του κοινού.
   Ο καθορισμός του πεδίου εφαρμογής μιας συμμετοχικής διαδικασίας θα απαιτήσει τον καθορισμό του θέματος, τον προσδιορισμό των πολιτικών αποφάσεων και την εξέταση του προϋπολογισμού.

3. Την κατανόηση του νομοθετικού, νομικού, δικαιοδοτικού και κοινωνικού πλαισίου για το θέμα.
   Η κατανόηση του πλαισίου θα είναι σημαντική για τον προσδιορισμό των ενδιαφερομένων, την επιλογή της μεθόδου ή τον εντοπισμό ενδεχόμενου περιορισμού του έργου. Σημαντικές μεταβλητές μπορεί να είναι: το επίπεδο διακυβέρνησης που επηρεάζει τα στοχευμένα στοιχεία του συστήματος ή εάν έχουν υπάρξει προηγούμενες παρεμβάσεις.

4. Προσδιορισμό των ενδιαφερομένων και καθορισμό της συμμετοχής τους.
   Τα ενδιαφερόμενα μέρη μπορεί να είναι ιδιώτες, μη κυβερνητικές οργανώσεις και ιδιωτικές εταιρείες, εμπειρογνώμονες στο θέμα ή υπεύθυνοι χάραξης πολιτικής. Είναι επομένως σημαντικό να προσδιοριστούν με σαφήνεια, να κατηγοριοποιηθούν ανάλογα με τη συνάφεια τους με το έργο και, τέλος, να επιλεγεί ποιοι θα συμμετάσχουν στη διαδικασία.

5. Πόρους.
   Πρέπει να διατεθεί εργατικό δυναμικό και χρηματοδότηση για το έργο. Πρέπει να ληφθούν υπόψη πόροι, όπως, το κόστος των συμβουλών εμπειρογνωμόνων, η χωρητικότητα του υπολογιστή, οι τοποθεσίες για συνεδριάσεις ή το κόστος εκτύπωσης.

6. Σχεδιασμό του σχεδίου. Το σχέδιο μπορεί να σχεδιαστεί σύμφωνα με μία από τις παραπάνω μεθόδους που μπορούν να διερευνηθούν σε βάθος (Soulum, N. 2003), λαμβάνοντας υπόψη όλες τις πληροφορίες και τις αποφάσεις των προηγούμενων βημάτων.

Η **φάση της δημοσίευσης** περιλαμβάνει την παροχή πληροφοριών σχετικά με τη διαδικασία μέσω δημοσιεύσεων ιστοτόπων ή/και ενημερωτικών δελτίων. Οι ενδιαφερόμενοι πρέπει να γνωρίζουν τη

διαδικασία και να είναι σε θέση να δώσουν πληροφορίες και να έρθουν σε επαφή με τους υπαλλήλους του έργου.

Κατά τη **φάση του διαλόγου**, και μετά από ενημέρωση του κοινού και των ενδιαφερόμενων μερών, θα πρέπει να πραγματοποιηθεί μια πρώτη συνάντηση με το κοινό ή τους ενδιαφερόμενους. Κατά τη διάρκεια αυτής της φάσης, μπορεί να υπάρξει ευαισθητοποίηση, να απαντηθούν ερωτήματα, να εντοπιστούν προηγούμενα παραμελημένα προβλήματα και να προσδιοριστούν νέοι άγνωστοι ενδιαφερόμενοι. Είναι σημαντικό η συνάντηση αυτή να πραγματοποιηθεί στο σωστό στάδιο της διαδικασίας, όχι τόσο νωρίς ώστε να μην έχουν συλλεχθεί ή επεξεργαστεί αρκετές πληροφορίες. Πρέπει να καλυφθούν όλες οι πτυχές της συνάντησης, από την υλικοτεχνική υποστήριξη μέχρι τους ενδιαφερόμενους και τις δημόσιες προσκλήσεις. Θα πρέπει να γίνει μια ανάλυση της συνάντησης για να εντοπιστούν διάφορες πτυχές της διαδικασίας. Καλύτερη κατηγοριοποίηση των ενδιαφερομένων, εντοπισμός συγκρούσεων ή λαθών, όπως, κριτήρια που δεν έχουν ληφθεί υπόψη, παρενέργειες ή κρυφά κόστη που μπορεί να προκύψουν από αυτήν τη διαδικασία.

Η **φάση απόκρισης** θα απαντήσει στις ερωτήσεις που θα τεθούν από την ανάλυση της συνάντησης. Μπορούν να σχεδιαστούν επιπλέον συναντήσεις ή να πραγματοποιηθούν εκπαιδευτικές δραστηριότητες για την καλύτερη ενημέρωση του κοινού. Μια τελική συνάντηση θα πρέπει πάντα να σχεδιάζεται στο τέλος του έργου με όλους τους ενδιαφερόμενους και το κοινό για να παρουσιαστούν τα αποτελέσματα.

ΕΚΠΑΙΔΕΥΣΗ

- Λαμβάνοντας υπόψη τις προαναφερθείσες φάσεις συμμετοχικής διαδικασίας, αναπτύξτε ένα σχέδιο συμμετοχικού οδηγού σε μια LCTP.

Μελέτη περίπτωσης: ClimadaPT.Local (http://climadapt-local.pt/en)

Γιατί επιλέχθηκε το έργο ClimadaPT.Local ως μελέτη περίπτωσης για τη συμμετοχική διαδικασία;

Το έργο ClimadaPT.local επελέγη ως μελέτη περίπτωσης σχετικά με τις εφαρμοζόμενες συμμετοχικές μεθοδολογίες στη διαδικασία λήψης αποφάσεων για τις στρατηγικές προσαρμογής στην κλιματική αλλαγή. Το σχέδιο αποτελεί παράδειγμα βέλτιστων πρακτικών λόγω των σκοπών, των χαρακτηριστικών τους και του σημαντικού αριθμού πορτογαλικών δήμων που εμπλέκονται.

Ποια είναι τα κύρια χαρακτηριστικά του ClimadaPT.Local?

Το ClimadaPT.Local είναι ένα πρωτοποριακό έργο στην Πορτογαλία που διήρκεσε από τον Ιανουάριο του 2015 έως τον Δεκέμβριο του 2016 με κύριους στόχους την ανάπτυξη 26 Δημοτικών Στρατηγικών για την Προσαρμογή στην Κλιματική Αλλαγή (MSCCA) και τη διάδοση αυτών των έργων σε άλλους δήμους μέσω της δημιουργίας ενός Δημοτικού Δικτύου για την προσαρμογή της κλιματικής αλλαγής. Τα βασικά χαρακτηριστικά του έργου αυτού βασίζονται στις διαδικασίες και τις μεθοδολογίες που υιοθετούνται για την ικανότητα των δημοτικών τεχνικών, τη συμμετοχή των υπευθύνων χάραξης πολιτικής και την ευαισθητοποίηση και συμμετοχή των τοπικών φορέων. Οι 26 δήμοι που επιλέχθηκαν για το έργο καλύπτουν περίπου το 21% του συνόλου των κατοίκων της χώρας και επιλέχθηκαν σε κάθε διακοινοτική κοινότητα, μητροπολιτική περιοχή και σε αυτόνομες περιφέρειες. Αυτή η γεωγραφική επιλογή σε όλη τη χώρα αποσκοπούσε στη διασφάλιση της κοινωνικοοικονομικής ποικιλομορφίας, των τρωτών σημείων και των ευκαιριών της κλιματικής αλλαγής στους διάφορους τομείς που έχουν ήδη προσδιοριστεί από την Εθνική Στρατηγική για την Προσαρμογή στην Κλιματική Αλλαγή και στην ενίσχυση της πολιτικής και θεσμικής δέσμευσης για τη μελλοντική εφαρμογή MSCCA. Για να ενισχυθεί η διαδικασία δημιουργίας ικανοτήτων και η διαδικασία μεταφοράς γνώσης, το έργο κάλυψε με τη συμμετοχή τριών επιπλέον Δήμων σε διαφορετικά στάδια της MSCCA (Εικ. 2).

Εικ.2- Πορτογαλικές κοινότητες συμμετέχουν στο έργο ClimaAdaPT.local - Δημοτικές στρατηγικές για την προσαρμογή στην αλλαγή του κλίματος (26 δήμοι ανέπτυξαν τη δική τους στρατηγική και 3 δήμοι με τις συνεχιζόμενες στρατηγικές τους). Πηγή: Διασκευή από (Simões, et al, 2016)

Η ClimadaPT.local συμμετείχε σε διάφορους εταίρους, συμπεριλαμβανομένων των πανεπιστημίων, των ερευνητικών κέντρων, των δήμων και των πολεοδομικών εταιρειών. Οι χρηματοδοτήσεις του ΕΟΧ και το πορτογαλικό ταμείο άνθρακα συγχρηματοδότησαν το έργο.
Η μεθοδολογία που υιοθετείται από το σχέδιο βασίζεται στην παραδοχή ότι η προσαρμογή της αλλαγής του κλίματος είναι μια διαδικασία λήψης αποφάσεων και, ως εκ τούτου, περιλαμβάνει τα ακόλουθα κύρια χαρακτηριστικά:

i. Συνέχεια - δραστηριότητες που πρέπει να αναθεωρηθούν και να επικαιροποιηθούν ανάλογα με τη συνάφειά τους,

ii. Ακρίβεια - πρέπει να επικεντρώνεται σε ερωτήσεις ή συγκεκριμένες αποφάσεις και να εξετάζει ήδη υφιστάμενες στρατηγικές και διαδικασίες λήψης αποφάσεων,

iii. Πολλαπλασιασμός των παραγόντων - σημαντικό να κατανοήσουμε διαφορετικές προοπτικές και την επιρροή τους στη διαδικασία λήψης αποφάσεων,

iv. Προσαρμοσμένη χρονικά - κατανοώντας τη διάρκεια ζωής μιας απόφασης, θα υποστηρίξει τον προσδιορισμό των απαιτούμενων πληροφοριών και το επίπεδο αβεβαιότητας.

ΣΗΜΑΝΤΙΚΑ ΘΕΜΑΤΑ ΓΙΑ ΤΟ LOCATIONS:

- Η καινοτομία στις συμμετοχικές διαδικασίες αποτελεί το κλειδί για την επιτυχία του στρατηγικού τοπικού σχεδιασμού.
- Η καινοτομία στις συμμετοχικές διαδικασίες είναι ζωτικής σημασίας για να αναπτυχθούν νέες μεθοδολογίες για την ικανότητα των δημοτικών τεχνικών, των τοπικών φορέων λήψης αποφάσεων και της ευαισθητοποίησης των ενδιαφερομένων.
- • Όπως το ClimadaPT.local, το έργο LOCATIONS περιλαμβάνει συνεχείς διαδικασίες λήψης αποφάσεων.

Πώς σχεδιάστηκε η συμμετοχική διαδικασία για το έργο ClimadaPT.Local;

Η συμμετοχική διαδικασία αποτελεί βασικό στοιχείο της μεθοδολογίας που χρησιμοποιείται στο πρόγραμμα ClimadaPT.Local και ενσωματώνεται σε όλη την εφαρμογή του. Η μεθοδολογία αυτή βασίστηκε σε ένα εργαλείο που ονομάστηκε ADAM ("Apoio à Decisão na Adaptação Municipal") που αναπτύχθηκε από το σχέδιο για τη στήριξη της απόφασης για τη δημοτική προσαρμογή. Η μεθοδολογία εμπνεύστηκε από το Πρόγραμμα Ηνωμένων Πολιτειών για το Κλίμα (UKCIP) και το εργαλείο ADAM βασίστηκε στον Οδηγό Προσαρμογής του UKCIP (Capela Lourenço, et al, 2014). Επομένως, η δομή του εργαλείου ADAM επωφελείται από την ευρωστία και την εμπειρία του οδηγού προσαρμογής του UKCIP που δοκιμάστηκε από διάφορες εφαρμοσμένες περιπτώσεις στο Ηνωμένο Βασίλειο, τη Γερμανία, την Αυστραλία, τον Καναδά και τις Ηνωμένες Πολιτείες (Capela Lourenço κ.ά., 2014). Το εννοιολογικό σχήμα που χρησιμοποιείται στη μεθοδολογία ADAM είναι μια διαδικασία συνεχούς λειτουργίας που περιλαμβάνει πέντε στάδια (Εικόνα 3):

I. Το βήμα μηδέν είναι αφιερωμένο στην προετοιμασία της εργασίας. Οι κύριοι στόχοι είναι να διασφαλιστεί η κατανόηση της μεθοδολογίας και των κυριότερων κινήτρων κάθε δήμου να εφαρμόσει μια στρατηγική προσαρμογής και να συγκεντρώσει την τεχνική ομάδα καθώς και τους δημοτικούς φορείς λήψης αποφάσεων (Capela Lourenço, et al, 2014).

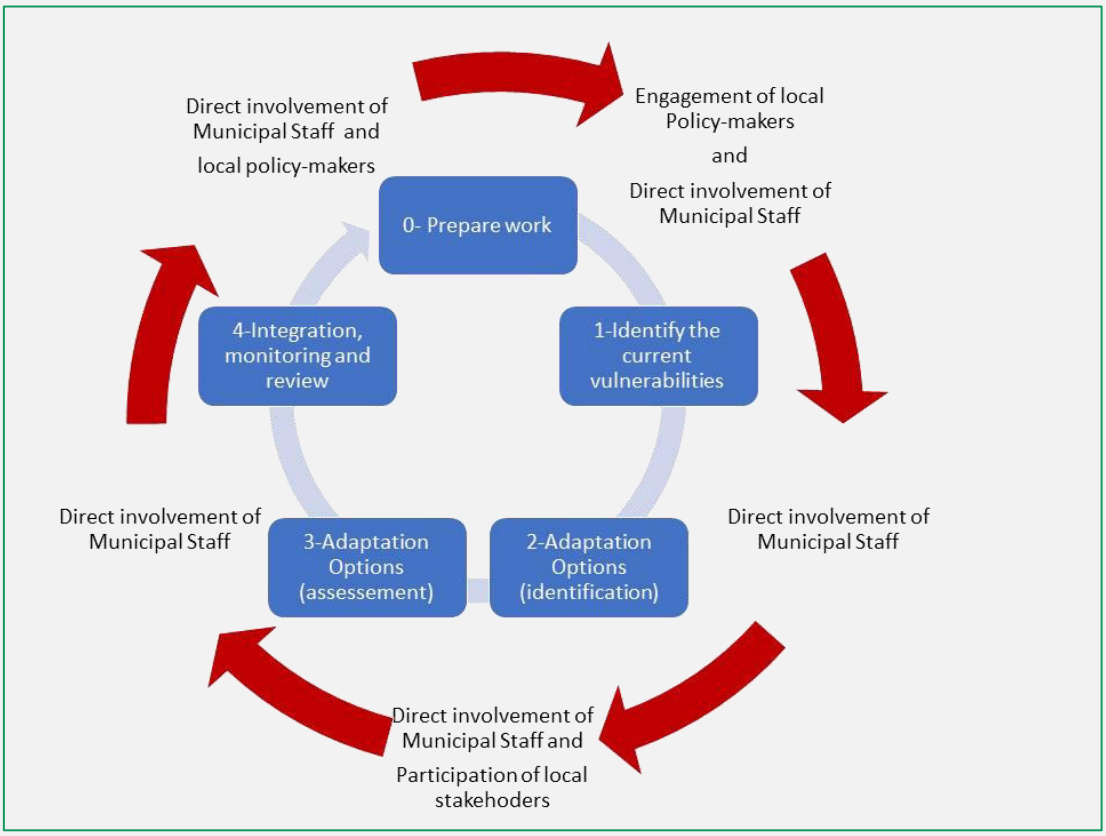
II. Το πρώτο βήμα είναι ο προσδιορισμός των σημερινών τρωτών σημείων της αλλαγής του κλίματος. Οι κύριοι στόχοι είναι η αύξηση της ευαισθητοποίησης σχετικά με τα τρέχοντα τρωτά σημεία, τον εντοπισμό των κυριότερων δημοτικών περιοχών που πλήττονται από τα κλιματικά φαινόμενα και τον εντοπισμό των δημοτικών τμημάτων ή άλλων θεσμών που είναι πιο προετοιμασμένοι να σχεδιάσουν και να ανταποκριθούν σε προηγούμενα γεγονότα που αφορούν στην αλλαγή του κλίματος (Dias, et al, 2016a).

III. Το δεύτερο βήμα είναι ο εντοπισμός των μελλοντικών τρωτών σημείων της αλλαγής του κλίματος. Οι κύριοι στόχοι είναι ο εντοπισμός των μελλοντικών επιπτώσεων της αλλαγής του κλίματος που απαιτούν απάντηση χρησιμοποιώντας διαφορετικά κλιματικά σενάρια που επιτρέπουν τη στόχευση γεωγραφικών περιοχών, τομέων και κοινωνικών ομάδων πιο ευάλωτων σε μελλοντικές κλιματικές αλλαγές (Dias, et al, 2016a).

IV. Το τρίτο βήμα είναι η αξιολόγηση των επιλογών για την αλλαγή του κλίματος. Όπως και σε άλλες διαδικασίες λήψης αποφάσεων, η διαδικασία προσαρμογής στην αλλαγή του κλίματος απαιτεί στρατηγικό σχεδιασμό για την επίτευξη συγκεκριμένης φιλοδοξίας μεσοπρόθεσμα, η οποία συνήθως σχεδιάζεται από κατευθυντήριες γραμμές που υποστηρίζουν ένα όραμα και συγκεκριμένους στόχους. Στο πλαίσιο αυτό, είναι δυνατόν να εκτιμηθούν οι αδυναμίες της αλλαγής του κλίματος που καθορίζουν τη συμμετοχή διαφόρων ενδιαφερομένων και να δοθεί προτεραιότητα σε επιλογές και μέτρα (Capela Lourenço, et al, 2016).

V. Το τέταρτο βήμα είναι η ενσωμάτωση των επιλογών προσαρμογής στο πλαίσιο της εδαφικής διαχείρισης. Αυτό το βήμα αποσκοπεί στον εντοπισμό και τον χαρακτηρισμό των μέσων εδαφικής πολιτικής διαχείρισης σε επίπεδο δήμων που μπορούν να υλοποιήσουν τις επιλογές προσαρμογής που επιλέχθηκαν για κάθε δήμο στα προηγούμενα βήματα. Θεωρεί επίσης τους ορισμούς των κατευθυντήριων γραμμών που θα επιτρέψουν αυτή την υλοποίηση. Η διαδικασία παρακολούθησης περιλαμβάνεται επίσης σε αυτό το στάδιο της μεθοδολογίας (Barroso, et al, 2016).

Όλα τα βήματα της μεθοδολογίας ADAM περιλαμβάνουν συμμετοχικές προσεγγίσεις προσανατολισμένες σε διάφορους στόχους και χρησιμοποιώντας διαφορετικές τεχνικές (Εικ.3). Ενώ η όλη μεθοδολογία αναπτύχθηκε από το δημοτικό προσωπικό που καθοδηγείται και εκπαιδεύεται από την τεχνική ομάδα του έργου, το τρίτο βήμα που σχετίζεται με την αξιολόγηση των επιλογών για την αλλαγή του κλίματος συνεπάγεται τη συμμετοχή των τοπικών φορέων. Οι τοπικοί φορείς χάραξης πολιτικής συμμετείχαν επίσης από την αρχή της διαδικασίας.



Εικ. 3– Εννοιολογικό σχήμα της μεθοδολογίας ADAM (Απόφαση Υποστήριξης Δημοτικής Προσαρμογής) που χρησιμοποιήθηκε για την ανάπτυξη Δημοτικών Στρατηγικών για την Προσαρμογή της Κλιματικής Αλλαγής (MSCC). Η συμμετοχική διαδικασία είναι συνεχής σε όλα τα βήματα από τη μεθοδολογία ADAM και περιλαμβάνει διαφορετικές οντότητες. Πηγή: Προσαρμογή από Capela Lourenço et al (2014).

- Το ClimadaPT.local υιοθέτησε μια καινοτόμο προσέγγιση σχετικά με την ανάπτυξη των δημοτικών στρατηγικών. Κάθε δήμος που συμμετείχε στο έργο ήταν υπεύθυνος για την ανάπτυξη των δικών του δημοτικών στρατηγικών για την προσαρμογή στην κλιματική αλλαγή (MSCC). Η προσέγγιση αυτή υποστηρίχθηκε σε όλα τα στάδια από την τεχνική ομάδα του έργου που ενέπλεξαν όλους τους συμμετέχοντες σε εκπαιδευτικές συναντήσεις και σε τοπικά εργαστήρια.

- Λαμβάνοντας υπόψη τη συνεχή διαδικασία λήψης αποφάσεων στο LOCATIONS, η συμμετοχική διαδικασία θα πρέπει να ενσωματωθεί στη μεθοδολογική της προσέγγιση.

- Για κάθε βήμα του LOCATIONS, είναι σημαντικό να προσδιοριστεί με σαφήνεια ο τρόπος με τον οποίο εμπλέκονται οντότητες και τι είδους οντότητες έχουν καθοριστική σημασία για κάθε στάδιο του έργου.

Πώς διεξήχθη η συμμετοχική διαδικασία;

Η συμμετοχική προσέγγιση ήταν μια συνεχής διαδικασία στο ClimadaPT.Local. Διαφορετικές συμμετοχικές μέθοδοι εφαρμόστηκαν σύμφωνα με τους συμμετέχοντες. Το προσωπικό του Δήμου που συμμετείχε άμεσα στην εκπόνηση της MSCCA έλαβε από την ομάδα του σχεδίου διάφορες εκπαιδευτικές συνεδρίες και τεχνική υποστήριξη για την εργασία τους. Στο πλαίσιο αυτό, το προσωπικό του Δήμου συνέταξε έκθεση για κάθε φάση του έργου. Επιπλέον, το προσωπικό του Δήμου που διατέθηκε άμεσα στο έργο είχε επίσης την ευθύνη να διαδώσει το έργο στο εσωτερικό του δήμου και να εμπλέξει άλλους δημοτικούς τεχνικούς και υπεύθυνους χάραξης πολιτικής. Όσον αφορά τη συμμετοχή τοπικών φορέων (ακαδημαϊκοί, ιδιωτικοί οργανισμοί, ενώσεις, δημόσια διοίκηση και πολίτες), αναπτύχθηκε ένα τοπικό εργαστήριο για κάθε δήμο που συμμετείχε στο έργο, όπου οργανώθηκαν στρογγυλές τράπεζες οργανωμένες ανά θέμα (π.χ. εενέργεια και υγεία, δάσωση, πολεοδομία, υδάτινοι πόροι κλπ.) και συντονίστηκαν από εμπειρογνώμονες για να συζητήσουν τις επιπτώσεις της κλιματικής αλλαγής και τις πιθανές επιλογές προσαρμογής προσαρμοσμένες σε κάθε δήμο. Αυτές οι έρευνες αφορούσαν περίπου 1 500 συμμετέχοντες για τα 26 τοπικά εργαστήρια που οργανώθηκαν. Στη συνέχεια, οι εμπλεκόμενοι φορείς έλαβαν έκθεση με τα σχόλια αυτού του εργαστηρίου. Τα αποτελέσματα των εργαστηρίων εξετάστηκαν και ενσωματώθηκαν στο τελικό MSCCA.

Πώς επιβλέφθηκε η συμμετοχική διαδικασία;

Η συμμετοχική διαδικασία και το ίδιο το έργο επιβλέφτηκαν χρησιμοποιώντας τέσσερις τύπους ερευνών που στοχεύουν ειδικά στο τεχνικό προσωπικό που συμμετέχει στην MSCCA, στα άλλα τεχνικά μέλη κάθε δήμου, στους διαμορφωτές πολιτικής και τους τοπικούς φορείς. Αυτή η παρακολούθηση κάλυψε όλη την περίοδο του έργου και εφαρμόστηκε σε έρευνες για κάθε τύπο συμμετεχόντων σε διαφορετικές στιγμές, με στόχο την αξιολόγηση της εξέλιξης των έργων και της αντίληψης κάθε ομάδας συμμετεχόντων.

ΣΥΖΗΤΗΣΗ

- Πώς νομίζετε ότι θα μπορούσε να οργανωθεί και να διεξαχθεί η συμμετοχική διαδικασία στο έργο LOCATION;
- Ποια στρατηγική θα μπορούσε να σχεδιαστεί για τη διάδοση σε κάθε δήμο του LCTP κατά τη διάρκεια της κατασκευής του μεταξύ του τεχνικού προσωπικού και των δημοτικών υπεύθυνων χάραξης πολιτικής;

2.4 Βήμα 3: Σύνταξη του επιχειρησιακού μοντέλου

2.4.1 Σχεδιασμός του μοντέλου – η Προσέγγιση Λογικού Πλαισίου

Η σύνταξη του επιχειρησιακού μοντέλου θα καθορίσει και θα καθοδηγήσει όλα τα επακόλουθα μέτρα και δράσεις που πρέπει να ληφθούν. Ως εκ τούτου, είναι εξαιρετικά σημαντικό να προετοιμαστεί ένα αξιόπιστο σχέδιο, βασισμένο σε στέρεες βάσεις, το οποίο ενσωματώνει όλα τα δεδομένα που προέκυψαν από τα προηγούμενα βήματα.

Πρέπει να ακολουθηθεί μια λογική ακολουθία βημάτων, ώστε να διασφαλιστεί ότι στο σχέδιο δεν περιλαμβάνονται λάθος υποθέσεις ή πρόωρα συμπεράσματα:

- **Ορισμός του τρέχοντος σεναρίου**

  Το πρώτο βήμα είναι μια σύνοψη των πληροφοριών που συλλέχθηκαν κατά τις προηγούμενες φάσεις, προκειμένου να παρουσιαστεί το τρέχον πλαίσιο, συμπεριλαμβανομένων των κύριων θεμάτων, των ευκαιριών και των πόρων. Ο βασικός παράγοντας είναι η καθιέρωση σαφούς, σχηματικής και συνθετικής εικόνας ως βασικού σεναρίου, το οποίο πρέπει να επιτρέπει τη χρήση δεικτών για την αξιολόγηση της εξέλιξης των μεταβλητών σεναρίων διαχρονικά. Μια χρήσιμη συμβουλή σε αυτό το στάδιο είναι να γνωστοποιηθεί το βασικό σενάριο που αναπτύχθηκε με τα σχετικά ενδιαφερόμενα μέρη, τα οποία θα μπορούσαν να συμπληρώσουν, να προσαρμόσουν ή ακόμα και να αμφισβητήσουν ορισμένα από τα συμπεράσματα που έχουν εξαχθεί.

Για να βελτιώσει την κινητικότητα και την ποιότητα ζωής των πολιτών της, η Δρέσδη ανέπτυξε ένα SUMP για να ικανοποιήσει τις ανάγκες κινητικότητας των κατοίκων, των επιχειρήσεων και της περιοχής για τις επόμενες δεκαετίες. Πραγματοποίησε εκ των προτέρων αξιολόγηση χρησιμοποιώντας συνδυασμό πιθανών σεναρίων και εκτίμηση επιπτώσεων. Η συλλογή δεδομένων ξεκίνησε τον Ιανουάριο του 2014 και η πόλη αναμένεται να εκτελεί δραστηριότητες παρακολούθησης ετησίως και αξιολόγηση της SUMP ανά τριετία. Η Δρέσδη οργάνωσε μια στρογγυλή τράπεζα για τη συμμετοχή εταίρων και ενδιαφερομένων στη διαδικασία δημιουργίας, παρακολούθησης και αξιολόγησης του SUMP. Η γερμανική πόλη έχει ήδη σημαντικά ευρήματα λόγω αυτής της έγκαιρης παρακολούθησης και αξιολόγησης. Αυτό απαιτεί άριστη συνεργασία μεταξύ όλων των εμπλεκόμενων μερών, καθώς και σημαντικούς χρηματοδοτικούς και ανθρώπινους πόρους - την κατανομή των οποίων η Δρέσδη προτίθεται να τυποποιήσει για τον επόμενο κύκλο SUMP. Η συνεργασία πολιτικών και τεχνικών επιπέδων ήταν επίσης μια πρόκληση. Χρησιμοποιήθηκε το πρότυπο CH4LLENGE για παρακολούθηση και αξιολόγηση SUMP το οποίο η Δρέσδη θεωρεί καλό οδηγό κατά την εκπόνηση τοπικού σχεδίου και συμβουλεύει άλλες πόλεις να χρησιμοποιούν δείκτες και συνεργάτες για την συλλογή δεδομένων. Ένα μεγάλο πλεονέκτημα, αναφέρει, είναι η λήψη δεδομένων που περιγράφουν την ανάπτυξη της αστικής κινητικότητας που μπορεί να συνδυαστεί με δεδομένα πραγματικών εξελίξεων με πολιτικούς στόχους. www.sump-challenges.eu

- **Ορισμός οράματος και στόχων**

  Ο καθορισμός των κύριων στόχων του LCTP (μετά το κοινό όραμα της ομάδας και των ενδιαφερομένων για την πόλη) θα καθορίσει όλα τα επόμενα βήματα. Αυτό το βασικό όραμα προέρχεται από το προηγούμενο έργο, καθώς και από τις τέσσερις κατευθυντήριες αρχές που περιγράφηκαν προηγουμένως. Είναι σημαντικό, τόσο το όραμα όσο και οι στόχοι να είναι κοινοί και να εμπλέκονται όλοι ή σχεδόν όλοι, προκειμένου να επιτευχθούν καλές προσδοκίες όσον αφορά τη διάρκεια και την επιτυχία του LCTP. Επομένως, όλοι οι ενδιαφερόμενοι πρέπει να είναι μέρος αυτού του βήματος και τα αποτελέσματα πρέπει να είναι απλά, σαφή και εύκολα κατανοητά.

- **Ορισμός δράσεων και δεικτών**

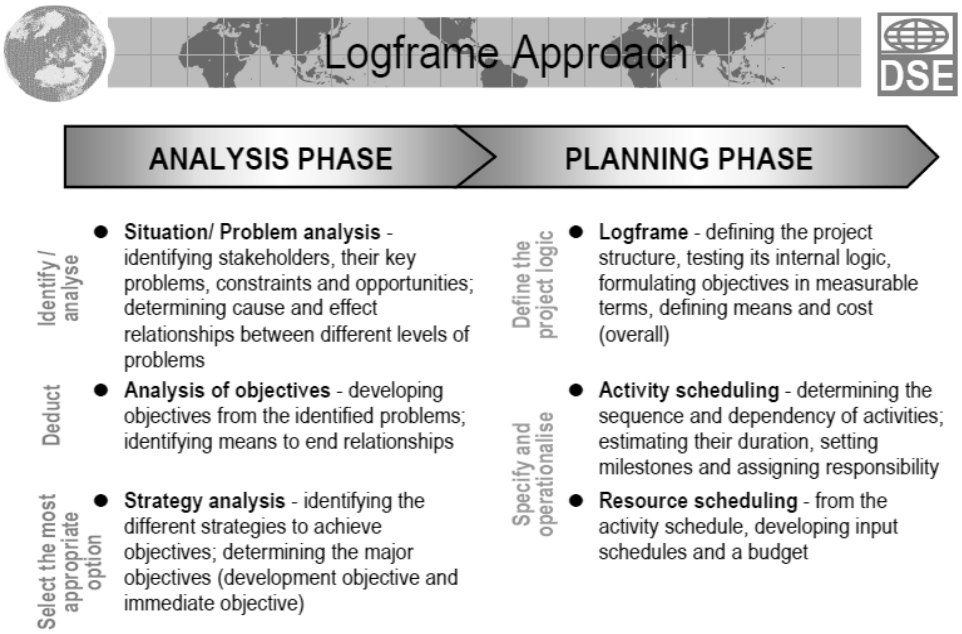
  Όπως και με τις περισσότερες διαδικασίες ανάπτυξης έργων, μετά το όραμα και τους κύριους στόχους, καθορίζονται οι πιο συγκεκριμένοι στόχοι, μαζί με τα αντίστοιχα μέτρα και δράσεις, το χρονικό διάστημα, τα αναμενόμενα αποτελέσματα και τους δείκτες/πηγές των δεδομένων που δηλώνονται στην αξιολόγησή τους.

  Για το σκοπό αυτό, είναι σκόπιμο να χρησιμοποιηθούν τα υπάρχοντα εργαλεία σχεδιασμού έργων, όπως η προσέγγιση λογικού πλαισίου (logical framework approach - LFA), διότι θα επιτρέψει την παρουσίαση όλων των βασικών στοιχείων του σχεδίου με σαφή, λογικό και αποτελεσματικό τρόπο. Επιπλέον, η LFA επιτρέπει όχι μόνο το σχεδιασμό του έργου, αλλά και τη διαχείρισή του σε βάθος χρόνου, καθώς είναι μια εξελικτική, επαναλαμβανόμενη αναλυτική διαδικασία που καθορίζει με

συστηματικό και λογικό τρόπο όλους τους στόχους του έργου και τις αιτιώδεις σχέσεις μεταξύ τους. Τα βασικά πλεονεκτήματα της χρήσης ενός LFA είναι:

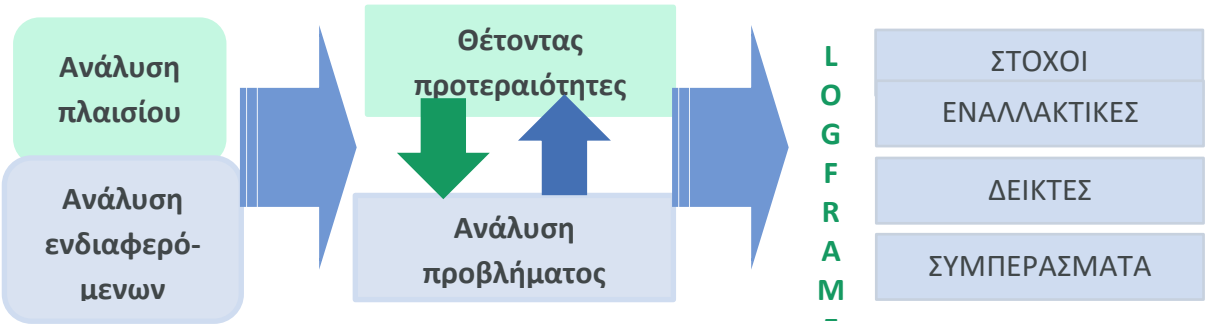
- Εύκολος και σαφής σχεδιασμός του έργου.
- Επιτρέπει τη διαχείριση και παρακολούθηση του έργου.
- Προωθεί το συντονισμό και την κοινή βάση μεταξύ των ενδιαφερομένων.
- Καθορίζει σαφώς την προτεραιότητα και τη συνάφεια κάθε στόχου και μέτρου σε ολόκληρη τη στρατηγική του Σχεδίου.
- Επιτρέπει τη χωριστή παρακολούθηση και αξιολόγηση κάθε γραμμής στόχων.
- Επιτρέπει αλλαγές και συμπεριλήψεις σε βάθος χρόνου.

Ένα οπτικό παράδειγμα ενός σχεδίου της Προσέγγισης Logframe, όπως προσφέρεται από το Γερμανικό Ίδρυμα Διεθνούς Ανάπτυξης (DSE), παρουσιάζεται παρακάτω:



Εικ. 4- Προσέγγιση Logframe. Πηγή: DSE

Η προσέγγιση του λογαριθμικού πλαισίου βασίζεται σε έναν πίνακα (πίνακας Logframe), η οποία θα περιλαμβάνει όλες τις πληροφορίες που λαμβάνονται μέσω των φάσεων ανάλυσης, ταυτοποίησης των ενδιαφερομένων, ιεράρχησης προτεραιοτήτων και προγραμματισμού, σε συστηματική, λογική και συνοπτική άποψη. Η ακολουθία που έπεται ανταποκρίνεται σε μια βήμα-προς-βήμα ανάλυση με την ακόλουθη δομή:



Είναι σημαντικό να καταλάβουμε ότι ο πίνακας LFA είναι το αποτέλεσμα όλων των προηγούμενων εργασιών, της ανάλυσης και της επεξεργασίας των απαραίτητων πληροφοριών. Σκοπός του είναι να παρουσιάσει με χρήσιμο τρόπο τα δεδομένα που έχουν ληφθεί προηγουμένως και θα εξαρτάται πάντοτε από την ποιότητα του τελευταίου. Το LFA είναι μια διαδικασία, όχι ένας στόχος.

Ο συνήθης πίνακας Logframe αποτελείται από έναν πίνακα κελιών 4 x 4, ο οποίος ξεκινά στην επάνω αριστερή γωνία και έχει τόσο κατακόρυφη όσο και οριζόντια λογική. Η κάθετη λογική μπορεί να γίνει κατανοητή ως αυτό που το σχέδιο σκοπεύει να επιτύχει, παρουσιάζοντας έτσι τους στόχους στα διάφορα επίπεδα. Η οριζόντια λογική μπορεί να συσχετιστεί με την πρόοδο, τον αντίκτυπο και την παρακολούθηση κάθε γραμμής δράσης.

Project Description		Objectively verifiable indicators of achievement	Sources and means of verification	Assumptions
Goal	What is the overall broader impact to which the action will contribute?	What are the key indicators related to the overall goal?	What are the sources of information for these indicators?	What are the external factors necessary to sustain objectives in the long term?
Purpose	What is the immediate development outcome at the end of the project?	Which indicators clearly show that the objective of the action has been achieved?	What are the sources of information that exist or can be collected? What are the methods required to get this information?	Which factors and conditions are necessary to achieve that objective? (external conditions)
Outputs	What are the specifically deliverable results envisaged to achieve the specific objectives?	What are the indicators to measure whether and to what extent the action achieves the expected results?	What are the sources of information for these indicators?	What external conditions must be met to obtain the expected results on schedule?
Activities	What are the key activities to be carried out and in what sequence in order to produce the expected results?	Means: What are the means required to implement these activities, e. g. personnel, equipment, supplies, etc.	What are the sources of information about action progress? Costs: What are the action costs?	What pre-conditions are required before the action starts?

Εικ. 5- Τυπικός πίνακας Logframe. Πηγή: Barreto (2010)

Κάθετη Λογική:

1. Στόχος: Συνολικός στόχος του έργου. Ο γενικός στόχος μπορεί να είναι μόνο του, πέρα από το πεδίο εφαρμογής αυτού του έργου, για παράδειγμα: Να δημιουργηθεί μια υγιή, βιώσιμη και άνετη πόλη.
2. Σκοπός: Επιθυμητό αποτέλεσμα που θα επιτύχει το έργο. Βελτιωμένη κινητικότητα που σχετίζεται την πόλη-προορισμό της κρουαζιέρας.
3. Παραδοτέα: Στρατηγική παρέμβασης του έργου. Μπορεί να υπάρχουν διάφορα παραδοτέα: 1.1 Μείωση των εκπομπών διοξειδίου του άνθρακα, 1.2 Μείωση της κυκλοφοριακής συμφόρησης, 1.3 Αύξηση των δαπανών που πραγματοποιούν οι επισκέπτες στην πόλη
4. Δραστηριότητες: Ειδικά καθήκοντα που απαιτούνται για την επίτευξη αυτών των αποτελεσμάτων. Μπορεί να υπάρχουν διάφορα για κάθε παραδοτέο. Οι δηλώσεις πρέπει να είναι σύντομες και με έμφαση στις λέξεις δράσης. Παραδείγματα: 1.1.1 Αύξηση και ανάπτυξη των διαδρομών για τους πεζούς. 1.1.2 Θέσπιση συστήματος κοινόχρηστων αυτοκινήτων.
5. Εισροές: Εάν είναι απαραίτητο ή χρήσιμο, να παρέχονται πρόσθετες πληροφορίες, όπως, τα μέσα και το κόστος, οι νομικές απαιτήσεις κλπ., που απαιτούνται για την εκτέλεση αυτών των δραστηριοτήτων.

Οριζόντια Λογική:

1. Για κάθε ένα από τα επίπεδα που παρουσιάζονται κάθετα στην πρώτη στήλη από τα αριστερά, πρέπει να καθοριστούν αντικειμενικά επαληθεύσιμοι δείκτες επίτευξης. Από την αρχή μέχρι το τέλος της ιεραρχίας των στόχων, οι δείκτες θα επιτρέψουν να μετρηθεί η πρόοδος όσον αφορά την ποσότητα, την ποιότητα και τον χρόνο. Οι δείκτες μπορούν να σχετίζονται με τον αντίκτυπο του μετρούμενου στόχου ή δραστηριότητας στο γενικό στόχο (ποσοστό μείωσης των εκπομπών άνθρακα σε δεδομένη χρονική στιγμή) ή στη διαδικασία της δραστηριότητας, που σχετίζεται άρα με τα αναμενόμενα αποτελέσματα και παραδοτέα (ετήσια ανάπτυξη των κοινόχρηστων αυτοκινήτων που χρησιμοποιούν οι χρήστες).
2. Πηγές και μέσα επαλήθευσης: η πηγή επαλήθευσης πρέπει να εξετάζεται και να προσδιορίζεται συγχρόνως με τη διατύπωση δεικτών. Αυτό θα βοηθήσει να ελεγχθεί εάν οι δείκτες μπορούν ή όχι να μετρηθούν ρεαλιστικά εις βάρος ενός λογικού χρονικού διαστήματος, χρημάτων και προσπάθειας. Πρέπει να διευκρινίζουν πώς, ποιοι και πότε θα συγκεντρωθούν οι πληροφορίες.
3. Υποθέσεις: Αυτή η έννοια αναφέρεται σε εκείνους τους παράγοντες ή γεγονότα που πρέπει να ισχύουν για να επιτρέψουν τη μετάβαση από ένα στάδιο του Logframe στο επόμενο. Οι υποθέσεις είναι εξωτερικοί παράγοντες που έχουν τη δυνατότητα να επηρεάζουν (ή ακόμη και να καθορίζουν) την επιτυχία ενός έργου, αλλά βρίσκονται εκτός του άμεσου ελέγχου των διαχειριστών του έργων. Οι υποθέσεις συνήθως προσδιορίζονται προοδευτικά κατά τη διάρκεια της φάσης ανάλυσης και μπορεί να παρουσιάζουν διαφορετικό εύρος επιπτώσεων (1. Η πολιτική δέσμευση για βιώσιμη κινητικότητα χορηγείται καθ 'όλη τη διάρκεια του σχεδίου· 1.1.2 Τα συστήματα κοινόχρηστων αυτοκινήτων παραμένουν μια νόμιμη εναλλακτική λύση).

Η διαδικασία αυτή προσαρμόζεται στις συγκεκριμένες συνθήκες και ανάγκες του πλαισίου, αν και ο πίνακας μπορεί να γίνει πολύ περίπλοκος εάν συμπεριληφθούν πάρα πολλές λεπτομέρειες. Είναι σκόπιμο να χρησιμοποιηθεί για την ανάπτυξη του σχεδίου στα βασικά και πιο σημαντικά χαρακτηριστικά του, αφήνοντας σε ξεχωριστά έγγραφα (παραρτήματα), την ειδική περιγραφή της ανάπτυξης των δραστηριοτήτων και των αναμενόμενων αποτελεσμάτων.

Είναι επίσης χρήσιμο να οριστούν δράσεις και μέτρα μέσα από μια αρθρωτή προσέγγιση, όντας δηλαδή ανεξάρτητοι ο ένας από τον άλλο. Τα διάφορα μέτρα πιθανότατα θα συνδέονται στενά, αλλά εάν ο τρόπος με τον οποίο έχουν σχεδιαστεί επιτρέπει την ανάπτυξή τους ξεχωριστά, ο κίνδυνος αποκλεισμού ολόκληρου του LCTP μετά από ένα αποτυχημένο μέτρο μειώνεται σημαντικά. Αυτή η προσέγγιση είναι ιδιαίτερα σημαντική σε μακροπρόθεσμα σχέδια, όπου δεν υπάρχει βεβαιότητα σχετικά με την κατανομή του προϋπολογισμού τα προσεχή έτη και, επομένως, για το ποιες δραστηριότητες και μέτρα θα είναι εφικτά.

2.4.2 Ανάπτυξη μελλοντικών σεναρίων

Η πολυπλοκότητα του πλαισίου μαζί με τους πολλούς παράγοντες που παρεμβαίνουν, και η φιλοδοξία και η διάρκεια του σχεδίου, υποδηλώνουν την πιθανότητα αποκλίσεων και σχετικών αλλαγών στο πλαίσιο. Τα δυνητικά μελλοντικά σενάρια δεν είναι μετρήσιμα και είναι αδύνατο να προβλεφθούν. Ωστόσο, μπορούν να τεθούν εύλογες προβλέψεις, εξετάζοντας τους πιο σημαντικούς και συχνούς παράγοντες και βαθμολογώντας τους σε μια κλίμακα από:

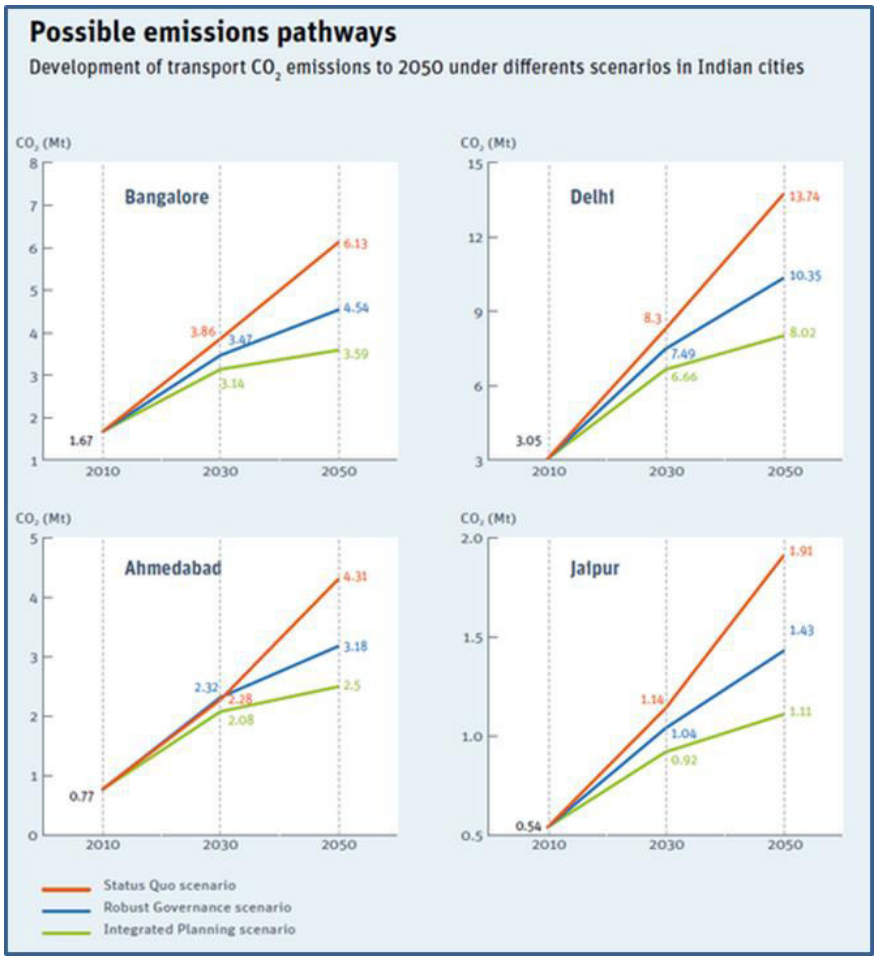
1. Τίποτα δεν αλλάζει, ούτε προς το καλύτερο ούτε προς το χειρότερο (το σενάριο Business as usual, όπου ιστορικά δεδομένα, τάσεις και συμπεριφοριστική συμπεριφορά θα μας βοηθήσουν να καθορίσουμε το μελλοντικό πλαίσιο).
2. Προβλέπονται πράγματι οι περισσότερες θετικές δυνατότητες, ξεπερνώντας τα αναμενόμενα αποτελέσματα και επιτρέποντας σταδιακές προσαρμογές του Σχεδίου (το καλύτερο δυνατό σενάριο, το οποίο θα μπορούσε να απαιτήσει την αναθεώρηση των κυριότερων στόχων και δραστηριοτήτων, καθώς και την επακόλουθη προσαρμογή του Logframe).
3. Τα απροσδόκητα γεγονότα ή περιστάσεις, ως επί το πλείστον αρνητικά για το έργο, αποτελούν σημαντικό εμπόδιο και κίνδυνο για την εκπλήρωση των προβλεπόμενων στόχων. Σε αυτή την περίπτωση, ολόκληρο το σχέδιο θα πρέπει να αναθεωρηθεί και, αν χρειαστεί, να επανεξεταστεί από την αρχή.
4. Πιο πιθανό σενάριο: όταν τα γεγονότα συμβαίνουν με τον πιο πιθανό τρόπο, προχωρώντας έτσι σε ένα ορισμένο στάδιο (όχι τόσο καλά όσο θα μπορούσαν), αλλά μειώνονται ή ακόμα και κολλάνε σε ορισμένες πτυχές. Σε αυτό το σενάριο, το πιο σημαντικό είναι να αξιολογήσουμε σωστά το πλαίσιο και τις πιο πιθανές τάσεις στο εγγύς μέλλον.

Τυπικά, ο σχεδιασμός του σχεδίου, οι στόχοι, τα μέτρα και τα αναμενόμενα αποτελέσματα θα βασίζονται στο πιο πιθανό σενάριο, καθώς είναι ο καλύτερος τρόπος να είναι κανείς στην «ασφαλή πλευρά» ενώ προσπαθεί να είναι φιλόδοξος. Είναι επίσης το πιο αποτελεσματικό σύστημα για την απόκτηση πηγών χρηματοδότησης και συμμετοχής των ενδιαφερομένων, δεδομένου ότι η παρουσίαση των στόχων του σχεδίου μπορεί να υποστηριχθεί από εύλογες και κοινές προσδοκίες.

Προβλέψεις και περιγραφές των πιθανών σεναρίων μπορούν να γίνουν σε διάφορα επίπεδα:

- Για το σύνολο του έργου, συνδυάζοντας έτσι τα αποτελέσματα και τις αλλαγές των διαφόρων στρατηγικών που εμπλέκονται
- Ανά κύριο στόχο, στρατηγική ή γραμμή δράσης, κάτι που είναι ιδιαίτερα χρήσιμο όταν είναι μάλλον ανεξάρτητα από την άλλα
- Για κάθε μέτρο ή δέσμη μέτρων, αυτό επιτρέπει να αναλύονται συγκεκριμένες διαφορετικές τάσεις, να επιτυγχάνεται η ακρίβεια και να μειώνεται ο αντίκτυπος των απροσδόκητων αρνητικών γεγονότων.

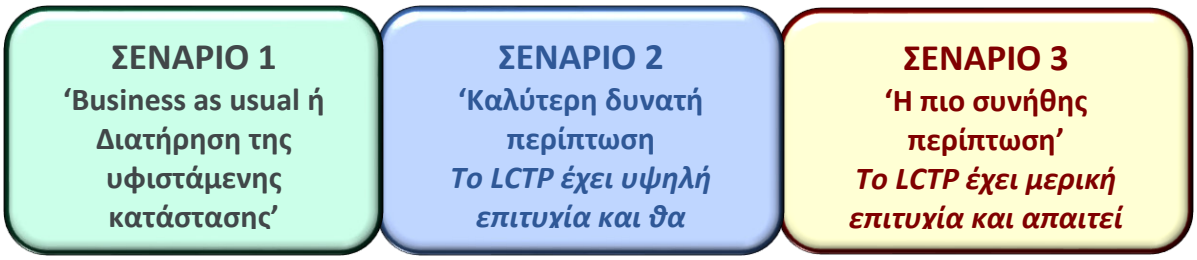
Προφανώς, όσο πιο εξελιγμένο και συγκεκριμένο είναι το μελλοντικό σενάριο, τόσο πιο ακριβό και πολύπλοκο γίνεται. Προκειμένου να σχεδιαστεί το Σχέδιο, μια καλή συμβουλή υπό αυτή την έννοια θα ήταν να δημιουργηθεί ένα γενικό πιθανό σενάριο για ολόκληρο το Σχέδιο και, στη συνέχεια, να εξεταστούν σε βάθος εκείνοι οι τομείς όπου η συνάφεια ή η ιδιαιτερότητα του μέτρου το καθιστά εύλογο.
Ένα οπτικό παράδειγμα διαφορετικών σεναρίων που συνδέονται με την εξέλιξη των εκπομπών CO2 από το 2010 έως το 2050 σε μερικές ινδικές πόλεις παρουσιάζεται παρακάτω:



Εικ. 6- Δυνατά μονοπάτια εκπομπών. Πηγή: Int. Transport Forum. COP21

Όταν το πιο πιθανό σενάριο (σε οποιοδήποτε επιλεγμένο επίπεδο λεπτομέρειας) έχει συνταχθεί, είναι πολύ σημαντικό να το κάνουμε αυτό με τα εξαιρετικά πιθανά σενάρια, έτσι ώστε να έχουμε ένα πλαίσιο που

οριοθετεί τις μελλοντικές περιπτώσεις, επιτρέποντας την εκτίμηση των αποτελεσμάτων του LCTP σε κάθε περίπτωση και αυξάνοντας τις πιθανότητες να προσαρμοστεί ή διασκευαστεί σε νέες συνθήκες που προκύπτουν. Αν εξαιρεθεί το σενάριο της χειρότερης περίπτωσης, δεδομένου ότι είναι πολύ δύσκολο να προβλεφθεί, πρέπει να εκπονηθούν τουλάχιστον τρία πιθανά σενάρια για μεσοπρόθεσμο/μακροπρόθεσμο μέλλον (5 έως 10 χρόνια):



Ο καθορισμός μελλοντικών σεναρίων συνδέεται αναγκαστικά με τη διαδικασία παρακολούθησης και αξιολόγησης, ώστε να εξασφαλιστεί ότι οι καθιερωμένοι δείκτες θα φέρουν τις απαιτούμενες πληροφορίες για την αξιολόγηση της συνολικής εικόνας από την οπτική του σεναρίου. Υπό αυτή την άποψη, είναι σημαντικό να προχωρήσουμε με το βήμα 3 και το βήμα 4 με συντονισμένο τρόπο, αναθεωρώντας τη συνοχή και την ανθεκτικότητά του.

2.5 Βήμα 4: Παρακολούθηση, αξιολόγηση και πηγές χρηματοδότησης

2.5.1 Ορισμός της διαδικασίας για παρακολούθηση

Παρακολούθηση σημαίνει «επόπτευση των τρεχουσών δραστηριοτήτων για να διασφαλιστεί ότι είναι σε εξέλιξη και κατά το χρονοδιάγραμμα για την επίτευξη των στόχων και των στόχων απόδοσης». Με άλλα λόγια, η παρακολούθηση σημαίνει να έχουμε ένα στιγμιότυπο της τρέχουσας κατάστασης (ή μιας σειράς στιγμιότυπων) στην υλοποίηση των δραστηριοτήτων και να εντοπίσουμε πού είμαστε, πόσο επιτύχαμε, πόσους πόρους και πόσο καλά τους χρησιμοποιήσαμε, σε σχέση με το σχέδιο εργασίας μας.
Για τους σκοπούς του παρόντος εγχειριδίου θα περιγραφούν δύο διαδικασίες παρακολούθησης, οι οποίες μετρούν αντίστοιχα:

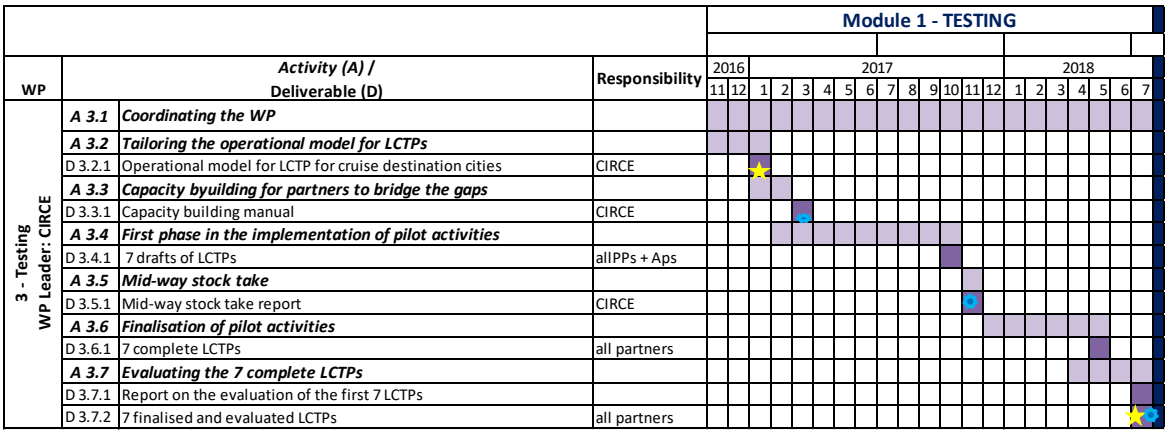
- Την απόδοση στην παραγωγή του LCTP
- Την απόδοση στην υλοποίηση του LCTP

Για τις διαδικασίες παρακολούθησης, χρησιμοποιούνται ποσοτικές και ποιοτικές παράμετροι, οι οποίες ενδέχεται να διαφέρουν ανάλογα με τα μεμονωμένα χαρακτηριστικά και τις επιλογές που γίνονται στο σχεδιασμό κάθε LCTP. Επομένως, οι ακόλουθες γραμμές είναι γενικές κατευθυντήριες γραμμές και χρειάζονται προσαρμογή και εξατομίκευση για κάθε επιμέρους επιχειρησιακό πλαίσιο.
Τα κυριότερα στοιχεία που πρέπει να ληφθούν υπόψη στις ενέργειες παρακολούθησης είναι: η χρονική στιγμή και οι προθεσμίες, οι δείκτες, η μεθοδολογία συλλογής και επεξεργασίας δεδομένων, οι αξιόπιστες πηγές δεδομένων, η ανάληψη ευθυνών ή ο ορισμός των αρμοδιοτήτων.

2.5.1.1 Παρακολουθώντας την παραγωγή του LCTP

Τα βήματα στην παραγωγή LCTP περιγράφονται στο Πακέτο Εργασίας 3 (Έλεγχος). Μετά την ολοκλήρωση των φάσεων προετοιμασίας και για χρονικό διάστημα 16 μηνών (Μάρτιος 2017 - Ιούλιος 2018), πρέπει να παραχθούν LCTP (σχέδια και οριστικοποιημένες εκδόσεις) και να αξιολογηθούν σύμφωνα με ένα σύνολο παραμέτρων αξιολόγησης που αναπτύχθηκαν αρχικά για τα μεσοπρόθεσμα αποθέματα το Νοέμβριο του 2017 και στη συνέχεια οριστικοποιήθηκαν έως τον Μάρτιο του 2018 για την τελική αξιολόγηση των LCTP (η προετοιμασία των παραμέτρων και της διαδικασίας αξιολόγησης είναι μια δραστηριότητα που προβλέπεται στο Πακέτο Εργασίας 4 - Μεταφορά).

Το διάγραμμα Gantt αντιπροσωπεύει την προβλεπόμενη ακολουθία ενεργειών.



Τα κύρια ορόσημα είναι τα παρακάτω:

- <u>Οκτώβριος 2017 – Προσχέδια έτοιμα:</u>
  - Τα σχέδια LCTP στις εθνικές γλώσσες είναι έτοιμα με λεπτομερή έκθεση στην αγγλική γλώσσα ή πλήρη μεταφρασμένη έκδοση που παράγεται από κάθε εταίρο έργου (αυτό το στάδιο προβλέπει την οργάνωση τουλάχιστον 2 συμμετοχικών συνεδριών σε κάθε περιοχή)
  - Προσχέδια LCTP στις εθνικές γλώσσες + αναλυτική έκθεση στα αγγλικά ή πλήρης μεταφρασμένη έκδοση που θα αποσταλεί στην CIRCE και την AREA για αξιολόγηση έναντι ενός συνόλου κοινών παραμέτρων αξιολόγησης (πρότυπα για τη λεπτομερή έκθεση και τις παραμέτρους αξιολόγησης θα παρασχεθούν εν ευθέτω χρόνω)
  - Σχέδια εκθέσεων αξιολόγησης που αποστέλλονται σε όλους τους εταίρους του έργου εν ευθέτω χρόνω και πριν από την ενδιάμεση συνεδρίαση.

Προθεσμία	Δείκτης	Μεθοδολογία	Πηγή δεδομένων	Ανάληψη ευθυνών	Παραδοτέο
27/10/2017	7 Σχέδια LCTP (εθνικές γλώσσες) + λεπτομερείς εκθέσεις στα αγγλικά ή σε πλήρως μεταφρασμένες εκδοχές	Συλλογή λεπτομερών εκθέσεων / πλήρως μεταφρασμένες εκδόσεις στα αγγλικά, ελεγμένα προς παραμέτρους	Εταίροι έργου	Όλοι εταίροι στο CIRCE/AREA	7 προσχέδιες εκθέσεις αξιολόγησης

- Νοέμβριος 15-16, 2017 (Ριέκα) – Ενδιάμεση έκθεση:
    - όλοι οι εταίροι του έργου παρουσιάζουν τα βασικά χαρακτηριστικά των σχεδίων LCTP σύμφωνα με ένα κοινό σύνολο διαφανειών με βάση τις λεπτομερείς αναφορές τους στα αγγλικά/πλήρη μεταφρασμένες εκδόσεις των σχεδίων LCTP (τα πρότυπα των διαφανειών θα παρασχεθούν εν ευθέτω χρόνω) ·
    - τα πλεονεκτήματα και οι αδυναμίες κάθε σχεδίου συζητούνται από κοινού κατά τη διάρκεια του εργαστηρίου σε μια προληπτική προσπάθεια βελτίωσης και αναβάθμισης των υφιστάμενων σχεδίων τους επόμενους μήνες, μαθαίνοντας επίσης από το τι κατάφερε να αποκομίσει η υπόλοιπη εταιρική σχέση.
    - όλα τα αποτελέσματα θα συγκεντρωθούν στην ενδιάμεση έκθεση.

Προθεσμία	Δείκτης	Μεθοδολογία	Πηγή δεδομένων	Ανάληψη ευθυνών	Παραδοτέο
15/11/2017	7 PPT	Συλλογή 7 εκθέσεων + PPT + υποδείξεις για βελτίωση	Εταίροι έργου	Όλοι εταίροι στο CIRCE/AREA	1 ενδιάμεση έκθεση

- Μάιος 8-9, 2018 (Δυρράχιο) – Οριστικοποίηση των LCTP:
    - μετά από προτάσεις και ιδέες από την ενδιάμεση έκθεση, τα LCTP οριστικοποιούνται για να παρουσιάσουν τις πλήρεις εκδοχές τους μέχρι τα τέλη Απριλίου 2018 (αυτό το στάδιο προβλέπει τη διοργάνωση τουλάχιστον 2 επιπλέον συμμετοχικών συνόδων σε κάθε περιοχή).
    - ολοκληρωμένα LCTP θα παρουσιαστούν κατά τη διάρκεια της συνάντησης στο Δυρράχιο με αναλυτικές εκθέσεις στην αγγλική γλώσσα/πλήρεις μεταφρασμένες εκδόσεις που υπογραμμίζουν την πρόοδο από την ενδιάμεση συνεδρίαση (τα πρότυπα των διαφανειών θα παρασχεθούν εν ευθέτω χρόνω).

Προθεσμία	Δείκτης	Μεθοδολογία	Πηγή δεδομένων	Ανάληψη ευθυνών	Παραδοτέο
8/5/2017	7 ολοκληρωμένα LCTP + επικαιροποιημένες λεπτομερείς εκθέσεις στα αγγλικά/πλήρως μεταφρασμένες εκδοχές	Συλλογή ολοκληρωμένων LCTPs+ επικαιροποιημένες λεπτομερείς εκθέσεις στα αγγλικά/πλήρως μεταφρασμένες εκδοχές	Εταίροι έργου	Εταίροι έργου στο CIRCE/AREA	Συλλογή των PPTs

- Ιούλιος 2018 – Τα LCTP οριστικοποιούνται και αξιολογούνται:
    - Η αξιολόγηση των LCTP ολοκληρώνεται (πακέτο αξιολόγησης: πρότυπα ποιότητας και διαδικασίες από REAK);
    - 21 σπονδυλωτά πακέτα;

→ Όλα τα παραδοτέα θα συγκεντρωθούν στην έκθεση αξιολόγησης των 7 LCTP.

Προθεσμία	Δείκτης	Μεθοδολογία	Πηγή δεδομένων	Ανάληψη ευθυνών	Παραδοτέο
31/07/2018	7 LCTP οριστικοποιούνται και αξιολογούνται	7 εκθέσεις αξιολόγησης	Εταίροι έργου	Εταίροι έργου στο CIRCE/AREA	Έκθεση για την αξιολόγηση των 7 LCTP

2.5.1.2 Παρακολουθώντας την εφαρμογή του LCTP

Βάσει του σχεδίου εργασίας (δράσεις, δείκτες, χρονοδιαγράμματα) που αναπτύσσονται σύμφωνα με τις κατευθυντήριες γραμμές που περιγράφονται στην παράγραφο 3.4.3, θα πρέπει να αναπτυχθεί ένα σχέδιο παρακολούθησης, το οποίο περιλαμβάνει λεπτομερείς οδηγίες για την εποπτεία της εφαρμογής, με σκοπό τον έλεγχο της έγκαιρης επίτευξης των στόχων εντός των καθορισμένων προθεσμιών, μετρώντας τις επιδόσεις, χρησιμοποιώντας το επιλεγμένο σύνολο δεικτών. Τα κύρια στοιχεία είναι και πάλι: χρονοδιάγραμμα και προθεσμίες, δείκτες, μεθοδολογία συλλογής και επεξεργασίας δεδομένων, πηγές δεδομένων, ανάληψη ευθυνών ή ορισμός των ευθυνών.

Για να είναι αποτελεσματική η χρήση των πόρων και για να είναι αποτελεσματικό στη χρήση το LCTP, είναι σημαντικό να ευθυγραμμιστούν με τα πιο σημαντικά σχέδια που επηρεάζουν την κυκλοφορία και την κινητικότητα στην πόλη (τυπικά ένα SUMP, ένα SEAP, ένα σχέδιο κυκλοφορίας, σχέδια ανάπτυξης πόλεων κ.λπ.). Δεδομένου ότι τα σχέδια αυτά είναι πιθανό να έχουν δικό τους σχέδιο παρακολούθησης, συνιστάται η εναρμόνιση των δράσεων παρακολούθησης, προκειμένου να επιτευχθούν συνέργειες και οικονομίες κλίμακας. Από την άποψη αυτή, ο ορισμός των ορόσημων των LCTP και ο γενικός χρόνος των ενεργειών θα ενισχύσει τη σκοπιμότητα και την εφαρμογή τους, εάν ευθυγραμμίζονται σε γενικές γραμμές με τις δράσεις και τα μέτρα που περιλαμβάνονται στα άλλα σχέδια αναφοράς.

Οι δείκτες που έχουν επιλεγεί για τη μέτρηση των επιδόσεων κατά την υλοποίηση των δράσεων που περιλαμβάνονται στο σχέδιο εργασίας πρέπει να είναι SMART (ειδικοί, μετρήσιμοι, εφικτοί, σχετικοί και χρονικά δεσμευμένοι). Κατά συνέπεια, το σχέδιο εργασίας καθορίζει χρονοδιαγράμματα για την παρακολούθηση της επίτευξης των στόχων και παρέχει δείκτες και πηγές δεδομένων. Οι πηγές δεδομένων και οι μεθοδολογίες που χρησιμοποιούνται για τον προσδιορισμό της ανάλυσης του πλαισίου (παράγραφος 3.2.1) θα πρέπει να χρησιμοποιηθούν όσο το δυνατόν περισσότερο και κατά τη διάρκεια των εργασιών παρακολούθησης ώστε να επιτρέψουν τη δυνατή σύγκριση και να διευκολύνουν τη μέτρηση.

Κατά τον ορισμό του σχεδίου παρακολούθησης, είναι σκόπιμο να οριστεί ένα πρόσωπο που θα είναι υπεύθυνο για τη διαχείριση της διαδικασίας. Σε μια ομάδα παρακολούθησης που λογοδοτεί στον υπεύθυνο παρακολούθησης, διαφορετικά άτομα μπορούν να συνεισφέρουν με δεδομένα και πληροφορίες. Τα μέλη της ομάδας μπορούν να περιλαμβάνουν εκπροσώπους διαφόρων τμημάτων εντός του φορέα που εφαρμόζει το LCTP (τοπική αρχή, λιμενική αρχή) και εταίρους που έχουν αναγνωριστεί σε άλλα ιδρύματα και οργανισμούς, οι οποίοι είναι σε θέση να παρέχουν υποστήριξη στη συλλογή και επεξεργασία δεδομένων. Μετά την αξιολόγηση της απόδοσης, πρέπει να πραγματοποιηθεί ανασκόπηση των στόχων και των χρονοδιαγραμμάτων και να εκπονηθούν και να συμφωνηθούν διορθωτικές ενέργειες, προσαρμόζοντας αναλόγως το σχέδιο εργασίας.

Ολοκληρωμένο σχέδιο εργασίας με προθεσμίες και αρμοδιότητες

Κύριος στόχος 1							
Συγκεκριμένος στόχος 1.1	Έναρξη/ προθεσμία	Παραδοτέα	Δείκτες	Πηγή πληρο-φορίας	Αρμοδιότητα για παρακολού-θηση	Πρόγραμμα παρακολού-θησης	Περιγραφή και μεθοδολογία
						(Ορόσημα)	
Δράση 1.1.1	Έναρξη/ προθεσμία	Παραδοτέα	Δείκτες	Πηγή πληρο-φορίας	Αρμοδιότητα για παρακολού-θηση	Πρόγραμμα παρακολού-θησης	Περιγραφή και μεθοδολογία
						(Ορόσημα)	
Δράση 1.1.2	Έναρξη/ προθεσμία	Παραδοτέα	Δείκτες	Πηγή πληρο-φορίας	Αρμοδιότητα για παρακολού-θηση	Πρόγραμμα παρακολού-θησης	Περιγραφή και μεθοδολογία
						(Ορόσημα)	

Gantt με προθεσμία και ορόσημα

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Main goal 1																								
Specific goal 1.1																								
Action 1.1.1				●					●			●												
Action 1.1.2		●					●											●						
● = milestone																								

2.5.2 Χρηματοδότηση

Χωρίς μια σωστή εκτίμηση των οικονομικών πόρων που απαιτούνται για να προχωρήσουμε από τον προγραμματισμό στην πράξη, κάθε σχέδιο, ανεξάρτητα από το πόσο καλά σχεδιασμένο, παραμένει ένα «βιβλίο ονείρων». Ο καθορισμός της πηγής της χρηματοδότηση αποτελεί βασικό στοιχείο του σχεδίου εργασίας και πρέπει να δηλώνεται από κάθε δράση, προσδιορίζοντας μια εκτίμηση των απαραίτητων πόρων και των πιθανών πηγών.

Η Koprivnica προώθησε το πρώτο δημόσιο δίκτυο χρέωσης ηλεκτρικών αυτοκινήτων της Κροατίας και κοινόχρηστο σύστημα χρήσης ηλεκτρονικών αυτοκινήτων, το οποίο επιτεύχθηκε μέσω της συνδυασμένης υποστήριξης ενός χρηματοδοτούμενου από την ΕΕ σχεδίου αστικής κινητικότητας και χρηματοδοτήθηκε από ένα κροατικό εθνικό ταμείο και ένα πρόγραμμα ηλεκτροκίνησης. Αυτή η συνέργεια αποδείχθηκε ωφέλιμη για όλα τα μέρη. Για την πόλη, το αρχικό κόστος ήταν σημαντικά χαμηλότερο λόγω της εξωτερικής χρηματοδοτικής συνεισφοράς. Από την άλλη πλευρά, για αυτούς τους εταίρους δόθηκε η ευκαιρία να δοκιμάσουν νέες λύσεις και να συμβάλουν στην επίτευξη των δικών τους στόχων μέσω της εφαρμογής καινοτόμων τεχνολογιών. Το εθνικό περιβαλλοντικό ταμείο κατέβαλε τα συστήματα χρέωσης και πρόσθετα κονδύλια δόθηκαν επίσης από το έργο CIVITAS DYN@MO. Επίσης, μέσω της παρακολούθησης και της αξιολόγησης του έργου θα συγκεντρωθούν πολύτιμα δεδομένα για αυτούς τους εταίρους και μελλοντικούς χρήστες. Επιπλέον, το σύστημα θεωρείται ιδιαίτερα μεταβιβάσιμο www.eltis.org/discover/case-studies

Οι πόροι μπορούν να διατεθούν, εν μέρει ή εξ ολοκλήρου, για παράδειγμα, από:

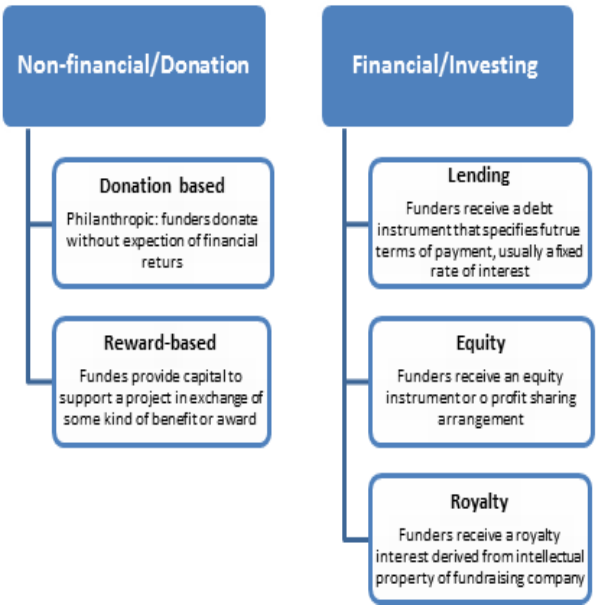
- τον φορέα που σχεδιάζει το σχέδιο μέσω του προϋπολογισμού του
- τους εξωτερικούς χορηγούς βοήθειας σε ευρωπαϊκό, εθνικό, περιφερειακό και τοπικό επίπεδο
- τα ανακυκλούμενα κεφάλαια, αρχικά δημόσια, αργότερα καθίστανται αυτοσυντηρούμενα
- τη δημόσια στήριξη για τη μόχλευση της εμπορικής χρηματοδότησης.
- Την εμπορική χρηματοδότηση (δάνεια από τράπεζες, δημοτικά ομόλογα)
- ένα μείγμα των προαναφερθέντων μέτρων.

Επιπλέον, οι καινοτόμες ευκαιρίες χρηματοδότησης περιλαμβάνουν:

Συλλογική χρηματοδότηση (Crowd funding): η πρακτική χρηματοδότησης ενός έργου ή μιας επιχείρησης με την αύξηση των χρηματικών συνεισφορών από ένα μεγάλο αριθμό ανθρώπων. Υπάρχουν πολλά είδη μοντέλων συλλογικής χρηματοδότησης, τα οποία μπορούν να ομαδοποιηθούν σε δύο κατηγορίες:

- Χρηματοπιστωτικές υπηρεσίες ή δωρεές συλλογικής χρηματοδότησης, όπου οι συνεισφορές των ιδιωτών δεν συνδέονται με οικονομική απόδοση.
- Οικονομική ή επενδυτική συγκέντρωση, όπου πωλούνται χρηματοπιστωτικά μέσα σε σχέση με τα περιουσιακά στοιχεία των εταιρειών ή/και τις οικονομικές επιδόσεις.

Το σχήμα δείχνει μια επισκόπηση των μεγάλων μοντέλων συλλογικής χρηματοδότησης



Σύμπραξη δημόσιου-ιδιωτικού τομέα (ΣΔΙΤ): ένα μοντέλο χρηματοδότησης για ένα έργο δημόσιας υποδομής, όπου ο ιδιωτικός εταίρος μπορεί να είναι ιδιωτική επιχείρηση, δημόσια επιχείρηση ή κοινοπραξία επιχειρήσεων με συγκεκριμένο τομέα εμπειρογνωμοσύνης. Διαφορετικά μοντέλα χρηματοδότησης ΣΔΙΤ χαρακτηρίζονται από το ποιος εταίρος είναι κύριος και είναι υπεύθυνος για τη διατήρηση περιουσιακών στοιχείων σε διάφορα στάδια του έργου. Παραδείγματα μοντέλων ΣΔΙΤ περιλαμβάνουν:

- Design-Build (DB): Ο εταίρος του ιδιωτικού τομέα σχεδιάζει και κατασκευάζει την υποδομή για να ικανοποιήσει τις προδιαγραφές του εταίρου του δημόσιου τομέα, συχνά για μια σταθερή τιμή. Ο εταίρος του ιδιωτικού τομέα αναλαμβάνει κάθε κίνδυνο.
- Σύμβαση λειτουργίας και συντήρησης (Ο & Μ): Ο εταίρος του ιδιωτικού τομέα, με σύμβαση, εκμεταλλεύεται ένα δημόσιο περιουσιακό στοιχείο για συγκεκριμένο χρονικό διάστημα. Ο δημόσιος εταίρος διατηρεί την κυριότητα των περιουσιακών στοιχείων.
- Design-Build-Finance-Operate (DBFO): Ο εταίρος του ιδιωτικού τομέα σχεδιάζει, χρηματοδοτεί και κατασκευάζει μια νέα συνιστώσα υποδομής και την εκμεταλλεύεται/διατηρεί με μακροχρόνια μίσθωση. Ο εταίρος του ιδιωτικού τομέα μεταβιβάζει τη συνιστώσα της υποδομής στον εταίρο του δημόσιου τομέα όταν η μίσθωση είναι επάνω.
- Build-Own-Operate (BOO): Ο εταίρος του ιδιωτικού τομέα χρηματοδοτεί, κατασκευάζει, κατέχει και εκμεταλλεύεται το στοιχείο της υποδομής σε διαρκή βάση. Οι περιορισμοί του εταίρου του δημόσιου τομέα αναφέρονται στην αρχική συμφωνία και μέσω της τρέχουσας ρυθμιστικής αρχής.
- Δημιουργία-Own-Operate-Transfer (BOOT): Ο εταίρος του ιδιωτικού τομέα λαμβάνει άδεια για τη χρηματοδότηση, το σχεδιασμό, την κατασκευή και τη λειτουργία μιας συνιστώσας υποδομής (και την χρέωση τελών χρήσης) για συγκεκριμένο χρονικό διάστημα, μετά το πέρας του οποίου η ιδιοκτησία μεταφέρεται ξανά στον εταίρο του δημόσιου τομέα.
- Buy-Build-Operate (BBO): Αυτό το δημόσιο περιουσιακό στοιχείο μεταβιβάζεται νομίμως σε έναν εταίρο του ιδιωτικού τομέα για μια καθορισμένη χρονική περίοδο.
- Μεταβίβαση-εκμίσθωση-λειτουργία-μεταφορά (BLOT): Ο εταίρος του ιδιωτικού τομέα σχεδιάζει, χρηματοδοτεί και χτίζει μια εγκατάσταση σε μισθωμένες δημόσιες εκτάσεις. Ο εταίρος του ιδιωτικού τομέα εκμεταλλεύεται τη διευκόλυνση για τη διάρκεια της μίσθωσης γης. Όταν λήξει η μίσθωση, τα περιουσιακά στοιχεία μεταφέρονται στον εταίρο του δημόσιου τομέα.
- Μόνο χρηματοδότηση: Ο εταίρος του ιδιωτικού τομέα, συνήθως μια εταιρεία χρηματοπιστωτικών υπηρεσιών, χρηματοδοτεί το στοιχείο της υποδομής και χρεώνει το συμφέρον του δημόσιου εταίρου για τη χρήση των κεφαλαίων.

Προϋπολογισμός που συνδέεται με κάθε δράση στο σχέδιο εργασίας

Δράση 1.1.1	Έναρξη/ προθεσμία		Cost Category					
			Προσωπικό	*Περιγραφή*	Προσωπικό με ανάθεση	*Περιγραφή*	Επενδύσεις	*Περιγραφή*
		Σύνολα						
		Πηγή χρηματο-δότησης						

Το δίκτυο Morgenstadt στοχεύει στην επιτάχυνση της παγκόσμιας μετάβασης σε αειφόρα αστικά συστήματα. Η πρωταρχική αποστολή του Δικτύου είναι να εντοπίσει, να συλλάβει, να ξεκινήσει και να υλοποιήσει πιλοτικά προγράμματα και παρουσιαζόμενα έργα για βιώσιμες αστικές λύσεις σε πόλεις της Γερμανίας και σε όλο τον κόσμο. Η εταιρεία Fraunhofer δρα ως συσσωρευτής μεταξύ των αναπτυξιακών αναγκών των πόλεων εταίρων και των λύσεων που προσφέρονται από τη βιομηχανία και τις επιχειρήσεις. Από το 2014, το δίκτυο Morgenstadt ξεκίνησε 18 έργα καινοτομίας που χρηματοδοτούνται κυρίως από το δημόσιο, συνολικού όγκου 82 εκατ. ευρώ. www.morgenstadt.de/en/city-of-the-future.html

3. Εργαλεία και τεχνικές

Αστική κινητικότητα

- Urban Mobility Package (EU)
- The urban mobility observatory
- SUMP guidelines
- CIVITAS: cleaner and better transport in cities
- CIVITAS Guide for the Urban Transport Professional
- European platform on mobility management

Κλιματική αλλαγή

- Climate Action: transport
- Covenant of Mayors for Climate and Energy
- Planning for Adaptation to Climate Change
- Guide To Community Energy Strategic Planning

Εμπλοκή ενδιαφερομένων & συμμετοχικές τεχνικές

CIVITAS:

- Involving Stakeholders: Toolkit on Organizing Successful Consultations
- Citizens' involvement in planning
- The use of social media for participatory processes
- Co-deciding with Citizens: Towards Digital Democracy at EU Level (ECAS)
- e-Participation Best Practice Manual (EU)

Χρηματοδότηση

- CIVITAS EU financing opportunities for urban mobility
- Guidelines for successful Public – Private – Partnership (EU)
- Resource Book on PPP Studies (EU)

Ανάπτυξη έργου

- Project cycle management and logical framework approach (EU)
- The guide to the LFA approach (Republic of Serbia, EU Integration Office)

4. Αναφορές

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VIII. LOCATIONS Leaflet in Greek

https://locations.interreg-med.eu

Interreg Mediterranean LOCATIONS

LOCATIONS

Τα σχέδια μεταφορών χαμηλού ανθρακικού αποτυπώματος θα επιφέρουν πολλαπλά πλεονεκτήματα:

ΕΝΙΣΧΥΜΕΝΗ ΚΙΝΗΤΙΚΌΤΗΤΑ ΚΑΙ ΠΡΟΣΒΑΣΙΜΟΤΗΤΑ

- Μειωμένη κυκλοφοριακή κίνηση και μεγαλύτερές ροές στην αστική κινητικότητα
- Ισορροπημένη ανάπτυξη και ενσωμάτωση διαφορετικών τρόπων μεταφοράς
- Καλύτερη χρήση των αστικών χώρων και των υπαρχόντων υποδομών και υπηρεσιών μεταφοράς

ΒΕΛΤΙΩΜΕΝΗ ΕΜΠΕΙΡΙΑ ΤΩΝ ΕΠΙΒΑΤΩΝ ΚΡΟΥΑΖΙΕΡΑΣ

- Βελτιστοποίηση της ροής των επιβατών κρουαζιέρας
- Πιο ασφαλές και άνετο περιβάλλον του λιμένα και των τερματικών σταθμών
- Υψηλότερη ποιότητα αειφόρων υπηρεσιων (π.χ. εκόρομες χαμηλου ανθρακικού αποτυπώματος)

ΠΡΟΣΤΑΣΙΑ ΤΟΥ ΠΕΡΙΒΑΛΛΟΝΤΟΣ ΚΑΙ ΤΗΣ ΥΓΕΙΑΣ

- Μειωμένη ρύπανση ατμόσφαιρας/ηχορύπανση και κατανάλωση ενέργειας
- Αειφόρος εκμετάλλευση των φυσικών πόρων
- Βελτίωση της ευημερίας και της ποιότητας ζωής των πολιτών

ΕΝΙΣΧΥΜΕΝΗ ΚΟΙΝΩΝΙΚΟ-ΟΙΚΟΝΟΜΙΚΗ ΕΞΕΛΙΞΗ ΚΑΙ ΑΝΑΠΤΥΞΗ

- Αύξηση της συνολικής ελκυστικότητας της περιοχής
- Ενθάρρυνση νέων επενδύσεων και αυξημένων επιχειρηματικών δυνατοτήτων
- Αυξημένες δυνατότητες για νέες υπηρεσίες και θέσεις εργασίας

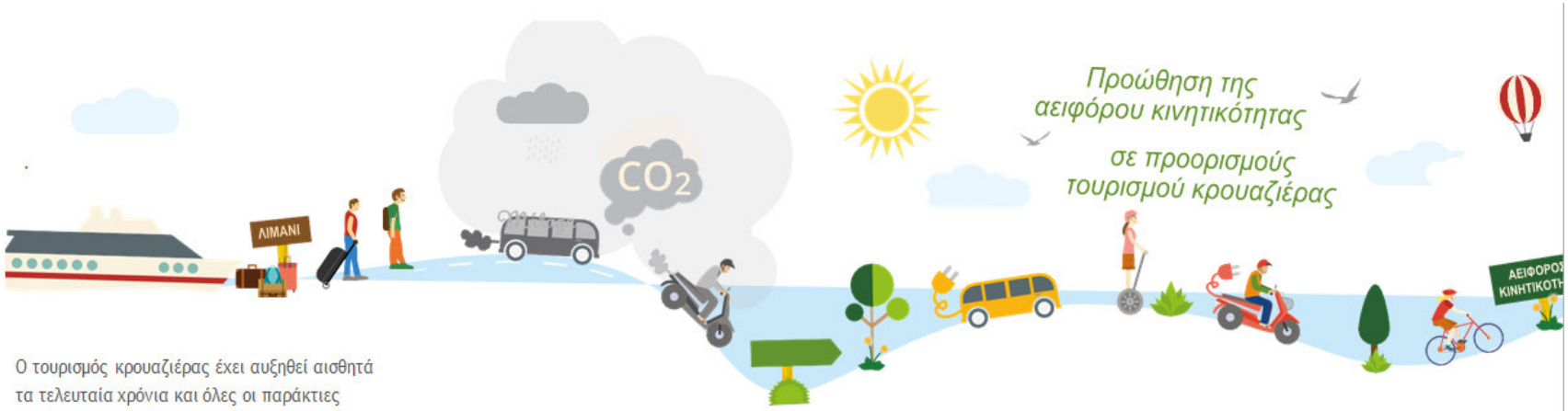
ΕΤΑΙΡΟΙ ΤΟΥ ΕΡΓΟΥ

AREA SCIENCE PARK - Επικεφαλής Εταίρος
Albanian Institute of Transport
CIRCE - Research Centre for Energy Resources and Consumption
City of Zadar
Durres Port Authority
Lisbon City Council
LISBOA E-NOVA
Málagaport
Municipality of Ravenna
Port of Rijeka Authority
Port System Authority of the Eastern Adriatic Sea
Regional Energy Agency Kvarner

Το Πρόγραμμα συγχρηματοδοτείται από το Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης

Dedalo srl - Trieste

Προώθηση της οικολογικής κινητικότητας σε προορισμούς κρουαζιέρας



Ο τουρισμός κρουαζιέρας έχει αυξηθεί αισθητά τα τελευταία χρόνια και όλες οι παράκτιες περιοχές της Μεσογείου είναι διατεθειμένες να αντλήσουν οφέλη όσον αφορά την οικονομική εξέλιξη, την ανάπτυξη, τη φήμη και την αναγνώριση.

Οι πόλεις -προορισμοί κρουαζιέρας βρίσκονται αντιμέτωπες με δύο αντικρουόμενες ανάγκες: την ανάγκη αύξησης των κερδών και των οικονομικών πλεονεκτημάτων, με την παράλληλη μείωση των αρνητικών επιπτώσεων, οι οποίες επηρεάζουν το φυσικό περιβάλλον και την αστική κινητικότητα, με τον συνεπαγόμενο αντίκτυπο στην πολιτιστική κληρονομιά και στη ζωή των τοπικών κοινοτήτων.

LOCATIONS

Low Carbon Transport in Cruise Destinations Cities

Το έργο LOCATIONS έχει ως σκοπό να συμβάλει στην αποσυμφόρηση της κίνησης και τη μείωση των ρυπογόνων εκπομπών στις πόλεις - προορισμούς κρουαζιέρας, μέσω ευρείας χρήσης πρωτοποριακών και αειφόρων λύσεων μεταφοράς, βελτιώνοντας με αυτόν τον τρόπο την ποιότητα ζωής των κατοίκων και των επιβατών και αυξάνοντας την ελκυστικότητα των λιμανιών για τους επαγγελματίες της κρουαζιέρας.

Διεθνής συνεργασία και τοπική δράση: μέσω της συγχώνευσης υψηλής σχετικής τεχνογνωσίας, δεξιοτήτων και εμπειρίας.

Με την ιδρυματική τους ιδιότητα και την βαθιά γνώση των τοπικών και τομεακών πλαισίων, οι εταίροι του LOCATIONS θα αναπτύξουν ένα τυποποιημένο, διεθνικό, εύκολα αναπαραγόμενο λειτουργικό μοντέλο, ικανό να αναδείξει την εξειδίκευση κάθε περιοχής.
Οι ενδιαφερόμενοι φορείς 7 πόλεων-λιμένων: Λισαβόνα, Μάλαγα, Ραβέννα, Τεργέστη, Ριέκα, Ζαντάρ και Δυρράχιο, θα υποστηρίξουν τη διαδικασία λήψης αποφάσεων της τοπικής αειφόρου κινητικότητας και των εργαλείων μεταφορών για να απαντήσουν στις ανάγκες αειφόρων διασυνδέσεων μεταξύ των λιμένων και των πόλεων.

Τα σχέδια μεταφορών χαμηλού ανθρακικού αποτυπώματος τα οποία συγκεντρώνουν προσαρμοσμένα μέτρα για τη βελτίωση της αειφόρου κινητικότητας των ανθρώπων και των αγαθών που σχετίζονται με τις ροές κρουαζιέρας θα ενσωματωθούν σε τοπικά ρυθμιστικά πλαίσια για την αύξηση της ελκυστικότητας και της βιωσιμότητας των πόλεων. Ειδικά αναγνωρισμένα μέτρα θα ελεγχθούν και θα υλοποιηθούν μέσω πιλοτικών δράσεων, ενώ θα αναγνωριστούν επιπλέον επενδυτικοί πόροι για την υλοποίηση των σχεδίων, προκειμένου να διασφαλιστεί η περαιτέρω επένδυση σε αυτόν τον τομέα.

IX. Video Subtitles Greek Translation

Όλες οι παραθαλάσσιες πόλεις έχουν το κοινό γνώρισμα να βλέπουν κόσμο να έρχεται και να φεύγει. Η θάλασσα είναι και ένα μέσο επικοινωνίας. Μέσω θαλάσσης ταξιδεύουν άτομα και εμπορεύματα, και τα λιμάνια γίνονται σημεία επαφής. Δεν υπάρχει μέρα που να μην μου τύχει να στραφώ και να δω μια ιδιαίτερη γωνιά που δεν είχα δει ποτέ ή που μου είχε διαφύγει και να εντυπωσιαστώ από την άπλετη ομορφιά της. Η επαφή με τη θάλασσα είναι πάντα παρούσα. Για μια πόλη, η υποδοχή ομάδων τουριστών προσφέρει σημαντικές ευκαιρίες αλλά μερικές φορές αποτελεί επίσης αιτία άγχους. Κατά τη γνώμη μας, το πρωταρχικό πρόβλημα είναι η υλικοτεχνική υποστήριξη και η κυκλοφοριακή συμφόρηση. Όταν χιλιάδες επιβατών αποβιβάζονται ταυτόχρονα από το καράβι, προκαλείται συνωστισμός λεωφορείων και ταξί. Χρειάζονται στρατηγικές που να μπορούν να εξισορροπήσουν τις αρνητικές επιπτώσεις με τις ευκαιρίες που δημιουργεί ο τουρισμός κρουαζιέρας. Το οικολογικό ζήτημα είναι ουσιώδους σημασίας. Πρέπει να επιλέξουμε μια προσέγγιση αειφόρου ανάπτυξης. Το LOCATIONS είναι ένα έργο για την αειφορία. Το πρώτο βήμα για την αντιμετώπιση του προβλήματος είναι η ανάπτυξη ενός σχεδίου μεταφοράς χαμηλού ανθρακικού αποτυπώματος. Το έργο προωθεί μια συμμετοχική διαδικασία σε κάθε μία από τις 7 πόλεις που λαμβάνουν μέρος σε αυτό. Μπορούμε να βρούμε μια λύση την οποία οι άλλες πόλεις που λαμβάνουν μέρος δεν έχουν σκεφτεί να μοιραστούν με τις άλλες και αντίστροφα. Η δυνατότητα της αναπαραγωγής με συστηματικό τρόπο των τεχνολογιών υπό δοκιμή στις πόλεις αυτές αποτελεί ευκαιρία επένδυσης στην ανάπτυξη του έργου. Πιστεύω ότι οι νέες γενιές έχουν ήδη μια πεποίθηση πιο δυνατή από ό,τι η δική μας γενιά. Η γνώμη μου είναι πως είμαστε εμείς που χρειαζόμαστε να εκπαιδευτούμε, περισσότερο από τους σημερινούς νέους. Οραματίζομαι πόλεις καλύτερα προσαρμοσμένες στις ανάγκες των πεζών και πιο ενεργά μέσα μεταφοράς, περισσότερο κόσμο στους δρόμους παρά μέσα σε κλειστούς χώρους. Μένει μόνο να τις κληρονομήσουμε κάποιες βασικές μεθοδολογικές γνώσεις αλλά περιέχουν ήδη μέσα τους όλα όσα χρειάζονται για να καθορίσουν μια θετική επιδίωξη και ευγενείς στόχους για να την πετύχουν. Προσωπικά, θα ήθελα να δω τις συνοικίες να διατηρούν την ταυτότητά τους και να βρουν μια καλή ισορροπία ανάμεσα στον τουρισμό και την καθημερινή ζωή. Πρέπει να βρούμε έναν τρόπο για να διαφυλάξουμε την ταυτότητα του κάθε τόπου.

1. Tutte le città di mare 2. hanno come caratteristica 3. quella di vedere arrivare e partire delle persone. 4. Il mare è anche 5. un mezzo di comunicazione. 6. Attraverso il mare viaggiano le persone e le merci 7. e i porti diventano un punto di contatto. 8. Non c'è giorno in cui 9. non mi capiti di voltarmi e vedere un angolo particolare 10. che non avevo mai visto o che mi era sfuggito 11. e stupirmi di quanto bello è. 12. Un contatto con il mare è sempre presente. 13. Per una città, accogliere gruppi di turisti	1. Όλες οι παραθαλάσσιες πόλεις 2. έχουν το κοινό γνώρισμα 3. να βλέπουν κόσμο να έρχεται και να φεύγει. 4. Η θάλασσα είναι και 5. ένα μέσο επικοινωνίας. 6. Μέσω θαλάσσης ταξιδεύουν άτομα και εμπορεύματα 7. και τα λιμάνια γίνονται σημεία επαφής. 8. Δεν υπάρχει μέρα που 9. να μην μου τύχει να στραφώ και να δω μια ιδιαίτερη γωνιά 10. που δεν είχα δει ποτέ ή που μου είχε διαφύγει 11. και να εντυπωσιαστώ από την άπλετη ομορφιά της. 12. Η επαφή με τη θάλασσα είναι πάντα παρούσα. 13. Για μια πόλη, η υποδοχή τουριστικών γκρουπ 14. προσφέρει σημαντικές ευκαιρίες 15. αλλά μερικές φορές αποτελεί επίσης αιτία άγχους. 16. Κατά τη γνώμη μας, το πρωταρχικό πρόβλημα

14. è una grande opportunità 15. ma talvolta anche causa di stress. 16. Il problema principale a nostro modo di vedere 17. riguarda la logistica e il traffico. 18. Quando migliaia di passeggeri sbarcano in contemporanea dalla nave 19. autobus e taxi si accalcano. 20. C'è bisogno di strategie in grado di 21. bilanciare gli impatti negativi 22. con le opportunità create 23. dal turismo crocieristico. 24. La questione ecologica è fondamentale. 25. Dobbiamo scegliere un approccio di sviluppo sostenibile. 26. LOCATIONS è un progetto sulla sostenibilità. 27. Il primo passo per affrontare il problema 28. è sviluppare un piano di trasporto a basse emissioni di carbonio. 29. Il progetto promuove un processo partecipativo 30. in ciascuna delle 7 città coinvolte nel progetto. 31. Possiamo trovare una soluzione cui le altre città coinvolte non hanno pensato 32. condividerla con loro e viceversa. 33. La possibilità di replicare in modo standardizzato 34. le tecnologie testate in queste città 35. è un'opportunità per capitalizzare 36. quanto sviluppato dal progetto. 37. Io credo che le nuove generazioni abbiano già 38. una convinzione molto maggiore della nostra generazione. 39. Secondo me siamo più noi da educare che le giovani generazioni. 40. Immagino città più a misura di pedoni 41. e mezzi di trasporto più attivi, 42. più gente sulle strade invece che all'interno di spazi chiusi. 43. Basta lasciargli una piccola eredità in termini metodologici 44. ma hanno già dentro di loro quello che serve 45. per avere un buon traguardo e dei buoni obiettivi. 46. Mi piacerebbe che i quartieri mantenessero la loro identità 47. e che si trovasse un buon equilibrio tra	17. είναι η υλικοτεχνική υποστήριξη και η κυκλοφοριακή συμφόρηση. 18. Όταν χιλιάδες επιβατών αποβιβάζονται ταυτόχρονα από το καράβι 19. προκαλείται συνωστισμός λεωφορείων και ταξί. 20. Χρειάζονται στρατηγικές που να μπορούν να 21. εξισορροπήσουν τις αρνητικές επιπτώσεις 22. με τις ευκαιρίες που δημιουργεί 23. ο τουρισμός κρουαζιέρας. 24. Το οικολογικό ζήτημα είναι ουσιώδους σημασίας. 25. Πρέπει να επιλέξουμε μια προσέγγιση αειφόρου ανάπτυξης. 26. Το LOCATIONS είναι ένα έργο για την αειφορία. 27. Το πρώτο βήμα για την αντιμετώπιση του προβλήματος 28. είναι η ανάπτυξη ενός σχεδίου μεταφοράς χαμηλού ανθρακικού αποτυπώματος. 29. Το έργο προωθεί μια συμμετοχική διαδικασία 30. σε κάθε μία από τις 7 πόλεις που λαμβάνουν μέρος σε αυτό. 31. Μπορούμε να βρούμε μια λύση την οποία οι άλλες πόλεις που λαμβάνουν μέρος δεν έχουν σκεφτεί, 32. να την μοιραστούμε μαζί με αυτές και αντίστροφα. 33. Η δυνατότητα της αναπαραγωγής με συστηματικό τρόπο 34. των τεχνολογιών υπό δοκιμή στις πόλεις αυτές 35. αποτελεί ευκαιρία επένδυσης 36. στην ανάπτυξη του έργου. 37. Πιστεύω ότι οι νέες γενιές έχουν ήδη 38. μια πεποίθηση πιο δυνατή από ό,τι η δική μας γενιά. 39. Η γνώμη μου είναι πως είμαστε εμείς που χρειαζόμαστε να εκπαιδευτούμε, περισσότερο από τους σημερινούς νέους. 40. Οραματίζομαι πόλεις καλύτερα προσαρμοσμένες στις ανάγκες των πεζών 41. και πιο ενεργά μέσα μεταφοράς, 42. περισσότερο κόσμο στους δρόμους παρά μέσα σε κλειστούς χώρους. 43. Μένει μόνο να τις κληρονομήσουμε κάποιες βασικές μεθοδολογικές γνώσεις 44. αλλά περιέχουν ήδη μέσα τους όλα όσα χρειάζονται 45. για να καθορίσουν μια θετική επιδίωξη και ευγενείς στόχους για να την πετύχουν. 46. Προσωπικά, θα ήθελα να δω τις συνοικίες να διατηρούν την ταυτότητά τους 47. και να βρεθεί μια καλή ισορροπία ανάμεσα στον τουρισμό 48. και την καθημερινή ζωή. 49. Πρέπει να βρούμε έναν τρόπο για να διαφυλάξουμε την ταυτότητα του κάθε τόπου.

turismo 48. e vita quotidiana. 49. Dobbiamo trovare un modo per salvaguardare l'identità dei luoghi.	

Αυτό το έργο χρηματοδοτήθηκε με την στήριξη του Προγράμματος Interreg MED 2014-2020. Η ευθύνη για το περιεχόμενο του βίντεο αυτού ανήκει στους δημιουργούς. Το βίντεο δεν αντιπροσωπεύει απαραίτητα την γνώμη της Ευρωπαϊκής Ένωσης. Ούτε το Πρόγραμμα Interreg MED 2014-2020, ούτε η Ευρωπαϊκή Ένωση είναι υπεύθυνοι για την ενδεχόμενη χρήση των πληροφοριών που περιέχει. Το βίντεο αυτό δεν αποτελεί εμπορικό προϊόν. Μπορεί να διανεμηθεί ελεύθερα υπό την προϋπόθεση ότι γίνεται μνεία του έργου, των δημιουργών και της συμβολής του Προγράμματος Interreg MED 2014-2020.

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Ευχαριστούμε το Ίδρυμα Εκδηλώσεων Ραβέννας (Fondazione Ravenna Manifestazioni) και το Ravenna Festival για τις εικόνες που μας παραχώρησαν.

ΥΠΟΤΙΤΛΟΙ
Υπεύθυνος Γραφείου Σχεδιασμού και Διαχείρισης Έργων - AREA Science Park
Υπεύθυνος Προγραμματισμού Κινητικότητας και Mobility Manager Περιοχής - Δήμος Ραβέννας
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Project Manager - Λισαβόνα E-Nova
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Υπεύθυνος Προγραμματισμού Κινητικότητας - Δήμος Λισαβόνας
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ΟΝΟΜΑΤΑ ΠΟΛΕΩΝ
Επτά πόλεις-εταίροι: Ζαντάρ, Τεργέστη, Δυρράχιο, Λισαβόνα, Ριέκα, Μάλαγα, Ραβέννα

ΕΡΓΟ LOCATIONS
Έργο Locations - Προώθηση της αειφόρου κινητικότητας σε προορισμούς κρουαζιέρας

LCTP
LCTP – Σχέδια Μεταφορών Χαμηλού Ανθρακικού Αποτυπώματος

X. LOCATIONS Modular Packages Greek Translation

Interreg Mediterranean LOCATIONS

Project co-financed by the European Regional Development Fund

ΠΡΟΓΡΑΜΜΑ LOCATIONS

ΣΥΝΟΛΟ ΑΡΘΡΩΤΩΝ ΠΑΚΕΤΩΝ ΓΙΑ ΤΗΝ ΕΝΘΑΡΡΥΝΣΗ ΤΗΣ ΑΝΤΙΓΡΑΦΗΣ ΚΑΙ ΕΦΑΡΜΟΓΗΣ ΤΟΥΣ

Το παρόν έγγραφο έχει δημιουργηθεί από το Area Science Park, στα πλαίσια του προγράμματος "LOCATIONS – Μεταφορές Χαμηλού Ανθρακικού Αποτυπώματος σε Πόλεις – Προορισμούς Κρουαζιέρας», το οποίο συγχρηματοδοτείται από το Interreg MED Programme.

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ΠΕΡΙΛΗΨΗ

ΕΙΣΑΓΩΓΗ

Η βιομηχανία κρουαζιέρας αναμένεται να αυξηθεί σταθερά κατά τα επόμενα χρόνια, υπερβαίνοντας τα 25 εκατομμύρια επιβάτες παγκοσμίως. Ένας αυξανόμενος αριθμός ανθρώπων θα επιλέγει να ταξιδεύει μέσω θαλάσσης τη νύχτα, να ξυπνάει κάθε μέρα σε ένα νέο λιμάνι και να περνάει μερικές ώρες στην ακτή για να εξερευνήσει τους προορισμούς και να βιώσει τα σημεία ενδιαφέροντος τους. Η αύξηση στην κυκλοφορία κρουαζιέρας επηρεάζει επίσης τους προορισμούς από οικονομικής σκοπιάς, δεδομένου ότι κάθε επιβάτης κρουαζιέρας ξοδεύει κατά μέσο όρο 70 ευρώ προς όφελος της περιοχής και της ανάπτυξής της. Οι προορισμοί, εντούτοις, βρίσκονται αντιμέτωποι με φαινομενικά συγκρουόμενες ανάγκες: την αύξηση κερδών που συνδέονται με τις κρουαζιέρες, διατηρώντας παράλληλα τους φυσικούς και πολιτιστικούς πόρους που είναι απαραίτητοι για την ελκυστικότητα των προορισμών, τους οποίους η βιομηχανία κρουαζιέρας σταδιακά θα αναλώσει και θα μολύνει, εάν δεν προταθεί και δεν ενθαρρυνθεί από κοινού κάποια αλλαγή.

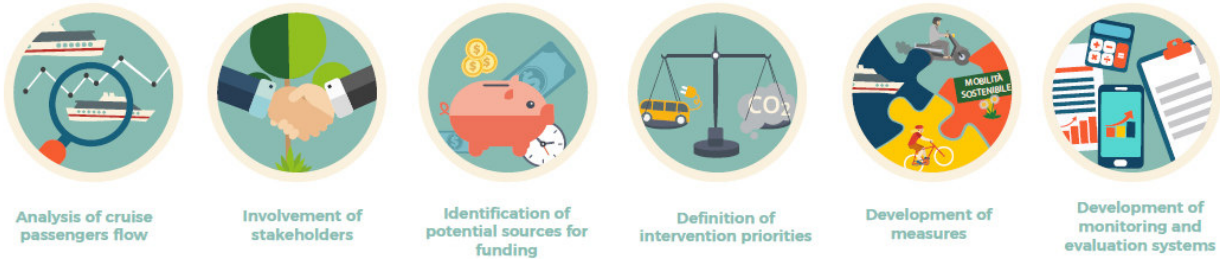
Ένας πιο ευσυνείδητος τουρισμός κρουαζιέρας μπορεί να καλλιεργηθεί από τις αρμόδιες αρχές και τους τοπικούς ιθύνοντες, για να βελτιώσει σταθερά την εμπειρία των επιβατών, τόσο στο επάκτια, όσο και εν πλω, χωρίς να θέσει σε κίνδυνο τα τοπικά φυσικά και πολιτιστικά αγαθά.

Η ΠΡΟΣΕΓΓΙΣΗ ΤΟΥ LOCATIONS

Το **LOCATIONS – Μεταφορές χαμηλού ανθρακικού αποτυπώματος σε πόλεις – προορισμούς κρουαζιέρας** (Low - carbon Transport in Cruise Destination Cities) είναι ένα MED-ETC πρόγραμμα, διάρκειας 36 μηνών, που αντιμετωπίζει το ζήτημα των αρνητικών εκροών που παράγονται από τους επιβάτες κρουαζιέρας και τις ροές των εμπορευμάτων στο έδαφος, στα τοπικά μέσα μεταφοράς, και ιδιαίτερα τις εκπομπές άνθρακα, τόσο στα λιμάνια προέλευσης όσο και στα λιμάνια - ενδιάμεσους σταθμούς. Η λύση που προτείνεται από το Locations είναι η ανάπτυξη Σχεδίων Μεταφορών Χαμηλού Ανθρακικού Αποτυπώματος (**Low Carbon Transport Plans - LCTP**), δηλαδή, ειδικά τομεακά σχέδια που εστιάζουν σε συγκεκριμένους επιβάτες και ροές εμπορευμάτων που παράγονται από τον τουρισμό κρουαζιέρας, τα οποία μπορούν να αναπτυχθούν στο ευρύτερο πλαίσιο άλλων τοπικών στρατηγικών χωρικών σχεδίων, ενέργειας και μεταφοράς/κινητικότητας.

Το πρόγραμμα στηρίζεται σε 3 κύριους πυλώνες:

- ένα ισχυρό τοπικό δίκτυο από θεσμικούς παράγοντες (π.χ. τοπικές αρχές, λιμενικές αρχές, περιφερειακή/νομαρχιακή αρχή) που συνενώνουν τις δυνάμεις τους για να αντιμετωπίσει το ζήτημα σε μια συντονισμένη προσπάθεια
- αποτελεσματική συμμετοχή και συζήτηση, η οποία συμπεριλαμβάνει τους τοπικούς παράγοντες, τις κοινότητες επιχειρηματιών, τους φορείς παροχής υπηρεσιών, τις επιχειρήσεις κρουαζιέρας, τους επιβάτες κ.τ.λ.
- μία κοινή λειτουργική μεθοδολογία, η οποία βασίζεται στην προσέγγιση που χρησιμοποιείται για την ανάπτυξη των Σχεδίων Βιώσιμης Αστικής Κινητικότητας, για να καθοδηγήσει τους τοπικούς φορείς στην ανάπτυξη των δικού τους LCTP.



Εικόνα 2 LOCATIONS λειτουργική μεθοδολογία

Το LOCATIONS αναπτύσσεται σε δύο κύρια στάδια: 1) ανάπτυξη μεθοδολογίας και έλεγχος 2) κεφαλαιοποίηση και αναπαραγωγή.

Κατά τη διάρκεια του σταδίου 1, ένα αξιόπιστο λειτουργικό μοντέλο, το οποίο έχει αναπτυχθεί από κοινού από μία κοινοπραξία τεχνικών εταίρων, τοπικών και λιμενικών αρχών από 5 MED-ETC χώρες (Ιταλία, Ισπανία, Πορτογαλία, Κροατία, Αλβανία), χρησιμοποιείται για να παράγει μία σειρά από 7 LCTP σε όσο το δυνατόν περισσότερες πόλεις που αποτελούν προορισμούς κρουαζιέρας (Τεργέστη και Ραβέννα, Μάλαγα, Λισαβόνα, Ριέκα και Ζαντάρ, Δυρράχιο).

Το στάδιο 2 έχει μια διπλή εστίαση. Από την μια πλευρά, υποστηρίζει την εφαρμογή των LCTP σε τοπικό επίπεδο, διερευνώντας τις δυσκολίες που ανακύπτουν και εντοπίζοντας κατάλληλες επιλογές, οι οποίες συχνά συμπεριλαμβάνουν χρηματοδοτικές λύσεις. Από την άλλη πλευρά, πυροδοτεί μια διαδικασία αντιγραφής και εφαρμογής για την ανάπτυξη νέων LCTP, κεφαλαιοποιώντας την εμπειρία και τα υλικά που αναπτύχθηκαν κατά το στάδιο ελέγχου. Νέες πόλεις προορισμού κρουαζιέρας κατάλληλες να αναπαράγουν την ανάπτυξη LCTP θα επιλεγούν στις χώρες των εταίρων του προγράμματος, βάσει των επιβατών που σχετίζονται με την κρουαζιέρα και των ροών των εμπορευμάτων που επηρεάζουν την περιοχή και των σχετικών αντίκτυπων σε τοπικά συστήματα μεταφοράς, καθώς επίσης και βάσει της διαθεσιμότητας ενός ισχυρού τοπικού δικτύου φορέων που θα δεσμεύονται και θα είναι έτοιμοι να στηρίξουν τη διαδικασία. Επιπλέον, μέσω των διαδικασιών αναπαραγωγής, η μεθοδολογία του LOCATIONS θα ελεγχθεί περαιτέρω και θα εφαρμοστεί σε ένα ευρύτερο φάσμα συγκεκριμένων τοπικών πλαισίων, καθιστώντας την άμεσα πιο αξιόπιστη και ευέλικτη να προσαρμοστεί στις συνεχώς εξελισσόμενες τοπικές συνθήκες.

ΑΡΘΡΩΤΑ ΠΑΚΕΤΑ LOCATIONS

Για να διευκολυνθεί η αναπαραγωγή και η μεταφορά της προσέγγισης του LOCATIONS σε νέες περιοχές και χώρες της MED και ακόμα παραπέρα, δημιουργείται μία σειρά αρθρωτών πακέτων, που περιγράφουν τεχνικά μέτρα και λύσεις που περιλαμβάνονται στα 7 σχέδια χαμηλού ανθρακικού αποτυπώματος που παράχθηκαν στο πλαίσιο του έργου, προκειμένου κατά τρόπο που να γίνουν εύκολα στη χρήση, ως σημείο αναφοράς στην παραγωγή νέων LCTP, που θα συμπληρώνονται από πρακτικές οδηγίες και προτάσεις από την προηγούμενη εφαρμογή των LCTP. Τέτοια αρθρωτά πακέτα αντιπροσωπεύουν ένα είδος καταλόγου δυνατών αναπαραγόμενων δράσεων οι οποίες θα μπορούσαν να προσαρμοστούν σε τοπικό πλαίσιο από τοπικές αρχές, στη δημιουργία των δικών τους LCTP.

Συνολικά, περισσότερες από 40 μετρήσεις LOCATIONS ελήφθησαν υπόψη ως σημείο εκκίνησης για την ανάπτυξη των αρθρωτών πακέτων. Ανάλογα με τον στόχο κάθε μέτρησης, ταξινομήθηκαν σε 9 διαφορετικές κατηγορίες και σε 14 αρθρωτά πακέτα, ως ακολούθως:

Υβριδικά, καθαρά και ηλεκτρικά οχήματα	**Ηλεκτρική κινητικότητα για προορισμούς κρουαζιέρας**
	Κοινές λύσης κινητικότητας για προορισμούς κρουαζιέρας
	CNG και LNG λύσεις για προορισμούς κρουαζιέρας
	Θαλάσσια μεταφορά χαμηλού ανθρακικού αποτυπώματος
Προσβασιμότητα λιμένων	Βελτίωση της προσβασιμότητας λιμένων
Προσβασιμότητα	Διαχείριση κυκλοφοριακών και λεωφορειακών ροών σε προορισμούς κρουαζιέρας
	Βιώσιμες λύσεις για άτομα με μειωμένη κινητικότητα
Διατροπικότητα	Ενίσχυση της διατροπικότητας των επιβατών
Εισιτήρια και τιμολόγια	Ενσωματωμένη κάρτα τουρίστα

Βελτίωση/υπηρεσίες ποδηλασίας και πεζοπορίας	Βελτίωση των διαθέσιμων διαδρομών πεζοπορίας για τους επιβάτες κρουαζιέρας
	Βελτίωση των ποδηλατικών διαδρομών για τους επιβάτες κρουαζιέρας
Διαχείριση πρόσβασης και οδική τιμολόγηση	Ζώνες χαμηλών εκπομπών και συστήματα χρέωσης συμφόρησης
Διαχείριση στάθμευσης/κοστολόγηση	Βελτίωση της διαχείρισης στάθμευσης
Πληροφορίες σε πραγματικό χρόνο και χρήστες των οδών	Λύσεις ΤΠΕ και συστήματα καθοδήγησης των επιβατών κρουαζιέρας

Ατομικές μετρήσεις που προβλέφθηκαν και αναφέρθηκαν στα 7 LOCATIONS LCTP περιλαμβάνονται σε κάθε αρθρωτό πακέτο ως περιπτώσεις μελέτης, οι οποίες παρέχουν περισσότερες πληροφορίες αναφορικά με το πώς μπορεί να υλοποιηθεί η μέτρηση σε κάθε δοθέν πλαίσιο, έπειτα από υποχρεωτικές λόγω πλαισίου προσαρμογές. Μόλις μορφοποιηθούν, συντεθούν σε νέα σχέδια και υλοποιηθούν, τα αρθρωτά πακέτα συνεισφέρουν στον απώτερο στόχο της μείωσης του επάκτιου περιβαλλοντικού αποτυπώματος των κρουαζιέρων. Η αυξανόμενη ενεργειακή αποτελεσματικότητα στις μεταφορές και η μειούμενη εξάρτηση από τα ορυκτά καύσιμα άνθρακα, μαζί με μειωμένη κυκλοφοριακή συμφόρηση και ελαχιστοποίηση των επιβλαβών εκπομπών, επιτρέπουν στους προορισμούς κρουαζιέρας να διατηρήσουν τους τοπικούς πόρους και να βελτιώσουν την προσβασιμότητα και την ποιότητα ζωής των κατοίκων και των επισκεπτών.

Για την εκπλήρωση τέτοιων στόχων, τα αρθρωτά πακέτα συνεισφέρουν μέγιστα στο να επιτευχθούν οι επιδιώξεις και οι δείκτες άλλων στρατηγικών, χωρικών, ενεργειακών πλάνων μεταφοράς/κινητικότητας, όπως τα SEAP/SECAP και τα ΣΒΑΚ, ανοίγοντας το δρόμο για μια διαρκή χωρική βελτίωση, την ανάπτυξη μίας οικονομίας χαμηλού ανθρακικού αποτυπώματος και την επιδίωξη των στόχων της Ε.Ε. 2020.

1.ΗΛΕΚΤΡΙΚΗ ΚΙΝΗΤΙΚΟΤΗΤΑ ΓΙΑ ΠΡΟΟΡΙΣΜΟΥΣ ΚΡΟΥΑΖΙΕΡΑΣ

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Οι προορισμοί κρουαζιέρας αντιμετωπίζουν δύο ανταγωνιστικές ανάγκες: την αύξηση των κερδών που σχετίζονται με τις κρουαζιέρες και άλλες θετικές απολαβές, με την παράλληλη άμβλυνση του αρνητικού αντίκτυπου που ασκείται στους προορισμούς κρουαζιέρας, ο οποίος επηρεάζει το φυσικό περιβάλλον και την αστική κινητικότητα. Ο εξηλεκτρισμός της κινητικότητας αποτελεί ένα κεντρικό υποστηρικτικό εργαλείο των φιλοδοξιών των πόλεων – προορισμών κρουαζιέρας και παρέχει στους σχετικούς με την κρουαζιέρα χρήστες κινητικότητα πιο οικονομική, πιο ασφαλή και περισσότερο οικολογικά εναλλακτική.

Για να γίνουν τα ηλεκτρικά οχήματα πραγματικότητα σε προορισμούς κρουαζιέρας, τα Δημοτικά Συμβούλια και οι Λιμενικές Αρχές πρέπει να συνεργαστούν υπό ένα ευρύτερο πλάνο ηλεκτρικής κινητικότητας που θα είναι σε θέση να προάγει την ηλεκτρική κινητικότητα δια μέσου των εγκαταστάσεων της πόλης και του λιμανιού, επιτρέποντας στους επιβάτες και τους μεταφορείς να επιστρέψουν σε καθαρούς τρόπους μεταφοράς.

Όσον αφορά την περιοχή λιμένων, συστήνεται μια σταδιακή μετατόπιση προς τη χρήση των ηλεκτρικών οχημάτων και στην αντικατάσταση του στόλου των λιμένων (αυτοκίνητα, ελαφριά φορτηγά, φορτηγά εργασίας, μοτοσικλέτες). Τα λεωφορεία που μεταφέρουν τους επιβάτες μεταξύ της εισόδου και των τερματικών σταθμών, θα πρέπει να αντικατασταθούν με έναν παρόμοιο τύπο οχήματος, αλλά τα αυτοκίνητα ή οι μοτοσικλέτες που χρησιμοποιούνται για τη μεταφορά του

προσωπικού λιμένων μεταξύ των εγκαταστάσεων λιμένων και των διαφόρων μονάδων μπορούν να αντικατασταθούν με προσωπικούς μεταφορείς, όπως, ηλεκτρικά ποδήλατα, μοτοποδήλατα ταχυτήτων ή μοτοποδήλατα στα οποία ισορροπεί κανείς.

Όπου η μεταφορά των επιβατών κρουαζιέρας στην πόλη λαμβάνεται υπόψη, πρέπει να γίνεται διάκριση μεταξύ του λιμένα-ενδιάμεσου προορισμού και του λιμένα προέλευσης. Στον πρώτο, η υπηρεσία μεταφοράς θα πρέπει να περιορίζεται στα ηλεκτρικά οχήματα που συνδέουν τον τερματικό σταθμό με ένα ή περισσότερα στρατηγικού ενδιαφέροντος σημεία της πόλης ή των περιχώρων της, ενώ στους λιμένες προέλευσης, τέτοιες υπηρεσίες πρέπει να ενισχύονται με ηλεκτρικά οχήματα που να συνδέουν τον τερματικό σταθμό με τους κύριους τοπικούς τερματικούς σταθμούς μεταφορών και τους βοηθητικούς κόμβους, όπου οι επιβάτες κρουαζιέρας φθάνουν και αναχωρούν. Σε κάθε μια περίπτωση, τα ηλεκτρικά λεωφορεία, τα λεωφορεία και τα ταξί λαμβάνονται υπόψη, ενώ οι επιλογές και οι δομές ενοικίασης ηλεκτρικών αυτοκινήτων και ηλεκτρικών ποδηλάτων μπορούν να υποστηρίξουν τον προορισμό στην ανάπτυξη μιας ανεξάρτητης κινητικότητας μεταξύ των επιβατών κρουαζιέρας κατά την επίσκεψη σε κύρια σημεία έλξης της πόλης και των περιχώρων της. Σε μια τέτοια περίπτωση, ένας συγκεκριμένος αριθμός οχημάτων πρέπει να εξασφαλιστεί σε ένα καθορισμένο διάστημα στάθμευσης πλησίον του επιβατικού τερματικού σταθμού.

Μια σαφής μετάβαση στα ηλεκτρικά οχήματα μπορεί να υποστηριχθεί από την ανάπτυξη ενός κατάλληλου δικτύου υποδομής για φόρτιση, σε συνδυασμό με βελτιωμένη τεχνολογίας αποθήκευσης. Καθορισμένα σημεία στάθμευσης και φόρτισης αφορούν κανονικά αντικείμενο διαπραγματεύσεων με τον Δήμο, ενώ οι κατάλληλοι τοπικοί, περιφερειακοί και εθνικοί κανονισμοί ενεργούν ως σημαντικοί μοχλοί για την επιτυχία του εγχειρήματος.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Προοδευτική αντικατάσταση των επιχειρισιακών δομών του στόλου του λιμένος από την Λιμενική Αρχή.

Προώθηση της αγοράς ηλεκτρικών οχημάτων σε άτομα, επιχειρήσεις και ιδρύματα κοντά στο λιμάνι.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

Αυξημένη δυνατότητα στους τουρίστες κρουαζιέρας να προσεγγίσουν τα σημαντικά ελκυστικά ιστορικά κέντρα της περιοχής.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μείωση των εκπομπών αερίων του θερμοκηπίου και των περιβαλλοντικών επιπτώσεων

Αύξηση της ενεργειακής απόδοσης στις μεταφορές

Βελτίωση της ποιότητας ζωής στις πόλεις όσον αφορά τη μείωση της ρύπανσης και του θορύβου

Αυξημένη χρήση ανανεώσιμης ενέργειας που παράγεται σε τοπικό επίπεδο

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Αυτή η δράση πρέπει να λογίζεται ως τμήμα ενός μεγαλύτερου σχεδίου για την προώθηση της ηλεκτρικής κινητικότητας σε ολόκληρη την πόλη και τα ποσοστά επιτυχίας είναι συνδυασμός δύο κύριων παραγόντων, του δημοτικού συμβουλίου και των λιμενικών αρχών. Από τη στιγμή που οι

στόχοι οριοθετηθούν σαφώς, θα πρέπει να αναζητηθούν πηγές χρηματοδότησης σε εθνικό και διεθνές επίπεδο. Το σχέδιο/έργο μπορεί να υποβληθεί για χρηματοδότηση σε τοπικά, εθνικά ή ευρωπαϊκά προγράμματα που έχουν ως στόχο να ενθαρρύνουν τη μείωση της κλιματικής αλλαγής, την απομάκρυνση από την οικονομία του άνθρακα ή την ενσωμάτωση της ηλεκτρικής κινητικότητας σε αστικά περιβάλλοντα. Δημόσιες-ιδιωτικές συμπράξεις μπορούν επίσης να αποβούν ελκυστικές στην ανάπτυξη του σχεδίου/προγράμματος του λιμένα.

Για κάθε συγκεκριμένο έργο που περιλαμβάνεται στο σχέδιο, η αρμόδια Αρχή για την υλοποίηση πρέπει να ξεκινήσει διαδικασίες προμηθειών (για παράδειγμα, την έναρξη δημόσιου διαγωνισμού). Ο φορέας που παρέχει την υπηρεσία μπορεί να αναπτύξει ένα σχήμα και να επωφεληθεί από προνόμια που παρέχονται από το συμβούλιο.

Μια στρατηγική για την προώθηση της χρήσης των ηλεκτρικών οχημάτων είναι να δοθούν κίνητρα στους πράκτορες που προβαίνουν σε αλλαγές από οχήματα εσωτερικής καύσης σε ηλεκτρικά οχήματα ή διαφορετικά ο περιορισμός της πρόσβασης σε μερικές περιοχές υπέρ των ηλεκτρικών οχημάτων. Οι δύο στρατηγικές μπορούν να συνδυαστούν: για παράδειγμα, οι πράκτορες μπορεί να πληροφορηθούν ότι στη διάρκεια 2-5 ετών, κάποιες περιοχές θα είναι προσιτές μόνο στα ηλεκτρικά οχήματα, αλλά συγχρόνως να τους χορηγούνται κάποια οικονομικά κίνητρα για την αγορά ηλεκτρικών οχημάτων.

Έπειτα, η υλοποίηση μπορεί να πραγματοποιηθεί σταδιακά. Θα πρέπει να γίνεται αξιολόγηση των μέτρων σε τακτική βάση, προκειμένου να διασφαλιστεί ότι η απόδοση στην κινητικότητα δεν έχει αρνητικές επιπτώσεις.

Θα πρέπει να προβλεφθεί κάποια εκπαίδευση για τη διαχείριση του ηλεκτρικού στόλου και των ηλεκτρικών αυτοκινήτων.

ΕΠΕΝΔΥΣΗ €€€

Η αντικατάσταση των υφιστάμενων στόλων, καθώς και η δημιουργία ειδικών χώρων στάθμευσης και υποδομών φόρτισης απαιτεί μεγάλη επένδυση.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Προωθώντας τη χρήση ηλεκτρικών οχημάτων σε όλο το λιμάνι

Οι υπηρεσίες που παρέχει η λιμενική αρχή, όπως η φόρτωση/εκφόρτωση των αποσκευών και η συλλογή αποβλήτων με τη χρήση οχημάτων, θα πρέπει να συμμορφώνονται με αυτόν τον στόχο. Απαιτούνται επενδύσεις τόσο για την απόκτηση ηλεκτρικών οχημάτων (συμπεριλαμβανομένων αυτών των μεταφορών προσωπικού) όσο και για την εγκατάσταση υποδομών φόρτισης, σταθμών και ειδικών χώρων στάθμευσης διαμέσου του λιμένα. Επιπλέον, θα πρέπει να παρασχεθούν κίνητρα σε ιδιωτικές εταιρίες που λειτουργούν εντός του λιμένα, προκειμένου να υποστηριχθεί η μετάβασή τους στην ηλεκτρική κινητικότητα. Το μέτρο αυτό υποστηρίζει τον στόχο της πόλης να καταστήσει την ηλεκτρική κινητικότητα μια πραγματικότητα. Αντί να είναι μια απομονωμένη πρωτοβουλία, η εισαγωγή της ηλεκτρικής

κινητικότητας σε επίπεδο λιμένος υποστηρίζεται από και υποστηρίζει παρόμοιες δράσεις στην πόλη. Συγκεκριμένα, για τους επιβάτες κρουαζιέρας, αυτή η πρωτοβουλία προσφέρει μια επιλογή για «καθαρή» μετακίνηση μέσα στο λιμάνι (μεταξύ των τερματικών σταθμών και της πύλης του λιμανιού), ως συμπλήρωμα άλλων πρωτοβουλιών που εγγυώνται αειφόρο κινητικότητα μεταξύ του λιμένα και της πόλης.

Δημιουργία υπηρεσίας ενοικίασης ηλεκτρονικών ποδηλάτων στον τερματικό σταθμό κρουαζιέρας και στον τερματικό σταθμό των φέριμποτ.

Στο Δυρράχιο θα δημιουργηθεί υπηρεσία ανταλλαγής/ενοικίασης ηλεκτρονικών ποδηλάτων, με στόχο τη σημαντική βελτίωση της κινητικότητας στο Δυρράχιο καθώς και την προώθηση της ενεργητικής κινητικότητας μεταξύ των επιβατών κρουαζιέρας και των τουριστών. Θα δημιουργηθούν δύο σταθμοί κοινόχρηστων/ενοικιαζόμενων ηλεκτρονικών ποδηλάτων στις πύλες του λιμανιού, οι οποίοι θα είναι αμφότεροι κοντά στον τερματικό σταθμό των κρουαζιερόπλοιων και φέριμποτ, ενώ 400 ηλεκτρονικά ποδήλατα προβλέπεται να εξυπηρετούν την πόλη του Δυρραχίου και θα δημιουργηθούν 20 θέσεις σε διαφορετικές τοποθεσίες της πόλης.

Επέκταση των υπηρεσιών ηλεκτρικών ταξί στον τερματικό σταθμό κρουαζιέρας και στον τερματικό σταθμό των φέριμποτ.

Το μέτρο αυτό ορίζει τη δημιουργία δύο επιπλέον σταθμών ηλεκτρικών ταξί στον τερματικό σταθμό επιβατών του λιμένα του Δυρραχίου: ένας κοντά στη διαδρομή των πεζών μέχρι τον σιδηροδρομικό σταθμό και ο άλλος σταθμός στην κύρια πύλη του λιμανιού κοντά στον τερματικό σταθμό των κρουαζιερόπλοιων, παρέχοντας στους επιβάτες κρουαζιέρας έναν διαφορετικό και πιο «καθαρό» τρόπο μεταφοράς. 20 ηλεκτρικά ταξί προβλέπεται να εξυπηρετήσουν επιπρόσθετα το Δυρράχιο.

Το κρίσιμο σημείο εφαρμογής αυτού του μέτρου είναι η δέσμευση των τοπικών αρχών, της Λιμενικής Αρχής και των Αλβανικών Σιδηροδρόμων, ώστε να καταλήξουν σε συμφωνία σχετικά με τους αναγκαίους χώρους για το ηλεκτρικό ταξί κοντά στους τερματικούς σταθμούς.

Εγκατάσταση υπηρεσίας ηλεκτροκίνητου λεωφορείου από τον τερματικό σταθμό κρουαζιέρας και τον τερματικό σταθμό των φέριμποτ στις τοπικές τουριστικές περιοχές

Στο Δυρράχιο θα οργανωθεί υπηρεσία μεταφοράς με ηλεκτρικό λεωφορείο, τόσο από τον τερματικό σταθμό κρουαζιέρας όσο και από τον τερματικό σταθμό των φέριμποτ προς τις κύριες τοπικές τουριστικές περιοχές. Η υπηρεσία θα χωριστεί σε δύο μέρη και θα συνδέσει διαφορετικούς τρόπους μεταφοράς, προκειμένου να μειωθούν οι εκπομπές αερίων του θερμοκηπίου και να προσφερθούν διαφορετικοί προορισμοί στους επιβάτες κρουαζιέρας. Πρώτα, η Λιμενική Αρχή θα προσφέρει δωρεάν υπηρεσία μικρού ηλεκτροκίνητου λεωφορείου για τη σύνδεση τόσο του τερματικού σταθμού κρουαζιέρας όσο και του τερματικού σταθμού των

φέριμποτ με τον σιδηροδρομικό σταθμό. Σε δεύτερο επίπεδο, τέσσερις φορές την ημέρα, ένα ηλεκτροκίνητο λεωφορείο θα οδηγεί τους επιβάτες κρουαζιέρας και τους τουρίστες από το σιδηροδρομικό σταθμό στο κορυφαίο αξιοθέατο του Κάστρου μέσα στην Περιφέρεια του Δυρραχίου.

Το μέτρο αυτό προβλέπει την αγορά 2 ηλεκτροκίνητων λεωφορείων (> 40 θέσεων), 3 μικρών ηλεκτροκίνητων λεωφορείων (<20 θέσεων) καθώς και την εγκατάσταση του αντίστοιχου εξοπλισμού φόρτισης.

Εισαγωγή ηλεκτρικών μοτοποδήλατων με σταθμούς φόρτισης

Η ιδέα είναι να δημιουργηθεί ένας σταθμός ηλεκτρικών σκούτερ με σημεία φόρτισης στον τερματικό σταθμό επιβατών καθώς και σε άλλα σημεία της πόλης. Στόχος είναι να προσφερθεί στους επιβάτες κρουαζιέρας η επιλογή να χρησιμοποιούν απλά μέσα προσωπικής μεταφοράς δύο ατόμων, για αποστάσεις έως και 10 χλμ. από το σημείο ενοικίασης. Από τεχνική άποψη, σε σύγκριση με άλλα οχήματα μεταφοράς επιβατών κρουαζιέρας, το ηλεκτρικό μοτοποδήλατο είναι ένα μέσο μεταφοράς το οποίο ένας μέσος οδηγός μπορεί να μάθει να οδηγεί γρήγορα ενώ απαιτείται ελάχιστος εξοπλισμός και εκπαίδευση για την οδήγηση μέσα σε κυκλοφορία. Με το μοτοποδήλατο, είναι δυνατόν να φτάσει κανείς σε οποιοδήποτε σημείο της πόλης σε σύντομο χρονικό διάστημα, ειδικά σε μέρη με πανοραμική θέα στην πόλη και τον κόλπο του Kvarner, καθώς και στις πλησιέστερες παραλίες. Προβλέπονται δύο παραλλαγές της εφαρμογής αυτού του μέτρου: (1) με σταθερή μπαταρία ανά μοτοποδήλατο και δύο σταθμούς επαναφόρτισης με δύο συνδέσεις και (2) με μπαταρία που αντικαθίσταται στο μοτοποδήλατο σε έναν σταθμό επαναφόρτισης και μια μονάδα φόρτισης 30 μπαταριών.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Insight 13 - E-mobility: From strategy to legislation
- CIVITAS Insight 19 - E-mobility: Make it happen through SUMPs
- CIVITAS Insight 20 – Cities' role in introducing clean vehicles and using alternative fuels
- European Alternative Fuel Observatory
- PRESTO project (Intelligent Energy Europe Programme) - Cycling Policy Guide
- FREVUE project: main publications
- ZeEUS eBus: Report An overview of electric buses in Europe
- Case of Barcelona (Spain)
- Case of Iasi (Romania)

2. ΛΥΣΕΙΣ ΚΙΝΗΤΙΚΟΤΗΤΑΣ ΚΟΙΝΗΣ ΧΡΗΣΗΣ ΓΙΑ ΠΡΟΟΡΙΣΜΟΥΣ ΚΡΟΥΑΖΙΕΡΑΣ

ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Οι επιβάτες κρουαζιέρας που φθάνουν σε ένα λιμάνι-ενδιάμεσο σταθμό και είναι πρόθυμοι να φύγουν από το πλοίο έχουν δύο κύριες επιλογές: να καταφύγουν σε εκδρομές που διοργανώνονται από την εταιρία της κρουαζιέρας ή/και που αγοράζονται επί τόπου ή να πραγματοποιήσουν επίσκεψη στην πόλη/περιοχή, την οποία μπορούν να οργανώσουν ανεξάρτητα. Στην τελευταία περίπτωση, οι επιβάτες κρουαζιέρας μπορεί να αποφασίσουν να χρησιμοποιήσουν κάποια από τις κοινής χρήσης λύσεις κινητικότητας ανάλογα με τις ειδικές ανάγκες και προτιμήσεις τους.

Οι υπηρεσίες ενοικίασης προέρχονται συνήθως από ιδιωτικές πρωτοβουλίες, οι οποίες οδηγούν στην εισαγωγή και λειτουργία συστημάτων ενοικίασης/διανομής ποδηλάτων, ηλεκτρικών αυτοκινήτων και προσωπικών ηλεκτρικών μεταφορέων (PTV), όπως ηλεκτρικά ποδήλατα, σκούτερ, σκούτερ ώθησης, αυτοκινούμενα σκούτερ κ.λπ., για τους επιβάτες κρουαζιέρας και τους επισκέπτες γενικά.

Ωστόσο, η δημιουργία υπηρεσιών κοινής χρήσης/ενοικίασης για τους χρήστες των πόλεων εν γένει και τους επισκέπτες ειδικότερα, μπορεί εύκολα να οδηγήσει σε διαμάχες, όπου συνιστάται η συμμετοχή τόσο των δημόσιων όσο και των ιδιωτικών φορέων, προκειμένου διευκολυνθούν οι πρωτοβουλίες και η αμοιβαία αναγνώριση μεταξύ των φορέων εκμετάλλευσης και των ιδρυμάτων.

Θα μπορούσε να επιδιωχθεί συναίνεση μεταξύ εμπλεκόμενων μερών μέσω εταιρικών σχέσεων δημόσιου-ιδιωτικού τομέα, οι οποίες λειτουργούν με διττό στόχο: αύξηση της χρήσης προσωπικών

ηλεκτρικών μεταφορέων (PTV) για προορισμούς μεσαίων αποστάσεων και ηλεκτρικών αυτοκινήτων για προορισμούς μεγάλων αποστάσεων, θεσπίζοντας παράλληλα σαφείς κανόνες για ασφαλή και υπεύθυνη μεταφορά.

Από τη μια πλευρά, τα ηλεκτρικά οχήματα θα πρέπει να προωθηθούν ως εναλλακτική λύση για την κινητικότητα των επισκεπτών έναντι άλλων μέσων μεταφοράς που βασίζονται σε ορυκτά καύσιμα. Εκτός αυτού, τα ποδήλατα, τα PTV και τα ηλεκτρονικά αυτοκίνητα προσφέρουν έναν ευέλικτο, καθαρό και μηχανοκίνητο τρόπο μετακίνησης, επαρκή για το περιορισμένο χρονικό διάστημα που ταξιδεύουν οι επιβάτες κρουαζιέρας σε μια πόλη. Τα λειτουργικά συστήματα μπορούν να έχουν έδρα σταθμούς (από σημείο σε σημείο) ή ελεύθερα (με δυνατότητα παραλαβής και επιστροφής οχημάτων οπουδήποτε εντός της επιχειρησιακής περιοχής, η οποία προτιμάται σε αστικό περιβάλλον).

Από την άλλη πλευρά, οι ιδιωτικές εταιρείες που προσφέρουν αυτές τις υπηρεσίες ενδέχεται να τις διαφημίζουν ή να τις πωλούν μέσω υφιστάμενων οδών δημοσιότητας, όπως οι τουριστικές κάρτες, οι εφαρμογές και οι ιστότοποι. Μπορούν να αναζητηθούν περαιτέρω συνεργασίες με ταξιδιωτικά γραφεία και ακτοπλοϊκές εταιρίες για άμεση προώθηση τους πριν από την άφιξη. Επίσης, μπορούν να οργανωθούν ξεναγήσεις με τη χρήση του PTV παρά με λεωφορεία και αυτό είναι ήδη κοινό σε αρκετούς τουριστικούς προορισμούς. Οι εταιρείες ενοικίασης/κοινής χρήσης μπορούν επίσης να επωφεληθούν από το μειωμένο κόστος ενοικίασης εμπορικών χώρων στο λιμάνι, επιτρέποντας την άμεση πρόσβαση στους επιβάτες.

Τέλος, πρέπει να καταβληθούν επιπλέον προσπάθειες για τη θέσπιση σαφών κανόνων μεταφοράς και για τον καθορισμό μιας κατάλληλης υποδομής φόρτισης, ως βασικούς παράγοντες για την επιτυχία αυτών των οχημάτων. Ορισμένες συσκευές PTV είναι σε θέση να επιτύχουν υψηλές ταχύτητες, αυξάνοντας το επίπεδο κινδύνου για τους χρήστες και τα άτομα σε δημόσιους χώρους. Πρέπει να εφαρμόζονται υποχρεωτικοί εξοπλισμοί ατομικής προστασίας, περιορισμός περιοχών, όρια ταχύτητας και απαιτήσεις στάθμευσης κοντά στα αξιοθέατα της πόλης. Υπάρχει ανάγκη για σταθμούς φόρτισης (αργή/γρήγορη φόρτιση) και ειδικές θέσεις στάθμευσης. Αυτό κανονικά αποτελεί το αντικείμενο διαπραγματεύσεων με το δήμο ή/και τις επιχειρήσεις κοινής ωφελείας.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

- Αυξημένος αριθμός επιβατών κρουαζιέρας και τουριστών με ασφαλή χρήση ηλεκτρικού PTV ενοικιαζόμενου /κοινόχρηστου.
- Μειωμένος αριθμός ιδιωτικών αυτοκινήτων σε αστικές περιοχές, τοσο προερχόμενων από ξένους όσο και αυτών που ανοίκουν στους κατοίκους.
- Μειωμένη περιβαλλοντική και ηχητική ρύπανση.
- Αυξημένη δυνατότητα για τους πολίτες, τις επιχειρήσεις και τα ιδρύματα να αγοράζουν / εκμισθώνουν ηλεκτρονικά οχήματα.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

- Ελαχιστοποιημένες τουριστικές εμπειρίες με βάση το αυτοκίνητο.
- Αυξημένη χρήση των PTV από τους κατοίκους.
- Μειωμένη ανάγκη χώρων στάθμευσης (ανακατανομή γης).
- Αυξημένα μέτρα ασφαλείας για όλους τους χρήστες της πόλης.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Τα δημοτικά συμβούλια μπορούν να αρχίσουν προωθώντας την ανάπτυξη συστημάτων ηλεκτρικού αυτοκινήτου, PTV ή συστημάτων κοινόχρηστων ποδηλάτων για να επιτύχουν τους δικούς τους στόχους αστικής κινητικότητας και μείωσης της κλιματικής αλλαγής. Ο σχεδιασμός και η λειτουργία αυτών των συστημάτων θα μπορούσε να αποφασιστεί μέσω πρόσκλησης υποβολής προσφορών. Ωστόσο, οι πρωτοβουλίες ενδέχεται να προέρχονται επίσης απευθείας από ιδιωτικούς ή μη κερδοσκοπικούς οργανισμούς και να μπορούν να υλοποιηθούν σε συνύπαρξη με δημόσιες δομές. Σε αυτήν την περίπτωση, οι δημόσιες αρχές πρέπει να αξιολογήσουν προσεκτικά τη διάθεση πολλών συστημάτων που προσφέρουν παρόμοιες υπηρεσίες. Το δημοτικό συμβούλιο θα πρέπει να συντονίζει τις διάφορες ενδιαφερόμενες ομάδες να αρχίσουν διαπραγματεύσεις και να αποφύγουν προβλήματα που υπάρχουν ήδη στις μεγάλες τουριστικές πόλεις.

Το δημοτικό συμβούλιο πρέπει πρώτα να καθορίσει τον τουριστικό τομέα ή την στρατηγική στο εύρος της πόλης για την προώθηση της χρήσης ποδηλάτων, PTV ή της χρήσης ηλεκτρικών αυτοκινήτων. Στη συνέχεια, θα πρέπει να ξεκινήσει μια διαδικασία εμπλοκής των ενδιαφερομένων με τον προσδιορισμό των παρόχων υπηρεσιών που ήδη εργάζονται στην πόλη και άλλων πιθανών τουριστικών φορέων. Οι προτεραιότητες των κατοίκων και οι προσδοκίες των φορέων εκμετάλλευσης θα πρέπει να αντιμετωπιστούν, προκειμένου να βελτιστοποιηθεί η διαδικασία λήψης αποφάσεων. Θα πρέπει να επιτευχθούν ωφέλιμες για όλους συμφωνίες μεταξύ των εμπλεκομένων μερών, ώστε να καταστεί δυνατή η πραγματοποίηση τόσο δημόσιων όσο και ιδιωτικών λύσεων για τους επισκέπτες.

Σε περίπτωση δημόσιου συστήματος κοινής χρήσης, ο σχεδιασμός μπορεί να γίνει από το ίδιο το συμβούλιο ή από τη σύναψη συμβολαίου με μια συμβουλευτική εταιρία. Η λειτουργία, η συντήρηση και η ανάπτυξη των συστημάτων υποστήριξης (δηλαδή οι πλατφόρμες ΤΠΕ) συνήθως διατίθενται μέσω πρόσκλησης υποβολής προσφορών. Οι τοπικές αρχές πρέπει να παρακολουθούν και να αξιολογούν τη λειτουργία και να διαπραγματεύονται τους όρους, εάν είναι απαραίτητο.

Οι υποδομές φόρτισης και στάθμευσης είναι κανονικά αντικείμενο διαπραγματεύσεων. Οι δημόσιες αρχές μπορούν/πρέπει να έχουν υποδειγματικό ρόλο και μπορούν να αποκτήσουν ωφέλιμους συντελεστές υπό ορισμένες προϋποθέσεις (π.χ. κατανομή στόλου).

Για παράδειγμα, το δημοτικό συμβούλιο μπορεί να επιτρέψει την πρόσβαση σε περιοχές περιορισμένης πρόσβασης και να υποστηρίξει την εγκατάσταση υποδομών φόρτισης υπό ευνοϊκές συνθήκες.

ΕΠΕΝΔΥΣΗ €€

Απαιτείται μεσαία επένδυση εάν το μέτρο βασίζεται στα υπάρχοντα δημόσια και ιδιωτικά συστήματα κατανομής/κοινής χρήσης και τα σημερινά μέσα της πόλης για την τουριστική διαφήμιση, την προώθηση και τις πωλήσεις. Ωστόσο, τα νέα συστήματα που απαιτούν την απόκτηση οχημάτων, την ανάπτυξη υποδομών, τα συστήματα είσπραξης εσόδων και τα κανάλια προώθησης, θα απαιτήσουν υψηλές επενδύσεις και, πιθανώς, μακροπρόθεσμες συμβάσεις ΣΔΙΤ (Συμπράξεις Δημοσίου – Ιδιωτικού Τομέα) για λειτουργία.

Εάν το πρόβλημα της αρχικής επένδυσης μπορεί να ξεπεραστεί μέσω εθνικών και ευρωπαϊκών κονδυλίων, πρέπει να δοθεί ιδιαίτερη προσοχή στο στάδιο του επιχειρηματικού μοντέλου, δεδομένου ότι το σύστημα κατανομής απαιτεί ένα βιώσιμο επιχειρηματικό μοντέλο για τη διαχείριση του συστήματος και την κάλυψη του κόστους συντήρησης. Ποιος θα είναι υπεύθυνος για την καθημερινή διαχείριση; Πόσοι χρήστες απαιτούνται ώστε να επιτευχτεί το σημείο ισορροπίας; Όλα αυτά είναι ερωτήματα που πρέπει να απαντηθούν στη φάση σχεδιασμού.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Προωθώντας τη χρήση των ηλεκτρικών προσωπικών μεταφορέων

Η πόλη της Μάλαγα προωθεί σχήματα ενοικιαζόμενων και άλλων κοινόχρηστων προσωπικών ηλεκτρικών μεταφορέων σε συνεργασία με ιδιωτικές εταιρίες οι οποίες προσφέρουν αυτήν την υπηρεσία. Η προώθηση των προσωπικών μεταφορέων πρέπει να γίνεται εγγυώμενη την ασφάλεια και αποφεύγοντας τις αντιπαραθέσεις μεταξύ των κατοίκων. Θα πρέπει να υιοθετηθούν διαχειριστικές λύσεις, όπως, ενημερωμένες βάσεις δεδομένων από υπάρχουσες εταιρίες, οχήματα καθώς και η χρήση τους. Από την άλλη πλευρά, ένα σύνολο κανόνων μετάβασης, ακόμα και αλλαγής των σημερινών κανονισμών, θα πρέπει να συμφωνηθεί με τις εταιρίες ενοικίασης, προκειμένου να διασφαλιστεί η ασφάλεια των επισκεπτών και να αποφευχθούν αντιπαραθέσεις με τους κατοίκους. Επομένως, οι επισκέπτες μπορούν να επωφεληθούν από αυτές τις δημόσιες-ιδιωτικές συνεργασίες για να έχουν πρόσβαση σε καθαρή, γρήγορη και ευέλικτη μεταφορά, ειδικά οι επιβάτες κρουαζιέρας που μετακινούνται από και προς το λιμάνι. Επιπρόσθετα, η πρωτοβουλία αυτή επιτρέπει την παραγωγή τοπικής γνώσης προκειμένου να ενεργοποιηθούν σχήματα και για τους κατοίκους.

Προάγοντας τη χρήση των ηλεκτρικών οχημάτων στο κέντρο της πόλης

Έχοντας το πλεονέκτημα των LCTP του Προγράμματος Locations, και χρησιμοποιώντας την κινητικότητα των επιβατών κρουαζιέρας ως πιλοτική πρωτοβουλία, θα αναπτυχθεί ένα μεταπτυχιακό πρόγραμμα για την εδραίωση της ηλεκτρικής κινητικότητας στη Μάλαγα, που θα επικυρώνει τη χρήση πρωτοπόρων δράσεων που έχουν αναπτυχθεί κατά την τελευταία δεκαετία. Αυτό θα περιλαμβάνει την επιδότηση χρήσης των ηλεκτρικών οχημάτων μεταξύ των κατοίκων, των επισκεπτών και των εταιριών, για όλους τους τύπους ηλεκτρικών οχημάτων. Σήμερα, η πόλη προσφέρει ελεύθερη στάθμευση για ηλεκτρικά αυτοκίνητα σε ειδικές ζώνες (συμπεριλαμβανομένου του λιμανιού και του κέντρου της πόλης) και διαχειρίζεται τα σημεία φόρτισης. Μέχρι το 2020, ο αναμενόμενος αριθμός των ηλεκτρικών οχημάτων στην Μάλαγα αναμένεται να είναι γύρω στα 1.200.

Προωθώντας την υλοποίηση ενός προγράμματος για επιβάτες με μειωμένη κινητικότητα

Η κύρια ιδέα είναι να διευκολυνθεί η ένταξη των επιβατών με μειωμένη κινητικότητα μέσω της σύστασης ενός συστήματος κοινόχρηστων αναπηρικών αμαξιδίων. Αυτά

μπορούν να τοποθετηθούν σε σημεία καίριας σημασίας της πόλης για να επιτρέψουν τους επιβάτες να επισκεφθούν τη γύρω περιοχή με τη μικρότερη προσπάθεια. Τα αναπηρικά αμαξίδια μπορούν να χρησιμοποιηθούν και στα τουριστικά λεωφορεία, καθώς μπορούν να τοποθετηθούν σε συγκεκριμένους χώρους στάθμευσης, επιτρέποντας στα λεωφορεία να σταματήσουν μακριά από περιοχές με συμφόρηση σε δημοφιλείς προορισμούς. Αυτοί οι διαθέσιμοι χώροι στάθμευσης θα πρέπει να βρίσκονται αρκετά κοντά ώστε να επιτρέπουν στους επιβάτες να μετακινούνται προς εκεί ανεξάρτητα. Είναι ζωτικής σημασίας να ορισθεί ένα επιχειρησιακό μοντέλο που θα εξασφαλίσει την οικονομική σταθερότητα του έργου και την προσεκτική επιλογή των τοποθεσιών για την υλοποίησή του.

Προωθώντας τη χρήση των συστημάτων κοινόχρηστων ποδηλάτων για τους τουρίστες

Το τρέχον σύστημα των δημόσιων κοινόχρηστων ποδηλάτων περιλαμβάνει τρεις σταθμούς κοντά στον τερματικό σταθμό κρουαζιέρας, αλλά η πρόταση είναι να μελετηθεί μια αύξηση της χωρητικότητας (ο πλησιέστερος σταθμός έχει χωρητικότητα για εννιά ποδήλατα) για να ικανοποιήσει τις απαιτήσεις των επιβατών κρουαζιέρας όχι μόνο μέσα στον τερματικό σταθμό, αλλά και στις κύριες περιοχές που επισκέπτονται (κέντρο της πόλης, Belém και Parque das Nações). Επίσης, τα εναλλακτικά συστήματα κοινόχρηστων ποδηλάτων που προορίζονται για τους τουρίστες θα πρέπει να ληφθούν υπόψη και για τους επιβάτες κρουαζιέρας για να μην εμπλέκεται η χρήση τους με τα συστήματα δημόσιων κοινόχρηστων ποδηλάτων από τους κατοίκους. Για να είναι επιτυχής αυτή η δράση, είναι σημαντικό να συνδυαστεί με το τρέχον και το μελλοντικό δίκτυο, τους τουριστικούς προορισμούς και την προώθηση αυτής της υπηρεσίας μεταξύ των επιβατών κρουαζιέρας.

Εισάγοντας τα ηλεκτρικά μοτοποδήλατα με επαναφορτιζόμενους σταθμούς

Η ιδέα είναι να δημιουργηθεί ένα σταθμός ηλεκτρικών μοτοποδηλάτων με σημεία επαναφόρτισης στον τερματικό σταθμό των επιβατών καθώς επίσης και σε άλλα σημεία της πόλης. Ο στόχος είναι να προσφερθεί στους επιβάτες κρουαζιέρας η επιλογή της χρήσης απλών μέσων ατομικής μεταφοράς για δύο χρήστες, για αποστάσεις έως 10 χλμ. από το σημείο ενοικίασης. Από τεχνολογική άποψη, συγκρινόμενο με άλλα οχήματα μεταφοράς επιβατών κρουαζιέρας, το ηλεκτρικό μοτοποδήλατο είναι ένα μικρό μέσο μεταφοράς που ένας μέσος οδηγός μπορεί να μάθει γρήγορα να χρησιμοποιεί ενώ για την οδήγηση στην κυκλοφορία, απαιτείται η λιγότερη δυνατή εκπαίδευση και εξοπλισμός. Με το μοτοποδήλατο, είναι εφικτό να φτάσει κανείς οποιοδήποτε σημείο της πόλης σε μικρό χρονικό διάστημα, ειδικά σε μέρη με πανοραμική θέα της πόλης, και στον Κόλπο Kvarner, καθώς και στις πλησιέστερες παραλίες. Προβλέπονται δύο παραλλαγές της εφαρμογής αυτού του μέτρου: (1) με σταθερή μπαταρία ανά μοτοποδήλατο και δύο σταθμούς επαναφόρτισης με δύο συνδέσεις και (2) με μπαταρία που αντικαθίσταται στο μοτοποδήλατο σε έναν σταθμό επαναφόρτισης και μια μονάδα φόρτισης 30 μπαταριών

Αυξάνοντας τον αριθμό των σταθμών κοινόχρηστων ποδηλάτων

Η αύξηση στους σταθμούς κοινόχρηστων ποδηλάτων οι οποίοι θα βρίσκονται σε στρατηγικά σημεία του κέντρου της πόλης και κοντά στον τερματικό σταθμό κρουαζιέρας θα παρέχει επιπλέον επιλογές χαμηλού ανθρακικού αποτυπώματος για τους επιβάτες κρουαζιέρας που επισκέπτονται στην πόλη. Αυτή η δράση προβλέπεται και πρόκειται να υλοποιηθεί μέσω του Προγράμματος CIVITAS PORTIS. Αυτή η υπηρεσία μεταφοράς θα μπορούσε να υλοποιηθεί κατά μήκος της παραθαλάσσιας περιοχής της πόλης, προσφέροντας, επομένως, ευκαιρίες στους επιβάτες κρουαζιέρας, οι οποίοι επιθυμούν να είναι περισσότερο ανεξάρτητοι και δεν επιθυμούν να αγοράσουν εκδρομικά πακέτα που προσφέρονται από τις εταιρίες κρουαζιέρας: όσον αφορά στην κινητικότητα, οι λύσεις κινητικότητας χαμηλού ανθρακικού αποτυπώματος πρέπει να είναι συνεπείς με το προφίλ των επιβατών κρουαζιέρας.

Δυρράχιο: εγκαθιδρύοντας μια υπηρεσία ενοικίασης ηλεκτρικών ποδηλάτων στον τερματικό σταθμό των κρουαζιερόπλοιων και των φεριμπότ.

Η ιδέα είναι η σύσταση μιας υπηρεσίας ενοικίασης/κοινής χρήσης ηλεκτρικών ποδηλάτων σε διάφορες περιοχές της πόλης και στους τερματικούς σταθμούς κρουαζιερόπλοιων και φεριμπότ και η συνεισφορά στον σχεδιασμό ενός δικτύου ποδηλασίας σε συνεργασία με τους δημιουργούς του ΣΒΑΚ της πόλης του Δυρραχίου. Οι σταθμοί θα συνδέονται με διαδρομές πεζών από τους τερματικούς σταθμούς των κρουαζιερόπλοιων και των φεριμπότ.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Policy Note: Smart choices for cities - Cities towards Mobility 2.0: connect, share and go!
- CIVITAS Insight 10 – Bike-sharing as a link to desired destinations
- CIVITAS Insight 13 –E-mobility: From strategy to legislation.
- CIVITAS Insight 19 - E-mobility: Make it happen through SUMPs!
- Handshake Issue #4: Cities & PPPs

3. CNG ΚΑΙ LNG ΛΥΣΕΙΣ ΓΙΑ ΠΡΟΟΡΙΣΜΟΥΣ ΚΡΟΥΑΖΙΕΡΑΣ

ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Όταν ένα κρουαζιερόπλοιο φτάνει σε έναν λιμένα, οι επιβάτες κατεβαίνουν από το σκάφος για εξορμήσεις ή για να επισκεφτούν την πόλη, ενώ παράλληλα, οι επιχειρήσεις προμηθειών συμμετέχουν στην παράδοση προμηθειών στα κρουαζιερόπλοια και στη διάθεση των αποβλήτων τους. Τα λεωφορεία των επιβατών και τα φορτηγά ανεφοδιασμού πηγαινο-έρχονται, δημιουργώντας μια τοπική συμφόρηση και συμβάλλουν στην εκπομπή επιβλαβών ρύπων στην περιβάλλουσα περιοχή. Το ίδιο συμβαίνει κατά την πρώτη και τελευταία ημέρα της κρουαζιέρας, όταν οι επιβάτες επιβιβάζονται και αποβιβάζονται, ενώ οι αποσκευές τους φορτώνονται και ξεφορτώνονται από το πλοίο, υπάρχει εφοδιασμός τροφίμων και το πλοίο προετοιμάζεται για το νέο ταξίδι.

Υπό αυτήν την προοπτική, το φυσικό αέριο που χρησιμοποιείται με διάφορους τρόπους μεταφοράς σε συμπιεσμένη (CNG) ή υγροποιημένη (LNG) κατάσταση, μπορεί να διαδραματίσει έναν σημαντικό ρόλο στο να γίνει πιο οικολογικό το τοπικό σύστημα μεταφοράς, παρέχοντας στους επιβάτες κρουαζιέρας πιο «καθαρές» επιλογές μεταφοράς και διασφαλίζοντας ταυτόχρονα μια περισσότερο βιώσιμη διαχείριση που σχετίζεται με τις κρουαζιέρες. Ακόμα κι αν τα οχήματα που

τροφοδοτούνται με συμπιεσμένο ή υγροποιημένο φυσικό αέριο (CNG/LNG) έχουν τεχνικά μειονεκτήματα, όπως, μια πιο ακριβή εγκατάσταση και ένα περιορισμένο εύρος όταν συγκρίνονται με τα συμβατικά καύσιμα των οχημάτων, η μικρότερη κατανάλωση καυσίμων, η μικρότερη κατανάλωση σε μίλια και ο μειωμένος περιβαλλοντικός αντίκτυπος, τα καθιστούν ανταγωνιστικά και κατάλληλα. Η οικολογική επίγνωση μαζί με το χαμηλότερο κόστος συντήρησης, το μεγαλύτερο κύκλο ζωής μηχανών και, φυσικά, τη σημαντική εξοικονόμηση κόστους καυσίμων έναντι των μηχανών ντίζελ και βενζίνης, είναι μερικοί από τους κυριότερους λόγους για την εγκατάσταση λειτουργών υπηρεσιών μεταφοράς, εταιριών κοινής ωφελείας, επιχειρήσεων παράδοσης και άλλες οντότητες για να εισαγάγουν τα οχήματα CNG/LNG στους στόλους τους.

Η μετατροπή των ιδιωτικών και δημόσιων στόλων μεταφορών επιβατών και εμπορευμάτων σε CNG ή LNG μπορεί να αποδειχθεί μία επιτυχής δράση, και για την επίτευξη των στόχων της Ευρωπαϊκής Επιτροπής για τη μείωση των αερίων του θερμοκηπίου και τη βελτίωση της ατμοσφαιρικής ποιότητας, προετοιμάζοντας το έδαφος για τη μείωση της εξάρτησης από το αργό πετρέλαιο και τη ενίσχυση της ασφάλειας ανεφοδιασμού. Εντούτοις, πρέπει να ληφθεί υπόψη ότι το CNG και LNG πρέπει να αναγνωριστούν ως προσωρινές λύσεις, που προορίζονται για να φθίνουν σε μια μακροπρόθεσμη προοπτική, ικανές όμως να ενθαρρύνουν την ενεργειακή μετάβαση σε ένα αειφόρο σύστημα μεταφοράς που τροφοδοτείται από «καθαρή» και τη ανανεώσιμη ενέργεια.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μείωση των επιβλαβών εκπομπών και βελτίωση της ποιότητας του τοπικού αέρα.

Αυξημένη ενεργειακή απόδοση στο σύστημα μεταφορών.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένη εξάρτηση από τα ορυκτά καύσιμα.

Βελτίωση της ποιότητας ζωής στις πόλεις όσον αφορά στη ρύπανση και τη μείωση του θορύβου.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Η διαθεσιμότητα της υποδομής CNG και LNG αποτελεί την προϋπόθεση για την υλοποίηση και τη λειτουργία των λύσεων LNG και CNG. Θα μπορούσαν να δημιουργηθούν ιδιωτικές εταιρικές σχέσεις. Όσον αφορά τους στόλους, σε περίπτωση μετατροπής και αντικατάστασης των στόλων των οχημάτων δημόσιας υπηρεσίας, το δημοτικό συμβούλιο πρέπει να υποβληθεί σε διαδικασία ανάθεσης.

ΕΠΕΝΔΥΣΗ €€€

Οι συνολικές επενδύσεις είναι μεσαίες έως υψηλές. Εξαρτώνται από το εάν έχει δημιουργηθεί μια νέα υποδομή τροφοδότησης για την αναβάθμιση της υπάρχουσας.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Ριέκα: Εισαγωγή της μονάδας CNG στα αστικά φορτηγά

Μία από τις υπηρεσίες που προσφέρονται σε κρουαζιερόπλοια και άλλα πλοία κατά την άφιξή τους στο λιμάνι είναι η συλλογή των αποβλήτων. Στη Ριέκα, όλα τα φορτηγά συλλογής αποβλήτων είναι αυτήν τη στιγμή ντιζελοκίνητα, αλλά η πρόθεση είναι να μετατραπούν σε μονάδες CNG. Πολλά λεωφορεία δημόσιων συγκοινωνιών έχουν ήδη μετατραπεί σε CNG και ένας σταθμός CNG κατασκευάστηκε στη Ριέκα για αυτήν την ανάγκη. Πρόκειται για μια καλή θέση εκκίνησης για την εταιρεία διαχείρισης αστικών απορριμμάτων Čistoća ltd, η οποία έχει ξεκινήσει δραστηριότητες που αποσκοπούν στην αγορά δύο φορτηγών συλλογής απορριμμάτων CNG τα οποία πληρούν το πρότυπο EURO 6. Η Čistoća ltd. ξεκίνησε επίσης την προμήθεια ηλεκτρικών οχημάτων για χωριστή συλλογή αποβλήτων και ηλεκτρικών τρίκυκλων οχημάτων σχεδιασμένων να διατηρούν την καθαριότητα της πόλης. Θα αγοραστεί ένα μεγαλύτερο CNG φορτηγό συνολικής χωρητικότητας 30 κυβικών μέτρων και ένας πλευρικός φορτωτής δύο θαλάμων για χωριστή συλλογή αποβλήτων, ο οποίος θα συνδυαστεί με ένα μικρότερο CNG φορτηγό όχημα με κινητήρα, κατάλληλο για στενούς δρόμους και σχεδιασμένο για τη συλλογή ξεχωριστών τύπων αποβλήτων.

Εκτιμάται μια μείωση των εκπομπών CO2 και άλλων επιβλαβών αερίων κατά 10-11 τόνους ετησίως, γεγονός που αποτελεί άμεσο αποτέλεσμα της χρήσης του CNG ως καυσίμου σε αυτά τα οχήματα.

Προωθώντας νέες συνδέσεις μέσω καναλιών

Ο Δήμος έχει ξεκινήσει τη διαδικασία για την έναρξη μιας νέας υπηρεσίας θαλάσσιας σύνδεσης μέσω καναλιού. Αυτός ο νέος τρόπος μεταφοράς θα μπορεί να συνδέσει τον τερματικό σταθμό κρουαζιέρας με το κέντρο της πόλης μέσω φεριμπότ χαμηλού ανθρακικού αποτυπώματος τα οποία θα κινούνται με LNG κατά μήκος του καναλιού. Τα φεριμπότ θα μπορούν να μεταφέρουν περίπου 120 επιβάτες και θα είναι προσβάσιμα ακόμη και για άτομα με μειωμένη κινητικότητα.

Η πόλη έχει ήδη λάβει εθνικούς πόρους προκειμένου να υλοποιήσει τις υποδομές οι οποίες απαιτούνται για την έναρξη της υπηρεσίας: μια αποβάθρα κατάλληλη για άτομα με μειωμένη κινητικότητα, μια νέα υπόγεια διάβαση που συνδέει την πόλη Νταρσένα με το κέντρο της πόλης και ένα νέο σταθμό κοινόχρηστων ποδηλάτων με 15 ηλεκτρικά ποδήλατα στην προβλήτα της πόλης Νταρσένα. Το κρίσιμο ζήτημα αυτού του μέτρου αφορά τους κανόνες πλοήγησης στο κανάλι. Όλα τα τουριστικά σκάφη πρέπει να δίνουν προτεραιότητα στα φορτηγά πλοία και η μέγιστη επιτρεπόμενη ταχύτητα είναι 11 χλμ./ώρα. Το ταξίδι στο κανάλι θα διαρκεί περίπου μία ώρα και δεν θα υπάρχει ένα σταθερό και αξιόπιστο χρονοδιάγραμμα καθώς η άφιξη των φορτηγών πλοίων και η αποχώρηση από το λιμάνι πραγματοποιείται με βραχυπρόθεσμη προειδοποίηση.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Policy Note- Smart choices for cities: Clean buses for your city
- CIVITAS Policy Note- Smart choices for cities: Alternative Fuel Buses
- CIVITAS Policy Advice Note 02 – Clean Fuels and Vehicles
- CIVITAS Insight 20 – Cities' role in introducing clean vehicles and using alternative fuels
- European Alternative Fuel Observatory
- CIVITAS MOBILIS - Case Studies on Sustainable Urban Transport
- INTERNATIONAL ENERGY AGENCY working paper – The contribution of natural gas vehicles to sustainable transport
- SOLUTIONS project: Handout - Cluster 6: Clean vehicles
- Buses operating on compressed natural gas in Barcelona (Spain)
- Hybrid and CNG buses in Ljubljana (Slovenia)

4. ΘΑΛΑΣΣΙΕΣ ΜΕΤΑΦΟΡΕΣ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ

ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Οι πλωτές οδοί θα μπορούσαν να προσφέρουν μια ενδιαφέρουσα προοπτική για τους επιβάτες κρουαζιέρας που είναι πρόθυμοι να γνωρίσουν την πόλη καθώς και να εξερευνήσουν το περιβάλλον της, μακριά από παραδοσιακά περάσματα και σχέδια κυκλοφορίας.

Επιπλέον, σε σύγκριση με τις χερσαίες οδούς μεταφοράς, το κόστος των πλωτών οδών είναι μικρό, καθώς βρίσκονται ήδη σε ισχύ και απαιτούν μικρή βελτίωση και συντήρηση. Όταν λαμβάνεται υπόψη η εξερεύνηση της πόλης από τους επιβάτες κρουαζιέρας, ιδιαίτερη προσοχή πρέπει να δοθεί στη χρήση φιλικών προς το περιβάλλον πλοίων και σκαφών που τροφοδοτούνται με εναλλακτικά καύσιμα.

Τα εναλλακτικά καύσιμα που χρησιμοποιούνται πιο συχνά σήμερα είναι το υγροποιημένο φυσικό αέριο (LNG), η ηλεκτρική ενέργεια, το βιοντίζελ και η μεθανόλη.

Άλλα καύσιμα που θα μπορούσαν να διαδραματίσουν ένα ρόλο στο μέλλον είναι το υγροποιημένο αέριο πετρελαίου (LPG), ο διμεθυλαιθέρας (DME), το βιομεθάνιο, τα συνθετικά καύσιμα, το υδρογόνο (ιδιαίτερα για χρήση σε κυψέλες καυσίμου), το υδρογόνο που προέρχεται από ανανεώσιμο ντίζελ (HDRD) και το πετρέλαιο πυρόλυσης. Επιπρόσθετα, τα καύσιμα όπως το Ντίζελ Εξαιρετικά Χαμηλής Περιεκτικότητας σε Θείο (Ultra Low-Sulfur Diesel -ULSD) μπορούν να

χρησιμοποιηθούν προκειμένου να υπάρξει συμμόρφωση με τους κανονισμούς και στήριξη της μετάβασης σε εναλλακτικά καύσιμα.

Η ηλεκτροδότηση έχει επίσης προκαλέσει έντονο ενδιαφέρον. Η πρόκληση όσον αφορά την ηλεκτρική ενέργεια που παράγεται στην ξηρά για την τροφοδοσία πλοίων, σχετίζεται με την ενεργειακή ικανότητα των μπαταριών και άλλων λύσεων αποθήκευσης, περιορίζοντας την εμβέλεια των πλοίων. Η ηλεκτροδότηση στη ναυτιλία μπορεί να έχει δύο διαφορετικές μορφές: ως ένα υβριδικό σύστημα πρόωσης ή ως ένα καθαρό ηλεκτρικό σύστημα πρόωσης. Τα σκάφη που κινούνται με ηλεκτρισμό με βάση την ξηρά μπορούν να προσφέρουν σημαντικά οφέλη όσον αφορά τη βελτίωση της ενεργειακής απόδοσης και τη μείωση των εκπομπών. Τα οφέλη από την ενεργειακή απόδοση προκύπτουν από την εξάλειψη των κινητήρων καύσης, οι οποίοι συνδέονται με σημαντικές απώλειες απόδοσης. Εκτός από τη χρήση ηλεκτρικών μπαταριών για την πρόωση, η ηλεκτρική ενέργεια που παράγεται στην ξηρά μπορεί επίσης να χρησιμοποιηθεί για την τροφοδοσία των πλοίων στη θέση αγκυροβολίας. Το κύριο εμπόδιο για την εισαγωγή μπαταριών στη ναυτιλία είναι το υψηλό κόστος κεφαλαίου τους. Πρέπει να ληφθεί υπόψη ότι η θαλάσσια μεταφορά με χαμηλό ανθρακικό αποτύπωμα μπορεί να απαιτεί νέους κανονισμούς και νομοθεσίες.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Βελτιωμένες τοπικές υποδομές για ενεργειακά αποδοτικές μεταφορές.

Μειωμένη συμφόρηση στο κέντρο της πόλης.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

Βελτιωμένες και πιο βιώσιμες τουριστικές προσφορές

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Βελτίωση της ποιότητας ζωής στις πόλεις όσον αφορά στη ρύπανση και τη μείωση του θορύβου.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Ο εναρκτήριος φορέας αυτού του αρθρωτού πακέτου πρέπει να είναι η πόλη/ο Δήμος ή η Λιμενική Αρχή.

Τα συγκεκριμένα μέτρα μπορούν να εφαρμοστούν από ιδιώτες μεταφορείς κατόπιν συμφωνίας με το Δημοτικό Συμβούλιο/τη Λιμενική Αρχή/Νομαρχιακή ή την τοπική Κυβέρνηση.

Μόλις δημιουργηθούν οι συνθήκες, είναι δυνατή η συνεργασία μέσω εταιρικής σχέσης δημόσιου-ιδιωτικού τομέα ή της οργάνωσης υπηρεσιών μέσω ιδιωτικών εταιρειών.

ΕΠΕΝΔΥΣΗ €€

Μια μέση συνολική επένδυση αναμένεται. Εξαρτάται από το μέγεθος του σκάφους, τον τύπο καυσίμου, την αυτονομία, καθώς και τη διαθεσιμότητα ειδικών υποδομών επανατροφοδότησης.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Προωθώντας νέες συνδέσεις μέσω του καναλιού

Ο Δήμος έχει ξεκινήσει τη διαδικασία για την έναρξη μιας νέας υπηρεσίας θαλάσσιας σύνδεσης μέσω του καναλιού. Αυτός ο νέος τρόπος μεταφοράς θα μπορεί να συνδέσει τον τερματικό σταθμό κρουαζιέρας με το κέντρο της πόλης μέσω φεριμπότ χαμηλού ανθρακικού αποτυπώματος που κινούνται με LNG κατά μήκος του καναλιού. Τα φεριμπότ θα μπορούν να μεταφέρουν περίπου 120 επιβάτες και θα είναι προσβάσιμα ακόμη και για άτομα με μειωμένη κινητικότητα.

Η πόλη έχει ήδη λάβει εθνικούς πόρους προκειμένου να υλοποιήσει υποδομές οι οποίες απαιτούνται για την έναρξη της υπηρεσίας: μια αποβάθρα κατάλληλη για άτομα με μειωμένη κινητικότητα, μια νέα υπόγεια διάβαση που συνδέει την πόλη Darsena με το κέντρο της πόλης και ένα νέο σταθμό κοινόχρηστων ποδηλάτων με 15 ηλεκτρικά ποδήλατα στην προβλήτα της πόλης Darsena. Το κρίσιμο ζήτημα αυτού του μέτρου αφορά τους κανόνες πλοήγησης στο κανάλι. Όλα τα τουριστικά σκάφη πρέπει να δίνουν προτεραιότητα στα φορτηγά πλοία και η μέγιστη επιτρεπόμενη ταχύτητα είναι 11 χλμ./ώρα. Το ταξίδι στο κανάλι θα διαρκεί περίπου μία ώρα και δεν θα υπάρχει ένα σταθερό και αξιόπιστο χρονοδιάγραμμα καθώς η άφιξη των φορτηγών πλοίων και η αποχώρηση από το λιμάνι πραγματοποιείται με βραχυπρόθεσμη προειδοποίηση.

Το μέτρο αυτό δημιουργεί ένα νέο μέσο μεταφοράς για τους επιβάτες κρουαζιέρας, δημιουργώντας μια συνέργεια με δύο διαφορετικά έργα. Ο επιβάτης κρουαζιέρας θα έχει μια επιπλέον δυνατότητα να φτάσει στο κέντρο της πόλης με ένα μέσο μεταφοράς χαμηλού ανθρακικού αποτυπώματος.

Ριέκα: παραδοσιακό σκάφος

Το μέτρο αυτό περιλαμβάνει την εξέταση του ενδιαφέροντος δυνητικών αναδόχων για την εισαγωγή παραδοσιακών σκαφών τροφοδοτούμενων από μια υβριδική μονάδα για την τοπική μεταφορά στο Mololongo (κυματοθραύστης) – Adamićev gat ή Gat Karoline Riječka ή για μετακινήσεις σε περιηγήσεις στην πόλη και στην παράκτια περιοχή. Στόχος είναι να προσφέρεται στους επιβάτες κρουαζιέρας μια εναλλακτική άποψη της πόλης μέσα από ένα παραδοσιακό σκάφος που χρησιμοποιήθηκε στα τέλη του 19ου και στις αρχές του 20ου αιώνα για τη μεταφορά επιβατών. Προβλέπονται δύο τύποι ταξιδιών:

• Μια σύντομη διαδρομή με λεωφορείο από τη θέση του λιμενοβραχίονα σε μερικές από τις θέσεις στην απέναντι πλευρά του κέντρου της πόλης (Gata De Franceschi, Πύλη Adamić ή Gata Karoline Riječka).

• Μια μεγαλύτερη διαδρομή για επίσκεψη στο λιμάνι της Ριέκα και την παράκτια περιοχή μέχρι την Opatija και, με καλές καιρικές συνθήκες, τη συνέχιση κατά μήκος των ακτών της Ίστριας.

Μέρος των επιβατών κρουαζιέρας μπορούν να χρησιμοποιήσουν το παραδοσιακό σκάφος που επηρεάζει στη μείωση του απαιτούμενου αριθμού λεωφορείων με κινητήρα εσωτερικής καύσης για τα τουριστικά αξιοθέατα και την ευρύτερη ακτή.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS MOBILIS project - Case Studies on Sustainable Urban Transport
- Case of Bourguet: electric boat on the lake
- Case of Bristol: hydrogenesis passenger ferry

5. ΒΕΛΤΙΣΤΟΠΟΙΗΣΗ ΤΗΣ ΠΡΟΣΒΑΣΙΜΟΤΗΤΑΣ ΤΟΥ ΛΙΜΑΝΙΟΥ

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Οι τρέχουσες τάσεις δείχνουν ότι ο τουρισμός κρουαζιέρας εξακολουθεί να είναι ένας νέος τομέας και έχει μεγάλες δυνατότητες επέκτασης. Η βελτιστοποίηση των λιμενικών δραστηριοτήτων είναι απαραίτητη για να καταστεί ελκυστική για τις εταιρίες κρουαζιέρας. Η βελτιστοποίηση του τερματικού σταθμού δεν σημαίνει μόνο τη βελτίωση της παραγωγικότητας και τη μείωση του λειτουργικού κόστους, αλλά την εύρεση μιας νέας προσέγγισης στη διαχείριση των τερματικών σταθμών η οποία θα βασίζεται στη γνώση των κριτηρίων που έχουν υιοθετήσει οι εταιρίες στην επιλογή των λιμένων.

Σε όλες τις περιπτώσεις, ένα καλό λιμάνι για κρουαζιερόπλοια βελτιστοποιεί την προσβασιμότητα του πλοίου στο λιμάνι, τη διαθεσιμότητα αγκυροβολίων, τις εγκαταστάσεις πρόσδεσης, τις εγκαταστάσεις υποδοχής επιβατών και την ασφάλεια των πλοίων.

Ως λιμάνι προέλευσης, το λιμάνι λειτουργεί ως βάση για ένα κρουαζιερόπλοιο, μεταφέροντας τους επιβάτες σε έναν κυκλικό διαδρομή κρουαζιέρας, ξεκινώντας και τελειώνοντας στο ίδιο λιμάνι προέλευσης. Η επιλογή των λιμένων από τις εταιρίες κρουαζιέρας εξαρτάται σε μεγάλο βαθμό από την προσβασιμότητα του τερματικού σταθμού στους τουρίστες και τους προμηθευτές, ελαχιστοποιώντας τις διαμάχες μεταξύ συγκεκριμένων και τυποποιημένων δραστηριοτήτων που εκτελούνται εντός και γύρω από την περιοχή του λιμένα.

Παρόλο που οι επιβάτες κρουαζιέρας ξοδεύουν το μεγαλύτερο μέρος του χρόνου τους στο πλοίο, οι εκδρομές στα λιμάνια-ενδιάμεσους προορισμούς είναι πρωταρχικά χαρακτηριστικά που καθιστούν την κρουαζιέρα ελκυστική για τους επιβάτες. Η βελτιστοποίηση εξετάζει επίσης πρόσθετες επιλογές για τους επιβάτες, όπως: ανεξάρτητους τρόπους μεταφοράς, ταξί, υπηρεσίες μεταφοράς προς διάφορους προορισμούς, συνδέσεις πεζών με την πόλη, κόμβους επεξεργασίας πληροφοριών και αλυσίδες εφοδιασμού για υλικοτεχνική υποστήριξη.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Αυξημένη προσβασιμότητα λιμένων.

Μειωμένη συμφόρηση λιμένα.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Αυξημένη χωρητικότητα της προβλήτας κρουαζιέρας στον κυματοθραύστη.

Αυξημένη δυνατότητα αποδοχής όλων των τύπων και μεγεθών των κρουαζιερόπλοιων.

Βελτίωση της κινητικότητας των επιβατών κρουαζιέρας.

Μειωμένες εκπομπές αερίων θερμοκηπίου και ατμοσφαιρικής ρύπανσης.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Η βελτιστοποίηση ξεκινά με στρατηγικό σχεδιασμό και αρχιτεκτονική διάταξη για την προσβασιμότητα των λιμένων ώστε να υπάρξει καθοδήγηση για όλες τις σχετικές διαδικασίες λήψης αποφάσεων, ξεκινώντας με ένα όραμα που παρουσιάζεται στα θεσμικά όργανα και τους επενδυτές και μια ανάλυση κόστους/ωφελειών.

Τα επόμενα βήματα είναι ο περαιτέρω τομεακός προγραμματισμός, ο καθορισμός μεταξύ άλλων, των μέτρων, των προθεσμιών, του κόστους, των πόρων, των δεικτών επιδόσεων και της κατανομής αρμοδιοτήτων, ακολουθούμενα από την υλοποίηση.

Το σχέδιο μπορεί να χρηματοδοτηθεί από τη λιμενική αρχή και το δημοτικό συμβούλιο ή να υποβληθεί για χρηματοδότηση στο πλαίσιο εθνικών ή ευρωπαϊκών προγραμμάτων με σκοπό την προώθηση της μείωσης της κλιματικής αλλαγής, την απομάκρυνση της οικονομίας από τον άνθρακα ή την ενσωμάτωση της ηλεκτρικής κινητικότητας σε αστικά περιβάλλοντα. Οι συμπράξεις δημοσίου και ιδιωτικού τομέα μπορεί επίσης να αποτελέσουν λύση για την ανάπτυξη του σχεδίου.

ΕΠΕΝΔΥΣΗ €€€

Ανάλογα με τον τύπο παρέμβασης, η επένδυση κυμαίνεται από μέτρια έως υψηλή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Αφαίρεση του σημείου συμφόρησης μεταξύ του κυματοθραύστη και του δρόμου D 404.

Με την αύξηση της χωρητικότητας του ελλιμενισμού της κρουαζιέρας στον κυματοθραύστη κοντά στον θαλάσσιο τερματικό σταθμό επιβατών, θα είναι δυνατή η αποδοχή κρουαζιερόπλοιων όλων των τύπων και μεγεθών. Αυτό θα οδηγήσει επίσης στη μετεγκατάσταση όλων των διαδικασιών των κρουαζιερόπλοιων, από τις συνήθεις δραστηριότητες του εφοδιασμού του πλοίου στην αποδοχή των επιβατών και τη μεταφορά τους σε άλλους προορισμούς με τη μορφή μονοήμερων εκδρομών. Τα περισσότερα από αυτά θα σχετίζονται με την οδική μεταφορά επιβατών που χρησιμοποιούν τουριστικά λεωφορεία που ταξιδεύουν σε τουριστικούς προορισμούς και τα ηλεκτρικά μοτοποδήλατα που περιλαμβάνονται στον τερματικό σταθμό επιβατών. Όλες οι μεταφορές περνούν αυτήν τη στιγμή από δρόμο μιας κατεύθυνσης γύρω από την αγορά της πόλης, όπου η κυκλοφορία είναι συνήθως πολύ έντονη, ακόμη και χωρίς τις πρόσθετες ροές επιβατών κρουαζιέρας, οι οποίες οδηγούν σε μεγαλύτερη συμφόρηση και δυσαρέσκεια των κατοίκων.

Για να αντιμετωπιστεί αυτό το ζήτημα, είναι απαραίτητο να διαχωριστεί η κυκλοφορία που κατευθύνεται προς την αγορά της πόλης και η κυκλοφορία που συνδέει τον κυματοθραύστη και τον δρόμο D 404. Υπάρχουν δύο επιλογές για την εφαρμογή αυτού του μέτρου: 1. Δημιουργία νέου δρόμου, συμπεριλαμβανομένης της ανασυγκρότησης της υπάρχουσας γέφυρας περιστρεφόμενης πλατφόρμας και της κατασκευής νέας γέφυρας για την παροχή αμφίδρομης κυκλοφορίας και 2. Προσαρμογή ενός υπάρχοντος δρόμου, που θα περιλαμβάνει την ανακατασκευή μιας υπάρχουσας γέφυρας, όπου η κυκλοφορία θα μπορούσε να είναι εναλλασσόμενη.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- Case of Kotor Cruise Port: Traffic Modelling and Performance Evaluation
- Case of the Port of Leith: 21st Century Gateway Port

Kai Wang Shuaian Wang, Lu Zhen, Xiaobo Qu, (2016) "Cruise shipping review: operations planning and research opportunities", Maritime Business Review, Vol. 1 Issue: 2, pp.133-148, available at https://doi.org/10.1108/MABR-04-2016-0007

6. ΔΙΑΧΕΙΡΙΣΗ ΚΥΚΛΟΦΟΡΙΑΣ ΚΑΙ ΡΟΗΣ ΛΕΩΦΟΡΕΙΩΝ ΣΕ ΠΡΟΟΡΙΣΜΟΥΣ ΚΡΟΥΑΖΙΕΡΑΣ

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Η ιδέα είναι να προσφερθούν ελκυστικές υπηρεσίες λεωφορείων για τη σύνδεση του λιμανιού με τα αξιοθέατα μέσω της βελτιστοποίησης των χρόνων διαδρομής, των καλύτερων εγκαταστάσεων για την επιβίβαση στα λεωφορεία, της παροχής υπηρεσιών προσαρμοσμένων στις απαιτήσεις των επιβατών κρουαζιέρας και της βελτίωσης της διαχείρισης της ροής μέσω καινοτόμων μέσων.

Προκειμένου να προωθηθούν εναλλακτικοί προορισμοί έξω από την πόλη ή μακριά από το λιμάνι, οι ταξιδιωτικοί πράκτορες και τα ταξιδιωτικά γραφεία πρέπει να διασφαλίσουν ότι οι εκδρομικές υπηρεσίες που προσφέρουν ανταποκρίνονται στον περιορισμένο χρόνο που έχουν οι επιβάτες.

Υπό αυτήν την έννοια, η λιμενική αρχή, σε συντονισμό με τις τοπικές αρχές τουρισμού και κινητικότητας, μπορεί να υποστηρίξει τους τουριστικούς πράκτορες προκειμένου να βελτιώσει την εμπειρία των επισκεπτών, βοηθώντας τη διαφοροποίηση της τουριστικής προσφοράς της πόλης.

Μια εναλλακτική λύση είναι η βελτιστοποίηση των δρομολογίων κατά την έξοδο από την πόλη, έτσι ώστε η κυκλοφοριακή συμφόρηση να αποφεύγεται και να μειώνεται. Μέσω μιας λεπτομερούς διάγνωσης της κατάστασης της κυκλοφορίας στην πόλη γύρω από το λιμάνι τη διάρκειας των χρονικών περιόδων κατά τις οποίες οι επιβάτες επιλέγουν τα εκδρομικά λεωφορεία και ξεκινούν τις διαδρομές τους, μπορούν να σχεδιαστούν συγκεκριμένα μέτρα για να μειωθεί ο χρόνος παραμονής των λεωφορείων μέσα στην πόλη. Για παράδειγμα, η χρήση των συστημάτων

πλοήγησης για τον υπολογισμό των βέλτιστων διαδρομών σε πραγματικό χρόνο ή η δημιουργία λεωφορειο-λωρίδων από το λιμάνι προς τις κύριες εξόδους της πόλης. Αυτό μπορεί να απαιτεί την καθημερινή υποστήριξη της τοπικής αστυνομίας για να διευκολυνθεί η πρόσβαση σε αυτές τις βελτιστοποιημένες διαδρομές και την εκπαίδευση των οδηγών λεωφορείων για τη χρήση καινοτόμων εργαλείων.

Ως συμπληρωματική λύση, θα μπορούσαν να αναπτυχθούν νέες υποδομές για τη στήριξη της αύξησης των επιβατών κρουαζιέρας που χρησιμοποιούν δρομολόγια λεωφορείων προς απομακρυσμένους προορισμούς. Αυτό θα μπορούσε να πραγματοποιηθεί εντός του λιμένα μόνο για τη χρήση τουριστικών λεωφορείων ή έξω από το λιμάνι με την εγκατάσταση ενός νέου σταθμού πολλαπλών λειτουργιών που θα παρέχει διάφορα είδη υπηρεσιών, συμπεριλαμβανομένων των δημόσιων λεωφορείων και των ταξί.

Επιπλέον, οι υπηρεσίες μπορούν να είναι προσαρμοσμένες στις απαιτήσεις των επιβατών κρουαζιέρας. Για παράδειγμα, μπορεί να δοθεί προτεραιότητα στις υπηρεσίες μεταφοράς, ανάλογα με την απόσταση που απαιτείται για την άφιξη στους προορισμούς. Με αυτόν τον τρόπο, οι συνθήκες επιβίβασης και αναχώρησης από το λεωφορείο θα επιτρέπουν την ομαλότερη λειτουργία για υπηρεσίες με μεγαλύτερους χρόνους ταξιδιού. Μια άλλη εναλλακτική λύση μπορεί να είναι η παροχή υπηρεσιών μεταφοράς κατόπιν αιτήματος.

Τέλος, μπορούν να καταβληθούν πρόσθετες προσπάθειες διαχείρισης μέσω της μέτρησης της τουριστικής ικανότητας των περιοχών και των σχετικών απαιτήσεων για χώρους στάθμευσης από τους φορείς εκμετάλλευσης λεωφορείων. Οι παράμετροι που χρησιμοποιούνται για τον υπολογισμό των παραπάνω είναι ο αριθμός και η χωρητικότητα των αξιοθέατων, ο αριθμός καταστημάτων και εστιατορίων, οι υποδομές μεταφοράς στην περιοχή και οι συνδέσεις μεταφοράς προς αυτήν. Μπορούν επίσης να ληφθούν υπόψη και άλλοι παράγοντες όπως ο συνολικός διαθέσιμος δημόσιος χώρος και οι χώροι πρασίνου. Ο αριθμός των διαθέσιμων θέσεων στάθμευσης στις περιοχές-στόχους θα πρέπει ακολούθως να βασίζεται σε αυτήν την χωρητικότητα. Θα μπορούσε να δημιουργηθεί ένας στόλος αυτοκινήτων για τους χώρους αυτούς, ο οποίος θα επιτρέπει την εκ των προτέρων κράτηση χώρων στάθμευσης από τους φορείς εκμετάλλευσης.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Περιορισμός χρόνων επιβίβασης (από τον τερματικό σταθμό στο λεωφορείο).

Περιορισμός απωλειών χρόνου υπηρεσιών μεταφοράς λόγω της συμφόρησης.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Αυξημένος αριθμός επιβατών κρουαζιέρας που επισκέπτονται μακρινά αξιοθέατα.

Μειωμένη συμφόρηση σε κρίσιμες περιοχές.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Η πρωτοβουλία αυτή θα μπορούσε να προωθηθεί από την τουριστική αρχή της πόλης σε συντονισμό με το λιμάνι.

Οι αρχές λιμένων και τουρισμού θα πρέπει να ξεκινήσουν διαβουλεύσεις με ταξιδιωτικούς πράκτορες προκειμένου να εντοπίσουν κοινά ζητήματα που υφίστανται στις υπηρεσίες μεταφοράς με λεωφορείο όταν φεύγουν (ή φθάνουν) στην πόλη. Στη συνέχεια, η φάση σχεδιασμού πρέπει να ξεκινήσει σε συντονισμό με την αρχή κινητικότητας της πόλης. Αυτή η οντότητα πρέπει να βοηθήσει στο να αποφασιστεί εάν οι δημόσιες μεταφορές θα μπορούσαν επίσης να επωφεληθούν από αυτή την πρωτοβουλία. Η προεπιλογή των μέτρων θα πρέπει επίσης να γνωστοποιηθεί στους διοργανωτές ταξιδιών για να ληφθούν τα σχόλιά τους. Ο τελικός σχεδιασμός ή/και η υλοποίηση των σχεδιαζόμενων λύσεων μπορεί να γίνει μέσω πρόσκλησης υποβολής προσφορών.

Στην περίπτωση διαχείρισης της στάθμευσης σε τουριστικές περιοχές, το δημοτικό συμβούλιο πρέπει πρώτα να καθορίσει τις διάφορες τουριστικές περιοχές και να υπολογίσει την χωρητικότητά τους. Αυτό το βήμα πρέπει να γίνει με τη συμμετοχή των ενδιαφερομένων. Μόλις καθοριστεί η χωρητικότητα, ο μέγιστος αριθμός διαθέσιμων χώρων στάθμευσης για τουριστικές μεταφορές μπορεί να προσδιοριστεί και να ξεκινήσει η πλατφόρμα επικοινωνίας.

ΕΠΕΝΔΥΣΗ €

Οι επενδύσεις θα πρέπει να παραμείνουν χαμηλές, εκτός εάν το πεδίο εφαρμογής του μέτρου διευρυνθεί πέρα από τον τουρισμό κρουαζιέρας (όπως στην περίπτωση της δημιουργίας αποκλειστικών λωρίδων για λεωφορεία ή ενός πολυτροπικού σταθμού λεωφορείων).

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Παροχή υπηρεσιών μεταφοράς με λεωφορείο για μακρινούς προορισμούς

Παρέχεται υπηρεσία μεταφοράς σε επιβάτες κρουαζιέρας που ενδιαφέρονται να επισκεφθούν μακρινά τουριστικά αξιοθέατα στη Μάλαγα και τα περίχωρά της. Η τουριστική αρχή, από μόνη της ή σε συντονισμό με τους ταξιδιωτικούς πράκτορες, προωθεί τις υπάρχουσες δημόσιες υπηρεσίες. Η υπηρεσία ενδέχεται να επιβεβαιώνεται μέσω μιας υπάρχουσας εφαρμογής ή παρόμοιων μέσων. Το κύριο ζήτημα είναι ότι οι περισσότεροι επιβάτες κρουαζιέρας δεν σχεδιάζουν την επίσκεψή τους πριν φτάσουν στη Μάλαγα (μόνο το 16% διοργανώνει εκδρομές με την υπηρεσία κρουαζιέρας). Η τουριστική αρχή πρέπει να συνεργαστεί με κρουαζιερόπλοια και ταξιδιωτικά γραφεία, στο πλαίσιο ενός κοινού πλαισίου συμφωνιών παροχών, προκειμένου να προωθήσει την υπάρχουσα τουριστική προσφορά, ειδικά την σχετική εφαρμογή, και τις προσφορές που προσφέρονται εντός αυτής. Συστήνεται συνεργασία με τουριστικούς πράκτορες, καθώς μπορούν να προσφέρουν την ευελιξία που απαιτεί μια υπηρεσία αυτού του είδους.

Βελτιστοποίηση διαδρομών των εκδρομικών λεωφορείων από τους τερματικούς σταθμούς

Η ιδέα είναι η μείωση της κυκλοφοριακής συμφόρησης βελτιστοποιώντας τις διαδρομές των εκδρομικών λεωφορείων, ιδίως σε κάποιες συγκεκριμένες περιοχές, όπως για παράδειγμα, στη Malagueta (όπου υπάρχει συχνά μόνο μια λωρίδα διαθέσιμη), σε συντονισμό με την αρχή κινητικότητας και τους οργανωτές περιηγήσεων της Μάλαγας. Το δημοτικό συμβούλιο πραγματοποιεί ανάλυση της τρέχουσας λειτουργίας των εκδρομικών λεωφορείων που προσφέρουν υπηρεσίες σε επιβάτες κρουαζιέρας, προκειμένου να θεσπιστούν συγκεκριμένα μέτρα για τη μείωση των επιπτώσεών τους στην κυκλοφορία και τη βελτίωση των συνθηκών κατά τη διαδρομή. Οι ώρες άφιξης και αναχώρησης, οι χώροι παραλαβής και παράδοσης, ο αριθμός των επιβατών που παραλαμβάνονται στους τερματικούς σταθμούς, οι προορισμοί, οι διαδρομές και τα προβλήματα που εντοπίζονται από τους οδηγούς, τους ταξιδιωτικούς πράκτορες και τις αρχές αξιολογούνται για να επιλεγούν τα καταλληλότερα μέτρα.

Από την άλλη πλευρά, η ανάλυση των μέτρων αυτών θα μπορούσε να συνοδεύεται από την αναθεώρηση της υφιστάμενης οδικής διαχείρισης και των συνθηκών, προκειμένου να εναρμονιστούν, στο μέτρο του δυνατού, με την υπάρχουσα και μελλοντική ροή των επιβατών κρουαζιέρας (ο Paseo Ciudad de Melilla και ο Paseo de la Farola είναι, για παράδειγμα, κάποιοι από τους άξονες στους οποίους θα μπορούσε να είναι ενδιαφέρουσα μια αναδιοργάνωση των κατευθύνσεων των ταξιδιών).

Ορισμός πρωταρχικών και εναλλακτικών διαδρομών λεωφορείου

Στο Ζαντάρ θα καθοριστούν οι πρωτεύουσες και δευτερεύουσες διαδρομές που θα συνδέουν τον τερματικό σταθμό κρουαζιέρας με το κέντρο της πόλης, ώστε να παρέχουν στους οδηγούς λεωφορείων και ταξί πληροφορίες για την κυκλοφορία σε πραγματικό χρόνο και οδηγίες σχετικά με την προτιμώμενη και συντομότερη διαδρομή. Από την υλοποίηση αυτού του μέτρου προκύπτουν τρία κρίσιμα ζητήματα: 1) Ορισμός των αναγνωρισμένων διαδρομών, 2) Διανομή πληροφοριών κυκλοφορίας σε πραγματικό χρόνο στους οδηγούς, 3) Πραγματική παρακολούθηση των διαδρομών που εκτελούνται από τους οδηγούς. Κατά συνέπεια, το πρώτο ζήτημα είναι προσδιορίσιμο καθώς υπάρχουν δύο διαθέσιμες διαδρομές. Η λύση του δεύτερου ζητήματος περιλαμβάνει την ενσωμάτωση του διαθέσιμου τρέχοντος συστήματος διανομής σε πραγματικό χρόνο που διατίθεται μέσω ενσωματωμένων συστημάτων πλοήγησης οχημάτων, τα οποία είναι ήδη σε θέση να λαμβάνουν πληροφορίες κυκλοφορίας σε πραγματικό χρόνο και να υπολογίζουν εκ νέου τις διαδρομές. Η δεύτερη προσέγγιση θα ήταν μέσω ευφυών συστημάτων μεταφοράς που θα παρείχε ως δυνατότητα η πόλη. Η τρίτη λύση είναι η απαίτηση να έχουν όλα τα λεωφορεία συσκευές παρακολούθησης στόλου. Τα οφέλη των επιβατών κρουαζιέρας από την εφαρμογή αυτού του μέτρου θα ήταν πιο βολικές μεταφορές ταξιδιωτών κρουαζιέρας, εξοικονομώντας χρόνο σε μεταφορές και επεκτείνοντας το διαθέσιμο χρόνο για επίσκεψη.

Ανάπτυξη έξυπνων συστημάτων διαχείρισης της ροής της κυκλοφορίας

Ο στόχος είναι να δημιουργηθεί ισορροπία στον αριθμό των τουριστών (συμπεριλαμβανομένων των επιβατών κρουαζιέρας) σε κάθε περιοχή έλξης,

ώστε να υπάρξει καλύτερη εμπειρία και να μειωθεί ο αντίκτυπος στην ποιότητα ζωής των κατοίκων. Η πρώτη δραστηριότητα είναι ένα σύστημα που ρυθμίζει την πρόσβαση των τουριστικών λεωφορείων σε ορισμένες τουριστικές περιοχές, βάσει της χωρητικότητας των περιοχών. Η χωρητικότητα πρέπει να καθορίζεται βάσει του αριθμού των αξιοθέατων, των διαθέσιμων υπηρεσιών κινητικότητας, των δημόσιων χώρων, του αριθμού των εστιατορίων και άλλων συναφών παραμέτρων. Αφού καθοριστεί αυτή η χωρητικότητα, θα πρέπει να διατεθεί ένας περιορισμένος αριθμός χώρων στάθμευσης για τα τουριστικά λεωφορεία και οι φορείς εκμετάλλευσης θα μπορέσουν στη συνέχεια να κάνουν κράτηση το σημείο στάθμευσής τους μέσω μιας κοινής πλατφόρμας.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Insight 06 - Access regulations to facilitate cleaner and better transport
- CIVITAS Insight 14 - Real-time information for public transport

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Όταν ένα κρουαζιερόπλοιο αγκυροβολεί σε ένα λιμάνι, οι επιβάτες κρουαζιέρας μπορούν να επιλέξουν οργανωμένες εκδρομές ή ατομικές επισκέψεις σε κάποιον προορισμό. Λαμβάνοντας υπόψη ότι οι επιβάτες κρουαζιέρας είναι συχνά ηλικιωμένοι που μπορεί να έχουν περιορισμούς στην κινητικότητα, οι προορισμοί πρέπει να θέσουν σε εφαρμογή τις κατάλληλες λύσεις για την προώθηση της ανεξάρτητης κινητικότητας στην πόλη, επιδιώκοντας την ιδέα της καλύτερης πρόσβασης σε όλους τους επιβάτες κρουαζιέρας, ανεξάρτητα από τους φυσικούς τους περιορισμούς, τις αναπηρίες ή την ηλικία.

Πρέπει να παρέχονται προσπελάσιμες δημόσιες και ιδιωτικές συγκοινωνίες και προσβάσιμα κτίρια/αξιοθέατα σε προορισμούς, προσφέροντας στους επιβάτες με περιορισμένη κινητικότητα όλες τις απαραίτητες εγκαταστάσεις για να φτάσουν ανεξάρτητα σε όλα τα αξιοθέατα της πόλης. Από τη μία πλευρά, πρέπει να παρέχεται πρόσβαση σε αναπηρικά αμαξίδια σε δημόσιους και ιδιωτικούς στόλους μεταφορών, καθώς και εκδρομές προσβάσιμες με λεωφορείο στα κυριότερα αξιοθέατα. Από την άλλη πλευρά, πρέπει να αντιμετωπιστούν κατάλληλα οι ανάγκες σχεδιασμού προσβασιμότητας και η άρση δομικών εμποδίων. Πρέπει να δημιουργηθούν πιο προσιτές διαδρομές πεζών και άνετα πεζοδρόμια, συμπληρωμένα με μηχανικά μέσα (δηλ. ανελκυστήρες)

και χαμηλωμένα κράσπεδα και ράμπες σε μη πεζοδρομημένες περιοχές, ώστε να προωθηθεί η χωρίς εμπόδια πρόσβαση στα αξιοθέατα και τις εγκαταστάσεις των προορισμών.

Παράλληλα με αυτό, ο εξοπλισμός αναπηρίας όπως τα ηλεκτρικά αναπηρικά αμαξίδια μπορεί να ενοικιαστεί για να διευκολύνει την κυκλοφορία των ατόμων με περιορισμένη κινητικότητα. Σε αυτήν την περίπτωση, θα πρέπει να παρέχεται ηλεκτρικό αναπηρικό αμαξίδιο σε βασικά σημεία της πόλης που συνήθως επισκέπτονται επιβάτες κρουαζιέρας (ή άλλοι τουρίστες) ή κοντά σε χώρους στάθμευσης για τουριστικά λεωφορεία.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένη συμφόρηση σε κρίσιμες περιοχές.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

Αυξημένη προσβασιμότητα στην πόλη για άτομα με μειωμένη κινητικότητα.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Βελτιωμένες και περισσότερο βιώσιμες υπηρεσίες που απευθύνονται στους επιβάτες και τους τουρίστες με μειωμένη κινητικότητα.

Βελτίωση της ποιότητας ζωής στις πόλεις όσον αφορά στη ρύπανση και τη μείωση του θορύβου.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Όπου διακυβεύεται η προσβασιμότητα των δημόσιων χώρων και υπηρεσιών, το δημοτικό συμβούλιο είναι ο εκκινητής της δράσης. Μπορεί να προκύψουν άλλες ιδιωτικές πρωτοβουλίες που προσφέρονται ως μέρος ενός τουριστικού πακέτου από τους φορείς εκμετάλλευσης κρουαζιερόπλοιων ή λεωφορείων ή να διερευνηθεί από νεοφυές επιχειρήσεις.

Ενθαρρύνεται η συμμετοχή των τελικών χρηστών σε εγκαταστάσεις δοκιμών, διαδρομές και εξοπλισμό.

ΕΠΕΝΔΥΣΗ €€€

Σύμφωνα με τον τύπο παρέμβασης, η επένδυση κυμαίνεται από μεσαία έως υψηλή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Προωθώντας την δημιουργία ενός έργου με ηλεκτρικές αναπηρικές καρέκλες

Το LCTP της Λισαβόνας πρότεινε ένα ηλεκτρικό σύστημα αναπηρικών αμαξιδίων για τη διευκόλυνση της μετακίνησης ατόμων με περιορισμένη κινητικότητα. Ηλεκτρικά αναπηρικά αμαξίδια θα παρέχονται σε σημεία-κλειδιά της πόλης και ιδιαίτερα κοντά σε σημεία παράδοσης τουριστικών λεωφορείων που συνδέουν τον τερματικό σταθμό κρουαζιέρας με τις τουριστικές περιοχές ή, επιπλέον, κοντά στις δημόσιες συγκοινωνιακές διεπαφές. Ένα από τα πλεονεκτήματα είναι ότι τα τουριστικά λεωφορεία δεν θα χρειάζεται να σταματούν τόσο κοντά στα

αξιοθέατα όπου η συμφόρηση προκαλείται συχνά από την αποβίβαση και την επιβίβαση των επιβατών λόγω του χρόνου που απαιτείται για την ολοκλήρωση των επιχειρήσεων και την έλλειψη χώρου για ειδικά σημεία στάθμευσης. Χάρη σε αυτό το μέτρο, τα λεωφορεία μπορούν να σταθμεύουν πιο μακριά από τα αξιοθέατα και οι επιβάτες μπορούν εύκολα να μετακινηθούν εκεί και να εξερευνήσουν την περιοχή, επιστρέφοντας στη συνέχεια στον ίδιο τόπο. Ο συντονισμός με τα λεωφορεία και τους φορείς εκμετάλλευσης κρουαζιερόπλοιων είναι θεμελιώδης, καθώς η πρόσβαση στις αναπηρικές καρέκλες μπορεί (ενδεχομένως) να συμπεριληφθεί στα παραδοσιακά τουριστικά πακέτα και, επίσης, να πραγματοποιείται με τη διοίκηση της πόλης προκειμένου για την ενσωμάτωσή τους με άλλες πρωτοβουλίες αειφόρου κινητικότητας.

Βελτιώνοντας την προσβασιμότητα για άτομα με μειωμένη κινητικότητα

Σε συνεργασία με τους φορείς εκμετάλλευσης των μεταφορών και του κρουαζιερόπλοιου, ο δήμος θα επιτρέψει σε δύο ειδικά μικρά λεωφορεία χαμηλού ανθρακικού αποτυπώματος σχεδιασμένα να μεταφέρουν άτομα με μειωμένη κινητικότητα να εισέλθουν στο ιστορικό κέντρο, όπου υπάρχουν αρκετοί περιορισμοί πρόσβασης για τα οχήματα. Προς το παρόν, αυτός ο τύπος λεωφορείου μπορεί να μεταφέρει 10 άτομα και 2 χρήστες αναπηρικών αμαξιδίων. Δύο θέσεις στάθμευσης θα διατεθούν για το μικρό λεωφορείο σε χώρο στάθμευσης κοντά στα μνημεία της UNESCO. Αυτός ο χώρος στάθμευσης είναι αυτήν τη στιγμή ιδιωτικός, αλλά ο Δήμος θα το αποκτήσει σύντομα. Πρόκειται για μια ενέργεια χαμηλού κόστους που έχει την υποστήριξη πολλών ενδιαφερομένων, αλλά χρειάζονται αστυνομικοί έλεγχοι προκειμένου να αποφευχθεί η χρήση από τους διαχειριστές λεωφορείων αυτών των μικρών λεωφορείων για τακτικές υπηρεσίες μεταφοράς. Το μέτρο αυτό θα αυξήσει την προσβασιμότητα σε άτομα με μειωμένη κινητικότητα και είναι σημαντικό να δώσει τη δυνατότητα στους επιβάτες κρουαζιέρας με μειωμένη κινητικότητα να επισκεφθούν εύκολα το κέντρο της πόλης της Ραβέννα.

Βελτιώνοντας την κινητικότητα για επιβάτες με αναπηρία και μειωμένη κινητικότητα

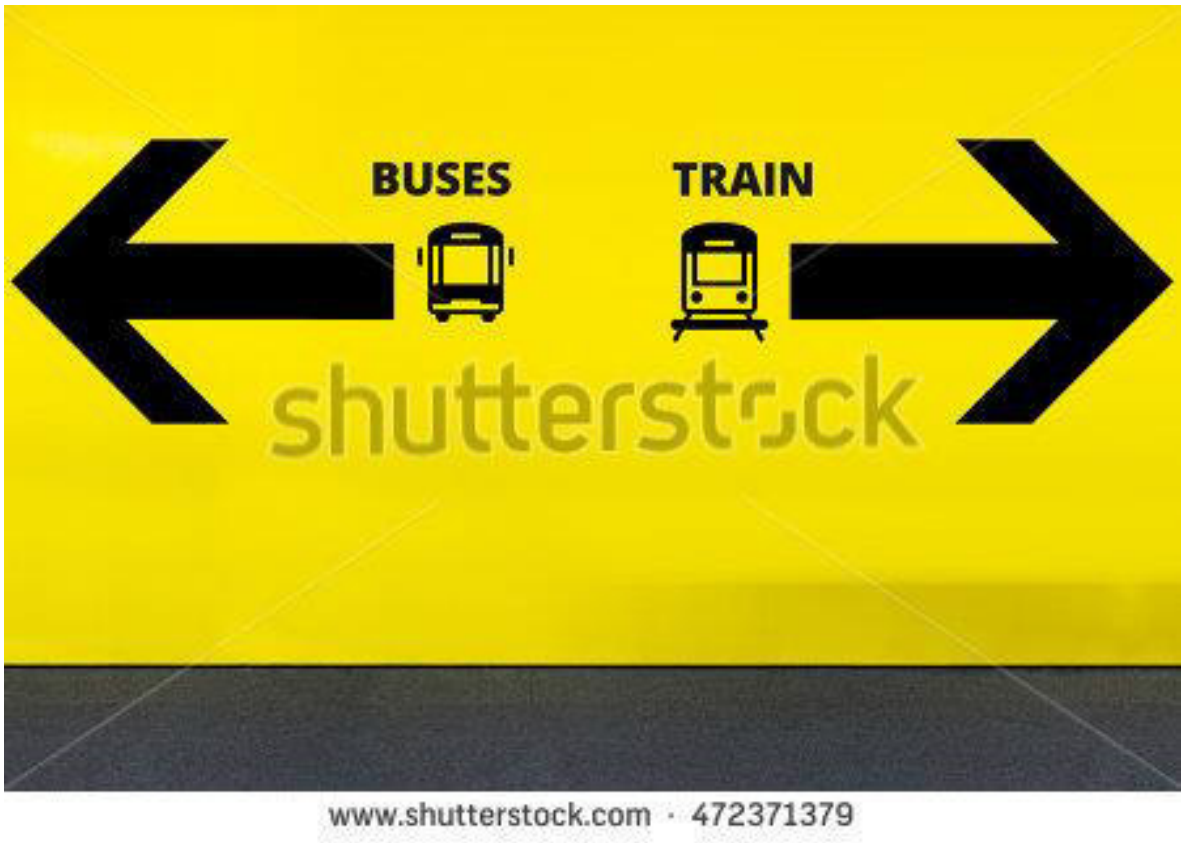
Το μέτρο αυτό θα απαιτήσει την ανάλυση της πραγματικής υποδομής στους τερματικούς σταθμούς κρουαζιερόπλοιων και φέριμποτ. Στην ιδανική περίπτωση, οι βελτιώσεις που έγιναν θα οδηγήσουν στη χρήση μέσων χαμηλού ανθρακικού αποτυπώματος σε όλες τις επισκέψεις στις αστικές περιοχές. Το κρίσιμο θέμα είναι η οικονομική στήριξη. Η υποδομή είναι ανύπαρκτη προς το παρόν, συνεπώς, θα χρειαστούν πολλά κεφάλαια για τη βελτίωση των πραγματικών υποδομών. Επίσης, ένα κρίσιμο ζήτημα θα είναι η συνεργασία με τους υπεύθυνους ανάπτυξης του ΣΒΑΚ. Το μέτρο αυτό λαμβάνει υπόψη ότι μεγάλο μέρος των επιβατών κρουαζιέρας είναι ηλικιωμένοι πολίτες με χαμηλή κινητικότητα. Το μέτρο αυτό επικεντρώνεται στην παροχή όλων των απαραίτητων εγκαταστάσεων στους επιβάτες προκειμένου να φτάσουν σε όλα τα αξιοθέατα της πόλης.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Highlight on accessibility

🔗CIVITAS INSIGHT 02- Accessible mobility: enabling independent living for all

8. ΕΝΙΣΧΥΣΗ ΤΗΣ ΔΙΑΤΡΟΠΙΚΟΤΗΤΑΣ ΤΩΝ ΕΠΙΒΑΤΩΝ



ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Τα στοιχεία από τη Eurostat της τελευταίας δεκαετίας δείχνουν ότι το 80% των επιβατών στην Ε.Ε. των 28 προτιμούν να προσφεύγουν σε μεμονωμένα μέσα μεταφοράς, προσελκυσμένοι από μεγαλύτερη κινητικότητα και ευελιξία. Οι διατροπικές μεταφορές θα πρέπει να είναι βιώσιμη εναλλακτική λύση στο εγγύς μέλλον, συμβάλλοντας στη μείωση της συμφόρησης και της ρύπανσης σε πολλές αστικές περιοχές.

Η διατροπική λογική προβλέπει μια μικτή φόρμουλα αποτελούμενη από τρένα, θαλάσσια φέριμποτ, ποταμόπλοια και αεροπλάνα για τα μακρύτερα τμήματα και, τέλος, τη χρήση οδικών οχημάτων μόνο για να καλυφθεί το αποκαλούμενο "πρώτο και τελευταίο μίλι".

Στη συγκεκριμένη περίπτωση του τουριστικού κρουαζιερόπλοιου, η λογική αυτή θα δώσει ουσιαστικά στους επιβάτες δύο νέες επιλογές: να φτάνουν άνετα στο λιμάνι για να επιβιβαστούν χωρίς να χρησιμοποιούν τα ιδιωτικά τους αυτοκίνητα και να χρησιμοποιούν ένα όχημα στο λιμάνι - ενδιάμεσο προορισμό, κατάλληλο για επίσκεψη σε τοποθεσίες και περιοχές φυσιολατρικού ενδιαφέροντος.

Με τον όρο "διατροπικές μεταφορές" δεν ορίζουμε ένα νέο τύπο μεταφορών, αλλά μια καινοτόμο προσέγγιση για τη χρήση των σημερινών συστημάτων μεταφορών, καθώς περνάμε από μια ανεξάρτητη και μη συσχετισμένη χρήση των ενιαίων παραδοσιακών συστημάτων σε μια περισσότερο ενοποιημένη χρήση.

Το πιο σημαντικό ζήτημα σχεδιασμού είναι να υπάρχουν αποτελεσματικοί διατροπικοί κόμβοι: ένας καλός κόμβος είναι ένα σημείο σύνδεσης που συνδέει τουλάχιστον 3 συστήματα μεταφοράς και διευκολύνει την εναλλαγή.

Επομένως, μια δομή αυτού του τύπου σπάνια δημιουργείται εξαρχής. Αντιθέτως, σχεδιάζεται συνήθως μετά από μια φάση ανάλυσης των υφιστάμενων υποδομών, μέσω παρεμβάσεων που αποσκοπούν στην επικάλυψη των διαφόρων δικτύων μεταφορών, σε στρατηγικά και καλά εξυπηρετούμενα σημεία. Για παράδειγμα, σε ορισμένες περιπτώσεις, μπορεί να είναι αρκετή η αναβάθμιση των υπηρεσιών που συνδέονται με τους υφιστάμενους σιδηροδρομικούς σταθμούς, εξασφαλίζοντας ισχυρές συνέργειες με τις τοπικές δημόσιες συγκοινωνίες (λεωφορεία, τραμ, μετρό), προσθέτοντας απλά ή φέροντας τους σταθμούς πιο κοντά τον ένα στον άλλο. Επιπλέον, η δημιουργία νέων συστημάτων κινητικότητας, όπως, η μίσθωση ή η από κοινού χρήση «καθαρότερων» οχημάτων, μπορεί να διαδραματίσει σημαντικό ρόλο.

Αυτά τα έργα, σε γενικές γραμμές, έχουν έναν ακόμη ευρύτερο στόχο, δηλαδή, την ανακατασκευή ολόκληρης της γύρω περιοχής, καθιστώντας τα ως γρανάζι οικονομικής ανάπτυξης.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένοι όγκοι κυκλοφορίας και συμφόρηση.

Μειωμένες εκπομπές αερίων του θερμοκηπίου και ατμοσφαιρικής ρύπανσης.

Μειωμένος αριθμός ιδιωτικών αυτοκινήτων σε αστικές περιοχές προορισμών κρουαζιέρας, τόσο εξωτερικών, όσο και αυτών που ανήκων σε κατοίκους.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένη χρήση ιδιωτικών αυτοκινήτων, αυξημένη χρήση των μέσων μαζικής μεταφοράς και περισσότερο βιώσιμα μέσα μεταφοράς.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Όπως στα περισσότερα συστήματα μεταφορών, ο δήμος είναι συχνά ο εκκινητής, ενώ συγκεκριμένα μέτρα μπορούν να αναληφθούν από ιδιωτικούς φορείς (φορείς κινητικότητας, εταιρίες συγκοινωνίας, επιχειρήσεις κοινής ωφελείας), κατόπιν συμφωνίας με το δημοτικό συμβούλιο.

- Ανάπτυξη πολιτικής, μελέτη σκοπιμότητας, τεχνικός/λειτουργικός/νομικός σχεδιασμός, καθώς και επικοινωνία της πολιτικής για την αποδοχή του κοινού.
- Εκπόνηση της στρατηγικής, η οποία περιλαμβάνει, μεταξύ άλλων, λεπτομερή ανάλυση του στοχευμένου διατροπικού κόμβου, προσδιορισμό των κύριων διαδρομών και των βασικών προορισμών, καθώς και πιθανά ζητήματα σύνδεσης.

ΕΠΕΝΔΥΣΗ €€€

Σύμφωνα με τον τύπο παρέμβασης, η επένδυση κυμαίνεται από μεσαία έως υψηλή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Ανάλυση των διαθέσιμων επιλογών δημόσιας συγκοινωνίας για την πρόσβαση στην πόλη

Η ανάλυση επικεντρώνεται κυρίως στη σιδηροδρομική ικανότητα του τοπικού πλαισίου (περιφέρεια Friuli Venezia Giulia) προκειμένου να υποδεχτεί τον αυξανόμενο αριθμό τουριστών, με ιδιαίτερη έμφαση στους επιβάτες κρουαζιέρας, παρέχοντάς τους εναλλακτικές λύσεις δημόσιων συγκοινωνιών για να φτάσουν εύκολα στο κέντρο της πόλης και τον τερματικό σταθμό της Τεργέστης. Η ανάπτυξη του σιδηροδρομικού σταθμού του αεροδρομίου της Τεργέστης (σταθμός Ronchi dei Legionari) αποτελεί ένα σημαντικό βήμα προς αυτήν την κατεύθυνση και αυτός ο νέος κρίκος μπορεί να αξιοποιηθεί από επιβάτες κρουαζιέρας που φτάνουν με αεροπλάνο ως αειφόρος και άνετη λύση για την Τεργέστη.

Μελετώντας συγκεκριμένες δημόσιες συγκοινωνίες μεταξύ του σιδηροδρομικού σταθμού και του τερματικού σταθμού κρουαζιέρας

Στην Τεργέστη, ο τερματικός σταθμός κρουαζιέρας βρίσκεται ακριβώς απέναντι από την κεντρική πλατεία, στην καρδιά του κέντρου της πόλης. Αυτή η θέση έχει θετικές και αρνητικές επιπτώσεις. Η εγκατάσταση προσφέρει τεράστια οφέλη για τους τουρίστες που, αποβιβαζόμενοι από το πλοίο σε ένα από τα λιμάνια των ενδιάμεσων προορισμών, βρίσκονται άμεσα στα τοπικά αξιοθέατα (μουσεία, μνημεία, καταστήματα, εστιατόρια κ.λπ.) στο κέντρο της πόλης, αλλά υπάρχει σοβαρή ανησυχία όσον αφορά την κινητικότητα. Οι επιβάτες που χρησιμοποιούν την Τεργέστη ως λιμένα προέλευσης και ο μεγάλος αριθμός επιβατών που αποβιβάζονται από το πλοίο για εκδρομές, πρέπει είτε να φτάσουν στον τερματικό σταθμό κρουαζιέρας είτε να μεταφερθούν στους προορισμούς τους. Από την άποψη αυτή, η πρόσφατη ανάπτυξη του σιδηροδρομικού σταθμού στο αεροδρόμιο της Τεργέστης είναι πιθανό να επιφέρει αύξηση των εισερχόμενων επιβατών στον σιδηροδρομικό σταθμό της πόλης. Μία καλύτερη σύνδεση μεταξύ του τερματικού σταθμού κρουαζιέρας και του σιδηροδρομικού σταθμού που απέχει μόλις 1 χιλιόμετρο θα αποτελούσε ένα βήμα προς την υλοποίηση αποτελεσματικών υπηρεσιών κινητικότητας, διευκολύνοντας τους τουρίστες στις κινήσεις τους προς, από και μέσα στην πόλη.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Insight 15 – Linking intermodal service better
- CIVITAS mobility solution: Intermodal interchanges for public transport
- CIVITAS mobility solution: Intermodality with public transport
- Case of Bucharest (Romania)
- Case of Pomerania (Poland)
- OECD Intermodal connections for destinations

9.ΕΝΣΩΜΑΤΩΜΕΝΗ ΤΟΥΡΙΣΤΙΚΗ ΚΑΡΤΑ

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Η λύση αυτή στοχεύει στη διευκόλυνση της πρόσβασης των επιβατών κρουαζιέρας σε μέσα μαζικής μεταφοράς, συστήματα κοινόχρηστων ποδηλάτων ή/και ενοικίαση ηλεκτρικών οχημάτων από το λιμάνι έως τα αξιοθέατα της πόλης και αντιστρόφως, με τη χρήση τουριστικής έξυπνης κάρτας προσαρμοσμένης στις απαιτήσεις του τουρισμού κρουαζιέρας. Εφαρμοζόμενη ευρέως σε πόλεις σε όλο τον κόσμο, μια τουριστική κάρτα είναι ένα εργαλείο μάρκετινγκ που ενσωματώνει πολλές υπηρεσίες προορισμού, από δημόσιους και ιδιωτικούς παρόχους, όπως, μειωμένες εισόδους σε αξιοθέατα, ειδικές προσφορές σε καταστήματα και χρήση δημόσιων συγκοινωνιών. Η εγκυρότητα μιας κάρτας συνήθως κυμαίνεται από 1 ημέρα έως 1 εβδομάδα.

Ο σχεδιασμός μιας κάρτας προσαρμοσμένης στις απαιτήσεις των επιβατών κρουαζιέρας χρησιμεύει ως μέθοδος για την προώθηση της χρήσης λύσεων μεταφοράς χαμηλού ανθρακικού αποτυπώματος, συμβάλλοντας παράλληλα στην τοπική οικονομία. Πέρα από την ενσωμάτωση των δημόσιων συγκοινωνιών (λεωφορεία, τραμ, μετρό κλπ.), οι τουριστικές κάρτες κρουαζιέρας θα πρέπει να περιλαμβάνουν πρόσβαση σε συστήματα κοινόχρηστων ποδηλάτων και ηλεκτρικά οχήματα (αυτοκίνητα, ποδήλατα, μοτοποδήλατα, ατομικά μεταφορικά μέσα) είτε μέσω απεριόριστης χρήσης είτε σε μειωμένες τιμές. Ανάλογα με την υπάρχουσα υποδομή, την ομαδοποίηση κορυφαίων αξιοθέατων και τα χαρακτηριστικά της πόλης, μπορεί να δοθεί προτεραιότητα σε έναν τρόπο μεταφοράς για τα υπόλοιπα.

Οι συμπράξεις δημοσίου και ιδιωτικού τομέα πρέπει να προσφέρουν ελκυστικές προσφορές στους ταξιδιώτες κρουαζιέρας. Από τη μία πλευρά, με ιδιωτικές εταιρίες ενοικίασης, τουριστικά αξιοθέατα και τοπικές επιχειρήσεις, ενώ από την άλλη, με γραμμές κρουαζιέρας, προκειμένου να προωθηθεί και να πωληθεί αυτή η υπηρεσία πριν ή κατά την άφιξη.

Επιπλέον, είτε βάσει τεχνολογίας έξυπνων καρτών είτε μέσω εφαρμογής, οι δήμοι θα μπορούσαν να επωφεληθούν από τα δεδομένα που συλλέχθηκαν για την ενίσχυση της τουριστικής και διαχείρισης των μεταφορών της πόλης, ενώ οι επιβάτες θα μπορούσαν να έχουν όλες τις τοπικές πληροφορίες σε ένα μέρος και σε πραγματικό χρόνο . Η ανάπτυξη μιας εφαρμογής συνιστάται σε σχέση με άλλες επιλογές ΤΠΕ, δεδομένης της δυνατότητας να προσφέρονται όλες οι πληροφορίες στους επιβάτες κρουαζιέρας με έναν μοναδικό και διαισθητικό τρόπο.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Αυξημένος αριθμός επισκέψεων σε τουριστικά αξιοθέατα.

Αυξημένες συνολικές δαπάνες των επιβατών κρουαζιέρας.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Βελτιστοποιημένη προσφορά μεταφοράς. Υπηρεσίες για επιβάτες κρουαζιέρας.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Προκειμένου να διασφαλιστεί η ενσωμάτωση του συστήματος δημόσιων συγκοινωνιών, το δημοτικό συμβούλιο, μέσω των τμημάτων του τουρισμού και της κινητικότητας, θα πρέπει να ξεκινήσει τη διαδικασία εφαρμογής. Ωστόσο, είναι δυνατή και η ιδιωτική πρωτοβουλία.

Μια εύκολη εφαρμογή θα μπορούσε να διατεθεί σε πόλεις που ήδη προσφέρουν μια τουριστική κάρτα, ειδικά εάν τη διαχειρίζεται μια δημόσια οντότητα.

Το πρώτο βήμα θα πρέπει να είναι η σύλληψη και ο σχεδιασμός των λειτουργιών της κάρτας. Συνιστάται ιδιαίτερα η από κοινού συνεργασία με δημόσιους και ιδιωτικούς φορείς από την αρχή, προκειμένου να επιτευχθούν συμφωνίες για τον τρόπο λειτουργίας του τελικού προϊόντος. Για παράδειγμα, το σύστημα διανομής (κάρτα έκπτωσης από διαφημιζόμενες τοπικές επιχειρήσεις, κάρτα all-inclusive με οικονομική αποζημίωση ή συνδυασμός των δύο) και η απαιτούμενη τεχνολογία (μαγνητική κάρτα, κάρτα τσιπ, εφαρμογή κ.λπ.).

Μόλις καθοριστεί το γενικό πλαίσιο, η φάση υλοποίησης μπορεί να πραγματοποιηθεί μέσω δημόσιας πρόσκλησης υποβολής προσφορών. Η λειτουργία γίνεται συνήθως από την τουριστική αρχή της πόλης. Ωστόσο, η εξωτερική λειτουργία του συστήματος μπορεί να διατεθεί και μέσω δημόσιας προσφοράς. Η λειτουργία του συστήματος περιλαμβάνει συνήθως την εμπορευματοποίηση των καρτών, τη διαπραγμάτευση των υπηρεσιών και την τεχνική συντήρηση.

ΕΠΕΝΔΥΣΗ €

Η αναμενόμενη επένδυση είναι χαμηλή. Οι απαιτήσεις του προϋπολογισμού θα ποικίλλουν ανάλογα με την τρέχουσα κατάσταση της τοπικής κυκλοφορίας της τουριστικής ή αστικής κάρτας, καθώς η επένδυση είναι αντιστρόφως ανάλογη του επίπεδου ανάπτυξης. Από τις λιγότερο στις περισσότερο ακριβές, οι διάφορες κατηγορίες επενδύσεων είναι:

- Συμπερίληψη νέας κατηγορίας/υπηρεσιών σε ένα υπάρχον σύστημα έξυπνων τουριστικών καρτών.
- Ενημέρωση ενός συστήματος μη έξυπνων καρτών για να γίνει έξυπνο και να συμπεριλάβει τις νέες υπηρεσίες.
- Ανάπτυξη συστήματος τουριστικής έξυπνης κάρτας από την αρχή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Ενσωματώνοντας την κινητικότητα κρουαζιέρας στην τουριστική κάρτα

Ένα προσαρμοσμένο πακέτο μέσα από τις υπάρχουσες τουριστικές έξυπνες κάρτες (όπως το Málagapass), ειδικά σχεδιασμένο για επιβάτες κρουαζιέρας, το οποίο διευκολύνει την πρόσβαση σε όλες τις δημόσιες συγκοινωνίες, ενώ παράλληλα προωθεί τοπικές επιχειρήσεις και τουριστικά αξιοθέατα. Θα πρέπει να λαμβάνεται υπόψη ο μέσος χρόνος που έχει διανυθεί, η τοποθεσία των αξιοθέατων και ο βέλτιστος τρόπος μεταφοράς για να φτάσει κανείς σε κάθε προορισμό. Μακρινά αξιοθέατα, όπως, ο Βοτανικός Κήπος (7χλμ. από το λιμάνι), μπορούν να προσφερθούν μαζί με τη δημόσια συγκοινωνία ή την επιλογή αυτοκινήτων κοινής χρήσης, ενώ τα αξιοθέατα μεσαίας απόστασης, όπως το Ρωσικό Μουσείο ή το Μουσείο Γυαλιού και Κρύσταλλου (3 χλμ. από το λιμάνι), μπορεί να περιλαμβάνει τη χρήση συστημάτων εκμίσθωσης ποδηλάτων ή ενοικίασης ηλεκτροκίνητων ατομικών μεταφορέων.

Η κάρτα, η οποία θα είναι εύκολα προμηθεύσιμη κατά την άφιξη στο λιμάνι, έχει ως στόχο να χρησιμοποιηθεί με εύκολο και διαισθητικό τρόπο. Επιπλέον, στοχεύει στην αύξηση της συμβολής του τουρισμού κρουαζιέρας στην τοπική οικονομία. Οι υπηρεσίες βελτιώνουν την εμπειρία των επιβατών επιτρέποντάς τους να προγραμματίσουν τα δρομολόγιά τους πριν ή κατά την άφιξη. Προτεινόμενες διαδρομές με μειωμένα πακέτα (είσοδος, διατροφή και μεταφορά) μπορεί επίσης να προσφερθούν.

Ενσωματώνοντας αειφόρες λύσεις μεταφοράς και έκδοσης εισιτηρίων πολιτιστικών αξιοθέατων

Η δράση αυτή αποσκοπεί στην προώθηση της δημιουργίας ενός πολύ-τομεακού πακέτου το οποίο περιλαμβάνει διάφορες υπηρεσίες κινητικότητας και εισόδους σε πολιτιστικά αξιοθέατα. Οι υπηρεσίες που προσφέρονται μπορεί να είναι κοινόχρηστα ποδήλατα, τουριστικές μεταφορές, δημόσιες συγκοινωνίες, εφαρμογές πεζοπορίας, ακόμα και πρόσβαση σε μνημεία και μουσεία. Οι τουριστικές μεταφορές μπορούν να διαδραματίσουν καίριο ρόλο, διότι

θα μπορούσαν να συμβάλουν στην κάλυψη των κενών του δικτύου κινητικότητας της πόλης (π.χ. ένας επιβάτης χρησιμοποιεί δημόσιες συγκοινωνίες στο κέντρο της πόλης και, στη συνέχεια, παίρνει μια ειδική υπηρεσία τουριστικών μεταφορών σε μια τοποθεσία έξω από την πόλη, όπως, τη Sintra ή την Cascais). Συντονισμένο με άλλα μέτρα, το πακέτο αυτό θα πρέπει να προωθείται μεταξύ των τουριστών και να διατίθεται στον τερματικό σταθμό της κρουαζιέρας για να επιτευχθεί αυξημένος αντίκτυπος.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- European Commission DG MOVE- Study on Public Transport Smartcards.
- UK´s Department for Work and Pensions - Evidence review of smartcard schemes in local authorities.

10. ΒΕΛΤΙΩΣΗ ΤΩΝ ΠΡΟΣΦΕΡΩΜΕΝΩΝ ΠΕΡΙΠΑΤΗΤΙΚΩΝ ΔΙΑΔΡΟΜΩΝ ΓΙΑ ΤΟΥΣ ΕΠΙΒΑΤΕΣ ΚΡΟΥΑΖΙΕΡΑΣ

ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Η πεζοπορία και η ποδηλασία αναγνωρίζονται και προωθούνται ως αειφόρα μέσα μεταφοράς, με θετικές επιπτώσεις στην υγεία, το περιβάλλον και τη γενικότερη ποιότητα ζωής μιας πόλης, καθώς συμβάλλουν στη μείωση της κυκλοφοριακής συμφόρησης και της ζήτησης των περισσότερο ρυπογόνων τρόπων μεταφοράς, περιορίζουν μια σειρά αρνητικών εξωγενών παραγόντων, συμπεριλαμβανομένων της ρύπανσης της ατμόσφαιρας και της ηχορύπανσης, εφαρμόζουν πολιτικές που αποσκοπούν στην επαναπροσδιορισμό των αστικών χώρων και σε ένα αστικό περιβάλλον φιλικότερο προς τον άνθρωπο. Ωστόσο, προκειμένου η πεζοπορία και η ποδηλασία να υιοθετηθούν από τους χρήστες της πόλης και να υποστηριχθούν από τοπικές αρχές και θεσμούς, οι υποδομές πρέπει να παρέχουν ένα ασφαλές και αποτελεσματικό περιβάλλον, προκειμένου οι άνθρωποι να περπατούν και να ποδηλατούν ελεύθεροι από ανησυχίες και υπερβολικούς περιορισμούς.

Όσον αφορά στους προορισμούς κρουαζιέρας, υπάρχουν δύο τουλάχιστον σοβαροί λόγοι για τη βελτίωση των προσφερόμενων διαδρομών πεζοπορίας στους λιμένες-ενδιάμεσους σταθμούς, στους κύκλους της κρουαζιέρας: συμβάλλουν στην επιδείνωση της κινητικότητας της πόλης με αποτροπή των ξαφνικών ροών των επιβατών κρουαζιέρας και στηρίζουν μια περισσότερο

ομοιογενή διανομή των τουριστών στην πόλη, βοηθώντας τις επιχειρήσεις να αναζωογονηθούν σε μια ευρύτερη περιοχή, πέραν αυτών γύρω από τα κύρια τουριστικά αξιοθέατα.

Επιπλέον, προκειμένου να προωθηθεί αποτελεσματικά η πεζοπορία, υπάρχει ανάγκη για ακριβείς χαράξεις διαδρομών και αποστάσεων, που να καλύπτουν τις μεγάλες αποστάσεις (π.χ. από τους τερματικούς σταθμούς έως τα αστικά κέντρα ή άλλους τομείς ενδιαφέροντος) με διαφορετικούς τρόπους (δημόσιες συγκοινωνίες, λεωφορεία κ.λπ.), λαμβάνοντας υπόψη τον διαθέσιμο χρόνο, τις συνήθειες, τις προτιμήσεις και τα χαρακτηριστικά των επιβατών κρουαζιέρας.

Η βελτίωση των διαδρομών πεζοπορίας στις τουριστικές περιοχές είναι πρωταρχικής σημασίας και μπορεί να περιλαμβάνει, μεταξύ άλλων, ένα καλά ανεπτυγμένο σύστημα πεζοδρομίων, με πεζοδρόμια μέσω πάρκων και δημιουργία πεζοδρομίων σε εμπορικές περιοχές.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Αυξημένη μερίδα επιβατών κρουαζιέρας που προτιμούν το περπάτημα ως τρόπο μεταφοράς.

Μειωμένος αριθμός επιβατών κρουαζιερόπλοιων που χρησιμοποιούν μη βιώσιμες επιλογές μεταφορών.

Μείωση εκπομπών αερίων του θερμοκηπίου και ατμοσφαιρικής ρύπανσης.

Βελτιωμένη ικανοποίηση των τουριστών.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένη ανάγκη για θέσεις στάθμευσης.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Το πρώτο βήμα είναι ο τομεακός στρατηγικός σχεδιασμός, η σαφής κατανόηση των χαρακτηριστικών του περιβάλλοντος από πλευράς ζήτησης και προσφοράς, η εκτίμηση της θέσης από όπου θα προέρχονται οι ροές, της θέσης στην οποία θα κατευθύνονται, του είδους των πληροφοριών και της υποδομής που μπορεί να χρειαστεί να επιλέξουν προκειμένου να προτιμήσουν την πεζοπορία στα πλαίσια της εμπειρίας τους από το αστικό περιβάλλον και τα τοπικά αξιοθέατα.

Ο σχεδιασμός και η προώθηση των διαδρομών πεζοπορίας θα πρέπει να βρούνε το φυσικό περιβάλλον τους σε πιο κυρίαρχες τοπικές πολιτικές κινητικότητας και μεταφορών, αντιμετωπίζοντας τη πεζοπορία ως ένα από τα μέσα που πρέπει να υποστηριχθούν και να αξιοποιηθούν.

Τα επόμενα βήματα είναι ο λεπτομερής σχεδιασμός, ορίζοντας, μεταξύ άλλων, τα μέτρα, τις προθεσμίες, το κόστος, τους πόρους, τους δείκτες επιδόσεων και την κατανομή αρμοδιοτήτων, ακολουθούμενα από την υλοποίηση.

Το σχέδιο μπορεί να χρηματοδοτηθεί εν μέρει ή εξ ολοκλήρου από ιδίους πόρους από τοπικούς φορείς (περιφερειακή/επαρχιακή αρχή, δημοτικό συμβούλιο, λιμενική αρχή κ.λπ.) ή μέσω προσκλήσεων για χρηματοδότηση στο πλαίσιο εθνικών ή ευρωπαϊκών προγραμμάτων που αποσκοπούν στην προώθηση της μείωσης των κλιματικών αλλαγών και την ενσωμάτωση της

ηλεκτρικής κινητικότητας σε αστικά περιβάλλοντα. Οι συμπράξεις δημοσίου και ιδιωτικού τομέα μπορεί επίσης να αποτελέσουν λύση για την ανάπτυξη του σχεδίου.

ΕΠΕΝΔΥΣΗ €€€

Σύμφωνα με τον τύπο παρέμβασης η επένδυση κυμαίνεται από μεσαία έως υψηλή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Βελτιώνοντας την προσβασιμότητα σε σημεία ενδιαφέροντος κοντά στον τερματικό σταθμό κρουαζιέρας

Το μέτρο αυτό προβλέπει τη δημιουργία δικτύου ποδηλασίας και πεζών που θα συνδέει τον τερματικό σταθμό κρουαζιέρας με φυσικά σημεία ενδιαφέροντος τα οποία έχουν εντοπιστεί από κοινού με τους τοπικούς φορείς. Αυτή η ενέργεια είναι απαραίτητη για να προσφέρει στους επιβάτες κρουαζιέρας έναν εναλλακτικό τρόπο μετακίνησης κοντά στον τερματικό σταθμό. Επιπλέον, το μέτρο αυτό αυξάνει τον αριθμό των πιθανών διαδρομών που είναι διαθέσιμες για τους επιβάτες κρουαζιέρας που μπορούν να εκτιμήσουν ορισμένα μέρη της Ραβέννας τα οποία επισκέπτονται τώρα ελάχιστα.

Ορίζοντας νέα διαδρομή ποδηλασίας/πεζοπορίας μεταξύ του λιμένα και του κέντρου της πόλης

Ο δήμος του Ζαντάρ σε συνεργασία με την κομητεία και την υπεύθυνη εθνική αρχή αναπτύσσουν ένα καινοτόμο μέτρο για τη δημιουργία νέας διαδρομής ποδηλασίας και πεζοπορίας, με τη χρήση ενός υφιστάμενου σιδηροδρομικού διαδρόμου ο οποίος δεν βρίσκεται πλέον σε χρήση. Αυτό μπορεί να συνδεθεί επιπρόσθετα με μια υπάρχουσα διαδρομή πεζοπορίας κατά μήκος της ακτής, η οποία οδηγεί από το κέντρο της πόλης στην Punta Bajlo. Αυτό το μέτρο παρέχει στους επιβάτες κρουαζιέρας και σε όλους τους άλλους χρήστες της πόλης μια ελκυστική λύση για την προσέγγιση του κέντρου της πόλης και τη σύνδεση παρακείμενων οικισμών όπως το Zaton.

Βελτιώνοντας την κινητικότητα των επιβατών κρουαζιέρας από τον τερματικό σταθμό κρουαζιέρας και φέριμποτ προς στην πόλη

Θα δημιουργηθεί οριζόντια και κάθετη σήμανση που θα εκτείνεται από τον τερματικό σταθμό μέχρι την πόλη. Η οριζόντια σήμανση θα περιλαμβάνει γραμμές διαδρομής διαφορετικών χρωμάτων που θα καθοδηγούν τους τουρίστες της κρουαζιέρας στις διαφορετικές "Πύλες Εξόδου" των Λιμένων και σε διάφορες περιοχές της πόλης. Σε ιδανική περίπτωση, οι γραμμές θα συνεχίζονται στην πόλη και θα συνδέουν όλα τα τουριστικά αξιοθέατα και τα σημεία πληροφόρησης.

Δημιουργώντας σημεία τουριστικής πληροφόρησης κατά μήκος των τουριστικών διαδρομών στην πόλη και σε περιοχές του λιμένα

Durrës

Το μέτρο προβλέπει την εφαρμογή πέντε σημείων πληροφοριών για τους επιβάτες κρουαζιέρας (το πρώτο θα βρίσκεται στην κύρια είσοδο του λιμένα, το δεύτερο στο σιδηροδρομικό σταθμό και τα άλλα σε συγκεκριμένα σημεία τουριστικού ενδιαφέροντος στην πόλη). Αυτά μπορούν να δημιουργηθούν και να εκτελεστούν από έναν ιδιωτικό φορέα εκμετάλλευσης ή/και από μια δημόσια υπηρεσία με μια συμφωνία με το δημοτικό συμβούλιο. Τα σημεία τουριστικής πληροφόρησης θα θεωρούν ότι οι επιβάτες κρουαζιέρας έχουν ένα συγκεκριμένο χρονικό παράθυρο (κατά μέσο όρο 4-6 ώρες παραμονής) για να επισκεφθούν την πόλη και να αναπτύξουν μια κατάλληλη τουριστική διαδρομή για τις ανάγκες των επιβατών κρουαζιέρας.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Insight 01 – Safer road infrastructure for cyclist and pedestrians
- CIVITAS Insight 08 - The high potential of walking
- Planning City Tourism Development: Principles And Issues
- Case of Barcelona (Spain)
- Case of St. Olav Ways (England)

11. ΒΕΛΤΙΩΣΗ ΤΩΝ ΠΡΟΣΦΕΡΟΜΕΝΩΝ ΔΙΑΔΡΟΜΩΝ ΠΟΔΗΛΑΣΙΑΣ ΓΙΑ ΤΟΥΣ ΕΠΙΒΑΤΕΣ ΚΡΟΥΑΖΙΕΡΑΣ

ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Οι επιβάτες κρουαζιέρας πρέπει να ενθαρρύνονται να εξερευνήσουν την πόλη προτιμώντας «καθαρούς» και εναλλακτικούς τρόπους μεταφοράς. Η ανεξάρτητη και ενεργητική εξερεύνηση των προορισμών κρουαζιέρας θα πρέπει να υποστηριχθεί και να εγκριθεί δεόντως από τα συμβούλια των πόλεων και τις λιμενικές αρχές. Υπό μια τέτοια προοπτική, θα πρέπει να δημιουργηθούν οι απαραίτητες υποδομές και εγκαταστάσεις για την προώθηση της ποδηλασίας μεταξύ των επιβατών κρουαζιέρας. Όπου ένα ανεπτυγμένο δίκτυο ποδηλασίας έχει ήδη δημιουργηθεί ή βρίσκεται σε φάση σχεδιασμού, η δράση θα πρέπει να επικεντρωθεί στη βελτίωση των ήδη υπαρχόντων λωρίδων, καθώς και στην κατασκευή νέων ποδηλατοδρόμων που θα μπορούσαν να ωφελήσουν τον τουριστικό κλάδο της κρουαζιέρας. Οι σωστά προγραμματισμένες και συντηρημένες υποδομές αποτελούν προϋπόθεση για να φέρουν την ποδηλασία κοντά στους επιβάτες κρουαζιέρας που προσελκύουν ποδηλάτες τουρίστες. Διαφορετικά, όπου υπάρχει έλλειψη υποδομής για ποδηλασία, θα πρέπει να ληφθεί υπόψη ο προγραμματισμός της για τον τουριστικό τομέα της κρουαζιέρας (και τον τουρισμό γενικότερα).

Σε κάθε περίπτωση, η ποδηλατική διαδρομή και όχι μόνο η σύνδεση του τερματικού σταθμού με την πόλη και το ποδηλατικό της δίκτυο (όπου υπάρχει) πρέπει να εξασφαλίσει ότι τα κύρια τουριστικά αξιοθέατα μπορούν να είναι με άνεση και ασφάλεια προσβάσιμα από επιβάτες κρουαζιέρας με δύο τροχούς. Ένα σημαντικό χαρακτηριστικό που πρέπει να ληφθεί υπόψη είναι η σύνδεση κατάλληλης υποδομής ποδηλασίας με υπηρεσίες ενοικίασης ποδηλάτων και με κατάλληλο σύστημα σήμανσης που υποστηρίζει τις ανάγκες των επιβατών κρουαζιέρας. Πρέπει επίσης να δοθεί προσοχή στις κατευθύνσεις της διαδρομής, πρέπει να είναι απλές και διαισθητικές (βλ. στη παρακάτω το παράδειγμα του ποδηλατικού δικτύου Pesaro "Bicipolitana" στο τμήμα των Πηγών).

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Αυξημένος αριθμός επιβατών κρουαζιέρας που χρησιμοποιεί το ποδήλατο ως τρόπο μεταφοράς.

Μειωμένος αριθμός επιβατών κρουαζιέρας που χρησιμοποιεί μη βιώσιμες επιλογές μεταφορών.

Μείωση εκπομπών αερίων του θερμοκηπίου και ατμοσφαιρικής ρύπανσης.

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Βελτίωση ικανοποίησης των τουριστών.

Μειωμένη ανάγκη για θέσεις στάθμευσης.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Η πολεοδομική υποδομή όπως το ποδηλατικό δίκτυο αποτελεί ευθύνη του δημοτικού συμβουλίου, αλλά ο συντονισμός με τους τουριστικούς φορείς και τους συλλόγους πολιτιστικής προβολής είναι σημαντικός για τον καθορισμό των διαδρομών.

Το πρώτο βήμα είναι να χαρτογραφηθεί το υπάρχον δίκτυο. Στη συνέχεια, προσδιορίζεται η θέση του τερματικού σταθμού κρουαζιέρας και των σημείων ενδιαφέροντος (δηλαδή, των τουριστικών περιοχών). Συνδυάζοντας αυτά τα δύο επίπεδα πληροφοριών, μπορεί κανείς να εντοπίσει την περίπτωση όπου απαιτείται παρέμβαση. Στη συνέχεια, θα πρέπει να οριστούν οι προτεραιότητες (πού να πραγματοποιηθεί πρώτα παρέμβαση) και να προχωρήσουν στην υλοποίησή τους.

ΕΠΕΝΔΥΣΗ €€€

Σύμφωνα με τον τύπο παρέμβασης η επένδυση κυμαίνεται από μεσαία έως υψηλή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Βελτιώνοντας το δίκτυο ποδηλασίας, λαμβάνοντας υπόψη την ανάπτυξη ευνοϊκών διαδρομών για τον τουρισμό

Το δημοτικό συμβούλιο της Λισαβόνας επιδιώκει, επί του παρόντος, μια στρατηγική επέκτασης του δικτύου ποδηλασίας της Λισαβόνας από 90 χλμ. έως 200 χλμ. μέχρι το

2021. Το παρόν μέτρο στοχεύει στη δημιουργία ή τη βελτίωση της υποδομής για ποδηλασία, έχοντας κατά νου τους επιβάτες κρουαζιέρας (και τους τουρίστες εν γένει). Η διαδικασία πρέπει να ξεκινήσει με την ανάλυση της τρέχουσας υποδομής και το τι προβλέπεται για το μέλλον. Διασταυρώνοντας αυτές τις πληροφορίες με την τοποθεσία του τερματικού σταθμού κρουαζιέρας και των κύριων αξιοθέατων που επισκέπτονται οι τουρίστες κρουαζιέρας, είναι δυνατόν να εντοπιστούν τα κενά και οι πτυχές που πρέπει να βελτιωθούν. Πινακίδες με πληροφορίες σχετικά με την κατεύθυνση των τουριστικών περιοχών και των αξιοθέατων, την απόσταση και το χρόνο για να φτάσει κανείς εκεί και τις τουριστικές διαδρομές που πρέπει να ακολουθηθούν, θα διατίθενται στις ποδηλατικές διαδρομές ή ακόμα και στις εφαρμογές για κινητά. Οι υπηρεσίες κοινόχρηστων ποδηλάτων θα συντονίζονται με αυτό το μέτρο και θα είναι διαθέσιμες κοντά στον τερματικό σταθμό.

Αυξάνοντας τις ποδηλατικές εκδρομές προς το κέντρο της πόλης

Στη Ραβέννα θα δημιουργηθεί μια ασφαλής και πλήρης ποδηλατική διαδρομή που θα συνδέει τον τερματικό σταθμό κρουαζιέρας με το ποδηλατικό κέντρο της πόλης. Παρόλο που το ΣΒΑΚ της Ραβέννας περιλαμβάνει ήδη μια παρόμοια λύση, το LCTP έχει προσδιορίσει μια εναλλακτική ποδηλατική διαδρομή περισσότερο κατάλληλη για τουριστικούς σκοπούς, όπου μπορούν να βρεθούν ιδιωτικές επενδύσεις σε μεσοπρόθεσμη περίοδο. Αυτή η ενέργεια θα μπορούσε να συνδεθεί με μια υπηρεσία ποδηλατικού λεωφορείου, ώστε οι επιβάτες κρουαζιέρας να επιστρέψουν στον τερματικό σταθμό με λεωφορείο. Η δημιουργία αυτής της ποδηλατικής διαδρομής είναι θεμελιώδης για να επιτρέψει στους επιβάτες κρουαζιέρας να ταξιδέψουν, όχι μόνο κοντά στον τερματικό σταθμό, αλλά και προς το κέντρο της πόλης της Ραβέννας.

Βελτιώνοντας την προσβασιμότητα σε σημεία ενδιαφέροντος κοντά στον τερματικό σταθμό κρουαζιέρας

Το μέτρο αυτό προβλέπει τη δημιουργία δικτύου ποδηλασίας και πεζών που θα συνδέει τον τερματικό σταθμό κρουαζιέρας με φυσικά σημεία ενδιαφέροντος, τα οποία έχουν εντοπιστεί από κοινού με τους τοπικούς φορείς. Αυτή η ενέργεια είναι απαραίτητη για να προσφέρει στους επιβάτες κρουαζιέρας έναν εναλλακτικό τρόπο μετακίνησης κοντά στον τερματικό σταθμό. Επιπλέον, το μέτρο αυτό αυξάνει τον αριθμό των πιθανών εκδρομών που διατίθενται για επιβάτες κρουαζιέρας, οι οποίοι μπορούν να εκτιμήσουν ορισμένα μέρη της Ραβέννας που σπάνια επισκέπτονται σήμερα.

Βελτιώνοντας την ποδηλατική σύνδεση του λιμανιού με την πόλη

Στη Μάλαγα, η υφιστάμενη υποδομή ποδηλάτων (λωρίδες και χώροι στάθμευσης) θα συμπληρώνεται με ασφαλείς συνδέσεις με τους λιμενικούς τερματικούς σταθμούς και τις τουριστικές περιοχές. Τα υφιστάμενα σχέδια επέκτασης της προσφοράς δημόσιων γραμμών στην πόλη θα πρέπει να αναθεωρηθούν για να εξασφαλίσουν ασφαλείς συνθήκες που θα υποστηρίζουν την προώθηση της ποδηλασίας μεταξύ των επιβατών κρουαζιέρας, αποφεύγοντας τις συγκρούσεις μεταξύ των κατοίκων. Το λιμάνι και οι τερματικοί

σταθμοί του θα πρέπει να συμπεριληφθούν στα σχέδια της πόλης για να διευκολύνουν την πρόσβαση των επισκεπτών σε δημόσιους σταθμούς κοινόχρηστων ποδηλάτων, καταστήματα ενοικίασης και αξιοθέατα που βρίσκονται σε απόσταση 5 χλμ. Η γραμμή του δικτύου ποδηλασίας θα πρέπει να συμπληρωθεί με επιλογές στάθμευσης ποδηλάτων κοντά σε τουριστικά αξιοθέατα, καθώς και να αναδιοργανωθεί σε περίπτωση που χρειαστεί. Το μέτρο αυτό θα απαιτήσει πιθανώς την αναθεώρηση του σημερινού σχεδίου κινητικότητας και τη συλλογή των προτάσεων των ενδιαφερομένων για να δικαιολογήσουν τροποποιήσεις. Η κατανομή των δημόσιων πόρων είναι επίσης απαραίτητη και μπορεί να συντμηθεί με άλλες απαραίτητες ποδηλατικές συνδέσεις. Ωστόσο, αυτό πρέπει να θεωρηθεί ως μέτρο που επηρεάζει την πόλη εν γένει και όχι μόνο τον τουρισμό κρουαζιέρας, δεδομένου ότι το λιμάνι αποτελεί σημαντική έλξη και αφετηρία ταξιδιών. Μία κατάλληλη εφαρμογή θα επηρεάσει θετικά τα προβλήματα συμφόρησης γύρω από το λιμάνι, ενώ παράλληλα θα επωφεληθούν οι επιβάτες κρουαζιέρας με ασφαλείς ποδηλατικές διαδρομές για να φτάσουν σε τουριστικές περιοχές, πέρα από το γεμάτο ιστορικό κέντρο.

Ορίζοντας νέες διαδρομές ποδηλασίας/πεζοπορίας μεταξύ του λιμένα και του κέντρου της πόλης

Ο δήμος του Ζαντάρ σε συνεργασία με την κομητεία και την υπεύθυνη εθνική αρχή αναπτύσσουν ένα καινοτόμο μέτρο για τη δημιουργία νέας διαδρομής ποδηλασίας και πεζοπορίας, με τη χρήση ενός υφιστάμενου σιδηροδρομικού διαδρόμου που δεν χρησιμοποιείται πλέον. Αυτό μπορεί να συνδεθεί επιπρόσθετα με μια υπάρχουσα διαδρομή πεζοπορίας κατά μήκος της ακτής, που οδηγεί από το κέντρο της πόλης στην Punta Bajlo. Το μέτρο αυτό παρέχει στους επιβάτες κρουαζιερόπλοιων και σε όλους τους άλλους χρήστες της πόλης μια ελκυστική λύση για να φθάσουν στο κέντρο της πόλης και να συνδέσουν παρακείμενους οικισμούς, όπως τον *Zaton*.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS mobility solutions- Walking and cycling enhancements/services
- CIVITAS Policy Note: Smart choices for cities. Cycling the city
- CIVITAS Policy Advice Note 03 – Cycle-friendly cities – How cities can stimulate the use of bicycles
- CIVITAS Insight 01 – Safer road infrastructure for cyclist and pedestrians
- BICY project, Central Europe Programme: How to develop cycling tourism?
- BICY project, Central Europe Programme: Best-Practices in Cycling
- Case of Pesaro (Italy)

12. ΖΩΝΕΣ ΧΑΜΗΛΩΝ ΕΚΠΟΜΠΩΝ ΚΑΙ ΣΥΣΤΗΜΑΤΑ ΧΡΕΩΣΗΣ ΚΥΚΛΟΦΟΡΙΑΣ

ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Η κυκλοφορία και οι άμεσες επιπτώσεις της - οι ρυπογόνες εκπομπές και η συμφόρηση - καθίστανται όλο και περισσότερο ως πρόβλημα για πολλές πόλεις μεσαίου μεγέθους. Η προσπάθεια επίλυσης αυτών των ζητημάτων για τις τοπικές αρχές αποτελεί πρόκληση, ιδιαίτερα - όσον αφορά τις πόλεις με λιμάνια- όταν η υψηλή ζήτηση από τον τουρισμό κρουαζιέρας προστίθεται στα συνηθισμένα φορτία ανθρώπων και εμπορευμάτων.

Μεταξύ των διαθέσιμων εργαλείων για την επίλυση ορισμένων από αυτά τα προβλήματα είναι τα συστήματα ελέγχου της κυκλοφορίας, τα οποία συνήθως εφαρμόζονται από την οριοθέτηση των περιοχών της πόλης και τον έλεγχο της κυκλοφορίας μέσω κατάλληλων σημείων πρόσβασης για την αναγνώριση εξουσιοδοτημένων οχημάτων.

ΖΩΝΕΣ ΧΑΜΗΛΩΝ ΕΚΠΟΜΠΩΝ

Οι οδικές μεταφορές αποτελούν μια από τις κύριες αιτίες της ρύπανσης στις πόλεις. Επειδή αυτό αποτελεί πραγματικό κίνδυνο για την υγεία των χρηστών των πόλεων, πολλές χώρες σε όλο τον κόσμο, συμπεριλαμβανομένης της Ε.Ε., έχουν θέσει ένα ελάχιστο όριο προτύπων για την ποιότητα του αέρα.

Οι ζώνες χαμηλών εκπομπών (Low emission zones - LEZ) είναι συχνά το πιο αποτελεσματικό μέτρο που μπορούν να λάβουν οι πόλεις για τη μείωση της ατμοσφαιρικής ρύπανσης, ιδίως των εκπομπών σωματιδίων και του διοξειδίου του αζώτου. Το σύστημα LEZ δημιουργεί περιοχές, εντός

της περιμέτρου των πόλεων, στις οποίες ελέγχεται η κυκλοφορία οχημάτων με υψηλές εκπομπές: συνήθως η αρχή αυτή εφαρμόζεται άμεσα, αρνούμενη την πρόσβαση αυτών των οχημάτων στις εμπλεκόμενες περιοχές. Το LEZ θα μπορούσε να δημιουργηθεί τόσο σε τουριστικά αξιοθέατα όσο και σε περιοχές τερματικών σταθμών κρουαζιέρας για να ωθήσει τους χειριστές λεωφορείων, ταξί κ.λπ. να μεταφέρουν επιβάτες κρουαζιέρας από τον τερματικό σταθμό στα αξιοθέατα ή το αεροδρόμιο, χρησιμοποιώντας οχήματα με χαμηλές εκπομπές.

ΣΥΣΤΗΜΑΤΑ ΧΡΕΩΣΗΣ ΚΥΚΛΟΦΟΡΙΑΣ

Κάθε δρόμος έχει όριο χωρητικότητας, που συνήθως εκφράζεται σε οχήματα ανά ώρα ή ημέρα. Η κυκλοφοριακή συμφόρηση εμφανίζεται όταν ο αριθμός των κυκλοφορούντων οχημάτων υπερβαίνει τη δυνητική χωρητικότητα του δρόμου, συνήθως σε συγκεκριμένα σημεία του οδικού δικτύου και σε συγκεκριμένες ώρες.

Τα συστήματα χρέωσης κυκλοφορίας προορίζονται να μετριάσουν τη συμφόρηση στις πόλεις, να μειώσουν τον όγκο της κυκλοφορίας σε ορισμένους δρόμους ή σε συγκεκριμένες αστικές περιοχές, να πείσουν τους οδηγούς να βρουν πιο βιώσιμες ταξιδιωτικές εναλλακτικές λύσεις, όπως, οι δημόσιες μεταφορές και η ποδηλασία. Οι περισσότερες πολιτικές χρέωσης κυκλοφορίας είναι βασισμένες σε ζώνες, πράγμα που σημαίνει ότι οι οδηγοί των μηχανοκίνητων οχημάτων καταβάλλουν τέλη για τη χρήση ενός δρόμου ή την είσοδο σε μια συγκεκριμένη περιοχή της πόλης σε περιόδους όπου υπάρχει μικρή χωρητικότητα. Τα τιμολόγια ενδέχεται να ποικίλλουν ανάλογα με τον τύπο του σχεδίου και την ώρα της ημέρας, με υψηλότερες χρεώσεις κατά τις ώρες αιχμής τις εργάσιμες ημέρες.

Η παρακολούθηση των κανόνων πρόσβασης αποτελεί θεμελιώδες στοιχείο για την επιτυχία και των δύο συστημάτων. Μια άλλη δυνατότητα είναι η κατανομή ανά κατηγορία, η οποία θα αφορά τον τύπο μεταφοράς ατόμων/φορτίων και την ιδιοκτησία δημόσιων/ιδιωτικών μεταφορών, με τη δυνατότητα πρόληψης της πρόσβασης σε συγκεκριμένη κατηγορία, σε μόνιμη βάση ή σε χρονοθυρίδες. Με αυτό το σύνολο ενεργειών, κάθε τοπική αρχή είναι σε θέση να διαχειριστεί το αστικό κέντρο και την περιοχή του τερματικού σταθμού κρουαζιέρας με την πάροδο του χρόνου, συμβαδίζοντας με τις αλλαγές της αγοράς και τις νέες περιβαλλοντικές οδηγίες.

Συνεπώς, οι χρεώσεις κυκλοφορίας στην τουριστική περιοχή και η πρόσβαση στον τερματικό σταθμό κρουαζιέρας θα μπορούσε να γίνει ένα εργαλείο για τη διαχείριση της ροής των λεωφορείων και των ιδιωτικών αυτοκινήτων. Για παράδειγμα, σε έναν λιμένα προέλευσης, ένα σύστημα χρέωσης της συμφόρησης θα μπορούσε να αποτρέψει τους επιβάτες που επιβιβάζονται και αποβιβάζονται με χρήση των ιδιωτικών τους αυτοκινήτων, επιλέγοντας τα μέσα μαζικής μεταφοράς για να φτάσουν στον τερματικό σταθμό.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ***ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ***

ΑΠΟΤΕΛΕΣΜΑΤΑ	ΜΑΚΡΟΠΡΟΘΕΣΜΑ	ΑΠΟΤΕΛΕΣΜΑΤΑ
Μειωμένος όγκος κυκλοφορίας στα κέντρα των πόλεων Μειωμένη περιβαλλοντική και ηχητική ρύπανση Βελτιωμένη ασφάλεια των μεταφορών Μειωμένος αριθμός ιδιωτικών αυτοκινήτων σε αστικές περιοχές προορισμών κρουαζιέρας , τόσο εξωγενών όσο και αυτών που ανήκουν σε κατοίκους.		Αυξημένη χωρητικότητα σε ποδήλατα ή δημόσιες συγκοινωνίες Αυξημένη χρήση των δημόσιων μέσων μεταφοράς καθώς και πιο βιώσιμων τρόπων μεταφοράς Αυξημένη ελκυστικότητα των ζωνών όπου εφαρμόζονται τα συστήματα

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Όπως σε όλα τα συστήματα μεταφορών, ο δήμος είναι ο εκκινητής, ενώ τα συγκεκριμένα μέτρα μπορούν να υλοποιηθούν από ιδιωτικούς φορείς (φορείς κινητικότητας, εταιρείες ΤΠΕ, επιχειρήσεις κοινής ωφελείας) κατόπιν συμφωνίας με το δημοτικό συμβούλιο.

- Ανάπτυξη πολιτικής, μελέτη σκοπιμότητας, τεχνικός / λειτουργικός / νομικός σχεδιασμός, καθώς και δημοσιοποίηση της πολιτικής για την αποδοχή του κοινού.
- Εκπόνηση του σχεδίου, το οποίο, μεταξύ άλλων, περιλαμβάνει λεπτομερή ανάλυση της στοχευμένης περιοχής, προσδιορισμό των κύριων διαδρομών και βασικών προορισμών, καθώς και πιθανά ζητήματα κυκλοφορίας.
- Εφαρμογή του συστήματος, μαζί με την κατασκευή, την εγκατάσταση και τη συντήρησή του.
- Αύξηση των ελεγχόμενων συστημάτων κυκλοφορίας και των κανονισμών παρακολούθησης
- Λειτουργία και προσαρμογή, συμπεριλαμβανομένων καθημερινών λειτουργιών, συντήρησης συστήματος, συνεχούς αξιολόγησης (οφέλους από την κυκλοφορία, ρύπανση, οδική ασφάλεια και κόστος) και τις απαιτούμενες προσαρμογές.

ΕΠΕΝΔΥΣΗ €€€

Σύμφωνα με το υπό εφαρμογή καθεστώς, η επένδυση κυμαίνεται από μεσαία έως υψηλή. Στην περίπτωση της Ζώνης Χαμηλών Εκπομπών, η επένδυση μπορεί να είναι χαμηλή για τη δημόσια διοίκηση, αλλά υψηλή για τους ιδιωτικούς τομείς. Στην περίπτωση αυτή, θα μπορούσαν να προβλεφθούν δημόσια κίνητρα, αλλά αυτό θα αυξήσει το επίπεδο των δημοσίων επενδύσεων.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Περιορίζοντας την πρόσβαση των τουριστικών λεωφορείων στο κέντρο της πόλης

Τα τουριστικά λεωφορεία που έρχονται στη Ραβέννα θα πρέπει να σταθμεύουν σε συγκεκριμένους χώρους στάθμευσης που χαρακτηρίζονται ως πολυτροπικοί κόμβοι και πληρώνουν εισιτήριο πρόσβασης. Δεδομένου ότι οι επιβάτες κρουαζιέρας έχουν σύντομη χρονική περίοδο για να επισκεφθούν το κέντρο της πόλης, τα

επιβατικά λεωφορεία θα συνεχίσουν να σταθμεύουν κοντά στο σταθμό σε προνομιακή θέση. Επιπλέον, θα απαλλαγούν από την πληρωμή του εισιτηρίου. Η δράση αυτή προβλέπεται στο ΣΒΑΚ και θα έχει άμεσο αντίκτυπο στην κινητικότητα των επιβατών κρουαζιέρας.

Εισάγοντας μία ζώνη χαμηλών εκπομπών

Στο Πόρτο Κορσίνι (περιοχή κοντά στον τερματικό σταθμό κρουαζιέρας), θα δημιουργηθεί Ζώνη Χαμηλών Εκπομπών με την εφαρμογή σταδιακών ενεργειών για τον περιορισμό της κυκλοφορίας των πλέον ρυπογόνων βαρέων οχημάτων, συμπεριλαμβανομένων των λεωφορείων που χρησιμοποιούνται για τη μεταφορά επιβατών κρουαζιέρας, τα οποία θα πρέπει να συμμορφώνονται με τις όλο και πιο αυστηρές περιβαλλοντικές απαιτήσεις. Μέχρι το 2020, σύμφωνα με τις διατάξεις της περιφέρειας Emilia Romagna, η οποία προβλέπει την αντικατάσταση όλων των λεωφορείων EURO 2 που προορίζονται για τοπικές δημόσιες συγκοινωνίες, οι επιβάτες κρουαζιέρας θα μεταφέρονται με οχήματα κατηγορίας EURO 3 ή υψηλότερης. Περίπου κάθε 4 χρόνια, σύμφωνα με τα σενάρια ΣΒΑΚ, η κατηγορία ελάχιστων εκπομπών για την πρόσβαση στο Πόρτο Κορσίνι θα ενημερώνεται, προκειμένου να συμβάλει στη μείωση των ρυπογόνων εκπομπών που προέρχονται από τη μεταφορά επιβατών κρουαζιέρας. Μεσοπρόθεσμα και μακροπρόθεσμα, μετά την κατασκευή μιας εγκατάστασης αποθήκευσης LNG στο Πόρτο Κορσίνι, αναμένεται ότι ένα τμήμα του στόλου των λεωφορείων που προορίζεται για τη μεταφορά κρουαζιερόπλοιων θα τροφοδοτείται με LNG ή/και ηλεκτρικό ρεύμα.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Insight 06 - Access regulations to facilitate cleaner and better transport
- CIVITAS Policy Advice Note 04 – Integration of parking and access management
- Case of Valletta (Malta)
- Case of London (United Kingdom)
- Case of Stockholm (Sweden)
- Case of Milan (Italy)

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Asian Development Bank (2015), *Introduction to Congestion Charging: A Guide for Practitioners in Developing Cities*, available at https://www.adb.org/sites/default/files/publication/159940/introduction-congestion-charging.pdf

13. ΒΕΛΤΙΩΣΗ ΤΗΣ ΔΙΑΧΕΙΡΙΣΗΣ ΣΤΑΘΜΕΥΣΗΣ

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Οι προορισμοί κρουαζιέρας επηρεάζονται έντονα από φαινόμενα συμφόρησης που προκαλούνται από τουριστικά λεωφορεία και μικρά λεωφορεία, που μεταφέρουν επιβάτες κρουαζιέρας σε κύρια τουριστικά αξιοθέατα της πόλης ή σε ημερήσιες εκδρομές στα περίχωρα της πόλης. Όσον αφορά τις κυκλοφορίας ροές που δημιουργούνται από τα τουριστικά λεωφορεία στην πόλη, αξίζει να επισημανθεί ότι, συνήθως, τα λεωφορεία αφήνουν τους επιβάτες όσο το δυνατόν πλησιέστερα στα αξιοθέατα, λόγω του περιορισμένου χρόνου που χρειάζονται οι επιβάτες για να επισκεφθούν την πόλη και συνήθως χρειάζονται χρόνο για να αποβιβάσουν όλους τους ανθρώπους.

Μια στρατηγική στάθμευσης για τα τουριστικά λεωφορεία είναι απαραίτητη για να εξισορροπηθεί ο αρνητικός αντίκτυπός τους στις τοπικές κυκλοφοριακές ροές και στην ποιότητα του αέρα, ώστε να εξασφαλιστεί ότι ειδικοί χώροι στάθμευσης για τα τουριστικά λεωφορεία δημιουργούνται πιο μακριά από τα αξιοθέατα όπου οι συμφορήσεις είναι συνήθως κρίσιμες. Σε μια τέτοια προοπτική, πρέπει να δημιουργηθούν δύο τύποι χώρων στάθμευσης: σύντομη και παρατεταμένη παραμονή. Ο χώρος στάθμευσης μικρής διάρκειας θα πρέπει να υλοποιείται κοντά σε τουριστικά αξιοθέατα και να έχει υψηλή εναλλαγή και περιορισμένο χρόνο στάθμευσης, με στόχο να επιβιβάζει και να αποβιβάζει μόνο τους επιβάτες κρουαζιέρας. Αντίθετα, οι χώροι στάθμευσης παρατεταμένης παραμονής έχουν ως στόχο την υποστήριξη των βραχυπρόθεσμων παραμονών, παρέχοντας χώρο για τα λεωφορεία για στάθμευση μετά την αποβίβαση των τουριστών και την αναμονή για την παραλαβή τους. Οι χώροι στάθμευσης παρατεταμένης παραμονής θα πρέπει να εξυπηρετούν

μεγαλύτερες περιοχές από τις περιοχές βραχείας παραμονής και να τοποθετούνται σε τοποθεσίες χωρίς προβλήματα κυκλοφοριακής συμφόρησης. Το σύνολο των σημείων στάθμευσης που είναι απαραίτητα για κάθε τουριστική περιοχή πρέπει να βασίζεται σε προηγούμενες μελέτες σχετικά με τη μέγιστη χωρητικότητα που μπορεί να φιλοξενήσει η αντίστοιχη περιοχή όσον αφορά τον αριθμό των τουριστών.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένη συμφόρηση σε κρίσιμες περιοχές

Μείωση εκπομπών αερίων του θερμοκηπίου και ατμοσφαιρικής ρύπανσης

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Βελτίωση της ποιότητας ζωής στις πόλεις όσον αφορά στη ρύπανση και τη μείωση του θορύβου.

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Το δημοτικό συμβούλιο έχει την ευθύνη για τη ρύθμιση του τουριστικού χώρου στάθμευσης των μεταφορών.

Το δημοτικό συμβούλιο πρέπει πρώτα να μελετήσει πού να δημιουργήσει τους χώρους στάθμευσης μικρής διάρκειας και παρατεταμένης διαμονής καθώς και τις υπηρεσίες που μπορεί να προσφερθεί. Οι χειριστές τουριστικών λεωφορείων θα πρέπει να συμμετέχουν σε αυτή τη διαδικασία για να διασφαλίσουν ότι οι ανάγκες τους ικανοποιούνται χωρίς να διακυβεύεται η ροή της κυκλοφορίας και η ποιότητα ζωής της πόλης. Μόλις τεθεί σε εφαρμογή, η εποπτεία της δημοτικής πολιτικής είναι σημαντική για να διασφαλιστεί ότι ακολουθείται η ρύθμιση.

ΕΠΕΝΔΥΣΗ €€

Οι επενδύσεις εξαρτώνται από τις θέσεις που έχουν επιλεγεί για τους χώρους στάθμευσης και τον βαθμό της απαιτούμενης παρέμβασης. Εάν απαιτείται μικρή παρέμβαση, οι επενδύσεις θα είναι συνήθως χαμηλές, διαφορετικά μπορεί να είναι αρκετά σημαντικές.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑ ΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Ρυθμίζοντας τη στάθμευση των τουριστικών μεταφορών

Θα δημιουργηθεί ένα σύστημα σημείων στάθμευσης μικρής διαρκείας μόνο για τους επιβάτες που αποβιβάζονται και επιβιβάζονται το οποίο θα συνδέεται με χώρο στάθμευσης παρατεταμένης παραμονής. Οι χώροι στάθμευσης μικρής διάρκειας θα είναι αρκετά κοντά σε αξιοθέατα, έτσι ώστε οι επιβάτες με χαμηλή κινητικότητα να μπορούν να φτάσουν εύκολα. Ο επιτρεπόμενος χρόνος για αυτήν την ενέργεια θα πρέπει να είναι αρκετός για την ομαλή

ολοκλήρωση των εργασιών και την προώθηση της εναλλαγής (π.χ. 5 λεπτά). Μετά την αποβίβαση των επιβατών, τα λεωφορεία θα σταθμεύουν στις περιοχές παρατεταμένης παραμονής, οι οποίες θα εξυπηρετούν στρατηγικές τουριστικές περιοχές και σε μερικές θέσεις στάθμευσης μικρής διάρκειας και, στη συνέχεια, θα επιστρέφουν να παραλάβουν τους επιβάτες στο τέλος της επίσκεψής τους. Ο χρόνος που θα επιτρέπεται να παραμείνει κανείς σε αυτές τις περιοχές θα πρέπει να προσαρμόζεται ανάλογα με τη χωρητικότητά τους και τον αριθμό των σημείων βραχείας παραμονής που εξυπηρετούν (π.χ. έως 2 ώρες).

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS mobility solution: Improving parking management
- CIVITAS mobility solution: Developing a parking strategy
- CIVITAS Policy Advice Note 04 – Integration of parking and access management

14. ΛΥΣΕΙΣ ΤΠΕ ΚΑΙ ΣΥΣΤΗΜΑΤΑ ΕΥΡΕΣΗΣ ΠΟΡΕΙΑΣ ΓΙΑ ΤΟΥΣ ΕΠΙΒΑΤΕΣ ΚΡΟΥΑΖΙΕΡΑΣ

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ΠΕΡΙΓΡΑΦΗ ΤΗΣ ΛΥΣΗΣ

Ειδικές εναλλακτικές λύσεις και εργαλεία κινητικότητας πρέπει να στοχεύουν σε επιβάτες κρουαζιέρας οι οποίοι προτιμούν την επιλογή να πραγματοποιήσουν μόνοι τους τις επισκέψεις στα αξιοθέατα από το να συμμετέχουν σε οργανωμένες εκδρομές, μακριά από το πλήθος και να αναζητήσουν κάτι που δεν προσφέρεται από τις παραδοσιακές τουριστικές διαδρομές.

Σε μια τέτοια προοπτική, οι λύσεις ΤΠΕ μπορούν να υιοθετηθούν από προορισμούς για να καθοδηγήσουν τους ανθρώπους μέσα σε ένα φυσικό, συχνά ανοίκειο περιβάλλον και να ενισχύσουν την κατανόηση και την εμπειρία τους από τον περιβάλλοντα χώρο. Είναι μια πρόσκληση για τους επιβάτες κρουαζιέρας να εξερευνήσουν μια πόλη με τα πόδια, ανταποκρινόμενοι στις βασικές ανάγκες πλοήγησης, ταυτοποίησης και πληροφόρησης. Παράλληλα, οι λύσεις ΤΠΕ θα μπορούσαν να αποτελέσουν ευκαιρία για τους επιβάτες κρουαζιέρας, παρέχοντάς τους πληροφορίες σε πραγματικό χρόνο σχετικά με το πώς μπορούν να προσεγγίσουν τουριστικά και πολιτιστικά αξιοθέατα, ευνοώντας και προωθώντας βιώσιμους τρόπους μεταφοράς και αποτελεσματικές υπηρεσίες δημόσιων συγκοινωνιών.

Από την μία πλευρά, οι λύσεις ΤΠΕ, όπως τα ευφυή συστήματα μεταφορών (ITS), μπορούν να υποστηρίξουν τους επιβάτες κρουαζιέρας στην απόκτηση πληροφοριών σχετικά με τις συνθήκες κυκλοφορίας και τις μεταφορές, βοηθώντας τους να κάνουν τις καλύτερες επιλογές και να

καταστήσουν ασφαλέστερη, πιο συντονισμένη και πιο «έξυπνη» χρήση των διαθέσιμων δικτύων μεταφορών.

Από την άλλη, τα συστήματα καθοδήγησης παρέχουν στους πεζούς χάρτες, οδηγίες και σύμβολα γενικής χρήσης για να τους καθοδηγήσουν στους προορισμούς τους.

Καθιστώντας τις πληροφορίες πιο προσιτές και εύκολα κατανοητές, μειώνουν την πιθανή σύγχυση, συμβάλλοντας στη βελτίωση και τον εμπλουτισμό των εμπειριών των πεζών της πόλης. Από τη σκοπιά της εφαρμογής, πρέπει να δοθεί προσοχή στο σημείο όπου εμφανίζονται οι πληροφορίες και όχι μόνο στον τρόπο με τον οποίο παρουσιάζονται. Οι πληροφορίες μπορούν να διανέμονται κατάλληλα και με επιτυχία είτε μέσω τοπικών εγκαταστάσεων (π.χ. διαδραστικές οθόνες, κιόσκια, στήλες και πίνακες) είτε/και μέσω ψηφιακών καναλιών (π.χ. κινητές εφαρμογές). Τα συστήματα μπορούν να υποστηρίξουν την πλοήγηση τόσο για τους πεζούς, όσο και για τους ποδηλάτες και τους ανθρώπους σε αναπηρικά αμαξίδια (σε αυτήν την περίπτωση, συνιστάται οι οδηγίες να είναι αναγνωρισμένες από ενώσεις ατόμων με ειδικές ανάγκες). Ο χώρος των πεζών πρέπει να είναι κατάλληλος, βολικός, ευχάριστος, συνδεδεμένος, άνετος και ασφαλής, επομένως, ίσως είναι χρήσιμο να συμπληρωθεί η αύξηση της πεζοπορίας με οχήματα με μειωμένες ταχύτητες κυκλοφορίας.

ΑΝΑΜΕΝΟΜΕΝΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

ΒΡΑΧΥΠΡΟΘΕΣΜΑ ΚΑΙ ΜΕΣΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένος αριθμός ιδιωτικών αυτοκινήτων σε αστικές περιοχές προορισμών κρουαζιέρας, τόσο εξωγενών, όσο και αυτών που ανήκουν σε κατοίκους.

Μειωμένη περιβαλλοντική και ηχητική ρύπανση.

Αυξημένη δυνατότητα για περπάτημα για επιβάτες κρουαζιέρας, τουρίστες και κατοίκους

ΜΕΣΟΠΡΟΘΕΣΜΑ ΚΑΙ ΜΑΚΡΟΠΡΟΘΕΣΜΑ ΑΠΟΤΕΛΕΣΜΑΤΑ

Μειωμένη συμφόρηση στις δημόσιες συγκοινωνίες

Μειώσεις της συμφόρησης στο οδικό δίκτυο

Ασφαλέστερες γειτονιές

Μεταβολή των συνηθειών και της συμπεριφοράς στην κυκλοφορία του τοπικού πληθυσμού

ΚΥΡΙΑ ΒΗΜΑΤΑ ΤΗΣ ΥΛΟΠΟΙΗΣΗΣ

Ο εκκινητής αυτού του μέτρου πρέπει να είναι μια πόλη/δήμος, ενώ τα απτά μέτρα μπορούν να εφαρμοστούν από ιδιωτικούς φορείς (φορείς κινητικότητας, εταιρείες ΤΠΕ, επιχειρήσεις κοινής ωφελείας), κατόπιν συμφωνίας με το δημοτικό συμβούλιο. Στην περίπτωση των ευφυών συστημάτων μεταφορών, η υπηρεσία κοινής ωφελείας δημόσιων μεταφορών πρέπει να συμμετέχει άμεσα στη δημιουργία της.

ΕΠΕΝΔΥΣΗ €

Το επίπεδο επένδυσης μπορεί να είναι χαμηλό έως μέτριο, ανάλογα με την έκταση της ανάπτυξης λύσεων κυκλοφορίας και τον αριθμό των πλατφορμών στις οποίες θα είναι διαθέσιμη η εφαρμογή.

ΑΝΑΦΟΡΕΣ ΑΠΟ ΤΑΣΧΕΔΙΑ ΜΕΤΑΦΟΡΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΑΚΙΚΟΥ ΑΠΟΤΥΠΩΜΑΤΟΣ ΤΟΥ LOCATIONS

Εγκαθιστώντας ενημερωτική πινακίδα στον τερματικό σταθμό επιβατών λιμένα

Το μέτρο αυτό περιλαμβάνει την εγκατάσταση ενημερωτικής πινακίδας στον τερματικό σταθμό λιμένα πλησίον της θέσης αγκυροβολίας του κρουαζιερόπλοιου στον κυματοθραύστη. Η πινακίδα θα πρέπει να περιλαμβάνει πληροφορίες σχετικά με τα τουριστικά αξιοθέατα της πόλης και το πώς μπορεί να τα προσεγγίσει κανείς. Η πινακίδα θα προωθήσει τα εναλλακτικά μέσα μεταφοράς, όπως, τα ηλεκτρικά μοτοποδήλατα, το παραδοσιακό σκάφος, το περπάτημα κλπ. Η πινακίδα μπορεί να είναι διαδραστική, με σταθερές ή μεταβλητές πληροφορίες. Δεδομένης της ποσότητας πληροφοριών, προτείνεται η εγκατάσταση μιας διαδραστικής πινακίδας, δηλαδή, μιας οθόνης αφής, έτσι ώστε ο επιβάτης να μπορεί να επιλέξει ποιες πληροφορίες θα δει και θα εξερευνήσει με περισσότερες λεπτομέρειες. Η διαδραστική πινακίδα παρέχει το μεγαλύτερο μέρος των πληροφοριών σε πολύ σύντομο χρονικό διάστημα και παρέχει στους επιβάτες ό, τι χρειάζονται για να γνωρίσουν την πόλη από μόνοι τους.

Αναπτύσσοντας μια εφαρμομή για τους τουρίστες κρουαζιέρας που συμπεριλαμβάνει όλα τα σημεία ενδιαφέροντος και τις δραστηριότητες

Στο Δυρράχιο θα αναπτυχθεί μια εφαρμογή για τους τουρίστες κρουαζιέρας σε συνεργασία με τις τοπικές τουριστικές αρχές και τους ιδιωτικούς φορείς, για την προώθηση ποικίλων «τουριστικών θεματικών μονοπατιών» στην πόλη, βάσει διαφορετικών κριτηρίων (π.χ. "παραδοσιακή κουζίνα" κ.λπ.). Η εφαρμογή για την ενημέρωση των επιβατών κρουαζιέρας είναι ένα πιο προσιτό εργαλείο σε σύγκριση με άλλες μεθόδους πληροφόρησης. Επίσης, το εργαλείο θα εμφανίζει διαφορετικές διαδρομές σύμφωνα με τα κριτήρια που εισήγαγαν οι επιβάτες κρουαζιέρας, καθιστώντας το μέτρο μοναδικό για την περιοχή.

Αναπτύσσοντας μια εφαρμογή για την εύρεση διαδρομής στην πόλη

Στην Τεργέστη θα αναπτυχθεί μια εφαρμογή εύρεσης της διαδρομής για τους επιβάτες κρουαζιέρας και τους τουρίστες, η οποία θα προσφέρει λεπτομερέστατες πληροφορίες για τους κύριους πολιτιστικούς και ιστορικούς χώρους, καθώς και για την προώθηση της χρήσης λύσεων χαμηλού ανθρακικού αποτυπώματος. Η εφαρμογή είναι ένα χρήσιμο εργαλείο για να καθοδηγεί τους τουρίστες, παρέχοντας πολύ εύκολα πλήρεις και ενημερωμένες πληροφορίες σχετικά με το πώς θα κυκλοφορούν στην πόλη, συμπεριλαμβανομένων πληροφοριών για την πολιτιστική κληρονομιά της πόλης και για διαδρομές γύρω από ιστορικούς χώρους. Η εφαρμογή θα είναι ελεύθερα διαθέσιμη από ιστότοπους προώθησης για τουρίστες και, επομένως, θα διευκολύνει τους τουρίστες στις κινήσεις τους μέσα στην πόλη, κυρίως όσους περνούν μικρό χρονικό διάστημα στην πόλη και χρειάζονται γρήγορη πληροφόρηση για το περπάτημα.

Προωθώντας εναλλακτικά σημεία τουριστικού ενδιαφέροντος

Κατά την άφιξη της κρουαζιέρας, θα διατεθεί η διανομή ειδικών τουριστικών χαρτών για επιβάτες κρουαζιέρας, ενδεχομένως προσαρμοσμένων από υπάρχοντες, για να επισημανθούν ειδικά σχεδιασμένα εναλλακτικά σημεία ενδιαφέροντος στην πόλη (όπως, καλλιτεχνική εκδήλωση ή θεματικά κτίρια), ώστε να είναι προσβάσιμα από το λιμάνι σε ομάδες τουριστών κρουαζιέρας ή μεμονωμένων ατόμων, σύμφωνα με τις προτιμήσεις των τουριστών κρουαζιέρας για διαδρομές με τα πόδια. Οι διαδρομές είναι ποικίλες και θα σχεδιαστούν βάσει των προτιμήσεων των τουριστών, βοηθώντας στην αποφυγή της επικάλυψης των πεζοποριών και της συμφόρησης στους κεντρικούς δρόμους του ιστορικού κέντρου. Αυτό πραγματοποιείται με δύο τρόπους. Πρώτον, από το λιμάνι μέχρι τα κύρια αξιοθέατα, οι διαδρομές κάνουν χρήση δευτερευόντων δρόμων που είναι εξίσου εξοπλισμένοι αλλά δεν έχουν τόση τουριστική κίνηση όσο οι κύριοι. Δεύτερον, από το λιμάνι έως τα εναλλακτικά αξιοθέατα, με λεπτομερείς κυκλικές διαδρομές προσαρμοσμένες στον διαθέσιμο χρόνο με διαφορετικά σημεία εκκίνησης από τα προηγούμενα. Οι πολυάριθμες στάσεις των λεωφορείων μπορούν να χρησιμοποιηθούν για τη διανομή ομάδων επιβατών, ανάλογα με τα προεπιλεγμένα δρομολόγια. Με αυτό το μέτρο, οι επιβάτες κρουαζιέρας μπορούν να επισκεφθούν την πόλη μέσω προσαρμοσμένων κυκλικών διαδρομών, ελέγχοντας παράλληλα τον απαιτούμενο χρόνο και κόπο, δεδομένου ότι οι χρόνοι περπατήματος (σε λεπτά) και οι αποστάσεις (σε μέτρα) συμπεριλαμβάνονται με διαισθητικό τρόπο. Σήματα στο δρόμο θα ενισχύσουν τις πληροφορίες εντός των χαρτών για τη διευκόλυνση της κινητικότητας των επιβατών.

Οι οικονομικές απαιτήσεις μπορεί να επιλυθούν μέσω της πώλησης διαφημίσεων από τις τοπικές επιχειρήσεις, συγκεκριμένα, των αγορών και των επιλογών διατροφής για κάθε διαδρομή που θα ενισχύσει την εμπειρία των επιβατών. Επιπλέον, ο σχεδιασμός του χάρτη θα πρέπει να εκμεταλλευτεί τον υπάρχοντα χάρτη «Η Μάλαγα σε 8 ώρες» ("Málaga en 8 horas") για τη μείωση των περιορισμών εφαρμογής και κόστους.

Παρέχοντας πληροφορίες για χρόνους πεζοπορίας και αποστάσεις

Στη Μάλαγα θα δημιουργηθεί ένα αστικό δίκτυο ολοκληρωμένων σημάτων γύρω από το λιμάνι και τις τουριστικές περιοχές, για να δείξει με έναν εύκολο και πολύγλωσσο τρόπο την απόσταση (σε μέτρα) και τον χρόνο περπατήματος (σε λεπτά) για να φτάσει κανείς σε κοντινά αξιοθέατα. Το δίκτυο σημάτων αντιστοιχεί στις πληροφορίες και τις συστάσεις που δίνονται στους επιβάτες κρουαζιέρας και γενικά τους τουρίστες, μέσω θεσμικών μέσων (χάρτες, διαδίκτυο, εφαρμογές κλπ.), έτσι ώστε οι επιβάτες των διαδρομών να βρουν έναν διαισθητικό και σαφή τρόπο μετακίνησης, ελέγχοντας τον περιορισμένο χρόνο που διαθέτουν. Για τον λόγο αυτό, απαιτείται η σχεδίαση των πεζών περιηγήσεων που περιγράφηκαν στο προηγούμενο μέτρο πριν από την εγκατάσταση των σημάτων, καθώς οι πληροφορίες που περιέχουν θα πρέπει να βοηθήσουν στη κατανομή των επιβατών κρουαζιέρας σε εναλλακτικά αξιοθέατα και μέσω εναλλακτικών δρόμων. Έτσι, οι διαδρομές, οι χρόνοι, οι αποστάσεις, οι προορισμοί και ακόμη και τα χρώματα πρέπει να είναι τα ίδια, τόσο στα σήματα της πόλης όσο και στα διαθέσιμα εργαλεία για τους επισκέπτες.

ΑΛΛΕΣ ΠΗΓΕΣ/ΠΑΡΑΔΕΙΓΜΑΤΑ/ΑΝΑΦΟΡΕΣ

- CIVITAS Insight 14 - Real-time information for public transport
- CIVITAS Insight 08 - The high potential of walking
- CIVITAS Policy Advice Note 10 – Innovative information systems for public transport
- SIMPLA project (Horizon 2020): Turn-key package 4.5 - ICT applications for efficient and integrated transport solutions
- SOLUTIONS project: - Handout - Cluster 1: Public Transport
- Sign Research Fundation: Urban Wayfinding Planning and Implementation Manual
- Case of Pontevedra: “Metrominuto” (Spain)
- Case of Emilia Romagna Region: “MyCicero” (Italy)

Project co-financed by the European Regional Development Fund

LOCATIONS

ΠΡΟΩΘΩΝΤΑΣ ΤΗΝ ΠΡΑΣΙΝΗ ΚΙΝΗΤΙΚΟΤΗΤΑ ΣΕ ΠΡΟΟΡΙΣΜΟΥΣ ΚΡΟΥΑΖΙΕΡΑΣ

ΕΤΑΙΡΟΙ ΤΟΥ ΠΡΟΓΡΑΜΜΑΤΟΣ

Area Science Park – Lead Partner
Albanian Institute of Transport
Research Centre for Energy Resources and Consumption
City of Zadar

Durres Port Authority
Lisbon City Council
LISBOA E-NOVA
MálagaPort

Municipality of Ravenna
Port of Rijeka Authority
Port System Authority of the Adriatic Sea
Regional Energy Agency Kvarner

https://locations.interreg-med.eu

3. LCTP of Limassol

Project co-financed by the European Regional Development Fund

Limassol Low Carbon Transport Plan

LOCATIONS - Low Carbon Transport in Cruise Destination Cities WP3 – Testing

Main author: CIVINET CY-EL

Date: 30 October 2019

Table of Contents

1. Introduction

The document on hand represents the Synthetic Report of the Low Carbon Transport Plan of Limassol (LCTP), Cyprus, mentioned from now on as "Limassol LCTP". The full-version of the Limassol LCTP is available in the Greek language, online, in the "Deliverable Library" section of the Interreg MED website.

An LCTP is a tool created in the framework of the LOCATIONS project in order to support the Mediterranean cruise-destinations to serve the mission of mitigating the impact that cruise-ships related traffic has on cities, improving the quality of life of inhabitants and visitors. The LCTP methodology has been developed with the collaboration of 20 partners across 5 countries. Seven leading cruise-ship destinations of the Mediterranean adopted the afore-mentioned plans by 2018. These cities were Ravenna, Durres, Malaga, Rijeka, Zadar, Lisbon, Trieste.

The Limassol LCTP has been elaborated in the framework of the LOCATIONS Project of Interreg MED, and funded by it, during the replication phase of the project, alongside Riviera, Igoumenitsa, Thessaloniki, Valetta and Koper, that elaborated their LCTPs, as well. CIVINET CY-EL was the responsible organisation for drafting the Limassol LCTP, in close collaboration with the Limassol Municipality and the Ministry of Transport, Communications, and Works of the Republic of Cyprus.

The Limassol LCTP has been drafted following the methodology provided by the LOCATIONS Project, as described thoroughly in the Capacity Building Manual, and taking into account the valuable experience of the already finalised 7 LCTPs. Lastly, the organisations responsible for drafting the 5 new LCTPs participated in a Capacity Building seminar in Lisbon, they have been in close contact with the Project's expert assigned to support them, and have carried out dedicated meetings and participatory activities with stakeholders of their study area aiming to generate an LCTP of high quality.

Area Science Park (Italy), Lead partner of the LOCATIONS project, was responsible for assisting CIVINET CY-EL in drafting the LCTP, providing expert support and monitoring its progress. The final version of the LCTP was provided to the Municipality of Limassol, as a policy & planning tool for addressing the mobility and environmental pressures of the cruise activity, locally.

2.0 Step 0: Work plan and team

As a preparation step of drafting the LCTP (defined as “Step: 0”), a working team was set up and a work plan was drafted.

2.0.1 Work team and contributors

Within the project work team, CIVINET CY-EL had the role of coordinating it, while the contribution of the other entities was substantial, as well. The working team comprised of two levels: the core work-team and the contributors. The first group had a regular communication regarding the LCTP drafting, while the second was involved in an ad-hoc basis in order to provide insights and input for specific matters of their interest/knowledge. All the involved entities were invited in the Participatory Workshops of the project.

Table 1: LCTP Limassol work team and contributors

WORK TEAM			
Organisation	**Name**	**Role in the Organisation**	**Role in the project**
CIVINET CY-EL Secretariat	Alexia SPYRIDONIDOU	International Affairs & Projects	• Project manager • Project contact person on behalf of the organisation • Main author
	Laoura VAVALIOU	Urban Planning Expert	Team member
	Kosmas ANAGNOSTOPOULOS	Coordinator	Team member
	Tasos PAPADIMITRIOU	Communication Responsible	Team member
	Sofia SPYRIDONIDOU	CIVINET members support	Team member
Ministry of Transport, Communications and Works Public Works Department	Demetris DEMETRIOU	Transport Planner, GIS Analyst	Limassol SUMP data provision
	Demetris PSYLLIDES	Transport Engineering Consultant	Limassol SUMP data provision

	Michael LABRINOS	Senior Executive Engineer, & Head of Sustainable Mobility Section	Overview and quality control
	Vana GANIA	Transport Planner	• Data provision (existing studies, raw data, planned measures and infrastructure, national policies) • Liaison with Ministry departments and the Limassol SUMP stakeholders • Project contact person on behalf of the Ministry
Limassol Municpality	Stylianos STYLIANIDES	Urban Planning Officer	• Insights for municipal relevant policies, projects (incl. the Limassol SUMP & the CIVITAS DESTINATIONS project) and strategies for mobility, environment & tourism • Local expert view
DP WORLD - Limassol Multi-purpose Terminal Operator (including Cruise)	Doros ARESTI	Communications Officer	• Provision of cruise terminal related data • Feedback on the LCTP Insights regarding cruise trends and local plans • Contribution in connecting the LCTP with the DP World vision

CONTRIBUTORS			
Organisation	**Name**	**Role in the organisation**	**Role in the project**
Limassol Tourism Board	Christina KANELLAKI	Project Manager	• Insights from DESTINATIONS project • Insights regarding data for tourism in general & cruise tourism, in particular • Contribution in connecting the LCTP with the local strategy for tourism
	Maria STYLIANOU	General Manager	
Strategem Ltd	Nicole MAVROVOUNIOTI	Project Manager	Insights from the: • Freight Logistic Action Plan (SULP) • Sustainable Mobility Tourist Action Plan (SMTAP)

			developed within the CIVITAS DESTINATIONS project
Cyprus University of Technology & Heraclitus Research Center	Antonis THEOCHAROUS	Assistant Professor – Department of Hotel and Tourism Management Coordinator – Heraclitus RC	• Provision of the university studies and insights on mobility, tourism & cruise • Participation in the project meetings • Liaison with the corresponding university departments for each topic
	Myrianthi ASTANIOTI	University Staff, Architect	
	Petros KOSMAS	Special Scientist at the Department of Hotel and Tourism Management, Assistant Coordinator at Heraclitus RC	

2.0.2 Work Plan

An overview of the project work plan is presented in the following table. Despite the initial intention to develop the LCTP step by step in a linear manner, the feedback and the constant onboarding of new stakeholders, alongside some important developments that took place during the LCTP elaboration (e.g. Limassol SUMP finalization, the 2nd Limassol Cruise Executive Summit, e.t.c.) lead to the approach of having the LCTP as a living document until its final submission.

Table 2: Limassol LCTP Work Plan (timeline)

Year	2018			2019									
Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Project month	M0	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Contracting													
LCTP Drafting													
Step 0 Work Plan and Team													

Step 1 **Initial Assessment**					Version 1					Version 2			
Step 2 **Participatory Process**		Workshop 1				Interviews				Workshop 2			
Step 3 **Draft of the operational model**													
Step 4 **Monitoring, assessment and sources for funding**													

2.1 Step 1: Initial Assessment

2.1.1 Context Analysis

Planning for the cruise sector related activities is a complex process, given the multiple different disconnected decision-making layers that have to coordinate and have their goals aligned. Roughly, the cruise-sector ecosystem is comprised of the global market of 1) cruise lines that own the fleet, decide the routes, attract passengers (often of a specific profile) and provide offers and service-packages, and 2) the cruise associations that promote destinations to cruise lines and passengers. At the local level, this system is complemented by 3) the cruise terminal operator, 4) the ground operators, 5) the local tourist agents and 6) the local decision-makers (authorities, stakeholders, e.t.c.) that define the local strategies for mobility, tourism, environment, quality of life, e.t.c. From a conservative perspective, and in the context that the climate change is pressing the cities to mitigate the impacts of polluting activities – among which the cruise-sector is definitely very impactful – one could seek for strategies that make the cruise related activities less polluting. This is definitely a goal, however, one should realize that for the decarbonisation of the cruise-related activities public and private bodies have to collaborate in order to upgrade the experience 'offered' to the visitor locally from both an environmental and an attractiveness perspective. A successful strategy would possibly even entail the rebranding of the destination into an 'eco-destination' or similar.

Luckily, the current timing could be considered as favorable for such endeavor as the global, EU, national and local policies seem to have environment on the top of the agenda, preparing the ground for relevant investments. At the same time, leading cruise lines promote "sustainable" itineraries and work on upgrading their fleet making use of available technology for the ship and the activities carried on board. Lastly, global campaigns for the environment increase awareness about the climate change and –hopefully- create the conditions for the sensitization of travelers in general and cruise-passengers in particular. None of the afore-mentioned layers can 'solve' the problem in a stand-alone manner, yet with a proper coordination among both the destination and the cruise line could lead to a common 'call for action' reaching the passengers, and having the fleet, the terminal, and the destination prepared.

The report (Limassol LCTP) on hand is a first important step, having definitely a 'local' focus. Considering that at least 12 cruise destinations are following the methodology to elaborate such plans through the LOCATIONS project, one could say that an important momentum is created for the Mediterranean to transform into a green cruise-destination. Below information that define the Limassol LCTP elaboration context is summarized and presented in chapters, as shown in *Figure 1*.

Figure 1: Context analysis contents

1	EU, national, regional and local framework of reference
2	Current cruise-related flows features, trends, etc., in the city/port
3	Mid to long term development trends estimation and weight
4	Catalogue of current policies/ public & private related initiatives
5	Weighted list of negative impacts linked to the cruise-related flows
6	Existing network, services and infrastructures in the city/ port

2.1.1.1. EU, national, regional and local framework of reference.

European & Global Context

Aiming to enhance **mobility**, reduce congestion, accidents and pollution in European cities, European Commission has been taking action for a number of years to deliver cleaner and better urban transport, through its various policies and funding projects. Even though most of these policies are not binding for the European cities and Cyprus, they are setting out recommendations and paving the path for Sustainable Urban Mobility. Below there are presented the most recent and impactful EU policy documents regarding mobility that Cyprus will take into account while elaborating on the LCTP of Limassol.

2001 – White Paper: "European transport policy for 2010: time to decide"

2002 – CIVITAS Initiative [Limassol is a demonstration city within the CIVITAS Initiative and one of the founding members of the CIVINET Greece-Cyprus Network]

2006 – Mid-term Appraisal of the White Paper: "Keep Europe moving – sustainable mobility for our continent"

2007 - Green Paper on Urban Mobility: "Towards a new culture for urban mobility"

2009 – Action Plan on Urban Mobility

2011 – White Paper: "Roadmap to a Single European Transport Area — Towards a competitive and resource efficient transport system"

2013 - Urban Mobility Package: "Together towards competitive and resource-efficient urban mobility"

2015 – Report on Sustainable Urban Mobility

2017 - Delivering on low-emission mobility: A European Union that protects the planet, empowers its consumers and defends its industry and workers

Regarding **environmental** issues, the EU has also been at the forefront of international efforts to fight climate change and promote sustainable development. Some of the most important steps that have been made towards this direction are presented below:

2011 – Covenant of Mayors for Climate and Energy [Limassol signed the Covenant taking action for local climate and energy]

2015 – 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals [adopted at the United Nations Sustainable Development Summit in New York]

2016 – Paris Agreement on Climate Change [adopted at the Paris climate conference aiming to take action and tackle climate change]

2016 – New Urban Agenda [unanimously adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), serving as a new vision for our cities and municipalities for the next 20 years]

2.1.1.2. Current cruise-related flows features, trends, etc., in the city/port

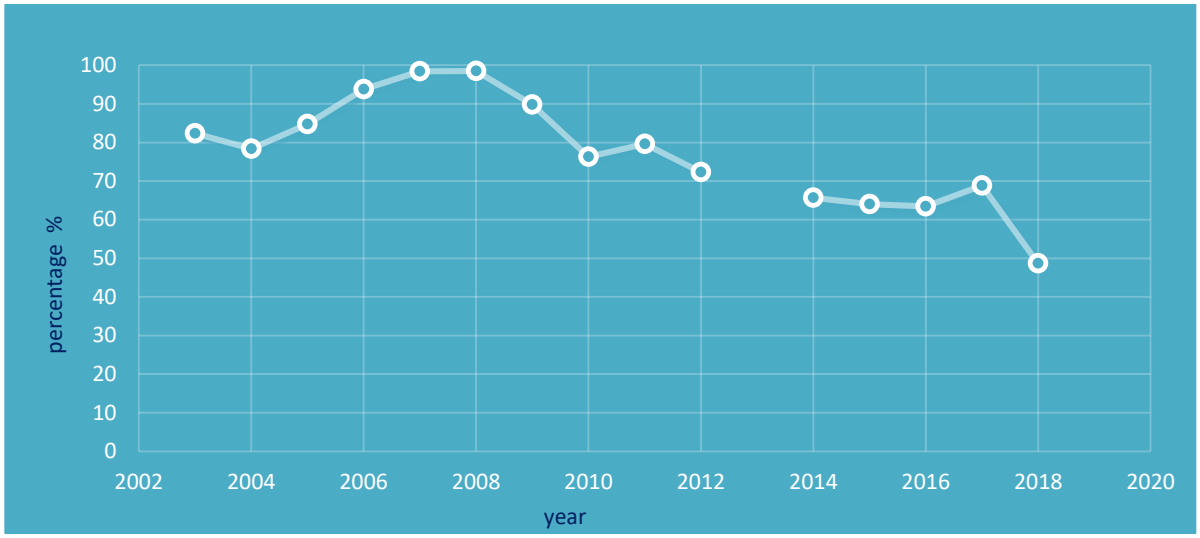
Limassol Port, a port of multiple uses, is the main port of Cyprus since 1974. It provides services to ships, loading/unloading of cargo and passenger traffic. The marine area of the port is one sq km and its land area is 1.3 sq km. Limassol's passenger port serves cruise ships, either for transit calls or as a home port.

The available Cyprus Tourism Organization statistics (years 2003-2018) show that 117804 passengers are served on average every year. This number applies to daily visitors in total.

Charles Meaby, General Manager of DP World Limassol states: "Cruise arrivals are expected to increase significantly in 2019. In 2018, a total of 68 arrivals were registered in Limassol, 36 of which involved ships using the port for transit purposes and 32 as a home port. For 2019, an increase of 40% is estimated. In all, around 93 arrivals are expected, 53 of them for transit and 40 for boarding. The upward trend is expected to continue in 2020."

Figure 2: Yearly cruise passenger arrivals (no data available for 2013), Source: CTO statistics

Figure 3: Percentage of the cruise passengers arriving at the Limassol port in regard to the total cruise passengers of Cyprus, Source: CTO statistics



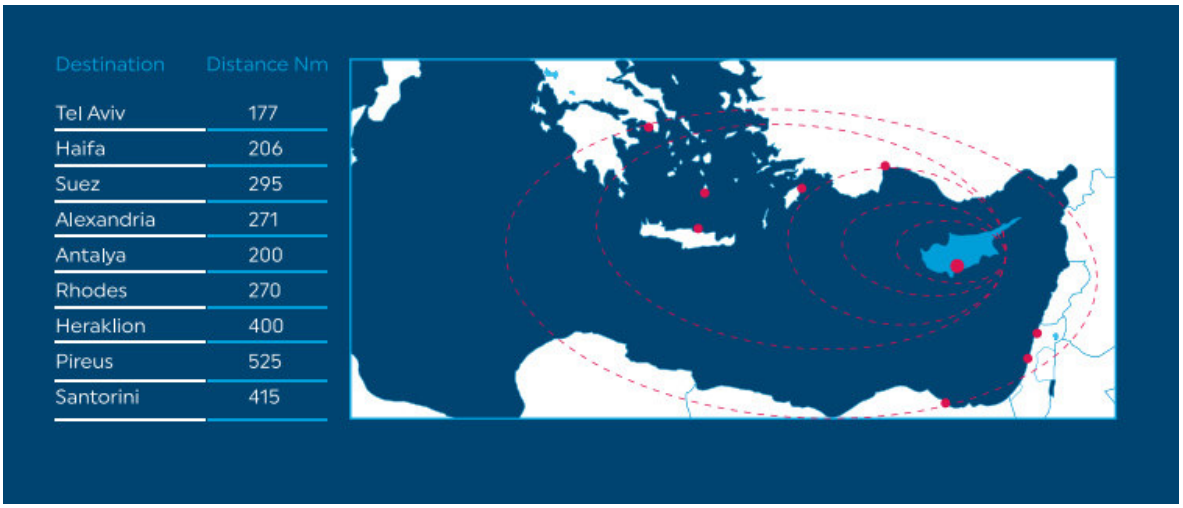
According to the available statistical data, October is the most popular month for the Limassol Port, as shown in Table 3.

Table 3: Most popular month (in terms of cruise-ships arrivals) for each year, Source: CTO statistics

2003	2004	2005	2006	2007	2008	2009	2010
November	**October**	August	**October**	**October**	**October**	**October**	**October**
2011	2012	2013	2014	2015	2016	2017	2018
October	**October**		**October**	**October**	**October**	April	**October**

There are 11 cruise companies operating at the port (AIDA Cruises, Costa CROCIERE, CUNARD, Hapag-Lloyd Cruises, MSC CRUISES, Norwegian Cruise Lne, Regent Seven Seas Cruises, Salamis Cruise Lines, Thomson Cruises, TUI Cruises, Viking Cruises). The destinations connected directly to Limassol are: Rhodes, Heraklion, Piraeus, Santorini, Alexandria, Antalya, Suez, Tel Aviv, Haifa.

Figure 4: Destinations connected directly to Limassol port, Source: DP World



For 2019, the average duration of stay at the port is calculated at 10.25 hours, with the most frequent value being 9 hours. The maximum duration is 39.5 hours and the minimum 3hrs. As a total, the for all cruise ships there are 1026 hours.

By checking the arrival and departure times of the 103 cuise-ships that called the Limassol port in 2019, it occurs that the 62% of the cruise-ships arrived between 7 and 9 am and the 55% of the cuise-ships departed between 4 and 6 pm. This means that both the most common arrival and departure times coincide with rush hour of a typical working day, potentially posing pressure to cruise-passengers that want to arrive to the port by bus/car.

Figure 5: Number of ships correlated to the duration of their stop in Limassol

HOURS IN PORT	NUMBER OF SHIPS	HOURS PORT	NUMBER OF SHIPS
3	1	10.5	1
4.5	1	11	3
5	12	12	3
5.5	2	13	7
6	9	15.5	4
7	15	16	1
8	6	23.5	1
9	18	24.5	1
9.5	1	27	6
10	8	39.5	1

In the following table we are presenting the cruise-ships that stay at the Limassol port for the longest amount of time, with “La Belle De L’Adriatique” staying for 39.5 hours. As presented in the beginning of this chapter, the average stay time is 9 hours. The time that the cruise-ships stay in the Limassol port is a very important factor, since it affects the type of activities offered to the cruise-passengers and the type of activities that will be supported by sustainable transport modes, according to the LCTP proposed measures.

Table 4: Cruise-ships with the longest stops in Limassol port for 2019

SHIP	ARRIVAL	DEPARTURE	HOURS IN LIMASSOL PORT
LA BELLE DE L'ADRIATIQUE	2 January, 07:30	3 January, 23:00	39.5
CROWN IRIS	12 April, 13:00	13 April, 16:00	27
CROWN IRIS	17 May, 13:00	18 May, 16:00	27
CROWN IRIS	16 October, 13:00	17 October, 16:00	27
CROWN IRIS	08 November, 13:00	09 November, 16:00	27
CROWN IRIS	22 November, 13:00	23 November , 16:00	27
CROWN IRIS	29 November, 13:00	30 November, 16:00	27
EUROPA	16 November, 22:00	17 November, 22:30	24.5
MEIN SCHIFF 4	23 April , 18:30	24 April, 18:00	23.5
MEIN SCHIFF 5	28 September, 07:00	28 September, 23:00	16
EUROPA 2	19 June, 07:00	19 June, 22:30	15.5
LA BELLE DE L'ADRIATIQUE	13 December, 07:30	13 December, 23:00	15.5
LA BELLE DE L'ADRIATIQUE	20 December, 07:30	20 December, 23:00	15.5
LA BELLE DE L'ADRIATIQUE	27 December, 07:30	27 December, 23:00	15.5
MARELLA DREAM	06 November, 08:00	06 November, 21:00	13

Moving to the cruise ship that makes use of the Limassol port more frequently, this would be Salamis

Filoxenia which uses Limassol both as a point of departure and as a final destination. The cruises of Salamis Filoxenia last 2-9 days, and its most frequest routes of the cruise ship are presented in the table below.

Table 5: Salamis Filoxenia routes, Source: Salamis Cruise Lines

Route 1	Route 2	Route 3	Route 4	Route 5	Route 6
Limassol	Limassol	Limassol	Limassol	Limassol	Limassol
Patmos	Rhodes	Symi	Patmos	Patmos	Patmos
Volos	Zante	Spetses	Mytilini	Mytilini	Kalamata
Paros	Kerkyra (Corfu)	Syros (Tinos)	Chios	Chios	Chania (Souda)
Piraeus	Patra	Rhodes	Kastelorizo	Kastelorizo	Rhodes
Kastelorizo	Ithaki	Limassol	Limassol	Limassol	Limassol
Limassol	Milos				
	Kastelorizo				
	Limassol				
Route 5	Route 6	Route 7	Route 8	Route 9	Route 10
Limassol	Limassol	Limassol	Limassol	Limassol	Limassol
Alexandria	Beirut	Rhodes	Haifa	Alexandria	Beruit
Limassol	Beirut	Rhodes	Limassol	Limassol	Limassol
	Limassol	Kastelorizo			
		Limassol			

The next two cruise-ships that call the Limassol port more frequently are the *Crown Iris cruise ship*, which has a starting point in Israel and is using Limassol as a one-day stopover, and *Marella Dream*, which uses Limassol as a starting point and final destination. The following table shows the routes of the 2 cruise ships that took place in 2019.

Table 6: Crown Iris and Marella Dream common routes for 2019, Source: Cruisemapper

Route 1	Route 2	Route 3
Limassol, Cyprus	Limassol, Cyprus	Limassol, Cyprus
Heraklion, Crete	Alanya, Turkey	Alanya, Turkey
Piraeus (Athens), Greece	Rhodes Town, Rhodes	Marmaris, Turkey
Mykonos Town, Mykonos	Kusadasi, Turkey	Heraklion, Crete
Kusadasi, Turkey	Ashdod (Jerusalem, Bethlehem), Israel	Ashdod (Jerusalem, Bethlehem), Israel
Rhodes Town, Rhodes	Ashdod (Jerusalem, Bethlehem), Israel	Ashdod (Jerusalem, Bethlehem), Israel
Limassol, Cyprus	Limassol, Cyprus	Limassol, Cyprus

Lastly, the La Belle de l'Adriatique cruise ship uses Limassol as a visiting port on either the cruise to the Greek islands or the cruise to Israel and stays in port overnight.

Table 7: La Belle de l'Adriatique 2019 routes, Source: Cruisemapper

Route 1	Route 2
Departing from Larnaca,	Departing from Larnaca, Cyprus hotels
Larnaca, Cyprus	Limassol, Cyprus
Haifa, Tel Aviv, Israel	Rhodes Island, Greece
Limassol, Cyprus	Paros Island, Naoussa, Greece

Arriving in Larnaca, Cyprus	Mykonos Island, Greece
	Delos Island, Greece
	Piraeus, Athens, Greece
	Arriving in Piraeus, Athens, Greece

As a conclusion, the aforementioned data allow us to understand the nature of the cruise in Limassol and its current positioning as a destination locally and worldwide. Some information related to the arrival/departure times and duration of stay are very important in order to allow us plan relevant and appropriate measures. Moreover, the exact cruise-lines that call Limassol port are important in order to have a good overview of the cruise-ships' capacity and their strategies regarding enhancing sustainability. Unfortunately, data related to the profile of the cruise-passengers were not available, however some cruise lines do have specific 'patterns' regarding their passengers, which is another important aspect that might affect matters such as accessibility, active mobility, ability to use technology, e.t.c.

According to our findings:

- The number of cruise ships calling or departing from Limassol has been decreasing since 2008, when it reached its peak, however, due to the efforts done in the last couple of years, the sector is rising again.
- The majority of the cruise-ships arrive and depart during the rush hours of a typical working day, posing potential pressure to the cruise-passengers who want to do this first/last 'mile' using the congested road. In regards to this topic, it should be noted that the traffic congestion during the rush hours does not affect only the cruise-terminal – Limassol connection, but also the peri-urban roads, since plenty of Cyprus residents work and live in different cities.
- The majority of the cruise ships stay in port for 9h, while among the 5 most visiting cruise-ships, the 4 have a capacity of around 1000+ passengers. This data matched with the destination's offered activities should be taken into account in order to have focused proposed measures for sustainable mobility.
- Comparing the number of cruise ships arriving in Limassol between 2003 and 2018, October has been the most popular month with the highest number of cruise-ships either calling or departing from Limassol. This is a good fact in regard to sustainable mobility, since in October the weather allows the use of non-motorised modes of transport. For some of the rest of the months the severe heat should be taken into account.
- As presented in the chapter 2.1.1.3 but also mentioned here for consistency, some of the cruise lines calling Limassol port have embraced sustainability in their company goals, creating good conditions to align properly the local efforts (LCTP) with the efforts of the cruise-lines.

2.1.1.3. Mid to long term development trends estimation and weight.

Trends related to sustainability in the cruise-sector

Besides the merely legislative and policy papers, it should become clear that the key for bringing a change in the cruise-sector is very dependent on and driven by the policies adapted by global leading cruise corporations, and especially the cruise-lines. Such changes by initiated by them, or by strong associations. According to our research, in the **tourism and the cruise sector**, there is a constantly growing global trend of cruise becoming more sustainable. Yet, this being a costly and time-consuming endeavor, not all cruise-lines

adapt with the same pace. Below we summarise some important and indicative examples.

- **The International Maritime Organization (IMO)** has already applied stringent requirements to reduce emissions from the global maritime fleet, while the Cruise Lines International Association (CLIA) which is the world's largest cruise industry trade association, is also pushing the envelope on responsible, sustainable cruising.

- **Cruise Lines International Association (CLIA)**

  "CLIA cruise lines have pledged to reduce the rate of carbon emissions across the industry fleet by 40% by 2030"

  Additionally, two leading cruise lines such as AIDA and CARNIVAL have declared their commitment to the 17 Sustainable Development Goals and are reporting their impact on critical sustainability issues using the GRI Sustainability Reporting Standards.

- **AIDA Cruises**

  "In all our efforts we always keep an eye on the Sustainable Development Goals of the United Nations as well as the Paris Climate Agreement and the climate goals of the International Maritime Organisation (IMO), because AIDA Cruises can only grow sustainably if we respect and protect our natural surroundings and the rich cultural heritage of our planet."

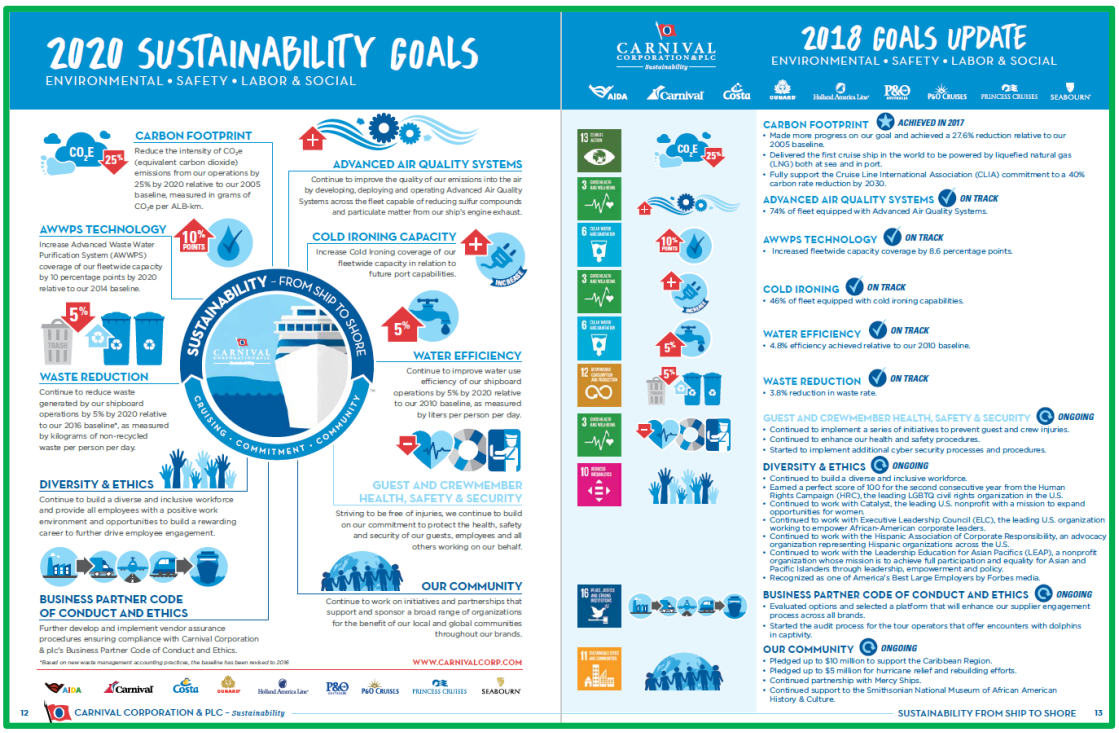
- **CARNIVAL Cruises**

  In 2017 we met and surpassed our 2020 goal three years ahead of schedule by achieving a 25% reduction in the intensity of carbon emissions from our operations. In 2018, we made even more progress with a 27.6% reduction relative to our 2005 baseline, and we are on track to meet all of our sustainability goals by 2020.

  As presented in the following figures, both AIDA and CARNIVAL declared their sustainability targets following the GRI. This established common language is an opportunity for all projects related to the cruise-decarbonisation, coming from either the global (cruise line, associations, companies providing cutting-edge technology for cruise-ships, e.t.c.) and the local scale (terminal operator, the city, shore excursion providers, e.t.c.) joining forces and creating a new profile for the cruise sector.

Figure 6: Sustainability targets of AIDA Cruises, Source: AIDA Cruises (https://www.aida.de)

Figure 7: Sustainability targets of CARNIVAL Cruises, Source: CARNIVAL Cruises (https://carnivalsustainability.com)



Trends related to the increase of cruise-passengers visiting Limassol

According to Charles Meaby, General Manager of DP World Limassol: "*Cruise arrivals are expected to increase significantly in 2019. In 2018, a total of 68 arrivals were registered in Limassol, 36 of which involved ships using the port for transit purposes and 32 as a home port. For 2019, an increase of 40% is estimated. In all, around 93 arrivals are expected, 53 of them for transit and 40 for boarding. The upward trend is expected to continue in 2020.*"

2.1.1.4. Catalogue of current policies/ public & private related initiatives.

National Context

In Cyprus there is a whole chain of policies, procedures and projects, both at the national and local level, which are closely related and are currently affecting urban mobility and transport. These documents, which are namely mentioned or briefly analysed below (based on their relevance to the topic) are setting the context for the LCTP of Limassol.

Strategic Development Plans

- *The study and implementation of Intelligent Transport Systems and a Development of Geographic Information System (2008-2009)*

  The aforementioned study was the first comprehensive Intelligent Transportation Systems study in Cyprus which posed a national high-level business and functional architecture. Among the main recommendations and proposals of the study was improvement of traveler's information for:

- Dynamic traffic data and guidance
- Bus arrivals at bus stops and terminals
- Parking guidance
- Provision of road incidents information
- Multi-modal travelers' information

- *Planning of Inter-Urban Public Transport in the Trans-European Network (TEN-T) of Cyprus (2010–2012)*

  The project scope included the design of the inter-urban public transport system in Cyprus and the reference network is the Trans-European Road Network of Cyprus (TEN-T). The main aim was the optimization of public transport services for the connection of major cities of Cyrpus, of the special land uses and of major touristic cities of Cyprus. The key characteristic of the proposed interurban bus concept was a "Hubs & Spoke" system adapted by the widely common system for rail services on the road based transportation system of Cyrpus.

- *Strategic Road Safety Plan for the Republic of Cyprus for the period 2012 – 2020 (2011-2012)*
  - The overall target of Strategic Road Safety Plan is the contribution towards the national goal of significantly enhancing road safety level in Cyprus. The special targets are:
  - Detailed recording of existing road safety conditions in Cyprus and assessment in relation to the data of other countries with greater road safety records
  - Formulation of proposals relevant to policy, procedures and specific actions in order to meet the overall target for significant reduction of road accidents in Cyprus.

- *Dangerous Transport Goods Management for the Cyprus Road Network (2015-2016)**

  The study was aiming to improve the safety and to optimize the efficiency of freight transport services at the Cypriot road transport network. The freight intermodal services in ports were also examined. A special reference is made to the new vertical axis of Limassol which provides direct access of the highway network to the container and car terminals of the port of Limassol.

Previous Sustainable Mobility related studies

- *Cycle Networks in Cyprus Towns – LIFE/97*

  The project prepared cycle networks for Nicosia, Limassol, Larnaca and Paphos. The project implemented one limited pilot cycle network in Paphos. The project produced a technical handbook for the design of bicycle facilities and drafted a study of the legal framework to highlight legal constraints for introducing cycle facilities.

Traffic Noise Studies and Action Plans

- *Strategic Noise Maps for roads with over 6 million movements per year (Nicosia – Limassol – Larnaca - Paphos)*
- *Strategic Noise Maps for Urban Agglomerations with population over 100.000 people*

The plans are not analysed as no relevant measures have been proposed in the framework of this project.

However, they are provided for completeness purposes and for a future consideration of including a relevant topic in the cruise-related local planning.

Current Policies and procedures affecting urban mobility

- *EUROPE 2020 Cyprus National Reform Program 2016*

  Within the EUROPE 2020 Cyprus National Reform Program 2016, Cyprus has prepared the Partnership Agreement (PA) which aims at securing the synergy and coordination among the European Structural & Investment Funds (ESI Funds) allocated to Cyprus, so as to achieve effective results that will contribute to the goals of the Europe 2020 Strategy and, consequently, to growth and job creation in Cyprus. Among the three funding priorities of PA stands the following: "Protecting the environment and promoting the efficient use of resources". The funding priorities set in the PA, derived from the analysis of the country's development needs and perspectives and national targets set in the context of the Europe 2020 Strategy. In order to attain the funding priorities, Cyprus decided to allocate its ESI Funds to 11 Thematic Objectives during the 2014-2020 programming period. Transport is one of the Thematic Objectives and contributes to the national target "*GHG emission reduction".*

  It is anticipated that the national emissions of Cyprus will be reduced during the following years and will continue to meet the National target of -5% in the non-ETS sectors.

- *"National Action Plan for the Improvement of Ambient Air Quality in Cyprus", "National Strategy for Sustainable Development"*

  Regarding the transport sector, the *"National Action Plan for the Improvement of Ambient Air Quality in Cyprus"* and the *"National Strategy for Sustainable Development"* include policies and climate related programmes and measures to address the environmental impact of the transport sector. Examples include:

  - Promotion of public transport
  - Introduction of Intelligent Transport Systems
  - Development of the Integrated Mobility Master Plans
  - Park-and-ride and central bus stations
  - Promotion of the use of bicycles
  - Incentives (through legislation) for the purchase of cars with low CO_2 emissions.

- *Strategic Planning for 2017 – 2019*

  The mission of the Strategic Planning for 2017-2019 of the Ministry of Transport, Communications and Works of Cyprus is the design and implementation of policies for the continued improvement of transport (air, sea, land) and communications, and the constant upgrading of the quality of projects implemented by the Ministry.

  With a vision to constitute Cyprus as a regional centre having modern and efficient infrastructure and services, the strategic objectives of the Ministry for the period 2017-2019, are the following:

  - Creation of a modern and safe road network and transportation in general and promotion of sustainable mobility
  - Promotion of the digital economy and development of secure electronic communication

networks and infrastructure

- Modern, safe and sustainable air transportation and improvement of connectivity between Cyprus and third countries
- Provision of modern and quality services and citizen security
- Exploitation of the country's wealth and resources
- Cyprus to retain its position as an international shipping centre

- *Operational Programme (OP) "Competitiveness and Sustainable Development" 2014 – 2020*

The OP constitutes a programming document that specific priorities and indicative categories of interventions which will be implemented during the period 2014-2020 contributing towards the strategic objective of the Partnership Agreement for the restructuring of the economy, the preservation and creation of new jobs and the safeguarding of social cohesion. Among others, the OP includes interventions in the sectors of Environment, Energy and Transport. In the 5th Priority Axes of the OP which regards "Promoting Sustainable Transport" there are 2 investment priorities:

- Supporting a multinational Single European Transport Area by investing in the Trans-European Transport Network (TEN-T). Under this investment priority stands the investment at the Port of Limassol, which is following interventions which had commenced during the programme period 2007-2013.
- Development and improvement of environmentally-friendly transport systems with low carbon emissions, including internal waterways and sea transport, ports, intermodal transport and airport infrastructure, aiming at promoting sustainable regional and local mobility.

- *National Action Plan for Disability 2013 – 2015*

The aim of the 1st National Action Plan for Disability in Cyprus was the promotion of the realization of human rights and the basic liberties for all people with disabilities, without any type of discrimination based on disability. The 3rd Thematic Unit of the Action Plan was "Accessibility to Transport" entailing:

- audit on the installation providing audible information concerning the route and the stops on buses
- audit on the gradual renewing of the bus fleet of the contractors and their replacement with new accessible buses
- people with disabilities entitled for the possession and use of the Blue European Card for parking

- *Report of Accessible Beaches*

The Report of Accessible Beaches was aiming to list the beaches that are accessible by people with disabilities (PwD). Today, there have been listed 50 beaches around Cyprus which have facilities for people who use wheelchair or have reduced mobility. According to the report, in Limassol there are 6 beaches fully accessible and 10 partially accessible to PwD.

- *National Tourism Strategy 2030*

The key objective of the Strategy was to restore Cyprus' tourism growth and revenue by means of

improving its value proposition, repositioning its tourism brand and making a strategic shift towards an upgraded, enriched and diversified tourism product. Attract more and higher-spending visitors and penetrate new niche segments and markets.

- Vision statement:

"Become, before 2030, a year-round sustainable destination receiving 4,8 million international tourists (40% of whom during November - April").

Local Context

Previous Transportation Studies

- *Limassol Transport Study (1992 – 1994)*

- *Feasibility Study for the Construction of Link Road between Limassol Port and Limassol – Paphos M/way (2004)*

The study concerned the feasibility of the 4.5 km Vertical Road Phase A. The construction of the road was aiming to connect the port to the national strategic highway in order to:

- support and enhance attraction and use of the port
- relieve current traffic congestion and environmental problems caused by port traffic
- provide a higher quality road access to the national highway network
- The road's feasibility has been positively evaluated and has proven to be the right solution for diverting heavy goods vehicles away from the urban road network.

- *Urban and transport planning impacts of the development of Cyprus University of Technology in the city of Limassol (2007)*

Plans & Projects

- *Implementing an ITS for Limassol (Project DIAVLOS) (2012-2014)**

The study objective was to design an integrated ITS traffic and parking information system in Limassol and other Cyprus regions. A special ITS deployment plan has been included in the study for Limassol designating in detail the type and quantity of necessary equipment in order to gather traffic data and provide traffic information to the citizens.

- *Sustainable Energy Action Plan (2012-2020) of the Municipality of Limassol (2013)*

The main objective of the Action Plan was to reduce carbon dioxide emissions by 20% until 2020. Regarding mobility, incentives and infrastructure there were proposals to increase the use of environmentally friendly (electric) cars.

- *Implementing a telematics system for public transport in Limassol (2016-2018)*

The project objective was to develop a modern ITS solution for the enhancement of bus transport

services in the entire Cyprus for both urban and inter-urban road network. The system was planned to be developed for 194 buses serving the city and regional bus lines of Limassol.

- *Local Plan for Limassol*

The Local Plan defined the goals and the general development strategy for Limassol (time horizon of the plan: 2018) containing sections on transport policy, residential development and housing, building density, commercial, office, industrial development, environment etc. Amongst the primary objectives of the Local Plan of Limassol was the implementation of a modern multi-dimensional road traffic policy which would address the existing and future functional needs of the entire city and of all the income strata of the population.

- *Limassol City Centre Plan (2011)*

The Limassol City Centre Plan was an Area Plan for the Centre of Limassol which was initiated due to the launching of major projects in the urban centre (creation of marina, renovation/ pedestrianisation of the area around the Castle, enhancement of the coastal road, etc.) that constituted necessary their interlining within an integrated area planning approach.

- *Limassol Sustainable Mobility Plan (SUMP)*

The SUMP for Limassol is a milestone in the development of future mobility for Limassol and is expected to achieve remarkable impacts in terms of sustainability. From an environmental perspective, SUMP's implementation would lead to reduction of Green House Gas emission from transport, mainly CO2, reduction of emission of pollutants and emission of noise. From a social perspective, SUMP's implementation would lead to an increase of the share for non-motorized use of public urban space, reduction of the negative impacts on safety, reduction of the number and severity of accidents, increasing walkability in the city and freedom of movement for all population groups, the children, the young, the old, the mobility impaired and generally those without access or without willingness of using a car. From a financial perspective, SUMP's implementation would lead to increasing profitability of public transport, increasing potential for businesses in Limassol, particular shops, tourist attractions like hotels, bars, restaurants e.t.c.

Specifically, the vision for Limassol according to the SUMP is:

- *"Lemesos to be an accessible, safe, functional and friendly city for its residents and visitors, with attractive, green and quiet neighbourhoods, a lively city centre, numerous spacious and magnificent open public spaces, a beacon of sustainable and smart mobility, facilitating an abundance of economic, business, educational, recreational and cultural opportunities."*

The strategy of the Plan entails measures for more attractive alternatives for mobility, Improved public transport systems, more space for pedestrians and non-motorized use of public urban space, less accidents and increases safety and security, less pollution and noise in the dense urban areas, restrictions for car uses, pricing of parking, limitations of access to the centre by car etc.

Specifically, the Plan elements include the following 10 key aspects of action:

- Detailed traffic management (check *Note A* below)
- Public transport

- Pedestrian measures
- Cyclist measures
- Parking
- Freight logistics (check *Note B* below)
- Traffic safety needs of specific groups
- Intelligent Transport Systems – ITS (check *Note C* below)
- Strategic Plans & Policies

Note A: In this Section the SUMP proposes the Coastal Avenue Scheme, a project which is going to affect significantly cruise tourists' mobility. Aiming to convert the seafront boulevard to the show piece of the Sustainable Urban Mobility within Limassol and to show to residents and visitors that Limassol is focusing on new mobility behaviour, the SUMP proposes a two-by-two redesign (two adjacent bus lanes on the northern (city) side and two adjacent traffic lanes on the southern (coastal) side). The aim of the redesign of the coastal boulevard is to reduce its separation effect between the urban area and the seafront, regaining space for people instead of moving or parking vehicles and increasing the attractiveness of the major asset of Limassol for people to walk, linger, cycle, meet.

Figure 8: Street conversion: Coastal Boulevard between Old Port and Crown Hotel, Source: SUMP for Limassol

Note B: In this section, a special reference is made to the Limassol port, since there is a need for consolidating freight traffic (but potentially also coaches) to and from the Limassol port. One measure proposed is a clear signage of the proposed lorry routes to and from the port in combination with restrictions on Omonoias road (closed for trucks of a length exceeding 15 meters with exception of local delivery). Another measure includes the implementation of heavy vehicle restrictions on routes that are currently used as shortcuts.

Note C: In this section it is proposed the deployment of ITS. It is noted that ITS should be implemented by taking into account the existing systems in operation as well a s strategies, policies and measures to be implemented. The ITS interventions proposed for Limassol are divided into three categories, *Road Traffic, Public Transport and Smart City* related, briefly explained in the following table.

Table 8: ITS Interventions proposed by the Limassol SUMP, Source: SUMP for Limassol

	Intervention	Description
ROAD TRAFFIC ITS	Urban UTC System	Traffic Signalization System upgrade (SCOOT)
	Traffic Detection field equipment	A wide array of traffic detection sensors to collect traffic data on a permanent basis
	Variable Message Signs (VMS)	Driver Information Systems
	CCTV surveillance cameras	Cameras for validating traffic conditions
	Incident detection systems	Field cameras detecting traffic irregularities (machine vision)
PUBLIC TRANSPORT ITS	Bus Priority System	Software and Hardware equipment allowing bus priority at selected traffic signalized intersections
	Dynamic Bus information Displays	Passenger Information Displays at terminals and bus stops
	Bus Lane Enforcement System	Enforcement cameras along exclusive bus lanes
SMART CITY APPLICATIONS	Integrated Parking Guidance System	Dynamic driver information displays for available off-street parking locations around CBD area
	Advanced Parking Payment Management System	A field sensor-based solution for managing on-street payment
	Centre to Centre communication between Traffic Systems	Software interfacing between remote traffic systems

- *CIVITAS Destinations project & CIVITAS, CIVINET Networks*

Limassol is a member of the **CIVITAS Initiative** and one of the leading cities participating in the **CIVINET CY-EL Network**, strongly committed to explore and promote a more sustainable urban mobility culture. Additionally, Limassol is one of the most significant CIVITAS demonstration cities, implementing the CIVITAS DESTINATION project aiming to build up an integrated approach to address mobility and tourism.

DESTINATIONS is a European project of the CIVITAS Initiative running for the period 2016-2020. The project builds up an integrated approach to address mobility and tourism, testing balanced strategies to face the rising challenges of these two growing sectors and to achieve sustainable development and a better quality of life in six cities. Limassol is one of them.

Specifically, the project's aims are:

- Help island cities to cope with new tourism trends and adapt their mobility systems accordingly
- Economy-sharing driven mobility solutions for citizens & tourists alike
- Switching to less polluting transport modes
- Development of business models to guarantee the financial viability and lasting impacts of the measures
- Working group representing over 150 cities & regions following the project as observers
- Links to China, to strengthen international cooperation

Below are presented the mobility measures which are or have been tested in Limassol through the DESTINATIONS Project. These solutions aim to improve urban accessibility, the cost effectiveness and integration of transport services and to reduce emissions and energy consumption.

1. Develop a **Sustainable Mobility Action Plan** to satisfy the mobility needs of residents and tourists: A new planning concept will be developed to address transport related challenges and problems in a more sustainable and integrative way
2. Promote the **uptake of electric vehicles**: Car rental companies and bike rental companies will be supported to increase the number of rental e-cars and e-bikes
3. **Bicycle challenge**: Change the mobility habits of locals (Cypriots and foreign residents) by promoting cycling in their daily lives
4. **Electric car rental** connecting the Limassol area-airports-**port**: Increase of EV-chargers, free parking for e-vehicles, increase the number of e-vehicles available for rent
5. **Expansion of bike sharing system**. Include new bikes & e-bikes for rent
6. **Smart Parking Guidance System**: reduce unnecessary traffic congestion in the city centre by implementing smart parking technology
7. **Green Label Award & Tourist Mobility Card**: creation of a Tourism Mobility card that would provide an incentive for tourists and residents to use sustainable modes of transportation for their leisure trips. This card will be promoted and supported by hotels awarded the Green Label
8. **Mobility Application & Travel Planner** enabling tourists and residents to use real time information and plan their travels accordingly
9. **Increase cycling and walking** in combination with special interest tourist activities as an integrated product: cycling and walking networks will be expanded, bicycle parking facilities will be added, routes will be created or adapted, map panels and signage will be installed and promotional material will be produced and disseminated
10. **Accessibility for the disabled, the visually and the hearing impaired:** An integrated mobility solution will be included with blind and deaf people systems installation at traffic light crossings, nearby bus stops served by buses accessible to people with disabilities and points of access to the beach for them
11. Awareness on the use of **sustainable mobility for leisure trips**: increase awareness about the available sustainable mobility modes in Limassol by providing tourists with informative material and encouraging them to use sustainable mobility modes on their leisure trips
12. **PT Traveller Information System**: Electronic signs will be installed in twenty five 'Smart' bus stops informing PT users on bus arrival times and other relevant information. In addition, electronic signs will be installed inside the busses informing PT users on bus routes and stops, as well as providing information about nearby attractions, events and sustainable mobility information enabling visitors to plan accordingly
13. Promotion & creation of **network for collection of used cooking oi**l: creation of a network for collecting used cooking oil from restaurants and hotels **and transferring it into a sustainable biodiesel production in the mobility sector**. Tourists will enjoy their leisure trip in a friendlier and cleaner environment
14. Creation of **electric bus hop on hop off service in the old town**: introduce two hop on hop off electric/hybrid buses with audio guides offering a tour in different languages. Tourists and residents will have the opportunity to travel around the city landmarks using the hop on hop off electric/hybrid bus instead of other conventional vehicles

15. **Safe routes to school**: Educating both students and parents through innovative workshops to use more sustainable modes to commute to school
16. **Limassol city centre Urban Freight Logistic Action Plan**: Introduce innovative solutions regarding traffic flow from urban freight logistics
17. **Improvement of PT routes, timetables, ticket procedure and bike transportation on buses** to make the service more attractive
18. **Attractive & Accessible Public Spaces** to Promote Intermodal Leisure trips: Introduce integrated sustainable mobility services

Figure 9: CIVITAS DESTINATIONS measures for Limassol, Source: CIVITAS (https://civitas.eu/)

- *EFKINISI project – Interreg Greece-Cyprus*

EFKINISI is a European Interreg Project running in four tourist island cities in Greece and Cyprus. One of the cities participating is Limassol. The project provides for the design and implementation of actions aimed at implementing smart, sustainable and cost-effective public transport solutions that are expected to significantly improve urban accessibility and reduce pollution and energy consumption.

As part of the project, the Limassol Tourist Development and Promotion Co Ltd (LTC) has already proceeded with the installation of a telematics system at 15 city bus stops and in 15 buses. The public information pillars provide information regarding buses that serve the stop, waiting times and useful tourist information. Buses screens inform about the next stop, the overall route, landmarks and events in the area. The innovation of the system is based on the combination of information on transport and tourism, which enriches the tourist experience of each visitor.

Figure 10: EFKINISI Project – More Environmentally Friendly Public Transport, Source: Limassol Tourism Company (http://www.limassoltourism.com)

- *DP World Limassol sustainability vision*

DP World Limassol is the operator of the new Cruise Terminal in Limassol. The Company is a leading enabler of the global trade and an integral part of the supply chain. The cruise sector stands very high in the company's agenda that aims to promote Cyprus and Limassol as an attractive cruise destination, elevate cruise tourism and invite tourists from markets that traditionally don't visit Cyprus in large numbers. The vision of the Company as it was presented by DP World Limassol's General Manager, Charles Meaby follows:

  - *"Establish Limassol as one of the major destinations in the Mediterranean for the cruise industry with the opportunity to be the first port of call for cruise lines after transiting the Suez Canal."*

2.1.1.5. Weighted list of negative impacts linked to the cruise-related flows

- Although a road connection between the cruise-terminal and the historical center exists, there is no infrastructure (dedicated facilities) appropriate neither for walking, nor for cycling, creating challenging conditions for both safety and comfort. Moreover, the afore-mentioned route is currently unattractive creating a negative first impression.
- Accessibility issues are not addressed appropriately in the city and in the main route connecting the city-center and the cruise-terminal.
- Bus connections are offered, however, cruise-tourists who want to visit the city-center get in the traffic, as in most cases, the ship arrival and departure coincides with the rush-hour.
- Most of the available shore excursion offers make use of polluting transport means.
- Only a small percentage of the cruise-passengers (less than 30%) disembark, providing a smallest market for the shore excursion providers to invest in changing their offered services (into more sustainable).

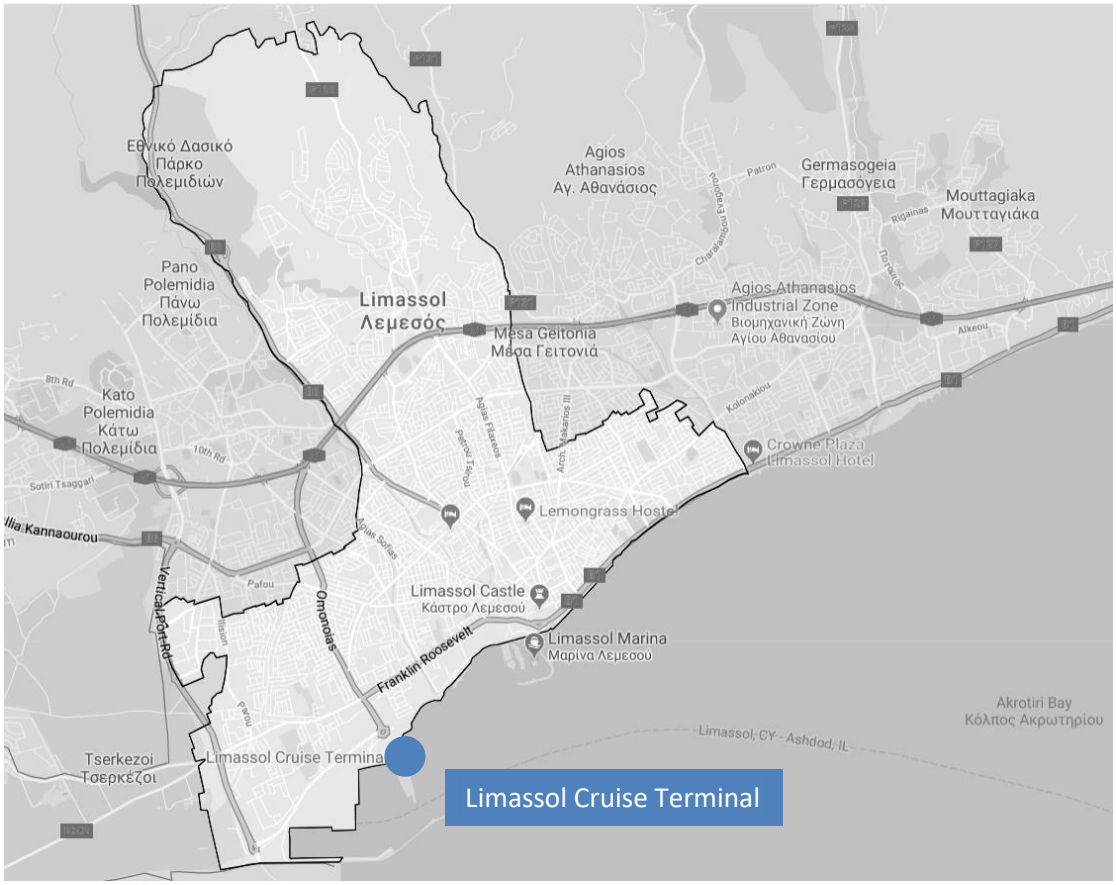
- As in other cruise destinations, the economic impact is minor due to the fact that passengers eat and sleep on the cruise ship and have already invested a substantial amount of money on the cruise trip.

2.1.1.6. Existing network, services and infrastructures in the city/ port

Limassol Port is the main port in Cyprus. It is located at the South coastline at the city of Limassol, which is the largest coastal town in Cyprus, midway between Larnaca and Paphos and close to the southern foothills of the Troodos Mountains. The port handles 90% of the export and import volume of the island. It also handles 80% of passenger traffic into and out of Cyprus including cruise ships and ferry connections with Greece, Israel, Egypt and Lebanon. The rest of the traffic is handled by the port of Larnaca.

DP World Limassol Port is the main cruise port of the island and is considered as one of the largest and busiest ports of the Mediterranean.

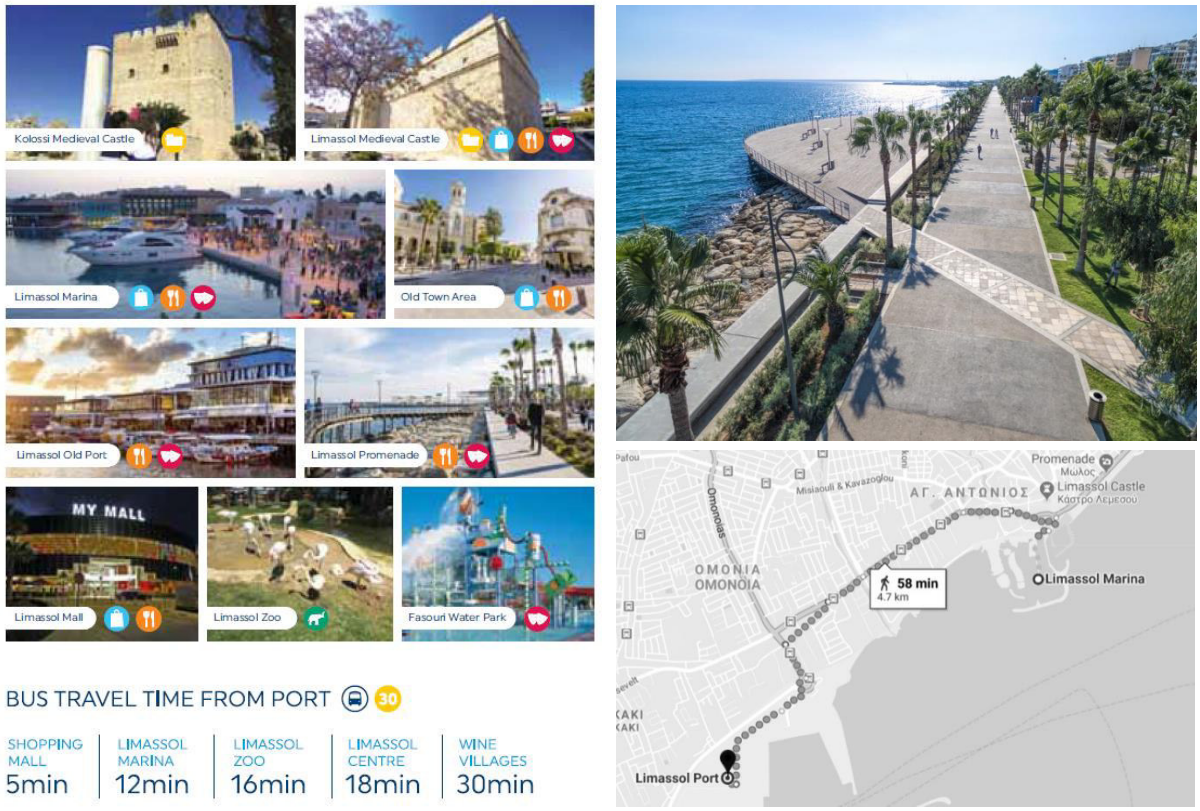
Figure 11: Map of Limassol – Limassol Cruise Terminal, Source: Google Maps (edited)



Accessibility

The DP World Limassol Cruise Terminal is located approximately 70 km from the two international airports (Larnaca and Paphos), while the cruise ships docks are approximately 5 km from downtown (direction north). The Terminal can be reached on foot (about 50 minutes' walk), by free shuttle buses (which are often provided by the cruise lines), by bus (N.30) or taxi (there is a taxi rank at the terminal). A plethora of tourist attractions are close by that visitors can explore such as the Limassol Marina, the Old Port, the Medieval Castle, the Old Town Area, the Limassol Promenade and the Limassol Zoo.

Figure 12: City-terminal-touristic sights composition, Source: Limassol Cruise Port brochure by DP World



Operation

In April 2016 DP World Limassol was awarded a 25-year concession to exclusively operate the multi-purpose and Cruise terminal in Limassol commencing February 2017. DP World is one of the largest port operators in the world, based in Dubai. The company operates multiply yet related businesses - from marine and inland terminals, maritime services, logistics and ancillary services, to technology-driven trade solutions. P&O Maritime, a DP World subsidiary was also awarded a 15-year concession to exclusively provide the full range of marine services in the Port of Limassol.

Figure 13: Port division, Source: DP World Limassol

Facilities

The DP World Limassol Port [comprising of 3 multi-purpose quays] includes:

- break-bulk
- general cargo
- Ro-Ro
- Oil & Gas services
- the brand-new passenger terminal (7,000 sq. m)

The brand new 7,000 sq. m Cruise Terminal commenced operations in July 2017, offering Cruise lines and passengers a plethora of services to accommodate their needs. Along with 24-hour availability the terminal offers integrated services including Home Call and Day Call handling capability, ensuring an improved customer experience.

Figure 14: Characteristics of the Limassol multipurpose terminal

Multipurpose Terminal	
Terminal Area	300,000 sq.m
Terminal Facilities	Open Yards & Covered Warehouses 18,000 sq.m
Quays length	1,600 m., 3 Quays with over 430 meters in length
	East Quay 480 m.
	North Quay 430 m.
	West Quay 450 m. + 320 m.
Certifications	ISPS
	ISO 9001: 2015 (Quality Management)
	ISO 14001: 2015 (Environmental Management)
	OHSAS 18001: 2007 (Occupational Health & Safety)
Draft	12-16 m. drafts
Sevices	Break Bulk

	General Cargo
	Container Handing
	RO/RO
	Naval Ships
	Oil and Gas Logistics Services
Operations	Trained and certified staff available 24/7 on demand
Cruise Terminal Facilities	7,000 sq.m brand New Cruise Terminal Facilities
	Check-in Facilities
	Luggage Handling
	Waiting Zones
	Available Parking Area (300 cars & Disabled)
	Bus Service
Security	Guards 24/7, CCTV recording

Figure 15: Terminal's Floor Plan & Views, Source: DP World Limassol

Further Investment

DP World has proceeded with significant investments in order to modernize the New Cruise Terminal and enhance tourists' experience. These investments include the complete landscaping of the surrounding area, the installation of an automated irrigation system, the installation of a full range of latest technology, in all internal and external areas, including remote smart monitors in both arrival and departure halls. Furthermore, includes the installation of state of the art CCTV & access control systems and a full range of recycling bins within the terminals. It is worth noting that two new duty free shops are ready to operate.

Cruise Lines - Destinations

Limassol is one of the major destinations in the Mediterranean for the cruise industry with the opportunity to be the first port of call for cruise lines after transiting the Suez Canal. It is included in the itineraries of many international cruise ships sailing in the region and it is also a permanent base for Cypriot-owned cruise ships which, seasonally carry out excursions in the region, to Greece, the Greek islands, Egypt, Israel, Lebanon and Syria.

The Cruise Lines calling Limassol port are:

- Aida Cruises
- Costa Crociere
- Cunard
- Hapag-Lloyd Cruises
- MSC Cruises
- Norwegian Cruise Line
- Regent Seven Seas Cruises
- Salamis Cruise Lines
- Thomson Cruises
- TUI Cruises
- Viking Cruises

You may read more about the cruise-lines that visited the Limassol port in 2019 in the chapter 2.1.1.2 "Cruise-related flows".

Awards

DP World Limassol has been honored with the:

- "Most Efficient Cruise Terminal" in the maiden MedCruise Awards
- 2018 CIPA International Investment Awards
- Silver Award at the 2019 Cyprus Tourism Awards, in the category "Strategy & Innovation/Modernization of Infrastructure"

Memberships

Aiming to stimulate the sustainable growth of cruise activities at Limassol port as well as strengthen Cyprus' position in the sector, DP World has joined as an Associate Member the MedCruise, which is the Association of Mediterranean Cruise Ports. Joining the MedCruise is considered indicative of the company's commitment to be actively involved in the development of the overall tour sector in Cyprus while contributing to enhancing the country's role as an important regional player.

Additionally, DP World Limassol has recently joined the Cyprus Marine Environment Protection Association (CYMEPA), demonstrating its determination to actively engage in the protection of the marine environment, combat pollution and make a positive impact on the local community.

Other Memberships

- Cyprus Shipping Chamber (Associate Domestic Member)

- Limassol Chamber of Commerce (Member)
- Limassol Tourism Development Chamber
- Cruise Lines International Association Europe (Member)
- Seatrade Cruise Global (Member)
- Employers & Industrialists Federation (Member)
- Cyprus Marine Club (Member)

Sustainability

Among DP World's four commitments is to "**Minimize impacts on our environment** by better managing natural resources and emissions". DP World has expressed its strong commitment on sustainability and its interest on addressing the UN Sustainable Development Goals (SDGs).

Figure 16: DP World Sustainable Development Goals, Source: DP World

- **DP World – Sultan Ahmed bin Sulayem** statement:

"We are committed to being world leaders in sustainability. It is as important to us commercially as it is to the societies in which we operate. As a major global employer we know we can play a significant role in improving people's lives, strengthening their communities, and protecting their environment."

- **DP World Limassol – General Manager Charles Meaby** statement:

"DP World Limassol places high priority on environmental protection and has launched a number of initiatives to drive our sustainability agenda since assuming responsibility of the multi-purpose terminal at Limassol port"

"We have a tradition of commitment to protect natural resources and undertaking environmental stewardship remains critical to us being a sustainable company"

Towards this direction DP World Limassol has also conducted an Environmental Policy (2018) which is based on the terminal's recognition of its role in providing guardianship of the environment. In the policy document

it is stated the company will achieve this by:

- Ensuring compliance with applicable environmental legislation which covers its activities, DP World standards and other requirements
- Protecting the environment, including prevention of pollution, reducing waste and conserving natural resources and ensuring measures are implemented to determine and mange environmental risks
- Being committed to continual improvement in environmental performance and the normalized reduction of emissions to air, land and water
- Establishing objectives and targets to effectively manage significant environmental aspects and monitor progress against it
- Actively engaging with local communities, businesses, regulators and other interested parties. Raise environmental awareness with staff and stakeholders
- Providing appropriate resources in the form of equipment, information, training, instruction and supervision for all employees, contractors and visitors to meet the Policy.
- Having arrangements in place for employees, contractors to suggest environmental improvements
- Requiring contractors and visitors to comply with the Environmental protection requirements
- Maintain and continually improve our environmental management system according to ISO 14001: 2015.

2.1.2 SWOT Analysis

The data presented in the previous chapters are considered representative of the current situation in Limassol. Yet, the same data have different interpretation according to the study subject. Therefore, the data collected are presented below using the SWOT Analysis tool. The SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) is a tool that allows identifying the state of a given situation, by considering the negative and positive aspects of the environment and the organization or project, in this case, the state of the City about urban transport related to cruise-tourism and the activities of the cruise passengers. The SWOT Analysis takes into account different data an presents them through the following matrix:

Table 9: SWOT Matrix

SWOT	Weaknesses	Strengths
INTERNAL ANALYSIS	• A great number of cruise-ships arrives during rush hours, discouraging the passengers to access the city-center with motorized transport means. • The part between the cruise-terminal and the marina (beginning of the renovated promenade) is not friendly for walking nor cycling (4km, 48min). • The car dominated culture (92% of the trips are done by car) and the car-oriented infrastructure create a challenging environment for active modes of transport. • The public transport is insufficient • The vast majority of the out-of-city destinations that are attractive to visitors are accessible only by car. • The vast majority of the available shore excursions make use of polluting transport means (jeeps, boats, etc).	• Cruise tourists do not affect importantly the road traffic in Limassol. • An upgraded cruise-terminal serves as a positive arrival experience. «DP World Limassol was honoured with the "Most Efficient Cruise Terminal" in the maiden MedCruise Awards» • A great part of the Limassol promenade has been recently renovated allowing for safe and pleasant walking and cycling. • The cruise terminal is in close proximity to the historical center, connected with bus. • According to local planning (SUMP), in the near future it will become possible to reach the marina (beginning of the renovated promenade) from the cruise-terminal with bike/ shared bike. • Limassol offers a great range of touristic promotional material online and printed, alongside a mobile application for mobility and another for the touristic sites. • The Limassol historical center concentrates a big part of activities that are interesting for

		visitors.
	Threats	**Opportunities**

EXTERNAL ANALYSIS	• Cruise-sector's dependency on global geopolitical developments.
	• Local planned investments that favor the use of car.
	• Potential lack of interest of the cruise related actors to shift towards sustainability.
	• Low adaptation to the pressing climate change, that calls for immediate actions.
	• More than half of the cruise-passengers stay on boat.
		• Limassol strategy and political commitment to
		  ○ shift towards sustainable mobility through plans and projects (most importantly the SUMP and the DESTINATIONS project) and through signing of the CIVITAS Declaration and being an active member of CIVITAS Initiative and the CIVINET CY-EL Network.
		  ○ respond to the climate change (signed the Covenant of Mayors).
		  ○ promote sustainable tourism (DESTINATIONS project, and other).
		• Cyprus commitment to Limassol's strategy to meet certain sustainability goals of the UN Agenda by 2030 (including the greening of transportation).
		• Limassol planned investments for sustainable mobility.
		• European funding earmarked for sustainable mobility, environment and energy efficiency.
		• DP World vision to Establish Limassol as one of the major destinations in the Mediterranean for the cruise industry with the opportunity to be the first port of call for cruise lines after transiting the Suez Canal.
		• Leading cruise lines vision to shift towards sustainability (e.g. CLIA cruise lines have pledged to reduce the rate of carbon emissions across the industry

		fleet by 40% by 2030, AIDA, Carnival and more are working towards the SDGs, e.t.c.).

2.1.3 CAME Analysis

The SWOT analysis is followed by a CAME analysis in further steps, which is a useful tool to define strategies and actions from SWOT matrix results. The key is to focus on the most relevant weaknesses, strengths, threats and opportunities and, then, associate actions to Correct, Adapt, Maintain and Explore each identified situation. CAME refers to the matrix for SWOT possible strategies (Correct, Adapt, Maintain and Explore)

Table 10: CAME Matrix

CAME	Threats	Opportunities
Strengths	**MAINTAINING STRATEGY** • Ensure that car-oriented investments in the study area (e.g. Aktaia odos) will include sustainable mobility infrastructure. • Liaise the local vision for sustainable mobility with the sustainability vision of large-scale cruise-actors, such as CLIA and individual cruise-lines. • Emphasise on sustainable itineraries for 9h (the most frequent duration of a cruise stay) and focus on having more passengers getting off the cruise-ship.	**EXPLORING STRATEGY** • Create a spatial continuous of safe, attractive, sustainable and accessible routes between the cruise-terminal and the city-center, taking advantage of the proximity and the already planned investments in this direction, and aiming to provide cruise-passengers with a smooth experience. • Capitalise on the efforts regarding the upgrade and promotion of the cruise terminal and Limassol as a sustainable MED destination and update the promotion strategy for cruise-passengers adding the sustainability pillar, where mobility, tourism & environment are in harmony. • Capitalise on the ongoing investments in order to integrate EVs and ITS in the cruise passengers - related mobility.
Weaknesses	**ADAPTIVE STRATEGY** • Combine investments required for cruise-passengers mobility	**CORRECTIVE STRATEGY** • Promote and seek for funding for sustainable mobility

	with measures provided in other studies and local plans (such as the SUMP, the DESTINATIONS & the EYKINISIS projects).	interventions focused on cruise-passengers, under the umbrella of broader strategies (e.g. fighting climate change, e.t.c.), in order to use the available EU support. • Make use of the momentum around climate change in order to engage more providers of shore-excursions to integrate sustainable mobility (and sustainability in general) in their offers.

2.2 Step 2: Participatory process

2.2.1. Stakeholders' identification

The stakeholders' identification took place with the substantial support of the Ministry of Transport, Communication and Works and the Municipality of Limassol. It should be noted that the timing of the LCTP was favorable, as it coincided with the finalisation phase of the Limassol SUMP, meaning that an extensive list of stakeholders related to mobility matters was available (including contact persons), and the corresponding stakeholders were already familiar about sustainable mobility terminology. Since the Ministry of Transport, Communication and Works was in charge of the SUMP elaboration monitoring, and was leading the SUMP consultation meetings, it assisted us by extending invitations and participating actively in the meetings. The municipality of Limassol hosted our participation meetings and both the Ministry and the Municipality provided us space for carrying out interviews and one-to-one meetings. Below an overview of the participation process throughout the LCTP elaboration, is provided.

Table 11: LCTP identified stakeholders

No	Organisation	Impact/ Role	Interest	Involvement
1	Ministry of Transport, Communication and Works	• Responsible of Sustainable Mobility Policies and Infrastructure. • In close collaboration with local and national-level mobility-related stakeholders. • Public Transport Authority	• LCTP coherence with current policies and planned investments for sustainable mobility and especially the SUMP. • Cruise-related mobility strategy.	• Provision of inputs related to the Limassol SUMP. • Provision of inputs on potential financial instruments. • Provision of inputs on sustainable mobility investments and plans • Contribution in the LCTP drafting. • Contribution in the LCTP participatory meetings organisation.
2	Municipality of Limassol	• Responsible of Sustainable Mobility Policies and Infrastructure locally.	• LCTP coherence with the local policies for mobility and tourism. • Alignment of the LCTP proposed measures with the measures of DESTINATIONS, EYKINISIS, Limassol SUMP and other plans. • Coordination of the Public Transport related measures of the LCTP.	• Provision of inputs related to the Limassol SUMP. • Provision of inputs on local sustainable mobility and relevant investments and plans. • Contribution in the LCTP drafting. • Contribution in the LCTP participatory meetings organization.
3	Port Authority	N/A	• Potential Interest in port related sustainable strategies.	-
4	DP World Limassol	• Cruise terminal operator • Responsible for cruise terminal related operations, investments and sustainability	• Interested in the decarbonisation strategies of cruise-related activities related and not limited to mobility. • Interest in the project as a tool for promoting Limassol as a sustainable	• Insights regarding the cruise terminal efforts towards sustainability. • Data provision regarding the cruise-terminal and the cruise schedules. • Insights regarding the cruise

		strategies.	cruise destination . • Interest for capitalizing and developing further the DP World Limassol's efforts towards sustainability. • Interest in improving the experience of the cruise passengers. • Interest in connecting the LCTP monitoring indicators to the GRI ones.	sector developments. • LCTP feedback.
5	Cyprus Tourism Organisation – Deputy Ministry of Tourism	• Responsible for the national policy for tourism • Guide for accessible beaches	-	-
6	Limassol Tourism Board	• Responsible for local strategies regarding sustainable tourism • DESTINATIONS project partner • EYKINISIS project partner • Limassol SUMP stakeholder	• LCTP coherence with the local policies for mobility and tourism. • Alignment of the LCTP proposed measures with the measures of DESTINATIONS, EYKINISIS, Limassol SUMP and other plans.	• Insights from the DESTINATIONS project. • Insights regarding data for tourism in general & cruise tourism, in particular. • Contribution in connecting the LCTP with the local strategy for tourism.
7	Traffic Police		• Interest on tackling effectively safety issues between the terminal and the city center. • Interest on traffic related discussions.	• Contribution in the LCTP mainly through the meetings.
8	Association for persons with reduced mobility		• Interested in improving the life of all PRM (residents and visitors). • Interest on how to effectively connect the LCTP proposed infrastructure with the one proposed by other plans aiming at a continuous network that covers more areas.	• Insights regarding the PRM infrastructure status in Limassol. • Input on PRM related measures.
9	Limassol bike sharing system provider		• Broadening of the bike sharing system activities, focusing on cruise passengers.	• Input on bike sharing system expansion plans • Feedback on the LCTP regarding cycling infrastructure
10	Cyprus University of Technology & Heraclitus Research Center		• The university has extensive track record in studies that concern all the thematics of the LCTP (environment, tourism, mobility) and is interested to contribute as well as gain from the LCTP elaboration.	• Provision of the university studies and insights on mobility, tourism & cruise • Participation in the project meetings • Liaison with the corresponding university departments for each topic

11	Limassol Chamber of commerce and industry		• Interest in the way that the proposed model will affect the local businesses	• Participation in the project meetings • Liaison with the corresponding university departments for each topic
12	Individuals working in the cruise sector		• General interest in the project	• Data provision and insights regarding cruise during interviews, data sources, e.t.c.

2.2.2. Participation process implementation

The stakeholders' identification took place with the substantial support of the Ministry of Transport, Communication and Works and the Municipality of Limassol.

The LCTP stakeholders were activated very effectively, since the majority was previously participating in the SUMP elaboration stakeholders meetings, meaning that they were familiar both with the process and the sustainable mobility topic. Especially the latter was particularly important because we did not have to explain and analyse sustainable mobility interventions and strategies that concern the city, but instead, we could focus on the mobility of the cruise-passengers.

The participatory process followed 4 steps of implementation, described below. Between the steps there was constant communication and exchange of files among the LCTP elaboration team and the stakeholders.

Step 1: First round of stakeholder meetings and interviews (November 2018)

The first round of stakeholder meetings comprised of:

1 - A group meeting in the premises of the Ministry of Transport, Communication and Works, inviting persons from different departments of the Ministry of Transport, Communication and Works aiming to:

- Introduce the project
- Discuss the timeline and the tasks
- Discuss the connection with the Limassol SUMP
- Coordinate the Ministry's contribution to the project implementation

2 – Half day interviews with experts

3 – A stakeholder group meeting in the premises of the Municipality of Limassol inviting the stakeholders presented in the table 6 of the chapter 2.2.1. The purpose of the meeting was to:

- Introduce the project to the stakeholders
- Present the project materials for the ones interested to go through them
- Provide the opportunity to the invitees to express their interest in the project, pose questions and potential expectations
- Plan the next steps, especially regarding the data-collection

The stakeholders were already familiar with sustainable mobility topics, yet they were not that familiar with cruise-related issues. During the meeting the stakeholders understood the project concept and their expected contribution to both the meeting and the project in general. The project material, specifically the a) Capacity Building Manual, b) LCTPs of the partner-cities and the c) 14 measure packages were available

during the meeting. The participants showed special interest to the LCTPs of the other cities, as it allowed them to understand better the aspired outcome. The LCTPs played an important role in engaging the participants, since they found the fact that leading cruise destinations such Lisbon, Malaga, Ravenna, e.t.c., elaborated such plans, was very important and inspiring. By the end of the meeting, all represented entities provided information for the contact persons for the project and had a list of data and studies to be forwarded to us.

Step 2: Questionnaires and phone interviews (March, 2019)

A short questionnaire was sent to different stakeholders, tailored to each case. Through this process we collected important data for the LCTP elaboration, alongside some new contacts for requests that could not be covered by the stakeholders identified initially. The data collection through the questionnaires was followed by bilateral phone discussions, providing the opportunity to exchange opinions about the LCTP drafting.

Step 3: Second round of stakeholders meetings and interviews (July 2019)

During July, a second round of stakeholder meetings took place. Similarly to the Step 1, a round of meetings took place in the premises of the Ministry of Transport, Communication and Works aiming to feedback the draft LCTP and to discuss the proposed measures. At this stage of the project it was important to understand which measures can be realistically adapted/implemented, therefore, we had a dedicated meeting with the Ministry, discussing planned investments and strategies in which we could include the LCTP measures. A special discussion concerned the connection of the LCTP measures with the SUMP measures, since the SUMP was just submitted that month.

During the following day, a stakeholders meeting took place in Limassol Municipality premises. The purpose of the meeting was to:

- agree on the vision that was shaped during the previous months
- get feedback and complete the proposed measures
- get focused insights on specific topics (mostly related to cruise and accessibility)

Lastly, aiming to suggest effective and focused on cruise-related policies, and trying to cover the fact that we are not in contact with any cruise line, we held some one-to-one meetings with professionals from the cruise-sector, to discuss the corresponding proposed measures and understand how to promote them.

2.3 Step 3: Design of the plan

2.3.1. Definition of the current scenario

The baseline of the current scenario is described as follows:

1. The cruise-sector after a long decline is recuperating. Around 120 cruise-ships are arriving annually during the last two years, and this number is expected to increase by 40% according to DP World.

2. More than half of the cruise-passengers stay on board while the cruise-ship is in the Limassol port, according to interviews with experts.

3. The vast majority of the off-shore excursions offered to cruise-passengers involve polluting transport means.

4. The majority of the cruise-ships arrive and depart during rush hours (07:00 - 09:00 am and 17:00 - 19:00 pm), overlapping with the rush hour of typical working days. This means that the cruise-passengers that want to use the road infrastructure to either leave or return to the cruise terminal, will have to go through the traffic.

5. The cruise-terminal is connected to the city with a bus, however, the first part between the cruise-terminal and the city of Limassol is not appropriate for cycling and walking.

6. The cruise-terminal is not fully equipped for supporting vehicles or even cruise-ships operating with clean fuels, however it is gradually implementing relevant measures.

7. Accessibility conditions are not sufficient, however there are relevant measures presented in the SUMP.

2.3.2. Definition of vision and objectives

A dedicated vision statement of the city regarding the cruise sector did not exist beforehand. However, several visions were taken into account from the sectors of tourism, mobility and from the cruise-terminal point of view. LCTP is approaching and embracing the nexus of mobility and tourism, therefore, as a first step, the different visions concerning tourism, mobility and cruise were found and are presented as follows:

- The National tourism strategy 2030 vision statement for Cyprus is to:

  "Become, before 2030, a year-round sustainable destination receiving 4,8 million international tourists (40% of whom during November - April").
- DP World's vision is to:

  "Establish Limassol as one of the major destinations in the Mediterranean for the cruise industry with the opportunity to be the first port of call for cruise lines after transiting the Suez Canal"
- *Limassol SUMP vision is:*

  "Lemesos to be an accessible, safe, functional and friendly city for its residents and visitors, with attractive, green and quiet neighbourhoods, a lively city centre, numerous spacious and magnificent open public spaces, a beacon of sustainable and smart mobility, facilitating an abundance of economic, business, educational, recreational and cultural opportunities."

Having the afore-mentioned visions as a reference, the following vision was developed in the framework of the LCTP elaboration and was validated during the second stakeholder meeting:

Limassol LCTP Vision

Limassol to become a destination of excellence where sustainable modes allow clean and efficient access across the island and help balance the co-existence of tourists and residents.

In regard to this vision, the following **general objectives** are defined:

I. Reduction of the CO2 emissions deriving from mobility services required for the cruise-passenger activities while off-shore.

II. Reduction of the CO2 emissions for the city-cruise-terminal flows that concern either the cruise-passengers or the cruise-terminal staff.

III. Reduction of the CO2 emissions of the cruise-ship.

IV. Increase of the number of cruise-passengers that get off board while the cruise-ship stays in Limassol.

2.3.3. Definition of actions and indicators

The actions and indicators are presented in the following table, alongside the general problem they address, the general goal they are associated to and the specific goal(s) for each measure/action.

Table 12: Proposed actions/measures, their general goal, the problem they address and their specific goal(s)

	GENERAL GOAL	PROBLEM	SPECIFIC GOALS	ACTION/MEASURE
A) Upgrading of existing cruise transport vehicles and services				
A1	Reduction of CO2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Limited use of Public Transport due to the limited provision of the service	Improvement of Public Transport Lines serving the Cruise Terminal in order to make them more attractive	Upgrading bus line 30 (in terms of reliability, frequency, comfort etc.)
A2	Increase of the % of cruise passengers visiting the destination (instead of staying on-board)	- Limited use of green modes of transport - Limited mobility of PRM	- Encouraging the use of non-motorized vehicles be enhancing intermodality - Encouraging mobility of PRM by ensuring accessibility of the city's transportation system	Conversion of the existing buses, taxis and car-rentals which are currently connected with the cruise terminal so as to serve PRM and transfer bicycles.
B) Upgrade of existing fleet that serves the cruise-passengers (clean vehicles, additional vehicles & mobility services)				
B1	Reduction of the CO2 emissions of the mobility system that serves the cruise-passengers in Limassol	Polluting public transport fleet	Reduction of the emissions of the public transport means that serve the cruise-passengers	Upgrade of the bus line 30 fleet "My Mall - New Port - Touristic", substituting the old buses with clean ones

B2	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Low share of public transport passengers due to insufficient PT service	- Improvement of the bus lines service quality, focusing on those serving the cruise-passengers - Reduction of the emissions of the buses that serve the cruise-passengers	Deployment of a clean shuttle-bus, mini-bus or van for connecting the Cruise Terminal with the Limassol historical center, in case the regular bus line does not have sufficient capacity to serve the cruise-passengers
B3	Reduction of the CO2 emissions of the mobility system that serves the cruise-passengers in Limassol	Polluting public transport fleet that serves cruise passengers	Reduction of the emissions of the public transport means that serve the cruise-passengers	Replacement of the Hop On Hop Off bus with an electric one, to serve the visitors of the city center touristic sights
B4	Reduction of the CO2 emissions of the mobility system that serves the cruise-passengers in Limassol	Use of polluting motorised vehicles for in-terminal operations of all kind (staff, goods, e.t.c.)	Reduction of the number of polluting vehicles used within the cruise-terminal	Gradual upgrade of the in-terminal vehicles to clean ones. Free provision of those vehicles for potential cruise-passenger related requests for in-terminal transfers
B5	Reduction of the CO2 emissions of the mobility system that serves the cruise-passengers in Limassol	Use of polluting motorised vehicles for cruise-passenger shore excursions.	Provision of low-emission mobility options for the cruise-passengers shore excursions.	Encourage the upgrade/replacement of vehicles that are used for cruise passenger shore excursions (e.g. car-rentals) with 'clean' ones, by providing incentives for the corresponding businesses (e.g. EV chargers placement, to be used for free for cruise-related activities)
B6	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Absense of low-cost, non polluting alternatives to the car, provided at the terminal	Shift of the polluting road transport users towards low-emission low-cost transport means	Provision of clean alternatives to car, such as e-bikes (including ones for PRM), e-scooters, e.t.c. at the terminal, for the cruise-passengers who wish to visit Limassol.
B7	Reduction of cruise-ship emissions	Important emissions and noise upon the cruise-ships arrival/departure and during their stay time.	Reduction of the emissions and the noise of the cruise-ships, eliminating the corresponding negative impacts upon their arrival/departure and during their stay time.	Establishment of cold ironing infrastructure in the cruise-terminal, in order to allow such cruise-ships to arrive and recharge.
C) Urban regeneration and new infrastructure in points of interest visited by cruise-passengers				

C1	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Limassol traffic jams prolong the time required for terminal-city connections by road transport (car/bus)	Increase of the capacity of road infrastructure and provision of a dedicated part for alternative to car transport means	Construction of Aktaia Odos in order to improve the connection of the new terminal with the marina, and consequently the city center. Allocation of dedicated space for pedestrians and bicycles.
C2	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Unsafe infrastructure for pedestrians and bicycles. Inaccessible infrastructure for PRM for many of the most important (cruise)tourist attractions.	Infrastructure upgrades for pedestrians, cyclists and PRM to move safely, comfortably, enabling access to the major (cruise)tourist attractions.	Creation of safe and comfortable bikelanes and sidewalks along existing road infrastructure between the new terminal and the Limassol city center, and along the routes that lead to the most important (cruise)tourist attractions.
C3	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Major (cruise)tourist destinations are accessible only by motorised vehicles	Encouragement of cycling and walking for reaching (cruise)tourist destinations, previously accessible only by motorised vehicles	Creation of bicycle connections that complement the existing ones and create continuos routes among the terminal and major (cruise)tourist destinations, previously accessible only by motorised vehicles
C4	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Limassol traffic jams prolong the time required for terminal-city connections by road transport (car/bus)	Prioritise and assist the bus lines that serve the cruise-passengers	Establishment of bus priority lanes, serving the buses that transfer cruise-passengers
C5	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Major (cruise)tourist destinations in Limassol are accessible only by motorised vehicles	Encouragement of bike-sharing use for reaching major (cruise)tourist destinations in Limassol	Establishment of bike sharing stations in the cruise-passengers points of interest in Limassol (including the cruise terminal)
C6	Increase of the % of cruise passengers visiting the destination	Low accessibility of PRM for important urban destinations for cruise-passengers	Encouragement of PRM mobility towards urban points of interest with own or other green transport means	Upgrade of the accessibility conditions of the PRM in the Limassol city center
D) Other Policies				

D1	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Fragmentation in he way the cruise guest can use different modes of transport and access the desired destinations	Creation of an integrated system of mobility services to the desired destinations of cruise	Upgrade of the Tourist Mobility Card application to an integrated platform including all means of transport and on-demand transport services (MaaS concept), combined with entry into tourist destinations and use of other tourist services.
D2	Increase of the % of cruise passengers visiting the destination	Limited available information on the ways and routes that a cruise visitor could visit destinations on foot or by bicycle (including PRM)	Creation of an integrated information system on how cruise visitors can tour the city by bicycle or walking (including PRM)	Marking of routes that are continuously accessible for PRM as well as of hiking and cycling routes. Creation of relevant printed and digital material and information / guidance tools (additional real time tools).
D3	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Limited provision/offer of sustainable mobility practices by local cruise partners	Promotion of more sustainable mobility practices in the local 'ecosystem' of cruise services	Adoption of a policy (by Cruise Lines) for "green" (in terms of mobility) partners, products and tourism packages.
D4	Reduction of CO_2 emissions per passenger & per cruise terminal worker due to his/her transport mean to/from the port	Limited available information to cruise visitors on the viability of the mobility packages offered and their respective businesses in terms of mobility	Provision of cruise tourists with the option to choose among the most sustainable mobility packages and businesses in order to promote more sustainable practices	Implementation of a programme indicating the environmental footprint of the shore excursions and of the alternative modes of transport to the destination on the relevant brochures, website etc.

Table 13: Proposed actions/measures and their implementation and monitoring indicators

	MEASURE	IMPEMENTATION AND MONITORING INDICATORS	RESPONSIBILITY	DATA SOURCE
A) Upgrading of existing cruise transport vehicles and services				
A1	Upgrading bus line 30 (in terms of reliability, frequency, comfort etc.)	- average time deviated from the stated time of arrival/departure per day and per month during the hours that cruise ships are in the port - average frequency of buses during the hours that cruise ships are in the port - cruise tourists' statement on their level of satisfaction based on non-quantitative criteria (comfort, safety etc.) - arrivals/ departures at the Cruise Terminal	EMEL LTD	field study & questionnaire surveys
A2	Conversion of the existing buses, taxis and car-rentals which are currently connected with the cruise terminal so as to serve PRM and transfer bicycles.	- % of vehicles serving cruise tourists that meet PRM service standards - % of vehicles serving cruise tourists that meet specifications for bicycle transfer - number of PRM cruise tourists or cyclists that used buses, taxis or car-rentals to transfer their wheelchair or bicycle	DP WORLD, Limassol Tourism Company	field study
B) Upgrade of existing fleet that serves the cruise-passengers (clean vehicles, additional vehicles & mobility services)				
B1	Upgrade of the bus line 30 fleet "My Mall - New Port - Touristic", substituting the old buses with clean ones	- % of clean buses deployed for running the bus line No 30	EMEL LTD	EMEL LTD
B2	Deployment of a clean shuttle-bus, mini-bus or van for connecting the Cruise Terminal with the Limassol historical center, in case the regular bus line does not have sufficient capacity to serve the cruise-passengers	- number of cruise-passengers that used the shuttle service	DP World, Limassol Tourism Company	EMEL LTD or other transport professionals

B3	Replacement of the Hop On Hop Off bus with an electric one, to serve the visitors of the city center touristic sights	- number of cruise-passengers that used the Hop On Hop Off service	Limassol Tourism Company	LTB
B4	Gradual upgrade of the in-terminal vehicles to clean ones. Free provision of those vehicles for potential cruise-passenger related requests for in-terminal transfers	- % of vehicles provided to visitors and staff for in-terminal needs - number of visitors, staff or cargo moved with the use of a clean vehicle within the terminal/port area	DP World	DP World
B5	Encourage the upgrade/replacement of vehicles that are used for cruise passenger shore excursions (e.g. car-rentals) with 'clean' ones, by providing incentives for the corresponding businesses (e.g. EV chargers placement, to be used for free for cruise-related activities)	- number of EV chargers in the port - electricity consumption for charging e-vehicles	DP World	DP World
B6	Provision of clean alternatives to car, such as e-bikes (including ones for PRM), e-scooters, e.t.c. at the terminal, for the cruise-passengers who wish to visit Limassol.	- number of available vehicles at the terminal (per type) at the time of arrival of the cruise-ship - number of rentals at the terminal during a cruise-ship stay	DP World	DP World
B7	Establishment of cold ironing infrastructure in the cruise-terminal, in order to allow such cruise-ships to arrive and recharge.	- annual energy consumption for cruise-ships - % of emissions at the cruise-terminal - level of noise at the cruise-terminal	DP World	DP World
C) Urban regeneration and new infrastructure in points of interest visited by cruise-passengers				
C1	Construction of Aktaia Odos in order to improve the connection of the new terminal with the marina, and consequently the city center. Allocation of dedicated space for pedestrians and bicycles.	- level of service of motorised traffic - number of cyclists and pedestrians crossing the area during the stay of the cruise-ship	Limassol Municipality	field study

C2	Creation of safe and comfortable bikelanes and sidewalks along existing road infrastructure between the new terminal and the Limassol city center, and along the routes that lead to the most important (cruise)tourist attractions.	- length of appropriate pedestrian and bike lanes within the area that is commonly used by cruise passengers - number of cruise-passengers who arrived on foot or by bike at the common touristic points of interest - number of accidents involving pedestrians and bikers across the proposed network	Limassol Municipality	field study
C3	Creation of bicycle connections that complement the existing ones and create continious routes among the terminal and major (cruise)tourist destinations, previously accessible only by motorised vehicles	- length of hiking and biking routes in the (out of Limassol) areas of interest for cruise-passengers - number of cruise-passengers who arrived on foot or by bike at the common touristic points of interest (out of Limassol)	Limassol Tourism Company	field study
C4	Establishment of bus priority lanes, serving the buses that transfer cruise-passengers	- average duration per route per type of vehicle - number of vehicles per type that use the priority lanes during the time that the cruise-ship is at the port - level of service at the priority lanes	Limassol Municipality	field study
C5	Establishment of bike sharing stations in the cruise-passengers points of interest in Limassol (including the cruise terminal)	- % of cruise-passenger destinations served by a bike-sharing system - number of cruise passengers arriving to identified destinations by bike-sharing -- % of those who are cruise passengers	Private investors	Private investors or/and field study
C6	Upgrade of the accessibility conditions of the PRM in the Limassol city center	- length of the road network that is appropriate for PRM - number of PRM passing by check points in the historical center -- % of those who are cruise-passengers	Limassol Municipality	field study
D) Other Policies				
D1	Upgrade of the Tourist Mobility Card application to an integrated platform including all means of transport and on-demand transport services (MaaS concept), combined with entry into tourist destinations and use of other tourist services.	- number of card users - level of user satisfaction - level of satisfaction of professionals	Limassol Tourism Company	Limassol Tourism Company & field study

D2	Marking of routes that are continuously accessible for PRM as well as of hiking and cycling routes. Creation of relevant printed and digital material and information / guidance tools (additional real time tools).	- % of road network with the relevant making to the desired one - number of copies of printed material distributed - number of users who visited or downloaded the digital information material and used the real time tools - number of pedestrians, cyclists and PRM crossing critical points of the desired network - number of pedestrians, cyclists and PRM found on the desired network and were cruise visitors	Limassol Tourism Company	Limassol Tourism Company & field study
D3	Adoption of a policy (by Cruise Lines) for "green" (in terms of mobility) partners, products and tourism packages.	- % of "green" packages/ activities to the total packages/ activities offered to cruise tourists - percentage of passengers purchasing such packages - level of satisfaction of these packages	Limassol Tourism Company	Limassol Tourism Company, Operators, Cruise Lines
D4	Implementation of a programme indicating the environmental footprint of the shore excursions and of the alternative modes of transport to the destination on the relevant brochures, website etc.	- % of "green" packages/ activities to the total packages/ activities offered to cruise tourists - percentage of passengers purchasing such packages - level of satisfaction of these packages	Limassol Tourism Company	Limassol Tourism Company, Operators, Cruise Lines

2.3.4. Development of future scenarios

The scenarios were built according to the categorization proposed within the Capacity Building Manual.

● **Business as usual (BAU) scenario:** No changes are brought in by the project and, therefore, the current trends in economic, social and environmental terms continue to be the same. In the case of Limassol LCTP, even without additional proposals deriving from it, important changes are expected to take place, since the Limassol SUMP measures implementation phase is about to begin. The same stands for measures/actions implemented in the framework of the DESTINATIONS and EYKINISIS projects.

● **Most positive possibilities scenario:** Significant changes brought in by the project, boost a behavioural change along the city, multiplying its effects and creating a positive trend with utter implications along the city and the cruise-sector.

● **Most likely scenario:** The most likely trends take place and some of the proposed measures/actions go forward, while others might get stuck. In the framework of the LCTP elaboration, we tried to link as many measures/actions as possible to existing policies and plans in order to increase the possibilities for the measure to be implemented.

In the following table, the proposed measures/actions are linked to the scenario they belong, according to several factors.

Before the scenario assignment we link the proposed measures with similar measures proposed by the:

- Limassol SUMP
- DESTINATIONS project
- EYKINISIS project

A successful connection is considered to save resources and allow a complementary strategy to be followed, specifying existing measures in order to be more relevant to cruise-passengers, as none of the afore-mentioned projects have the cruise-passengers as a target group.

Table 14: Measures/actions allocation to the three scenarios

	MEASURE	PRECONDITIONS	SUMP	CIVITAS DESTIN-ATIONS	EYKINISIS INTERREG PROJECT	SCENARIO 1	SCENARIO 2	SCENARIO 3
A) Upgrading of existing cruise transport vehicles and services								
A1	Upgrading bus line 30 (in terms of reliability, frequency, comfort etc.)	comprehensive upgrade of the Limassol Public Transport System	ID 01, 06, 07, 08, 18	LIM 7.1	YES	X	X	X
A2	Conversion of the existing buses, taxis and car-rentals which are currently connected with the cruise terminal so as to serve PRM and transfer bicycles.	- solutions to institutional problems - existing and new funding programs - training of professionals		LIM 7.1			X	X
B) Upgrade of existing fleet that serves the cruise-passengers (clean vehicles, additional vehicles & mobility services)								
B1	Upgrade of the bus line 30 fleet "My Mall - New Port - Touristic", substituting the old buses with clean ones	- age of existing fleet - clean vehicle cost decline - exploitation of existing and new funding programmes - general EMEL shift towards clean vehicles					X	X
B2	Deployment of a clean shuttle-bus, mini-bus or van for connecting the Cruise Terminal with the Limassol historical center, in case the regular bus line does not have sufficient	- insufficient demand for a fixed bus line - incentives for the shuttle provider - exploitation of existing or new funding programmes					X	

	capacity to serve the cruise-passengers							
B3	Replacement of the Hop On Hop Off bus with an electric one, to serve the visitors of the city center touristic sights	- age of existing vehicle - clean vehicle cost decline - exploitation of existing and new funding programmes		LIM 7.2		X	X	X
B4	Gradual upgrade of the in-terminal vehicles to clean ones. Free provision of those vehicles for potential cruise-passenger related requests for in-terminal transfers	- age of existing fleet - clean vehicle cost decline - exploitation of existing and new funding programmes - general DP World shift towards clean vehicles					X	X
B5	Encourage the upgrade/replacement of vehicles that are used for cruise passenger shore excursions (e.g. car-rentals) with 'clean' ones, by providing incentives for the corresponding businesses (e.g. EV chargers placement, to be used for free for cruise-related activities)	- age of existing fleet - clean vehicle cost decline - exploitation of existing and new funding programmes - general DP World shift towards eletromobility		LIM 4.1, 4.3			X	X
B6	Provision of clean alternatives to car, such as e-bikes (including ones for PRM), e-scooters, e.t.c. at the terminal, for the cruise-passengers who wish to visit Limassol.	- private business readiness to invest - exploitation of existing and new funding programmes - development of appropriate infrastructure (bike-lanes) next to the existing road network		LIM 4.2			X	X

B7	Establishment of cold ironing infrastructure in the cruise-terminal, in order to allow such cruise-ships to arrive and recharge.	- plenty of institutional, technical and financial requirements					X	
C) Urban regeneration and new infrastructure in points of interest visited by cruise-passengers								
C1	Construction of Aktaia Odos in order to improve the connection of the new terminal with the marina, and consequently the city center. Allocation of dedicated space for pedestrians and bicycles.	- permissions - financing - expropriations - regeneration plan of the greater area	ID 08				X	X
C2	Creation of safe and comfortable bikelanes and sidewalks along existing road infrastructure between the new terminal and the Limassol city center, and along the routes that lead to the most important (cruise)tourist attractions.	- permissions - financing - regeneration plan of the greater area	ID 09-17	LIM 3.1			X	X
C3	Creation of bicycle connections that complement the existing ones and create continious routes among the terminal and major (cruise)tourist destinations, previously accessible only by motorised vehicles	- permissions - financing - regeneration plan of the greater area		LIM 3.1			X	
C4	Establishment of bus priority lanes, serving the buses that transfer cruise-passengers	- permissions - public acceptance					X	

C5	Establishment of bike sharing stations in the cruise-passengers points of interest in Limassol (including the cruise terminal)	- private business readiness to invest - exploitation of existing and new funding programmes - development of appropriate infrastructure (bike-lanes) next to the existing road network	ID 15	LIM 4.2		X	X	X
C6	Upgrade of the accessibility conditions of the PRM in the Limassol city center	- financing - public acceptance	ID 09, 10, 16, 17, 19	LIM 3.1, 3.2		X	X	X
D) Other Policies								
D1	Upgrade of the Tourist Mobility Card application to an integrated platform including all means of transport and on-demand transport services (MaaS concept), combined with entry into tourist destinations and use of other tourist services.	- Consensus building and mutually beneficial business model for all stakeholders involved		LIM 6.2, 7.4			X	
D2	Marking of routes that are continuously accessible for PRM as well as of hiking and cycling routes. Creation of relevant printed and digital material and information / guidance tools (additional real time tools).	- funding		LIM 3.1, 3.2, 7.4		X	X	X

D3	Adoption of a policy (by Cruise Lines) for "green" (in terms of mobility) partners, products and tourism packages.	- CRUISE LINES turning to "green" policies					X	
D4	Implementation of a programme indicating the environmental footprint of the shore excursions and of the alternative modes of transport to the destination on the relevant brochures, website etc.	- funding - consensus among tourism professionals					X	X

2.4 Step 4: Monitoring, assessment and sources for funding

2.4.1. LCTP implementation monitoring

Table 15: LCTP Limassol timeline of measures implemntation

#	LCTP Limassol measures	Timeline										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
A1	Upgrading bus line 30 (in terms of reliability, frequency, comfort etc.)											
A2	Conversion of the existing buses, taxis and car-rentals which are currently connected with the cruise terminal so as to serve PRM and transfer bicycles.											
B1	Upgrade of the bus line 30 fleet "My Mall - New Port - Touristic", substituting the old buses with clean ones											
B2	Deployment of a clean shuttle-bus, mini-bus or van for connecting the Cruise Terminal with the Limassol historical center, in case the regular bus line does not have sufficient capacity to serve the cruise-passengers											
B3	Replacement of the Hop On Hop Off bus with an electric one, to serve the visitors of the city center touristic sights											
B4	Gradual upgrade of the in-terminal vehicles to clean ones. Free provision of those vehicles for potential cruise-passenger related requests for in-terminal transfers											
B5	Encourage the upgrade/replacement of vehicles that are used for cruise passenger shore excursions (e.g. car-rentals) with 'clean' ones, by providing incentives for the corresponding businesses (e.g. EV chargers placement, to be used for free for cruise-related activities)											
B6												

	Provision of clean alternatives to car, such as e-bikes (including ones for PRM), e-scooters, e.t.c. at the terminal, for the cruise-passengers who wish to visit Limassol.											
B7	Establishment of cold ironing infrastructure in the cruise-terminal, in order to allow such cruise-ships to arrive and recharge.											
C1	Construction of Aktaia Odos in order to improve the connection of the new terminal with the marina, and consequently the city center. Allocation of dedicated space for pedestrians and bicycles.											
C2	Creation of safe and comfortable bikelanes and sidewalks along existing road infrastructure between the new terminal and the Limassol city center, and along the routes that lead to the most important (cruise)tourist attractions.											
C3	Creation of bicycle connections that complement the existing ones and create continuos routes among the terminal and major (cruise)tourist destinations, previously accessible only by motorised vehicles											
C4	Establishment of bus priority lanes, serving the buses that transfer cruise-passengers											
C5	Establishment of bike sharing stations in the cruise-passengers points of interest in Limassol (including the cruise terminal)											
C6	Upgrade of the accessibility conditions of the PRM in the Limassol city center											
D1	Upgrade of the Tourist Mobility Card application to an integrated platform including all means of transport and on-demand transport services (MaaS concept), combined with entry into tourist destinations and use of other tourist services.											
D2	Marking of routes that are continuously accessible for PRM as well as of hiking and cycling routes. Creation of relevant printed and digital material and information / guidance tools (additional real time tools).											
D3	Adoption of a policy (by Cruise Lines) for "green" (in terms of mobility) partners, products and tourism packages.											

D4	Implementation of a programme indicating the environmental footprint of the shore excursions and of the alternative modes of transport to the destination on the relevant brochures, website etc.											

2.4.2. LCTP funding

Table 16: LCTP funding sources and responsible bodies for each measure implementation

	MEASURE	PRECONDITIONS	LEVEL OF INVESTMENT	FUNDING SOURCE	RESPONSIBILITY	TIMELINE
A) Upgrading of existing cruise transport vehicles and services						
A1	Upgrading bus line 30 (in terms of reliability, frequency, comfort etc.)	comprehensive upgrade of the Limassol Public Transport System	€€	NATIONAL & EUROPEAN FUNDS	EMEL LTD	Start: 2020 End: 2022
A2	Conversion of the existing buses, taxis and car-rentals which are currently connected with the cruise terminal so as to serve PRM and transfer bicycles.	- solutions to institutional problems - existing and new funding programs - training of professionals	€	PRIVATE FUNDS	TRANSPORTATION PROFESSIONALS	Start: 2020 End: 2021
B) Upgrade of existing fleet that serves the cruise-passengers (clean vehicles, additional vehicles & mobility services)						
B1	Upgrade of the bus line 30 fleet "My Mall - New Port - Touristic", substituting the old buses with clean ones	- age of existing fleet - clean vehicle cost decline - exploitation of existing and new funding	€€	NATIONAL & EUROPEAN FUNDS	EMEL LTD	Start: 2022 End: 2023

		programmes - general EMEL shift towards clean vehicles				
B2	Deployment of a clean shuttle-bus, mini-bus or van for connecting the Cruise Terminal with the Limassol historical center, in case the regular bus line does not have sufficient capacity to serve the cruise-passengers	- insufficient demand for a fixed bus line - incentives for the shuttle provider - exploitation of existing or new funding programmes	€	NATIONAL, EUROPEAN AND PRIVATE FUNDS	EMEL or other transportation professionals	Start: 2022 End: 2023
B3	Replacement of the Hop On Hop Off bus with an electric one, to serve the visitors of the city center touristic sights	- age of existing vehicle - clean vehicle cost decline - exploitation of existing and new funding programmes	€€	EUROPEAN & PRIVATE FUNDS	Transport operator (Ministry)	Start: 2020 End: 2021
B4	Gradual upgrade of the in-terminal vehicles to clean ones. Free provision of those vehicles for potential cruise-passenger related requests for in-terminal transfers	- age of existing fleet - clean vehicle cost decline - exploitation of existing and new funding programmes - general DP World shift towards clean vehicles	€€	PRIVATE FUNDS	DP World	Start: 2020 End: 2030
B5	Encourage the upgrade/replacement of vehicles that are used for cruise passenger shore excursions (e.g. car-rentals) with 'clean' ones, by providing incentives for the corresponding businesses (e.g. EV chargers placement, to be used for free for cruise-related activities)	- age of existing fleet - clean vehicle cost decline - exploitation of existing and new funding programmes - general DP World shift towards eletromobility	€	PRIVATE FUNDS	Private investors in collaboration with DP World	Start: 2020 End: 2022

B6	Provision of clean alternatives to car, such as e-bikes (including ones for PRM), e-scooters, e.t.c. at the terminal, for the cruise-passengers who wish to visit Limassol.	- private business readiness to invest - exploitation of existing and new funding programmes - development of appropriate infrastructure (bike-lanes) next to the existing road network	€	PRIVATE FUNDS	Private investors	Start: 2020 End: 2022
B7	Establishment of cold ironing infrastructure in the cruise-terminal, in order to allow such cruise-ships to arrive and recharge.	- plenty of institutional, technical and financial requirements	€€€	NATIONAL, EUROPEAN & PRIVATE FUNDS	DP WORLD	Start: 2025 End: 2027
C) Urban regeneration and new infrastructure in points of interest visited by cruise-passengers						
C1	Construction of Aktaia Odos in order to improve the connection of the new terminal with the marina, and consequently the city center. Allocation of dedicated space for pedestrians and bicycles.	- permissions - financing - expropriations - regeneration plan of the greater area	€€€		Ministry of Transport, Communication & Works and Limassol Municipality	Start: 2023 End: 2025
C2	Creation of safe and comfortable bikelanes and sidewalks along existing road infrastructure between the new terminal and the Limassol city center, and along the routes that lead to the most important (cruise)tourist attractions.	- permissions - financing - regeneration plan of the greater area	€€		Ministry of Transport, Communication & Works and Limassol Municipality	Start: 2020 End: 2023
C3	Creation of bicycle connections that complement the existing ones and create continious routes among the terminal and major (cruise)tourist destinations, previously accessible only by motorised vehicles	- permissions - financing - regeneration plan of the greater area	€€		LTB, periurban Municipalities	Start: 2020 End: 2022

C4	Establishment of bus priority lanes, serving the buses that transfer cruise-passengers	- permissions - public acceptance	€		Ministry of Transport, Communication & Works and Limassol Municipality	Start: 2020 End: 2020
C5	Establishment of bike sharing stations in the cruise-passengers points of interest in Limassol (including the cruise terminal)	- private business readiness to invest - exploitation of existing and new funding programmes - development of appropriate infrastructure (bike-lanes) next to the existing road network	€		Private investors	Start: 2020 End: 2021
C6	Upgrade of the accessibility conditions of the PRM in the Limassol city center	- financing - public acceptance	€€		Ministry of Transport, Communication & Works and Limassol Municipality	Start: 2020 End: 2022
D) Other Policies						
D1	Upgrade of the Tourist Mobility Card application to an integrated platform including all means of transport and on-demand transport services (MaaS concept), combined with entry into tourist destinations and use of other tourist services.	- Consensus building and mutually beneficial business model for all stakeholders involved	€	NATIONAL, EUROPEAN & PRIVATE FUNDS	LIMASSOL TOURISM COMPANY	Start: 2020 End: 2021
D2	Marking of routes that are continuously accessible for PRM as well as of hiking and cycling routes. Creation of relevant printed and digital material and information / guidance tools (additional real time tools).	- funding	€€	NATIONAL, EUROPEAN & PRIVATE FUNDS	LIMASSOL TOURISM COMPANY	Start: 2020 End: 2021

D3	Adoption of a policy (by Cruise Lines) for "green" (in terms of mobility) partners, products and tourism packages.	- CRUISE LINES turning to "green" policies	€	PRIVATE FUNDS	CRUISE LINES	Start: 2020 End: 2030
D4	Implementation of a programme indicating the environmental footprint of the shore excursions and of the alternative modes of transport to the destination on the relevant brochures, website etc.	- funding - consensus among tourism professionals	€	PRIVATE FUNDS	LIMASSOL TOURISM COMPANY	Start: 2021 End: 2030

4. LCTP of Thessaloniki

Interreg Mediterranean LOCATIONS
Project co-financed by the European Regional Development Fund

Low Carbon Transport Plan – Thessaloniki

LOCATIONS - Low Carbon Transport in Cruise Destination Cities

Thessaloniki, 30th October 2019

Auhtors: Dimitrios Melas (AUTh), Anastasia Poupkou (AUTh), Stavros Cheristanidis (AUTh), Natalia Liora (AUTh), Konstantina Tolia (AUTh), Mina Tolidou (MDAT SA), Anthi Tsakiropoulou (MDAT SA).

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List of abbreviations

AUTH – Aristotle University of Thessaloniki

CERTH - Centre for Research and Technology Hellas

EIB - European Investment Bank

HIT –Hellenic Institute of Transport

MDAT - Metropolitan Development Agency S.A.

MoTh Municipality of Thessaloniki

OASTH - Organization of Urban Transportation of Thessaloniki,

RDFCM - Regional Development Fund of Central Macedonia ,

TCCI - Commerce and Industry Chamber of Thessaloniki

Thess Open Mall - Open Commercial Centre

THETA - Transport Authority of Thessaloniki S.A.

THPA S.A. - Thessaloniki Port Authority S.A.

TTO - Thessaloniki Tourism & Marketing Organization

YPEN–Green Fund - Hellenic Ministry of Environment and Energy –Green Fund

Private Sector:

SsT - Sightseeing Thessaloniki : Thessaloniki HOP 'N' HOP OFF Busses, EasyBike, THESSBIKE, Lime SA, Farport Greece, ATTIKO METRO S.A., ERGOSE S.A. (railway).

1. LCTP

1.0. Step 0: Work Team

The Work Team for the project in Thessaloniki was formed by AUTH. As an associated partner, Metropolitan Development Agency S.A. (MDAT) of Thessaloniki was been involved in the project. The teamwork's synergy merge the innovation and technical experience of similar scale projects developed already by AUTH in terms of Urban Mobility and Sustainable Development as well as the local experience and support provided by MDAT, being key partners in the accurate development of the LCTP. Details on the members of the project team are illustrated in Table 1.

Table 1 – Work Team

Name	Entity	Function	Tasks
Dimitrios Melas	Aristotle University of Thessaloniki (AUTH)	Professor/Project Coordinator	**Coordination and overview of the project** **Expert adviser on mobility and environmental matters**
Anastasia Poupkou	AUTH	Research Associate/Project Manager	**Environmental expert** **Sustainable mobility expert** **Production of LCTP**
Stavros Cheristanidis	AUTH	Environmental and quality expert	**Project management** **Production of LCTP**
Natalia Liora	AUTH	Research Associate	**Carbon footprint expert** **Production of LCTP**
Konstantina Tolia	AUTH	Administrative Personnel	**Text editing & Translations** **Implementation of the participatory activities** **Communications responsible**
Mina Tolidou	Metropolitan Development Agency S.A. (MDAT)	Executive in the Financial Department	**Implementation of the participatory activities** **Liason with Thessaloniki SUMP stakeholders** **Contribution in the funding step** **Insights on the measures and investments proposed by Thessalonikis' SUMP and other strategies, studies & plans**

Anthi Tsakiropoulou	MDAT	Traffic engineer	**Urban traffic and mobility expert**

1.1 Step 1: Initial assessment

1.1.1 Context analysis

i. Current cruise-related flows

Global tourism has grown steadily for the past two decades. The estimated total number of visitors in the world grew from 563 million in 1996 to 1322 million in 2017, an 135% increase. Regarding global cruise tourism the increase has also been stable and continuous with the number of individual passengers increasing 62% from 2005 until 2015.

ii. The European Context

In the case of Europe, the increase has been more visible with the number of passengers embarking in its ports more than doubling in the same period (Table 2).

Table 2 – Global demand for cruise tourism (in million passengers)

	2005	2010	2011	2012	2013	2014	2015	10-Year Growth
North America	9,96%	11%	11,44%	11,64%	11,82%	12,16%	12,08%	12%
Europe	3,19%	5,67%	6,15%	6,23%	6,39%	6,39%	6,59%	109%
Subtotal	13,15%	16,67%	17,58%	17,87%	18,21%	18,55%	18,77%	43%
Rest of the World	1,21%	2,40%	2,91%	3,03%	3,09%	3,49%	4,33%	266%
Total	**14,36%**	**19,07%**	**20,49%**	**20,90%**	**21,30%**	**22,04%**	**23,10%**	**62%**

Within Europe different regions can be identified namely the Mediterranean (Med), Northern Europe and Atlantic Islands. In 2015 the Mediterranean was the most active area, with a demand of 3,71 million individual passengers while in the Atlantic Islands it was 0,55 million and Northern Europe with 1,6 million passengers.

Within the Med, the area with most volume of cruise passengers is the West Med. It has been increasing its share of passengers for the past 6 years, from 69% in 2012 to 76% in 2017 of the total in the Med area, as depicted in the graph of Figure 1. As for the absolute number of passenger movements2 in the West Med it increased steadily until 2016 reaching a peak of 20 million and then having a slight decrease in 2017 (-2%). On the other hand, the rest of the Med areas (East Med, Adriatic and Black Sea) decreased their number of passenger movements by 25% in the same 6 years period (2012-2017).

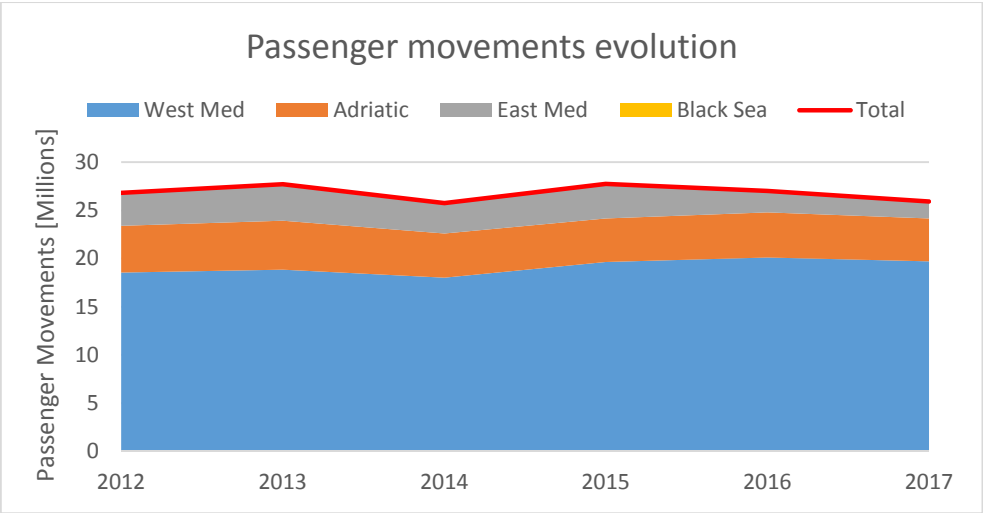

Figure 1 – Evolution of passenger movement in the different areas of the Mediterranean Sea.

The European path towards sustainable mobility progressed with the publication of the 2001 White Paper, titled 'European transport policy for 2010: time to decide', and the launch of the CIVITAS Initiative in 2002. Until today, CIVITAS has served as hub to test over 800 measures and urban transport solutions as part of demonstration projects in more than 80 cities Europe-wide. While the 2001 white paper set the medium-term, sustainable transport objectives, established to break the link between economic and traffic growth and combat the unequal growth among modes of transport. Especially, it highlighted the relevance of intermodality as a solution to the increasing demand for transport that cannot longer rely on the continuous construction of transport infrastructure.

In 2006, the European Commission (EC) submitted a mid-term appraisal of the White Paper called 'Keep Europe moving – sustainable mobility for our continent'. New concerns arose with regard to the challenges stemmed from the increase of energy prices, the international efforts to mitigate climate change and the fast-pace of globalization.

Similarly, in 2007, the EC published the Green Paper on Urban Mobility - 'Towards a new culture for urban mobility'. This document identified the top-five challenges faced by cities: congestion, dependence on fossil fuels, increase in freight and passenger flows, accessibility to the urban mobility system and safety. As a result, the Action Plan on Urban Mobility was adopted in 2009. This plan intended to support regional and national authorities in their implementation of sustainable measures and SUMPs between 2009 and 2012. With the Action Plan, the EC presented for the first time a comprehensive support package for urban mobility.

Today, most of the related policy is based in the 2011 White Paper, entitled 'Roadmap to a Single European Transport Area — Towards a competitive and resource efficient transport system', with over 40 initiatives designed to generate growth and jobs, reduce dependence on imported oil, and cut the sector's carbon emissions by 60% by 2050. Specifically, with the 2013 Urban Mobility Package - 'Together towards competitive and resource-efficient urban mobility', the EC reinforced its support to local implementation of measures by: sharing experiences, show-casing best practices, fostering cooperation, providing targeted financial support, focusing research and innovation on delivering solutions for urban mobility challenges, involving the Member States and enhancing international cooperation.

The LCTP has been created taking into account the following European frameworks of reference:

- White Paper 'Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system' (2011)
- Urban Mobility Package 'Together towards competitive and resource-efficient urban mobility' (EC, 2013)
- Delivering on low-emission mobility: A European Union that protects the planet, empowers its consumers and defends its industry and workers (COM/2017/0675)

From 2010 to date, more than 7 million passengers choose each year a Mediterranean cruise port as a starting point. Despite the loss of the dynamics of the past decade, all ports in the Mediterranean have seen home-porting increase by at least 500,000 passengers (+ 6%) compared to 2010. At the same time, the number of ports of departure was increased to 52. Cruise companies and guest passengers are looking for new selections in their cruise programs that they offer and choose, creating a dynamic market - which, in turn, allows major ports to claim higher market shares.

At the same time, the loss of attractiveness of Greek ports and destinations as regards their use as cruise ports is strong. In the most recent five-year period 2012-2016, cruise passengers who started completing their cruise in a Greek port were significantly fewer, at least 60,000 (-12%) than in 2010. The loss of the dynamic of the Greek ports of origin is directly linked to the reduction of the use of the Eastern Mediterranean as a starting point for a cruise.

iii. The National Context

The interest in cruise sector in Greece is intense and timeless. The geographical location of Greece, the extensive coastline, the polynesive character, the climate, the natural beauty and the significant reserves of historical wealth and cultural heritage, are comparative advantages for the development of sea tourism and in particular the cruise. The direct, indirect and derived benefits of cruise ship approaches and passenger arrivals are important and diffused into a wider society.

During the last five-year period in Greece an approximately 26 million cruise passenger movements has been recorded in 42 different Greek ports. At the same time, cruise ship approaches in all of the country's ports exceeded 21,000. According to estimates by PwC (2016)[1], if the current rates of change are maintained, in 2021 the cruise will account for 10% of the total arrivals of tourists in our country and 3% of the total revenues.

Despite the significant figures, the trends of recent years and in particular the most recent eight-year period, are not very encouraging. By comparing the cruise passenger traffic in Greek ports at 2012 and at 2016, a 6% decrease was observed. In 2012 and 2013 cruise passenger movements in Greek ports amounted to 5.5 million, with cruise ship approaches exceeding 4,000. In 2014, these figures fell significantly as passenger movements were 700,000 less and cruise ship approaches dropped more than 400 approaches. Although last two years a slight recovery is observed, the actual values do not exceed those of 2012.

[1] PwC-REMACO (2016). Ελληνικός τουρισμός: Προοπτικές και δυνατότητες. Συνέδριο ΣΕΤΕ: ≪Ελληνικός Τουρισμός: Νέα Δεδομένα και Μελλοντικές Προκλήσεις≫ 18 Οκτωβρίου 2016.

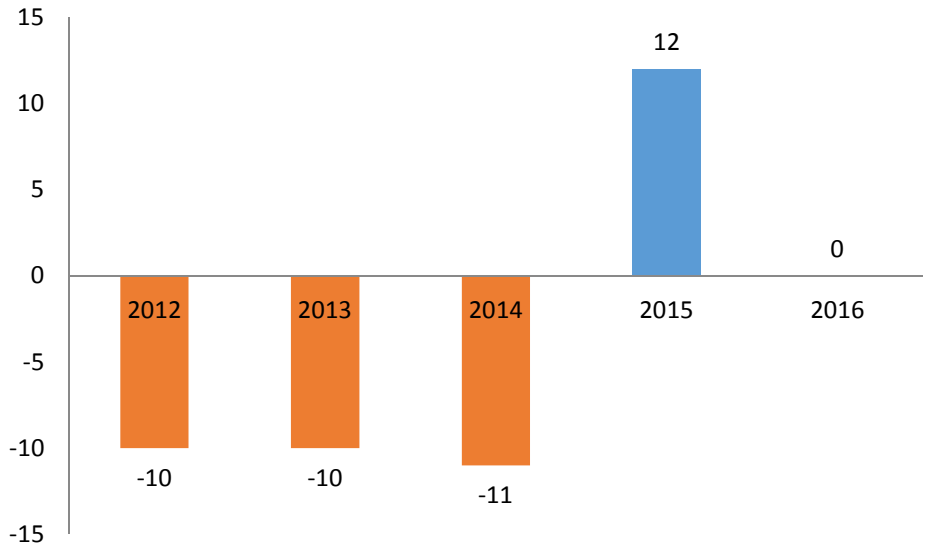

Figure 2 – Annual variation of cruise ships arrivals in Greece

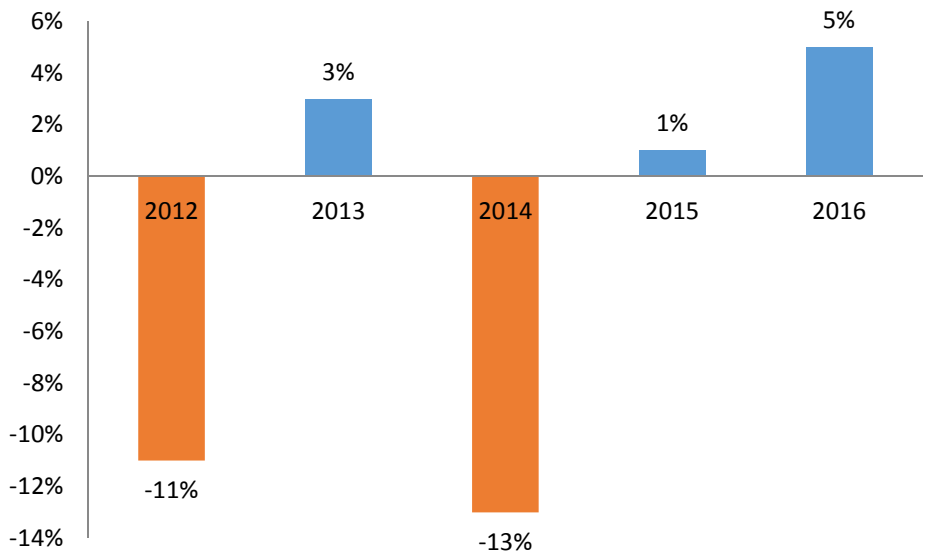

Figure 3 – Annual variation of passengers' arrivals in Greece

The annual rates in terms of ships (figure 2) and passengers (figure 3)arrivals provide a more complete picture of the overall size and the course of the cruise market over the five-year period 2012-2016. In 2014, total passenger traffic fell to -13% and fall in approaches to -11%, while in 2015 and 2016 marks the gradual recovery of the market. The rates for the recent year of analysis are marginal in terms of ship approaches, but displaying an increase of 5% for cruise passenger movements.

Cruise trends are not in line with the overall trends in the arrival of tourists in our country, as tourism in Greece is significantly strengthened at the same time. In 2015 there was a record of arrivals of foreign tourists and revenues, as the country received more than 26 million foreign tourists, showing an annual increase of 7.6%.

iv. City Context

Thessaloniki (520 km. north of Athens) is the second largest city of Greece and the most important centre of the area. Built near the sea (at the back of the Thermaïkos Gulf), it is a modern metropolis bearing the marks of its stormy history and its cosmopolitan character, which give it a special beauty and charm. Being a melting pot of many civilisations over the centuries; the Greeks, Romans, Ottomans, Jews and the Christians, Thesaloniki has many interesting sights one can visit and can be used as a base to discover nearby places of interest like the archaeological sites of Vergina and Dion.

Figure 4 – Thessaloniki's' terminal

The traffic congestion and jams which tend to happen around the port are already a matter of concern for the city which the forthcoming SUMP is expected to address. An important aspect for local urban mobility is that metro is to be opened in 1-2 years.

v. Port of Thessaloniki

Currently, Thessaloniki is a port of call, but plans are ongoing to make Thessaloniki a home port with the Balkans as a reference area. However, this would require enlarging the airport and other transport facilities. In table 3 are presented the distances between the port of Thessaloniki and the capital cities of the neighboring countries as well as distances from other ports.

Table 3 – Distance from the port of Thessaloniki

Οδική απόσταση της Θεσσαλονίκης από άλλες πόλεις (km)				
Belgrade, (Serbia): 609	Bucharest, (Romania): 608	Skopje, (NM): 219	Sofia, (Bulgaria): 280	Tirana, (Albania): 328
Απόσταση του λιμένα της Θεσσαλονίκης από άλλα λιμάνια (nmi)				
Algeciras, Ισπανία: 1693	Alexandria, Egypt: 673	Alexandroupoli: 200	Burgas, Bulgaria: 443	Instabul, Turkey: 333
Constanta, Romania: 529	Genova, Italy: 1179	Haifa, Israel: 785	Heraklion: 347	Izmir, Turkey: 254
Limassol, Cyprus, 653	Piraeus: 252	Varna, Bulgaria: 482	Venice, Italy: 1057	Volos: 140

The port facilities and the Th.P.A S.A. (port authority) approach to cruise tourism are adequate and well planned not only to absorb the flow of passengers, but also to attract larger numbers in the future. In table 4 are presented the current operational characteristics, infrastructure and port services of Thessaloniki's port.

Table 4 – Operational Characteristics, Infrastructure & Port Services of Thessaloniki's port

General characteristics	Working Hours	24 hours
	Implementation of ISPS Code	YES
	Waste Management	YES
Offered	Passenger Terminal	Terminal (area) 1,300 m^2
	Tourist information office (for	YES

Services at Terminal Cruise	passengers)	
	Information Office (for crew)	YES
	Reception lounge	NA
	Crew Space	NA
Safety	Metal Detector	YES
Other Services	Baggage handling services	YES
	Luggage storage	YES
	Visible Marking	YES
	Wheelchair access	YES
	Pedestrian routes	YES
	Greater International Airport	16 km
Accessibility	Distance from the city	500 m.
	Distance from transport:	
	Taxi	50m
	Bus	150m
	Subway	NA (1km)

Services

Vessels

THPA S.A. provides the following services to vessels arriving at the port of Thessaloniki**:**

- Berthing
- Water supply
- Power-telecommunications supply
- Waste and residue management
- Towage

Other institutions provide the following services:

- Fire-fighting services
- Navigation (channelVHF 12, Range16-24 kilometers)
- Lashing/unlashing services

Also, private companies provide the following services:

- Towage
- Catering

Passengers

The passenger port of Thessaloniki is located between Piers 1 and 2 and has a quay of a total length of 400m with a depth of 8m. The quay has 4 positions, for stern berthing and 1 for berthing alongside the pier or alternatively, 3 for berthing alongside the pier, (for the provision of services to cruise ships mainly). Vessels with a draught of up to 9m can berth alongside the pier with the installation of a special construction. of 200 m max.) if berthing alongside the pier. The port basin provides sufficient space and depth for cruise ship maneuvering and is well protected by a wave-breaker, from the weather conditions (winds, waves, etc.), while providing for the safe harboring of ships.

Passenger traffic is facilitated by a modern, cruise-passenger terminal located near (500m) the city center (figure 5). The "Macedonia" cruise passenger terminal that operates on a 24hour-7days/week basis, is hosted on the ground section of a renovated neoclassical building and services passengers of passenger-ships and ferryboats, flying dolphins and cruise-ships. Its high specifications and modern facilities meet the requirements of the Schengen treaty and the ISPS code. The terminal includes Duty Free shops, an Info kiosk and Wireless Access Points that contribute to the creation of a friendly environment and to the provision of high-quality services to all passengers.

Figure 5 –Location of the cruise terminal.

Furthermore, the port of Thessaloniki is at a 16km distance from the International "Macedonia" Airport and a mere kilometer from the Passenger Railway Station. Unfortunately, there is no direct connection with public transport means there is no direct connection with public transport means near the cruise terminal. The cruise passengers have to walk a distance of 500m (7min) to the closest bus stop, while the under-construction nearest subway stop will be within walking distance of 1km (15 min).

Event Halls

Inside the port facilities, Th. P.A. S.A. disposes of premises to host multipurpose activities. A series of warehouses on the 1st pier have been internally rearranged to host modern multipurpose uses (conferences, seminars, exhibitions, film projections and reception halls), while preserving intact their traditional architecture.

Parking Services

Inside the port premises THPA S.A. is operating two outdoor parking areas with a total capacity of 595 vehicle parking spaces. The company, in cooperation with the competent institutions, is examining the further and more systematic development, exploitation and integration of the port's property, in the everyday life of Thessaloniki. The operation of car parks close to the Passenger Terminal on Salaminas Street, facilitates immensely the specific area's traffic problem.

The parking area across the passenger terminal (245 parking spaces) operates 24hrs. The entrance of the open-air parking area is on Axiou Street, at a distance of 50 meters from the Port's Central Gate. This choice of location has the purpose of avoiding traffic congestion at the Central Gate and on Kountourioti and Nikis Streets, while it simultaneously facilitates the users of the port and the city in general.

vi. Current cruise-related flows

The main findings concerning the current cruise-related flows in Thessaloniki are summarized below:

- A significant decrease in the number of cruise ships and consequently in the number of passengers is observed in the last years (figure 6), since cruise companies prefer to avoid the North Aegean Sea. The main reasons for these trends are two. Due to the political instability in Turkey Istanbul is not anymore top cruise destinations and so for example Thessaloniki is not any more an intermediate stop between Piraeus-

Athens and Istanbul. The migrant crisis also set the crisis that "risk" that cruise ships should stop its voyage to carry on board refugees and migrants in danger on board of overcrowded sinking ships and disembark them to the nearest port.

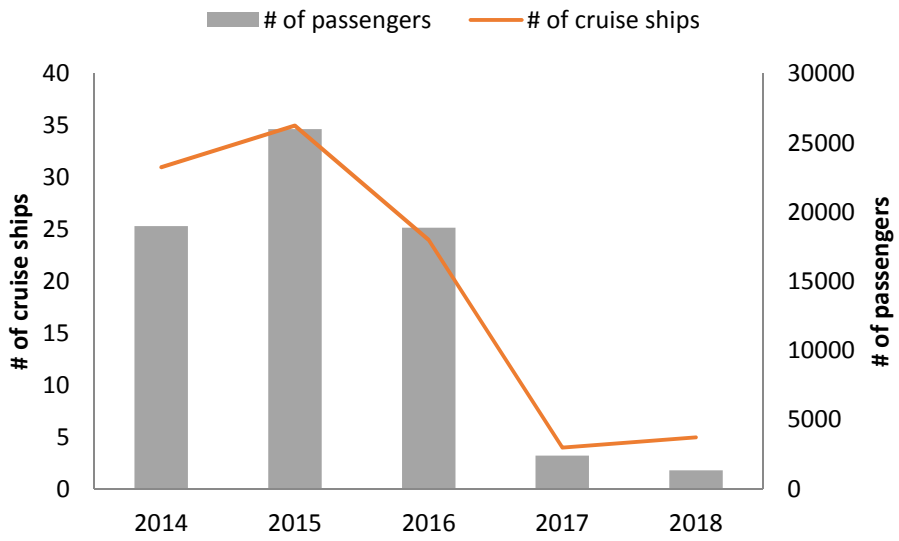

Figure 6 – Total annual cruise ships arrivals and passengers in Thessaloniki's port

- Although the highest tourism season in Thessaloniki takes place in summer, cruise tourism has its peak seasons in autumn (figure 7).

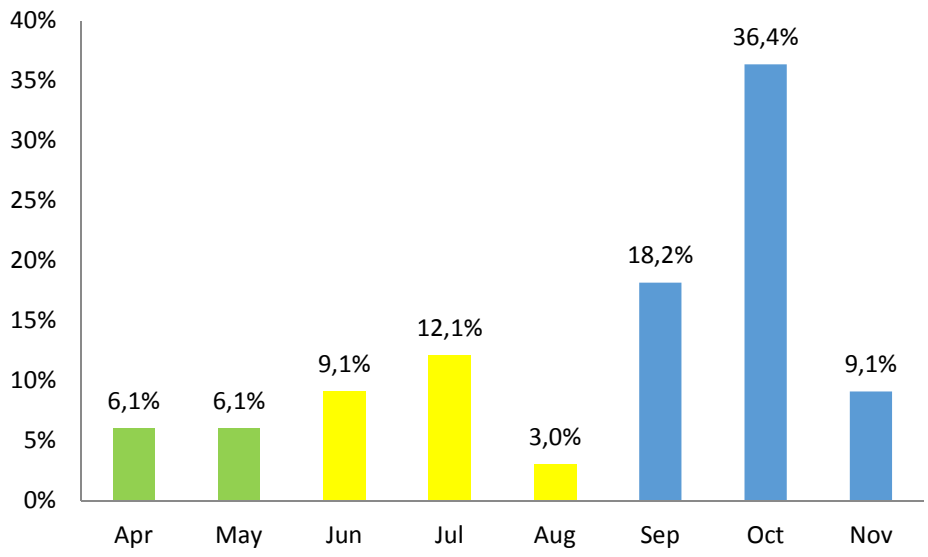

Figure 7 –Distribution of the cruise ships arrivals in Thessaloniki

- Thessalonikis' port is almost completely connected with other Greek ports (figure 8). This may constitute a disadvantage for Cruise companies.

The port of Thessaloniki is in a long distance from the main cruise areas in the Aegean (eg Cyclades) as well as from the cruise line connecting Piraeus to Instabul. For a cruise company to approach the port of Thessaloniki entails a significant divergence from existing cruise lines and routes, resulting in increased costs (fuel costs, operational costs) but also increases the cruise travel time. This, coupled with the limited recognition of the destination, prevents cruise companies from choosing Thessaloniki as an intermediate destination on a cruise and much more as a port of call. Another proposal to reduce the impact of this particular (geographical) handicap in Thessaloniki is the co-operation of the ports of Northern Greece, which as a whole is a geographical area where cruise activity is limited. The cooperation of cruise ports and destinations in Northern Greece (indicative of the ports of Thessaloniki, Volos, Kavala, Limnos, Skiathos and Skopelos) with the aim of creating and promoting new cruise companies in Northern Greece, could increase the attractiveness of the particular geographical area and make it more isolated in terms of cruise.

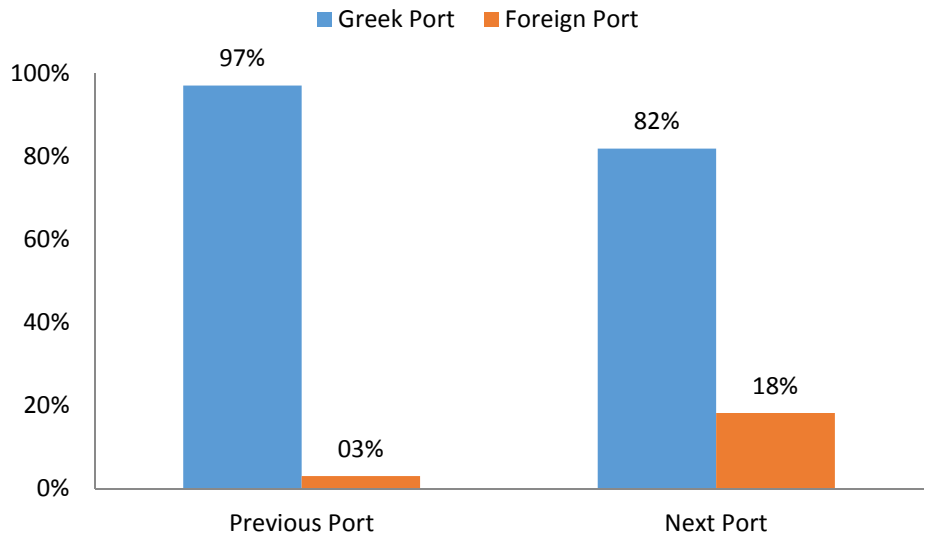

Figure 8 –Previous and next port of cruise ships visiting Thessaloniki

- As in other cruise cities the average time that cruise tourist spend in the city is less than a day (figure 9). The amount of time that the passengers stay in the city means they'll only have time to visit the main attractions or participate in excursion usually organized by the cruise service

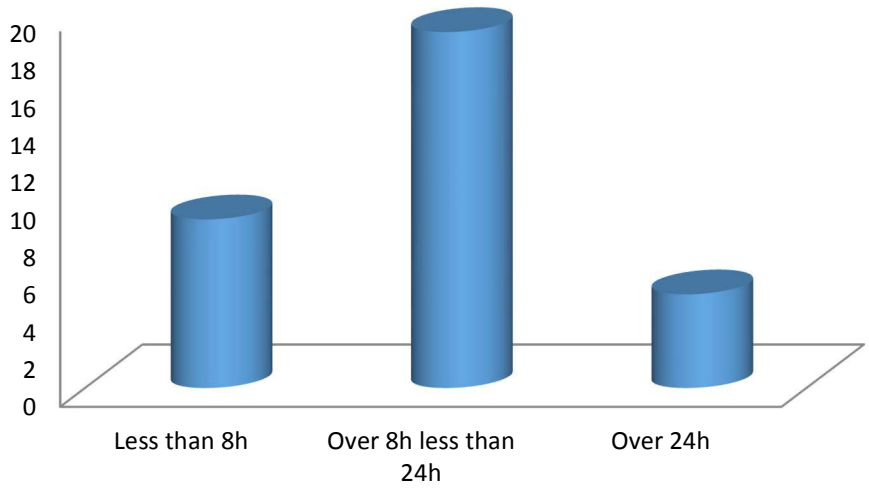

Figure 9 –Average time that cruise tourist spend in Thessaloniki

1.1.2 SWOT/CAME analysis

Based on information and data collected in the analyses and through consultations with stakeholders, was produce a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) following the provided model.

Table 5 – SWOT analysis

	Strengths	Weaknesses
Internal Context	• Location near the city center • Different types of tourism (sight-seeing, spiritual, history, cultural, gastronomic) • >100 cities attraction in distance less than 30 minutes walking • Further improvement of traffic conditions– particularly metro line into service	• Distance between the terminal and the Public bus connecting the main touristic attractions. • Pedestrian mobility • Significant seasonality on cruise tourism • Distance from main cruise routes • Port infrastructure -Lack of parking areas for buses and cars
	Opportunities	Threats

External Context	• Expected increase of cruise tourism in the Mediterranean • Expected diversification of offer in cruise ship tourism - demand for new ports • Expected increase of cruise tourism in the Mediterranean • Expected diversification of offer in cruise ship tourism - demand for new ports • Expected increase of cruise tourism in the Mediterranean • Expected diversification of offer in cruise ship tourism - demand for new ports	• Lack of investments in the sector in the past • The political stability of the wider eastern Mediterranean • Strong competition from other cruise-destination cities in the South Aegean sea.

The main weaknesses are linked to traffic and infrastructure. Since the terminal is located close enough to the city center and the passenger can simply walk there in 15 minutes. Of course, this is also a threat since, for touristic excursions, the transports (bus, taxis and others) must enter the city center to pick-up the passengers. Regarding the passengers information, an app is available offering info on museums and other touristic attractions but not mobility info. Additionally, there is an information point unfortunately in a distance from the terminal.

Despite all the public transport connections available, Thessaloniki has seen a disinvestment in public transport over the recent years. In addition, the distance between the cruise terminal and the bus stop to the cultural line of the local public transport (i.e. a bus line specifically devoted to tourists) is not so convenient. The expected SUMP and the forthcoming operation of metro service will serve towards a more sustainable transport and less GHG emissions to comply with European goals.

Furthermore, due to the limited amount of time passengers spend in the city, they tend to go only to the main attractions which are concentrated in the historical centre and in surrounding religious areas and local ethnical cemeteries, opting to have lunch on board.

The CAME analysis followed the SWOT analysis is presented in Table 6.

Table 6 – CAME analysis

Correct	Adapt
• Improve pedestrian network quality and accessibility. • Promote sustainable mode of transport for cruise passengers.	• Shift to electric mobility • Offer tailored services to cruise passengers, achieving partnership with cruise liners, and providing direct connections with other destinations (operating as a hub).
Maintain	**Explore**
• Positive outcomes with monitoring and revising activities	• New opportunities in cross sector collaboration (alignment of aims among stakeholders)

1.2. Step 2: Participatory process

The goal of the participatory process is the involvement of relevant stakeholders, including public administration, cruise business and citizenship. The activities were designed to collect crucial data for the development of the LCTP.

For this purpose, a three-phase process was designed and implemented:

1. First phase (November 2018): Identification and establish contact with relevant stakeholders.
2. Second phase (February – March 2019): Elaboration of a participated diagnosis of the current situation regarding mobility aspects of cruise tourism in the City.
3. Third phase (on going): a broader sample of stakeholder representatives will be invited to provide feedback on the measures included in the LCTP plan

1.2.1 Stakeholders identification

During the first phase, the participatory process began with the identification of relevant stakeholders, which interests were interconnected and strongly linked to cruise tourism, so as to define the LCTP goals and measures for the needs of the LOCATIONS project,

Table 7 – Key stakeholders

The importance and influence of the stakeholders in the development, implementation and monitoring of LCPT

Stakeholder	Stakeholder's importance in the project (Medium /High)	Stakeholder's influence on the project (Medium/High)
Port of Thessaloniki Authority	High	High
Municipality of Thessaloniki, Thessaloniki/ International Tourism Relations	High	High
Association of Shipping Agents of Thessaloniki & Federation of Naval Agents of Greece	Medium	Medium
Thessaloniki Chamber of Tradesmen	Medium	High
Thessaloniki's Urban Transport Organization	Medium	Medium
Tourism Promotion and Marketing Agency of Thessaloniki Area	High	High
Professionals of alternative ways of transport in the city	Medium	Medium
Citizens	Medium	Medium

1.2.2 Participatory implementation

i. 1st Participatory Workshop

During the second phase, the 1st LOCATIONS workshop was held on the 20nd February 2019 in Thessaloniki. The topic of the 1st workshop was: Workshop "Tourism Cruise & Environment: Prospects & Challenges for Low Carbon Transport in Cruise Destinations" of the Interreg Med "LOCATIONS".

Figure 10 – 1st Participatory Workshop

The workshop, which was followed by 27 participants, was organized by the Aristotle University of Thessaloniki (Professor Melas Dimitrios) and hosted by the Metropolitan Development Agency of Thessaloniki S.A. (CEO Kalogirou Chrisostomos) in the City Hall of Thessaloniki.

<u>During the workshop:</u>

1. Professor Melas Dimitrios and Stavros Cheristanidis (Aristotle University of Thessaloniki) presented the LOCATIONS approach concerning the mitigation of cruise related traffic impact on cities for improving the quality of life of inhabitants and passengers by Low Carbon Transport Plans,
2. Evgenia Traikapi (Port Authority of Thessaloniki S.A.)presented the port state regarding the cruise sector,
3. Giorgos Bassmadelis (Municipality of Thessaloniki, Thessaloniki International Tourism Relations) presented the actions of the municipality which are related to the cruise,
4. Vasilios Kampakis (Association of Shipping Agents of Thessaloniki & Federation of Naval Agents of Greece) focused his presentation on: “The arrivals of the cruise ships at the Port of Thessaloniki and the management of their passengers activities”,
5. Nikos Nikolopoulos (Thessaloniki Chamber of Tradesmen) focused on issues in the city related to the cruise passengers from the perspective of the tradesmen of Thessaloniki
6. The Region of Central Macedonia was represented by Alexandros Thanos who presented the actions of the region which are related to the cruise.

7. Anthi Tsakiropoulou (Metropolitan Development Agency of Thessaloniki S.A.) addressed the issue of: “Accessibility, Sustainable Mobility and Responsible Visitor Removal in the City of Thessaloniki».
8. Professor Thekla Tsitsoni (Aristotle University of Thessaloniki) presented "The Contribution of Urban Greenery to Improving the Quality of Life of Citizens and Visitors",
9. Thessaloniki’s Urban Transport Organization represented by Siskou Katerina and Anagnostou Fani presenting the Cultural Line.

The workshop was also attended by representatives of the following:

- Tourism Promotion and Marketing Agency of Thessaloniki Area
- Taxi Association of Thessaloniki
- Cycling Athletic Club of Thessaloniki
- Hop On - Hop off Thessaloniki
- "Boats S.A."
- Representatives of Professionals of alternative ways of transport in the city, such as skates, & rented bicycles
- Volunteers of the Cruise Ship Reception of the Municipality of Thessaloniki
- Representative of residents and city professionals

Main Outcomes:

The workshop that took place was vivid and very interesting. The participants raised questions and concerns, presented possible solutions and actions, each with its own perspective, in order to make interventions for the improvement of the current state and to turn the city into a more attractive destination. The problem of the city of Thessaloniki related to cruise tourism is not so intense due to the small number of cruise visitors. However, both infrastructure and organization need improvement. Some of the main outcomes of the workshop are the following:

- The Port Authority of Thessaloniki presented the current state regarding the cruise sector and the Authority’s plans for attracting more ship arrivals,
- The Chamber of Commerce recognizes the positive impacts of the cruise passengers on the city’s economic development.
- The Region and the Municipality presented their vision concerning the integration of the cruise tourism into a more holistic tourist design

- The Association of Shipping Agents of Thessaloniki & Federation of Naval Agents of Greece expressed their concerns regarding the handling, at national level, of Thessaloniki's tourist projection and the subsequent related investments.
- Thessaloniki's Urban Transport Organization proposed a differentiation in the cultural route.
- Mobility problems, lack of parking spaces and atmospheric pollution were the main concerns of the residents and the cyclists.

ii. 2nd Participatory Workshop

The second workshop with stakeholders was organized on 25th of June 2019. During the workshop, hosted by the Metropolitan Development Agency of Thessaloniki S.A. in the City Hall of Thessaloniki, AUTH presented the current state regarding the impact of cruise tourism in the city and the LOCATIONS approach through the LCTP. In the framework of the workshop, a debate on the LCTPs proposed actions and indicators took place and the participants were asked to complete a questionnaire evaluating proposed actions, indicators and future scenarios. The workshop was closed with discussion over the potential implementation of the LCTP in Thessaloniki and possible sources of funding.

Figure 11 – 2nd Participatory Workshop

iii. Participatory Meeting

An interview with Mrs. Traikapi, Head of the Office of Communication, Public Relations & Corporate Social Responsibility of Port Authority of Thessaloniki S.A. (key stakeholder), took place in March 2019. The interview was held in order to get as much information possible about the current state of the infrastructure, tourist flows, issues and the development of cruise ship tourism in the city of Thessaloniki. Based on the information and documentation obtained, a foundation for the development of LCTP was laid. Additionally, data for the detailed statistics were obtained**.**

2. Design of the Plan

The methodology used for the design of the LCTP is based on the training during the Capacity Building Seminar held in Lisbon on October 18th – 19th /2018 and the Capacity Building Manual.

2.1. Definition of the current scenario

The cruise terminal is located in the city center, near most of the city's touristic attractions. On one hand, this is positive, since cruise passengers wishing to visit the city's attractions can walk to them as they disembark. On the other hand, such a central location impacts on the residents, since cruise passengers wishing to arrive to the terminal or departing from it for local excursions mainly use private vehicles and buses.

The main identified issues, which have to be considered in the present LCTP, are summarized in Table 8. In addition, in Table 8 the causes of each issue are shown along with the associated consequences resulting in a decrease in the quality of tourists' experience and of inhabitants' life.

Table 8 –Thessaloniki's identified issues and associated causes and consequences

Issues	Related to	Consequences
Use of non-sustainable Transport modes by tourists (taxi, minivan, etc) for short distances	○ Low quality of pedestrian network ○ Inadequate cycling network ○ Insufficient bike renting	○ Higher number of vehicles circulating in the city center ○ Increased congestion

	/sharing network ○ Lack of tourist information ○ Lack of bus stop of cultural line close to the terminal	in road traffic
Road traffic congestion in city center and touristic attractions areas due to touristic coaches	○ Lack of parking capacity for touristic buses ○ The majority of buses departing from cruise terminal are heading to the same destination	○ Increase GHG and pollutants emissions ○ Lower travel speed ○ Noise pollution

Mobility options that contemplate sustainable transport modes, smart fluxes management, use of information technologies and many other novel ideas can contribute to a better quality of air, less traffic congestion, less time waiting to enjoy a touristic attraction, less crowd on some streets and public spaces, fostering of local businesses and an overall increased quality of life.

2.2 Definition of vision and objectives

The vision focuses on implementing a low-carbon transport plan for cruise passengers, based on the city's development vision as a cruise destination, in synergy with a holistic multimodal connection approach as part of wider sustainable traffic and mobility policies in the City of Thessaloniki (e.g. SUMP).

The main objective of the LCTP focus on submitting a realizable sustainable plan with specific actions to reduce carbon footprint and maximize future opportunities related to the cruise sector , with respect to the mobility needs of cruise passengers, residents, businesses, and the region in the forthcoming years.

2.3 Definition of actions and indicators

To serve the vision of the implementation of a low-carbon transport plan for cruise passengers, and the objective within the framework of the LCTP, four basic strategic axis have been defined, each one constituted with necessary actions to achieve these goals and indicators to measure the performance in their implementation towards the objectives

1. Easy movements:
    a. Increase the number of cruise passengers walking to attractions.
    b. Decrease traffic congestion around the port.

2. Decrease air quality and climate change related pollutant emissions and noise pollution:

   a. Increase the number of cruise passengers cycling to attractions.

   b. Increase the use of low carbon mobility services by cruise passengers.

   c. Reduce the emissions from vehicles used for transportation of cruise passengers.

3. Urban Interventions.

4. Local economy.

In the table 9 below, the actions are further detailed with sub-actions and associated with indicators to measure the performance in their implementation towards the objective.

Table 9 – Definition of actions and indicators for Thessaloniki

Action	Sub-Action	Indicator	Source	Short description about the Actions and Sub-Actions
1/a	1/a/1 Provide walking time & distance information.	Cruise passengers walking to attractions.	Cruise passenger surveys and tourist attractions' records	Developing an urban network of signals around the port and touristic areas, indicating, in an easy and multilingual way, the distance (in meters) and walking time (in minutes) to reach nearby attractions.
	1/a/2 Foster walking tourism for cruise passengers.	Length of newly introduced walking routes.	MoT	Provide useful permanent information via apps, QR codes, maps, advertisements or web sources to cruise passengers to plan their visit before arriving to the port, as well as to encourage cruise passengers to reach attractions on foot.
	1/a/3 Improve the pedestrian network in terms of accessibility.	Pedestrian network.	MoT	Improve the pedestrian network with respect to disabled and low mobility passengers and residents.
1/b	1/b/1 Optimization of coaches routes from the terminal.	Traffic congestion in main streets around the port.	Local police.	In coordination with local authorities and tour operators, reduce the congestion by optimizing the routes of coaches.
	1/b/2 Improve parking management and new parking space.	Number of parking lots in the area of the port.	Local police.	An amount of parking lots necessary for each touristic area must rely on previous studies of the maximum capacity the respective area can accommodate in terms of number of tourists. Investigating the possibility of funding for the use of parking in selected areas near the terminal and exploring the possibility to incentivize the development of light parking spaces on vacant plots.
2/a	2/a/1 Improvement of the existing bicycle infrastructure.	Users satisfaction.	User satisfaction survey.	Improve the existing bicycle infrastructure (lanes & parking) with safe connections to the port terminals and tourist areas.
	2/a/2 Establish a bike rental service in the cruise terminal.	Number of bicycle rentals.	Network logging / GIS	Establish a bike rental service in the cruise terminal.

Action	Sub-Action	Indicator	Source	Short description about the Actions and Sub-Actions
2/b	2/b/1 Establish a bus-stop of cultural line close to the terminal.	Number of cruise tourists using buses.	OASTH	The facility offers benefits for tourists who, disembarking the ship, would find a better connection between the cruise terminal and the local sites of interest.
	2/b/2 Establish electrical bus shuttle service at the premises of the port.	Number of cruise tourists using bus shuttles.	Port Authority of Thessaloniki S.A.	A gradual shift to the use of electric vehicles and replacement of the port fleet is recommended.
2/c	2/c/1 Limitation of circulation to polluting vehicles.	PM, CO, NOx, SO_2 levels.	Air pollution monitoring network.	Fosters intermodal transport as an innovative approach to use the current transport systems, moving from an independent and unrelated use of the single, traditional systems to an integrated one.
3	3/1 Implementation of soft mobility zones and pedestrianisation.	PM, CO, NOx, SO_2 levels. Noise levels.	Air pollution and noise monitoring network, Real estate rates.	Implementation of soft mobility zones and pedestrianisation on a scale around the cruise ships terminal.
	3/2 Improve accessibility for people with reduced mobility.	n/a	MoT	Installation of special signage system to reserve a parking space for vehicles providing this service and a device to facilitate wheelchair access to vehicles, such as lifts, ramps, etc.
4	4/1 Increase the use local facilities and low carbon mobility services by cruise passengers.	Number of cruise passengers using the card.	Records provided by participating bodies.	Implementation of a touristic smart card system that facilitates access to public transport means and local sites of interest.

2.4 Development of future scenarios

The complexity of the context, together with the many factors intervening, and the ambition and duration of the Plan, imply the likely possibility of deviations and relevant changes in the context. Under this view, the potential future scenarios are difficult to foresee. However, reasonable predictions can be established, looking to the most influential and frequent factors, and rating them in a scale from:

1. Nothing changes, neither for better nor for worse (Business as usual scenario, where historical data, trends and behavioral conduct will help us to define the future context).
2. Most likely scenario (adequate scenario): when events occur in the most likely way, thus progressing to a certain stage (not as good as they could have), but getting low or even stuck in some aspects.
3. Most positive possibilities foreseen actually occur (Best possible scenario), surpassing the expected outcomes and allowing to incremental adaptations of the LCTP.

However, unexpected events or circumstances, mostly negative for the project, may become a significant obstacle and hazard for the fulfillment of foreseen objectives.

Table 10 - Thessaloniki current and future scenarios

Action	Current state	Do-nothing scenario	Adequate scenario	Best possible scenario
1/a/1 Provide walking time & distance information. Linked to: 1/a/2 1/a/3	Information, maps and pedestrian signage for visitors is currently inadequate and heterogeneous. In many areas there is a problem of orientation for visitors.	Awareness raising for the Thessaloniki's Intelligent Urban Mobility Management System.	Enhancing and upgrading pedestrian information signage, smart mobility apps, provision of high level information on mobility planning (pedestrian routing, point of interest, public transport info, town info, estimated walking times and distances etc.).	Providing a suite of services for travelers/ Mobility as a Service (MaaS) facilities.
1/a/2 Foster walking tourism for cruise passengers. Linked to: 1/a/1 1/a/3	Inadequate pavement/ pedestrian network and information provided at the port.	Infrastructures are expected to worsen due to degradation and gradually become partially debased.	Urban redevelopment, including establishing pedestrian touristic routes.	A coherent link of green corridors between the port, the coastal zone and the city center.
1/a/3 Improve the pedestrian network in terms of accessibility. Linked to: 1/a/1 1/a/2 3/1 3/2	Inadequate pavement/ pedestrian network (insufficient widths, occupation by illegal parking, lack of infrastructure/ facilities for people with disabilities, difficulties in crossing central axes due to lack of appropriate pedestrian crossings).	Length of the pedestrian network/ infrastructure/ 1000 residents: 0.055km/ 1000 residents Modal split of walking daily trips: 9.2%.	% increase of the length of the pedestrian network/ infrastructure/ 1000 residents: +5%, namely 0.058km/ 1000 residents Modal split of walking daily trips: 11.15%.	% increase of the length of the pedestrian network/ infrastructure/1000 residents: +7%, namely 0.062km/ 1000 residents Modal split of walking daily trips: 11.45%

[The accessibility level of service concerns all the users walking around the pedestrian network, both residents and visitors/ passengers. However, the indicators defining the adequacy of the infrastructure can be defined as a ratio of the length of the pedestrian network or infrastructure/ 1000 residents and not concerning the visitors' attractiveness. Concerning the modal split, at the moment there are not available any survey results concerning the tourists'

mobility modal split.]

Action	Current state	Do-nothing scenario	Adequate scenario	Best possible scenario
1/b/1 Optimization of coaches routes from the terminal Linked to: 2/b/1 2/b/2	Traffic congestion especially in the morning and afternoon rush hour in the central area of the MoT.	Minor or none improvement in average travel time and in air quality.	Adequate improvement in average travel time and in air quality.	Relevant improvement in average travel time and in air quality.
1/b/2 Improve parking management and new parking space.	Inadequate organization of a parking system that makes it difficult to move downtown (lack of off-road places, lack of proper parking regulations enforcement).	Awareness raising for the operation of the THESi (new Controlled Parking System of the MoT) and the operation of the parking at Koundouriotou (850 parking spaces) closed to the port.	Investigation of the financing possibilities for the use of parking spaces in selected areas located near the terminal facilities of the Metro. Investigation on the feasibility of the development of light parking structures in not used properties.	Investigation for operation of Possible Park & Ride venues, among them Koundouriotou - Karatasou (200 parking spaces) closed to the port.
2/a/1 Improvement of the existing bicycle infrastructure.	Inadequate network of bike lanes (inadequate infrastructure, road network, poor road network maintenance which reduces cyclist safety, lack of bicycle parking facilities).	Review and upgrade of the existing bicycle network Expanding the bicycle infrastructure network at important urban axes Bicycle infrastructure (length of the bicycle infrastructure/ 1000 residents): 0.04% +4km of bicycle	Review and upgrade of the existing bicycle network Expanding the bicycle infrastructure network at important urban axes Bicycle infrastructure (% increase of the length of the bicycle infrastructure/ 1000 residents): +17%, namely 0.05% Modal shift daily trips to bicycle (% increase of the total trips performed by bicycle): +1%	Review and upgrade of the existing bicycle network Expanding the bicycle infrastructure network at important urban axes Bicycle infrastructure (% increase of the length of the bicycle infrastructure/ 1000 residents): +150%, namely 0.13% Modal shift daily trips to

		infrastructure Modal split of cycling daily trips: 1.7% -> 2%	Modal split of cycling daily trips: 2.65%	bicycle (% increase of the total trips performed by bicycle): +1% Modal split of cycling daily trips: 2.95%

The cycling level of service concerns all the users cycling along the bicycle network, both residents and visitors/ passengers. However, the indicators defining the adequacy of the infrastructure can be defined as a ratio of the length of the bicycle network or infrastructure/ 1000 residents and not concerning the visitors' attractiveness. Concerning the modal split, at the moment there are not available any survey results concerning the tourists' mobility modal split.]

Action	Current state	Do-nothing scenario	Adequate scenario	Best possible scenario
2/a/2 Establish a bike rental service in the cruise terminal. Linked to: 2/a/1	Operation of an automatic bike rental station (iBike) (14 shared bikes).	+2% if passengers using the service.	Design, organization and implementation of a reliable, user friendly and comprehensive bicycle sharing system +10% of passengers using the service.	+20% of passengers using the service.
2/b/1 Establish a bus-stop close to the terminal Linked to: 2/c/1 2/b/2	The closest bus stop of cultural line located at a distance of 2km.	Service not available at present	Establishment of a bus stop of cultural line close to terminal and activation when a cruise ship arrives.	Establishment of a bus stop of cultural line close to terminal and integrating it into an intermodal network.

The establishment of a new bike rental service generally in the City including in the cruise terminal as much as the enhancement of the one already operating is a matter of private sector. There are not data recorded or available to us concerning the use of the bike rental service, neither generally in the City nor the bike rental station on the cruise terminal. Therefore, the percentages added above are totally indicative.

Action	Current state	Do-nothing scenario	Adequate scenario	Best possible scenario
2/b/2 Establish electrical bus shuttle service at the premises of the port. Linked to: 2/c/1	No facility.	Service not available at present.	Implementation of an electrical bus shuttle service and adequate use by cruise tourists and port staff.	100% of cruise passengers use electric bus, and additionally, all the vehicles within the port are electric.
2/c/1 Limitation of circulation to polluting vehicles. Linked to: 2/b/1 2/b/2	Traffic congestion especially in the morning and afternoon rush hour in the central area of the MoT. Public Transport: Inadequate network coverage, long travel times due to adverse traffic conditions, inadequate route information, timetables and bus frequencies.	Compliance with specific loading and unloading hours.	Integration of loading positions in the parking management system in order to upgrade their use and supervision. Establishment of the night-hours timetable for the goods' distribution. Restructuring of public transport system.	Space disposal and support for the creation of small urban distribution centers and goods' distribution with alternative means. Incentives for electric professional fleets. Integration of the West Suburban Train and the Urban Sea Transportation in the Public Transport system.
3/1 Implementation of soft mobility zones and pedestrianisation Linked to: 1/a/3	Traffic congestion especially in the morning and afternoon rush hour in the central area of the MoT.	Minor to no reductions in emissions from transport sector.	Adequate emissions decrease due to transport.	Relevant emissions decrease due to transport.
3/2 Improve accessibility for people with	Lack of infrastructure/ facilities for people with disabilities, difficulties.	The existing poor infrastructures are expected to worsen due	Adequate implementation of the proposed action.	Extensive implementation of the proposed action.

reduced mobility. Linked to: 1/a/3		to degradation.		
Action	**Current state**	**Do-nothing scenario**	**Adequate scenario**	**Best possible scenario**
4/1 Increase the use local facilities and low carbon mobility services by cruise passengers Linked to: 1/a/1 1/a/2	Only a museum ticket card exists valid for a number of archaeological sites.	A touristic card that facilitates access in historical and cultural site	A touristic card that facilitates access to all public transport means, the bike rental system, discounts on a wide range of attractions and services, from historical and cultural sites to hotels, shops and restaurants.	A touristic card specifically designed for cruise passengers in terms of cost that facilitates access to all public transport means, the bike rental system, historical and cultural sites providing discounted offers in local shops.

3. Monitoring and Funding

3.1 Monitoring LCTP implementation

For the LCTP of Thessaloniki, the following indicators and the proposed entity with the responsibility of monitoring LCTPs corresponding indicators are presented in table 10. Since the SUMP of the city of Thessaloniki is expected in the forthcoming months, for an efficient use of resources and for LCTP to be effective, the proposed actions, where approximately coincide, will be harmonized to SUMPs most relevant plans and monitoring procedures. The other actions will be yielded to the corresponding competent authority or body for their uptake.

Table 11 – LCTPs' actions implementation monitoring and outcomes

Action	Indicator	Responsibility of monitoring	Outcome – Data source	Implementation
1/a/1 Provide walking time & distance information.	Cruise passengers walking to attractions	MoT, TTO	Number of info points. Number of tourists helped.	Short term
1/a/2 Foster walking tourism for cruise passengers	Length of newly introduced walking routes	MoT, THETA	Number of touristic routes crossing the ports terminal.	Mid term
1/a/3 Improve the pedestrian network in terms of accessibility	Pedestrian network	MoT	Number of reserved a parking spaces. Number of devices facilitating wheelchair access to vehicles Number of ramps, etc.	Mid term
1/b/1 Optimization of coaches routes from the terminal	Traffic congestion in main streets around the port	HIT, THETA	Reduce on travel time	Mid term
1/b/2 Improve parking management and new parking space	Number of parking lots in the area of the port	MoT, , THETA	Raise of the number of parking spaces in the selected areas	Mid term
2/a/1 Improvement of the existing bicycle infrastructure	Users satisfaction	MoT, , THETA	Km of maintained and expanded network	Mid term
2/a/2 Establish a bike rental service in the cruise terminal	Number of bicycle rentals	TTO, Private sector, THPA S.A.	Number of bicycles and rentals hours of services	Short term

Action	Indicator	Responsibility of monitoring	Outcome – Data source	Implementation
2/b/1 Establish a bus-stop of cultural line close to the terminal	Number of cruise tourists using buses	OASTH	Existence of a bus stop.	Short term
2/b/2 Establish electrical bus shuttle service at the premises of the port.	Number of cruise tourists using bus shuttles	THPA S.A.	Reduction of air pollution levels.	Mid-Long term
2/c/1 Limitation of circulation to polluting vehicles	PM, CO, NOx, SO_2 levels	MoT, YPEN	Reduction of air pollution levels.	Mid-Long term
3/1 Implementation of soft mobility zones and pedestrianisation	PM, CO, NOx, SO_2 levels Noise levels	MoT, YPEN	Reduction of air pollution levels.	Mid-Long term
3/2 Improve accessibility for people with reduced mobility	n/a	MoT	Number of vehicles for people with reduced mobility.	Short-Mid term
4/1 Increase the use local facilities and low carbon mobility services by cruise passengers	Number of cruise passengers using the card	TCCI	Number of tourist cards used.	Short-Mid term

3.2 Funding

Estimation on cost analysis, in order of magnitude, of the interventions related to the proposed actions is reported in the next table, where possible sources of funding have been pinpointed. The majority of the actions require large investments and it is hard to estimate the cost and the timeline of LCTPs' proposed actions since the initiatives can be implemented to different extents and by different project contractors. However, most of the actions are included in regional and national strategies and are to be included in city's' SUMP.

Table 12 – Actions, description and possible source of funding

€: Low-to-medium cost of investment, €€ : Medium-to-high cost of investment, €€€ : High cost of investment

Action/Sub-Action	Description of implementation and methology	Cost estimation	Possible source of funding/ Possible financial schemes
1/a/1 Provide walking time & distance information.	Installation of information panels.	€	TTO, MoTh, Thess Open Mall, TCCI
1/a/2 Foster walking tourism for cruise passengers	Creation of tourist routes and green corridors by integrating points of interest. Promoting city as a touristic - cultural destination by integrating cultural heritage elements into the urban public space and upgrading the accessibility to them. Routes including the areas of Ano Ladadika, the traditional Vlali market, Bezesteni and the wider area of Mavili Square. A common feature of these areas is their particular historical interest and their ultimate purpose is to highlight them in conjunction with their interconnection with other refurbishments and to upgrade the overall picture of the urban context. Pedestrian Routes either cross existing pedestrian streets, or roads with wide sidewalks or lack of appropriate infrastructure, on which the Municipality should intervene in order to create the appropriate infrastructure and conditions for the use of these infrastructures.	€	EIB, YPEN- GREEN FUND, RDFCM, THPA S.A., ATTIKO METRO S.A., MoTh, THETA
1/a/3 Improve the pedestrian network in terms of accessibility	Providing public space to citizens - creating and upgrading green kernels - urban redevelopment of streets and squares. Facilitating and protecting pedestrian mobility by improving and expanding the relevant infrastructure and protecting their rights. Implement support systems for pedestrians, cyclists and wheelchair users. Implementation of information tools and interactive citizen communication tools (Mobility as a Service - MaaS).	€€-€€€	EIB, YPEN- GREEN FUND, RDFCM, THPA S.A., ATTIKO METRO S.A., MoTh, THETA

Action/Sub-Action	Description of implementation and methology	Cost estimation	Possible source of funding/ Possible financial schemes
1/b/1 Optimization of coaches routes from the terminal	Remodeling nodes / signpost programs along the road axes.	€€-€€€	RDFCM, THPA S.A., MoTh, THETA, OASTH, SsT, HIT, CERTH
1/b/2 Improve parking management and new parking space	Investigating the possibility of funding for the use of parking in selected areas near the terminal and exploring the possibility to incentivize the development of light parking spaces on vacant plots. Possible Park & Ride venues close to the port terminal and city center: i) New Railway Station (500 parking spaces), ii) AUTH (2000 parking spaces), iii) Helexpo (1000 parking spaces)	€€-€€€	EIB, YPEN- GREEN FUND, RDFCM, THPA S.A., ATTIKO METRO S.A., MoTh, THETA
2/a/1 Improvement of the existing bicycle infrastructure	Review and upgrade of the existing bicycle network. Expansion of the existing bicycle network at important urban axes to enhance cycling Design, organization and implementation of a reliable, user friendly and comprehensive bicycle sharing system.	€€-€€€	EIB, YPEN- GREEN FUND, RDFCM, MoTh, EASYBIKE, THESSBIKE
2/a/2 Establish a bike rental service in the cruise terminal	Installation of a bike rental station.	€	YPEN–Green Fund, HIT, RDFCM, MoTh, EasyBike, THESSBIKE.
2/b/1 Establish a bus-stop close to the terminal	Installation of a stop in the area of the terminal crossing the cultural line and intermodal connection to the airport and intercity bus.	€	OASTH, MoTh, THETA, SsT, Fraport Greece
2/b/2 Establish electrical bus shuttle service at the premises of the port.	Ensuring specific spaces for charging infrastructures for electric vehicles, investigate the possibility of funding the replacement of vehicle fleet with electric busses.	€€€	EIB, THPA S.A., YPEN–Green Fund, OASTH, HIT, CERTH

Action/Sub-Action	Description of implementation and methology	Cost estimation	Possible source of funding/ Possible financial schemes
2/c/1 Limitation of circulation to polluting vehicles	Infrastructure, policy and tools upgrade for enhancing intermodal mobility based on the sustainable urban mobility principles (Seamless intermodality)	€€	EIB, YPEN–Green Fund, RDFCM, Fraport Greece, ERGOSE S.A., THPA S.A., ATTIKO METRO S.A., MoTh, THETA
3/1 Implementation soft mobility zones and pedestrianisation	The soft mobility zones or pedestrian roads, located at the city center, will further facilitate the alternative and green mobility and harmonize the coexistence of pedestrians, cyclists and cars.	€€-€€€	EIB, YPEK - GREEN FUND, RDFCM, MoTh
3/2 Improve accessibility for people with reduced mobility	Implement solutions to promote independent mobility in the city, pursuing the idea of better access for all cruise passengers, regardless of their physical limitations, disabilities or age. Improving accessibility of the road network and public transport by users with disabilities. Disposal of an electric wheelchair in key areas of the city and / or near parking spaces for tourist coaches.	€€	RDFCM, THPA S.A., MoTh, THETA
4/1 Increase the use local facilities and low carbon mobility services by cruise passengers	Implementation of a tourist card which offers discount in transportation, audioguide and free or discounted entry to tourist attractions, including museums, shops and restaurants.	€-€€	TTO, MoTh, Thess Open Mall, TCCI, SsT, EasyBike, THESSBIKE, Lime SA.

5. LCTP of Sète

Project co-financed by the European Regional Development Fund

LCTP Sète

LOCATIONS - Low Carbon Transport in Cruise Destination Cities

5th Activity Report. Version 1.1

WP5 – Capitalizing
Activity 5.3 Capitalization of LOCATIONS results in new countries of the MED area

Sébastien Dalmas

Javier Fernández

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Date 30/09/2019

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Low Carbon Transport Plan

The Low Carbon Transport Plan (LCTP) of Sète, as a Mediterranean destination for cruise tourism, was carried out within the framework of the project LOCATIONS (Low-*Carbon Transport in Destination Cruise Cities)*, which is part of the cooperation programme for the Mediterranean area INTERREG MED and is co-financed by the European Regional Development Fund (ERDF). The main objective of LOCATIONS is to increase the institutional and operational capacity of port cities to face the challenges on sustainable mobility in a context of growth of cruise tourism, encouraging the use of low-carbon transport systems, multimodal connections and non-motorised modes. As much as possible, the LCTP is articulated with local mobility and energy policies, mainly the Sustainable Urban Mobility Plans (SUMP) and the Sustainable Energy and Climate Action Plans (SECAP).

This document follows the methodology developed during the design phase of the LOCATIONS project, tested and implemented in the initial 7 cities of the consortium: Durres, Lisbon, Malaga, Ravenna, Rijeka, Trieste and Zadar. In addition to the LCTPs, the LOCATIONS project generated the Operational Model, a guide for the development of an LCTP, and the Modular Package[1], which contains best practices for cruise destinations. Both documents serve as the starting point for the replication of the methodology within the LOCATIONS' capitalisation phase.

As a result, Sète, along with 10 other cities in the MED area (Figure **¡Error! No se encuentra el origen de la referencia.** was selected as a beneficiary of the project for the development of the LCTP of Sète. In this process, Sète Agglopôle Méditerranée was involved to support the actions carried out locally. A total of 10 measures, built from an extensive participatory process and a thorough review of the local context, are presented with the aim of improving the experience that cruise passengers have when visiting the city, as well as increasing the perceived benefits of local residents and businesses.

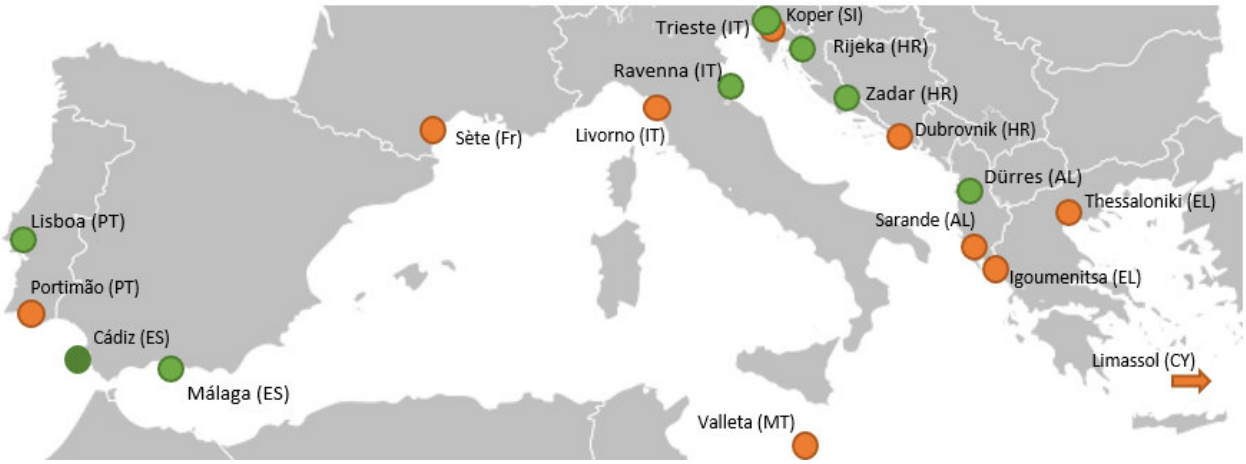

Figure 1. Cities of the LOCATIONS consortium. 1st phase (green) and 2nd phase (orange)

[1]Documents available at: https://locations.interreg-med.eu/what-we-achieve/deliverable-library/

Step 0: Work plan and team

Work team

The work team assembled to design and develop the Low Carbon Transport Plan (LCTP) in Sète within the LOCATIONS project is integrated by members of three different entities:

- Edenway, as the technical partner involved in the design of the plan
- Fundación CIRCE, as partner of the LOCATIONS Consortium, involved in the coordination and supervision of the project
- Sète Agglopôle Méditerranée, as the local entity involved in supervision and acting as the bridge between the technical team and local stakeholders

As a result of the synergies emerged from the conjunction of different profiles, the work team has united technical expertise and capabilities with knowledge about the local context in order to provide Sète with an adequate plan in terms of sustainable mobility and development.

The following table comprises all team members involved in the design and development of the LCTP:

Name	Entity	Project role	Duties and tasks
Sébastien Dalmas	Edenway	Project coordinator	– Project coordination – Participatory processes – Interlocutor with Sète
Javier Fernández	Edenway	Expert consultant	– Context analysis – Vision and objectives – Design of the plan – Participatory processes – Interlocutor with CIRCE
Adrien Boudy	Edenway	Consultant	– Technical support – Context analysis – Participatory processes
Nicole Hérisson	Sète Agglopôle Méditerranée	Local interlocutor	– Participatory processes – Supervision
Felipe Del Busto	Fundación CIRCE	Project supervisor	– Project coordination – Supervision
Ana Allué	Fundación CIRCE	Project supervisor	– Project coordination – Supervision

Table 1. Team members involved in the elaboration of the LCTP

Figure 2. Edenway team members involved in the LCTP design and development

Work plan

The work plan adopted during the elaboration of the LCTP has been structured around two main blocks, consisting in the contextualization and design of the plan. Each block has been associated with one participatory process aimed at acquiring better knowledge about the local context and at prioritising with local stakeholders the actions envisaged in the plan. The development of the plan comprises several deliverables aimed at facilitating the continuous revision and feedback among the key partners involved. As this plan consists in a replication of similar work performed in other cities, the work plan follows the modular approach developed within the LOCATIONS project, aimed at easing the replication process.

The following table describes the different deliverables throughout the timeframe of the project:

Deliverables	Deadline	Description
1st Activity Report	30th November 2018	Working Team, Working Plan and translation of documents
1st Participatory Process	28th February 2019	Individual interviews conducted with representative entities
2nd Activity Report	28th February 2019	Diagnosis and context analysis
3rd Activity Report	31st May 2019	First draft version of the LCTP
2nd Participatory Process	28th June 2019	Second phase of the participatory process
4th Activity Report	31st August 2019	Second draft and first synth versions of the LCTP
5th Activity Report	30th September 2019	Final and synth versions of the LCTP

Table 2. List of deliverables

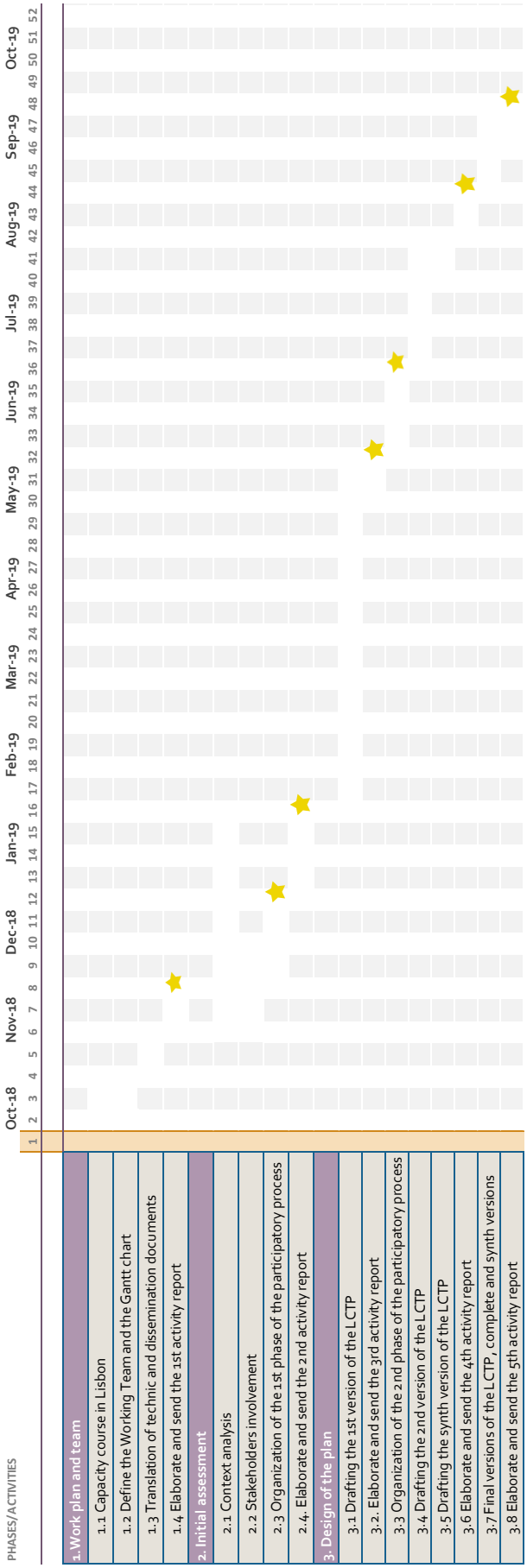

Figure 3. Gantt chart

Step 1: Initial assessment

Context analysis

Located on the French Mediterranean coast, on a juncture of the sea and the Thau lagoon, Sète is a city profoundly marked by the singularity of its site. It has a distinctive and colourful cultural identity, as illustrated by the long-lasting and unique tradition of water jousting, reflecting the very soul of the town. The omnipresence of water, its incomparable light and its picturesque atmosphere make of Sète an unforgettable experience for visitors.

Sète is also known and appreciated for its cultural life. Each year many music festivals, concerts, art exhibitions and culinary events are held in the city. There are also five different museums in Sète, reflecting the natural environment of the region and the cultural background of Southern France.

The population is characterised by a quite old average age (45 years), almost four points higher than the average of France (41.5 years in 2018), and a quite low average household income (1,715 €/month), considerably lower than the average of the country (2,160 €/month in 2015)[i].

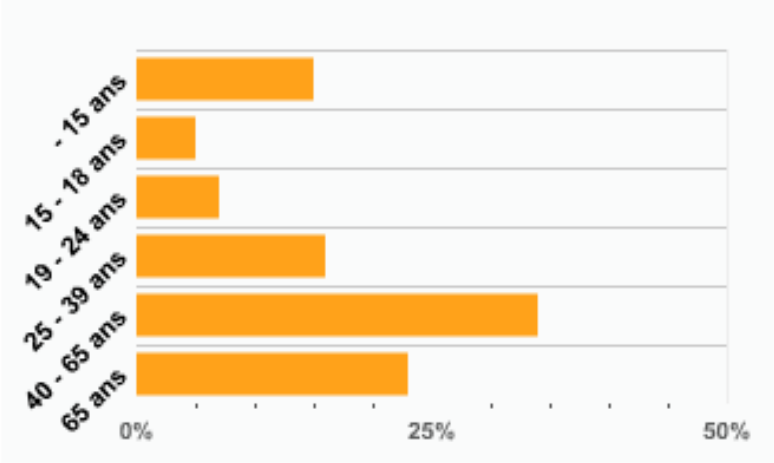

Figure 4. Population pyramid of Sète

Like the region's wines and local products, Sud de France, Languedoc-Roussillon touristic destinations are numerous and unavoidable. Endowed with an exceptionally wide array of natural, historic, cultural and gastronomic assets, Sud de France, Languedoc-Roussillon is the third touristic destination in France by its number of visitors. Five magnificent sites listed as Word Heritage by UNESCO are accessible from the port of Sète, and many one-day or half-day tours are at hand. Sud de France is a land of contrasts where the wild beauty of some sites can only be equalled by the soothing charm of its 220 km of sandy beaches, and its many rivers and canals.

Specificities of tourism in Sète and in its surroundings

Several particularities have been identified concerning tourism and more particularly cruise tourism in Sète. Sète is called “the Hidden Gem” by cruise companies as it is a less famous destination compared to larger ports such as Barcelona or Citavecchia, and the authenticity of the region makes it a unique experience in the Mediterranean Sea. Thanks to its canal network, Sète is also called “the Languedoc Venice”, a powerful brand image which makes the town very attractive for tourists.

Even if Sète is not calibrated for mass tourism, the activities offered in Sète are much diversified, ranging from cultural attractions to the enjoyment of the natural environment. Furthermore, the surrounding municipalities have cultural specificities too. For instance:

- Bouzigues is well known for its shellfish production
- Balaruc-les-Bains is a famous spa treatment destination with thermal springs

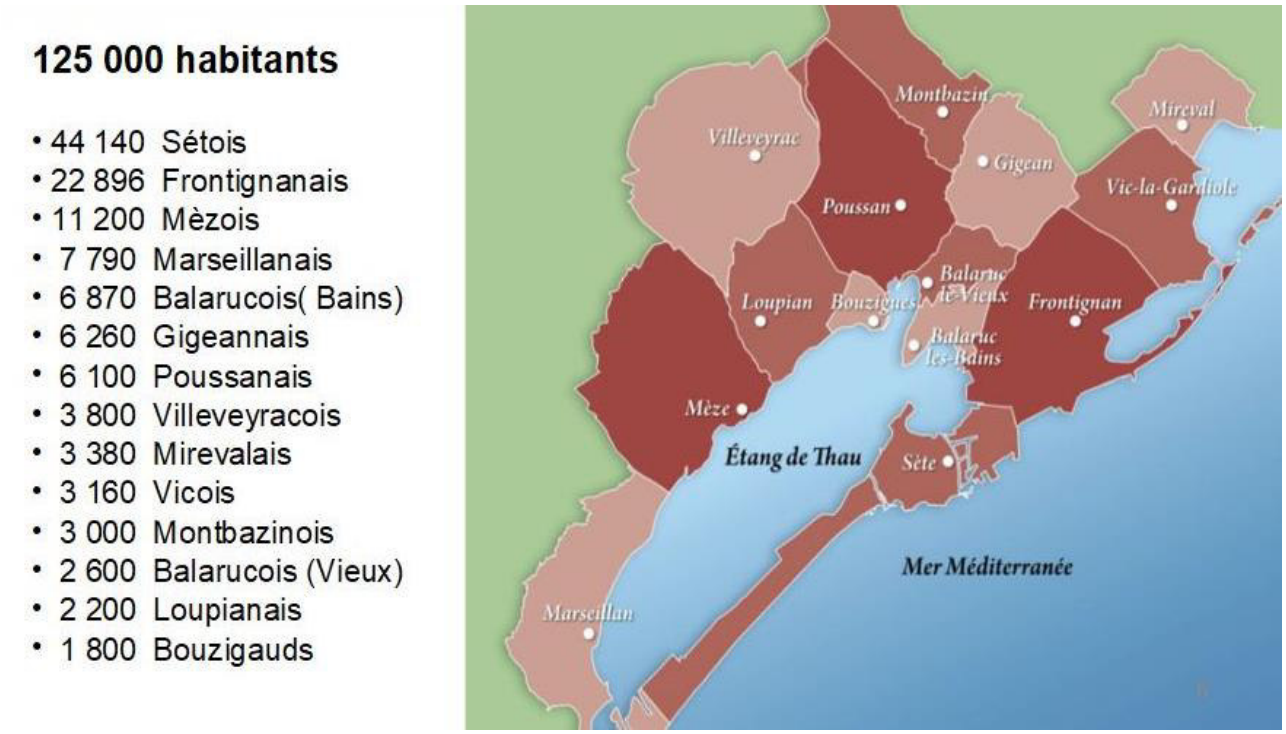

Figure 5. Map of Sète Agglopôle Méditerranée and number of inhabitants per municipality[ii]

Due to all these reasons, proximity tourism is important all year long, and hence the touristic season is very long, ranging from March to October.

But, paradoxically, what makes the Thau lagoon an interesting choice for LOCATIONS project is that this authenticity can be double-edged as the lack of infrastructure to face this touristic potential is significant. For instance, there is not a cycling network to go all around the Thau lagoon by bicycle; there is no by-pass road around Sète, which makes traffic congestion a huge problem in the city; there are not enough taxi services; the path to go to the Mont Saint-Clair, a major vantage point in Sète, is not well indicated, etc. Consequently, many tourists stay in the city centre or go on excursions by bus to the closest UNESCO sites, such as Carcassonne and Pont du Gard, but do not enjoy the touristic potential of the Thau lagoon and its exceptional environment.

In the same way, local population does not think in this touristic logic: there is a counterbalance between tourism activity and the town's daily life. On one hand, many cruises berth on Sundays, a day when most of the shops are closed, so the economic profits from tourism cannot be exploited enough. On the other hand, part of the population thinks that tourism is worsening the quality of life in Sète.

A thoughtful assessment of the city of Sète and the whole Sète Agglopôle Méditerranée region is essential since it will serve as the baseline for the vision and will determine the relevance of the measures and

objectives proposed. The following topics and elements have been considered in the analysis of the regional context:

1	EU, national, regional and local framework of reference
2	Current cruise-related flows features, trends, etc., in the city/port
3	Mid to long term development trends estimation and weight
4	Catalogue of current policies/ public & private related initiatives
5	Weighted list of negative impacts linked to the cruise-related flows
6	Existing network, services and infrastructures in the city/ port

1. EU, national, regional and local framework of reference

The main normative elements affecting sustainable mobility at the European, national, regional and local level have been analysed hereafter in order to ensure the horizontal and vertical integration between different administration levels and the conception of a far-reaching low carbon transport plan.

EU framework[iii]

In the European context, the twentieth century began with the publication of the 2001 White Paper, titled 'European transport policy for 2010: time to decide', which outlined the path towards a sustainable mobility model by setting medium-term goals aimed at breaking the link between economic and traffic growth, and especially confronting their harmful effects on the environment. Emphasis was put on intermodal transport chains as a solution to the increasing demand of transport instead of relying on the continuous construction of transport infrastructure. In parallel, only one year later, the CIVITAS Initiative was launched, serving as a test bed for more than 800 urban transport measures in over 80 cities around Europe.

Five years later, in 2006, the European Commission (EC) published a mid-term appraisal of the White Paper titled 'Keep Europe moving – sustainable mobility for our continent', which brought about new concerns about the rise of energy prices, international action to mitigate climate change and the fast-pace of globalisation. Furthermore, the main challenges ahead for urban cores in terms of sustainable mobility were identified in 2007 within the framework of the Green Paper on Urban Mobility, 'Towards a new culture for urban mobility', being congestion, fossil fuels dependence, increase in freight and passenger flows, accessibility to the urban mobility system, and safety. In this sense, the Action Plan on Urban Mobility adopted in 2009 outlined some guidelines to support municipalities in the implementation of sustainable measures and sustainable urban mobility plans (SUMPs).

In 2011, ten years after its first version, another White Paper was published, titled 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system'; a document which still inspires most of the sustainable mobility-related policy nowadays and which counts with over 40 initiatives aimed at fostering growth, generating employment, reducing dependence on imported oil, and reducing the transport sector's carbon emissions by 60% by 2050.

This measures where reinforced in the 2013 Urban Mobility Package, 'Together towards competitive and resource-efficient urban mobility', which objective was to share best practices and experiences, foster cooperation among different levels of administrations and stakeholders, provide targeted financial support, and focus research and innovation on delivering solutions for urban mobility challenges.

More recently, the European Commission has issued the 2016 European Strategy for Low-Emission Mobility and the 2017 Clean Mobility Package, titled 'Delivering on low-emission mobility: A European Union that protects the planet, empowers its consumers and defends its industry and workers', aimed at accelerating the transitions towards low-carbon mobility. Both strategic documents share the goal of guaranteeing access to all Europeans to benefit from safer traffic, less polluting vehicles and advanced technological solutions, while supporting the competitiveness of the European Union.

Within the context of promoting innovation in the transport sector related to cruise tourism mobility, LOCATIONS project, besides other EU initiatives such as H2020 CIVITAS' projects PORTIS and DESTINATIONS, stands out for drawing on new technologies and solutions with potential to foster a change in mobility habits in order to achieve a more sustainable model.

National Framework (France)[iv]

When analysing the French legal framework regarding urban mobility we can go back to the 1980s, when The Law on interior transport guidance, "Loi d'orientation des transports intérieurs (LOTI)", of 1982, formalized for the first time the concept of Urban Mobility Plan, "Plan de Déplacements Urbains (PDU)". Some years after that, the Law on air and rational use of energy, "Loi sur l'air et l'utilisation rationnelle de l'énergie (LAURE)", of 1996, made compulsory to define a PDU in urban agglomerations of more than 100,000 inhabitants, such as the Sète Agglopôle Mediterranée.

With the beginning of the 21st century, the concept of Urban Mobility Plan was redefined, and some laws incorporated and redefined its principles and scope. First, the Law on solidarity and urban renewal, "Loi solidarité et renouvellement urbain (SRU)" of 2000, which enforced the scope and content of the PDUs, including the principle of control of transport and traffic needs. Secondly, the Decree 2004-489, for the transposition of the European Directive 2001/42/EC, on the assessment of the effects of certain plans and programs on the environment, required PDUs to include an environmental appendix that identifies, describes and values the environmental impact that the plan application might have: air quality, noise, pollution, etc. Lastly, on 2005 the Law for equal rights and opportunities and participation and citizenship of persons with disabilities, "Loi pour l'égalité des droits et des chances et la participation et la citoyenneté des personnes handicapées", required urban transport authorities to include accessibility master plans in the developed PDUs.

More recently, some national laws are also interesting from the point of view of sustainable development, energy and territorial planning. The Law on national commitment to the environment, "Loi portant engagement national pour l'environnement", of 2010, enforced sustainable development objectives focused on promoting the development of charging infrastructure for plug-in electric and hybrid vehicles. On the other hand, the Law of modernization of the territorial public action and affirmation of the metropolises, "Loi de modernisation de l'action publique territoriale et d'affirmation des métropoles (MAPTAM)", of 2014, defined the Region as the leader administrative level in territory planning affairs. Following, the Law on the new territorial organization of the Republic, "Loi portant nouvelle organisation territoriale de la République (NOTRE)", of 2015, defined the spatial planning document of regional scale: the Regional Plan of

Development, Sustainable Development and Equality of the Territories (SRADDET). Finally, the Law on the energetic transition for the green growth, "Loi relative à la transition énergétique pour la croissance verte", of 2015, required all EPCI (*Établissement public de coopération intercommunale*) of more than 20,000 inhabitants, such as the Sète Agglopôle Méditerranée, to develop a Climate Air Territorial Energy Plan (PCAET).

Regional Framework (Occitanie)

Regarding the regional framework, both at region level (Occitanie) and agglomeration level (Sète Agglopôle Mediterranée), several plans set the strategies and objectives of Sète and the agglomeration regarding urban mobility, territorial planning and sustainable development.

SRADDET - Occitanie 2040[v]

The NOTRe law instructs the Regions to prepare a Regional Plan for Territorial Planning, Sustainable Development and Equality (SRADDET), which replaces the SRADDT, created in 1995 and modified in 1999.

Occitanie 2040 is the future regional scheme of spatial planning, development and equality of the region of Occitanie.

From now on, Occitanie 2040 must establish the medium and long-term objectives in terms of territorial balance and equality; the creation of various infrastructures of regional interest; the opening of rural areas; housing and economic management; intermodality and transport development; control and recovery of energy; fight against climate change; air pollution; protection and restoration of biodiversity; prevention and waste management.

In this sense, the Occitan Region is undergoing a participatory process to invite citizens, public entities, private companies, associations, research centres and academic institutions to participate in the elaboration of the Occitanie 2040 plan.

CPER Occitanie

With more than 2.7 billion euros from state and regional budget for the period 2015-2020, plus credits mobilised by other local authorities, the State-Region Plan Contracts (CPER) Occitanie is the main contractual financial tool for regional development, with European funds now managed by the Region, which represent more than 2.8 billion euros in 2014/2020. The CPER Languedoc-Roussillon was signed on July 20, 2015 and the CPER Midi-Pyrénées on June 30, 2015. In January 2017, a memorandum of understanding was adopted for the revision of CPER Occitanie.

Contracted projects focus on seven thematic priorities: multimodal mobility; higher education, research and innovation; the energy and ecological transition; the factory of the future; digital development; employment and vocational training; culture and heritage. The territorial component of CPER accompanies the territorial dynamics of both urban and rural spaces, both mountainous and coastal.

Local Framework

At the agglomeration level

Urban Mobility Plan 2012 – 2022[vi]

Currently, the existing PDU (Plan de Déplacements Urbains) of the agglomeration is the PDU 2012 - 2022 which was developed by Thau Agglo according to the following steps:

1. Diagnosis (2009): in close collaboration with the communes, an in-deep study of the territory was elaborated during 2010, highlighting its strengths and weaknesses.
2. Scenarios (2010): several evolutionary hypotheses were examined by the PDU steering committee and technical committee in connection with thematic workshops bringing together experts, associations and institutions.
3. Project (2011): the PDU was drafted according to the diagnosis, the analysed scenarios and the territorial project. It proposes an action and investment plan for the time scope of 2012 - 2022.
4. Consultation (2011 - 2012): a wide consultation process is conducted to openly share the diagnosis and to enrich the proposals. It is organized in two phases:
    a. In September 2011, public meetings were held in several municipalities to prepare a first vote of the Community Council of Thau agglo in November 2011.
    b. The adopted project is then submitted to the various partners of the agglomeration and debated to the public during a public inquiry (June 2012).
5. Adoption and implementation: at the end of this consultation phase, the PDU action programme is definitively approved by the Community Council and therefore implemented.

The general objective of the PDU is summarised as:

- Increase the number of daily trips made by all modes by 2020: from 312,000 trips as baseline, to 362,000 as objective.

On the other hand, 4 different goals are defined, each one related to a different mode of transport considered:

- Decrease the use of private car in the total amount of daily trips: from 66% to 59%.
- Strengthen the share of public transport trips: from 7% to 11%.
- Doubling the share of bicycle trips: from 3% to 5%.
- Increase the share of pedestrian trips: up to a consolidated 24%.

In order to achieve those objectives, 30 specific actions are defined, which are grouped in 14 broader actions, which are then classified in 3 axes of action:

Axis 1 - Reinforce public transportation	
Action 1.1 - Improve rail connection to the Thau Basin.	Strengthen the rail network (Frontignan, Sète, Vic-Mireval, Marseillan).
Action 1.2 - Consolidate the offer of public transport in and between municipalities.	Improve the offer of inner public transport networks.
	Strengthen and modernize the Sète Agglopôle Méditerranée Transport System

	Offer local shuttles in the city centre.
	Facilitate the reinforcement of the public transport offer on the CCNBT (link with the community offer, SCOT's travel component).
	Improve access to stop points.
	Set up a Training and Traveling Information System for Travelers.
Action 1.3 - Promote intermodality.	An incentive pricing policy in connection with the parking spaces at the entrance of the agglomeration.
	Towards a pole of correspondence on Poussan: an intermodal strategy in competitive spaces.
Action 1.4 - Ensure the urbanism-transport link.	Move from a public transport catch-up policy to an anticipation strategy.
Action 1.5 - Propose innovative solutions for public transport.	Set up maritime lines.
	Develop transport on demand.
Axis 2 - Calm the circulation	
Action 2.1 - Organize accessibility and road access to the territory.	To ensure the great accessibility of the territory while preserving the agglomerated centres.
Action 2.2 - "From the road to the street": towards a development of urban roads.	Requalification of the major axes of Thau Agglo RD2, ex RN2112 in urban boulevard.
	Set up traffic plans (PLD).
Action 2.3 - Engage a comprehensive and consistent parking policy.	Set up relay parking places at the entrance of the agglomeration.
	A parking policy: regulation of parking in the city centre, resident parking card.
Action 2.4- Secure sensitive places.	Secure and constrain circulations around schools.
	Secure the main "black spots of the territory".
Action 2.5 - Organize the transport of goods.	Facilitate the accessibility of the Port of Sète via the RD600.
	Regulate the delivery and set up a "small logistics" type device.
Axis 3 - Pacify the public space	
Action 3.1 - Make Thau agglo a reference territory in terms of soft traffic.	Set up a bicycle path scheme for home-work trips in support of the departmental network and municipal actions.
	Strengthen the bicycle parking offer.
	To propose a (experimental) service of Vélostation.
Action 3.2 - Make public spaces accessible to all.	Develop a global "pedestrian" security (residents and visitors).
	Promote the sharing of roads. Participate in the development of zones 30, zones of meetings...
Action 3.3 - Support the change of mentality: direct responses to users.	Help, accompany travel plans (companies, administrations...)
	Promote the development actions such as "Car à pattes" (walking to school).
	Create a mobility agency.
Action 3.4 - Thau agglo: an exemplary community.	Sustainable mobility within Thau Agglo.

Table 3. Actions of the PDU 2012-2022

The total budget of the PDU is 134€ million, from which 52M€ comes from Thau Agglo and the other 82M€ comes from the different partners. Moreover, the budget share of each axes is defined as follows:

- Axes 1 for the promotion of public transport: 63.5% of total budget.
- Axes 2 for the traffic and parking management: 25% of total budget.
- Axes 3 for the promotion of soft modes of transport: 11.5% of total budget.

Urban Mobility Plan 2020 – 2030[vii]

However, with the new foundation of Sète Agglopôle Méditerranée, a new PDU is under development, which will overlap the previous PDU starting from 2020 and with a time scope of 10 years. In line with previous goals, the new PDU aims to reduce private car usage in favour of public transport and soft transport modes in order to offer harmonious, environment-friendly and innovative mobility conditions to citizens and tourists.

This new PDU is being defined following participatory processes at 3 different levels:

- First, the project started with a meeting celebrated by the end of 2017 with public administration representatives from different levels (state, Occitan region, Hérault department, municipalities...).
- Secondly, a joint consultation process was celebrated during 2018 with 130 local stakeholders (associations, neighbourhood committees, development councils, International Chamber of Commerce) within the framework of 4 thematic workshops:
    - "Public transport and intermodality"
    - "Traffic, parking and road safety"
    - "Active and new mobility modes"
    - "Access and movement in the heart of the agglomeration"
- Finally, a third component refers to citizen consultation. A dedicated website has been launched to allow the public to ask questions and send their opinions and suggestions to the project managers. Besides, 5 public events have been organized during 2018 in different municipalities, in order to motivate the citizen participation in the co-definition of the plan.

The mobility diagnosis conducted for this PDU has concluded the following:

Regarding modes of transport

- 435,000 trips are done in Sète Agglopôle Mediterranée every day.
- This represents 4 daily trips per inhabitant.
- 60% of these trips are made by car.
- 30% of the total number of displacements is made on foot and only the 2% is made by bike.
- Public transport accounts for only the 5% of the total share, while motorbikes are the remaining 3%.
- The main issues related to this mobility are: traffic congestion, bad air quality, insecurity and noise pollution.

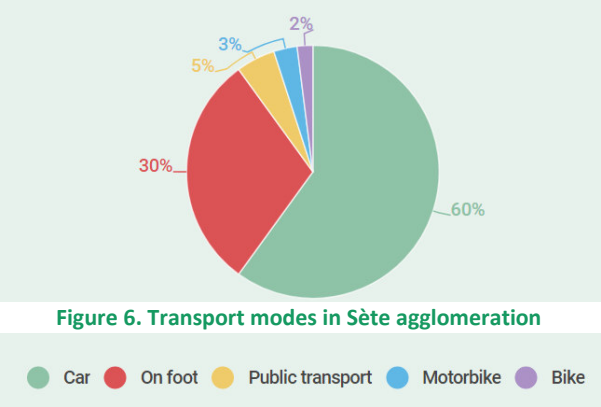

Figure 6. Transport modes in Sète agglomeration

- These negative impacts are even worse during the summer season, when the population of some areas doubles or even triples.
- Besides, 30% of the car trips are shorter than 2 kilometres long.

Regarding mobility habits

- More than one third of everyday trips are made for job reasons.
- Cars occupation rate is of only 1.3 passengers on average.
- On average, trips are 7.5 kilometres long and take between 50 and 65 minutes.
- The heart of the agglomeration, Sète-Frontignan-les 2 Balaruc, concentrates most of the tourists' places, offices buildings and commercial areas, generating the highest number of displacements.
- 184,500 trips are made every day in or to the Sète city centre.
- Traffic congestion has been identified as a really serious issue in Sète, especially in the city centre, in the peak hours with more activity, and during the summer season.
- This situation of congestion has a clear negative impact on the life quality of locals and tourists.
- 70,000 displacements cross the limits of the agglomeration, from which the majority are towards the neighbouring metropolis.

Weaknesses and strenghts

Summarising, some weak and strong points have been identified during the diagnosis of the territory.

The weak points of the territory are:

- Public transport stuck in traffic jams and lack of implementation of bus lanes ("Transports collectifs en site propre").
- Overlapping of traffic lanes.
- Town-centre asphyxiated.
- Restricted number of entries in the town (3).
- Blocking access to employment and development centres (East entry).
- Road Network to consolidate (RD600 / Law School link to East entry).
- Constraining configuration of the town (canals, narrow streets, mountain right in the city centre).
- Road risk for all users.
- Environmental threats.
- Maintaining a diffuse urbanisation.
- Discontinuous cycle network.
- Too-easy parking on large employment centres.
- Absence of Park and Ride and Carpooling Parks.
- Insecurity feeling while cycling or walking in the town centre.

On the other hand, the territory has showed the following strengths:

- Dynamics of progress in public transit (SAM network skyrocketing and expanding).
- Securing major highways.
- Smart City on Sète.
- Mind shift towards walking in the urban centres.
- Bus lanes and maritime transport projects.

- Multimodal transport projects.
- Cycle infrastructure projects.
- Strong citizen implication (associations, movements) for the promotion of green mobility.
- Political awareness about the interest of redefining mobility in Sète.

Sète is also participating in the national program “Actions Coeur de villes”, which aims at helping several cities to redesign their city centres in order to improve the quality of life of the citizens. In Sète, the goal is to strengthen the “pedestrianisation” of the city, especially in the city centre and near the berths.

Having done the diagnosis of the territory and the analysis of its mobility issues and needs, the PDU will define, with a collaborative approach, the strategy, objectives and action plan that will allow solving those issues and moving towards an environmentally and socially friendly mobility.

By now, the 11 general objectives that are currently defined for the PDU are:

1. A sustainable balance between mobility and environmental protection.
2. Strengthening social and urban cohesion.
3. Improving the safety of all trips.
4. Decreasing car traffic.
5. Developing public transport, cycling and walking.
6. Improving the use of the main urban road network.
7. Better organisation of parking.
8. Improving the organisation of the agglomeration supply conditions.
9. Improving the commuting of employees from private and public entities.
10. Organisation of integrated pricing and ticketing in public transport.
11. Development of charging infrastructure for electric or hybrid vehicles.

Those objectives have been concretized in the last version of the PDU in 4 main objectives with a series of actions for each of these objectives. Each action is detailed with its estimated costs, a series of measures and a map showing its concretization:

Objective 1: A relaxed mobility for short and medium distances

- Action 1: Realizing communal pedestrian strategies - the “slow città” (a solidary and shared city)
- Action 2: Creating cycle lanes continuity for safe daily trips
- Action 3: Facilitating the use of bike by incentive measures

Objective 2: Public transports more effective and attractive

- Action 4: Consolidating the SAM network (name of the public transport network) performances: make a commitment to a high frequency of servicing
- Action 5: Improving the level and the offer of the SAM network
- Action 6: Implementing a maritime shuttle network
- Action 7: Meshing the territory with park-and-ride services
- Action 8: Facilitating the access to the territory by road and train networks

Objective 3: A better share of public space in the city centre of municipalities

- Action 9: Meshing the territory to offload urban cores and guaranteeing the accessibility to the city centre
- Action 10: Redistributing and regulating the parking services offer depending on the different use cases

Objective 4: New practices for more harmonious transport

- Action 11: Propelling the touristic eco-mobility to promote the territory
- Action 12: Deploying connected mobility plans
- Action 13: Sustaining a car sharing and a carpooling plan
- Action 14: Encouraging a greener mobility: vehicles with less greenhouse gases and air pollutant emissions
- Action 15: Managing the freight and the sustainable delivery serving the development of the territory

Territorial Climate-Air-Energy Plan (PCAET)[viii]

Currently being developed by Sète Agglopole Mediterranée, it will replace the old Climate Territorial Energy Plan (PCET) adopted in 2012 by former Thau Agglo.

It will cover a broader area of action and will be established on the perimeter of the 14 municipalities of the new agglomeration. It will include:

- The reduction of greenhouse effect gases emissions (GHG).
- Energy sobriety: efficiency and control of energy demand.
- Air quality: identifying the major sources of atmospheric pollution in order to prevent and reduce them.
- Promotion and development of renewable energy sources.
- Adaptation to climate change: reducing vulnerabilities in the territory and adapting it to the climate evolution.

Territorial Coherence Scheme (SCoT)[ix]

The Territorial Coherence Scheme of Thau is an urban planning document that ensures the coherence of development in all the aspects of the daily life of the inhabitants of the region: housing, living, environment, displacements, economy, agriculture...

It has the objective of designing the development model of the territory for the next 20 years, and it has the following main ambitions:

- To control urbanization: to frame the reception of population and to build primarily in urban areas.
- To make the choice of a responsible development: to develop while preserving the natural and agricultural resources of the territory, essential for its activities; in particular, fishing and shellfish farming.
- Structure development around 3 major poles, promote living-employment proximity and limit travel distances.
- Promote the use of alternative modes of transport to the private car: public transport, gentle paths.

At Sète level[x]

At the municipal level, the Local Urban Plan (PLU) was defined taking into account the main orientations defined in the project of planning and sustainable development (PADD):

- To affirm the position of Sète in the heart of the agglomeration by offering a quality living environment.
- To affirm the identity of the city of Sète by deploying and organizing its economic potential.
- To organize trips to limit nuisances and highlight the city of Sète.
- To preserve and enhance Sète's identities, better considering natural risks and nuisances.

Regarding mobility, the PLU takes into account the Urban Mobility Plan (PDU) and has implemented a number of innovations. For instance, in order to support the creation of a public transport corridor from the station to the West entrance, the PLU plans to widen the Boulevard de Verdun / Camille-Blanc and increase the density of buildings around it.

Sites have also been reserved for the widening of the tracks (limited to the passage of emergency vehicles concerning the Mont Saint-Clair) and for the creation of parking spaces, pedestrian and bicycle lanes, and crossroads.

2. Current cruise-related flows features, trends, etc., in the city/port

The commercial port, which allowed the transit of 4 million tons of goods in 2017 (bulk, liquid, container and rolling freight), also covers the dock with passenger ferries and cruise ships, which represented a total of 180,000 passengers in 2014.

Regarding cruise tourism, statistics from the Port of Sète report of 2015[xi], in combination with figures provided by the port authority during the interviews, show that Sète cruise port is among the top 5 fastest-growing Mediterranean cruise ports during the last 5 years.

The total number of cruise passengers has experienced an incredible growth (Figure 7) in the last years, reaching 110,000 passengers in 2018, which implies a growth of 358% in respect to the two previous years, which is the 4th highest increase in all Mediterranean cruise ports, and a growth of 1,196% in relation to 2014. This exponential growth between 2014 and 2018 has occurred in parallel to the construction of new berths (Môle Masselin) which has allowed the port of Sète to host >200m-long cruise ships.

The number of cruise calls has increased considerably too (Figure 7), reaching 70 calls during 2018, which represents a growth of 59% in relation to the previous year. However, it is noticeable that the number of calls increases slower than the number of passengers, something which is due to a diversification of the markets targeted. Before the construction of the new berths, Sète was hosting high-class market boats, which are smaller than the usual boats and hence accommodate less passengers. But now Sète tends to diversify the type of cruise which docks at the port. There were 700 passengers per call in 2015, while there will be 1,600 passengers per call in 2019. This trend will even grow more intensely when the port will be able to host >300m ships.

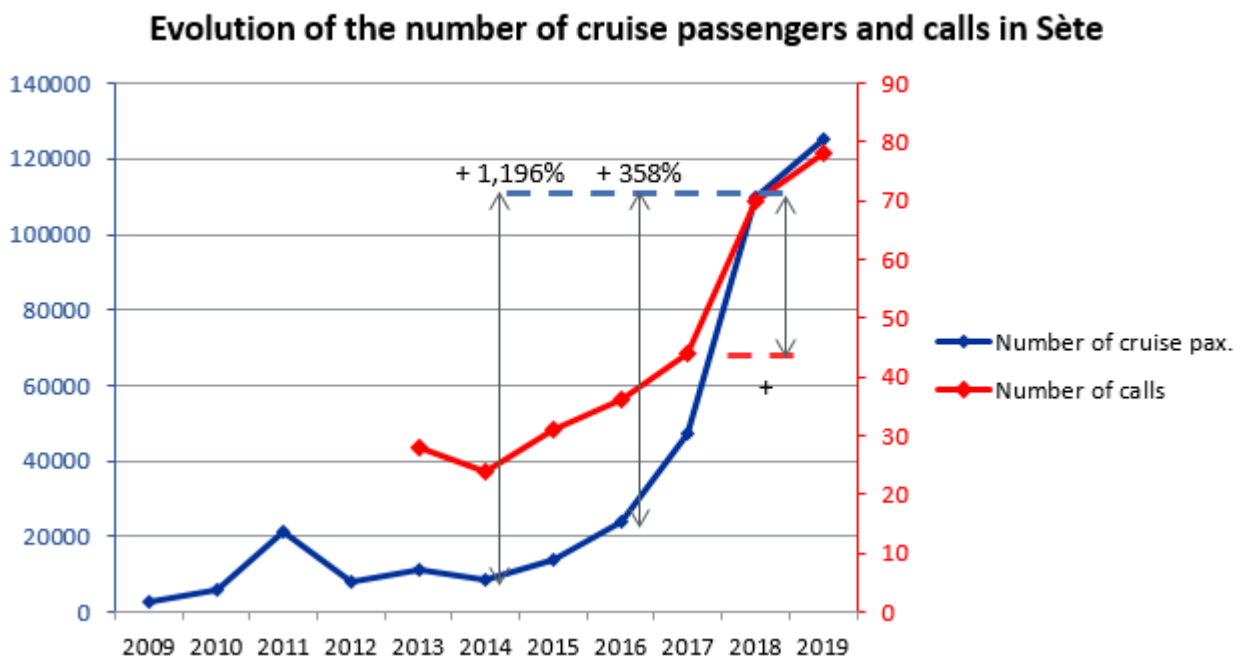

Figure 7. Evolution of cruise passengers in Sète[xii]

Furthermore, statistics show that Sète cruise port is almost entirely a port of call, since only 63 passengers started or ended their journey in Sète in 2017. Transit passengers have always represented the biggest share of total cruise passengers, although in 2014 home in and out passengers reached their maximum, accounting for 28% of all passengers that year.

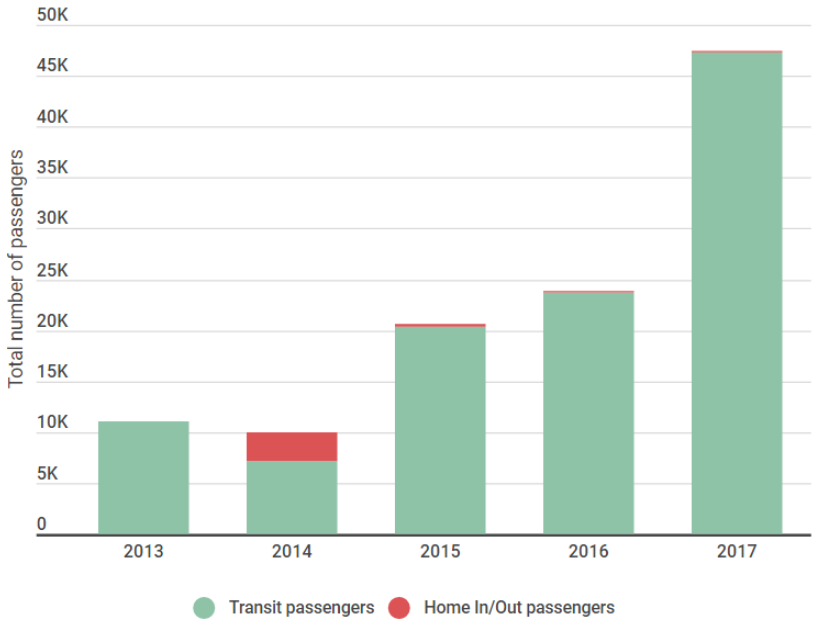

Figure 8. Evolution of transit and home in/out cruise passengers in Sète

Therefore, Sète cruise port is not considered as a home port anymore, as there is a very tiny part of passengers who are disembarking or embarking in Sète as the initial or ending point of their journeys. Nevertheless, Sète aims to accommodate the interporting business model in the next few years, meaning that, for each cruise, some passengers (but not the totality) will disembark and some others will embark,

using it in a home port manner. This is justified by the aim of offering cruise trips adaptable to the needs of each passenger, without, for instance, making them embark in Barcelona if they live near Sète.

The economic impact of cruise activity is not very significant for the port: 700,000 € in 2018. However, it benefits considerably the image and notoriety of the town and the region.

Cruise passenger profile and activities

The touristic season is characterised by a quite constant influx of cruise passengers from its beginning in March to its end in October. The reason behind this is that the main cruise company, which is a Spanish subsidiary of the Royal Caribbean Company, offers cruise trips which dock at Sète port every Sunday during the season. Therefore, it represents 35 cruises per year, which is half of the total number of annual cruises in Sète. The summer season peak of cruise passengers is not as important as the one of conventional tourism, since during this season cruises in the North and Baltic Sea are very popular.

As it has been explained in the previous section, the diversification of the cruise market in Sète has led to a different profile of cruise passengers. The population of cruise passengers in Sète used to be quite old, with an average age of 50 years old, and affluent. With the construction of the two new berths, now there are more and more young cruise passengers in the city, which sometimes arrive in thematic cruises, such as cycling or wine tours. However, this new type of passengers does not impact the high-class cruises which still remain one of the targeted tourism groups of Sète.

Comparatively, the average conventional tourists in Sète are quite old and travel with their couples: 43% of them are more than 55 years old and there is 2.8 people per group in average. They spend in average 1,100€ per group during their stay, being this stay of 9.8 nights spent in Sète. Their favourite activity is going to the beach (6.1 times in average), while an 80% of them visit other municipalities around the Thau lagoon.

Those cruise passengers come from all over Europe, especially from France, Spain (since the main cruise company in Sète is Spanish), Germany and the United Kingdom. United States is among the top countries of origin too. It is remarkable that the origin of cruise passengers is much more diversified than for classical tourism, which relies mainly on proximity tourism; that is people from the department of Hérault and Paris mainly, with only 14% of foreign people, mainly English, Swiss and Belgians.

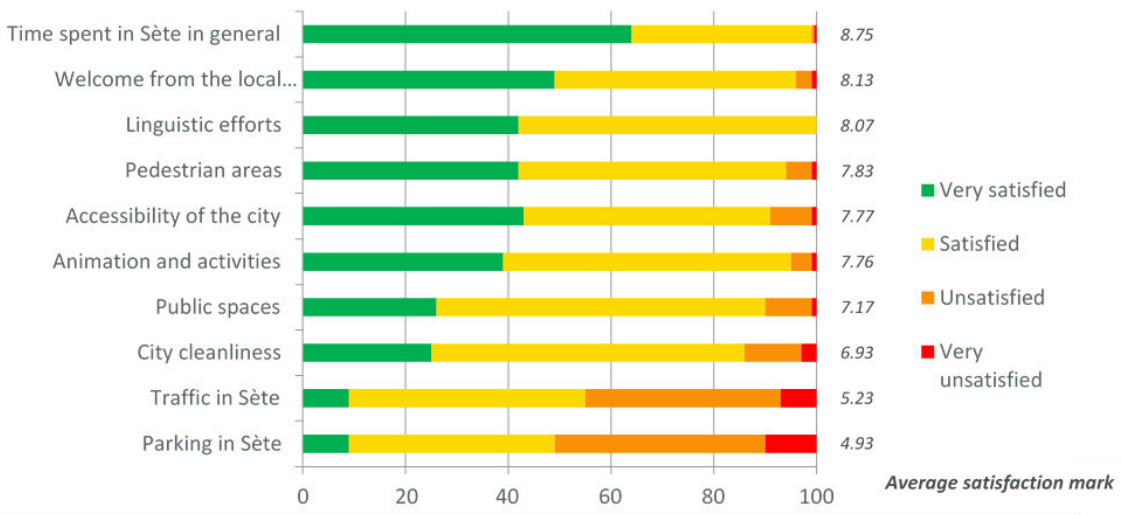

Figure 9. Satisfaction survey based on tourist experience in Sète (2017)[xiii]

The figure above shows a satisfaction survey made by a consulting firm specialised in tourism in partnership with the Tourism Office of Sète about the opinion of tourists about the main issues linked with tourism and mobility in Sète.

As we can see, most of the tourists enjoy their time in Sète, which is considered a welcoming city, being among their main positive aspects the welcome and the linguistic efforts from local people. However, tourists seem to be much less satisfied about traffic and parking in Sète, which are perceived as the principal negative aspects in the city. Currently, during the touristic season, some tourists are leaving Sète as soon as they arrive because of traffic congestion.

Once their boat has arrived in Sète, three categories of cruise passengers can be distinguished:

- One third of cruise tourists stay on the boat and they neither spend any money nor enjoy any activity in Sète. Therefore, they do not experience mobility issues in Sète and do not have any impact on traffic.
- One third of cruise tourists take buses to go on excursion to the well-known touristic sites which are close to the city, being Carcassonne and Pont du Gard the principal destinations. Like those who stay on the boat, they do not experience mobility issues and do not have an impact on traffic because the port is located near to large motorways which connect Sète to these touristic sites. Thus, the buses go directly out of the city without interfering with the city's mobility problems.
- One third of cruise tourists enjoy touristic activities in Sète. Among this category of tourists, there is only a few people who spend money in the city. The main reason is that clients of premium cruises can afford to go on excursions, while clients of classic cruises prefer to spend their money in more touristic cities like Barcelona or Rome.

When cruise passengers go to the city centre of Sète to enjoy the tourist experience, they mainly travel on foot because of traffic congestion issues but mainly due to the proximity of the city centre from the port. The size of the city makes it walkable; tourists can walk easily throughout the city during their one-day visit. Two exceptions can be noticed though:

- Some of the tourists who want to go Mont Saint-Clair's point of view take the bus, due to the difficulty of finding the path to go on foot and to the high slope to reach the top.
- Some tourists want to spend their time cycling around the Thau lagoon.

The Mont Saint-Clair and Les Halles market are the most visited touristic sites in the city. Museums and other cultural and touristic sites are not so well known by cruise passengers, who only spend one day in Sète generally. Conventional tourists who spend more days in Sète are the main visitors of museums and enjoy other type of activities around the city.

3. Mid- to long-term development trends estimation and weight

Mid- and long-term trend projections of cruise-related flows in the port of Sète have been drafted hereafter, based on:

- Statistical resources from the port documentation, annual reports and strategies.

- Consultation to experts, the port authority and local stakeholders during the first participatory process.

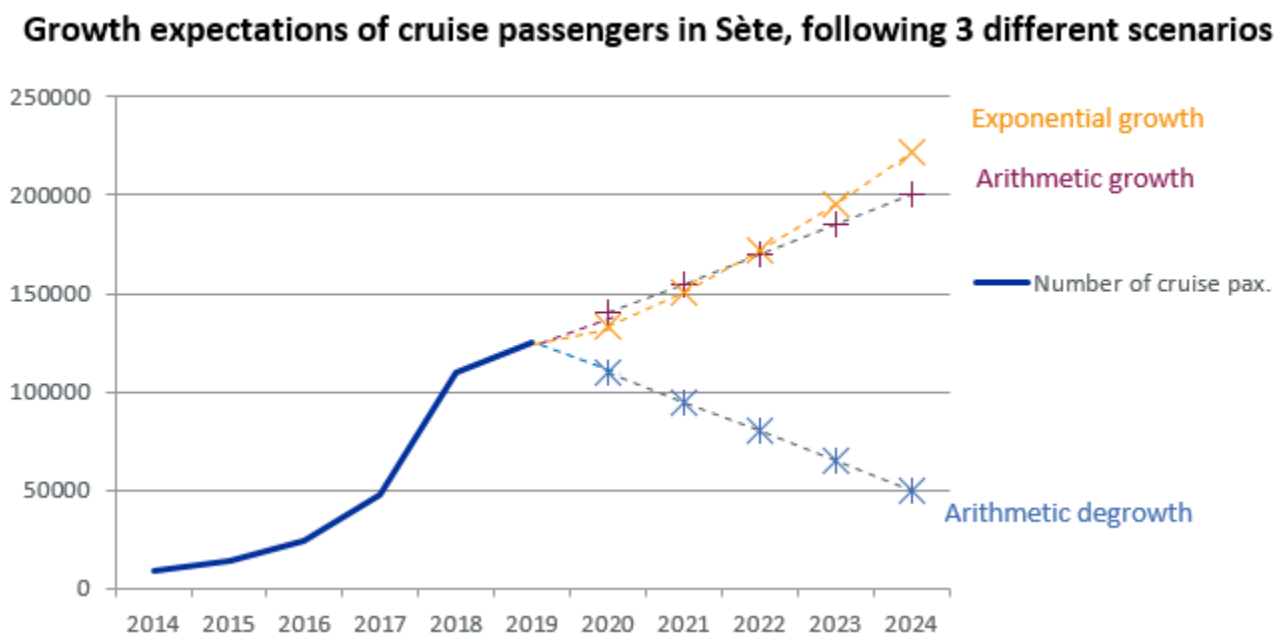

Figure 10. Annual cruise passengers and future trends

With those quantitative and qualitative information sources, three different scenarios are foreseen, which vary mainly in terms of the degree of implementation of sustainable actions and strategies aimed to foster the port growth while minimising its negative environmental and social externalities:

- **Scenario zero (Do-nothing)**: no LCTP actions or similar plans and strategies are implemented in the port or the city, leading to a scenario where traffic congestion, and hence noise and pollution associated to it, have peaked. In consequence, the number of cruise passengers coming to Sète has stopped its growth, or even started to drop. Currently, during the touristic season, some tourists are leaving Sète as soon as they arrive because of congestion, so a decrease of cruise passengers staying in the city would be totally plausible if no actions are taken.
- **Business-as-usual scenario (Medium implementation)**: Sète development is driven by current and future strategies (PDE, PCAET, Occitanie 40), which improve the overall performance of the city. Only the LCTP initiatives aligned with the region and city plans are carried on, so the full potential of the LCTP is limited. Minor positive changes are brought in by the project given the partial application of specific measures for cruise passengers. The number of cruise passengers follows a steady and linear increase.
- **LCTP scenario (Optimal implementation)**: Alongside other local and regional strategies, significant changes are brought by the LCTP full implementation, boosting a behavioural change towards a low-carbon economy, including all the business and activities related to cruise tourism, and multiplying its effects along the city. The growth of cruise passengers continues the incredible figures of the last years, while environmental and social externalities are minimised.

However, the port authority has fixed its goal, in terms of figures of cruise passengers, of reaching 200,000 passengers, arguing that they want cruise tourism to be controlled and reasonable, so the number of cruise tourists can be aligned with the town capacity. After one of these scenarios reaches 200,000 passengers, we

can then imagine that there will be a stagnation of the number of passengers, following the wishes of public authorities.

These scenarios will serve as a reference for assessing the impact of the LCTP initiatives at the local level for energy, transport and environmental issues. However, the main difficulty to establish those different models was the lack of data. The exponential growth between 2016 and 2018 cannot be used for mathematical models because it results from the construction of two new berths and it is, therefore, not the consequence of the natural curse of cruise passenger growth that there will be once the berths are now already built. In consequence, only 2018 and 2019 data has been used for these projections, so they should be relativised. The only information coming from the port of Sète for future trends about cruise passengers is the figure of 200,000 cruise tourists they aim to reach within the next 10 years.

4. Existing network, services and infrastructures in the city/port

The geographical location of the port of Sète and its multimodality facilities are major assets: Sète is quickly connected to the motorway network, which connects Southern France with Spain, Italy and northern Europe; but also to the railway network, with 40 kilometres of intra-port network, as well as a direct link with the canal du Rhône. With easy motorway and high-speed rail access (TGV connects Montpellier and Paris in 3h 15min), and Montpellier-Méditerranée International Airport in the nearby area (about 30 min drive), Sète is an ideal port of call.

General configuration of the town and major transport axis

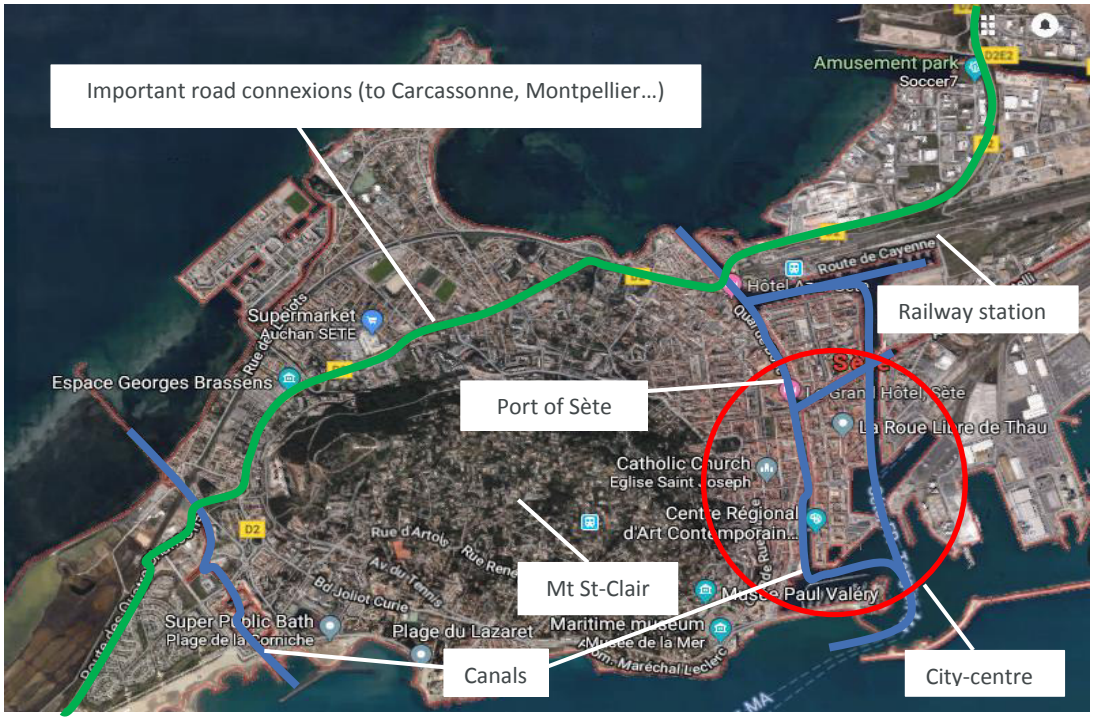

Figure 11. General configuration and organisation of the territory

Regarding the configuration of the town and the location of the port within the city, the territory has several particularities:

- The water canal network connects directly the port of Sète to both the Thau lagoon and the Mediterranean Sea passing through the city centre. There are some maritime shuttles which transport passengers during special events such as summer festivals and markets.
- The canals and the Mont Saint-Clair, a hill in the middle of the town, are constraining mobility.
- The port is located at a strategic place, near the motorway going to Carcassonne, Montpellier and other touristic sites. This motorway network links Sète to the main French cities and neighbouring European countries.
- The railway station is being transformed as an intermodal hub which will gather several transport modes. It provides the connection of Sète to Montpellier and Paris in less than 4 hours.

Cycling network features

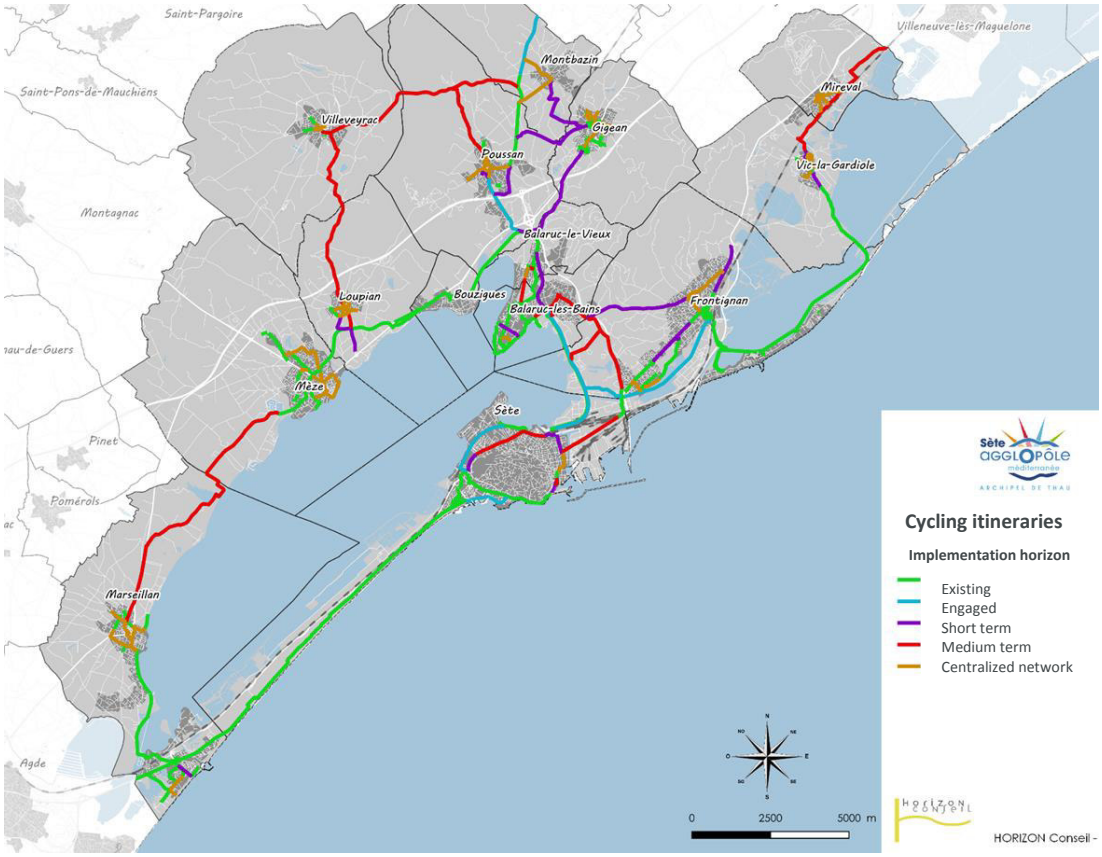

Figure 12. Current and planned Sète agglomeration cycling network

- The cycling network in Sète is discontinuous and sometimes there are no road markings, and the quality of pavements is low.
- There are no restricted areas for cars.
- There are no bicycle shops in Sète.
- There is a very strong insecurity feeling while cycling in the city centre.
- The intermodality options for bicycle users are weak: it is not possible to take a bus or a maritime shuttle with a bike, but it is allowed in trains.
- There are some good cycling infrastructures near Sète, such as the Lido green lane, which connects Sète with Marseillan-Plage.

- There is strong developing potential: Sète is at the crossroads of Eurovelo lanes, so a lot of things can be seen travelling by bicycle in a one-day trip, something which could be interesting for cruise passengers.
- There are some projects which are already planned and being implemented: in the near future it will be possible to cross Sète by bicycle from east to west (2021) and to ride all around the Thau lagoon.

The possiblity of implementing a bicycle sharing scheme has been considered; however, it has been discarded for the moment due to being too expensive, as each bicycle costs between 2,000 and 2,500 € per year.

On the other hand, nature tourism could be further developed throughout the whole agglomeration, especially with cycling tours going all around the Thau lagoon; a type of cycling tours which are not being offered yet.

All in all, there is room for improvement regarding the cycling network in Sète agglomeration; however, one can hardly expect this improvement to have a huge impact in traffic and mobility in the town as long as the car remains ultra-dominant. Besides, another difficulty to promote the use of bicycles in Sète are the steep roads in some areas, but this obstacle could be solved by using electric bicycles.

Public transport services within the city

Figure 13. Sète bus municipal lines (not including connections to neighbouring municipalities)[xiv]

There is not any other regular public transport mode beyond the seven bus lines connecting the different neighbourhoods of the city. The cruise terminal of the port of Sète is well connected to the bus network thanks to its ideal location, at the heart core of the city.

Here are the main negative aspects identified when analysing the bus network:

- Traffic is complicated because of the limited number of bridges allowing to cross over the canals. In consequence, during peak hours buses get stuck in traffic jam and hence their timetables are often not respected.

- Buses large size slow down car traffic in some narrow streets in the city centre due to their difficulties to manoeuvre.
- Bus routes do not connect all parts of the city: only one bus goes to the Mont Saint-Clair, which is the major touristic site in the city along with the Halles market in the city centre.
- Buses are criticised due to not being frequent and punctual enough. This is also a reason to explain that cruise passengers and tourists do not take buses when arriving in Sète, especially when they want to go to the Mount St-Clair.
- As buses are large and use fuel, their emissions worsen pollution issues in the city.

Public transports between the city and neighbouring municipalities

Figure 14. Bus lines connecting Sète with neighbouring municipalities[xii]

Bus services connecting Sète to neighbouring municipalities, such as Frontignan or Balaruc, suffer from the same problems mentioned previously for municipal bus lines. Some remarks can be made to assess the network in Sète agglomeration:

- It is configured as a star-network: every bus line joins Sète, and there are no connections between the municipalities which are not located in the same side of the pond.
- Some territories at the west coast of the lagoon are totally excluded from the network.
- Once outside the city of Spete, the traffic is good throughout the agglomeration.

In order to use the public transport service, one must pay a fee except for one line which is free of charge. However, the whole public transport network is free for senior people too. Public transport fees are approximately a 30% more expensive than in other towns of similar size.

Other services (or absence of services) in Sète

- A car sharing application, RezoPouce, is being implemented in the agglomeration. Every user is identified so the accent is put on security.
- There are not boat shuttles in the Thau lagoon. There used to be one which connected every municipality around the lagoon but it does not exist anymore.
- There is no regular and permanent maritime shuttle in Sète's canals.
- One car park can be used in the outskirts of the town to enter to the city centre without using the car.
- Three underground car parks are being built in Sète and some people fear that they will worsen the traffic.
- Eight electric charging points for electric vehicles have been implemented.
- Sète Agglomeration subsidises the purchase of electric bicycles.

Local perception of the current situation and policies

The population seems very divided about general mobility topics. Some locals think the car remains too important in Sète and that public institutions should take actions to strenghten green and soft transport modes while impeding the use of cars in the city. This part of the population is very mobilised against pollution issues (big cruise boats are perceived as very pollutant too), and they think that public institutions are too inoperant concerning anti-car policies.

On the other hand, another part of the population is very attached to their private cars and they believe that the public transport service and the walking and cycling environments should not be further developed. In their opinion, public institutions are too restrictive concerning anti-car policies.

Communication between citizen associations and public institutions is also described as very weak and should be reinforced. However, the Development Council is a participative democracy instance which contributes to give the local population the opportunity to speak out and suggest ideas and projects concerning mobility issues. The Development Council has organised a sustainable mobility week and an eco-mobility festival, where green vehicles could be tested by the population. Besides, it has arranged some business meetings and exchange of experiences too. The overall aim is also to find inspiration from other cities in this matter.

This raises a question about whether there should be a wake-up call concerning green mobility and about the need of decreasing private car usage in Sète. Is it the role of public institutions to convince the population to change their habits? Or, on the contrary, should local people become aware first of the importance of taking action in this regard? In any case, this divergence of perspectives from the population will complicate the implementation of all mobility-related projects.

Situation and description of the port of Sète

Thanks to its unique geographical position, between the sea and the lagoon, the port of Sète includes a commercial port, a fishing port and a marina.

The port of Sète is at a-night-sail away from some major ports. Ships are berthed in its port in ideal and secure conditions. The cruise terminal is ISPS certified and situated at a five- or ten-minute walk from the main water canal, the town centre, the Les Halles covered market and some other places of interest. Sète is called "l'île singulière" (the unique island), since it is a genuine, colourful Mediterranean town with a very original atmosphere coming from its canals, its fishing port and its blend of French, Italian and Spanish cultures.

Figure 15. Aerial view of the port of Sète

Figure 16. Distances to some major ports

The port is strategically located at a short distance from the iconic city of Barcelona (154 nautical miles) and the fast-growing city of Marseille (80 nautical miles). The access to the port, well sheltered from prevailing winds, is safe and reliable. As it can be seen in the figure below, the completely fenced-in and ISPS certified port offers today three berths for cruise ships near the heart of Sète.

Figure 17. Cruise terminals of the port of Sète[xv]

1. “Quai d’Alger”: this cruise-dedicated berth accommodates ships with a maximum length of 200 metres and a draft of 7.40 metres. Guests are received in a bright and attractive cruise terminal, at a mere 5- or 10-minute walk from the city centre, which counts with a Wi-Fi hot spot, a tourist information office, a shop and a currency exchange point. The adjacent parking space accommodates up to 12 tour buses and a taxi stand.
2. "Masselin" berths: this cruise-dedicated berth is inside the port and counts with easy access to the motorway. It accommodates vessels up to 225 metres LOA (>240 metres on request) and a draft of 10 meters. A bus shuttle service to town is provided, courtesy of the Sète Cruise Club.
3. "H" berth: although not being a cruise-dedicated berth, it could accommodate, if there is space available, ships up to 350 metres LOA and a draft of 14 metres.

5. Catalogue of current policies/ public & private related initiatives

Some of the initiatives currently aimed at improving the tourism mobility are detailed in the PDU 2020-2030[v], which is for now the main and only strategic plan to be developed by the agglomeration. Only one of the actions envisaged and its inherent measures concerns directly the mobility of tourists:

- Action 11: Propelling the eco-mobility to promote the territory
    - Measure 37: Elaborating a touristic mobility plan with a package of intermodal services

- Measure 38: Implementing selective circulation plans to limit pedestrian-cycling and cars conflicts during summer

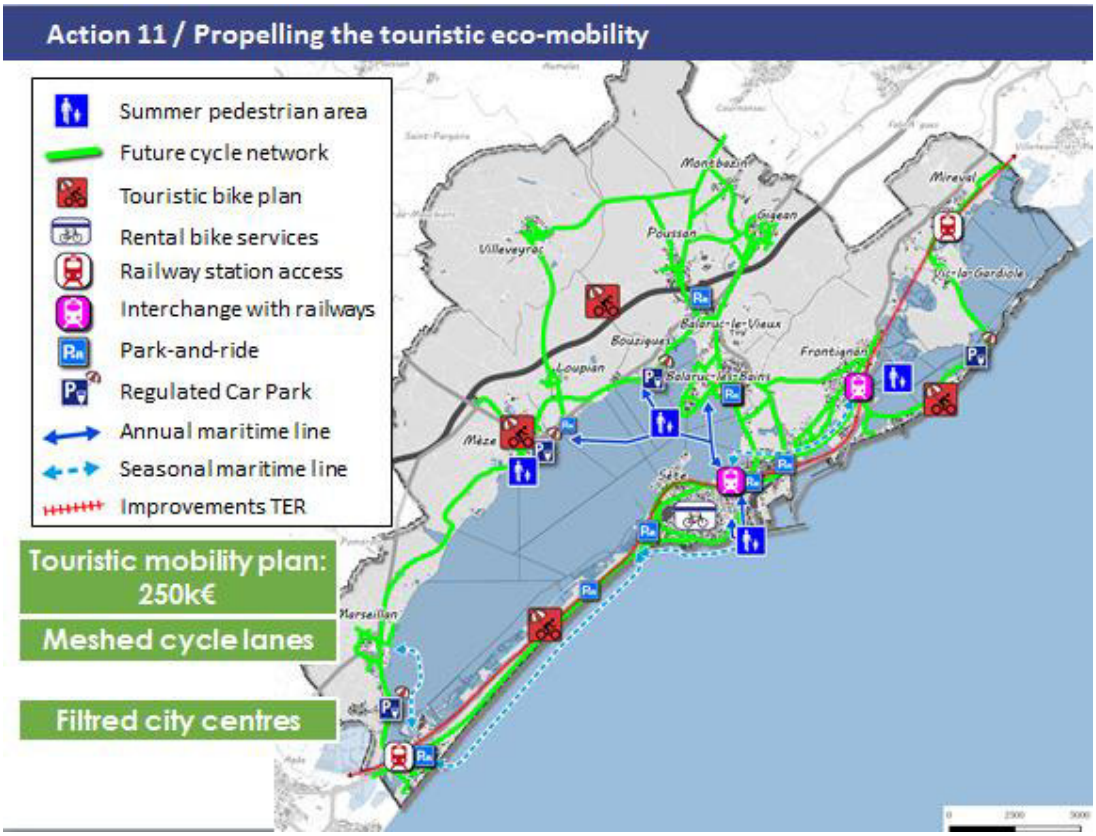

Figure 18. Plans for propelling touristic eco-mobility

Some other actions and measures of the PDU do not concern directly the mobility of tourists but could have a more or less important impact on it; particularly, the actions linked with cycling and pedestrian mobility because these are the main transport modes used by cruise passengers in Sète.

- Action 1: Conducting common pedestrian strategies: the “slow città”
  - Measure 1: Consolidating walking with pedestrian desire paths
  - Measure 2: Supporting a city centre pacification policy
  - Measure 3: Encouraging using soft transport modes for short distances
- Action 2: Creating cycle lanes continuity for safe daily trips
  - Measure 7: Defining a cycle parking policy
  - Measure 9: Making the use of bicycles safer in town
- Action 3: Facilitating the use of bicycle through incentive measures
  - Measure 10: Raise awareness about the use of bicycles
  - Measure 11: Facilitating the spread of a sustainable mobility package
  - Measure 12: Thinking about the possibility of a bicycle sharing scheme
  - Measure 13: Implementing a promotion plan for electric bicycles
  - Measure 14: Developing bicycle connections in the territory
- Action 6: Implementing a maritime shuttle network
  - Measure 22: Reinforce the current service
  - Measure 23: Experimenting maritime lines throughout the Thau lagoon
- Action 7: Implementing park-and-ride services throughout the territory

  - Measure 25: Defining a service of park-and-ride stations
- Action 13: Supporting a car-sharing and a car-pooling plan
  - Measure 41: Supporting the car-pooling
  - Measure 42: Promoting car-sharing
  - Measure 43: Following and dynamising RezoPouce
- Action 14: Encouraging a greener mobility: vehicles with less greenhouse gas and other air pollutant emissions

Even if those initiatives are not directly aimed at improving cruise passengers' mobility, the impact would be significant in the future growth of cruise tourism in Sète.

Sète Agglopôle Méditerranée also wrote an annual report in 2018[xvi] about the internal and territorial situation concerning sustainable development. Some of the actions mentioned in this report concern the mobility context in the territory and the report details new propositions to develop sustainable mobility, which could have an impact in tourism-related mobility too. The most interesting actions in this sense are:

- The creation of an "eco-mobility" festival: a festival dedicated to families and citizens of different municipalities around the Thau lagoon aimed at encouraging the use of alternative transport modes while helping people to change their habits.
- The launching of RezoPouce, a car-sharing platform: after registration on the Internet or in the city halls of the municipalities involved, passengers and drivers can meet in one of the existing 85 stops in the territory.
- The implementation of two 100% electric buses, which are free of charge and connect the railway station with the city centre.
- The construction of 20 electric vehicle charging points: 4 in Sète, 2 in Frontignan and 1 in every other municipality in the agglomeration.
- There is aim to increase the use of occasional maritime shuttles and to develop permanent maritime shuttles.
- The purchase of the electric bicycles is subsidised by the agglomeration: up to 20% of the price of the bicycle is paid by the agglomeration with a 200 € maximum.
- An "eco-mobility" label which concretises an action program by the agglomeration in favour of eco-mobility
- The construction of a big multi-modal platform in the railway station of Sète, which also comprises the redevelopment of the surrounding neighbourhood.

However, existing problems and emerging challenges result in a variety of other initiatives that deal with them applying different approaches and resources. Therefore, a catalogue is presented collecting the current public and private initiatives which affect mobility and tourism in the main areas of the city and the port.

New passengers' terminal

The former region Languedoc-Roussillon has participated in a program to develop a new passengers' terminal in the port of Sète, with a total budget of 39.85 million €. The region defined the goal of increasing passengers' traffic from 180,000 passengers in 2015 to 300,000 passengers in 2020, and keep growing until achieving 600,000 or 900,000 passengers in the future (not only for cruises but also for ferry maritime traffic).

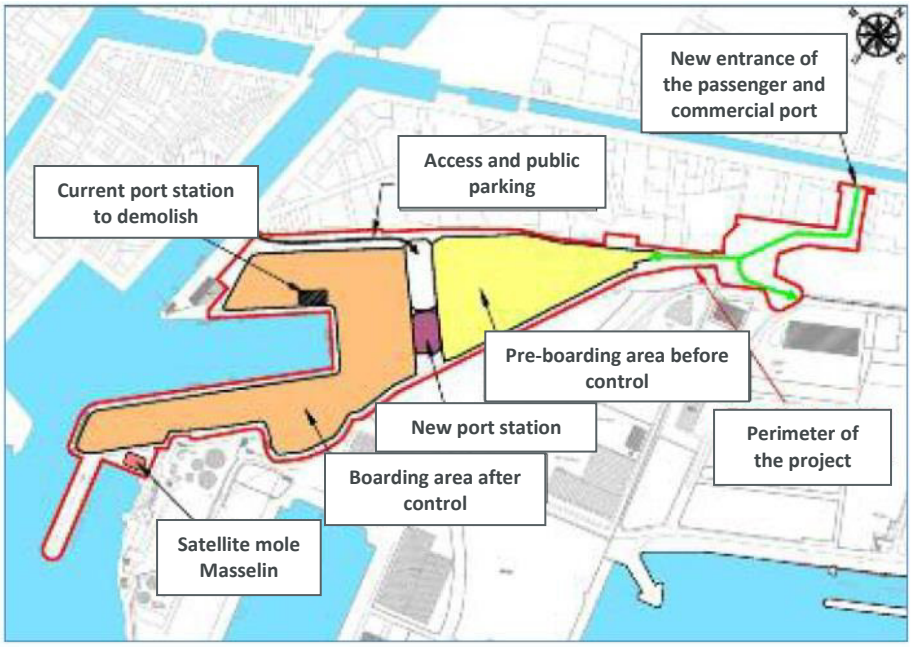

Figure 19. Configuration of the new passengers' terminal

Since the equipment back in 2015 was insufficient to reach this goal, it was necessary to renew and improve the infrastructures with the aim of increasing passengers' capacity while providing quality and comfort conditions to passengers.

The objectives behind the new passengers' station are:

- Increasing the quantitative capacity of passengers' reception.
- Improving the quality of passengers' reception.
- Assuring a harmonised relation between the port and the city.

The first renovation works started in 2008 with the development of the historical ferry dock (Bassin Orsetti), which were followed in 2014-2015 with the Masselin refurbishment works. During the period 2017-2019, the works done consisted in the maintenance and operation of the existing port station. In 2019, the new station and the needed equipment will be delivered, and, after the opening of the new station, the old one will be demolished.

Strategy 2015 – 2020

Port Sud de France developed a strategic plan 2015-2020[xvii], which defined the following general objectives:

- Create and maintain a close relationship with customers by constantly listening throughout the performance of services, ensure their proper execution and a precise and rigorous follow-up of the quality of these.
- Service reliability thanks to an optimisation of the internal organisation due to the modernisation of tools and port infrastructures and the setting up of an ambitious maintenance programme.
- Accompany port professionals in supporting sustainable development within their area of activity by encouraging private investment.
- Promote and optimise space management and anticipate future needs for the development of port activities and traffic.

- Strengthen the ambitions on sustainable development, seeking the integration of the port with its urban and natural environment, limiting the impacts on water and air, as well as the footprint of their activities on natural resources.

More concretely, according to the Commerce Port Director, in order to meet the development strategy of growing a 5.6% annually, the commercial port will direct its actions towards the following specific objectives:

- Listen to their customers in order to help them develop their traffic flow.
- Service reliability and performance measurement through simple and reliable indicators.
- Guarantee the reliability and performance of their tools thanks to a maintenance plan of 800,000 €/year over 5 years, as well as the implementation of the CMMS at the end of 2015.
- Adapt to the new infrastructures made available in changing their modes of operation.
- Develop revenue through more efficient leasing management and search for new collection tools.
- Continue to reduce their footprint on water resources and energy, and seek to limit their impacts, giving higher priority to:
    - The flight of dust by the strict respect of operating rules.
    - Emissions to water with the implementation of recommended actions following diagnoses on wastewater and rainwater.

Urban traffic monitoring sensors[xviii]

In 2016, the city of Sète worked with the IoT company Urbiotica and the smart lighting company Citelum in the installation of traffic monitoring sensors in strategic and conflictive points of the city, and in the installation of parking sensors to optimise the use of parking space in the city. The objective was to improve the mobility and parking management of Sète, reducing congestion in the town, while applying a Smart City approach.

The project consisted in the deployment of 30 U-Flow sensors at strategic points in the town of Sète. The sensors provide real-time information on how busy the roads are and the vehicle volumes in order to determine congestion levels. They detect up to 60,000 vehicles a day with a counting reliability of more than 99% and vehicle classification reliability of over 95%.

Monitoring local traffic at strategic points in the town allows Sète to develop traffic management strategies, generate alarms in critical situations and, therefore, improve mobility in the town. Besides, the data captured is transformed into valuable information that will be sent in real time to citizens by means of signalling applications and panels so that they are aware of traffic conditions and can decide on the best way to get to and move around the town.

6. Weighted list of negative impacts linked to the cruise-related flows

The main negative impacts of touristic flows are traffic congestion and overcrowded public space. As it has been stated in the mobility diagnosis of the city, elaborated for the occasion of the PDU 2020 - 2030, traffic congestion has been identified as a really serious issue in Sète. These congestion issues get even worse in the city centre and near the main touristic attractions. Only three entrances provide access to the city, being

each one of those crossed by 25,000 vehicles per day. Therefore, the scarce number of entrances to the city is one of the main causes behind congestion issues in Sète.

However, according to the port authority and other consulted experts, congestion is not caused by cruise tourism since cruise passengers do not contribute to it in the city centre as most of them do not drive in the city, but walk. Excursion buses departing from the cruise terminal leave directly the city by taking the east motorway without going through the city centre, being their most common destinations famous touristic sites such as Carcassonne, Pont du Gard, etc.

Nevertheless, more and more tourists are planning their excursions on their own, thanks to the Internet and the diversification of information and offer of touristic tours. Furthermore, one of the ambitions of the port is to offer the possibility of interporting, which will make congestion issues worse because of the embarkation and disembarkation of some passengers. Finally, current trends show that the number of cruise passengers will increase in the following years. Because of all these reasons, congestion issues must be taken very seriously in the analysis of current and future cruise-analysis flows, even if those issues are not caused by cruise tourism for now.

Cruises arrive quite near to the city centre of Sète and the town itself has a relatively small size. Once the port will offer interporting possibilities, it will imply that, during summer season, and especially at peak hours when cruise tourists disembark, congestion issues will intensify and have a clear negative impact on the quality of life of citizens and tourists themselves.

Other negative impacts also related to cruise tourism are:

Negative impact	Weight (Low - Medium - High)[2]
Congestion issues	Low
Air and noise pollution	Medium
Soil consumption for parking and infrastructures	Low
Safety	Low
Stress for the local community	Low-Medium

Table 4. Weighted list of negative impacts linked to cruise-related flows in Sète

Regarding the perception of cruises by the population, cruise tourists have a better reputation for locals than tourists who spend one or more nights in Sète, as they do not cause trouble or noise during the night. The Sète population is very aware of the positive economic effects of cruise tourism, both for the town and local shop owners. However, some of them fell a bit invaded when it comes to cruises, because cruise ships accost at least every Sunday in season.

Nevertheless, some aspects of cruise tourism impact directly the local population and its perception towards cruises:

- As some cruises berth in Sète on Sundays, some shop owners have to change their habits and open on Sundays whereas some other do not want to.
- Some locals do not like to have a boat in front of their windows all the time.

[2] The weight of the negative impacts has been assigned thanks to the feedback provided by local stakeholders interviewed during the first participatory process. Concerning pollution issues, they are mainly caused by boats which never turn off their motor instead of by cruise-passenger flows in the city.

- There is local perception of the efforts done to host big ships, something which contributes to the economy of the town and the region but goes against trying to fix locals problems such as congestion, traffic and urban planning issues.
- The perception of cruises varies depending on the neighbourhood. For example, the perception is worse in the "Quartier des 4 ponts", where the noise caused by boats affects the local population.
- Part of the local population is not enthusiastic about cruise tourism. In some cities, citizens enjoy going to the port to see the vessels and greet the tourists arriving or leaving, but this is not the case for Sète.

SWOT and CAME analysis

SWOT analysis

Figure 20. SWOT analysis matrix

Once the collection of data and information is considered as sufficiently representative of the context, a comprehensive image can be obtained through a SWOT analysis matrix:

SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) is a tool that allows assessing a given situation by considering the negative and positive aspects of the environment and the organisation or project; in this case, the status of the city regarding urban transport linked to cruise tourism.

	STRENGTHS	WEAKNESSES
INTERNAL CONTEXT	In the city centre of Sète, pedestrian mobility is predominant due to the small size of the city and the high concentration of services and touristic places in the city centre. Even if it represents only 30% of the transport modes used by the population, this is about the only transport mode used by cruise passengers in Sète.	Car remains ultra-dominant in the transport modes used by the population in Sète (60% of the total). It causes severe traffic problems in the city centre, something which often impedes the public transport service to respect their timetables. Therefore, the public transport service suffers from bad reputation and represents only 5% of the transport modes used.
	The main port of Sète is directly located in the city centre (300m from the main shopping streets of the city centre). Therefore, cruise passenger's mobility to the city centre does not impact on traffic.	The cycling environment is very weak: no real network, no connecting cycling lanes to the lagoon or the other neighbouring municipalities, and feeling of insecurity while using a bicycle in the city centre. It causes a very low use of bicycles in Sète (2%).
	In general, tourists appreciate their experience in Sète (the satisfaction degree is about 8.75 out of 10) thanks	Parking and mobility appear to be the weakest factors of the visiting experience in Sète according to tourists'

	to a nice living environment and to the proximity of famous UNESCO sites. This good reputation contributes to the growth of cruise tourism in Sète. The number of cruise calls and cruise passengers has been increasing over the past 6 years.	opinion (respectively, a satisfaction degree of 4.93 and 5.23 out of 10).
	OPPORTUNITIES	**THREATS**
EXTERNAL CONTEXT	Sète has a water canal network which links several strategic places to the port. These canals are wide enough to host fluvial shuttles during special events as summer festivals and markets.	As the attachment to their personal cars is still strong for Sète citizens, they could protest the implementation of new public transport infrastructure or transport services for cruise passengers which could slow down private car circulation.
	There is political awareness about the importance of developing alternative transport modes in Sète: charging points have just been implemented and there are subsidies to buy an electric bicycle. Several projects are being developed too: reinforcement of the cycling network, encouragement of green and soft mobility (subsidies, investments), and divulgation campaigns.	The increasing influx of cruise passengers during the next few years could make the city of Sète become overcrowded by tourists. This could have a negative impact on the citizens' opinion about cruises, something which could lead to protestations or movements against cruise tourism.
	A part of the population is getting mobilised for the development of green transport modes through several citizen associations. Governance tools for cruises are also coordinated by the Cruise Club entity, which should be able to follow the requirements of cruise passengers and Sète's citizens.	Sète is not one of the major cruise destinations in the Mediterranean Sea yet and their cruise market is, therefore, very sensitive to economic conditions and current trends.

Table 5. SWOT analysis matrix for Sète

The SWOT analysis matrix shows that Sète has particularities which must be taken into account in the analysis of cruise mobility, as cruises are a relatively recent economic market in the city and they do not have yet a direct impact on the population. Therefore, the population emerges as an essential actor to build a new mobility plan which will be both respectful with the living environment and envisage a sustainable vision for the future. Most of the threats and opportunities are linked to the population habits and how cruises could change it in a positive or negative way, being the main weakest points the high usage of private car and the weak cycling environment.

Hereunder, the CAME analysis should highlight some possible answers to improve mobility in the city, which is described as terrible by all the citizens and the tourists interviewed.

CAME analysis

The SWOT analysis is followed by a CAME[3] analysis in further steps, which is a useful tool to define strategies and actions from SWOT matrix results. The key is to focus on the most relevant weaknesses, strengths, threats and opportunities and, then, associate actions to Correct, Adapt, Maintain and Explore each identified situation.

[3] CAME refers to the matrix for SWOT possible strategies (**C**orrect, **A**dapt, **M**aintain and **E**xplore)

CAME	THREATS	OPPORTUNITIES
WEAKNESSES	Adaptive strategy *'Resist'*	Corrective strategy *'Take advantage'*
STRENGTHS	Maintaining strategy *'Keep up'*	Exploring strategy *'Maximize'*

Figure 21. CAME analysis matrix

Both, the SWOT and CAME analysis are efficient tools which, from a logical approach, present the type of strategy that should be adopted in every case. Different strategies can be followed at the same time, targeting different goals and situations. In every case, a close look to the stakeholders involved must be given to foresee expectations and needs, as well as to maximize participation.

	MAINTAIN	CORRECT
INTERNAL CONTEXT	The mobility plan should consider giving priority to promote walkability in the city. As the streets in Sète are very narrow, it could include a 100% pedestrian city centre, while accessibility should be reinforced, especially between the port and the centre, for people with disabilities (e.g. sound warnings and enough space on pavements). The walking environment should be comfortable enough for all type of cruise passengers.	Focus should be put on sustainable and reliable transport services such as clean bus services and trains, such as on implementing more frequent smaller electric or gas-powered buses, car-sharing platforms, and all-included transport tickets for tourists (including visits to tourist attractions, for instance).
	There should be an informative signalling system as soon as the cruise passengers get off of the boat. Since the port is near the city centre, it is a great opportunity to offer a wide array of transport services and information points by the port exit, aimed at encouraging people to enjoy the city centre and the surroundings of Sète by using sustainable mobility services (conventional and electric bicycles, pedestrian walks, etc.). This can be done only if the port or the city collaborates with rental transport services.	Prioritise the improvement of the cycling network and the connections to Sète surroundings. Sète and the Thau lagoon could be a strategic place for the cycling tourism market. Cycling lanes should be implemented in the city and the network should be continuous and detached and protected from car lanes and motorways. Bicycles users should feel safe everywhere in and around the town.
	Continue cross-sectorial coordination to provide pleasant experiences to visitors, including cruise passengers. City council should seek for alliances with the private sector and involve local associations to guarantee a sustainable exploitation of Sète's touristic potential.	Establish specific measures to facilitate mobility around the port and the city main touristic areas. Solutions to be envisaged within LOCATIONS project should be developed. For example, take action on impeding private car traffic in Sète (private car-restricted areas, car parks in the outskirts the town, encouraging intermodality with park-and-ride stations, etc.).

	EXPLORE	ADAPT
EXTERNAL CONTEXT	Sète municipality should take advantage of the water canal network and implement a real and regular fluvial shuttle service. This service could be used by cruise passengers to go from the port to other strategic places of the city, but also by the population all around the lagoon. Besides, it would be useful to avoid mobility problems in case the port is moved further from the city centre.	The aim is not to forbid completely the use of cars in Sète but to minimise private car as the first choice for small trips. Car park surface inside and outside the town must be enough, while a bypass motorway around Sète should be built. Some main traffic roads for cars should be kept to cross the city in an efficient way (allowing vehicles to reach strategic places as hospitals and police stations) without normalising the use of cars for <1-kilometre trips.
	Existing awareness of public authorities could be a good way to start working on innovative projects: partnerships with rental companies, start-ups, and communication tools. The City Council and Thau agglomeration must work together to transform deeply urban mobility while offering intelligent and feasible alternatives to private car.	A wider offer of noiseless transport services such as bicycles or electric vehicles should help the cohabitation between tourists and local population, being pleasant for everyone. The benefits of cruise tourism on the local economy should be better divulgated to the population by the port authority or tourism companies.
	The link between citizen associations and public authorities should be reinforced. This is the role of the Development Council, and this institution should be developed at its full potential, by strengthening its communication tasks and the involvement of both public institutions and citizens.	Consolidate Sète as a touristic destination for cruises by offering tailored services to cruise passengers, achieving partnership with cruise liners, and providing direct connections with other destinations (operating as a hub).

Table 6. CAME analysis matrix for Sète

All in all, this analysis shows that the problem lies more on Sète's urban mobility in general than just in cruise-related mobility. There is a need to implement new transport modes in Sète, promote new ways to move and foster new mobility habits, while always caring about making them accessible to cruise passengers. As the SWOT matrix, the CAME matrix shows how important the cooperation between public authorities and citizens will be to imagine a new mobility plan and a change in people mobility behaviour (whether they are citizens or cruise passengers). For now, this is the main weakness that has been highlighted during the interviews: depending on their age, social situation, experiences, etc., citizens and representatives of different public and private authorities have different (and sometimes even totally opposed) requirements, being the only common factor that they all agree that there is a strong and deep mobility problem, which could, of course, impact cruise tourism. Therefore, the mobility plan must change the situation by:

- Taking into account all different perspectives towards soft and green mobility (by implementing participation and consultation tools, as it has been done in the urban development plan). However, actions must not get stuck because of a wide array of different points of view; the final decision must not wait too long to be taken.
- Taking progressive but concrete decisions (communicating deadlines, priorities, projects, not doing works in every neighbourhood simultaneously).
- Offering alternatives to motorised individual cars. The population in Sète is quite old so some citizens have some difficulties to move; therefore, allowing only pedestrian access to every street in the city centre is not a solution, as some services (e.g. hospital, police station) need motorised vehicles and, sometimes, motorised vehicles (such as buses, tramways, etc.) are the only transport modes adapted to elderly people.

In the LOCATIONS framework, mobility around the port must be the one to focus on, but, as the port is directly located in the city centre, it necessarily implies to work on general mobility topics too, avoiding to remain focused only on the port and its surroundings. General traffic issues in Sète are not caused by cruises but they could have an impact on cruise tourism.

Step 2: Participatory process

First participatory process

Stakeholders involved

- Environment, Safety and Quality department of the Port of Sète
- Communication department of the Port of Sète
- Tourism Office
- Transport Services department at Sète Agglopôle Méditerranée
- Contractual Policy Service and Cooperation department at Sète Agglopôle Méditerranée
- "La Roue Libre de Thau" association
- Citizen Council
- Sud Singulier, a private touristic company
- Technical Services department in Sète
- Development Council, a participative democracy instance

Participatory process design

The aim of the first participatory process was to gather information directly from people who actually work or live in Sète to have an exhaustive overview about the situation of the municipality concerning cruise tourism and mobility. In addition to available information resources on the web, the involvement of local associations and public institutions which are related in some manner to cruise tourism mobility (e.g. the port authority, the transport services institution, Sète agglomeration, etc.) has been considered essential, since they have a lot of expertise in the topic which would be useful to the final outcome of this plan.

In order to do so, a few actors from different public institutions were targeted as potential interviewees with the help of a member of Sète agglomeration institution. Considering the needs of the interviewees, it was chosen to conduct telephonic interviews with each participant, following personalised interview guidelines with questions aimed at getting the more relevant information from each actor. However, those interview guidelines were neither exhaustive nor limiting, and sometimes other topics were discussed if they seemed useful for the diagnosis and context analysis task.

First participants contacted were people who represented the most obvious institutions which could be relevant for the project: the port authority, the tourism office, the agglomeration and the transport service authority. But, progressively, it appeared that it would be relevant to interview citizen associations and private actors too, such as La Roue Libre de Thau (citizen association which promotes the use of bicycle throughout Sète agglomeration), the Citizen Council and Sud Singulier (private touristic company based in Sète). Finally, a member of the Sète agglomeration suggested two more actors whose points of view were also relevant for the participatory process: the leader the Development Council and the responsible for Technical Services of Sète.

The topics discussed with all the actors were various and depended a lot on the institution that each actor represented. The personalised semi-conducted interview guidelines were divided in 5 generous topics:

- Tourism

- General mobility
- Cruise-related mobility
- Actions
- Governance

On the one hand, the objective of talking about touristic issues was to gather data about cruises, number of passengers, future trends and vision of the port for the cruises. On the other hand, the aim was also to have a clear vision about what makes Sète an interesting territory for tourism and more particularly for cruises, talking about the touristic potential of the territory and how it could be promoted (e.g. main touristic sites, main activities chosen by tourists in Sète, neighbouring municipalities that tourists visit).

Furthermore, the questions about mobility allowed understanding traffic congestion issues in Sète and how it impacts on the public transport service and the cycling and walking environments. Hence, this helped to have a general overview about traffic issues and transport networks in Sète, focusing more on the transport modes mainly used by cruise passengers and the sustainable vision of transport services in the agglomeration.

Then, the interviewees were asked about actions being implemented in the territory to fix the current mobility situation, what were their opinion, as well as their general opinion about cruise tourism and which measures could have a more significant impact to promote sustainable mobility in Sète.

Finally, the interviews were always concluded with a final question about governance and how the coordination and the cooperation between the different actors is. This allowed to find out about the Cruise Club entity and how the different stakeholders worked within this institution (one general assembly per year and a small meeting with workshops every two months).

Conclusions

The variety of stakeholders involved in the first phase of the participatory process allowed to collect very precise and exhaustive point of views; especially, about the main issue of this study: mobility. The context analysis of the territory was considered comprehensive enough when citizen associations and representatives were involved too. In any case, personal opinions about the responsibility of public and private institutions have not been included in this document.

The first phase of the participatory process has not only allowed to know the features of the territory and its specificities but also to realise the real situation lived everyday by Sète citizens regarding mobility. Their experiences have been the most relevant information for this context analysis because these qualitative data reflect the plurality of perspectives and priorities of the citizens. Hereunder, there is a brief summary of the main conclusions of this first phase of the project, concerning the situation in Sète but also how it is felt by the citizens.

All stakeholders agree on the fact that mobility is the principal blackspot of Sète, and that traffic congestion is omnipresent and deteriorates seriously quality of life in the city. Even if it is not directly caused by cruise tourism, the growth in the number of cruises berthing in the port could seriously worsen it, especially if the port is moved further from the city centre. Concerning the public transport system, it is not very efficient, and it could be significantly improved. Finally, few measures are being taken regarding soft mobility users, so the cycling and walking environment continue to be very weak.

However, all these mobility issues are mainly caused by the predominant use of private cars by the inhabitants, combined with a constrained urban morphology (e.g. reduced number of access points to the city, presence of water canals, high population density, topography, narrow streets, etc.). However, stakeholders disagree about the cause behind congestion and how to fix it. Each actor has its own interests and priorities, which can be nearly opposed sometimes, and this shows the necessity to make every stakeholder cooperate for a good and complete implementation of the actions proposed.

Second participatory process

Stakeholders involved

- Contractual Policy Service and Cooperation Department at Sète Agglopôle Méditerranée
- Transport Service Department at Sète Agglopôle Méditerranée
- Port of Sète
- 'La Roue Libre de Thau' association
- Tourism Office
- Regional Council
- Municipal Council

Participatory process design

The objectives of the second phase of the participatory process, held in Sète the 9th of July of 2019, were multiple; however, the main goal behind it was the evaluation and prioritisation of the proposed actions contained in the first draft of the LCTP, which the work team prepared during the previous months of the event. In this sense, the workshop was aimed at presenting the project and discussing the vision, objectives and action of the plan directly with the main stakeholders of Sète.

All participants of the first phase of the participatory process were invited to the workshop, but not all of them could be present as Sud-Singulier (private touristic company), the Development Council, the Citizen Council and the Technical Services of Sète agglomeration were absent this time. In parallel to the celebration of this workshop, a member of Sète agglomeration contacted some new stakeholders and organised a Technical Committee right before the workshop; a planned coincidence which allowed some new participants to join the workshop, such as representatives for the Region and for the city. In total, 10 participants were present during the workshop.

This second participatory project has been designed as a workshop with two differentiated parts. On the first part of it, the working team conducted a brief presentation of the project and, above all, a description of the action plan proposed. This presentation insisted on why each action was relevant for Sète and how it could be implemented in the city. It was meant to be dynamic: stakeholders had time to comment each action and to give their points of view about their feasibility. Thus, this dynamic allowed to make stakeholders debate about the vision they have for cruise mobility in Sète, and embraced a plurality of opinions about mobility issues in the city and how to fix them.

The main ideas that came out of this first phase were principally related to some difficulties regarding the implementation of some of the actions proposed due to the multiplicity of actors involved and other external

factors. This participatory process was useful to get some insights from the well-versed and concerned local people, something which was not possible until meeting them in person. In result, the following main problems were noticed:

- The implementation of maritime services could be difficult due to the fact that Sète agglomeration is the only one willing to finance it.
- The agglomeration is not ready to buy hydrogen or natural gas maritime ferryboats due to their high capital costs.
- The implementation of maritime shuttles would need to be a private initiative. Visiting the city centre is quite fast by foot; therefore, sightseeing tours should go to further places to be more useful.
- The bridges over water canals are too low, so it is not possible to cover the ferryboats.
- It could be difficult to build more cycling infrastructure within the city of Sète due to the lack of urban space.
- The department is in charge of the cycle lane around the Thau pond, and the missing section is ecologically very sensitive
- It is complicated to restrict completely private car traffic in the city centre, so incentive measure should be prioritised instead.
- A bike-sharing system would cost 400,000-500,000 € per year, so its implementation implies high risks for the city.
- Today, there is not enough money to invest in electric, hydrogen or natural gas buses, but the objective is to have them in operation in 10-15 years.

Participants also suggested new ideas for the implementation of some of the measures, being the following the most noteworthy:

- Transform the city centre into an only-pedestrian area
- Use QR codes in the vertical signalling system
- Integrate current cycle lanes from all municipalities in the agglomeration into the Thau lagoon rural cycling network.

After the presentation by the working team, each participant received an individual voting sheet with all the proposed actions described and they were asked to prioritise them, based on the following criteria:

- 1: not important
- 2: minor importance
- 3: to be considered
- 4: important
- 5: high-priority

After all stakeholders filled in their voting sheets, a ranking of the actions was elaborated with the average results of the voting (table 5), being highlighted the eight best valued measures to be chosen as more relevant for the action plan.

Action	Total points	Average	Rank	Standard Deviation
Action 1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions	40	**4,44**	**1**	0,53
Action 2. Connect the cruise terminal to main touristic attractions by cycling infrastructure	31	3,44	9	1,13
Action 3. Implement a cycling network throughout the Thau lagoon	33	**3,67**	**5**	1,22
Action 4. Improve informative signalling along walking and cycling routes	38	**4,22**	**2**	0,67
Action 5. Implement an electric bicycle and kick scooter sharing service	27	3,00	12	1,32
Action 6. Promote bicycle and kick scooter renting services near the cruise terminal	24	2,67	16	1,12
Action 7. Install informative panel boards at the cruise terminal	34	**3,78**	**4**	1,30
Action 8. Promote alternative touristic interesting points	33	**3,67**	**5**	1,32
Action 9. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card	32	**3,56**	**7**	1,33
Action 10. Develop an app especially designed for tourist experience	38	**4,22**	**2**	1,09
Action 11. Introduce small-size electric buses in the public transport fleet	25	2,78	14	1,64
Action 12. Implement a low-carbon shuttle bus service from the cruise terminal to some main touristic attractions	25	2,78	14	1,20
Action 13. Implement a new service of maritime/fluvial transport via canal, comprising shuttle services, conventional lines and sightseeing tours	26	2,89	13	1,36
Action 14. Develop the railway station as a multimodal hub	32	**3,56**	**7**	1,59
Action 15. Implement an electric scooter sharing and rental service	18	2,00	17	1,00
Action 16. Renewal of the port's own vehicle fleet with low-carbon vehicles	29	3,22	11	0,97
Action 17. Provide incentives for fleet renewal with low-carbon vehicles to private companies operating within the port	31	3,44	9	0,73

Table 7. Statistics of the votes

When taking a look to the results, it clearly appears that the eight best valued actions stand out from the rest. Therefore, the stakeholders focused their work during the second part of the workshop in developing these eight actions:

- Action 1: Improve the pedestrian connection between the cruise terminal and the main touristic attractions
- Action 3: Implement a cycling network throughout the Thau lagoon
- Action 4: Improve informative signalling along walking and cycling routes
- Action 7: Install informative panel boards at the cruise terminal
- Action 8: Promote alternative touristic interesting points
- Action 9: Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card
- Action 10: Develop an app especially designed for tourist experience
- Action 14: Develop the railway station as a multimodal hub

During the second phase of the workshop, the participants were divided into two work groups. Each group worked on four actions, being asked to develop the following points about each one:

- Actors involved in the implementation process
- Impact and opportunities (from an economic, environmental and social perspective)
- Obstacles and criticism
- Main insights for the implementation of the action
- Other remarks

Figure 22. Group work for the second phase of the workshop

The information collected as a result of these group works was a bit sparse but quite relevant for defining precisely the actions to be included in the action plan. After the celebration of the workshop, some of the stakeholders who could not participate in the event were contact and asked to conduct the same tasks described above, but in an individual manner. Their insights were taken into account to the elaboration of the final version of the action plan too.

Conclusions

All in all, this second participatory process was useful to have a precise idea of the situation and the difficulties of implementation of the actions. The main added value in comparison to the first phase of the participatory

process was the confrontation of different perspectives; something which allowed the stakeholders to feel really involved and interested in the project, despite having each one their own interests and priorities. It also allowed to have a better knowledge of the degree of difficulty of implementing each action proposed due to the participation of the main public administrations which will be responsible to implement them.

Step 3: Design of the plan

Definition of the current scenario

The previous steps have rendered a detailed image of the current scenario and the context of mobility and cruise tourism in Sète, including the weaknesses and threats faced by the city as well as the strengths and opportunities which should be capitalised to ensure a prosperous future.

The participatory process and the technical analysis conducted previously have allowed to elaborate on a precise description of the present situation in Sète and deduce how current trends are likely to evolve in the future. A short summary of the most relevant mobility issues in Sète is exposed below:

- **Vehicular traffic**: Mainly experienced by the inhabitants of Sète, there is a consensus to consider it as the principal mobility issue in the city. The restricted number of accesses to the city centre, the narrow streets, the lack of car parks and park-and-ride stations, and the predominant use of private car by citizens are the major causes of congestion within Sète. During summer months and holiday periods, it is worsened by the presence of tourists from nearby places. It is predominant in the city centre, where the port area, the railway station and the commercial zone are located, as well as around the three access points between the city and its surroundings.
- **Pedestrian and cycling infrastructures**: There is a strong lack of cycle lanes in Sète, which, combined with the narrow streets and the big amount of motorised vehicles in urban roads, make the cycling environment unsafe. Moreover, information signs are not present enough and are sometimes confusing. Finally, there is not any street where motorised traffic is forbidden.
- **Public transport**: The public transport service is not adapted to the current mobility flows in the city. Due to the difficulties to drive along narrow streets, buses slow down traffic and often have to unload passengers where they can, instead of on the dedicated space for bus stops. Furthermore, buses are not frequent enough to meet the demand and some strategic touristic points (like the Mont Saint-Clair, inside the city) are barely served by the public transport service.

From a sustainability standpoint, the current scenario linking mobility to cruise tourism flows reflects the following trends:

1. **Social perspective:** Due to the future plans concerning the interporting business model in the port and the growing number of cruise passengers, a conflict could start to grow if the tourists embarking for a cruise in Sète worsen traffic jam problems in the city centre.
2. **Economic perspective:** As a significant number of cruises berth on Sundays in Sète, passengers push shopkeepers to develop new economic practices. Moreover, about two thirds of the passengers do not spend money in the city, something which could be hard felt by local shopkeepers.
3. **Environmental perspective:** Cruises lead to several environmental issues, the major ones being water and air pollution. Cruise flows contribute directly and indirectly to carbon emissions and noise through vessels, as well as through related traffic and tourists flows.

If there is no plan to address these issues, all these trends are likely to continue and intensify, especially regarding traffic congestion and air and water pollution. This could lead to a deterioration of quality of life, something which besides could damage the attractiveness of Sète as a cruise destination taking into account

that cruise tourism is still a fragile economic market in Sète. Later on, the analysis of possible scenarios will support the assessment of the impact of proposed actions for observed patterns.

Definition of vision and objectives

The LCTP vision is to facilitate and promote the usage of low-carbon transport modes among cruise tourists, hence contributing to a wider sustainable transport system in Sète by taking into account the issues and deficiencies detected in the current scenario during the context analysis phase.

The strategy is built upon three main strategic axes which in turn have their own strategic objectives and actions. However, all actions considered in this plan are interrelated.

Strategic axis 1: Increase the number of cruise passengers walking and cycling to attractions

- Improve the current walking and cycling environment
- Increase the offer of active mobility activities for tourists

Strategic axis 2: Develop the tourism potential of Sète agglomeration using soft transport modes

- Encourage cruise tourists to stay in Sète
- Promote tourism throughout the whole Sète agglomeration
- Promote the usage of low-carbon transport modes among cruise passengers

Strategic axis 3: Improve the offer of intermodal low-carbon mobility

- Improve the existing public transport system and encourage tourists to use it
- Promote multimodal trip chains
- Decrease carbon emissions and noise associated to cruise tourism mobility

This vision shares common goals with the objectives envisaged within the PDU 2020-2030 elaboration process. Both visions aim to encourage soft transport modes by improving the walking and cycling environment of the city. Public transport is a priority in both of them too; the improvement of the bus service performance is pursued, as well as increasing the offer of services available for citizens. Lastly, the incorporation of new technologies to the overall transportation system of Sète constitutes a main line of action, something which is present in many actions of the LCTP, as it could be seen hereafter. In this sense, the promotion of sharing and connected mobility and the transition towards the usage of low emission vehicles are mobility trends which none of them avoid but aim to foster.

Definition of actions and indicators

The initiatives envisaged to respond to cruise tourism mobility issues are presented below classified into the three strategic axes and its corresponding objectives. For further information about the initiatives, more detailed descriptions are included in the Annex I of the present document.

STRATEGIC AXIS 1: INCREASE THE NUMBER OF CRUISE PASSENGERS WALKING AND CYCLING TO ATTRACTIONS
Initiative 1.1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions
Provide an attractive, safe and comfortable walking environment connecting the cruise terminal with main touristic attractions and shopping areas in order to facilitate the enjoyment without constraints of the touristic experience. *This action is in line with 1.3.*
Initiative 1.2. Promote cycling around the Thau lagoon
Connect the cruise terminal with the future plans for the rural cycling network circumventing the Thau lagoon through bicycle lanes and promote excursions around this natural environment. *This action is in line with 1.3 and 2.2.*
Initiative 1.3. Improve informative signalling along walking and cycling routes
Implement an intuitive and clear horizontal and vertical signalling system aimed at inviting tourists to walk and cycle, and guide them with directions, distance and time. *This action is in line with 1.1, 1.2, 2.2 and 2.4.*
STRATEGIC AXIS 2: DEVELOP THE TOURISM POTENTIAL OF SÈTE AGGLOMERATION USING SOFT TRANSPORT MODES
Initiative 2.1. Install informative panel boards at the cruise terminal
Install a combination of fixed and interactive informative panel boards at the cruise terminal to attract cruise passengers to stay in Sète, including touristic attractions and sustainable transport choices to travel to them. *This action goes in line with 2.2.*
Initiative 2.2. Promote alternative touristic interesting points
Promote alternative points of interest, including historical sites, museums and local businesses at the cruise terminal entrance and through the informative signalling system, tourist-related websites and apps. *This action goes in line with 1.2, 1.3, 2.1, 2.3, 2.4 and 3.2.*
Initiative 2.3. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card
Implement a tourist card consisting in a multimodal package which allows access to several sustainable mobility options along with entrance to cultural attractions, as well as some discounts in restaurants, shops and other local businesses. *This action goes in line with 2.2, 2.4, 3.1, 3.2 and 3.3.*
Initiative 2.4. Develop an app especially designed for tourist experience
Develop a wayfinding app especially designed for tourists which gathers all relevant information regarding mobility options, tourist attractions and cultural activities within Sète agglomeration in one single place. *This action goes in line with 1.3, 2.2, 2.3, 3.1 and 3.2.*
STRATEGIC AXIS 3: DECREASE CARBON EMISSIONS AND NOISE ASSOCIATED TO CRUISE TOURISM MOBILITY
Initiative 3.1. Implement a low-carbon shuttle bus service from the new cruise terminal to the city centre

Implement a low-carbon shuttle bus service connecting the new cruise terminal to the city centre of Sète, synchronised with cruise arrivals. *This action goes in line with 2.3 and 2.4*
Initiative 3.2. Study the implementation of new services of maritime transport via canal comprising shuttle services and sightseeing tours
Conduct a viability study on the possibility of recovering water canals for mass transportation by implement two different transport services for tourists using low-carbon ferryboats: shuttle services and sightseeing tours. *This action goes in line with 2.3 and 2.4.*
Initiative 3.3. Ensure multimodal connection between the railway station and the cruise terminal
Ensure that all or most of the mobility services offered at the railway station after its transformation into an intermodal hub are offered in the cruise terminal too in order to facilitate connections between these two key transport nodes. *This action goes in line with 2.3.*

Table 8. Strategic axes and initiatives

Each initiative is associated below with some indicators aimed at measuring its implementation process and accomplishment of the objectives. Apart from the specific indicators for each initiative, some general indicators are provided too in order to measure the performance of the whole project.

Axis	Action	Indicator
STRATEGIC AXIS 1	**Initiative 1.1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions**	Ind1.1.1. Share (%) of cruise passengers walking Ind1.1.2. Share (%) of walking trips Ind1.1.3. Length (km) of pedestrian paths
	Initiative 1.2. Promote cycling around the Thau lagoon	Ind1.2.1. Share (%) of cruise passengers cycling Ind1.2.2. Share (%) of cycling trips Ind1.2.3. Length (km) of bicycle lanes Ind1.2.4. Number of bicycle rental shops near the cruise terminal
	Initiative 1.3. Improve informative signalling along walking and cycling routes	Ind1.3.1. Number of informative totems installed
STRATEGIC AXIS 2	**Initiative 2.1. Install informative panel boards at the cruise terminal**	Ind2.1.1. Share (%) of cruise passengers who stay in Sète
	Initiative 2.2. Promote alternative touristic interesting points	Ind2.2.1. Share (%) of tourists who visit tourist attractions within Sète agglomeration, outside the city Ind2.2.2. Share (%) of tourists who visit alternative tourist attractions within the city of Sète Ind2.2.3. Share (%) of tourists who visit traditional tourist attractions within the city of Sète
	Initiative 2.3. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card	Ind2.3.1. Share (%) of cruise passengers taking public transport Ind2.3.2. Share (%) of cruise passengers who spend money in Sète

	Initiative 2.4. Develop an app especially designed for tourist experience	Ind2.4.1. Number of downloads of the app per month Ind2.4.2. Number of visitors to the website per month Ind2.4.3. Rating of the app on iOS/Android
STRATEGIC AXIS 3	**Initiative 3.1. Implement a low-carbon shuttle bus service from the new cruise terminal to the city centre**	Ind3.1.1. Occupancy (%) of shuttle buses
	Initiative 3.2. Study the implementation of new services of maritime transport via canal comprising shuttle services and sightseeing tours	Ind3.2.1. Number of studies about maritime transport services for tourists conducted
	Initiative 3.3. Ensure multimodal connection between the railway station and the cruise terminal	Ind3.3.1. Number of mobility services available in the cruise terminal Ind3.3.2. Frequency of buses between the cruise terminal and the railway station
OTHER	-	Ind0.0.1. Share (%) of private car trips Ind0.0.2. Number of daily trips by private car per person

Table 9. Indicators by initiative

Development of future scenarios

The action plan envisaged can have a different degree of success depending on several factors, such as the approval of the local population, the cost of implementation, the support of public institutions, etc. As a consequence, three scenarios have been imagined describing these different levels of success and their impact on the city of Sète and its cruise tourism market.

- **Do-nothing scenario:** if nothing is implemented
  - The current economic, social and environmental trends continue to be the same and to intensify
- **Adequate scenario:** minor positive changes are brought in by the project, but not significant enough to completely reinvent cruise-related mobility and fix all mobility issues
  - The changes are mostly concentrated in the port area and concern the port activities. The effect of action is constrained by the partial achievement of goals.
- **Best possible scenario:** significant changes brought in by the project boost a behavioural change along the city, multiplying its effects and creating a positive trend with utter implications along the city
  - The changes impact not only the port area but also the rest of the city, facilitating every mobility aspect for cruise passengers in a sustainable way.

However, Sète is currently implementing a new PDU (Local Transport Plan) which timespan will extend from 2020 to 2030. Both the PDU 2020-2030 and the LOCATIONS project LCTP share a similar vision towards the transport system of Sète agglomeration. Some of the measures described in the final draft of the PDU 2020-

2030 are complementary to the measures of the LCTP. Therefore, the aim is to align efforts to implement initiatives whenever possible. Probably, both plans will have an influence on mobility within Sète, so hence it is very unlikely that the situation remains at it is now. In order to better harmonise both plans, the horizon set to spot the expected results of the LCTP action plan is the same as the PDU: the year 2030.

An estimation of the measures implemented in each of the scenarios described above is provided, as well as the estimated results of all indicators in each scenario. The best possible scenario contemplates the fully implementation of the plan, while in the do-nothing scenario none of the presented actions is implemented. Halfway between them, the adequate scenario considers the implementation of the initiatives most linked to the action plan of the PDU 2020-2030 and the ones which present lower implementation costs.

Measure	Do-nothing scenario	Adequate scenario	Best possible scenario
Initiative 1.1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions	✗	✗	✓
Initiative 1.2. Promote cycling around the Thau lagoon	✗	✓	✓
Initiative 1.3. Improve informative signalling along walking and cycling routes	✗	✓	✓
Initiative 2.1. Install informative panel boards at the cruise terminal	✗	✓	✓
Initiative 2.2. Promote alternative touristic interesting points	✗	✓	✓
Initiative 2.3. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card	✗	✗	✓
Initiative 2.4. Develop an app especially designed for tourist experience	✗	✓	✓
Initiative 3.1. Implement a low-carbon shuttle bus service from the new cruise terminal to the city centre	✗	✗	✓
Initiative 3.2. Study the implementation of new services of maritime transport via canal comprising shuttle services and sightseeing tours	✗	✗	✓
Initiative 3.3. Ensure multimodal connection between the railway station and the cruise terminal	✗	✗	✓

Table 10. Implementation of initiatives by different scenarios

In the table below, the indicators are presented with estimations for each scenario. The figure indicated in the best possible scenario constitutes the targeted goal if the action plan is fully implemented. In contrast, the figures of the adequate scenario represent the partial implementation of this set of actions. It is important to remark that the figures presented below do not represent only the outcome of this plan (LCTP), but the result of the implementation of the PDU 2020-2030 too. Therefore, the horizon set for these estimated figures is 2030.

Indicator	Current trend	Do-nothing scenario	Adequate scenario	Best possible scenario
Ind1.1.1. Share (%) of cruise passengers walking	33%	30%	37%	45%
Ind1.1.2. Share (%) of walking trips	30%	28%	33%	37%
Ind1.1.3. Length (km) of pedestrian paths	0,18 km	0,18 km	1 km	2,5 km
Ind1.2.1. Share (%) of cruise passengers cycling	?	0%	3%	6%
Ind1.2.2. Share (%) of cycling trips	2%	1%	4%	8%
Ind1.2.3. Length (km) of bicycle lanes	94,7 km	94,7 km	214,7 km	230,0 km
Ind1.2.4. Number of bicycle rental shops near the cruise terminal	0	0	1	2
Ind1.3.1. Number of informative totems installed	-	0	2	4
Ind2.1.1. Share (%) of cruise passengers who stay in Sète	33%	30%	40%	50%
Ind2.2.1. Share (%) of tourists who visit tourist attractions within Sète agglomeration, outside the city	65%	55%	72%	80%
Ind2.2.2. Share (%) of tourists who visit alternative tourist attractions within the city of Sète	41%	35%	50%	60%
Ind2.2.3. Share (%) of tourists who visit traditional tourist attractions within the city of Sète	82%	90%	82%	80%
Ind2.3.1. Share (%) of cruise passengers taking public transport	?	4%	8%	15%
Ind2.3.2. Share (%) of cruise passengers who spend money in Sète	33%	30%	45%	60%
Ind2.4.1. Number of downloads of the app per month	-	-	3,500	5,000
Ind2.4.2. Number of visitors to the website per month	106,000	100,000	140,000	180,000
Ind2.4.3. Rating of the app on iOS/Android	-	-	4,0/5,0	4,0/5,0
Ind3.1.1. Occupancy (%) of shuttle buses	-	-	-	80%
Ind3.2.1. Number of studies about maritime transport services for tourists conducted	-	0	0	1
Ind3.3.1. Number of mobility services available in the cruise terminal	2	2	3	5
Ind3.3.2. Frequency of buses between the cruise terminal and the railway station	20 min	20 min	15 min	10 min
Ind0.0.1. Share (%) of private car trips	60%	63%	50%	35%

Ind0.0.2. Number of daily trips by private car per person	3,4	3,6	2,6	1,8

Table 11. Estimation of indicators by different scenarios

Step 4: Monitoring and funding

Monitoring LCTP implementation

Once the LCTP is accepted by public authorities in Sète, a co-working team responsible for its implementation will need to be created. This co-working team will need to be integrated by all key stakeholders involved in funding the actions. A coordinator body of the implementation should be appointed. Once the funds are allocated, the implementation process shall begin, being the co-working team responsible for its monitoring and control within the given timeframe.

Below, the monitoring responsibilities of each initiative are presented along with the timeframe, indicators, monitoring schedule and expected outcome. The indicators mentioned above will serve to ensure the monitoring of the actions and to evaluate the level of success of them to respond to their specific objectives. As there is willingness to align the LTCP action plan with the PDU 2020-2030, the timespan of the initiatives has been established from 2020 until 2030 too. However, in most of the cases, the first visible effects are expected to be observed at 2025 already.

STRATEGIC AXIS 1: INCREASE THE NUMBER OF CRUISE PASSENGERS WALKING AND CYCLING TO ATTRACTIONS	
Initiative 1.1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions	
Timeframe	2020-2025
Outcome	The number of streets connecting the cruise terminal to the main points of interest which qualify as a good pedestrian environment improves significantly and some streets in the city centre are closed to road traffic. This leads to a larger share of cruise passengers choosing to walk instead of using other transport modes, something which improves the quality of their visit to Sète. This action has an impact on the number of inhabitants walking on their daily trips too.
Indicators	Ind1.1.1. Share (%) of cruise passengers walking Ind1.1.2. Share (%) of walking trips Ind1.1.3. Length (km) of pedestrian paths
Source of data	Sète municipality (Ind1.1.2, 1.1.3) Tourism association (Ind1.1.1)
Monitoring responsible	Sète municipality
Monitoring schedule	Monthly (1.1.1., 1.1.2) Yearly (1.1.3)
Initiative 1.2. Promote cycling around the Thau lagoon	
Timeframe	2020-2025
Outcome	New bicycle lanes connect the cruise terminal to the cycling network surrounding the Thau lagoon, so the share of cruise passengers choosing to rent a bicycle and explore this natural environment on their own or on the many cycling excursions now offered by tour operators has increased.
Indicators	Ind1.2.1. Share (%) of cruise passengers cycling

	Ind1.2.2. Share (%) of cycling trips Ind1.2.3. Length (km) of bicycle lanes Ind1.2.4. Number of bicycle rental shops near the cruise terminal
Source of data	Sète agglomeration (Ind1.2.2, 1.2.3) Tourism association (Ind1.2.1, 1.2.4)
Monitoring responsible	Sète agglomeration
Monitoring schedule	Monthly (1.2.1., 1.2.2) Yearly (1.2.3, 1.2.4)
Initiative 1.3. Improve informative signalling along walking and cycling routes	
Timeframe	2020-2025
Outcome	The implementation of the new signalling system leads to a smoother walking and cycling transit in Sète, which besides is now distributed more evenly, despite more cruise passengers are choosing to walk and cycle. In result, there are not overcrowded streets. As well, tourists visit many other touristic attractions which before did not get as many attention as the most famous due to not being advertised.
Indicators	Ind1.3.1. Number of informative totems installed
Source of data	Sète municipality
Monitoring responsible	Sète municipality
Monitoring schedule	At the end of the implementation process

Table 12. Monitorisation of Strategic axis 1 initiatives

STRATEGIC AXIS 2: DEVELOP THE TOURISM POTENTIAL OF SÈTE AGGLOMERATION USING SOFT TRANSPORT MODES	
Initiative 2.1. Install informative panel boards at the cruise terminal	
Timeframe	2020-2023
Outcome	The installation of new informative panel boards which welcome cruise passengers at the cruise terminal increases the share of those who decide to stay in Sète. Alternative touristic attraction to the most famous sites get more attention by tourists, who now use more sustainable transport modes to move around the whole Sète agglomeration.
Indicators	Ind2.1.1. Share (%) of cruise passengers who stay in Sète
Source of data	Tourism association
Monitoring responsible	Tourism association
Monitoring schedule	Monthly
Initiative 2.2. Promote alternative touristic interesting points	
Timeframe	2020-2023
Outcome	Some points of interest which before were not so-well-known among tourists now get more attention; something which helps to balance the number of tourists in each place and increases and distributes economic benefits more evenly throughout the city and the whole Sète agglomeration.
Indicators	Ind2.1.1. Share (%) of tourists who visit tourist attractions within Sète agglomeration, outside the city
Source of data	Tourism association

Monitoring responsible	Tourism association
Monitoring schedule	Monthly
Initiative 2.3. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card	
Timeframe	2020-2025
Outcome	The integration of transport and tourist attractions ticketing in a multimodal package leads to larger shares of tourists visiting main points of interest and using low-carbon transport modes to move around Sète agglomeration. Besides, discounts on some local businesses generate a higher economic return from tourism.
Indicators	Ind2.3.1. Share (%) of cruise passengers taking public transport Ind2.3.2. Share (%) of cruise passengers who spend money in Sète
Source of data	Transport authority
Monitoring responsible	Transport authority
Monitoring schedule	Monthly
Initiative 2.4. Develop an app especially designed for tourist experience	
Timeframe	2020-2023
Outcome	The new app contributes to increase the share of cruise passengers staying in Sète and using low-carbon transport modes to move around the whole agglomeration.
Indicators	Ind2.4.1. Number of downloads of the app per month Ind2.4.2. Number of visitors to the website per month Ind2.4.3. Rating of the app on iOS/Android
Source of data	Tourism association
Monitoring responsible	Tourism association
Monitoring schedule	Monthly

Table 13. Monitorisation of Strategic axis 2 initiatives

STRATEGIC AXIS 3: DECREASE CARBON EMISSIONS AND NOISE ASSOCIATED TO CRUISE TOURISM MOBILITY	
Initiative 3.1. Implement a low-carbon shuttle bus service from the new cruise terminal to the city centre	
Timeframe	2022-2025
Outcome	Shuttle buses transport many cruise passengers from the cruise terminal to the city centre of Sète as the distance among them has increased after the conclusion of construction works on the new terminal. Pilot projects of new lines connecting the cruise terminal to some distant touristic sites are implemented in order to measure the need of more shuttle bus lines.
Indicators	Ind3.1.1. Occupancy (%) of shuttle buses
Source of data	Bus operator
Monitoring responsible	Transport authority
Monitoring schedule	Monthly
Initiative 3.2. Study the implementation of new services of maritime transport via canal comprising shuttle services and sightseeing tours	
Timeframe	2020-2023

Outcome	A viability study is conducted on the possibility of recovering water canals for mass transportation by implementing shuttle and sightseeing tour services using ferryboats.
Indicators	Ind3.2.1. Number of studies about maritime transport services for tourists conducted
Source of data	Sète agglomeration
Monitoring responsible	Sète agglomeration
Monitoring schedule	At the end of the implementation process
Initiative 3.3. Ensure multimodal connection between the railway station and the cruise terminal	
Timeframe	2020-2030
Outcome	In parallel to the transformation of the railway station into a multimodal transport hub, most of the new mobility services which are now offered in the railway station are offered in the cruise terminal too, hence contributing to smoother transport connection among these two nodes which now are able to accommodate larger tourist flows.
Indicators	Ind3.3.1. Number of mobility services available in the cruise terminal Ind3.3.2. Frequency of buses between the cruise terminal and the railway station
Source of data	Transport authority
Monitoring responsible	Transport authority
Monitoring schedule	Yearly

Table 14. Monitorisation of Strategic axis 3 initiatives

Funding

The economic resources needed to implement each action are presented below along with possible founding sources. The total budget of the plan is about 3,440,000 €, while the following tables indicate the required budget for each one of the strategic axes. However, these budgets are difficult to estimate and might vary depending on the level of implementation finally achieved and the particularities of the geopolitical context.

In fact, one measure by itself, the implementation of a shuttle bus service between the new cruise terminal and the city centre, represents more than half of this budget (2,210,000 €). The rest of the envisaged measures are more affordable and sum up all together 1,230,000 €. Despite most of the measures are interrelated, they can be implemented individually too.

Initiative	Actions	Estimated cost	Possible funding source
Initiative 1.1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions	a) Study on pedestrian conditions of Sète	100,000 €	Sète municipality
	b) Reconditioning of the pedestrian environment	500,000 €	
	TOTAL	**600,000 €**	

Initiative 1.2. Promote cycling around the Thau lagoon	Bicycle lane connecting the cruise terminal and the cycling network	100,000 €	Sète agglomeration
	TOTAL	**100,000 €**	
Initiative 1.3. Improve informative signalling along walking and cycling routes	Purchase and installation of on-street signalling	70,000 €	Sète municipality Sète agglomeration
	Purchase and installation of informative totems	10,000 €	
	TOTAL	**80,000 €**	
STRATEGIC AXIS 1: INCREASE THE NUMBER OF CRUISE PASSENGERS WALKING AND CYCLING TO ATTRACTIONS			**780,000 €**

Table 15. Budget for Strategic axis 1 initiatives

Initiative	Actions	Estimated cost	Possible funding source
Initiative 2.1. Install informative panel boards at the cruise terminal	Installation of informative panel boards	60,000 €	Sète agglomeration Tourism association
	Installation of informative kiosks	30,000 €	
	TOTAL	**90,000 €**	
Initiative 2.2. Promote alternative touristic interesting points	Design of a new tourism marketing campaign	40,000 €	Sète agglomeration Tourism association
	Design and printing of maps, leaflets and flyers	10,000 €	Advertising
	TOTAL	**50,000 €**	
Initiative 2.3. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card	Supply of smart cards for 5 years	100,000 €	Own revenue Sète agglomeration Transport authority Tourism association
	Implementation of smart card reading technology	60,000 €	
	TOTAL	**160,000 €**	
Initiative 2.4. Develop an app especially designed for tourist experience	App development, update and maintain for 5 years	40,000 €	Sète agglomeration Tourism association
	Website update and maintain for 5 years	10,000 €	
	TOTAL	**50,000 €**	
STRATEGIC AXIS 2: DEVELOP THE TOURISM POTENTIAL OF SÈTE AGGLOMERATION USING SOFT TRANSPORT MODES			**350,000 €**

Table 16. Budget for Strategic axis 2 initiatives

Initiative	Actions	Estimated cost	Possible funding source
Initiative 3.1. Implement a low-carbon shuttle bus service from the new cruise terminal to the city centre	Purchase of 4 electric buses	2,000,000 €	Private operators Transport authority Sète agglomeration
	Charging infrastructure, maintenance and energy costs	200,000 €	
	Construction works for 2 bus stops	10,000 €	
	TOTAL	**2,210,000 €**	
Initiative 3.2. Study the implementation of new services of maritime transport via canal comprising shuttle services and sightseeing tours	Viability study	100,000 €	Sète agglomeration Tourism association Transport authority
	TOTAL	**100,000 €**	
Initiative 3.3. Ensure multimodal connection between the railway station and the cruise terminal	*Costs might vary depending on the services established at the railway station*	-	Private operators Sète agglomeration Transport authority
	TOTAL	**-**	
STRATEGIC AXIS 3: DECREASE CARBON EMISSIONS AND NOISE ASSOCIATED TO CRUISE TOURISM MOBILITY			**2,310,000 €**

Table 17. Budget for Strategic axis 3 initiatives

Annex 1 – LCTP Measure Description

STRATEGIC AXIS 1: INCREASE THE NUMBERS OF CRUISE PASSENGERS WALKING AND CYCLING TO ATTRACTIONS

1.1. Improve the pedestrian connection between the cruise terminal and the main touristic attractions

Description

The improvement of the pedestrian environment should consider the widening of sidewalks in crowded areas and the creation of pedestrian zones around main touristic attractions and shopping areas, among other urban design actions aimed at enhancing walkability in Sète. Pedestrian connections between the cruise terminal and these main points of interest should be reinforced by designing a network of pedestrian paths where cruise tourists could walk in a safe and comfortable way once they arrive to the city.

In order to do so, first of all, it would be necessary to identify the main points of interest together with public administrations and local stakeholders, considering habits and preferences of cruise passengers and tourists in general, as well as their interaction with citizens' daily life and current traffic flows. Routes and distances from the cruise terminal to these points of interest should be analysed accurately in order to cover those touristic areas which are reachable by foot during the available time that cruise passengers have to visit.

Afterwards, it would be needed to map existing, planned and desired pedestrian routes before identifying the gaps in the existing network, in terms of missing connections and insufficient level of service, which this initiative is aimed to cover. In each particular touristic site, it would be necessary to develop specific solutions by assessing where pedestrian flows would be coming from and where they would be aimed in order to know which type of infrastructure and informative signalling would be required. Accessibility for persons with reduced mobility should be assessed and reinforced in these areas too, as well as the redirection of motorised traffic flows.

Actions should be taken in the streets which constitute desired pedestrian paths of connection between the cruise terminal and the city centre or other touristic attractions, being Rue Honoré Euzet one example of them. In these streets, sidewalks should gain space to parking lots and road lanes, pedestrian crosswalks should be secured and the implementation of shared spaces should be considered. New solutions of urban design not only need to slow down or restrict road traffic to favour and protect the pedestrian, but should consider aesthetics too in order to increase the attractiveness of walking by improving lightning, urban furniture and vegetation.

Pedestrian connections to Mont Saint-Clair, one of the main attractions of the city, represent a greater challenge due to the configuration of the territory, so pedestrian paths need to minimise high slopes and consider attractive lookout points for people to stop, rest and enjoy the views along the way; something which would need the implementation of appropriate urban furniture.

The transformation of the areas surrounding touristic attractions or shopping areas into 100% pedestrian zones would probably benefit from a progressive implementation of access restrictions for private cars;

something which could begin with a few of the most crowded areas and only during the tourist season peak. If so, citizens who might be now against pedestrianisation would become aware about its benefits by experimenting them in a reduced area and during a limited time period; something which might induce them to change their mobility behaviour in the short-term and which might ease the future plans of converting gradually the city centre into a pedestrian-only area thanks to a higher public acceptance.

Objective

Providing safe and comfortable pedestrian connections between the cruise terminal and the main points of interest of Sète, including the city centre, should be paramount to foster active mobility and dissuade the usage of motorised transport modes by cruise passengers. This action is aimed to address the negative externalities associated to motorised traffic, such as traffic safety and congestion, which is a really serious issue in Sète, but also air and noise pollution inherent to it.

A good walking environment would help to increase the share of cruise passengers choosing to walk instead of using private cars and worsen even more traffic problems in the city centre, where most of the main touristic attractions are located. Besides, the promotion of active mobility will contribute to relieve pressure from the public transport service, instead of overloading it with a tourist influx which could be difficult to accommodate.

Context

Walking is the most comfortable way to visit a city and get impregnated by its own particular atmosphere. Therefore, it is essential to provide cruise passengers, and tourists in general, with an attractive, walkable environment to enjoy without constraints the whole touristic experience. The dimensions of Sète and the proximity of the cruise terminal to the city centre make it very appropriate for cruise passengers to walk during their short stays. Besides, cruise passengers spend a lot of time inside a vessel, so providing them with active means of transport helps them to change this routine and enjoy more the whole cruise trip experience.

Furthermore, improving the walking environment provides tourists with the option of organising their visit independently, hence helping to distribute them more homogeneously throughout the city. Otherwise, sudden flows of cruise passengers arriving to certain points of the city could potentially exacerbate the city's mobility system, which is already suffering from a lot of stress, and disturb passers-by due to overcrowding public spaces.

Walking is not only the most sustainable transport mode, but it is beneficial to human health and welfare. Therefore, this initiative, which goes in line with present trends of reappropriation of public space for citizens, would be beneficial not only for tourists, but for citizens too, since the transformation of cities into pedestrian-friendly areas helps to reduce people stress and to enjoy a better quality of life. Social cohesion is one of the features which pedestrian areas are supposed to reinforce too as they provide more and better meeting spaces in the public realm. Currently, most of cruise tourists already travel by foot when visiting Sète, but the overall current share of pedestrian trips –considering both tourists and residents- is still too low (30%) based on the features of the territory.

As well, local businesses located in pedestrian-friendly areas would have a lot to gain from this action due to welcoming a larger influx of tourists and hence potential customers. Otherwise, in cities with a poor walking environment, tourists only stop in those shops located in the vicinity of main tourist attractions. Thus, it

would contribute to obtain a higher economic return from tourism, a field where there is still considerable room for development.

Other related actions

The PDU 2020-2030 already considers the pacification of Sète city centre as a measure to encourage the use of soft transport modes. Particularly, the creation of some pedestrian paths within the town's historic quarter contemplates the connection between the port and the railway station as a part of a broader plan to connect the main intermodal nodes of the city. However, this pedestrian network plan only considers some areas within the city centre, but not around other points of interest outside of this area. Therefore, these two actions which share common goals are perfectly complementary and would help to accelerate the transformation of the city in a pedestrian-friendly area for both tourists and citizens.

Sète is also participating in the French national programme "Action Coeur de Ville", which aims to support medium-sized municipalities in revitalising their city centres in order to reinforce their role as driving forces for economic development and to improve living conditions. Among the objectives envisaged by this programme, the transformation of its urban core based on the concept of the "walkable city" is contemplated with the purpose of strengthening pedestrian daily trips.

This action goes in line with 1.3.

1.2. Promote cycling around the Thau lagoon

Description

For tourists to be able to cycle throughout the nature environment surrounding the Thau lagoon, it is necessary to implement previously a proper cycling infrastructure, consisting in cycling paths circumventing it; something which is already planned in the PDU 2020-2030 in the mid-term. However, in order to foster cycling among cruise passengers specifically, it is essential to connect smoothly the cruise terminal with this rural cycling network in a direct and comfortable manner, as well as to promote excursions around the Thau lagoon environment.

With this aim, the present action would imply the construction of bicycle lanes connecting the cruise terminal with the planned cycling paths which will circumvent the Thau lagoon. Bicycle lanes would need to be continuous, bidirectional and completely detached and protected from road traffic by physical barriers –and not just by horizontal signalling- aimed at providing safe conditions to bicycle users. The design of the bicycle lanes should respect the minimum width recommended for them too. Furthermore, it would be advisable to take into account the access to bicycle rental shops in the vicinity of the cruise terminal when designing the bicycle lanes.

During the design of the bicycle lanes, the already existing cycling infrastructure in the city of Sète should be taken into account in order to try to connect the cruise terminal to both the rural and the urban cycling networks with one-single intervention. Although the cycling infrastructure in the city of Sète is currently weak, it would represent a first step towards the connection of the cruise terminal with the main touristic sites in the region. As well, the implementation of proper horizontal and vertical signalling system would be

essential to provide tourists with directions, distance and time to main touristic sites throughout the cycling routes.

In order to accomplish the promotion of cycling around the Thau lagoon among cruise tourist, this action would require cooperation and coordination between all municipalities within Sète agglomeration together with touristic operators and cultural attractions' associations to organise one-day cycling excursions aimed at discovering the natural environment surrounding Sète. In fact, nature tourism is a niche market which could be further developed with a better offer of activities for tourists in a respectful way with the environment.

Objective

This action aims at implementing a safe, direct and comfortable cycling connection between the cruise terminal and the rural cycling network circumventing the Thau lagoon. It would help to promote active mobility among cruise passengers and to reduce the amount of tourists using private car or organised excursions by bus to go to nearby municipalities, but also would provide commuters living in the outskirts who go daily to Sète for work reasons with an alternative to private car. Therefore, it would contribute to reduce greenhouse gas emissions and noise pollution in the area, while helping at the same time to reduce congestion issues in the access points to the city of Sète.

Context

The touristic potential of Sète agglomeration is not enough exploited yet as the city of Sète or more distant touristic destinations get the major influx of cruise passengers while only a few of them experience the delights of the neighbouring municipalities and the Thau lagoon natural environment. The specific features of the territory represent an exceptional opportunity to explore nature surrounding the Thau lagoon by using a clean and active transport mode, such is the bicycle.

Currently, there are some good cycling infrastructures near Sète, such as the Lido green lane, which connects the city with Marseillan-Plage. However, future plans for this cycling network circumventing the Thau lagoon will connect all municipalities within the area, as well as the beaches on the coastal front and other potential touristic sites within the area which are aimed to be more promoted for tourism. There is only one gap missing in the planned cycling network, hence failing to circumvent the whole Thau lagoon, which is the section between Marseillan and Mèze.

In contrast, the cycling infrastructure in the city of Sète is considered very weak due to cycle lanes being discontinuous, to the low quality of the pavement and the lack of road markings. Moreover, the absence of restricted areas for cars in a predominant car-based environment arouses an insecurity feeling while cycling, which dissuades many people to do so. In fact, the share of bicycle daily trips in Sète is just 2%. Therefore, a better cycling environment might encourage local residents to cycle in their daily trips, especially to commute, something which would alleviate significantly traffic congestion issues, while reducing air and noise pollution in the city.

Cyclotourism is a niche market which is growing exponentially during last years and, in this sense, Sète is a strategic place for promoting this type of tourism due to being at the crossroads of Eurovelo lanes and integrated into ViaRhôna and Canal du Midi cycling routes. Beyond that, this initiative would give cruise passengers the opportunity to explore independently and by active means of transport the surrounding natural environment of Sète, where a lot of things can be seen in a one-day bicycle trip.

Other related actions

The PDU 2020-2030 already considers the implementation of a cycling network surrounding the Thau lagoon; however, all of these projects are planned in the medium-term. This action aims to complement the planned cycling network with measures aimed at facilitating and promoting it among cruise passengers and hence opening new possibilities in a niche market which can attract more users as it is cyclotourism. As well, it aims to ensure that all points of interest in Sète agglomeration are easily reachable from the cruise terminal by bicycle in the near future.

In relation to the urban cycling network, there are some plans to implement some cycle lanes in the PDU 2020-2030, but the cycling network would still remain quite weak. Therefore, there is room for much improvement in this field, something which this action is aimed to remediate by laying the first stone of a future project that should extend the number of cycle lanes throughout the city, connecting main points of interest with the cruise terminal and, by the way, providing good connections between all neighbourhoods.

This action goes in line with 1.3. and 2.2.

1.3. Improve informative signalling along walking and cycling routes

Description

In order to invite cruise passengers, and tourists in general, to walk and cycle throughout the city and the whole Sète agglomeration, it is essential to implement an intuitive and clear horizontal and vertical signalling system. Cruise passengers should find the informative signalling system as soon as they get off the vessel. Therefore, signals need to begin from the cruise terminal entrance and extend to all routes leading to main points of interest.

Signals need to include not only directions, but distance and walking/cycling time too in an easy and, if needed, multilingual way. This is not trivial, but especially relevant when taking into consideration that cruise passengers have a limited time window to visit cruise destinations. It would be interesting that signals indicate the proximity of mobility services stations and tourist information points too.

The signalling system would encompass two main types of signals: four-sided informative totems and wayfinding vertical signals. Informative totems are designed to be read and consulted in a non-transit mode, so they need to be located in just a few strategic locations, being the cruise terminal, the railway stations and the main touristic attractions the most obvious sites. This type of signals of great dimensions allow to gather around several people and provide them with a lot of information in each of the sides of the totem, which can include maps, directions, transport options and the historical context of the touristic attraction. On the contrary, wayfinding signals are located along routes to be read in transit, providing directions to main points of interest. Therefore, the routes where to implement these signals need to be assessed carefully considering current and future plans for pedestrian and cycling tourism flows.

Moreover, digitalisation allows nowadays to implement interactive signalling systems which can respond better to tourists needs depending on the time of the day or season of the year, as well as manage better traffic flows in real time and in the event of an incident or special events. Moreover, digital signalling avoids the risk of excessive signalling, something which could make it become unreadable. This type of signals might

incorporate LED displays, Internet connection and 360º-rotation in order to be managed through a digital central platform, as well as QR codes for tourists to interact with them.

Ideally, some information points would be installed along main pedestrian and cycling routes too. As well, it is important to have a homogeneous signalling system for all municipalities within Sète agglomeration and use the same signalling system (e.g. colours, logotypes, etc.) in wayfinding digital tools available for tourists via smartphone app or website, as well as in paper maps and leaflets distributed among tourists.

Objective

Wayfinding signals would help tourists to move independently around Sète by active means of transport, but also would be an invitation for cruise passengers to walk and cycle throughout the city and the whole Sète agglomeration, and to visit other points of interest beyond the most overcrowded tourism circuit too.

Context

Improving the signalling system of the city constitutes a low-cost measure which has a great impact in helping tourists orientate and move around the city, something especially significant for cruise passengers considering the limited time they have available to visit. A good signalling system eases and fosters active mobility, but smooths pedestrian and cycling flows too, hence avoiding nuisances to residents.

In this sense, signals could help to alleviate overcrowded streets by deviating tourist flows to secondary streets which are equally equipped but do not receive the same traffic flow, hence helping the local businesses established in those streets to increment their potential customers too. As well, signals could promote alternative attractions which do not receive high tourism flows.

Other related actions

This action goes in line with 1.1, 1.2, 2.2 and 2.4.

STRATEGIC AXIS 2: DEVELOP THE TOURISM POTENTIAL OF SÈTE AGGLOMERATION USING SOFT TRANSPORT MODES

2.1. Install informative panel boards at the cruise terminal

Description

This action aims to install informative panel boards at the cruise terminal which would include information about touristic attractions in the whole Sète agglomeration and how to reach them, acting as a bait to attract a higher number of visitors. When offering information about how to travel to touristic attractions, panel boards should promote sustainable transport modes –such as walking, cycling, public transport and sharing services- over the usage of private car. As well, they should include distance and travel time for each transport mode to ease tourists the planning of their visit.

Given the huge amount of information, a combination of fixed and interactive panel boards could be the best way to provide visitors with basic and most important information, in fixed panel boards, while at the same

time providing more detailed information based on the preferences of the tourists, in interactive panel boards. In this way, thanks to their touchscreen displays, interactive panel boards would provide tourists with a larger amount of information and the possibility of exploring in detail the features which they are more interested in. Both types of panel boards should be visually attractive to draw the attention of cruise passengers at their arrival and make them stop to absorb the information contained in them.

On the other hand, tourist information points should be reinforced, not only in the cruise terminal entrance, but also on main touristic sites and intermodal nodes such as the railway station. These information points should be prepared with flyers and brochures about all main cultural, gastronomy and leisure attractions within the territory, always combined with the offer of sustainable transport modes available to tourists.

Objective

The installation of informative panel boards at the cruise terminal would serve the aim of attracting cruise passengers to stay in Sète and visit the main points of interest throughout the whole agglomeration, instead of going to more distant destinations such as Montpellier or Carcassonne. As well, this initiatives pursues the aim of communicating cruise passengers the available low-carbon mobility services and routes to discover Sète attractions in order to promote and raise awareness about sustainable mobility.

Context

Currently, only one third of cruise passengers stay in Sète when their vessels berth on the port, while another third decide to stay on the boat; the remaining go to distant touristic sites. Some of the cruise passengers have already planned excursions before their arrival to Sète, but many others do not plan their visit in advance and make the decision whether to stay in the city or to travel to nearby destinations at their arrival. Sète touristic potential is not enough exploited yet, so a better promotion of its touristic attractions and other points of interest within the whole agglomeration could help to increase the number of visitors. Therefore, there is potential to increase the share of tourists that enjoy touristic activities in Sète or nearby municipalities with this initiative aimed at approaching the two thirds of cruise passengers who put their feet on Sète as soon as they arrive to the port.

Providing all the information about the wide offer of possibilities for tourists in Sète at the cruise terminal, as it is the first place cruise passengers put their feet on, can make undecided tourists and also those aiming to travel to other destinations to change their mind and stay within the agglomeration. Moreover, cruise tourists often go to the same few touristic attractions which are most famous, hence contributing to overcrowding some public spaces. In this sense, the desire to discover other not-so-well known parts of the city and the agglomeration could be fed by giving better information about alternative points of interest at the cruise passengers' arrival.

The cruise terminal already counts with some informative panels, but there is need to modernise them with new technological advances which allow digital interaction between the panel and the user. These panels need to be adapted to the vision for tourism and mobility in Sète agglomeration for the following years. Given the reduced time window tourists have to visit the city, both attending personnel in information points and interactive panel boards could help them with tailored-made solutions to explore the city, encompassing points of interest and low-carbon transport modes.

Other related actions

This action is in line with 2.2.

2.2. Promote alternative touristic interesting points

Description

Promoting alternative touristic attractions within the whole Sète agglomeration would need communication and information campaigns aimed at highlighting the virtues of those points of interest which are not so well-known among tourists. A wide array of tourist sites, including historical sites, museums and local businesses could be promoted within thematic tourist circuits, such as gastronomy, tradition, nature or thermal spa, among others.

In order to do so, maps, leaflets and flyers need to be designed and printed with the purpose of being distributed in tourist information points. Informative panel boards at the cruise terminal entrance and tourist-related websites and apps need to contain information about these sites too and highlight the distinguishing features of these alternatives along with precise information about time, distance and low-carbon transport options to reach them. The new informative signalling system which would be implemented in parallel to this initiative would serve to promote and provide information about alternative points of interest too, and guide tourists along their routes.

Not only touristic attractions, but local businesses could be promoted in advertising spaces in maps, leaflets and flyers created in the context of this initiative, as well as on tourist-related websites and apps. For businesses, appearing on them would be a powerful advertising stunt to attract tourists who want to complete their experience in the city with some shopping and gastronomy activities. Moreover, the sale of these advertisements spaces would become a source of income which could potentially fund this and other tourism-related initiatives.

As well, collaboration with tour operations and travel agencies is essential to arrange excursion services to alternative destinations outside the urban core which can comply with the limited time window which cruise passengers have to visit cruise destinations.

Objective

Diversifying Sète's tourist offer would be a strategy which would contribute to better integrate tourists flows which now inundate the city into the whole territory, while at the same time redistributing the economic benefits of tourism. Furthermore, it would help to reduce traffic congestion and overcrowding of public spaces in critical areas of the city, such as the historical city centre. Therefore, it would contribute to enhancing both the visitor experience and the inhabitants' quality of life.

Context

Currently, a few touristic attractions in Sète get most of the attention from tourists while other points of interest within the whole agglomeration are still unknown for them. The current situation could lead to the overcrowding of some public spaces during peak hours for tourists which affect the curse of life of the

inhabitants. Emphasising other touristic attractions in tourism marketing campaigns would make tourists discover other potential sites to visit during their stays and hence divert tourist flows between more points.

Currently, about two thirds of cruise passengers do not spend money on local businesses, something which causes a bit of opposition in the commercial sector; especially because many cruises berth on Sundays so local shopkeepers need to change their economic practices or remain closed. The possibility of promoting their business by advertising them in maps, leaflets and flyers aimed at promoting touristic attractions of the city would most probably generate a higher economic return and hence could soften opposition to cruise tourism of some local business owners and keep them in favour of it.

Other related actions

This action is in line with 1.2, 1.3, 2.1, 2.3, 2.4 and 3.2.

2.3. Integrate sustainable transport options and cultural attractions ticketing in an integrated tourist card

Description

This action aims to implement a tourist card consisting in a multimodal package which would allow access to several mobility options along with entrance to cultural attractions, such as museums and historical monuments. Besides, it might include discount prices in restaurants, shops or other type of local businesses not entirely included in the package.

The card's validity period could fluctuate between one day and one week and include unlimited usage of transport modes or a limited number of trips. The creation of different versions of the tourist card depending on the length of the stay (e.g. 1-day and 3-day card) should be assessed in order to optimise the offer not only to cruise passengers, which usually only stay one day, but for all tourist profiles, which might stay more.

Mobility options included in the tourist card must include public transport service ticketing, but also should give priority to other alternative low-carbon transport choices, such as bicycle and kick scooter sharing schemes or rental options, over private car usage. The inclusion of touristic sites should be carefully assessed in order to be correlated with the prioritised transport choices included in the same package. That is to say, included tourist attractions must be always reachable by the sustainable transport modes included in the tourist card offer without need of purchasing any other ticket.

The integration of transport and tourist attractions ticketing could be based on smart card technology or managed through a smartphone app using QR codes, hence functioning in an easy and intuitive manner in either way. In order to optimise the service provided by the tourist card, the parallel development of a tourist app would be recommended for the purpose of providing all local information in one place and in real time, together with ticketing and payment management. Moreover, nowadays digitalisation even allows to offer customisable packages which can be tailored to the users' preferences and the length of their stay; something which could be done by tourists easily via this app.

In case of opting for smart card technology, the touristic card needs to be easily available for cruise passengers on arrival at the port, so it could be sold in tourist information points and in ticket vending

machines in the cruise terminal. Implementation of the required technology to read smart cards or QR codes via smartphone might be necessary in some of the points of interest included in the packages.

Partnerships between public authorities and private entities would be required to offer attractive deals to users. Therefore, the involvement of private rental and sharing companies, tourist attractions managers and local businesses is essential. As well, it would be better to involve cruise lines for the purpose of promoting and selling this service prior to the arrival of cruise passengers.

Objective

Apart from facilitating the tourist experience by eliminating the need of purchasing specific tickets at each touristic site and transport mode, hence avoiding queues, a tourist card is a marketing tool which allows the promotion of low-carbon transport choices while at the same fostering cruise tourism contribution to the local economy. Furthermore, it has the potential to draw attention to touristic attractions that are outside the regular circuit for visitors.

Context

Integrated tourist cards are more and more extended in the main touristic destinations around the globe as they ease tourists the management of tickets for transport services which they are not acquianted with. Nevertheless, Sète does not have this type of service yet. Moreover, ticket purchase in both transport facilities and touristic attractions usually generates long queues which disrupt the curse of action of the inhabitants, so, by offering all this ticketing in a one single-purchase package, these queues could be avoided or at least minimised.

Moreover, this type of ticket allows to diversify the touristic offer and hence avoid overexploitation of some touristic sites, minimising congestion problems derived from it. The inclusion of discount prices in local businesses also increases and diversifies expenditure in the area, thus benefiting the commercial sector, a part of which currently complains about cruise tourism not spending enough money in the area –only one third of cruise passengers do-.

For this action to be successful, it needs proper organisation, coordination and partnership between multiple local and regional stakeholders. As the integrated tourist card will be based on information and communications technology (ICT), it will allow the collection of data from tourists trips and activities; something which is increasingly becoming a key resource to create better solutions or improve existing services better suited to tourists' behaviour and preferences.

Other related actions

This action is in line with 2.2, 2.4, 3.1, 3.2 and 3.3.

2.4. Develop an app especially designed for tourist experience

Description

The development of a wayfinding app especially designed for tourists would allow to gather all relevant information regarding mobility options, tourist attractions and cultural activities within Sète agglomeration in one single place.

The app should contain all information regarding touristic activities in the area in a user-friendly way, encompassing cultural attractions' historical context and opening hours, as well as gastronomy, accommodation and shopping options. Besides, it needs to count with a route planner with GPS navigation which, despite including all mobility options, should give preference to low-carbon transport modes. In the cases required, the app needs to gather information regarding ticketing, timetables and location of the stations of the included mobility services.

Information needs to be always updated –especially, real-time information about mobility services- and the app should allow push-up messages to communicate possible disruptions in cultural attractions' opening hours and transport network routes or timetables, as well as the celebration of special events.

Moreover, this digital tool has a lot of potential to promote low-carbon transport choices and alternative points of interest, and to deviate tourists from often overcrowded streets. For instance, the app could promote some itineraries and touristic thematic paths adapted to different profiles of tourists, as well as intermodal combinations of sustainable transport choices to move all around Sète agglomeration. All in all, it constitutes mainly an invitation for tourists to explore the city on foot, gain knowledge about all the secret delights of the city, and make best-informed transport choices.

The development of this app could be carried out in parallel with other initiatives integrated in this plan, such as the improvement of the signalling system and the launching of an integrated tourist card. On one hand, if new signals incorporate QR codes, this app should become the canal to read them and redirect users to some of the gathered information within the app.

On the other hand, this app should allow the purchase and management of the integrated tourist card since it would make easier the tourist experience for visitors, enabling them to use the ticketing of mobility services and cultural attractions via QR codes and to see the location of nearby transport stations, points of interest and local businesses with discounts for tourist card holders in a map. Precisely, the management of the tourist card through the app would allow to offer more customisable packages based on the users' preferences and the length of their stay.

The tourist app needs to be available in both Android and iOS markets, and publicised on tourist websites and at the arrival of cruise passengers to the cruise terminal. It would be required to update regularly the app too. Furthermore, all data gathered by the app would talk about tourists' habits and could be used to enhance the tourism experience and mobility management with the purpose of offering better services.

Objective

This tourist app would be a useful tool to guide visitors through an unfamiliar environment, providing them with maps and directions to guide them to touristic destinations, as well as complete and up-to-date

information about transport choices and touristic attractions' timetables, prices and cultural heritage background.

Context

A smartphone app is a more accessible, handier and an always-in-hand tool compared to other conventional methods of information, such as roadmaps, leaflets and flyers. By using it, the tourist experience of those who prefer the option of do-it-yourself visiting would be definitely enhanced by smoothing their trips; especially in the case of cruise passengers, whose short time for visiting the city demands quick information to move around.

Other related actions

This action is in line with 1.3, 2.2, 2.3, 3.1 and 3.2.

STRATEGIC AXIS 3: DECREASE CARBON EMISSIONS AND NOISE ASSOCIATED TO CRUISE TOURISM MOBILITY

3.1. Implement a low-carbon shuttle bus service from the new cruise terminal to the city centre

Description

As the conclusion of construction work on the new terminal in the port of Sète will move 300 meters farther the cruise terminal than where it is currently located, this action aims at implementing a shuttle bus service to transport cruise passengers from it towards the city centre as the higher distance would most probably dissuade many of them to walk to main touristic attractions as it happens nowadays.

Therefore, this action aims to offer shuttle bus services connecting the cruise terminal entrance with some point of the city centre which can allow the embarking and disembarking of large crowds. Shuttle services departing from the cruise terminal could function as an on-demand service by being synchronised with cruise arrivals, hence avoiding to have conventional bus lines with empty vehicles at some hours. Besides, the large dimensions of the cruise terminal might provide better facilities for smoother boarding of large crowds of cruise passengers than conventional bus stops in the vicinity.

As well, this action considers the implementation of pilot projects for other shuttle bus lines towards more distant destinations not easily reachable by foot, beginning from the Mont Saint-Clair and the beaches in the coastal front, two touristic attractions which attract large touristic influxes. If the pilot project for these two lines ends up being successful, these lines could be consolidated as permanent shuttle services in the future, while other possible destinations within the whole Sète agglomeration could be considered; something which would be a way to promote alternative touristic sites to the tourist circuit. Other touristic attractions targeted as possible destinations of shuttle buses should never be easily reachable by foot; otherwise, the road system would be overcharged with more vehicles by absorbing potential pedestrians. In any case, a careful assessment would be needed to decide the destinations of pilot projects for new shuttle bus lines, as well as a proper monitoring of their impact, when implement, to evaluate their success.

Electric buses should be prioritised in this service, while hybrid or gas-powered buses could be considered too if electric charging is not considered viable. Therefore, this measure contemplates the purchase of electric buses, as well as the implementation of the respective charging equipment, in case they are electric, which, being shuttle services, could be deployed in the cruise terminal more easily.

The renewal of the current bus fleet could be fostered by offering grant incentives to operators in case of shifting from internal combustion engines to cleaner models, as well as by limiting access to some areas only to low-carbon vehicle models, something which would be far more restrictive. Combination of both strategies could be a better strategic movement: operators might be advised of future plans to implement this kind of restrictions in the mid-term (e.g. 2-5 years), while at the same time being offered some financial incentives for the purchase of low-carbon buses.

Objective

The implementation of shuttle buses transporting cruise passengers to the city centre and other more distant touristic attractions emerge as a mechanism to improve the mobility of the large influxes of cruise passengers arriving to the city. The higher distance between the cruise terminal and the city centre might dissuade many tourists from walking, so action must be taken to ensure that those who decide to not walk still use low-carbon transport modes during their stay. Moreover, this action would help to reduce stress over conventional lines of the public transport service, while offering more direct and optimised routes towards the points of interest with higher tourist influx as shuttle buses do not make intermediate stops.

Context

The wide consensus about the unreliability of public transport service in Sète alerts about the need of taking measures to improve its performance. However, one can hardly expect a good public transport service to be able to accommodate on its own the large influxes of cruise passengers that a port city receives all of a sudden. Even more, some of the main touristic sites, like the case of Mont Saint-Clair, are not served with a frequent bus service and are hard to reach by active transport modes.

In this sense, shuttle services would help to connect easily by mass transit distant destinations in the agglomeration which would otherwise be reached by private car. It important to underline that shuttle bus lines heading towards other municipalities in the agglomeration would not affect traffic congestion as the cruise terminal has easy and direct motorway access.

Other related actions

This action is in line with 2.3 and 2.4.

3.2. Study the implementation of new services of maritime transport via canal comprising shuttle services and sightseeing tours

Description

This initiative aims to conduct a viability study on the possibility of recovering water canals for mass transportation by implementing different kinds of water transport services using low-carbon ferryboats

aimed at tourists, and goes in line with the ambition of Sète agglomeration of increasing the use of current occasional maritime shuttles and experiment with some permanent lines.

One of the new maritime transport services aimed to be examined would be shuttle services via water canal connecting the cruise terminal to some main destinations throughout the Thau lagoon. Even a water shuttle connection with the city centre could be considered in the long-term if the cruise port is expanded and hence becomes further from it. This type of service would be aimed especially for cruise tourists, but the other contemplated services would be opened for all tourist profiles and even residents.

The second water transport service contemplated in this measure are water sightseeing tours for tourists. It is a widespread practice among cities which have a river flowing across the urban core, so Sète, counting with water canals and a large lagoon, would be an exceptional market for this type of business. Despite cruise passengers spent already a lot of time in vessels, waterways are an attractive transport offer for all tourists and represent a very distinguishable feature for the city. Besides, water transport would offer tourists a different perspective of the city, away from motorised traffic, and would serve to take profit of the natural environment surrounding it.

Therefore, this action would examine the interest of potential concessionaires to introduce these kinds of services via water canal and assess the feasibility, impact and pros and cons of their implementation, both for private companies and the region. In order to do so, first of all, the present initiative would conduct a benchmarking study of similar services offered in different cities and regions from all around the world. Later, it would study which lines would be more interesting for tourism mobility and would estimate their traffic volumes and seasonality. As well, different business models for the operation of these services would be assessed in order to figure out which one is more suitable based on the ambition of Sète agglomeration. First contacts with potential concessionaires would be established to find out their willingness to offer these types of services and to know more in depth the critical issues to be assessed during the study.

The type of vessels to be used in these services would need a careful assessment too with the purpose of gaining deep knowledge about the state of the art of the technology of low-carbon ferryboats regarding both the vessels and their charging systems. Alternative propulsion systems and fuels, such as pure electrical, hybrid, Liquefied Natural Gas (LNG), biodiesel or methanol, would be prioritised in the study, which would examine the capital costs of the purchase of vessels and charging infrastructure, as well the operating costs, of each technology.

The environmental impact of new maritime services would be assessed carefully in order to not damage the natural environment of the Thau lagoon and assure the preservation of its flora and fauna. The study would need to contemplate too if the new services enter in conflict with cargo ships and other business activities (e.g. fishing and oyster culture) which already use the water environment. As well, vessels and docks would need to be able to accommodate people with reduced mobility and some legislation for low-carbon water transport might be needed before circulation.

Objective

This action aims to assess the viability and economic, social and environmental impact of implementing maritime shuttle and sightseeing tour services via water canal throughout the Thau lagoon. Maritime transport would contribute to the decongestion of traffic in urban cores, a relevant issue in Sète, by diverting tourism flows to the currently unused water canals. Moreover, when compared to land-based transport

services, waterways are less expensive and require less maintenance. If low-carbon ferryboats are chosen, it would contribute to the reduction of greenhouse gas emissions and local pollution associated to tourism mobility.

Context

Water canals in Sète connect the port with the Thau lagoon and the Mediterranean Sea through the city centre. However, they have been for a long time in disuse despite past successful experiences. Nowadays, there are only occasional maritime shuttle services during special events such as summer festivals or markets which are quite successful, so there are future plans to expand maritime services, but none tourism-related maritime services have been contemplated yet.

It is important that vessels used in these services are eco-friendly in order to not damage the environmental resources of the lagoon and contribute to decrease emissions associated to tourism mobility. However, the offer of low-carbon vessels is still not very varied and the purchase prices of this type of vessels are still too high to be implemented in the short-term, which constitutes all the more reason to conduct a viability study about the possible implementation of these types of services in the mid- or long-term.

Other related actions

The PDU 2020-2030 contemplates the implementation of some water transport regular and seasonal lines connecting some of the municipalities located around the Thau lagoon, something which would be especially beneficial in the case of those located on opposed coasts. In contrast with the present initiative, especially aimed at tourists, the service contemplated in the PDU 2020-2030 has potential to become very useful for commuters who travel daily to Sète for work reasons and could absorb a significant portion of current private car users if the service is enough frequent and reliable. In this case, it would help to reduce traffic congestion on the accesses to the city. Tourists travelling to municipalities within Sète agglomeration would benefit from this initiative too. Besides, synergies would emerge from the implementation processes of both initiatives.

This action is in line with 2.3 and 2.4.

3.3. Ensure multimodal connection between the railway station and the cruise terminal

Description

Based on the plan of Sète agglomeration of transforming the current railway station into an intermodal hub, this action aims to ensure that all or most of the mobility services offered at the railway station are offered in the cruise terminal too in order to facilitate connections with these two key transport nodes in the region by different transport modes.

The transformation of the current railway station into an intermodal hub will encompass, beyond rail services, the integration of bus lines and several mobility services, including sharing and rental, in the facilities or vicinity of the station. This new services, which will use different types of vehicles, will be especially useful as first- and last-mile solutions complementary to railway trips, despite not serving uniquely this only purpose.

Taking into account that some cruise passengers use the railway station to travel to nearby municipalities during their stay in Sète and that the interporting business model which Sète aims to embrace in the near future would increase significantly the volume of people travelling between the railway station and the cruise terminal, action must be taken to ensure that the connection between these two transport nodes run smoothly in all transport modes and that it is able to accommodate higher people flows. Furthermore, unlike most cruise passengers who use the bus line nowadays (mostly those heading to more distant cities like Montpellier for a one-day visit on their own, for instance), interporting customers will travel with luggage before embarking or after disembarking in Sète; something which, beyond the higher occupancy levels, will cause greater nuisance to local users

Therefore, all or, at least, most –depending on their nature- mobility services present in the railway station should have a station in the cruise terminal too in order to ensure appropriate connections with a good level of service between these two key nodes of transport for cruise mobility. There is already a bus line connecting them, but there would be need to assess the need of increasing the capacity of this line as flows will increase. At the same time, the presence of new mobility services at the railway station will invite many cruise tourists to use them during their visit in Sète, so, in order to facilitate their tourist experience in the city and avoid overcrowding of the bus line, most of these services need to count with a station or a pick-up/return point in the cruise terminal.

Objective

This measure would serve the aim of dissuading private car usage in favour of a combined trip which would include rail or inter-municipal bus services plus bicycle, kick scooter or urban bus lines, for instance. In the specific case of cruise tourism, this intermodal hub will facilitate tourists the option of travelling to more distant destinations in a one-day trip and to use Sète as a home port for boarding without need of using their private cars, being offered a wide array of transport choices at their arrival.

Therefore, the increase in usage of public transport and other clean transport modes inherent to the development of the railway station as an intermodal hub would help to reduce usage of private car in Sète agglomeration and hence traffic congestion in the city. Moreover, these transformation projects, in general, end being a major driving force for economic growth in the surrounding area.

Context

Intermodal transport chains will have to be a viable alternative in the near future with the purpose of contributing to reducing congestion and pollution in many urban areas. The intermodal logic envisages a mixed formula consisting of buses, trams, metro and sharing mobility services for short- and medium-distance trips, as well as trains, maritime ferries, river boats and airplanes for the longer sections of the transport chain. In this logic, the use of private vehicles is only contemplated to cover the so-called "first and last mile" when there are no other more sustainable transport choices available.

Hence, intermodal transport does not define a new type of transport, but an innovative approach to the use of current transport systems, which implies the combination of them into an integrated trip chain. In order to be able to do so, intermodal hubs or nodes become essential to connect different transport modes and facilitate the interchange between them.

The transformation of the railway station into a multimodal mobility hub is considered essential to the future development of Sète as it would help to accommodate the higher touristic flows ambitioned for the following

years, while at the same time it would improve the transport chain in trips between the urban core and nearby municipalities. Thus, it is especially important for commuters who live in nearby municipalities but work in Sète, who will have several first- and last-mile solutions to complete their railway trip instead of using their private cars for the whole trip.

The transformation of the railway station into an intermodal hub would not only consist in an upgrade of the transport services offered linked to the existing railway station, but would need to consider a redevelopment on the entire surrounding area with the aim of accommodating the stations of these services and ensure the synergies between them. As well, implementation of vertical and horizontal signalling would be necessary to guide passengers along the intermodal exchanges. Beyond mobility services, the redevelopment of the railway station needs to encompass retail business and accommodation services within the station and in the vicinity of it.

Apart from the municipality, involvement of mobility agencies, public transport companies and utilities would be essential to the transformation of the railway station as an intermodal hub; a process which would comprise the identification of the main routes and key destinations of Sète residents and visitors, as well as potential connection issues.

As the cruise terminal welcomes yearly a high share of the tourists arriving to Sète, it is increasingly becoming an important mobility node in the city too, although, unlike the railway station, it is of significance only for cruise tourists and all the employees of the port and port-related industries.

In the near future, Sète aims to accommodate an interporting business model, which is to say that, for each cruise, some passengers would disembark in Sète's port while other would embark, using it in a home port manner instead of just as a port of call. This new business practice would increase the number of visitors arriving to Sète in other transport means different than maritime vessels, so the railway station would gain prominence and the trips connecting it with the cruise terminal would significantly increase. As well, it would mean that some cruise passengers would spend one night or more in the city before or after their cruise trip; a higher demand which the accommodation sector should be prepared to absorb.

Other related actions

This action is in line with 2.3.

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6. LCTP of Valletta

Interreg Mediterranean LOCATIONS

Project co-financed by the European Regional Development Fund

Low Carbon Transport Plan of VALLETTA

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PARAGON EUROPE

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EXECUTIVE SUMMARY

The Low Carbon Transport Plan is a methodology developed by the LOCATIONS project which is funded by the INTERREG Programme. The study outlines the application of land-based greener transport alternatives around cruise harbour cities within the Mediterranean region in order to offset the adverse impacts of cruise ships on the surrounding harbours and the city's population.

The Low Carbon Transport Plan for Valletta is a study commissioned by Lisboa e-Nova as the LOCATIONS partner who had the obligation that after contributing towards the creation of the methodology and implementing the methodology in Lisbon had to identify another cruise harbour city in the Mediterranean where it could replicate and test the Methodology. This report is the outcome of such study.

Paragon Europe was entrusted to replicate the methodology in Malta and to create a set of proposed actions aimed at offsetting the impact of cruise ships. Besides reducing the carbon footprint, these actions are also aimed at improving the visitor experience in Maltese cities that are visited by cruise tourists. The study was conducted between October 2018 and October 2019.

The report is subdivided into 5 sections. **Section 1** deals with the context and it looks at current cruise-related flows current and future trends. This section also explores the European and National Frameworks of Reference for Low Carbon Economy and GHG emissions. The context of Valletta as a cruise port and attraction for cruise passengers is also discussed. Following the outline of the context within which cruise tourism takes place, a SWOT and CAME analysis were conducted.

Section 2, outlines the Participatory Process which is the methodology used to identify, select and engage with stakeholders and to obtain the primary data on which this report is based.

Section 3, elaborates the Low Carbon Transport plan for the city of Valletta, by outlining the current scenario and challenges, the Vision and the Strategy for the LCTP and its application in Valletta. Following on from research conducted, a set of 10 actions have been identified that can be implemented in collaboration with the stakeholders over a 5-year period (until 2024). It is expected that such a plan will continue to be monitored and elaborated upon, since the cruise industry will continue to evolve over time.

Section 4, provides an insight into the management and monitoring of the activities, whilst the final section, **Section 5** provides an indication on the funding opportunities available to fund such initiatives.

The LCTP for Valletta is a study helps to bring home Valletta's objective to become a carbon-neutral city. The ideas proposed reflect the ongoing need for achieving better quality of life for the residents by reducing the adverse impact of GHG emissions and at the same time, continue to improve the quality of cruise tourism experience. This study is intended to promote a positive approach – one that is aimed at finding plausible alternatives of green mobility in and around cruise harbour cities.

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INTRODUCTION

This document represents the Low Carbon Transport Plan (LCTP) for the Valletta Harbour region in Malta. The LCTP is a methodology developed under LOCATIONS (Interreg Med programme) and it is based on Sustainable Urban Mobility Plan (SUMP) guidelines, targeting low carbon mobility in cruise destination cities.

Malta's cruise industry has been earmarked by successive governments as an industry worth developing. The Grand Harbour area, which houses the cruise terminal is within walking distance of Malta's capital city, Valletta which is also a World Heritage Site. Valletta is considered to be the main tourist attraction in Malta and it is also the main city visited by cruise passengers. The city of Valletta and the cruise harbour area have in recent years gone through an extensive regeneration process, which have led the improvement of the services offered by the city as well as increased the popularity of the city. Furthermore, the regeneration of the Grand Harbour area has led to a better visitor experience of the city. Coupled with the regeneration of the city, the accessibility to Valletta has improved – including better physical accessibility as well as an increase in the availability of green transport options which provide quicker and cleaner access to the city of Valletta.

The Cruise Industry in Malta is considered an important economic player and it is responsible for the generation of 95 Million Euro in revenues annually. However, like the situation in other cruise destinations, especially those in other Mediterranean ports, the cruise industry in Malta, has been heavily criticised due to the adverse environmental impacts, in particular emissions and physical impacts such as congestion at sites. This is compounded by the fact that the Grand Harbour area is already exposed to high emissions due to an intense vehicular usage in the area.

The Maltese government as well as the Maltese transport authorities are fully aware of the benefits of the cruise industry. They are also sensitive to the impact that this industry as well as other GHG emission generating activities such as increased use vehicles and sea transport can have on the population within the Grand Harbour area and they are committed to limit the impact as much as is possible. The Government of Malta has in the 2020 Budget announced that it is studying the possibilities of introducing shore-side power supply for cruise liners in order to combat emissions from cruise ships and other vessels. Shore-side power allows ships to turn off their engines and plug into the electrical grid while at port. Malta's conversion to LNG for electricity generation enables the country to retain low emissions during the provision of the ship-to-shore services.

The aim of the LCTP is to highlight the measures already being implemented by the Maltese Authorities however it has the added value to propose additional measures on how to further reduce the adverse impacts of cruise tourism in the area and suggest alternative measures that bring about positive social and economic impacts as well as bring about less environmental impact. The ultimate aim of this study is to find ways on how to continue benefiting from the industry and not having a situation whereby citizens vote to eliminate cruise tourism completely as has been the case in Venice or Barcelona.

SECTION 1: The Context

1.1 Current cruise-related flows

This section outlines the current cruise-related flows within Valletta Grand Harbour, the communities involved and the type of visits that visitors engage with whilst on land. The information is obtained from the National Statistics Office and information sourced from information located on the official website of the Cruise Port.

The Area

The area of focus of the Low Carbon Transport Plan (LCTP) in Malta is the Grand Harbour region, namely the area comprising Valletta, Floriana, Marsa, Vittoriosa, Senglea and Cospicua. The Grand Harbour has, since the beginning of time, been associated with maritime activity and was crucial in shaping Malta's history and identity. The natural harbours have since the 16th century been connected with commercial, maritime and trading activities. The harbours were fortified by the military Order of the Knights of St. John (from 1530s until 1798) and later reinforced by the British (1800 – 1964). Prior to the advent of the airline industry the Grand Harbour has been the main entry and exit point of the Maltese islands. Historically, the port has also been associated with the docking of large boats, warships, trading ships and in recent years cruise ships. The urban cities of Valletta, Floriana, Senglea Birgu and Sliema have over the centuries developed an infrastructure dependent on the maritime activities of the harbour areas.

Figure 1: The Grand Harbour ca 1900 showing military and commercial activity

Figure 2: Valletta Grand Harbour (source: www.google.com/maps)

The Cruise port is located on the natural harbour of Valletta – known as the Grand Harbour. The exact location of the cruise port falls between the two cities of Valletta and Floriana. In Malta, the impact of cruise tourism is demonstrated and mainly targets the Valletta Region, focusing on the City of Valletta as the main focal point of demonstration and, also incorporating the Northern and Southern Harbour Districts (as per NSO[1] Classification) – which are the main areas affected by cruise liner emissions. The Grand Harbour Region comprises 8 localities[2] which between them host almost 50% of the Maltese population, the main commercial districts, the most popular tourist destinations, with Valletta, Malta's capital city attracting 98% of all visitors to the Maltese Islands, as well as the two main international gateways; the Valletta Cruise Port Terminal and within a few kilometres the Malta International Airport.

The main characteristics of the Valletta Cruise terminal are best described as follows:

- The Port of Valletta is an established port of call and a promising homeport, having a strategic location in the middle of the Mediterranean and being well-connected to Europe, North Africa and the Middle East.

[1] National Statistics Office

[2] The 8 localities surrounding the Grand Harbour region are: Valletta, Floriana, Marsa, Paola, Cospicua, Senglea, Birgu and Kalkara.

- Malta has International features and is English-speaking
- Valletta Waterfront destination provides a warm welcome and is connected to the Valletta bus terminal.
- The port is on the doorstep of historical Valletta, a UNESCO World Heritage city, allowing the cruise liners to make the most of their calls without any time 'wasted' in arriving there (www.vallettawaterfront.com).

Regeneration of the Cruise Terminal

Following the departure of the British Forces from Malta in 1979, the Grand Harbour declined in its importance and both the Harbour area and the surrounding city of Valletta became quite dilapidated and lost much of their commercial value. Despite this the grand Harbour remained the main port of call for cruise tourism in the Maltese Islands. Valletta's regeneration potential came once again to the fore in mid-1990s. The Maltese Tourism Authorities as well as other pertinent Authorities were fully aware of the need to upgrade the existing cruise terminal, which was unable to handle the volume of visitors, apart from the area being unpleasant to the visitor. A major regeneration project was undertaken between May 2002 and June 2007. The regeneration of the areas was aimed at addressing traffic problems in the area, the restoration of the historical waterfront buildings aimed at addressing the very same purpose of welcoming guests and trade during the 'Knights of Malta, the recovery of historical steps and improving the accessibility to the capital city of Malta by re-opening of a tunnel and restoration of a lift linking the harbour to the elevated part of the city, this avoiding the use of transport to reach the city (Planning Authority 1998).

Figure 3: The Restored Façade of Pinto Wharf, Floriana known as Valletta Waterfront

The following points, outlined by the architect firm ESDA, are the impacts on the harbour and Malta resulting from this regeneration process:

IMPACTS AT A GLANCE

The development of the Valletta Port Terminal contributed to the improvement of the road networks between cities in the harbour region, enhancing vehicular and pedestrian circulation.

Each year, the Valletta Cruise Terminal hosts over one million visitors, putting in $75 million from cruise expenditure into the local economy.

All major cruise lines now offer a service traveling to Valletta's Cruise Terminal, and the number of cruise liners visiting Malta has increased in line with traffic flow to the Mediterranean area. This is due to increased spending because of new retail uses, and re-emergence of historic businesses in the immediate vicinity of the Valletta waterfront.

Malta's cruise tourism accounts for 23% of the GDP and a direct employment of 30% of the Maltese population.

Cruise ship tourism increased in the area by nearly 500%.

The development contributed nearly $12 million in jobs and enhanced the historical value of the architectural surroundings.

Source: https://www.edsaplan.com/go-with-the-flow-valletta-waterfront/

1.2 EU, National, Regional and Local Framework of Reference

Directives given from the EU are internationally levelled governance tools that shape the national laws. On a local level, the Grand Harbour Regeneration Corporation (GHRC) is identifying the required projects around the Grand Harbour region, which consists of the cities of Valletta, Floriana, Marsa, Vittoriosa, Senglea and Cospicua. These projects must be handed in to the Planning Authority which reviews and approves/rejects the proposals. Furthermore, the Planning Authority will monitor the project and has the right to terminate certain projects if they do not align with regulations or agreements. Port charges are charged at a standard rate according to the Net Tonnage of a vessel by the Malta Maritime Authority.

Documents relevant to the planning are "***The Grand Harbour Local Plan"*** (Planning Authority 2002), but also the paper ***"A Strategy for Valletta"*** (Planning Authority 2016) which addresses the issue of local air pollution by transportation that is caused by cruise liners.

A Strategy for Valletta aims to address the urgent need for urban regeneration to maintain and increase the tourist attractiveness of the city and locality. Although, the document barely mentions the cruise industry (once on page 35), it seeks to outline the growing problems plaguing the capital and inhibiting its full commercial exploitation. The policy initiative focuses

on the leading obstructions to tourist growth by providing relevant responses, namely: rejuvenation of historic and non-historic buildings; repurposing of city area for more green and open spaces; improvement of land and sea transport; improvement of pedestrian zones; creation of inviting social and economic environment; better municipal and government management. Moreover, it suggests that Geographical Information System (GIS) data collection measures/instruments need be developed to aid policy makers in the formulation of strategic planning.

The Grand Harbour Local Plan (GHLP) supplements a more comprehensive strategy for cruise tourism. It follows the same line as "A Strategy of Valletta" in sketching the pressing problems, obstructing the tourist industry (e.g. deterioration of buildings, low accessibility, lack of green spaces, etc.). Nevertheless, the GHLP breaks down specific focus areas, the Valletta/Floriana waterfront and the Cottonera Site (both of them collectively making up the Outer Harbour). With regards to the former, the local plan highlights the apparent need for new improved cruise facilities (terminals, landings, etc.), the restoration of the Pinto Stores and the rerouting of the existing road network, and the necessary expansion of the retail and service sector to better respond to passenger tastes. For Cottonera, the GHLP envisions the promotion of tourist and leisure activities, which would be implemented through the transformation of Dock No 1 to a commercial centre. As a whole, for the Outer Harbour, the plan reiterates its emphasis on the vertical outlook (i.e. for bastions to be easily visible and not to be obscured by other buildings) the greening of the waterfronts and the establishment of interlinkage between the residential, commercial and industrial zones as well as between the localities.

The National Tourism Policy 2015-2020 (Malta Tourism Authority, 2014) presents a more recent evaluation of the state and direction of cruise tourism. The paper analyses the benefit of short travelling distance and buoy offs installed on Gozo, which facilitate passenger travel in between different parts of the country. The underlying intention reverts back to more investment in the ferry facilities (particularly landings in Gozo), attracting more cruise operator, switching to more eco-friendly ships and strengthening home porting.

The Maltese national route falls in line with the wider EU agenda of promoting pan-European cooperation and stakeholder engagement; organising communicational campaigns advertising cruise tourism; developing accessible data storages and systems; incentivising a transition to renewables/electricity; and lastly establishing a maritime and coastal focus within the tourism industry.

Low Carbon Policy for Malta

The commitment and vision to decrease carbon dioxide emissions and reach the 2020 targets of reduction of carbon dioxide emissions by 5% on the 2005 by 2020 levels is outlined in the

document "Low Carbon Development Strategy" by the Ministry for Sustainable Development and Climate Change (MSDEC 2017).

Figure 4: View of the Three Cities, Grand Harbour Malta from the Norwegian Spirit July 2017 (Source: N. Theuma)

This document outlines various areas in which to tackle the reduction of CO_2. In particular with, reference to transport, the document also makes reference to the strategy by Transport Malta published in 2016. This strategy outlines the plan for the 2050 scenario. The Government's vision for this sector is underpinned by a commitment 'to provide a sustainable transport system which is efficient, inclusive, safe, integrated and reliable for people and freight, and which supports attractive urban, rural and coastal environments and communities where people want to live and work: now and in the future'.

A sustainable development approach to transport is evident from the **6 main goals** that characterise the Strategy.

Transport is seen as being a means to:

- **Support Economic Development** by:
    - reducing congestion and the removal of traffic bottlenecks, improving travel times and thereby supporting competitiveness;
    - improving reliability and efficiency to allow for better journey planning;

- strengthening transport links and connectivity, nationally and internationally, to increase access to markets;
- reducing operational costs and improving seamless interconnectivity can contribute towards increased profitability and supports competitiveness;
- improving the experience and ease of access for non-regular users with a view to contribute towards supporting the tourism product.

- **Promote Environmental and Urban Sustainability** by:
  - reducing and mitigating GHG emissions;
  - ensuring efficient and sustainable use and management of resources;
  - ensuring adaptation to climate change;
  - minimising the impact of transport to enhance landscapes and townscapes;
  - preserving natural habitats and biodiversity
  - respecting historical and heritage resources.
- **Provide Accessibility and Mobility** through:
  - easy access to daily facilities;
  - convenient and reliable journey times;
  - equitable and sustainable approach to all transport modes;
  - managing freight and urban logistics.
- **Support Social Development and Inclusion** by:
  - ensuring that travel options and journey quality are suitable for all user groups;
  - ensuring affordability for targeted social groups;
  - increasing societal awareness on the need for sustainable travel choices;
  - reducing severance and adverse impacts on specific communities;
  - integrating isolated communities.

- **Remain Safe and Secure** through:
    - resilient critical infrastructure;
    - an extended lifetime of high-quality infrastructure;
    - a reduction in injuries and loss of life from transport related accidents;
    - rapid response to emergencies and accidents;
    - protection against crime and terrorism.
- **Improved Public Health** through:
    - a clean and pleasant public realm;
    - active lifestyles;
    - reduced pollution (air, noise and light).

All the above are pertinent to the LCTP of the cruise area since all aspects are relevant to a plan whereby an important economic contributor retains its relevance whilst at the same time ensures that its impacts on the environment is minimised as much as possible.

1.3 Current cruise-related flows feature and trends in the city/port

The past years have shown continuous improvement in international cruising and the Maltese cruise sector has moved in parallel. The European cruise market particularly, which in the Mediterranean is expanding year on year, while more and larger cruise ships are being deployed in the region. A very important development for the future of the Mediterranean cruising sector is the extension of the season with winter cruising.

During the period of 2008 and 2014, the average of cruise passengers arriving in Malta was less than half a million per year (Central Bank 2019 and Fig. 5). As from 2015 onwards passenger number increased reaching 670,000 in 2017. A slight decrease in passengers was experienced during 2018, however figures for 2019 show that both the number of cruise ships calling at Valletta Harbour and the number of passengers seem to be on the increase. Interestingly, the increase in passenger arrivals was not matched by a similar rise in cruise liner calls. In 2017, 342 cruise liner calls were made, significantly more than in the previous years, but still below the 397 calls made in 2008. This shows that larger vessels, with increased accommodation capacity are calling into the Maltese ports as well as other Mediterranean ports.

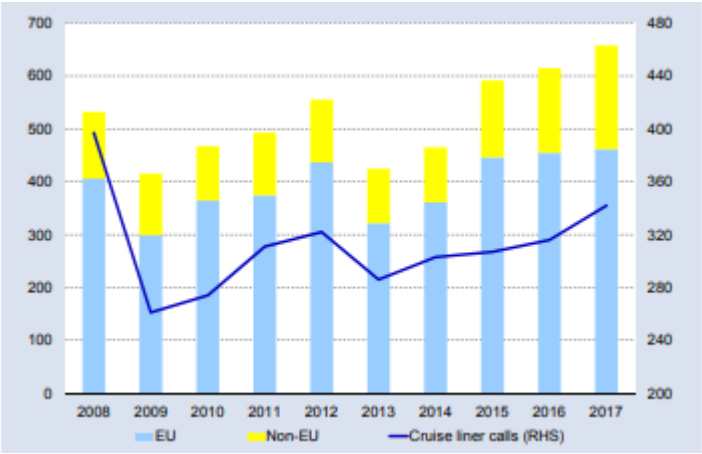

Figure 5: Cruise Ships and Passengers 2008 - 2017 (Source Central Bank of Malta)

According to the cruise ships schedule provided by the Valletta Waterfront, cruise ships' stay in the harbour ranges from 5 hrs to more than 24 hours. The cruise ships docking for more than 24 hours are smaller in loading weight. The most common stay of a cruise ship at the Grand Harbour is of 10 hours (in 2018, 73 cruise ships docked for 10 hrs and in 2019 it is expected that a total of 104 ships will dock for 10 hrs until the end of the year). In 2018 this was followed by cruise ships docking for more than 24 hrs and in 2019, it is expected that the second highest duration during 2019 of docking at port is of 9 hours (Valletta Waterfront n.d a and b).

Cruise Tourism during the Year

There were 310 cruise liner calls in 2018, 32 cruise ships less than 2017. Between 2017 and 2018, Malta saw an increase in the number of cruise passengers per ship, where the average number of passengers was of 2014 as opposed to 1.959 passengers per vessel, compared to 2017. Total cruise passengers for 2018 stood at 632.739, a drop of 5.6% over 2017.

Figure 6 shows the number of passengers per month of the year. As can be seen, the peak month for cruise passengers arriving to Malta is October for the years 2016-2018. While in 2016, this was followed closely by the months of May and September respectively, in 2017, the second highest months were August and September, whilst in 2018 April and August registered the highest number of arrivals.

The most common number of ships calling per day is of 2. However, there are days when more ships dock at the Grand Harbour with the highest number of cruise ships calling on one day is of 5 cruise ships. During 2018 there were days when there were more. During 2019 there will be a total of 12 days in which 5 cruise ships will docking simultaneously at the Grand Harbour.

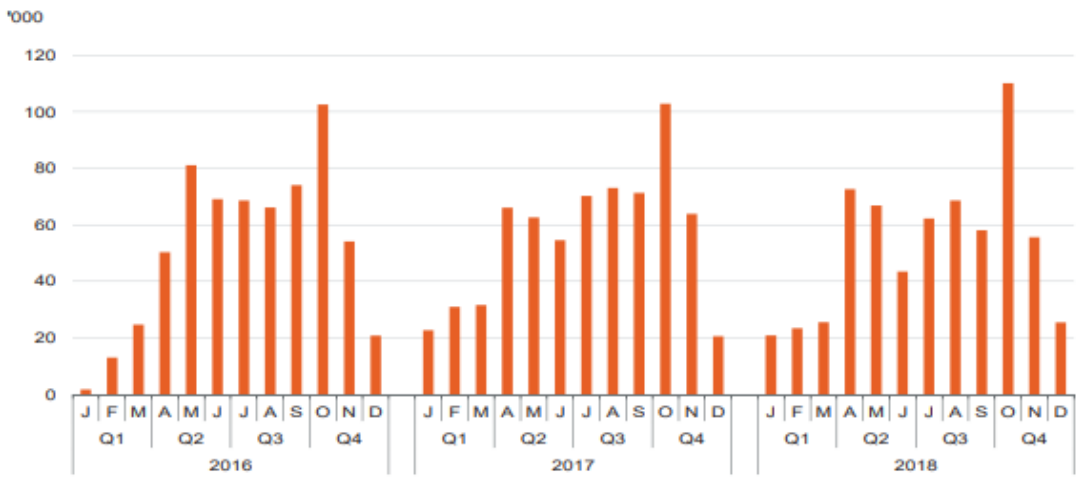

Figure 6: Number of passengers per month (2016-2017) (Source: NSO 2019)

Transit vs Landed Passengers

Passengers arriving by cruise can be divided into two groups, namely those who leave Malta on the same cruise ship (Transit) and those who leave Malta by another means of transport or remain on the island (Landed). The amount of transit and landed passengers is shown in Figure 7.

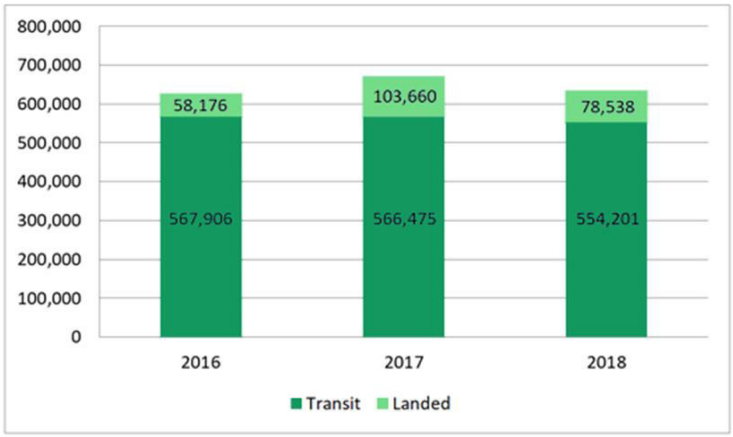

Figure 7: Transit and Landed Passengers, 2015-2017 (Source: NSO 2018)

Nationality

Of the total cruise passengers to Malta, 66.9 % came from EU Member States. In 2018, the British market was by far the biggest market which superseded the German market which was the biggest market for 2016 through 2017. The British market was followed by the German and Italian market respectively. In 2018, a shift in the market segmentation occurred, with the biggest increase being recorded from the British market, which advanced by 55.707 passengers (NSO 2018), a slight increase was recorded for the Spanish market. Overall, when compared to 2017, the EU market in 2018 declined by 50.753 passengers.

On the other hand, an increase in the non-EU front was registered during 2018, with the biggest market coming from America which was consistently the highest market throughout the three consecutive years (2016 – 2018).

Figures 8 -10 below show the ratio between EU and non-EU passengers and the main groups of nationalities within those, respectively.

Female passengers who numbered 338.096 and were in the majority of cruise passengers during 2018 (NSO 2019).

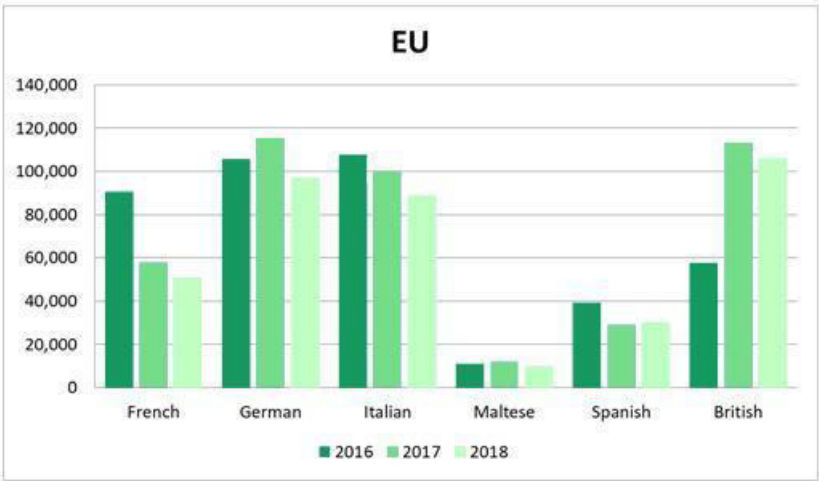

Figure 8: EU passengers divided by nationality (Source: NSO 2018)

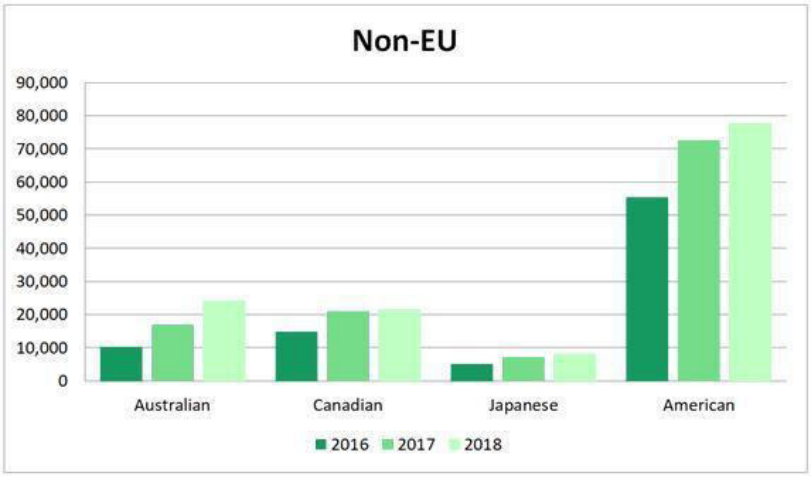

Figure 9: Non-EU passengers divided by nationality (Source: NSO 2018)

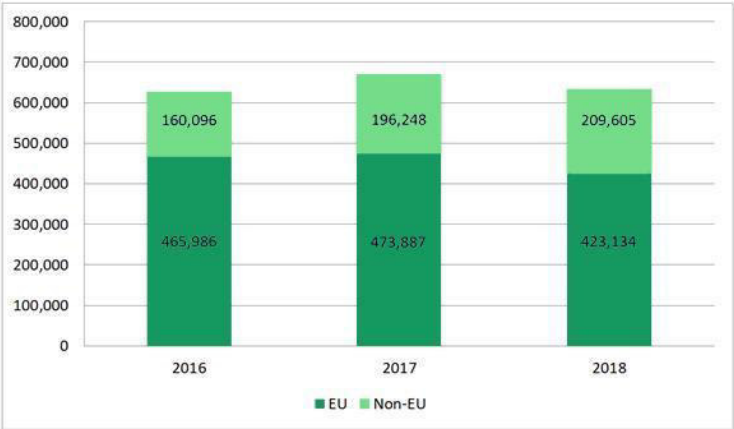

Figure 10: EU and Non-EU Passengers Compared (Source: NSO 2018)

During 2018 it was reported that Malta's cruise tourism experienced a solid growth from the North American market, with a total of 93.482 passengers, according to the NSO, outnumbering the UK visitors. This represents an increase in 2017 over the previous year of 24 percent for the American market (total 72.612) and a 30 percent increase for the Canadian market (20.870). The North American market represents almost 12% of the total cruise passengers to Malta worldwide which in 2018 was 632.739 (an increase of 7 percent) (Cruise News March 2018). This increase was reportedly due to Valletta's status as European Capital of Culture 2018. The increase of this market was also reflected in the increase of tourists from the same region.

Age

Figure 11 below shows the age groups of cruise passengers to Malta in 2018. Most passengers were between 60 and 79 years old, amounting to 252.071 (38%). These were followed by passengers aged 40-59, reaching 199.803 (32%) of the total passengers.

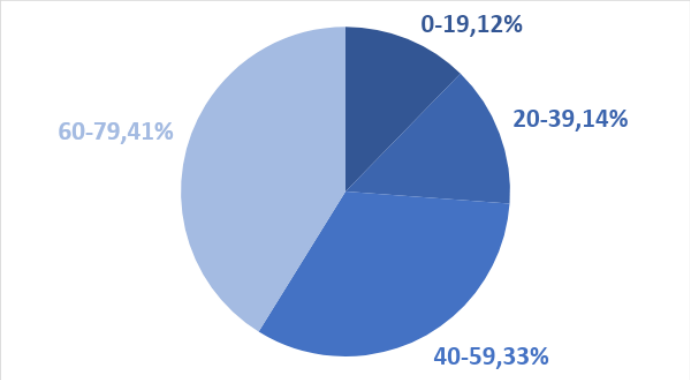

Figure 11: Passengers divided by age (Source: NSO 2019)

1.4 Cruise-sector mid- to long-term (5 to 10 years) development trends

As stated above, the Port of Valletta has been regarded as one of the finest and safest natural port havens in the Mediterranean. In recent years the cruise port has had an investment of over 30 million €. The aim of the Valletta cruise port is to continue growing. Speaking at a ceremony in 2017, the Valletta CEO Stephen Xuereb commented that the aim of the company is to continue growing and to continue improving its already good services to accommodate more travellers. He also remarked that the cruise terminal company was seeking to expand the area it already has in order to accommodate the larger cruise vessels that will be servicing the industry in the near future (Malta Today, 2017).

According to the official website of the Valletta Waterfront, the Valletta Cruise Port thrives to engage in activities that link the historic experience with modern innovation to develop more transportation and other economic activities connected with the port. The Valletta Cruise terminal has been built in a way that it offers an excellent service as a contemporary Mediterranean port, both as an established port-of-call as well as a homeport.

In 2016, the cruise tourism industry contributed 95 million € to the Maltese economy (Malta Today, 2017a). Conscious of its role as a driving force within Malta's economy, Valletta Cruise Port has already entered into agreements with bodies and enterprises aimed at defining the

strategic lines of development, while proactively pursuing projects increasing quality and improving the cost-benefit ratio to the various users.

The strategy is based on a strong emphasis on the product; on high quality services; a healthy environment and regular events that promote Valletta and Malta as an experience rather than just another destination. The harmonious blend between the past, present and future has made the Valletta Waterfront one of the most sought-out destinations by locals, cruise passengers and tourists alike.

1.4 City Context

Malta has received 2.6 million visitors in 2018. The main area of cruise tourism in Malta is the capital city of Malta, Valletta. Valletta is a World Heritage Site and annually receives 98% of the visitors to Malta. Valletta has the main heritage sites and attractions the main museums and offers panoramic views of the two harbours, Marsamxett Harbour (on the western side of Valletta) and the Grand Harbour (on the Eastern side of Valletta) (Fig 12).

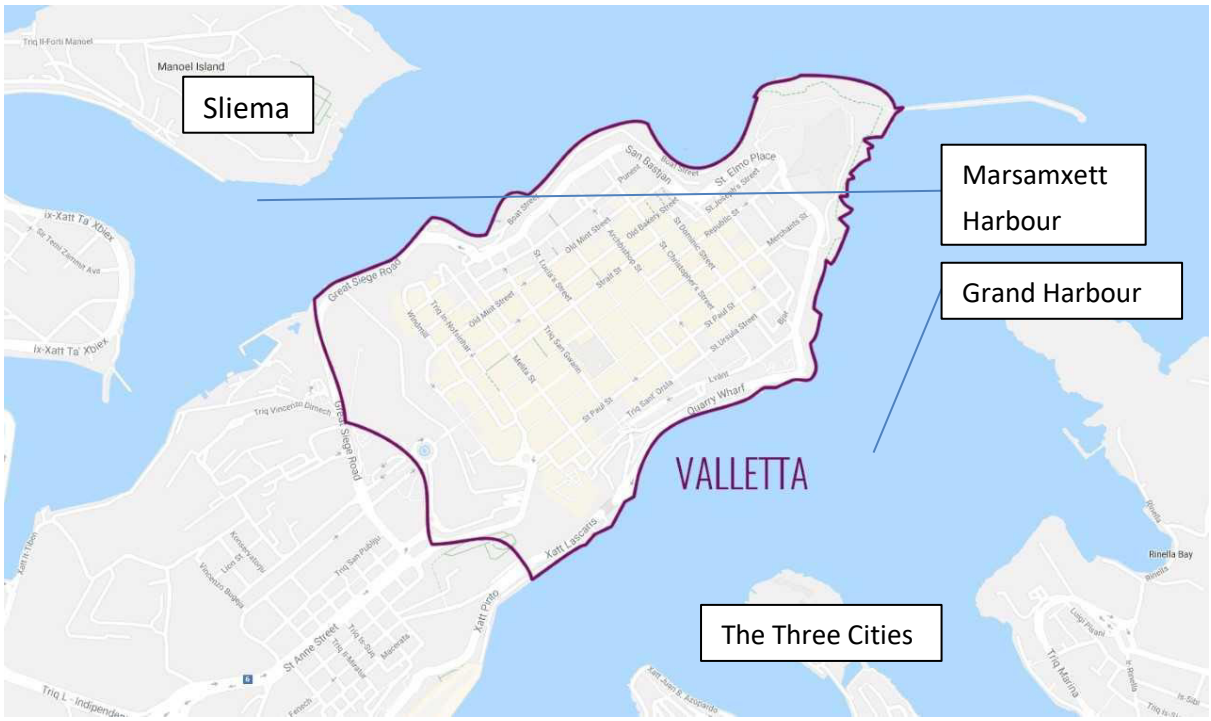

Figure 12: The City of Valletta, showing the two main harbours (source google maps)

Those that descend the boat have various options to explore Valletta as well as the Maltese Islands. A selection of tours is made available for visitors on the boat. Tour times on land vary from 4 hours to 8 hours (Fig 13).

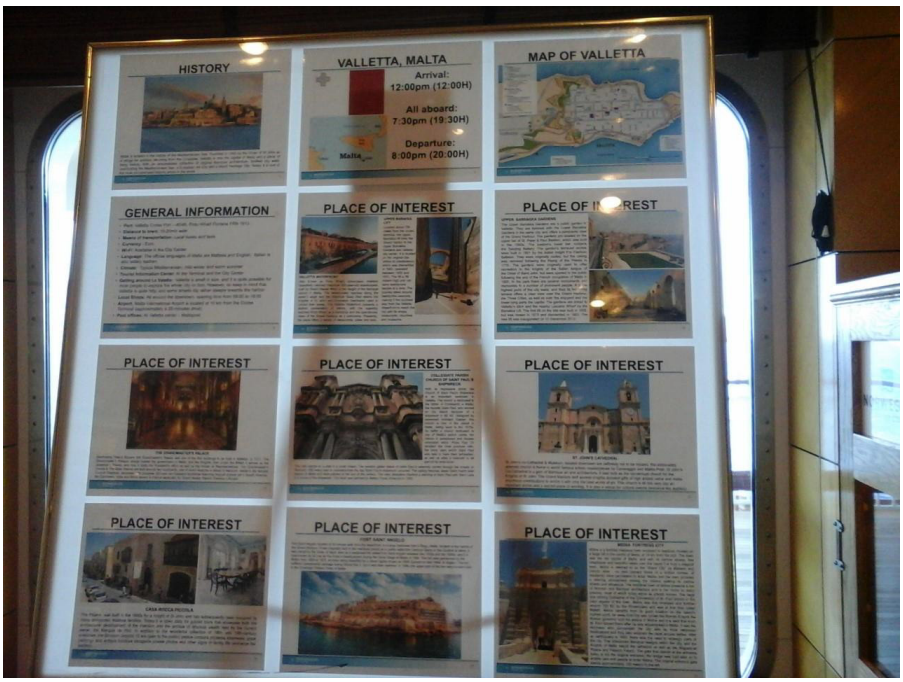

Figure 13: Malta Day Information Stand aboard the Norwegian Spirit July 2017 (Source: N. Theuma)

Visitors can opt for:

- Pre-booked tours via the Cruise ship as outlined above. Pre- booked tours include visits to Valletta and Mdina (a Medieval City), the Three Cities, the Southern Regions,
- Visit the Capital City which is located just 10 minutes away on foot
- Take a Hop-On Hop-Off bus and visit either the Northern regions of the island or the Southern Regions
- Take a taxi
- Use a pre-arranged private guided tour
- During 2019 e-mobility facilities (of electric cars and e-bikes) were introduced near the Valletta lift

From time to time, features such as that shown on the Daily Telegraph[3], also give advice to visitors where there they can go.

Valletta and the surrounding towns of Sliema and the Three Cities (see Fig 12, above) are within easy reach with each of the areas being situated less than 1 km away across the harbours. Valletta city is less than 10 minutes away from the cruise terminal and is easily reached on foot via a tunnel and a lift, which was part of a full regeneration process of the harbour and cruise terminal (see Fig 14).

Figure 14: Valletta Lift (Source: www.seanmallia.com)

The Three Cities which are located just across the landing spot and reachable via the traditional water taxi – which are operated using fossil fuels.

On occasions, when more than 3 cruise ships dock into the harbour, the Three Cities become the main focal point of visitors as cruise ships dock closer to the cities – which is at times a concern for the cities and their residents due to the air pollution generated.

Alternative offers to cruise passengers include the South Eastern region of the Maltese Islands (visits to Blue Grotto), visits to Mdina and Rabat and Gozo Tour. Visits to the sister island of Gozo are appealing to the visitors, however they are not deemed feasible due to distances

[3] https://www.telegraph.co.uk/travel/cruises/port-guides/valletta-cruise-port-guide/?WT.mc_id=tmg_share_em

and time incurred to reach the sister island as a trip to the island of Gozo by speed boats takes circa 45 minutes by boat each way and then there is very limited time for a tour on the island. For all these tours and visits, land transport via car hire, taxi services, buses or hop-on-hop-off services are offered. The only exception is Gozo where a multi-modal surface transport is used combining sea transport and land transport. An informant from one cruise handling company mentioned that the most popular tours and visits are Valletta (amongst first time visitors) and the South Eastern regions (via hop-on hop off buses) for repeat visitors. It seems therefore that first time visitors could cause less environmental impact than repeat visitors who use vehicles and therefore a bigger carbon footprint to reach their tour destination. We are currently conducting specific studies to determine relative percentages of usage as data on which transport modes are most used and if the observations made by the cruise representative can be substantiated or not.

Figure 15: The Islands of Malta showing the main sites outside Valletta visited by cruise passengers

Figures 16 – 18 show three different tour options for cruise passengers (i) the Valletta Walking Tour on foot (Figure 16), the Three Cities Boat Tour (Figure 17) and the Speedboat Tour to Gozo and Comino (Figure 18).

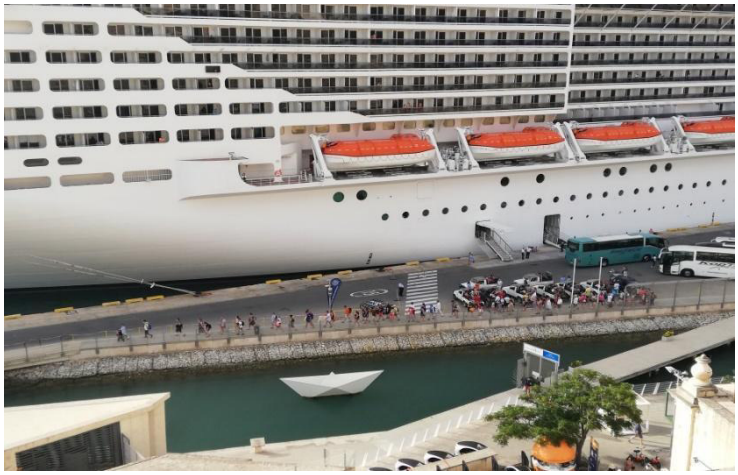

Figure 16: Valletta Tour on Foot

Figure 17: Boat Tour to the Three Cities

Figure 18: Boat Tour to the Three Cities

Visiting Valletta

The City of Valletta is easily reached. Two main options are available for visitors visiting Valletta. The first option is the most convenient and the one with the least carbon footprint is the walking route. Upon descending from the boat passengers exit the terminal gate and walk on the main road they cross to a recovered tunnel and then via a restored lift (Figure 14 above). The lift offers a panoramic view of The Three Cities and the Grand harbour. As soon as visitors exit the lift, they find themselves into the Upper Barrakka Gardens which are one of the main vantage points of the city. The whole journey lasts 10 minutes. From these gardens, passengers find themselves at the heart of Valletta following a short walking distance.

The second option is that of the coaches doing a combined tour of Valletta and other cities. This type of tour entails the use of coaches. Coaches leave the cruise terminal and go up Crucifix Hill to Floriana (the city next to Valletta and the city through which all traffic has to go through to access Valletta's entry points). Coaches drop off passengers on roundabout which is about 15minutes away from Valletta on foot. Due to recent refurbishment of the main entrance to Valletta, which has become pedestrianised, organised transport visitors have a longer distance on foot to reach Valletta. This way of reaching Valletta poses a number of challenges to elderly visitors on the coaches, can cause traffic congestion on to the main road to Valletta and has a higher carbon footprint since if the coaches are unable to find an ideal spot to drop off passengers, then they have to circle the roundabout. This also means that coaches will have to drive away and return to pick-up their passengers after the Valletta Tour. Tourist Guides have remarked that since the regeneration of Valletta's entrance and the introduction of the access system described above, the tour has become more difficult for visitors and the tor of Valletta is at times drastically reduced.

Figure 19: From Valletta Cruise Terminal to Valletta via Floriana

The following are the main modes of transport available to reach the cruise passenger terminal. Numerous transportation services are available to and from the Valletta Sea Passenger Terminal, thus making the Port of Valletta well-connected to Valletta itself and the rest of the Maltese Islands.

By Air – The Malta International Airport services major regional and international air carriers. Valletta Cruise Port is approximately a 15 minutes' drive from the airport, where taxis are readily available.

By Taxi – A booking office is available on the Valletta Waterfront promenade providing taxi services and tours at established rates.

By Bus – Hop-on, hop-off bus services are available offering transport to diverse place of interest. Booths from where to book your bus service to Valletta are available on the Valletta Waterfront promenade. A public bus service to Valletta (Route 130) is also available at 2.60 € including a day ticket on all the public bus network.

By Traditional *Dghajsa* (boat) and Water Taxi – Tours around the historic Maltese waters including the Grand Harbour, using traditional boats and water taxis are available.

On Foot – One may opt to stroll to Valletta which takes approximately 25 minutes through Crucifix Hill, or 5 minutes through the tunnel and the lift. Prior to the regeneration project and the lift, the only access to Valletta was via two steep hills, one through Floriana or another less known through Valletta. This also led to excessive use of vehicles and manipulation of innocent visitors by taxi drivers. This has now been circumvented; however, the impression still is that there is excessive use of vehicular traffic which we will investigate further.

By Horsecab – Available in the road adjacent to the Valletta Waterfront. These offer traditional horsecab rides to the City.

By E-Mobility – Passengers have the option to explore the city using e-mobility. There are two options available the first is Rentable electric 2-seater cars located as soon as one exits the terminal.

Figure 20: Electric Cars Outside Valletta Cruise Terminal

The second is the Tallinja E-bike which offers the opportunity to get around the city in a faster way and take in its beauty from a different point of view. A map of the city is provided on the screen as well as information on the various stations one can drop off the bike. The prices vary depending if one owns a Tal-linja card or not, but even so, are still very affordable. Helmets, however, are not provided.

Figure 21: E-Bikes parking Station – Valletta Lift

Figure 22: Map of Valletta – for E-Bike users

Existing Road Network, Transport Services and Infrastructure in the City/Port

The Cruise terminal is located 15 minutes away from the airport with a distance of just over 9km. The airport and the Cruise Port are connected by a recently upgraded road network funded through the TEN-T programme. At the time of research further upgrading of the road infrastructure aimed at relieving transport pressure points and congestion is underway.

The regeneration of the plan for the cruise terminal sought to create an improved access to the Grand Harbour, this included good connections to the arterial road system and measures for better peripheral movement along the shoreline including full pedestrian access.

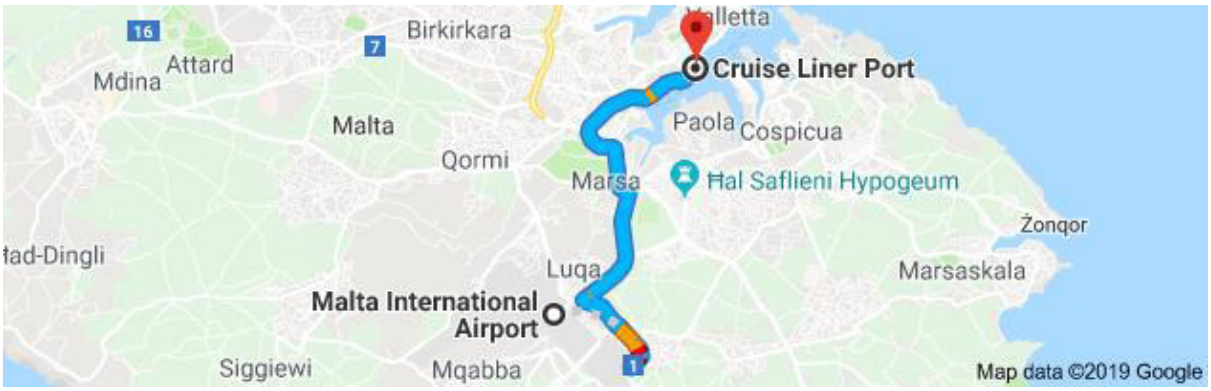

Figure 23: Malta International Airport link to Valletta Cruise Port (Source: www.google.com/maps)

Vehicular circulation within the terminal and accessibility from terminal to sites

The vehicular circulation within the terminal is limited to companies who work directly work with the cruise companies. Within the terminal there is space for circa fourteen (14) coaches. At night-time the cruise terminal is closed and so no vehicular access within the terminal at night. The site has a comprehensive network of pedestrian routes, giving public access to the waterfront, except for those areas restricted for security reasons. The creation of a landscaped open space/accessible to the public was an integral element of the development proposal.

Attractions in Valletta

Valletta, which is a UNESCO World Heritage Site (designated in 1980) is pedestrian-friendly and has major attractions which include unique baroque architecture. Some of the main Valletta attractions include:

- The Palace of the Grand Masters and the Armoury
- The Co-Cathedral of St. John which has two Caravaggio paintings and its museums
- The Manoel Theatre built by the Knights of St. John
- Several baroque buildings and palaces
- Renzo Piano designed houses of Parliament
- Churches, which in themselves are works of art
- Museums, including the Museum of Archaeology, the Museum of Fine Arts, the Museums of Fortifications and the World War II Museum
- Public gardens with panoramic views and a botanical garden
- Several Restaurants
- Trade and artisan crafts shops

An analysis of visitor movements in Valletta and interviews with tourist guides conducting guided tours for cruise passengers, carried out as part of the LCTP study have demonstrated the following visitor patterns in Valletta. The first stop is the upper Barrakka Gardens, followed by the Co-Cathedral of St. John, the Palace of the Grand Masters and the Armoury and the

Museum of Archaeology. This visitor movement in the city is problematic, especially when there are more than two cruise ships docked at the port.

A study conducted by the Malta Tourism Authority in 1998, on cruise tourism in Malta (MTA 1998) remarked that for cruise tourism to flourish in Malta there was the need for more attractions in Valletta available for cruise passengers and more high-end products for tourists coming to Malta via cruise ships and that shops in Valletta need to remain open during the afternoons. Thanks to the regeneration of the city of Valletta, today there are international brands available and thus satisfying one particular need for the visitors, however, one aspect that has been mentioned by operators as well as persons working on cruise ships is that there is very little authentic or taste of Malta available for visitors. It seems therefore that Valletta has gone through a whole cycle whereby the city has gone from a state limited offer for cruise passengers to a state where Valletta has become too globalized and too commercial for the cruise visitors. This coupled with the change in the overall typology of cruise passengers could also affect the way in which visitors experience Valletta and consequently, the impacts on Valletta may be therefore more adverse than originally thought.

Services

The Valletta Waterfront includes two terminals namely the Pinto Terminal and the Forni - Magazino Terminal. These are located within the restored historical buildings next to Pinto Wharf (Fig 24 and Fig 25). The restored historic buildings include state of the art check-in facilities, a comfortable waiting area, restroom facilities and baggage facilities. Both terminals are accessible to passengers with special needs.

Figure 24: Valletta Waterfront showing Pinto Wharf and the Restaurants (source Google maps)

Figure 25: Map showing the Valletta Waterfront Area (Source Google Maps)

Forni Magazino Terminal also houses a duty-free shopping centre displaying some of the more refined crafts of the Maltese islands. The waterfront area hosts several international franchised restaurants and bars with historical buildings as a backdrop.

1.5 SWOT Analysis

Based on the research conducted and the information obtained from the stakeholders a SWOT analysis of cruise tourist mobility in Valletta and elsewhere was conducted. The findings are grouped into four main categories under STRENGTHS, WEAKNESSES, OPPORTUNITIES and THREATS and presented in Figure 26. Building on the SWOT, a CAME analysis representing Change, Adapt, Maintain, Explore, was carried out and this is represented in Figure 27.

The main strengths are (i) the harbour's proximity to Valletta (ii) increased mobility offer, including e-mobility which has made Valletta more accessible to the visitor. However, should a visitor opt to take a tour of Malta, the entry into Valletta is more complex as it involves a bus ride and then a longer walk to reach the city centre and therefore a higher carbon footprint and less comfort for the visitor. The size of the islands gives Malta an added advantage in terms of the tourist -offer as cruise visitors can easily visit other places than Valletta, however, this can be seen as a weakness as such an option can generate a considerable amount on physical pressure on the environment and creates higher GHG emissions in certain parts of Malta. Other weakness is low visitor experience that could result from the congregation of different tourist groups at sites of major interest.

The CAME diagram identifies those aspects and activities within the harbour area or are currently being offered that can be maintained. These include current services offered by the harbour and the accessibility to Valletta as well as to continue developing the e-mobility services. CAME further identifies measures that need to be taken to correct major adverse issues such as traffic congestion and emissions by cruise ships as well as other transport -related activities in the harbour not necessarily related to cruise tourism. The analysis illustrates that cruise tourism will continue to grow and therefore requires of those that manage the industry an understanding of the impact that the industry can have on the community and the areas in which it is developed. Thus, it calls for the continued effort by all stakeholders involved to work alongside one other both transversally and horizontally. The sector provides plenty of areas or opportunities worth exploring, such as more technology-based devises that can enhance the level of experience, explore further the enhanced mobility within the city and to other areas on the Maltese Islands. This is also an invitation for further development of alternative modes of clean-tech transport.

STRENGTHS

Historical setting and background

Valletta Waterfront destination provides a warm welcome and is connected to the Valletta bus terminal.

The port is on the doorstep of historical Valletta, a UNESCO World Heritage city, allowing the cruiser to make the most of their call without any time 'wasted' in arriving there

Modern amenities at the Port Terminal

Excellent Accessibility to Valletta

Positive Economic Impact for Maltese cruise handling companies

Generation of Direct and Indirect Employment

Small Island - other destinations /attractions are within reach

WEAKNESSES

Pollution and High Carbon Footprint

Traffic Congestion

Adverse Socio-Cultural Impacts

Adverse Socio-Economic Impacts

Lack of Visitor Management at sites may lead to low visitor experience

Communication between the different entities

Competition amongst service providers for onshore activities

Some excursions could be better organised

Island Tours cause major impact on GHG

OPPORTUNITIES

Opportunities for local businesses selling local /Maltese products

Other centres /localities could benefit from cruise tourism

Attract boutique cruises to other areas of the Maltese Islands

Opportunities to develop further activities on shore that do not require major investment

Use of technology (such as apps) to give more information about enjoying the cities

THREATS

Increased globalisation and commoditisation of product offer

Bigger ships – bigger impacts

Other ports may become more popular leading to a decline in number of cruise ship calls

Cruise passengers opt to stay on board as they do not know what Malta could offer

External factors such as changes in security issues, environmental threats, climate change

Cannot influence how cruise companies sell the Malta attraction

Figure 26: SWOT Analysis

MAINTAIN

Retain services currently offered by the Valletta Waterfront

Retain Port Services

Current accessibility to Valletta for on-foot visitors is excellent

Routine data collected and data of anticipated number of visitors to be better used for better coordination with service providers such as attractions and non-organised transport providers

Retain and develop further the e-mobility options currently available

CORRECT

Correct impacts resulting from pollution resulting from traffic congestion

Manage better the social and cultural impacts

Provide more option for visitors on land to

Lack of Visitor Management at sites may lead to low visitor experience

Improve co-ordination between the different entities and service providers

EXPLORE

Opportunities to develop technology- based devises that can enhance the visitor experience

Improve accessibility to Valletta for all visitors

Study connectivity between the harbour cities to encourage mobility on foot

Study proposal for enhanced mobility to and within Valletta

Opportunity for better traffic management on cruise days by creating alternative access points to Valletta

Explore fun ways how to encourage persons to use alternative modes of transport

Study ways how other localities could benefit from cruise tourism

Encourage more local businesses selling local /Maltese products

Attract boutique cruises to other areas of the Maltese Islands

Opportunities to develop further activities on shore that do not require major investments

ADAPT

Appreciate that cruise tourism will continue to increase

Ensure that residents enjoy a quality of life and a better economic impact resulting from cruise tourism activity

Understand that cruise tourism is a transversal activity and therefore needs the co-operation of all entities for its better management

Figure 27: CAME Analysis

SECTION 2: The Participatory Process

Following an initial diagnosis of the area, 23 key stakeholders were identified. These were listed as stakeholders that could have an important contribution in the way in which the LCTP for the Valletta Cruise Terminal is developed.

2.1 Stakeholder Identification

At the initial stages of the project a list of possible stakeholders directly or indirectly involved with cruise tourism were identified. These included representatives from the communities which are impacted directly by the cruise activity, cruise handling companies, onshore service providers, and pertinent authorities, namely tourism and transport.

Whereas the full list of the Stakeholders is in Appendix 1, Table 1 below identifies the respective entities who have participated in the study.

Table 1: List of Stakeholders' Groups

Stakeholder Group	Entities
Communities	Valletta Local Council, Vittoriosa Local Council, Cospicua Local Council, Senglea Local Council, Mdina Local Council, Floriana Local Council, community resident groups where present in these localities and the Local Council Association
Cruise Handling Companies	Companies handling cruise-services on land
On-Shore Service Providers	Transport companies, tourist guiding services, tour organisers
Authorities	Malta Transport Authority and Malta Tourism Authority, Valletta Cruise Port, Valletta Management Unit, MRA

2.2 Participatory Process and Design

The stakeholders were approached first by a phone call and a request for a meeting to brief them about the study and to also obtain initial information. Eight face-to-face interviews were held during the period. Attempts were also made to conduct focus group sessions. Several attempts were made to bring entities together, in March 2019 and again in April 2019 but this took time to materialise mainly because persons, either found objection to meet and discuss with others or else there were other external factors such as local council elections which prevented participants from attending.

The team decided to continue holding face-face meetings with the various players and entities.

Until the time of this third report the following entities were contacted and interviewed:

- Tourist Guides – December 2018
- Mayor Valletta – date of meeting December 2018
- Executive Secretary, Bormla Local Council date of meeting December 2018
- Floriana Council Representatives – January 2019, September 2019
- Malta Transport Authority – January 2019
- Representative of Cruise Company 1, 2 and 3 – March 2019, July and August 2019
- Representative of Transport Services – March 2019 and May 2019
- Malta Tourism Authority – July 2019
- Senglea Local Council – July 2019
- Vittoriosa Local Council – July 2019
- Tour Services Organiser – July 2019
- Valletta Management Unit - August 2019

The above stakeholders were asked to give their views and experiences on the main impacts of cruise tourism on Malta in general and on the Grand Harbour area in particular. The views of these participants on the Cruise Tourism impacts are outlined below.

A stakeholder breakfast meeting was held in May 2019 (Fig 28) where stakeholders from urban development planning, Malta Transport Authority and a service provider met to discuss initial modular packages and initial perspectives on the way forward.

Figure 28: Stakeholders' Breakfast Meeting, May 2019

Summary of the Main Findings

Discussions with stakeholders were very useful as they have elicited an insight into the impacts of cruise tourism both from an impact as well as management perspective. Mainly, communities argued mainly about the need to address the issue of harmful gas emissions resulting from cruise ships and the need to address the extent of people walking about on cruise days, especially during days when more than cruise ship docks at the harbour. Communities also remarked on the opportunities that cruise tourism offers for more economic diversity in terms of product offer.

From an operational perspective a number of issues were raised these included, the needs to offer alternatives to visitors both in terms of what they can do whilst on land as well as offers to experience Malta differently, especially repeat visitors. Furthermore, research identified that companies tend to follow same routes when organising land tours thus resulting in congestion at specific nodes of interest at specific times. Exploring better ways on how to manage better the visitor flows is essential. Research with guides highlighted the diverse needs of cruise visitors – both form a mobility aspects such as elderly or parents with young

children as well as motivation – not all cruise visitors are satisfied with organised tours on land, and as with tourists, cruise visitors are also becoming more independent in the way they explore the cities they visit and hence require alternative modes of experiencing their surroundings.

Providers of activities also spoke about the need for diversity and also the need to adapt to newer and greener technology. There is an understanding that for cruise tourism to remain viable the industry needs to adapt itself and adjust to the needs of the environment as well as to be sensitive towards the needs of visitors. Authorities remarked that they are already planning to implement and develop further the offer of green transport on land and are committed to continue developing the offer.

One issue that remained a constant was that despite stakeholders expressing similar thoughts, it seems that some stakeholders work in parallel and rarely in consultation with one another. This study has been an attempt to bring stakeholders which traditionally did not work together at least to understand the perspectives of each other.

The interviews conducted with the stakeholders where supported by observation sessions held within the vicinity of the harbour to observe first-hand the movement of persons and vehicles. Furthermore, we conducted ad hoc interviews with cruise passengers and crew in the harbour area or on their way back to the boat.

Data obtained through our interviews and observations was documented and analysed and this served as the basis for the next section on the preparation of the LCTP for Valletta.

SECTION 3: Low-Carbon Transport Plan

3.1 Current Scenario and Challenges

The Grand Harbour region is located within the urbanised centre of Malta. As described in the previous chapters this area is characterised by challenges in transport management and is at the time of the study going through a major road network upgrade. During the past 10 years, there were other upgrades within the area – all aimed at rejuvenating the area as well as addressing the heavy traffic congestion issues that afflict all the surrounding localities of the cruise terminal.

Recent strategy developed by the government - *A Strategy for Valletta*[4] focuses on two key transport related aspects – accessibility and sustainability. Those are also considered as the main challenges for Valletta's Low Carbon Transport Plan. For instance, although, initiatives such as the lift, tunnel passage are in place, the majority of the cruise passengers refrain from entering the city by walking and still prefer non-sustainable modes of transport. The topography alone sanctions the accessibility with low quality passageways for pedestrians and narrow roads for vehicular users. However, the potential lies with the introduction of external connecting services, such as under city tunnels as proposed by one leading developer (Times of Malta 2015) or pedestrian bridges as already proposed in the 1950s and again in 2017 by architects (Times of Malta 2017 a and b) which could open up the framework and remove the bottlenecks. This can prove to be an efficient alternative for medium distance point of interest such as the Three Cities located across Valletta and the Harbour area itself; reducing the need for journeys, where possible; prioritizing, promoting and developing the use of public transport and active modes of transport, thus limiting traffic congestion in the localities surrounding Valletta and therefore contributing towards the reduction of GHG emissions. Furthermore, such action would raise the quality of Valletta as a WHS (Malta Today, 2017b).

[4] https://publicservice.gov.mt/en/Documents/Valletta_Strategy.pdf

Sliema

Cottonera – The Three Cities

Figure 29: Satellite View of the two harbours (Source http://www.cruiserswiki.org/wiki/Marsamxett_Harbour)

Second challenge is the uptake of sustainable transport options available at the port for the cruise passengers which has been described earlier together with the improvement and innovation of the public transport network, creating parking/fuelling facilities, more carpooling/car-sharing/bike-sharing schemes, better bike and cycling infrastructure, which will surely result in better living conditions for both residents and tourists.

Numerous mobility solutions are being introduced, namely in the form of shared mobility managed by online websites, apps and other technology. Yet, replacing the ownership of fossil fuel powered vehicles with electric vehicles will reduce noise and air pollution in urban areas but will still result in lack of parking and traffic. Congestion of traffic at port remains as a challenge as cruise passengers mostly prefer way the use of tourist coaches – leading to chaos, noise pollution and confusion at the harbour area with a ripple effect on the traffic flow circulating around the city on cruise days.

Table 2: Identified Challenges and Associated Causes and Consequences

Cause	Challenge	Consequences
- Lack of shade and convenient walking routes - Hilly topography - Limited capacity of the lift - Unpleasant experience of the tunnel access - smell, pollution, narrow, noise - lack of knowledge of other access paths/ methods - lack of assistance for the elderly tourists	Limited and inconvenient pedestrian accessibility to Valletta	High number of private cars and taxis on the roads. High number of tourist coaches on the roads and in the entrance of Valletta by Floriana, particularly due to lack of parking
-Limited capacity -Limited routes and safety -Lack of promotion and knowledge -Low use of public transport and bad publicity online re Malta's public transport situation (delays, capacity, etc.)	Slow uptake of available sustainable modes of transport - public transport, electric buses, e-bikes, carpooling, e-car sharing etc..	Traffic congestion Increase in emissions due to tourist coaches travelling from harbour to Valletta and looking for parking
-Non-sustainable transport choice of cruise passengers (tourist coaches, private car hire, taxis) -Large and slow vehicles on the roads -Parking issues due to lack of parking space both for coaches and private vehicles	Increased traffic Congestion in the harbour area	Low quality of life for the residents and tourists High carbon emissions Air and Noise pollution

3.2 Vision

'Valletta Waterfront – the stepping- stone to a sustainable city

Vision is to reduce the environmental impact of the cruise passengers mobility choices on Valletta's and Grand Harbour area ecosystem by providing an efficient, safe and easy to use low carbon transport systems which will stimulate and increase the quality of life in Valletta and economic growth by providing high quality sustainable mobility solutions.

In line with the commitment of the competent authorities who in 2017 signed the Valletta declaration as well as through the documents and position papers on the city, including the Planning Authority's Strategy for Valletta, the emphasis for Valletta and the harbour cities is built on sustainability, greener environments and a better quality of life. For this aim the vision and the objectives agreed so far with the stakeholders revolve around integrated regeneration, social inclusion of persons who are on the verge of poverty and the reinforcement of Valletta as one of the leading business hubs of and a core commercial node for retail, office, culture, tourism a leisure services.

In view of the above, Valletta and its current political representatives are committed to transition Valletta into a green, sustainable and economically viable city. There is enough evidence to suggest that one of the main issues that needs to be addressed in order to speed up the transition is to address carbon emissions resulting from traffic as well as to ensure that those visiting Valletta have a rewarding visit at minimal damage to the city. Valletta needs to manage better traffic circulation within and around the city, continue to work on identifying better ways for accessing the city and to continue to ensure good quality tourism product that adds value to tourists and the community.

Hence the vision projected for the cruise terminal and its related activities is one which ensures benefits for both the visited and the visitors – that is the city and its residents and the tourists visiting Valletta. For this aim the following vision for 2030 is projected.

3.3 Strategy

On a general perspective the main objective of this vision is to encourage the cruise passengers/ tourists to enjoy Valletta harbour and the surrounding city areas sustainably by respecting the social environment of the city, promoting economic prosperity of the harbour cities whilst limiting the adverse impacts on the physical environment resulting from use of vehicles required to carry visitors from the harbour to the city and back. It is also important to ensure that the local population – especially those living in constant and direct contact with the harbour have better air quality than is currently the case.

Following this objective, strategies have been defined to overcome each of the challenges identified and associate them with key themes namely sustainable choices, smart infrastructure and effective planning.

Figure 30: Layout of the Challenges and the Strategy to be followed

This strategy entails that all parties, starting from the cruise port company, the local authorities, local communities and service providers are all on the same page. This research has continued to emphasise how much there is a lack of cooperation and collaboration between the various entities. In some cases, the cruise handler is also an operator and hence also has a vested interest in the type of offers that they give to companies.

3.4 Actions and Indicators

The following table shows the foreseen actions for the Low Carbon Transport Strategy of Valletta addressing the challenges determined in previous section. Each action and indicators that are proposed will be elaborated in detail via an information sheet under the complementary strategies' actions. Targeted indicators are expected to be achieved by 2021 together with the support of the related stakeholders.

Table 3: Strategies and related Actions

Strategy	Actions
Strategy 1: influencing passengers' behaviours towards more sustainable modes via promoting and providing smart choices and campaigns	**Action 1:** Creation and Promotion of accessible information (maps/ apps) for cruise passengers– that make visits to the cities more sustainable
	Action 2: Introducing incentive packages for those who are choosing sustainable mobility options
	Action 3: Raising awareness among stakeholders of the benefits of sustainable modes through campaigns
Strategy 2: Improve the infrastructure for sustainable mobility options to increase the uptake of sustainable mobility solutions.	**Action 4:** Improving the potential and attractiveness of Valletta's walking and cycling opportunities and networks
	Action 5: Creation of alternative connections between Valletta and the Harbour cities
	Action 6: Introducing assistive technologies and alternative solutions for elderly passengers & those with mobility difficulties
Strategy 3: Using innovative tools to plan and manage transport within the Harbour area to lower the emissions & avoid traffic congestion	**Action 7:** Improving the attractiveness and perception of public transport and promote their use.
	Action 8: Encourage a better distribution of routes for passengers who wish to visit places outside Valletta
	Action 9: Use of intelligent transport tools to encourage alternative entry into Valletta during cruise days thus softening the transport impact
	Action 10: Organise better the parking area around the terminal to have a park and ride for transport providers and Set up "no idle zones" within and around the harbour to keep the air clean and cut down on hazardous carbon dioxide emissions by turning off engines.

Complementary Strategy N.1

Influencing passengers' behaviour towards more sustainable modes via promoting and providing smart choices and campaigns

Table 4: Action 1 Information Sheet

Action1: Creation and Promotion of apps for cruise passengers– that make visits to the cities more sustainable
Objective: - Increase the number of people exploring the city by using the existing sustainable modes of transport and by walking.
Activities: - Identify existing apps promoting sustainable mobility in Malta and explore opportunities to collaborate - Develop a web-based platform dedicated specifically to cruise passengers to introduce and promote available sustainable mobility solutions - Identify alternative routes and packages together with Destination Management Companies to promote via the platform. - Enhance the availability and capacity of the walking routes and tours. - Integrate multi-model transport routes for medium length destinations.
Related Actions: Action 2: Introducing incentive/reward packages for those who are choosing sustainable mobility options Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns Action 4: Improving the potential and attractiveness of the Valletta's walking and cycling opportunities and networks Action 7: Improving the attractiveness and perception of public transport to promote their use.
Indicators and Targets: - Share of cruise passengers walking and/or using public transport: - Currently: 7% for walking and 4% public transport 2% using electric vehicles (depending on the mode) - Objective: 50% walking and/or using Public Transport, 20% using e-bikes, 10% using e-vehicles, 5% using car sharing/carpooling.

Description:

Action 1 focuses on the promotion of the uptake of existing sustainable mobility services and walking routes by cruise passengers via transferring relevant information using online platforms and apps. First activity will aim to explore collaboration opportunities with existing platforms and apps and seek further assistance to those already available. Following the mapping, if it is identified as a requirement, a dedicated platform will be developed to assist

cruise passengers to plan their sustainable journeys. In order to increase the uptake, collaboration with Destination Management Companies (DMC) has been given the priority. With DMC support, new tour packages involving sustainable mobility options in particularly for the medium length distances will be created and those routes will be promoted via DMC's.

Table 5: Action 2 Information Sheet

Action 2: Introducing incentive packages for those who are choosing sustainable mobility options
Objective: - Increase the uptake of sustainable and active modes of transport
Activities: - identify attractive rewards/incentives to promote the available sustainable mobility solutions - Collaborate with touristic point of interests such as museums to get discounts - Collaborate with other cruise destinations to introduce gamification to engage passengers
Related Actions: Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns Action 4: Improving the potential and attractiveness of the Valletta's walking and cycling opportunities and networks Action 7: Improving the attractiveness and perception of public transport to promote their use.
Indicators and Target: - 20% increase of offer activities that visitors can do on land in the localities

Description:

This action is a supporting action for the Action 1 in order to increase the uptake of the existing solutions and convert the cruise passengers to use more sustainable modes of transport via incentivising positive behaviours. To achieve this objective, it is essential to raise awareness among stakeholders and involve partners to incentivise behavioural changes by introducing challenges, tournaments and any other similar promotional activities/gamification tools and platforms.

Table 6: Action 3 Information Sheet

Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns
Objective: - To sustain the ongoing interest in promoting sustainable mobility and to support stakeholders in their transformation to environment friendly mobility options
Activities: - Campaigns will be run in part, under the overarching umbrella of wider marketing of promoting a low carbon transport society including promotion of low carbon vehicles, fuels and technologies - Capitalise on existing apps and platforms promoting sustainable mobility to support and raise awareness of sustainable choices. - Support ongoing infrastructural development for better connectivity and EV infrastructure
Related Actions: Action 2: Introducing incentive/reward packages for those who are choosing sustainable mobility options Action 5: Creation of alternative connections between Valletta and the Harbour cities Action 4: Improving the potential and attractiveness of the Valletta's walking and cycling opportunities and networks Action 7: Improving the attractiveness and perception of public transport to promote their use.
Indicators and Target: - Introduction of the Sustainable Mobility Challenge Malta for Cruise Passengers - Raise further funding for the Sustainable mobility providers and start-ups via organising a demo day.

Description:

In order to sustain the ongoing interest in promoting sustainable mobility and to support stakeholders in their transformation to environment friendly mobility options, campaigns will be run in part, under the overarching umbrella of wider marketing of promoting a low carbon transport society including promotion of low carbon vehicles, fuels and technologies. Moreover, as a support to Action 2, more capital will be raised on existing apps and platforms promoting sustainable mobility to support and raise awareness of sustainable choices and the campaigns and efforts on infrastructural development for better connectivity and EV infrastructure will be supported.

Complementary Strategy N.2

Improve the infrastructure for sustainable mobility options to increase the uptake of sustainable mobility solutions.

Table 7: Action 4 Information Sheet

Action 4: Improving the potential and attractiveness of Valletta's walking and cycling opportunities and networks
Objective: - Increase the number of passengers visiting the city by walking and cycling
Activities: - Map the existing routes and identify new possible routes together with the stakeholders. - Provide online journey planning information for walking and cycling trips through websites and apps for multi-modal travel information - Improve the experience of walking routes such as the existing tunnel or via shading and greening of routes - Increase the capacity of bike sharing system and improve the existing network - Improve the pedestrian experience through better way finding, using technology to potentially enhance and enrich the pedestrian experience focusing on transverse/lateral routes into the City as a means of getting pedestrians right in the heart of the City in a short while.
Related Actions: Action 2: Introducing incentive/reward packages for those who are choosing sustainable mobility options Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns Action 6: Introducing assistive technologies for elderly passengers for walking
Indicators and Target: - Share of cruise passengers walking and cycling: - Currently: 2% for walking and 2% cycling - Target: 20% walking and 10% cycling

Description:

This action is the first identified action of Strategy 2, walking and cycling as an alternative to coach tours through improving the infrastructure, promotional events and education activities. Continued collaborating with service providers to provide online journey planning information for walking and cycling trips through websites /apps (for multi-modal travel information). Continued updating and promotion of hard copies and online versions of city-wide and local area walking and cycling maps**.** Moreover, improve the experience of walking routes such as the existing tunnel or via shading and greening of routes and increase the capacity of bike sharing system and improve the existing network. It is also important to improve wayfinding within and around the City through better signage, potentially using interactive means that engage pedestrians further, and through the use of ICT tools to increase its appeal.

Table 8: Action 5 Information Sheet

Action 5: Creation of alternative connections between Valletta and the Harbour cities
Objective: - To facilitate cruise passenger movement across the harbour cities without using vehicular transport.
Activities: - Loop system around Valletta using a tourist train (multiple visitors) - Use the underground system to link the Grand Harbour to Sliema (Marsamxett harbour) and offer access points to main attractions in Valletta - Explore the opportunities or the alternatives of proposed idea of creating a wooden bridge between Sliema and Valletta or a coastline walking connection.
Related Actions: Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns Action 4: Improving the potential and attractiveness of the Valletta's walking and cycling opportunities and networks Action 8: For persons who wish to visit places outside Valletta encourage a better distribution of routes
Indicators and Target: - A feasibility study delivered - Alternative routes proposed to the Planning Authority.

Description:

To improve the current situation infrastructure investments and innovative solutions are a must. As described in the above sections following options had been proposed to authorities: Loop system around Valletta using a tourist train (multiple visitors), Using the underground system to link the Grand Harbour to Sliema (Marsamxett harbour) and offer access points to main attractions in Valletta and exploring the opportunities or the alternatives of proposed idea of creating a wooden bridge between Sliema and Valletta or a coastline walking connection. LCTP Valletta aims to do a feasibility on one of the options and proposed the most feasible option to the Planning Authority together with Grand Harbour Regeneration Corporation.

Table 9: Action 6 Information Sheet

Action 6: Introducing assistive technologies and alternative solutions for elderly passengers
Objective: - To reduce the amount of vehicle dependency of elderly and provide alternative solutions
Activities: - Promotion of the existing 12-seater EV minibuses supported with an electric wheelchair sharing system - Introduction of assistive technologies to help active modes of transport. - Add facilities such as public toilets and seating with shade to enable older people. Elderly would walk more if they could find resting places at staggered intervals in public spaces, enabling them to rest when needed and giving them increased confidence to venture further outside
Related Actions: Action 2: Introducing incentive/reward packages for those who are choosing sustainable mobility options Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns Action 4: Improving the potential and attractiveness of the Valletta's walking and cycling opportunities and networks Action 7: Improving the attractiveness and perception of public transport to promote their use.
Indicators and Target: - Increase availability of EV minibuses - Facilitated accessibility of Valletta for users with disability with appropriate signage - Increased confidence of elderly to walk their way in Valletta

Description:

Considering the fact that majority of the cruise passengers are elderly, it is highly important to reduce the amount of vehicle dependency of those passengers and provide alternative solutions. Action will first focus on the improvement of the current options available such as the 12 seater EV buses via increasing the number of the vehicles and also the promotion of the 12-seater EV minibuses, As a supporting action it is considered that an electric wheelchair sharing system will be offered and other potential assistive technologies will be explored to help active modes of transport.

Complementary Strategy N. 3

Using innovative tools to plan and manage transport within the Harbour area to lower the emissions & avoid traffic congestion

Table 10: Action 7 Information Sheet

Action 7: Improving the attractiveness and perception of public transport to promote their use
Objective: - Increase the number of people using public transport and prioritising public transport as appropriate and feasible.
Activities: - Develop parameters in line with SMITHS (Sustainable Multimodal Intelligent Transport Hubs Project) to provide different inter-modal services in conjunction with Public Transport to essentially complete the last mile of one's journey. - Supporting Malta Public Transport Authority in their efforts to correct their public image internationally- particularly on online platforms to correct the perception - Introduce smart ticketing solutions to avoid delays when getting on the bus. - Introducing new type of vehicles with more seating for elderly - Increasing the amounts of available vehicles on the cruise days and introducing express routes to nearby localities.
Related Actions: Action 2: Introducing incentive/reward packages for those who are choosing sustainable mobility options Action 3: Raising awareness among stakeholders of the benefits of sustainable modes by campaigns
Indicators and Target: - Share of cruise passenger using public transport: - Currently: 10% - Objective: 50% using public Transport - Positive feedback on web/social media platforms

Description:

Action focuses on working with Malta Public Transport Authority and Transport Malta, towards creating a more seamless end-to-end journey for passengers including smartcard ticketing, accurate Real Time Passenger Information, branding of public transport and prioritising public transport as appropriate and feasible. It is expected that Malta Public Transport will deliver a range of quality and performance improvements including high vehicle standards, new vehicle technologies, infrastructure investment, enhanced passenger information and promotion; all increasing customer satisfaction and therefore increase the number of people using public transport. Furthermore, LCTP will develop parameters in line with SMITHS (Sustainable Multimodal Intelligent Transport Hubs Pect) to provide different inter-modal services in conjunction with Public Transport to essentially complete the last mile of one's journey.

Table 11: Action 8 Information Sheet

Action 8: Encourage a better distribution of routes for passengers who wish to visit places outside Valletta
Objective: - To reduce traffic congestion during cruise days due to tourist coaches
Activities: - Identify alternative routes and packages together with Destination Management Companies to promote. - Use intelligent planning tools i.e. offering real time journey planning to distribute routes to avoid the ripple effect on the traffic congestion via collaborating with
Related Actions: Action 2: Introducing incentive/reward packages for those who are choosing sustainable mobility options Action 7: Improving the attractiveness and perception of public transport to promote their use. Action 9: Use of intelligent transport tools to encourage alternative entry into Valletta during cruise days thus softening the transport impact
Indicators and Target: - 10% Decrease in traffic congestion on cruise days

Description:

This action aims directly to reduce the ripple effect of cruise passengers on the traffic congestion. To do so, together with the National Traffic Management Office and Infrastructure Malta LCTP will identify alternative routes. Contribution of Destination Management Companies to promote such options is very crucial for this action's success. In addition to those alternative routes, it is essential to use intelligent planning tools, i.e. offering real time journey planning to distribute routes to avoid the ripple effect on the traffic congestion via collaborating with Transport Malta.

Table 12: Action 9 Information Sheet

Action 9: Use of intelligent transport tools to encourage alternative entry into Valletta during cruise days thus softening the transport impact
Objective: - To avoid bottlenecks in the entrance of Valletta and improve the traffic management
Activities: - Collaborate with Transport Malta who is working with the Controlled Vehicular Access (CVA) operator who manages the Valletta Congestion Charge to use its existing infrastructure - Collaborate with Infrastructure Malta to introduce alternative entry points to Valletta on Cruise days. - Collaborate with the National Traffic Control Centre (NTCC) to enable all of Intelligent Transport Systems and subsystems to communicate
Related Actions: Action 7: Improving the attractiveness and perception of public transport to promote their use. Action 8: Encourage a better distribution of routes for passengers who wish to visit places outside Valletta Action 10: Organise better the parking area around the terminal to have a park and ride for transport providers and Set up "no idle zones" within and around the harbour to keep the air clean and cut down on hazardous carbon dioxide emissions
Indicators and Target: - 10% Reduction of traffic congestion on cruise days

Description:

To support Action 8, this action focuses on avoiding bottlenecks in the entrance of Valletta and therefore, improve the traffic management within the Harbour Area. To do so, following activities are proposed: Collaborate with Transport Malta who is working with the Controlled Vehicular Access (CVA) operator and who manages the Valletta Congestion Charge, so as to use its existing infrastructure, Collaborate with Infrastructure Malta to introduce alternative entry points to Valletta on Cruise days and to Collaborate with the National Traffic Control Centre (NTCC) to enable all of ITS subsystems to communicate.

Table 13: Action 10 Information Sheet

Action 10: Organise better the parking area around the terminal to have a park and ride for transport providers and Set up "no idle zones" within and around the harbour to keep the air clean and cut down on hazardous carbon dioxide emissions
Objective: - Improve the air quality around the Harbour area and quality of life of the residents.
Activities: - Study the feasibility of the introduction of No Idle Zones and get aligned with Transport Malta Low Emission Zones study. - Collaborate with Infrastructure Malta and Grand Harbour Regeneration Corporation to introduce parking areas for tourist coaches that link to better walking routes into the city.
Related Actions: Action 7: Improving the attractiveness and perception of public transport to promote their use. Action 8: Encourage a better distribution of routes for passengers who wish to visit places outside Valletta
Indicators and Target: - Improve the air quality by 10% in the Harbour areas using air quality and benchmarking studies - Delivering the study for the No Idle Zones.

Description:

Last Action of Strategy 3 aims to improve the air quality around the Harbour area and quality of life of the residents. Although the main cause of the low air quality is the cruise ships themselves, the tour coaches and other fossil fuel-based vehicles are increasing the effect. Therefore, LCTP Valletta suggests the preparation of a study on the feasibility of the introduction of No Idle Zones and get aligned with Transport Malta Low Emission Zones study. Following that, collaborate with Infrastructure Malta and Grand Harbour Regeneration Corporation to introduce better sited parking areas for tourist coaches that link to better walking routes into the City.

3.5. Development of Future Scenarios

As described in the previous chapter, Valletta is a city where tourism is prospering and each year more tourists visit it, either arriving by plane or by cruise ship. The future scenarios account therefore for the expected increase in the number of tourists. Since the actions described before have a focus not only on low carbon transport but also on the liveability of residents. On one hand, the effect on pollutants and greenhouse gases emissions will be predicted and, on the other hand, the effect on the pressure put on the locals' quality of life is also significant. The analysis will be qualitative to avoid making predictions that are too uncertain to be reliable since these are fast changing scenarios, that depend on external events, such as tourist and cruise fluxes, and on internal politics, that can support the actions or put a halt to it. To account for possible deviations from the plan in terms of objectives, ambitions or duration three potential scenarios where developed: Worst-case scenario, best-case scenario and most likely scenario.

Table 14: Development of Future Scenario

Scenario	Pollutants and Greenhouse Gases	Coexistence between locals and cruise passengers
Worst case scenario	With increasing number of cruise passengers and with current modal share, the number of touristic couches will increase and with it GHG and pollutants emissions	As the cases of Venice and Barcelona show if no measures are implemented the locals will start to question the benefits of tourism over the negatives. Normally cruise tourism is one of the main targets since its characteristics make it more visible (e.g. big packs of people and size of cruise ships)
Best-case scenario	Despite the increase of cruise passengers, there will be more tourists using more sustainable option (e.g. public bus, walking, cycling and others). This means that less GHG and pollutants will be released.	Touristic sites will not be overcrowded since there will be a balance between the different touristic areas. Also, local commerce will prosper with more people cycling and walking in the streets. This will benefit the image that the local population has of the cruise passengers
Most likely scenario	The modal shift to low carbon options might not be enough to reduce the GHG and pollutants emissions (due to increase of total number of tourists) but could be enough to maintain the current levels	There might be some decongestants of touristic sites with the creation of alternative ones and better balance between the touristic areas. Despite this and with increased number of tourists if the results are not visible to the locals, their image of cruise passengers will unavoidably worsen.

SECTION 4: Monitoring and Implementation

Successful implementation of the actions identified in Section 3 above, will help to define the future scenario for Valletta as a sustainable city. This vision requires the creation of a monitoring plan that will lead to the implementation of the actions identified. The implementation requires the identification of the actors involved and the necessary funding to implement the actions discussed in the previous section.

The timeframe for the actions is 2019 – 2022 which covers the current legislature hence enabling the current authorities to put into practice the plan. A project of this nature is not bound to any political boundary nor is it tied to a specific timeframe, since a low carbon transport policy is an ongoing activity. It is of note that since Valletta aims to become carbon free by 2030 – action must start now.

Monitoring the implementation of the actions, is an ongoing process and there should be a constant observation of the steps take, the outcomes and how these fit back into the plan itself. The LCTP for Valletta is not an independent exercise from other transport plan or actions being taken and actors should be keeping this plan in mind when considering other transport management initiatives.

The implementation plan discussed below builds on the strategies outlined in Section 3 and has the same objective that of lowering the carbon dioxide emissions to counteract the pollution felt within the harbour region of Valletta and the neighbouring cities.

4.1 Influencing passengers' behaviour towards more sustainable modes via promoting and providing smart choices and campaigns

The success of this strategy entails the understanding that there are two types of visitors descending from the cruise ship - Type 1 - those who prefer to use guided/pre-paid visits and Type 2- those who venture on their own. The strategy also requires the understanding that visitors that come on shore have a direct impact on the environment through their actions and that the quality of their experience is also enhanced if the access to the sites concerned is pleasurable and smart and gives added value for money spent, especially in cases where the visits are short.

The three actions are interrelated and require both the public as well as private sector entities to work together to raise awareness of alternative ways of exploring and visiting the city and to increase walking activities and the use of apps linked with alternative modes of green transport.

Table 15: Implementation and Monitoring Summary Action 1-3

Action	Actors	Indicators	Responsibility for Monitoring	Monitoring Schedule
1	Malta Public Transport Malta Tourism Authority Private Sector	Increase the numbers of visitors walking and /using Public Transport	Malta Public Transport	Yearly through monitoring of statistics
		Usage of new ways of exploring the city	Malta Tourism Authority	Assessment of usage of apps/
2	Private Sector Valletta Cruise Port Malta Tourism Authority Local Councils	Increase offer of activities that visitors can do on land in the localities	Valletta Cruise Port	Periodic Figures
			Malta Tourism Authority	Periodic Figures
3	Private Entities Malta Transport Authority	Introduction of Sustainable Mobility Challenge	Private Sector, NGO and Malta Transport	Number of Participants
		Increase the opportunity for funding of new ideas through private finance or PPP	Private Financiers	Number of projects funded and value of investment generated

4.2 Improve the infrastructure for sustainable mobility options to increase the uptake of sustainable mobility solutions

This strategy in line with the previous one also brings to the fore that the cruise industry can be a catalyser for change. Having a better infrastructure that supports green mobility activities, including the upgrade of the Valletta city options for walking and cycling and developing further the connections between the harbour cities possibly by also introducing physical connections between the cities, will decrease the usage of transport and limits carbon dioxide emissions from around the harbour cities. This will bring about an improvement of

the quality of life of residents around the harbour and will also introduce new experiential activities for the visitors. For this aim a concerted effort for introducing new ways of envisaging the harbour cities and infrastructural development is required. Therefore, this strategy will be spearheaded by the public authorities. Of course, these projects also lend themselves attractive for private investment which will gain from public usage, greener cities and also further economic growth in the area.

This strategy also envisages the facilitation for elderly visitors who can use ambient assisted technology to experience the cities. The technology combined with better infrastructure can and will lead to better visitor experience. Again, investment needs to be done by both public and private entities who will then ensure that the investments are maintained and monitored by the local authorities. The implementation and Monitoring schedules of Action 4-6 are outlined in Table 16.

Table 16: Implementation and Monitoring Summary Actions 4 - 6

Action	Actors	Indicators	Responsibility for Monitoring	Monitoring Schedule
4	GHRC Local Council Infrastructure Malta	Increase in pedestrianised and cyclable roads	Infrastructure Malta and GHRC	Asses half-way through to the project
		Continued upkeep of pedestrianised and cyclable areas	Local Council	Regular Monitoring as part of the upkeep of the city
5	Infrastructure Malta Transport Malta Private Sector	Projects identified are realised	Ministry for Transport	Regular assessment of the individual projects
6	Private Sector Infrastructure Malta Malta Transport Authority	Increase in number of vehicles	Malta Transport Authority and Private Sector	Monitoring for fair competition and sustainability
		Suitable supporting infrastructure	Infrastructure Malta	Assess Project half-way 2020

4.3 Using innovative tools to plan and manage transport within the Harbour area to lower the emissions & avoid traffic congestion

Cruise tourism is an important element in the Maltese economic activity. The success of this industry and a continued positive impact cannot be maintained unless there is an overall policy, whereby cruise tourism is seen as an integral part of an overall plan of the harbour area , the surrounding cities and in the case of Malta, the other localities where tours resulting from cruise tourism take place.

Starting with the services supporting the sector such as the better usage public transport is essential – however this needs to be done in collaboration with the several private service providers that support this industry and organise private tours. This can be done only if the public and private sector collaborate since the private sector provider will remain valid especially for the provision of alternative routes or activities that may not be easily reached by the public sector service.

Valletta, as Malta's capital city will continue to attract commuters and will remain the main attraction for cruise tourism and therefore working on better access to the city is of essence, especially as devising alternative ways on how one can access Valletta on cruise days will alleviate pressures from the current entry points. This will bring about a better distribution of traffic, minimize congestion and limit noise and greenhouse gases from the area.

Table 17: Implementation and Monitoring Sheet Actions 7 - 10

Action	Actors	Indicators	Responsibility for Monitoring	Monitoring Schedule
7	Malta Public Transport Authority Private Sector	Increase in usage of Public Transport	Malta Public Transport	Annual Routine statistics
		Improve perception of public transport	Malta Transport Authority	Annual Routine Statistics
		Facilitation of information	Malta Public Transport Authority and Private Sector	Open data and sharing of information to be implemented ideally by 2020
8	DMCs Malta Tourism Authority	Decrease traffic Congestion at popular sites on cruise days Indicators	DMCs	New routes by 2020
			Malta Tourism Authority	Conduct routine quality assurance of more popular areas
9	Infrastructure Malta Transport Malta NTCC Local Councils	Reduce Traffic Congestion during cruise days Less complaints from local communities around the harbour	Malta Transport Authority	Studies of traffic flows
				Better quality of life for residents
10	GHRC Infrastructure Malta	Improve air quality in the area	Environmental Resources Authority (ERA)	Regular monitoring of air quality

SECTION 5: Funding

A project such as the LCTP requires Sustainable transport and mobility have been one of the key areas under the Thematic priorities of the Cohesion funds for 2014-2020. Under the European Regional Development Fund (ERDF) and Cohesion Fund support through thematic objective 7 "Investment Priorities" Malta could benefit from the following:

- Supporting a multi-modal Single European Transport Area by investing in the trans-European transport network (TEN-T)
- Enhancing regional mobility by connecting secondary and tertiary nodes to TEN-T infrastructure including multimodal nodes (only ERDF);
- Developing and improving environmentally friendly (including low-noise) and low-carbon transport systems, including inland waterways and maritime transport, ports, multimodal links and airport infrastructure, in order to promote sustainable regional and local mobility.

Malta has benefited from over 236 million Euros in Transport Investment since 2014 from cohesion funds. Part of this investment has been directed towards the upgrading of the infrastructure, in particular, the development of the road network linking the airport to the Grand Harbour and the road network surrounding the Grand Harbour area and the Cruise Passenger Terminal area. Smaller projects such as the development of apps, new modes of transport have also benefited from funding, including start-up funds through H2020 or similar grants through ERDF funding. Moreover, one must also refer to the private investment funding that has been made to introduce alternative green transport to Malta. It would be beneficial to take stock of all the these existing projects – in order to map them out and to see how these can already be of added value to the project and then utilise similar funding to either upgrade existing projects or build on existing ones in order to reach the objective of a carbon neutral city.

Larger infrastructural projects such the new connections between the harbours need much larger funding and require new financial instruments that are better suited for such purposes. This needs to be coupled with a new investment culture mentality. New financial mechanisms that can be used for larger transport projects include funding that can be obtained through:

- **Malta Development Bank (MDB)** - Established in 2017, the Malta Development Bank has the objective of supporting initiatives that are environmentally sound and promote sustainable economic development. MDB has already supported green transport initiatives by supporting innovative transport SMEs promoting green transport initiatives.

- **EIB** - Funding through EIB capped at 76% can be sourced. So far Malta has accessed EIB funds for airport and port investments. EIB can fund land transport projects

- **EBRD** - funding although not used as yet for transport project can be sourced for sustainable development projects such as the ones mentioned to address the Low Carbon Transport Plan for Valletta

- **PPPs** - The Community Strategic guidelines mention PPS as a possible method of financing investment when there is scope for private sector involvement. PPP can manifest itself in both the financial leverage and implementation and management of projects. More PPS should be considered to bring about changes within the sector.

- **Private Investment** – in the past decade private investment in the transport sector has started to bring about first a revolution in the way transport was managed and subsequently an evolution. More private investment in green and alternative mobility has and will continue to introduce new modes of transport within the area. Such investment, within a larger framework can continue to bring more diversity into the area.

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7. LCTP of Koper

Project co-financed by the European Regional Development Fund

LCTP Koper

LOCATIONS – Low Carbon Transport in Cruise Destination Cities

Synthetic version

GORIŠKA LOCAL ENERGY AGENCY,

NOVA GORICA, SLOVENIA

WP5 Capitalizing

Activity 5.3 Capitalization of LOCATIONS results in new countries of the MED area

LCTP Koper

Version 0.1

Index

1 Introduction

LOCATIONS – Low-carbon Transport in Cruise Destination Cities is a 36-month-long, MED-ETC project, addressing the issue of negative externalities produced by cruise passengers and freight flows on on-land, local transport systems, particularly carbon emissions, both in home ports and in ports of call. The solution proposed by Locations is the development of Low Carbon Transport Plans (LCTPs), i.e. dedicated sectoral plans focusing on specific passengers and freight flows generated by cruise tourism, to be developed in the wider framework of other local strategic spatial, energy and transport/mobility plans.

The project is based on 3 main pillars:

- strong local network of institutional actors (e.g. local authority, port authority, etc.) joining forces to tackle the issue in a coordinated effort,
- effective participation and consultation, including local actors, business communities, service providers, cruise companies, passengers, etc.,
- common operational methodology, based on the approach used for the development of Sustainable Urban Mobility Plans, to guide local institutions in the development of their LCTPs.

The cruise industry is expected to grow steadily in the coming years, exceeding 25 million passengers worldwide. An increasing number of people will choose to travel by sea at night, wake up every day in a new port city and spend a few hours on shore to explore destinations and experience their attractions. The increase in cruise traffic is also affecting destinations from an economic perspective, since each cruise passenger spends on average 70 euros to the benefit of the territory and its development. Destinations are, however, faced with seemingly conflicting needs: increasing cruise-related profits, while preserving natural and cultural resources, essential for the attractiveness of destinations, that the cruise industry will gradually consume and pollute if no change is proposed and jointly encouraged.

A more conscious cruise tourism is to be fostered by competent authorities and local decision makers, to sustainably improve passengers' experiences, both on-shore and off-shore, without jeopardizing local natural and cultural assets.

LCTP for the city of Koper has been elaborated in the project LOCATIONS by Goriška Local Energy Agency, Nova Gorica, Slovenia (abbreviated name GOLEA).

The Municipality of Koper aims to become one of the reference destinations for the sustainable mobility of cruise passengers where available mobility options have a reduced impact on the environment and on the city residents.

According to this vision, four objectives have been identified:

- to develop a sustainable tourism (green tourism),
- to balance the coexistence between residents and tourists,
- to mitigate the negative effects of excessive traffic noise, traffic congestion, etc.,
- to reduce the GHG emissions by developing the LCTP.

For each challenge, a strategy has been determined and several actions have been planned, responding to specific objectives. Activities were planned to achieve the objectives and the indicators will ensure the

monitoring of the actions (how successful they are). The quantitative indicators and the target values have been settled to be achieved by 2028. The selected indicators are related to indicators included in the SUMP.

List of strategies within the LCTP Koper:

- Promotion of the city exploration by active modes of transport,
- Promotion of the e-bike and public transport use when enabled by distances and mobility conditions of tourists,
- Balancing the number of tourists at points of interest, reduction of negative impacts, enhancement of tourist experience and spreading points of interest,
- Implementation of congestion charge schemes,
- Introduction of electric vehicles in the waste management company fleet,
- Introduction of sustainable options for people with reduced mobility.

For the implementation of all measures a total of 23,7 million euros are planned (private investments, investments planned by neighboring municipalities for the implementation of shared measures with the Municipality of Koper and measure 2.7 Introduction of light rail are not included). Public funds can be obtained from municipal funding for infrastructure projects and promotional activities or from different national and EU funds. Some of the actions may require private investments from private organizations or start-ups, which can be revenue-generating.

Assuming, as predicted, that the number of cruises and passengers will continue to grow significantly, the plan success can't be measured having absolute CO_2 values as a reference. There will be, in fact, always also other factors influencing the results. Based on existing data, different prepared scenarios, elaborated measures, an analysis of the reduction of CO_2 emissions per 1000 passengers was implemented. The level of emissions per scenarios for medium end long term period are shown in the following table. A specific goal that was settled is to reduce the CO_2 emissions per cruise ship passenger by 20 % in the frame of 10 years according to the most likely scenario.

2 Low Carbon Transport Plan

2.0 Step 0: Work plan and team

2.0.1 Team

According to the requirements of the project LOCATIONS an expert team was formed within the agency GOLEA for the elaboration of the LCTP Koper. During the first months, an extensive knowledge was acquired in cruise tourism and passengers flows that enabled the team to develop the project successfully.

Table 1: People involved in the elaboration of the LCTP

Name	Function	Tasks/expertise
Boštjan Mljač	Energy project manager for the elaboration of the LCTP Koper	Coordination of project, participatory process, elaboration of LCTP/ energy adviser
Rajko Leban	Director	Participatory process, elaboration of LCTP/ energy advisor, technician
Vanja Cencič	Energy project manager	Participatory process, database collection/ project manager of different EU projects, experience in event organization
Ivana Kacafura	Energy project manager	Elaboration of LCTP/ experience in the field renewable energy sources, with an emphasis on environment and economic eligibility

2.0.2 Work plan

The Work plan adopted to elaborate this document has been split in 5 main tasks. The plan has been drafted before the development of the LCTP. Some deviations have been adopted as listed in the table below:

Table 2: Planning of tasks

Task	Planned	Carried out	Notes
1st progress report – Work plan and team description	9/2018 – 11/2018	9/2018 – 11/2018	
2nd progress report – diagnosis including 1st participatory activity	11/2018 – 1/2019	11/2018 – 4/2019	The meeting with stakeholders has not been carried out as planed in January 2019 due too municipal elections. There were some changes within the municipal administration.
3rd progress report – first version of LCTP	1/2019 – 5/2019	1/2019 – 5/2019	
4th progress report – 2nd version of LCTP including the 2nd participatory activity	6/2019 – 8/2019	6/2019 – 9/2019	Golea has received the second part of key information from stakeholders two months after the 2nd participatory activity. A short delay has occurred.
Deadline for finalized LCTP	10/2019	10/2019	

2.1 Step 1: Initial assessment

2.1.1 Context analysis

2.1.1.1 EU, national, regional and local framework of reference

The LCTP of Koper will contribute to the local implementation of National and European Urban mobility policy.

General context – linked to EU policies

- White Paper on Transport 'Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system' (2011)
- Urban Mobility Package (2013)
- Fuel Sulphur Directive 2012/33/EU
- European Union Strategy for the Adriatic and Ionian Region (EUSAIR)

National context – linked to national policies

- Maritime Code (the Official Gazette of the Republic of Slovenia, No. 120/2006 – UPB, No. 88/2010 No. 59/2011 in No. 33/2016)
- Development program of the international Port of Koper for the period 2016 - 2020
- The passenger terminal of the Port of Koper: Prospects of development in cruising (Project carried out under the WP3 of Adria project (Accessibility for the revival and development of

the Adriatic) funded under the Cross-Border Cooperation Programme Italy - Slovenia from 2007 to 2013, by the European Regional Development Fund and national funds)
- Energy Act (the Official Gazette of the Republic of Slovenia, No. 17/2014 and No. 81/2015)
- Strategy for Sustainable Growth of Slovenian Tourism for 2017-2021

Regional context – linked to regional policies
- Regional Development Program of South Primorska region 2014-2020 (No. 303-7/2013/34)

City context – linked to local policies/ plans/ strategies
- Local energy concept of Koper municipality 2013
- Sustainable Energy Action Plan for the Municipality of Koper (2018)
- Spatial and urban planning of the Municipality of Koper
- Sustainable Urban Mobility Plan (SUMP) of the Municipality of Koper (2017)
- Sustainable urban strategy of the Municipality of Koper (2016)
- Environmental protection program of Koper municipality 2015-2020
- Strategy for development and marketing of tourism in the Municipality of Koper by 2025

The LCTP Koper has been elaborated following the methodology, guidelines and other documents from the project LOCATIONS
- Deliverable 3.3.1 – Capacity Building Manual
- Deliverable 4.3.2 – Set of modular packages to foster replication
- D.3.7.1 Report on the evaluation of the first 7 LCTPs
- D3.7.2 Seven finalized and evaluated LCTPs
- D4.2.1_Transfer_Package_final_version 2

2.1.1.2 Current cruise-related flows features, trends, etc. in the city/port

Koper is the fifth largest city in Slovenia. Located in the southwestern part of the country, approximately five kilometers (3.1 miles) south of the border with Italy and 20 kilometers (12 miles) from Trieste, Koper is the largest coastal city in the country. It is bordered by the satellite towns of Izola and Ankaran and anchors the Istrian region. With a unique ecology and biodiversity, it is considered an important national natural resource. It is the oldest recorded urban settlement in Slovenia.

Koper is an active and green year-round Mediterranean destination as well as the 2017 European Destination of Excellence with regard to cultural tourism. Here, the historical coastal town meets the green Istrian countryside, revealing incredible history, cultural heritage, a wide array of culinary delights, authentic stories, natural sights, and experiences. The pleasant Mediterranean climate allows for numerous options for spending leisure time actively and relaxing in nature or by the sea. There is also the largest brackish wetlands in Slovenia the Škocjanski Zatok Nature Reserve, located nearby to town – (Koper - The Green Destinations Collection, 2018).

The city's Port of Koper is the major contributor to the economy of city municipality. Only one percent of Slovenia has a coastline. From the Figure 1 it can be seen the view of the city of Koper and the Passenger Terminal from the air.

Figure 1: View of the city of Koper and the Passenger Terminal from the air
(Koper, 2018)

Port of Koper is a modern, well organized and well equipped multipurpose hub, operating day and night, all year long. The port is the Border Inspection Post for the European Union and the entire area has a Free Zone status.

The Port of Koper has 12 specialized terminals:

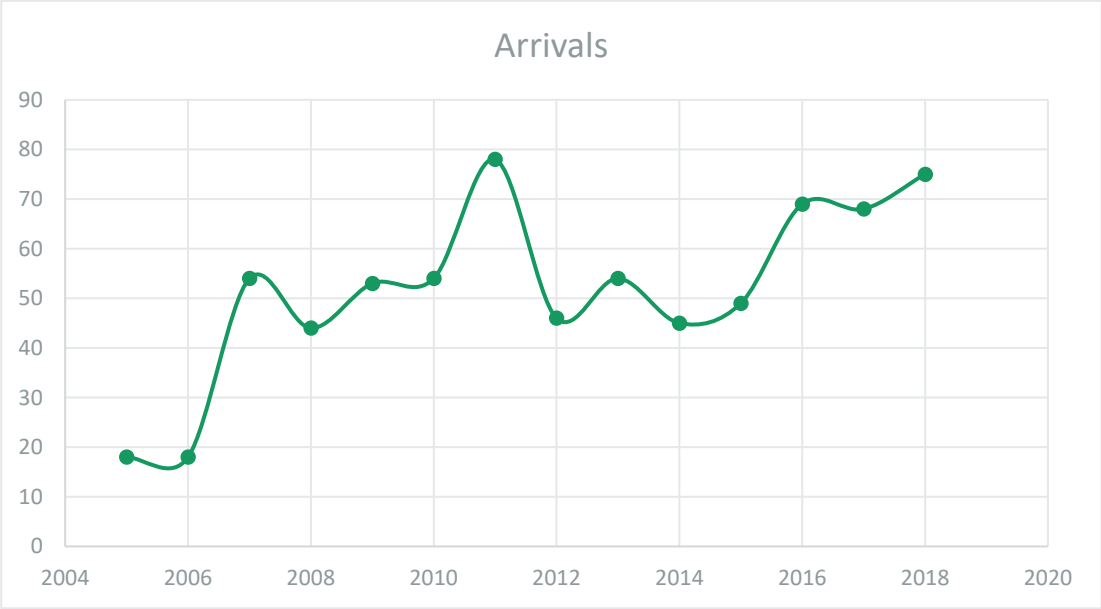
- Container and Ro-Ro Terminal
- Car Terminal
- General cargo Terminal
- Fruit Terminal
- Timber Terminal
- Terminal for minerals
- Terminal for cereals and fodder
- Alumina Terminal
- European Energy Terminal
- Liquid Cargoes Terminal
- Livestock Terminal
- Passenger Terminal

The core business covers cargo handling and warehousing services for all types of goods, complemented by a range of additional services for cargo with the aim of providing a comprehensive logistics support for customers. The company manages the commercial zone and provides for the development and maintenance of port infrastructure (Port of Koper, 2018).

The data regarding the number of arrivals and cruise ships passengers in Port of Koper in the period from 2005 to 2018 are illustrated in the following tables and graphs. Table n.3 and Graph n.1 and 2 show a continuous increase in number of arrivals and passengers in Koper from 2005 to 2011. Another increase has occurred from 2014 to 2018.

Table 3: Number of cruise arrivals and passengers in Port of Koper in the period from 2005 to 2018
(Port of Koper, 2018)

Year	Cruise arrivals	Passengers
2005	18	1.100
2006	18	1.614
2007	54	25.580
2008	44	15.246
2009	53	31.021
2010	54	37.264
2011	78	108.729
2012	46	64.455
2013	54	65.434
2014	45	58.970
2015	49	57.893
2016	69	78.923
2017	68	72.175
2018	75	101.415



Graph 1: Number of arrivals in Port of Koper in the period from 2005 to 2018
(Port of Koper, 2018)

Graph 2: Number of passengers in Port of Koper in the period from 2005 to 2018
(Port of Koper, 2018)

The list of arrivals for 2019 is just informative and it was created on a basis of available data from the received reservations. Projections for 2019 are 69 foreign ships for cruise trips, 116.000 passengers and 47.027 crew members in Port of Koper.

Ships calling in Koper are always a pre or post Venice (apart when Ravenna is among them). Venice is always on a destination list, sometimes Ravenna but in this case cruise ships skip northern-central Adriatic. Take a look at two maps (Figure 1 and Figure 2).

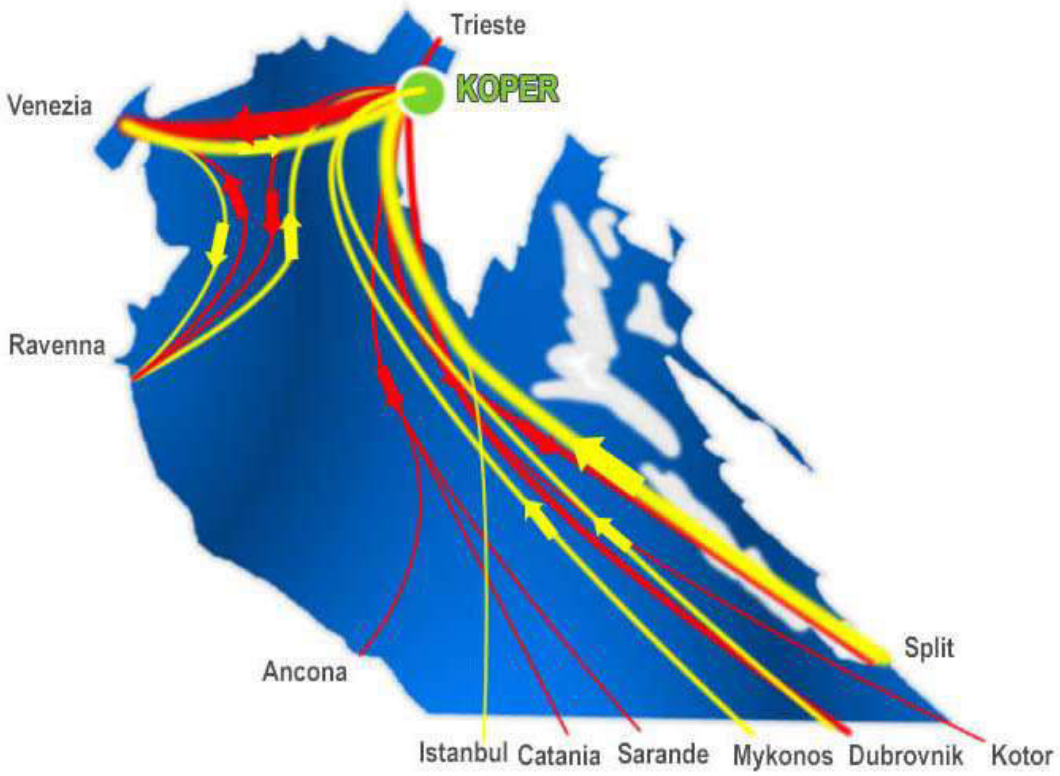


Figure 2: Examples calling Koper
(Prospects of development in cruising, 2012)

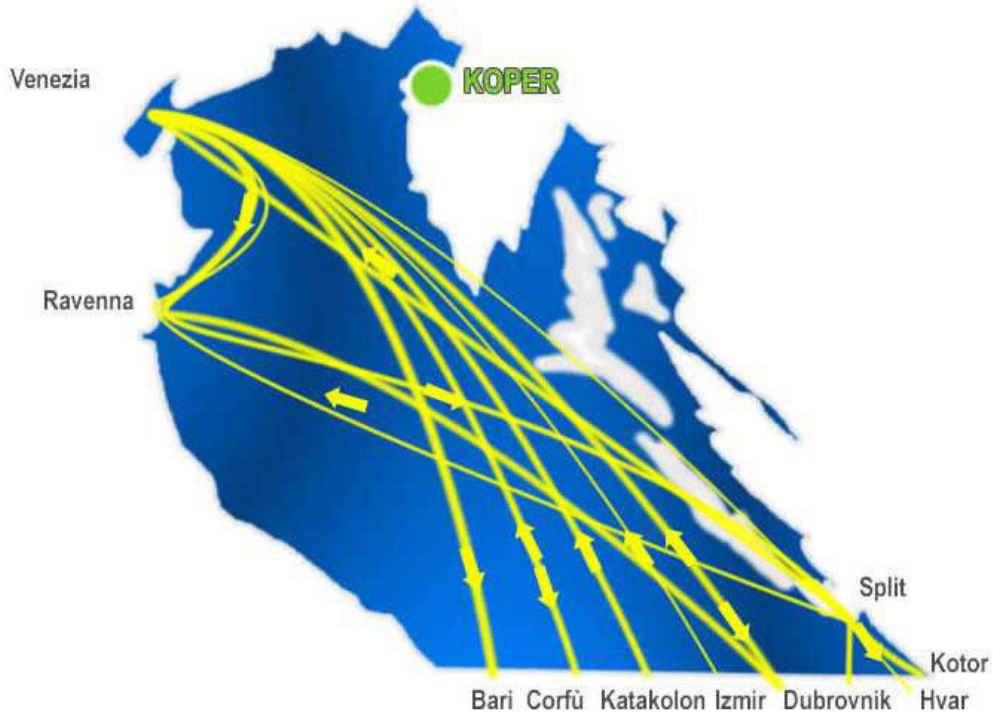
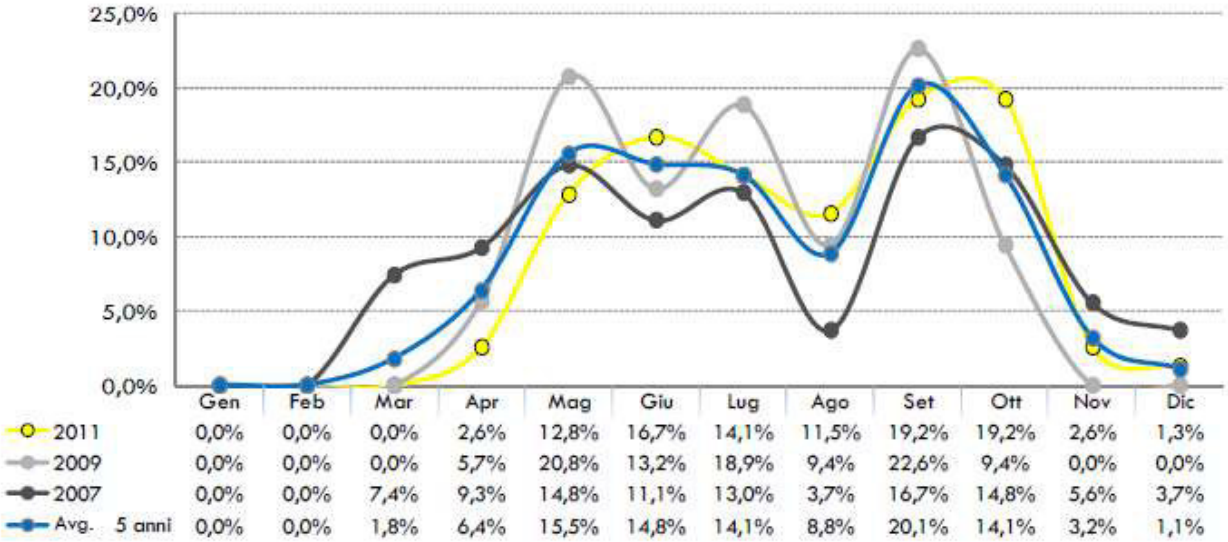


Figure 3: Cruise ships when skipping Koper
(Prospects of development in cruising, 2012)

The seasonal distribution of cruise ship arrivals for years 2007, 2009 and 2011 in the Port of Koper is illustrated in the Graph below.

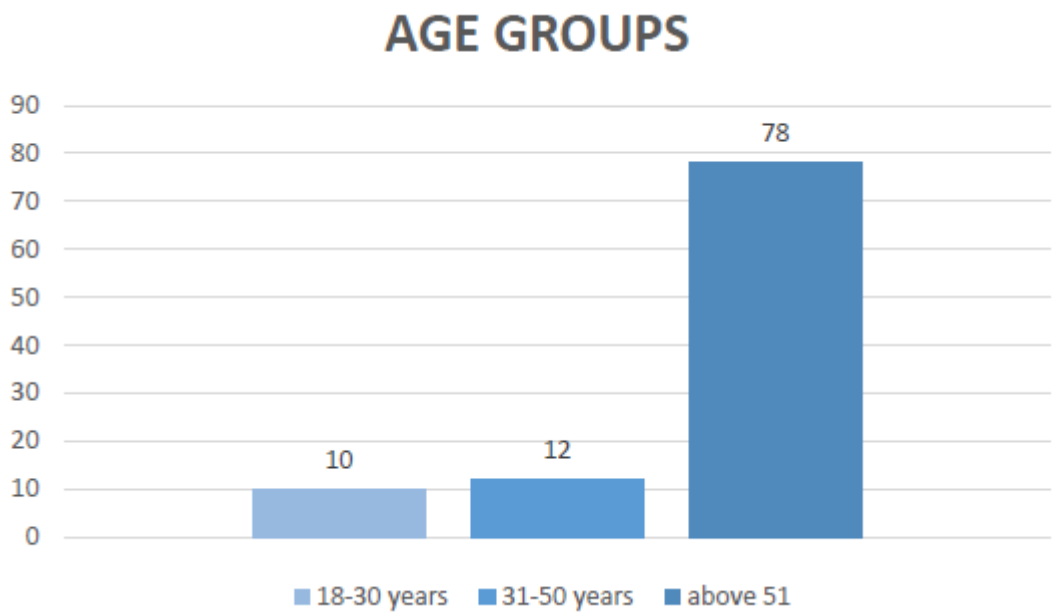


Graph 3: Monthly seasonality – Cruise calls in Koper for years 2007, 2009 and 2011
(Prospects of development in cruising, 2012)

Within the project Inter-Connect Program Interreg ADRION a survey was done between October 26th and October 27th 2018 which included cruise ships which were present in the coastal city of Koper. Regional Development Agency (RDA) LUR Ljubljana has been in charge for the elaboration of data analysis. They managed to acquire 100 completed questionnaires. The questionnaires which were elaborated in collaboration with an external expert included general socio-economic questions, questions of the modal split, trip organization, frequency of using public transport at home environment, transport mode preferences and a hypothetical question concerning a rail trip to Ljubljana during their short cruise stop in Slovenia. In fact, the cruise ships are moored in the port for only 12 hours.

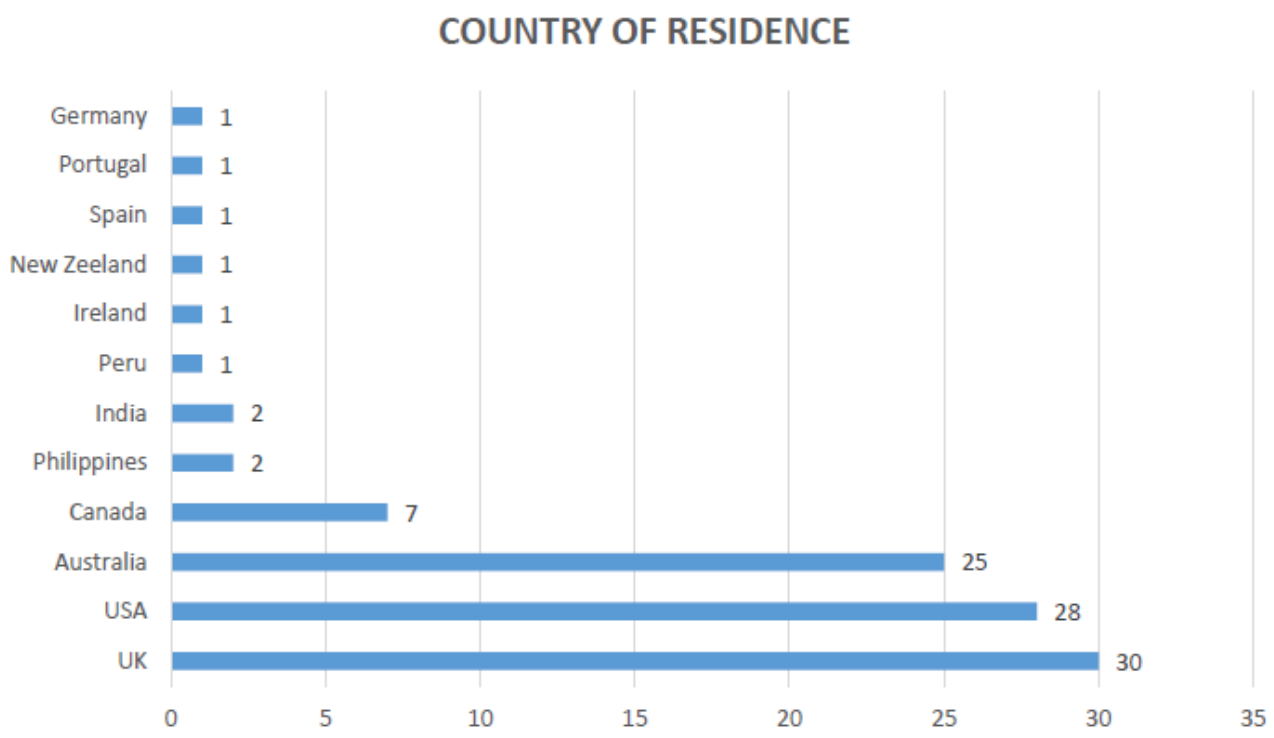
The goal of the research was to acquire information about travel habits of passengers, about their possibilities of choosing transportation modes, and factors that influence on their travel decisions. They also verified what are the possibilities and options about using public transportation and more sustainable ways of commuting, especially railways and waterways, and how the factors like travel time, price and other benefits effect one's travel choice.

The data show that the most numerous are cruise passengers aged 51 or over (78 %). They are followed by passengers aged 31-50 years (12 %), and passengers aged between 18 and 30 (10 %).



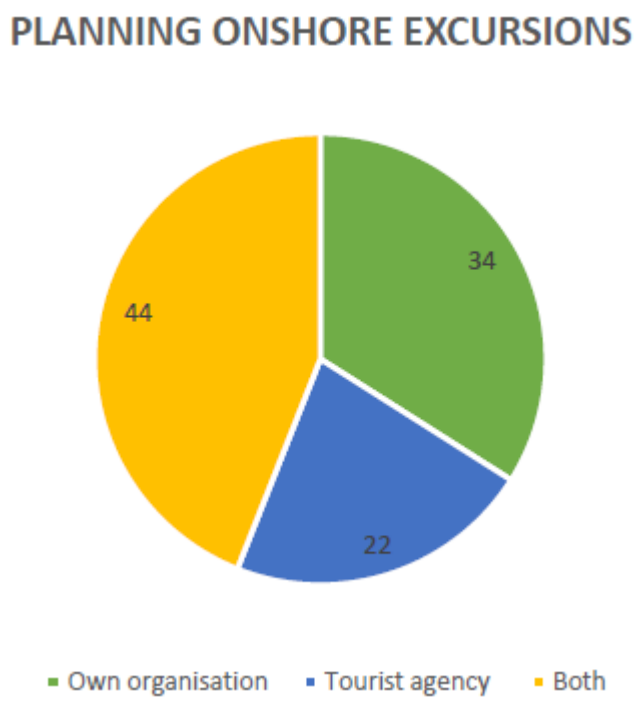
Graph 4: Age groups of passengers
(Transnational connectivity - Users need surveys, 2018)

Graph below shows the structure of cruise passengers according to the region of origin. One third of surveyed visitors are visitors from UK. Similar share represents visitors from the USA (28 %) and Australia (25 %). 7 % were visitors from Canada, two of them were from Philippines and India, and one from Peru, Ireland, New Zeeland, Spain, Portugal and Germany.



Graph 5: Country of residence
(Transnational connectivity - Users need surveys, 2018)

Fortyfour percent (44 %) of passengers combined individual onshore excursions with excursions organised by travel agency. Just 22 % decided to book onshore excursion organized by the travel agency.

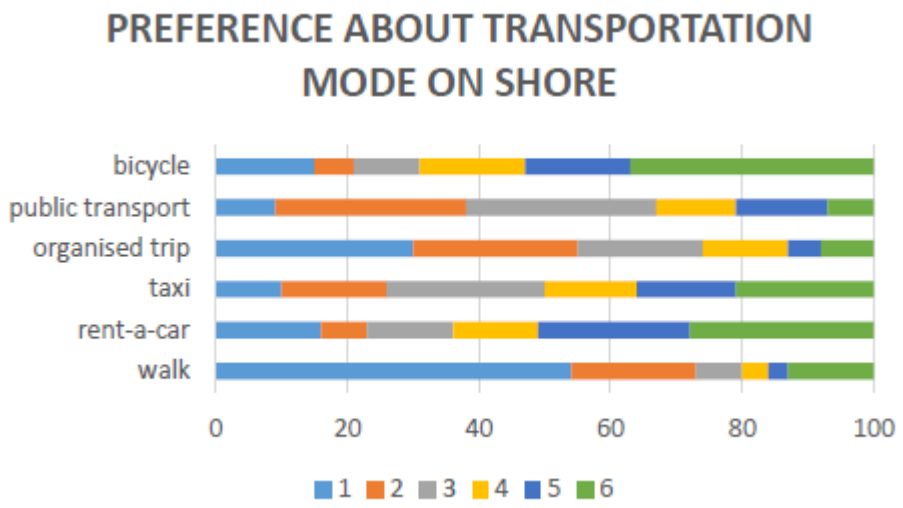


Graph 6: Planning onshore excursions
(Transnational connectivity - Users need surveys, 2018)

Guests ranked on shore transport mode preferences for each transportation mode on a scale from one to six, where one means the mode is mostly preferred, while six is least preferred mode to travel. Most preferred is walking (54 % of guests), followed by organized trips, rent a car, cycling and taxi. Public transport ranks last place in modes preferred – nine guests marked it as number one.

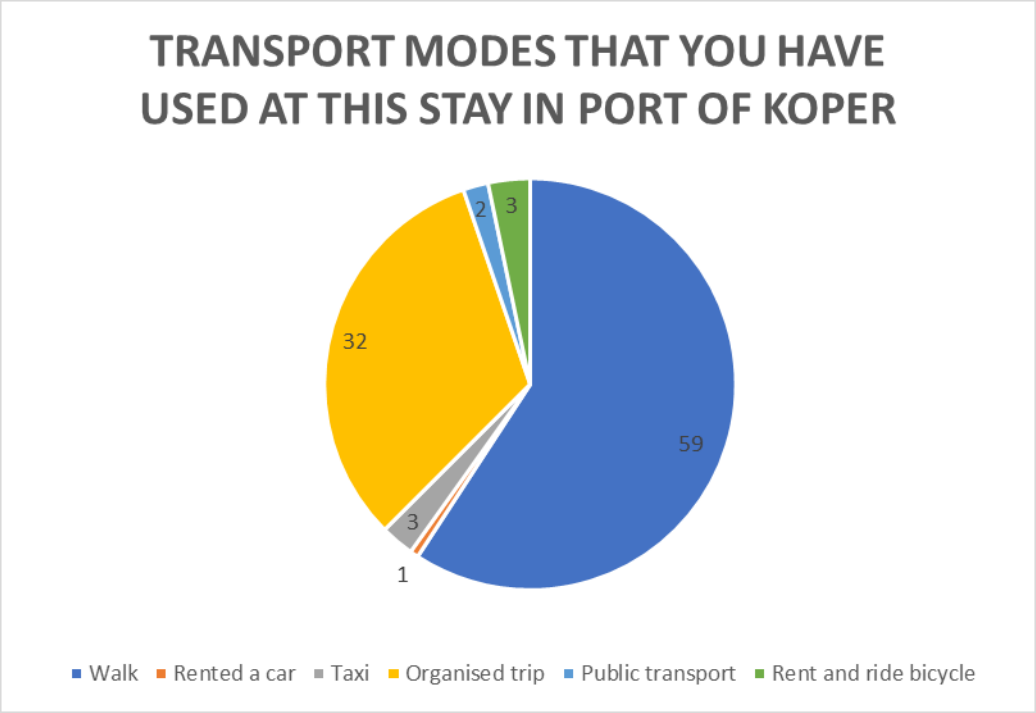
Within least preferred modes cycling ranks highest, meaning guests are unable or unwilling to explore the destination by bicycle. Guests were not asked if travelling by bicycle was organized or not. Guests also do not prefer renting a car or take a private tour with taxi. Seven guests selected public transport as least preferred mode, while eight guests selected organized trip as least preferred mode. From this information, we can conclude that public transport can compete with organized trips, and other measures to improve the role of public transportation are necessary.

One of the guest also stated that he/she has returned several times to Koper by cruise and that he is already familiar with local public bus lines which he/she uses them regularly.



Graph 7: Preference about transport mode on shore
(Transnational connectivity - Users need surveys, 2018)

According to survey 90 interviewed walked, while 62 of them used other transportation modes in combination with walking. Organized trips by international and local providers were attended by 49, five rented and ride a bicycle, while four used taxi service for a private trip. One rented a car and drove the vehicle for himself/herself.



Graph 8: Transport modes that you have used at this stay in Port of Koper
(Transnational connectivity - Users need surveys, 2018)

According to the main Slovenian local tourist agency Atlas Express d.o.o. the most interesting organized trips are to: Bled, Ljubljana, Postojna cave, Karst region, Lipica, the hinterland of Slovenian Istria and coastal cities. In 2018 900 organized trips have been carried out, involving 710 buses.

2.1.1.3 Estimation of mid to long term development trends and weight

Graph below shows that the number of cruisers exceeded the number of tourist arrivals in 2011. Cruisers have to be considered as international economic added value.

Graph 9: Tourism and cruise tourism in Koper
(Prospects of development in cruising, 2012)

The limit has been set up to 200.000 visitors from cruise ship tourism in Koper whereby ships should be distributed throughout the year to mitigate the negative effects of excessive traffic noise, traffic congestion, etc. It will be possible to establish a homeport in Koper in the long run, but firstly it is necessary to solve logistical obstacles and to ensure public transport for tourists from nearby airports (Ljubljana, Trieste, Venice and Pula). Specific additional car parks in Koper are not foreseen in the case of the home port establishment.

A detailed overview is illustrated in the Table 4 where it is visible that continuous increase of cruiser calls is expected in the Port of Koper which will lead to the increase of number of passengers.

Table 4: Forecast of number of passenger arrivals in the period from 2018 to 2035
(Port of Koper, 2018)

Year	Passengers
2018	101.415
2019	120.000
2020	93.000
2021	110.000
2023	125.000
2025	131.000
2028	142.000
2030	181.000
2035	195.000

2.1.1.4 Catalogue of current policies/ public & private related initiatives

The Port of Koper is involved in different European projects:

- Supair (Interreg ADRION)
- Isten (Interreg ADRION)
- Adripass (Interreg ADRION)
- TalkNET (ESSR)
- SECNET (Interreg Italia-Slovenia)
- Competence center Logins
- Sauron (Horizon 2020)
- Car Esmatic (Connecting Europe Facility)
- ELEMED (Connecting Europe Facility)
- NMP (EU Structural Funds in Slovenia)
- Fresh Food Corridors (Connecting Europe Facility)
- Fresh Food Corridors (Connecting Europe Facility)
- GAINN4MOS (Connecting Europe Facility)

Other completed European projects:

- RCMS (Program: Horizon 2020)
- COSTA II EAST/ POSEIDON-MED (Program: TEN-T)
- NAPA Studies (Program: TEN-T)
- STARNETregio
- Adria A (Interreg Italia-Slovenia)
- GIFT (SEE)
- EMPIRIC (CEE)
- LOGICAL (CEE)
- SAFEPORT (Interreg Italia-Slovenia)
- Greencranes (TEN-T)
- SETA (SOUTH EAST EUROPE)
- SEEMARINER (SOUTH EAST EUROPE)
- ITS ADRIATIC MULTI-PORT GATEWAY (TEN-T)
- KOBALINK (MARCO POLO)
- SoNorA (TEN-T)
- MOS4MOS (TEN-T)
- Hinterport (MARCO POLO)
- Watermode (ESRR)
- Losamedchem (MED)
- Freight4All (MED)
- PORTA (MED)
- Memo (MED)
- Backgrounds (MED)
- Climeport (MED)
- INWAPO (CEE)
- INTE-TRANSIT (MED)
- iFreightMED-DC (MED)
- GREENBERTH (MED)
- KOC Logistika (EU Social found)
- B2MOS (TEN-T)
- NAPAPROG (TEN-T)
- NAPADRAG (TEN-T).

2.1.1.5 Weighted list of negative impacts linked to the cruise-related flows

Description of negative effect	Priority	Description of negative effect on the local level
Road congestion	High	Congestion of tourist buses in the port
Air and noise pollution	Moderate	By increased traffic this negative effect may have a tendency of growth.
Increased land use for parking and road infrastructures	Low	Specific additional car parks in Koper are not foreseen in the case of the home port scenario.
Reduced road safety	Moderate	It is estimated that road safety has a moderate priority because sometimes there is an interaction of buses with pedestrians in the area of the port.
Stress for the local community	Moderate	Old town in Koper is located close to the port and mostly pedestrianized, the saturation of main street might occur with high number of passengers arriving at the same time. Conflicting situation in public transport system between daily users and cruise passengers.
Climate impacts	High	Increase GHG and pollutants emissions

2.1.1.6 Existing networks, services and infrastructures in the city/ port

The passenger port is located about 300 meters (5 minute walk) from the main town square with its cathedral, cafes, restaurants and main tourist attractions (Figure 4). Passengers may use an elevator located across the street which enables easier access to the city center.

On Saturdays and Sundays during the cruise season a little tourist train is transporting tourists every half an hour around the perimeter of old town right from the cruise dock. This transport solution is an optimal solution for passengers with light mobility problems. Tourists can use also the hop on hop of bus between cities Koper-Izola-Piran during the main summer season.

Figure 4: Map of the passenger port and Koper main town square

Arriva Group (the largest bus line passenger operator who – with its companies – carries out line bus services within the territory of Slovenia) has a concession for city bus transports in Koper. They have invested considerably in newer, modern, economical and more ecological buses in cooperation with the Municipality of Koper in recent years. They have also adapted the lines and schedules to actual needs. Since 2002 the trend in the number of passengers transported by public urban transport has been increasing. In 2002 about

289.000 people were transported, while in 2007 they were already 530.000, in 2014 the number increased up to 674.000 and the number is still increasing. Significant progress has been possible due to investments in the fleet, the introduction of new bus lines and more frequent departures of buses, subsidizing services that are significantly more accessible. Positive effects are also linked to investments in roads and other public infrastructure (SUMP of Koper, 2017). The map below illustrates the urban public bus transport lines in the city of Koper.

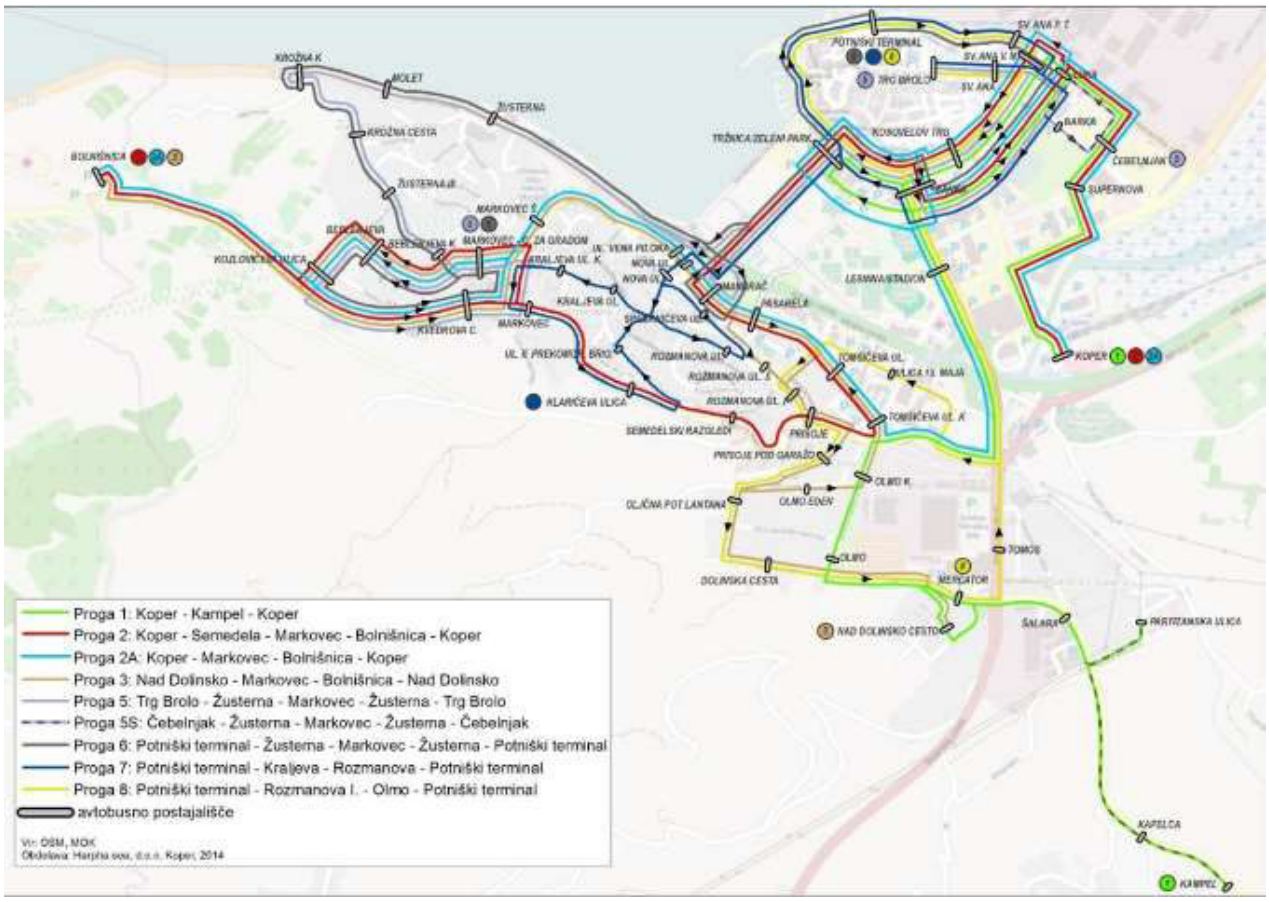


Figure 5: Urban public bus transport lines in the city of Koper
(SUMP of Koper, 2017)

On a request of Luka Koper busses are obliged to announce their arrivals in the port in relation to the organized passengers excursions.

On the other hand, the number of online providers is rising that are organizing/offering several individual excursions and pick up passengers in different locations across the city. There is no traffic control. Sometimes tourists that use this type of service fail to re-embark timely.

The map below illustrates roads in Koper and in a sourroundings.

Figure 6: Roads in Koper and in a sourroundings.
(Atlas okolja, 2019)

2.1.2 SWOT and CAME analysis

The topics listed in the SWOT Analysis (Table 5 – SWOT Analysis), are related to the information presented in previous chapters. The CAME analysis (Table 6) is more advanced systematization that will help to support the implementation of strategies and actions.

Table 5: SWOT Analysis

Strengths	Weaknesses
➢ high quality network of pedestrian and cycling facilities. ➢ Presence of the elevator across the street that enables easier access of passengers from the terminal to the center of town. ➢ Tourist attraction - nature reserve Škocjanski zatok close to the cruise terminal. ➢ Public bus in front of the port terminal. ➢ City Policy is directed toward the increase of number of e-buses. ➢ Sustainable tourism development (green tourism). ➢ Available information (months in advance) on the arrivals of cruises in port.	➢ Limited amount of available time to visit Koper. ➢ Poorly developed facilities in the cruise terminal (use of container terminal). ➢ Lack of taxi parking regulation. ➢ Lack of parking spaces for buses and cars. ➢ Increase of share of touristic individual bus excursions. ➢ Decentralized destinations accessible by train but not viable due to time limitations.

Opportunities	Threats
➢ Possibility to reach the beach on foot from the cruise terminal. ➢ The passenger port is located just about 300 meters from the main town square. ➢ New e-bike sharing station will be established close to terminal. ➢ Higher awareness on available ICT solutions. ➢ Train station reachable by bus. ➢ Multimodal transportation connections. ➢ Cruise tourism might become less seasonal (with increasing turnaround share). ➢ Increase of turnaround cruises.	➢ Increasing number of tourists (cruise and otherwise). ➢ Increasing size and ship capacities ➢ 7 busiest tourist months (April -September), 5 off-peak months (low season). ➢ Climate change and natural disaster. ➢ Global economic-political instability. ➢ Tourism is a highly volatile industry. ➢ Development of new tourist products in other nearest ports. ➢ Insufficient political will to implement LCTP.

Table 6: CAME analysis

	Threats	Opportunities
Weakness	**Adaptive strategy *'Resist'*** Use EU and local/national funding strategies for implementing low carbon solutions.	**Corrective strategy *'Take advantage'*** Identify strategies for corrective actions based on shared experiences, collected inputs and data.
Strengths	**Maintaining strategy *'Keep up'*** Maintain positive results with on-going monitoring and revising activities.	**Exploring strategy *'Maximize'*** Explore new opportunities in cross sector collaboration (alignment of aims among stakeholders).

2.2 Step 2: Participatory process

2.2.1 Stakeholders identification

The stakeholders were divided in groups based on relevance and impact they had in the development of the LCTPs activates and future scenarios.

Table 7: Stakeholders divided in groups based on their importance and influence

Influence /Power+	High Importance/Interest +	Low Importance/Interest +
Low	Ministry for infrastructure (National)	Municipality of Koper (Local) Port Authority (National)
High	Utilities: Waste disposal service Marjetica Koper d.o.o. & Rižana aqueduct Koper d.o.o. (Local)	Atlas Express d.o.o. (Local tourist agency) Regional Development Centre Koper (RDC) (Regional)

The stakeholders involved in the project are presented below. A list of stakeholders is provided with a description of main interest related to cruise tourism and ways to increase their motivation.

Table 8: A list of stakeholders with a description of main interest related to cruise tourism and ways to increase their motivation

Stakeholder	Potential impact on the project	Main interest related to cruise tourism	How to motivate	Notes
Municipality: Municipality of Koper	High	Orientation toward sustainable tourism development. Improve public opinion about cruise tourism.	Present that LCTP can contribute to improve inhabitant environment with added economic value.	Providing information and data (feasibility studies and other important documents), coordination of stakeholders and signing a support letter for the implementation of LCTP. The main responsible entity for drafting the Plan with the support of GOLEA and further implementation and monitoring of introduced measures.

Stakeholder	Potential impact on the project	Main interest related to cruise tourism	How to motivate	Notes
				Providing required information on future investments.
Port of Koper: Luka Koper, d. d.	High	Increasing revenue. Improved corporate image. Increasing competitiveness. Improved accessibility to the terminal.	Improve cruise passengers' "comfort", aiming to raise attractiveness. Opportunity to contribute at the development of the LCTP.	Providing information and data on the flow of cruise. Providing information and data (feasibility studies and other important documents). Providing information and data on the flow of tourists. Providing required information on future investments.
Ministry for infrastructure	Medium	Economic Growth Expected	Sustainable Mobility and transport policies development. Low carbon economy policy development.	Providing feedback on policies and integration with national policies.
Regional Development Centre Koper (RDC)	Medium	Improvement of city of Koper image as a sustainable touristic destination.	Present importance of minimizing negative impacts on the city.	RDC performs the role of regional coordinator of interests on local as well as national level in the fields of regional development, economy, human resources and environment protection.

Stakeholder	Potential impact on the project	Main interest related to cruise tourism	How to motivate	Notes
Atlas Express d.o.o. (Local tourist agency)	Medium	Increased revenue. improve the range of tourist products and services. Higher number of customers.	Promising more clients and an increasing revenue. Opportunity for upgrade of their services for different type of guests.	Providing information and data on the number of excursions per each cruise ship.
Rižana aqueduct Koper d.o.o.	Medium	Better service.	Present importance of minimizing negative impacts on the city.	Providing information and data concerning graywater associated with cruise ship traffic.
Local utility company: Marjetica Koper d.o.o.	Medium	Electric vehicles for collection of city wastes	Present importance of minimizing negative impacts on the city.	Providing information and data on the waste collection.

2.2.2 Participatory process design and implementation

During the participatory process the objective was to present the project to potential partners in order to obtain their support and to collect useful information.

2.2.2.1 Participatory workshops

Preparatory meeting

The preparatory meeting was organized on 27th of February 2019 in Koper. Together with the Jasna Softić, new deputy mayor of the Municipality of Koper and Ivana Štrkalj, contact person in charge for development of LCTP at municipal level the programme of the 1st participatory workshop was drafted.

1st Participatory workshop

The 1st Participatory workshop took place on 15th of March 2019 in the Municipality of Koper (municipal building). Prior to the meeting, information on the target organizations was partially gathered in order to understand how they can contribute at the document elaboration and what type of information they can provide. This preparation phase was very useful since it enabled the project presentation, collection of data and information for definition of current situation.

2nd Participatory workshop

The 2nd Participatory workshop took place on 10th of July 2019 in the Municipality of Koper (municipal building). Golea presented the synthetic version of LCTP Koper. Stakeholders provided proposals how to improve the LCTP. Additional key information was collected (number of cruise ships and passenger arrivals in the period 2019-2021, already planned investments by the Municipality of Koper for the next years, collection of data on energy consumption, waste transport, etc.).

2.2.2.2 Methods used for data collection

Different methods have been used for data collection.

Table 9: Methods used for data collection

Methodology used	Description	Results
Surveying	Within the project Inter-Conect Program Interreg ADRION a survey was implemented between October 26th and October 27th 2018 when cruise ships were present in the coastal city of Koper. RRA LUR Ljubljana was in charge for the elaboration of data analysis. In collaboration with an external expert they managed to acquire 100 completed questionnaires. The questionnaires included questions on general socio-economic status, of the modal split, trip organization, frequency of using public transport at home, transport mode preference and a hypothetical question about a rail trip to Ljubljana during their cruise stop in Slovenia.	Acquired information about travel habits of passengers, about their choice of choosing transportation modes, and influences of factors that determine their trips.
Meetings	Meeting was held with the following stakeholders: Municipality of Koper, Luka Koper, d. d., Regional Development Centre Koper, Atlas Express, Rižana aqueduct Koper d.o.o., Marjetica Koper d.o.o. and Slovenian Ministry of infrastructure. Additional meetings have been organized with the nearby municipalities of Izola and Ankaran to discuss the following topics: Establishment of a shared bicycle rental system with neighboring municipalities, introduction of low carbon water transport and e-buses.	Gather their support, collecting data and get feedback/suggestions.
Interview	A short interview has been done with representatives of regional development agencies RDC Koper and RDA Ljubljana about Transnational connectivity - Users need surveys.	Acquired additional information about travel habits of passengers (use of modal split, trip organization, preferences about transportation modes, etc.).
PAME	After each meeting with stakeholders, a meeting between the Municipality of Koper and GOLEA followed.	Analysis of information and data obtained from various stakeholders.

Methodology used	Description	Results
Delphi method	Meetings were held at which the initial measures were presented and then given to the Municipality of Koper and to the Port of Koper for their final acceptance. Mobility specialists have been involved (Urban Planning Institute of the Republic of Slovenia and PNZ d.o.o.)	Definition of goals and specific measures which will solve the existing problems and reduce the negative impacts of cruise ships on the city and the environment.

2.3 Step 3: Low Carbon Transport Plan

2.3.1 Current scenario and challenges

Elaboration of step 1 and 2, the collected data, information and feedback from stakeholders - all this provided the basis for the elaboration of an overview of the current's context, including the main issues, opportunities and resources:

- Collected data show that cruisers exceeded the number of tourist arrivals in 2011 in the city of Koper. Cruisers have to be considered as international economic added value.
- In 2018 over 100.00 passengers arrived on cruise ships.
- 59 % of tourists walked. Organized trips by international and local providers were attended by 32 % of guests. Public transport ranks last place in modes preferred.
- Old town in Koper is located close to the port and mostly pedestrianized, the saturation of main street might occur with high number of passengers arriving at the same time.
- New e-bike sharing system will be established close to terminal.
- The limit has been set up to 200.000 visitors from cruise ship tourism in Koper whereby ships should be distributed throughout the year to mitigate the negative effects of excessive traffic noise, traffic congestion, etc.
- It will be possible to establish a homeport in Koper in the long run, but firstly it is necessary to solve logistical obstacles and to ensure public transport for tourists from nearby airports.
- Local energy concept and SUMP for the Municipality of Koper have already been elaborated.
- Implementation of the LCTP will improve the image of the city of Koper as a sustainable touristic destination (more efficient transport and facilities, reduced air pollution, conservation of heritage sites and open spaces, etc.).

2.3.2 Vision

Vision

The Municipality of Koper aims to become one of the reference destinations for the sustainable mobility of cruise passengers where available mobility options have a reduced impact on the environment and on the city residents.

Objectives

According to this vision, four objectives have been identified:

- to develop a sustainable tourism (green tourism)
- to balance the coexistence between residents and tourists
- to mitigate the negative effects of excessive traffic noise, traffic congestion, etc.,
- to reduce the GHG emissions by developing the LCTP.

2.3.3 Strategy

The table below, presents the challenges to be tackled and the suggested strategies

Table 10: Challenges to be tackled and the suggested strategies

No.	Challenges	Strategies
1.	Tourists use non sustainable transport modes for short distances	Promotion of the city exploration by active modes of transport
2.	Tourists use non sustainable transport modes for medium distances	Promotion of the e-bike and public transport use
3.	Excessive concentration of people in the old town of Koper	Balancing the number of tourists at points of interest, reduction of negative impacts, enhancement of tourist experience and spreading points of interest
4.	Congestion in road traffic	Implementation of congestion charge schemes
5.	Waste disposal service use diesel powered vehicles	Introduction of electric fleet for the waste management company
6.	Independent mobility in the city for older people, frequently affected by mobility limitations	Introduction of sustainable solutions for people with reduced mobility

2.3.4 Actions and indicators

For each challenge, a strategy has been determined and several actions have been planned, responding to specific objectives. Activities were planned to achieve the objectives and the indicators will ensure the monitoring of the actions (how successful they are). The quantitative indicators and the target values have been settled to be achieved by 2028. The selected indicators are related to indicators included in the SUMP.

Table 11: Actions and indicators

No.	Strategies	Actions	Indicators and target
1.	Promotion of the city exploration by active modes of transport	1. Establishment of the bike-sharing system 2. Establishment of web application for renting e-bikes 3. Carrying on with the implementation of cycling network in Koper 4. Construction of accessible pedestrian routes 5. Reduction of number of public car parks	➢ Share of cruise passengers walking and/or using bicycle: ○Currently: walking 59 %, rent and ride bicycle 3 %. ○Objective: walking 61 %, rent and ride bicycle 5 %.
2.	Promotion of the e-bike and public transport use	1. Carrying on with the implementation of cycling network in the countryside 2. Establishment of a shared bicycle rental system with neighboring municipalities (Ankaran, Izola, Piran, Trieste-Italy) 3. Introduction of n. 4 e-buses 4. Introduction of low carbon water transport 5. Implementation of multimodal transportation connections 6. Introduction of integrated tourist card (to facilitate access of cruise passengers to the public transport, bike-sharing systems, etc.)	➢ Share of cruise passengers using public transport: ○Currently: 2 %, ○Objective: 4 %. ➢ Number of missing links in the cycling network: ○17. ➢ Number of water transport lines: ○Currently: 0

No.	Strategies	Actions	Indicators and target
		7. Introduction of light rail	○Objective: 2. ➢ Number of e-buses: ○Currently: 1 ○Objective: 4.
3.	Balancing the number of tourists at points of interest, reduction of negative impacts, enhancement of tourist experience and spreading points of interest	Progress and promotion of: different experiential paths, diversified touristic hotspots and activities that can take place all year round (Cruise tourism might become less seasonal)	Number of offered excursions: ○Currently: 25 ○Objective: 40.
4.	Implementation of congestion charge schemes	Implementation of a taxi parking regulation in the port and providing training to taxi service providers on fuel efficient driving, presentation of the importance of e-mobility for reducing CO2 emissions and raising knowledge on local attractions	➢ Number of implemented regulations for touristic fleet in the port: ○Currently: 0 ○Objective: 1.
5.	Introduction of electric vehicles in the waste management company fleet	Introduction of one electric street sweeper	➢ Number of electric vehicles in the waste management company fleet: ○Currently: 3 ○Objective: 4.
6.	Introduction of sustainable options for people with reduced mobility	Introduction of three electric vehicle dedicated to people with reduced mobility in the city of Koper	➢ Number of electric vehicles: ○Currently: 0 ○Objective: 3.

The multimodal traffic plan has been elaborated and will be introduced to solve the identified traffic problems around the city in the next years, as shown in the map below (Figure 7).

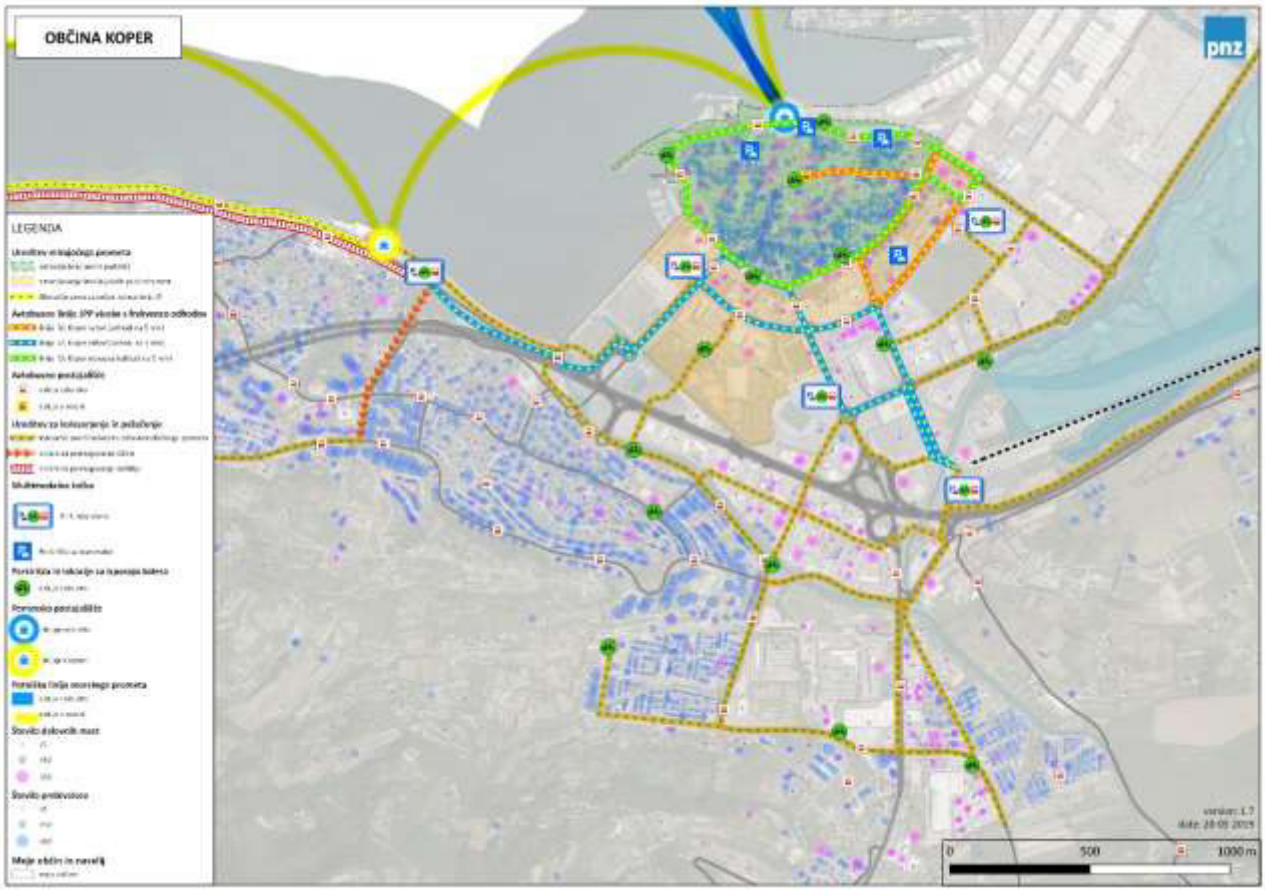


Figure 7: The multimodal traffic plan for the city of Koper
(Multimodal schemes for sustainable mobility in the coastal zone - PNZ d.o.o., 2018)

2.3.5 Development of future scenarios

The table 12 summarizes the information regarding the three scenarios that enables an easy comparison between each scenario.

Table 12: Different scenarios and foreseen impacts

Scenario	Pollutants and Greenhouse Gases	Coexistence between locals and cruise passengers
Business as usual scenario	The current trends in economic, social and environmental terms continue to be the same.	
Best-case scenario	Despite the increase of cruise passengers, there will be more tourists using more sustainable transport options (e.g. walking, cycling, e-bus, and	The city center will not be overcrowded since there will be a balance between the different interesting areas. In addition, local economy will prosper, more people will be cycling and walking

Scenario	Pollutants and Greenhouse Gases	Coexistence between locals and cruise passengers
	others). This means that less GHG and pollutants will be released.	in the streets. This can contribute to increase the cruise passengers image. Low carbon public transport will be increased which will lead to a sustainable development of cruise tourism.
Worst-case scenario	With significant increase of number of cruise passengers and current modal share, the number of cruising ships will increase and consequently also the GHG and air pollutants.	Negative effects will lead to excessive traffic noise, traffic congestions, etc. If no measures are taken the locals will start to have doubts in the cruise tourism benefits.
Most likely scenario	The modal shift to low carbon options might not be enough to reduce the GHG and pollutants emissions significantly (due to increase of total number of tourists) but could be enough to maintain the current emission levels.	The number of tourists will gradually rise. The share of tourists that will choose cycling and walking will slowly increase. Tourists will have the possibility to choose diverse experiential paths and to experience local products. Low carbon public transport will be partially introduced.

2.4 Step 4: Monitoring and funding

2.4.1 Monitoring LCTP implementation

The implementation of the LCTP is divided within the following steps:

1. Acceptance of the plan by the Luka Koper, d. d. (port authority) and the Municipality of Koper.
2. Establishment of Co-working team responsible for implementation.
3. Involvement of key stakeholders for support.
4. Implementation of measures within the indicated timeframe. The port authority and the Municipality of Koper are responsible for the implementation of the LCPT within the indicated timeframe in cooperation with key stakeholders.
5. Monitoring and control of the implemented measures. The body in charge of monitoring and controlling the implementation of measures are the port authority and the Municipality of Koper.

2.4.2 Funding

Public funds can be obtained from municipal funding for infrastructure projects and promotional activities or from different national and EU funds.

Some of the actions may require private investments from private organisations or start-ups, which can be revenue-generating.

Strategy 1 - Promotion of the city exploration by active modes of transport

Actions	Start/ deadline	Key stakeholders	External Expertise	Cost	Source of funding
1.1 Establishment of bike-sharing system	1/2019 - 12/2019	Municipality of Koper	Yes	792.126 €	Local, national end EU sources
1.2 Implementation of web application for renting e-bikes	10/2019 - 12/2020	Municipality of Koper, Tourist Information Center	Yes	30.000 €	Local, national end EU sources
1.3 Carrying on with the implementation of cycling network in Koper	1/2020 – 12/2028	Municipality of Koper	Yes	1.300.000 €	Local, national end EU sources
1.4 Construction of accessible pedestrian routes – Koper a city without vehicles	6/2020 – 12/2027	Municipality of Koper	Yes	10.000.000€	Local, national end EU sources
1.5 Reduction of number of public car parks	5/2022-12/2028	Municipality of Koper	Yes	NA	Local, national end EU sources

Strategy 2 – Promotion of the e-bike and public transport use

Actions	Start/ deadline	Key stakeholders	External Expertise	Cost	Source of funding
2.1 Carrying on with the implementation of cycling network in the countryside	5/2021-12/2028 (possible prolongation)	Municipality of Koper	Yes	4.000.000 €	Local, national end EU sources
2.2 Establishment of a shared bicycle rental system with neighboring municipalities (Ankaran, Izola, Piran, Trieste-Italy)	9/2020 – 12/2025 (possible prolongation)	Municipality of Koper, Municipality of Ankaran, Izola, Municipality of Piran, Municipality of Trieste	Yes	/	Local, national end EU sources
2.3 Introduction of n. 4 e-buses	5/2019 – 6/2020	Municipality of Koper, ARRIVA, GOLEA	Yes	555.000 €	Local, national end EU sources
2.4 Introduction of low carbon water transport	5/2022 – 6/2023	Municipality of Koper, private partner, GOLEA	Yes	/	Local, national end EU end private sources
2.5 Implementation of multimodal transportation connections	5/2022 – 12/2028 (possible prolongation)	Municipality of Koper, Regional Development Centre Koper, ARRIVA	Yes	5.600.000 €	Local, national end EU sources
2.6 Introduction of integrated tourist card (to facilitate access of cruise passengers to the public transport, bike-sharing systems, etc.)	2/2021 – 2/2022	Municipality of Koper, Atlas Express d.o.o., Luka Koper d. d., Tourist Information Center, Regional Development Centre Koper	Yes	30.000 €	Local, national end EU sources
2.7 Introduction of light rail	2/2025 –	Ministry for infrastructure, Municipality of Koper, Municipality of Ankaran, Izola, Municipality of Piran, Municipality of Trieste	Yes	/	Local, national end EU sources

Strategy 3 - Balancing the number of tourists at points of interest, reduction of negative impacts, enhancement of tourist experience and spreading points of interest

Actions	Start/ deadline	Key stakeholders	External Expertise	Cost	Source of funding
3.1 Progress and promotion of: different experiential paths, diversified touristic hotspots and activities that can take place all year round (Cruise Tourism might become less seasonal)	1/2020 – 12/2028	Atlas Express, Tourist Information Center, Municipality of Koper, Regional Development Centre Koper, Luka Koper, d. d.	Yes	120.000 € per year	Local, national end EU sources

Strategy 4 - Implementation of congestion charge schemes

Actions	Start/ deadline	Key stakeholders	External Expertise	Cost	Source of funding
4.1 Implementation of a taxi parking regulation in the port and providing training to taxi service providers on fuel efficient driving, presentation of the importance of e-mobility for reducing CO2 emissions and raising knowledge on local attractions	1/2021 – 12/2022	Municipality of Koper, Luka Koper, d. d.	Yes	30.000 €	Local sources

Strategy 5 - Introduction of electric fleet for the waste management company

Actions	Start/ deadline	Key stakeholders	External Expertise	Cost	Source of funding
5.1 Introduction of one electric street sweeper	1/2020 – 12/2020	Marjetica Koper d.o.o., Municipality of Koper	No	200.000 €	Local, national end EU sources

Strategy 6 – Introduction of sustainable options for people with reduced mobility

Actions	Start/ deadline	Key stakeholders	External Expertise	Cost	Source of funding
6.1 Introduction of three electric vehicle dedicated to people with reduced mobility in the city of Koper	1/2023 – 12/2023	Municipality of Koper	No	50.000 €	Local, national end EU sources

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4 ANNEX

4.1 ANNEX 1 – LCTP measure description

1.1 Establishment of the bike-sharing system

- **How is the measure implemented at a local level?**
  There will be in total seventeen (17) stations of the bike rental systems installed close to largest traffic generators in the city. Most stations are located along the cycle paths or in the immediate vicinity of the cycle paths. One station will be located near to the cruise terminal. Five stations are currently not directly connected to the existing cycling network. A total of 102 electric bikes will be purchased.
- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  A crucial issue will be the collaboration of different stakeholders to successfully promote the measure.
- **What sets the measure apart from other similar measures?**
  This measure will introduce e-bike sharing/rental services in the city, which will contribute to the improvement of independent mobility of inhabitants and tourists.
- **How does the measure satisfy the needs of cruise passengers?**
  This measure provides to cruise passengers a clean mode of transport, the possibility to move faster and easier around the city. (to visit for example the natural reserve Škocjanski zatok in the vicinity).

1.2 Implement a web application for renting e-bikes

- **How is the measure implemented at a local level?**
  All e-bike sharing stations will be integrated into a system that will provide up-to-date information on the number of bicycles available at each station. A mobile application will be available for users to show how many bikes are available at a given stop at a given time. Each station will also be equipped with public lighting and video surveillance.
- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The main issue will be the maintenance and update of the application. Older people are usually less familiar with mobile applications.
- **What sets the measure apart from other similar measures?**
  ICT solutions are devoted to cruise passengers that prefer the option of do-it-yourself visiting and sightseeing than organized shore excursions, which enables them to avoid the crowd and to search for new products/adventures that are not offered by traditional tourist paths.
- **How does the measure satisfy the needs of cruise passengers?**
  The mobile application will allow tourists to rent bicycles autonomously.

1.3 Continue the implementation of the cycling network in Koper

- **How is the measure implemented at a local level?**
  The Municipality of Koper is currently pursuing a strategy of expanding the cycling network in the city as this is a prerequisite to bring cycling closer to inhabitants and cruise passengers/other tourist. The purpose is to build the missing bike paths within the city. List of missing sections: bike path

between Markovec end Gažon, missing bike path on the Dolinska road from the roundabout close to Hofer till Mercator, missing part of bike path on Šmarska, Ferrarska street, Olive road and Street 15. Maja.

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The municipality should apply for dedicated EU cohesion founds.
- **What sets the measure apart from other similar measures?**
  Appropriate cycling infrastructure is coupled with the measure e-bicycle rental services.
- **How does the measure satisfy the needs of cruise passengers?**
  Main touristic attractions can be comfortably and safely reached by cruise passengers on two wheels.

1.4 Create accessible pedestrian routes – Koper a city without vehicles

- **How is the measure implemented at a local level?**
  According to SUMP Koper progressive restrictions for motor transport in the old town are planned, and a final city centre closure by 2025. Within this strategic document has been settled also to improve safety and to reduce the number of road accidents by 50 % from 2017 till 2027. Walking and cycling are recognized and promoted as sustainable transport modes, with positive effects on health, the environment and quality of life in the city. The sustainable transport enhancement will help to reduce the traffic congestion, noise pollution and contribute to improvement of air quality. The measure will contribute to easier implementation policies addressed to the re-appropriation of urban spaces and a more people-friendly urban environment.
- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The first step is sectoral strategic planning, to gain a clear understanding on the demand and supply sides, assessing where flows would be coming from, where they would be aimed, what kind of information and infrastructure they may require to opt for walking during their visit of urban environment and local attractions.
- **What sets the measure apart from other similar measures?**
  The measure supports a more homogeneous distribution of tourists across the city, helping reviving businesses in a wider area than merely around the main tourist attractions.
- **How does the measure satisfy the needs of cruise passengers?**
  Better infrastructure will provide a safe and effective environment for people to walk free of worries and excessive constraints.

1.5 Reduction of number of public car parks

- **How is the measure implemented at a local level?**
  According to analyses just 1 % of tourists from cruising ships rented a car and drove by theirselfs. Specific additional car parks in Koper are not foreseen in the case of the home port scenario. In fact, the Municipality of Koper will reduce the car dependency by inhabitants and visitors. Parking outside the city center is envisaged which will bring many positive effects. In first place this measure will

increase traffic safety. In the center of Koper and also other settlements in the Koper Municipality jurisdiction priority will be given to pedestrians and cyclists.

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The initial dissatisfaction of users with the introduction of the measure.
- **What sets the measure apart from other similar measures?**
  The number of motorized trips will be minimal as parking will be limited in certain locations.
- **How does the measure satisfy the needs of cruise passengers?**
  The city will be revived and even more attractive for tourists.

2.1 Carrying on with the implementation of cycling network in the countryside

- **How is the measure implemented at a local level?**
  The Municipality of Koper is currently pursuing a strategy of expanding the cycling network in the city and also in the countryside which is a prerequisite to bring cycling closer to inhabitants and cruise passengers/other tourist. The purpose is to gradually build the bike paths in the countryside. List of missing links in the cycling network: Bertoki – Prade, intersection to Ankaran – Hrvatini, Bertoki – Pobegi, Pobegi – Sveti Anton, missing link to Parencana bike path in Bertoki, Hrvatini – Škofije, Bordon – Cepki, Rižane – Mostičje, Venganel – Prade, Bertoki – Concrete plant Dekani, Concrete plant Dekani – Miši, Concrete plant Dekani – Dekani center, Manžan – Guci, Hrvatini – Lazaret and Škofije - Ankaran.
- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The municipality should apply for dedicated EU cohesion founds.
- **What sets the measure apart from other similar measures?**
  Implementation of the cycling network in the countryside enables the development of new experiential paths.
- **How does the measure satisfy the needs of cruise passengers?**
  Tourists are increasingly interested in experiential paths. Combining cycling and authentic experience in the countryside might become one of the core tourist product.

2.2 Establishment of a shared bicycle rental system with neighboring municipalities (Ankaran, Izola, Piran, Trieste-Italy)

- **How is the measure implemented at a local level?**
  This specific measure is the upgrade of measure 1.1 Establishment of the bike-sharing system in Koper with neighboring municipalities. A shared bicycle rental system enables that one user can borrow an e-bike in Koper, cycles for example to Portorož (Municipality of Piran), leaves the e-bike there and comes back to Koper with a bus. First meetings had been held between neighboring municipalities to discuss how to carry out this measure.
- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**

The Municipality of Koper selected the contractor with a public tender. The investment will be finalised in 2019. The investment is going to be co-financed by dedicated EU cohesion founds. Other municipalities will be encouraged to prepare their own tender for selection of contractor which will support them to establish a compatible system.

- **What sets the measure apart from other similar measures?**
  This specific measure is the upgrade of the measure 1.1.
- **How does the measure satisfy the needs of cruise passengers?**
  The network of cycling paths will be extended throughout the Slovenian coast and, if possible, also in Italian Municipality of Trieste.

2.3 Introduction of n. 4 e-buses

- **How is the measure implemented at a local level?**
  The company Arriva Dolenjska and Primorska d.o.o. got the concession for public bus transport in the Municipality of Koper on a basis of a public tender in 2014. The contract was signed on the 27th January 2014 for a period of ten years. There are eight urban public bus routes in Koper. According to Investment project identification document for the purchase of new e-buses in Koper between 1st October 2014 and 31st December 2018 an average of 71.867 passengers were carried by buses per month. In total 14 vehicles are in use, 13 of them are diesel-fueled vehicles. From November 2018 onwards, a new line is in operation. An electric bus runs along line number 4: Šalara-Olmo-Market-Žusterna-Market-Olmo-Šalara.
  Additional three (3) e-buses are planned to be purchased for the new lines 1, 2 and 3. Lines 1 and 2 complement each other. They connect the P&R parking lots in Žusterna, the industrial zone in Sermin (Sermin GORC), with the city center, with the main bus station in Koper (P&R Koper and motorhome parking). The lines extend during the summer months from P&R Žusterna via Rozmanova and Krožna street to the border between the closed part for vehicles of the Coastal road and the part of the road with regular one-way traffic to Koper. The new lines will also establish a new connection to the Sermin industrial zone (Sermin GORC).

  Route of the line1 and 2 is shown on the map below.

Figure 8: Line 1 and 2

(Municipality of Koper, 2019)

Route of the line 3 is shown on the map below.

Figure 9: Line 3

(Municipality of Koper, 2019)

Technical characteristics of new e-buses are shown below:

Table 13: Technical characteristics of the electric vehicles

(Investment project identification document for the purchase of new e-buses in Koper, 2019)

BUS	K-Bus E-Solar City
category	M2
weight of the empty vehicle	2,500 kg
maximum total permitted weight of the vehicle	4.450 kg
number of passengers	26 passengers + driver
vehicle reach	approx. 100 km
battery	40 kWh with Chademo quickcharge system
roof solar panels	600 W

Figure 10: E-bus from Koper

(Investment project identification document for the purchase of new e-buses in Koper, 2019)

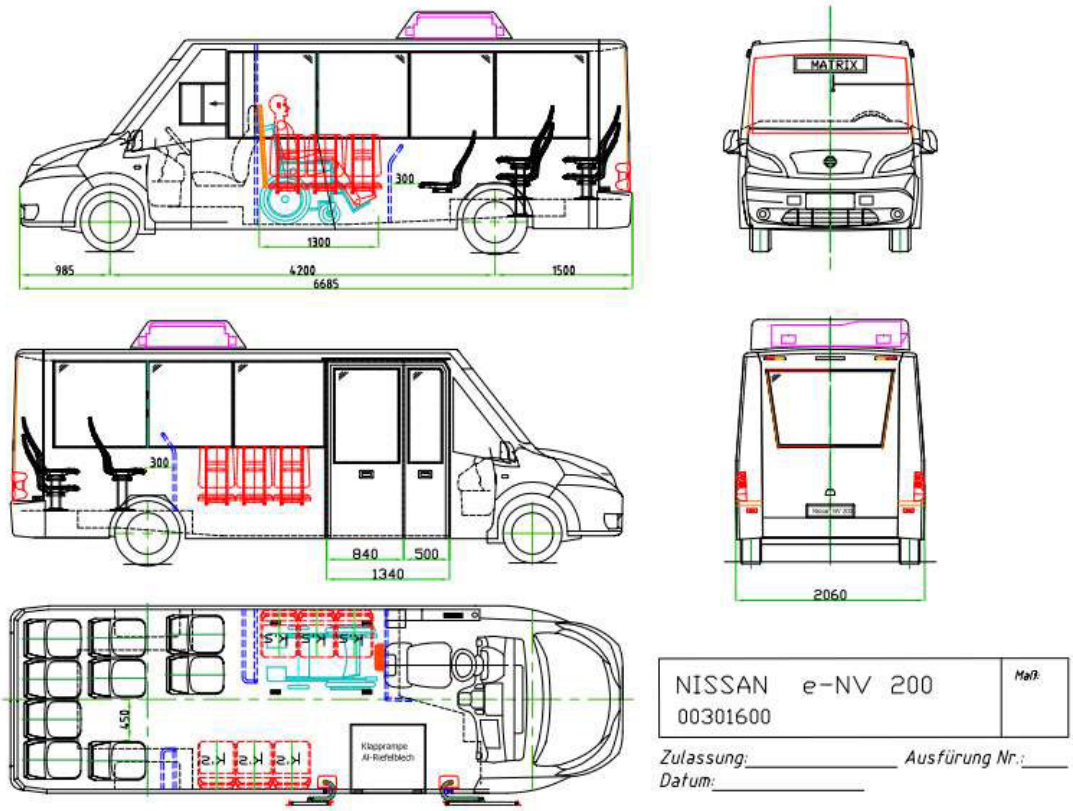

Figure 11: K-BUS d.o.o. Koper

(Investment project identification document for the purchase of new e-buses in Koper, 2019)

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The Municipality of Koper has applied for non-refundable financial incentive for the purchase of electric buses at the national Eco Fund's public call (up to 80 % of the value of the electric buses can be financed, excluding tax).
- **What sets the measure apart from other similar measures?**
  • reduced noise,

• easier access to city center,
• increased attractiveness of the area as a tourist destination,
• increased energy efficiency by reducing energy consumption,
• reduced greenhouse gas emissions and improved air quality

- **How does the measure satisfy the needs of cruise passengers?**
  Public bus stop is in front of the terminal.

2.4 Implement low carbon water transport

- **How is the measure implemented at a local level?**
  A new regular line connecting coastal towns in Slovenia and Trieste in Italy is planned in the long run. The extension of the Trieste - Milia line to Koper is welcomed as there are currently no connections between coastal towns in Slovenia and Italy. The measure will become interesting if the traffic policy of both countries changes. Legal issues (cabotage) will need to be solved. The current regulation requires to report passenger information (names, etc.) when they travel from Trieste to Koper and vice versa.

  Because of the cabotage, for example, urban bus transport between the municipalities of Nova Gorica, Šempeter-Vrtojba (Slovenia) and Gorizia (Italy) is facing similar problems. Listed municipalities, contiguous to each other on the Italian-Slovenian border, cover an area of 46,7 km^2 and altogether they include a population of approximately 75.000 inhabitants. On 8th August 2011, they established the EGTC GO to identify and cope with common challenges as well as to find solutions for the integration of services reducing the public spending and improving the quality of life of the citizens.

  The proposal "EGTC GO Cross-border Public Urban Mobility Plan" intends to identify a sustainable solution to the removal of the obstacles hindering the integration of the urban transport networks operating in the EGTC GO area. The EC Regulation 1073/2009 lays down restrictions on cabotage operations (art.15 c) at cross-border level for "transport services meeting the needs of an urban center or conurbation, or transport needs between it and the surrounding areas" unless they shall not be performed independently of the international regular services in accordance with the EC Regulation. Yet, art 8.4 e of the Regulation establishes that "authorization is granted unless the Member State decides on the basis of a detailed analysis that the principal purpose of the international passenger service is not to carry passengers between stops located in different Member States".
- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  It will be necessary to overcome bureaucratic problems between two countries and to build a new pear in Koper.
  The implementation of the measure is linked to the private company interest.
- **What sets the measure apart from other similar measures?**
  Diversification of means of transport between coastal cities.
- **How does the measure satisfy the needs of cruise passengers?**
  Introduction of waterways would offer to a cruise passengers a new and interesting perspective on the town its surroundings, away from traditional routes.

2.5 Implementation of multimodal transportation connections

- **How is the measure implemented at a local level?**

  The multimodal traffic plan has been elaborated and will be introduced to solve the identified traffic problems in the city of Koper and its surroundings in the following years. With the term "intermodal transport" we do not define a new type of transport, but an innovative approach to use available transport systems, moving from non-connected single use of traditional systems to an integrated one. The following map is presenting the multimodal traffic plan for the city of Koper.

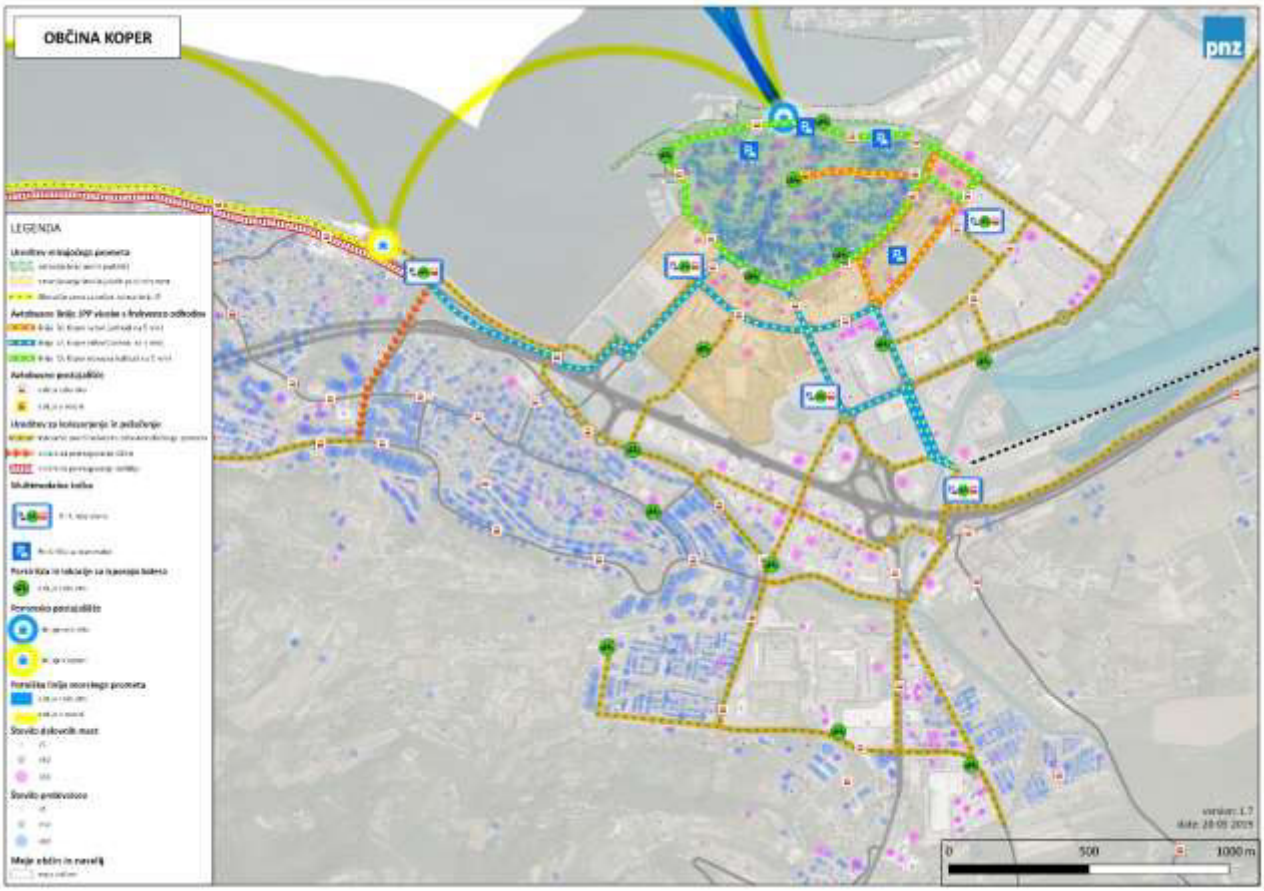

Figure 12: The multimodal traffic plan for the city of Koper
(Multimodal schemes for sustainable mobility in the coastal zone - PNZ d.o.o., 2018)

A specific sign has been designed for the intermodal nodes:

New 5 intermodal nodes will link 3 transport systems (car parking, bike-sharing and bus station). Part of the infrastructure has been already built (for example, part of dedicated car parks).

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**

The most important planning challenge is to have efficient intermodal nodes: a good node is a connection point that links at least 3 transport systems and facilitates the interchange. The following stakeholders should be included within the planning process of this measure: Municipality of Koper, ARRIVA and Regional Development Centre Koper.

- **What sets the measure apart from other similar measures?**
  Integration of different transport modes in one place.
- **How does the measure satisfy the needs of cruise passengers?**
  Multimodal schemes will facilitate the transition from one transport system to another. In the case of cruising tourism is expected a combined use of public buses and the bike-sharing system.

2.6 Introduction of integrated tourist card (to facilitate access of cruise passengers to the public transport, bike-sharing systems, etc.)

- **How is the measure implemented at a local level?**
  A tourist city card – Koper card is the key that opens the city gates and allows to tourists and city visitors to explore easily the city. At the purchase of a tourist city card six coupons are given in order to enable the visit of main city monuments and to enjoy various experiences free of charge. Two coupons are valid as entrance tickets to the bell tower and guided tour of the Praetorian Palace, while tourists can use the other four coupons to visit other monuments and for local experiences. There are numerous offers on the way around the city offered by the card; discounts and presents at the city providers identified by the KOPER CARD label. The card can be used from the day of purchase until 31th December of the current year. The discounts may be used many times during the validity period of the card, at every purchase or service order at the providers.

Figure 13: Koper card
(Koper card, 2018)

In the frame of this measure an upgraded card will be provided. One card will integrate discounted city attraction entrances, special offers in shops and use of public transport (public bus and e-bike sharing system).

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  An easy implementation might be expected as Koper tourist card has already been introduced and offered to tourists.
- **What sets the measure apart from other similar measures?**
  This measure aims to facilitate cruise passengers the access to public transport and e-bike sharing systems.
- **How does the measure satisfy the needs of cruise passengers?**
  The smart card is adapted to cruise tourism requirements.

2.7 Introduction of light rail

- **How is the measure implemented at a local level?**

  The introduction of a light rail would improve better transit connectivity between coastal cities and Trieste and Umag and an alternative to car use would be established. One of a route variant is shown on a map below.

Slika 1: Introduction of light rail between Koper and Sečovlje
(»ADRIMOB«, Institute of Traffic and Transport Ljubljana p.l.c, 2014)

The Transport development strategy of the Republic of Slovenia until 2030 includes a description of a light rail within a measure U.15 in connection with other measures that are dedicated to incentivate the use of public transport in the cities, so far, however, it does not deal with it separately.

Among the measures of the Integrated Transport Strategies of the Municipality of Koper and its neighboring municipalities the establishment of a city railway in the coastal area is examined.

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**

  It would make sense to start with public and expert discourse on possibilities of integration of light rail within the territory that should be initiated by coastal municipality authorities together with competent national institutions.

The fact is that a light rail with an extension to neighboring countries (Italy, Croatia) or with connection to a nearby international airport (Ronchi dei Legionari Airport) would enable an increased connection at wider regional area that has a great tourist potential and offers different tourism related forms of services.

- **What sets the measure apart from other similar measures?**
  The integration of light rail is more appropriate for the urban areas, cities could have consequentlly higher number of train stops and better access for residents. The light rail system integrates well with the classic rail system since it can connect to conventional tracks.
- **How does the measure satisfy the needs of cruise passengers?**
  By this measure an attractive public transport would be established across coastal area throughout the year and would shorten travel time during peak summer season.

3.1 Progress and promotion of: different experiential paths, diversified touristic hotspots and activities that can take place all year round

- **How is the measure implemented at a local level?**
  Koper is an active and green year-round Mediterranean destination as well as the 2017 European Destination of Excellence with regard to cultural tourism. Here, the historical coastal town meets the green Istrian countryside, revealing incredible history, cultural heritage, a wide array of culinary delights, authentic stories, natural sights, and experiences. The pleasant Mediterranean climate allows for numerous options for spending your leisure time actively and relaxing in nature or by the sea. There is also largest brackish wetlands in Slovenia located nearby the town – the Škocjanski Zatok Nature Reserve (Koper - The Green Destinations Collection 2018).

  Experiential travel can emphasize different areas of local life – culinary, culture, history, shopping, nature or social life– and can therewith be the basis for a holistic travel experience. The goal is to more deeply understand a travel destination's culture, people and history by connecting with it more than just by visiting it. Therefore, the traveler gets in touch with locals who give guidance how to experience a place (Experiential travel, 2018).

  According to the term "experiential travel" is already mentioned in different books and publications from 1985, however it was discovered as a meaningful market trend in last years. In 2017, 65 % of travelers preferred 'experiencing something new' over 'feeling rested and recharged' (U.S. Experiential Traveler Trends 2018: Annual Survey on Traveler Behavior, Motivations & Preferences).

  According to local tourist agency Atlas Express tourists are increasingly interested in experiential paths.; in fact they already have the possibility to choose among several experiential paths. New paths should be developed, promoted and offered to tourists.

  Koper has signed the Green Policy of Slovenian Tourism and joined the green scheme. The Green Scheme of Slovenian Tourism is a comprehensive system to promote the development of sustainable tourism in Slovenia, intended for both destinations and tourist service providers. The scheme, the objective of which is to improve competitiveness, quality and innovativeness of Slovenian tourism, is

based on the European Tourism Indicator System ETIS and the Global Sustainable Tourism Council GSTC, which enables a comparison to other green destinations around the world (Green scheme of Slovenian tourism, 2018).

Logo SLOVENIA GREEN:

Figure 14: Logo SLOVENIA GREEN

Green scheme of Slovenian tourism, 2018

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The following key stakeholders should collaborate shoulder to shoulder for the implementation of this measure: Atlas Express d.o.o., Tourist Information Center, Municipality of Koper, Regional Development Centre Koper, Luka Koper d. d.
- **What sets the measure apart from other similar measures?**
  Within this measure new activities that can take place throughout the entire year will be developed, promoted and offered to tourists. Cruising ships should be distributed throughout the year to mitigate the negative effects as for example excessive traffic noise, traffic congestion, etc.
- **How does the measure satisfy the needs of cruise passengers?**
  Experiential travel tends to focus on travel that is inspirational and/or creates a path to self-discovery.

4.1 Implementation of a taxi parking regulation in the port and providing training to taxi service providers on fuel efficient driving, presentation of the importance of e-mobility for reducing CO2 emissions and raising knowledge on local attractions

- **How is the measure implemented at a local level?**
  There is no taxi parking regulation in the Port of Koper. Presently the access to the port is not regulated and controlled. Suitable decree is needed where conditions for the access near to the port or in the port and the price list will be determined. A further possibility is a vehicle segmentation by emission categories. E-vehicles and hybrid vehicles should pay less for the access to the area, while an access of high emmission vehicles could be limited permanently or at time slots. With this set of actions, the local authority will be able to manage succesfully its urban center and the cruise terminal area, in line with market changes and new environmental directives.

  It should be given a precedence to electric vehicles when applying for obtaining a taxi service concession.

Additionally, taxi service providers should be trained on fuel efficient driving, the importance of e-mobility for reducing CO_2 emissions and about interesting local attractions.

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The investment share will be low for the public administration (Policy development, Elaboration of the plan, Elaboration of the taxi parking regulation, provide training) but high for the private sector (Luka Koper- Implementation of the system, along with its manufacturing, installation and maintenance; Taxi companies - new vehicles).
- **What sets the measure apart from other similar measures?**
  The primary objective of the scheme is to reduce the congestion in the city (the n. of taxi vehicles) and to persuade taxi drivers to use more efficient vehicles. Improved transport safety is also expected.
- **How does the measure satisfy the needs of cruise passengers?**
  The final goal is to upgrade the quality of taxi services.

5.1 Introduction of one electric street sweeper

- **How is the measure implemented at a local level?**
  Waste management company Marjetica Koper d.o.o. mostly uses diesel powered vehicles.
  In the last years they are gradually introducing electric vehicles in the company fleet. On the following pictures is displaying their electric vehicles:

Figure 15: Small pick-up for collecting waste in the city center
(Marjetica Koper d.o.o., 2019)

Technical characteristics:

- Load capacity 300 kg
- Box volume 1,8 m3
- Dimensions (mm) 2885 x 1570 x 1800
- Batteries 8x12V (72V)
- 2 seats
- Charger 220V
- Max speed 25 km/h
- Range 80 km

• Year 2006

Figure 16: Electric vehicle for 4 persons
(Marjetica Koper d.o.o., 2019)

Technical characteristics:
• Motor power 4 kW
• Gross vehicle weight 1100 kg
• Vehicle weight 670 kg
• Load capacity 430 kg
• Dimensions (mm) 3320x1190x1690
• Number of seats in the cabin 4
• Batteries 8x6V
• Charging time 6 - 8 hours
• Charger 220V
• Max speed 38 km/h
• Range 70 km
• Year 2017

Figure 17: The electric vacuum cleaner is used to clean public areas in the city center
(Marjetica Koper d.o.o., 2019)

Technical characteristics:

- Model Glutton 2411
- Dimensions (mm) 1950x750mmx 1700
- Weight 365 kg
- Batteries 48V, 440 Ah
- Motor power 1500 W
- Sound level 55 dB at 4 m distance
- Maximum speed 6 km/h

The company Marjetica has currently in total 4 diesel powered street sweepers. Presently, one diesel powered sweeper is in use to clean streets and public areas in the center of Koper. The vehicle operates 35 hours per week (1820 hours per year) and consumes 600 liters of diesel per month (7200 liters per year).

Currently they are planning to replace only one of it with an electric one in the near future because battery autonomy is still under question. This change would reduce the maintenance costs. The price of a new electric machine range from 160.000€ to 200.000€ (depending on the manufacturer). Manufacturers of electric sweepers promise approx. 90 % of fuel savings. Technical characteristics of the foreseen new street electric sweeper are shown below:

Figure 18: Street electric sweeper MODEL D. zero
(Industrial and street cleaning equipment DULEVO INTERNATIONAL leaflet, 2017)

Table 14: Technical characteristics of the vehicles

(Industrial and street cleaning equipment DULEVO INTERNATIONAL leaflet, 2017)

Technical characteristics of the street electric sweeper MODEL D. zero		
DIMENSIONS		
Length	mm	4495
Width	mm	1440
Height	mm	2000
Height with beacon	mm	2150
Net weight	kg	3550
Payload	kg	1000
Gross vehicle weight	kg	4550
PERFORMANCE		
Cleaning performance	m^2/h	25200

SWEEPING WIDTH		
Variable sweeping width	mm	1750 ÷ 3200
Max speed	km/h	25
Working speed	km/h	12
WASTE CONTAINER		
Container volume	m3	2,1
WATER TANK		
Water tank capacity	l	237
Material		AISI 304
Recycling system capacity	l	180
WATER SYSTEM		
Type		Electric
Flow	l/m	15
Pressure	Bar	10
BATTERY		
Type		Li Fe PO4
Number of batteries	n°	2
Maximum Power	kW	76,8
Voltage	V	96
Battery Capacity	Ah	800
Autonomy (UNI EN 15429-2)	hours	8
Voltage	V	12
TRACTION		
Transmission		Electric
Motor power	W	9000
HYDRAULIC SYSTEM		
Type		Electro-hydraulic
Electro-hydraulic	W	3500
SOUND EMISSIONS		
Sound pressure level (LpA)	dB	64,4
Sound power level (LwA)	dB	93,4
AIR CONDITIONING SYSTEM		
Type		Electric
Cooling power		1,5
Heating power		0,9

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  Waste management company Marjetica Koper d.o.o. will apply for non-refundable financial incentive for the purchase of one electric street sweeper through the national Eco Fund's public call.
- **What sets the measure apart from other similar measures?**
  The goal is to promote the purchase of electric vehicles among other utilities working in/for the port.
- **How does the measure satisfy the needs of cruise passengers?**
  Reduced environmental and noise pollution.

6.1 Introduction of three electric vehicle dedicated to people with reduced mobility in the city of Koper

- **How is the measure implemented at a local level?**
  Taking into account that cruise passengers are often elderly people, frequently affected by mobility limitations, destinations should put in place appropriate solutions to foster independent mobility in the city, pursuing the idea of becoming more accessible to all cruise passengers, regardless of their physical limitations, disabilities or age.

  A step in the right direction has been implemented. An elevator has been installed just across the street from the terminal which is in use mostly by elderly people that want to visit the city center. The passenger port is located about 300 meters from the main town square with its cathedral, cafes, restaurants and main tourist attractions. Use of the elevator is free of charge.

Figure 19: Public elevator in Koper
(ALUKS, 2014)

The municipality has pubblished public tender for the purchase of three electric vehicles (category N1) with seating for six passengers. It is planned that residents and visitors will be able to use three electric delivery vehicles in 2019.

All three vehicles can reach the top speed of 40 km/h and they will be painted in white and adapted to transport elderly and disabled people in the city center. The range of vehicles will be least 90 kilometers. All vehicles will also be able to recover energy when driving downhill and braking (Municipality of Koper, 2019).

- **Which are the critical issues that one has to deal with in terms of implementation of the measure?**
  The Municipality of Koper has applied for non-refundable financial incentive for the purchase of electric buses at the national Eco Fund's public call (up to 80 % of the value of the electric buses can be financed, excluding tax).
  What sets the measure apart from other similar measures?
  This measure takes in account that a large part of cruise passengers are senior citizens usually with reduced mobility capacities.
- **How does the measure satisfy the needs of cruise passengers?**
  The implementation of the measure would Increase city center accessibility for people with reduced mobility capacities.

4.2 Annex 2 – CO2 EMISSIONS per 1000 passengers

One of initial activities in the development of the Low-Carbon Transport and Mobility Plan is to determine the timeline for achieving the set goals. Therefore, a ten year period was settled for the implementation of LCTP.

The following energy consumers which are connected to the cruise tourism implementation and serve to the carriage of passengers/cargo at the destination are taken into consideration:

- buses for organized excursions,
- public buses,
- taxies,
- rent a car,
- street sweepers and
- waste collection vehicle.

For the purpose of calculation of CO2 emissions the following data have been taken into account:

- cruise ship passenger traffic per year,
- forecast of number of passenger arrivals in the period from 2018 to 2028,
- number of days the cruise ships are moored in the port,
- retention of a cruise ship at the destination,
- number of excursion buses per cruise ship,
- distance from the pier to the highway and back (4,3 km one way),
- vehicle mileage on municipal roads (only the territory under the municipal jurisdiction was under examination),
- frequency of vehicles per cruise ship,
- number of vehicles,
- the structure and characteristics of all vehicles.
-

Within business as usual scenario the current trends in economic, social and environmental terms continue to be the same. This scenario takes into account that no changes are introduced. No measures from this LCTP would be implemented.

Best-case scenario takes into account the implementation of all measures from the LCTP. Successful implementation of a taxi parking regulation in the port and providing training to taxi service providers on fuel efficient driving, presentation of the importance of e-mobility for reducing CO2 emissions and raising knowledge on local attractions would result in the increase in the number of electric taxis. This scenario foresees that only electric taxis would be in use in the port till 2028.

Most likely scenario takes into account the implementation of all measures from the LCTP. Some measures will be implemented partially. For instance, 70 % of planned bike lanes within the LCTP would be built in the Municipality of Koper. This scenario considers that 30 % of electric taxis would be in use till 2028.

Assuming, as predicted, that the number of cruises and passengers will continue to grow significantly, the plan success can't be measured having absolute CO_2 values as a reference. There will be, in fact, always also other factors influencing the results. Based on existing data, different prepared scenarios, elaborated measures, an analysis of the reduction of CO_2 emissions per 1000 passengers was implemented. The level of emissions per scenarios for medium end long term period are shown in the following table. A specific goal that was settled is to reduce the CO_2 emissions per cruise ship passenger by 20 % in the frame of 10 years according to the most likely scenario.

Table 15: CO_2 emissions per 1000 passengers per scenarios

Year	Business as usual scenario	Best-case scenario	Most likely scenario
2018	1.111	1.111	1.111
2023	1.111	859	893
2028	1.111	853	888

The Low carbon transport plan (if Most likely scenario or Best case scenario are considered) follows the objectives included in the draft document National Energy and Climate Plan (NENP), where the emission increase of 14 % is foreseen for transport by 2030 compared to base year 2015. NENP goals would not be achieved only in case of Business as usual scenario.

8. Annexes

Annex I – LCTP of Igoumenitsa acceptance letter of the City of Igoumenitsa
Annex II – LCTP of Limassol acceptance letter of the Ministry of Transport, Communications and Works
Annex III – LCTP of Limassol acceptance letter of the Limassol Municipality
Annex IV – LCTP of Thessaloniki acceptance letter of the City of Thessaloniki
Annex V – LCTP of Thessaloniki acceptance letter of the Major Development Agency Thessaloniki
Annex VI – LCTP of Sète acceptance letter of the Sète Agglomeration of Cities
Annex VII – LCTP of Valletta acceptance letter of the Grande Harbour Regeneration Corporation
Annex VIII – LCTP of Valletta acceptance letter of the South East Region
Annex IX – LCTP of Koper acceptance letter of the Municipality of Koper

Annex I – LCTP of Igoumenitsa acceptance letter of the City of Igoumenitsa

From: Ioannis Lolos
Mayor
Municipality of Igoumenitsa
teliskar@gmail.com

25/09/2019

To: Mr. Eng. BUJAR KOTRI
Head of Transport Planning Department
INSTITUTE OF TRANSPORT
MINISTRY OF INFRASTRUCTURE AND ENERGY
Albania

«Acceptance of LCPT for the city of Igoumenitsa"

Dear Mr Kotri,

First of all, I would like to thank you for the opportunity that you gave us to collaborate with you and create the **Low Carbon Transport Plan (LCTP)** for the city of Igoumenitsa, I would like to inform you that the Municipal experts of the Municipality read carefully the in depth analysis of the LCTP for the city of Igoumenitsa. We all unanimously agree that the LCTP can perform a very useful tool for our city that will improve the mobility and accessibility in the city due to cruise flows and further promote our area as a tourist destination, respecting the environment and natural resources. Recommendations and measures included in the LCTP, will be integrated in the Igoumenitsa's Sustainable Urban Mobility Plan (SUMP) aiming to further elaborate the developed scenarios.

The LCTP is a tangible outcome of the great collaboration that there was done among the Municipality of Igoumenitsa and the local stakeholders, University of Ioannina and Premium Consultants, who were mobilized in order to contribute in this important effort. I strongly believe that we will have the opportunity to collaborate again in the future in order to promote our common values for the economic and social growth of our area through collaborative and developmental actions.

Sincerely,

Ioannis Lolos

Mayor

Annex II – LCTP of Limassol acceptance letter of the Ministry of Transport, Communications and Works

REPUBLIC OF CYPRUS
MINISTRY OF TRANSPORT, COMMUNICATIONS AND WORKS

DEPARTMENT
OF PUBLIC WORKS
1428 NICOSIA

File No.: 4.2.6
Tel. No.: 22806630
Fax No.: 22498935
Email: mlambrinos@pwd.mcw.gov.cy

31 October 2019

Subject: Interreg Med Project LOCATIONS

Dear LOCATIONS Consortium,

The Public Works Department of the Ministry of Transport, Communications and Works of the Republic of Cyprus recognises the importance of mitigating the impact that cruise-ships related traffic has on cities, in order to improve the quality of life of inhabitants and visitors. Moreover, it endorses the vision of turning Cyprus into an exemplary sustainable cruise destination.

For the afore-mentioned reasons, and in the framework of the LOCATIONS - Low Carbon Transport in Cruise Destinations project (Interreg MED), it contributed to the development of the Limassol Low Carbon Transport Plan, according to the project's methodology and by collaborating with project partners and subcontractors.

With this letter, the Public Works Department of the Ministry of Transport, Communication and Works of the Republic of Cyprus acknowledges the Limassol LCTP as the key policy & planning tool for addressing the mobility and environmental pressures of the cruise activity, locally, and incorporates it in its local strategies for achieving the afore-mentioned goals and its vision regarding cruise, tourism and sustainable mobility. Moreover, it considers its approach relevant to other cruise-cities of Cyprus.

S. Zapitis
Director
Public Works Department

165 Strovolos Avenue, T.T. 2048, Strovolos
Web Page: www.mcw.gov.cy/pwd

Annex III – LCTP of Limassol acceptance letter of the Limassol Municipality

ΔΗΜΟΣ ΛΕΜΕΣΟΥ
LEMESOS (LIMASSOL)
MUNICIPALITY

Δημοτικό Μέγαρο
Αρχιεπισκόπου Κυπριανού 23
Τ.Κ. 50089, 3600 Λεμεσός, ΚΥΠΡΟΣ
Τηλ: +357 - 25 88 43 00
Τέλεφαξ: +357 - 25 36 54 97
http://www.limassolmunicipal.com.cy
E-mail:limassol.municipal@cytanet.com.cy

Town Hall
23, Arch. Kyprianos Str.
P.O.Box 50089, CY-3600 Lemesos (Limassol), CYPRUS
Tel: +357 - 25 88 43 00
Telefax: +357 - 25 36 54 97
http://www.limassolmunicipal.com.cy
E-mail:limassol.municipal@cytanet.com.cy

Φακ.:

Ref.:

31st of October 2019, Limassol

Dear LOCATIONS consortium,

The Municipality of Limassol recognises the importance of mitigating the impact that cruise-ships related traffic has on cities, in order to improve the quality of life of inhabitants and visitors. Moreover, it expresses its willingness to turn Limassol into an exemplary sustainable cruise destination.

For the afore-mentioned reasons, and in the framework of the LOCATIONS - *Low Carbon Transport in Cruise Destinations* project (Interreg MED) it developed its Low Carbon Transport Plan, following the project's methodology and receiving expert assistance from the project partners and subcontractors.

With this letter, the Municipality of Limassol acknowledges the Limassol LCTP as the key policy & planning tool for addressing the mobility and environmental pressures of the cruise activity, locally, and incorporates it in its local strategies for achieving the afore-mentioned goals and its vision regarding cruise, tourism and sustainable mobility.

Mr. Nicos Nicolaides

Mayor of Limassol

Annex IV – LCTP of Thessaloniki acceptance letter of the City of Thessaloniki

To: LOCATIONS Consortium

Dear Sir/Madame,

In the scope of the European Project LOCATIONS – Low Carbon Transport in Cruise Destination Cities and the work developed for the City of Thessaloniki, I confirm the reception of the Low Carbon Transport Plan for the Cruise Tourism of Thessaloniki and inform you that we have a great interest to pursuit the proposed strategy.

Specifically, it is understood that the actions outlined are consistent with each other, and they are integrated in the vision that this Agency has for the City and I'm committed to develop this Plan until its implementation.

The strategy of the Low Carbon Mobility Plan for the Cruise Tourism of Thessaloniki will be integrated into the City planning instruments, to ensure its implementation in the medium-to-long term.

I take advantage of this opportunity to present, Dear Sirs, the assurances of my consideration.

Local, date

Thessaloniki, Oct 2nd 2019.

Job role

Dept. Head of Tourism dept. of City of Thessaloniki

Signature

ΔΗΜΟΣ ΘΕΣΣΑΛΟΝΙΚΗΣ ΔΗΜΟΚΡΑΤΙΑ

Name

Margarita Salpingidou

Annex V – LCTP of Thessaloniki acceptance letter of the Major Development Agency Thessaloniki

MAJOR
DEVELOPMENT
AGENCY
THESSALONIKI S.A.

To:
LOCATIONS Consortium

Dear Sir/Madame,

In the scope of the European Project LOCATIONS – Low Carbon Transport in Cruise Destination Cities and the work developed for the City of Thessaloniki, I confirm the reception of the Low Carbon Transport Plan for the Cruise Tourism of Thessaloniki and inform you that we have a great interest to pursuit the proposed strategy.

Specifically, it is understood that the actions outlined are consistent with each other, and they are integrated in the vision that this Agency has for the City and I'm committed to develop this Plan until its implementation.

The strategy of the Low Carbon Mobility Plan for the Cruise Tourism of Thessaloniki will be integrated into the City planning instruments, to ensure its implementation in the medium-to-long term.

I take advantage of this opportunity to present, Dear Sirs, the assurances of my consideration.

Thessaloniki September 27, 2019

MAJOR DEVELOPMENT
AGENCY THESSALONIKI S.A.
VAT No: 094410584 - TAX OFFICE: FAE THESSALONIKI
REG No 30634/62/B/94/0065
1, VASILEOS GEORGIOU A' Ave
THESSALONIKI 546 40, GREECE

Chrisostomos Kalogirou
Managing Director
Major Development Agency Thessaloniki S.A.

Annex VI – LCTP of Sète acceptance letter of the Sète Agglomeration of Cities

Sète agglopôle méditerranée
ARCHIPEL DE THAU

ATTN: LOCATIONS Consortium

Frontignan, le 21 octobre 2019

Ref: Reception du LCTP de Sète dans le cadre du projet LOCATIONS

Madame, Monsieur,

Dans le cadre du projet Européen LOCATIONS – Transport Bas Carbone dans les Villes à destination de croisière, et de l'implication de la ville de Sète, je vous confirme la bonne réception du Plan de Mobilité Bas Carbone (LCTP) de Sète et vous confirme que nous avons un grand intérêt à poursuivre la stratégie proposée.

En particulier, j'assure que les actions proposées sont cohérentes et en phase avec la vision de la ville.

Pour cette raison, je m'engage à exploiter cet outil en encourageant son intégration avec les stratégies et plans locaux et en particulier avec le Plan de Mobilité Durable de l'Agglomération de Sète.

Bien cordialement,

Ref: Reception du LCTP de Sète dans le cadre du projet LOCATIONS

Dear Sirs,

In the scope of the European Project LOCATIONS – Low Carbon Transport in Cruise Destination Cities, and the worked developed for the City of Sète, I confirm the reception of the Low Carbon Transport Plan for the Cruise Tourism of Sète, Sète LCTP, and inform you that we have a great interest to pursuit the proposed strategy.

Specifically, I assure you that the actions outlined are consistent with each other, and that they are articulated with the vision that this executive has for the city.

For this reason, I am committed to exploit this instrument by promoting its integration with local plans and strategies, and in particular with the Sète Sustainable Urban Mobility Plan.

Sincerely,

Jean-Jacques Taillade
Directeur Général des Services Intérim

Sète agglopôle méditerranée
4 avenue d'Aigues,
BP 600 - 34110 FRONTIGNAN
Tél. : 04 67 46 47 48 - Fax : 04 67 46 47 47
GPS : 43°26'16.7"N 3°42'04.9"E
www.agglopole.fr

Annex VII – LCTP of Valletta acceptance letter of the Grande Harbour Regeneration Corporation

Grand Harbour
Regeneration Corporation

Our Ref: Paragon Europe.doc
Your Ref:

15th November 2019

Dr. Theuma

On behalf of the GHRC, whilst acknowledging receipt, I would like to thank you for the work and research carried out in preparation of the Low Carbon Transport Plan for Valletta document that you co-authored with Ms Claire Zarb and Ms Denise Cassar.

Regards,

Mario Bonello A&CE
Head Projects GHRC

Annex VIII – LCTP of Valletta acceptance letter of the South East Region

Reġjun Xlokk
(South East Region)
97, Triq Santa Marija,
Ħal Tarxien TXN 1708
Malta

30th October,2019

Dear Dr. Theuma

We acknowledge receipt of the LCTP - Valletta

Best Regards

Paul Farrugia
President

t: +356 2704 0492 f: + 356 2704 0493
e-mail: regjun-xlokk.dlg@gov.mt

Annex IX – LCTP of Koper acceptance letter of the Municipality of Koper

MESTNA OBČINA KOPER
COMUNE CITTÀ DI CAPODISTRIA

ŽUPAN – SINDACO

Št. zadeve: 303-12/2019

Koper, 15. 10. 2019

PREDMET: Pismo podpore vezano na realizacijo specifičnih ukrepov v sklopu projekta »LOCATIONS« - Low Carbon Transport Plan in Cruise Destination Cities; Program Interreg Mediterranean (MED)

V funkciji župana Mestne občine Koper potrjujem, da se bo institucija katero predstavljam trudila k izvajanju, spremljanju in nadziranju ukrepov, ki so bili definirani v okviru projekta LOCATIONS« - Low Carbon Transport Plan in Cruise Destination Cities; Program Interreg Mediterranean (MED). Razvoj specifičnih ukrepov je primarno usmerjen na zmanjšanje negativnih zunanjih vplivov, ki jih prinaša povečano števila potnikov na križarjenjih ter z njimi povezani ostali tovorni tokovi na kopnem. Skrb za izvajanje ustreznih ukrepov bo na dolgi rok prinesla povečanje privlačnosti destinacije in kakovosti mestnega okolja.

Tovrstno sodelovanje nam bo omogočilo tudi boljše spoznavanje vseh ostalih aktivnosti in načrtov, ki bodo izdelani v okviru projekta LOCATIONS.

Podpis tega pisma ne prinaša nobene finančne obveznosti za Mestno občino Koper.

S spoštovanjem,

Aleš Bržan,
župan Mestne občine Koper

MESTNA OBČINA KOPER – COMUNE CITTÀ DI CAPODISTRIA – ŽUPAN

Po pooblastilu župana
PODŽUPANJA
Jasna Softić