



# SYNTHETIC REPORT OF THE FINAL LCTP

**LOCATIONS - LOW CARBON TRANSPORT IN CRUISE DESTINATION CITIES**

**WP3 — TESTING**

**ACTIVITY 3.6 FINALIZATION OF PILOT ACTIVITIES**

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# 1. LOW CARBON TRANSPORT PLAN

## 1.0 STEP 0: WORK PLAN AND TEAM

TEAM			
Name	Organization	Role in the organization	Tasks in the elaboration of the LCTP
Dinko Živković	Port of Rijeka Authority	Port development	Coordination of all relevant stakeholders for developing the LCTP; Analysing data for the statistic base; Defining the concept of the LCTP, public procurement of expertise in urban mobility
Rajko Jurman	Port of Rijeka Authority	Cruise business	Providing information on cruise development in Rijeka
Sandra Juretić	Port of Rijeka Authority	EU projects	Data analyzing
Astrid Zekić	REA Kvarner		Developing a questionnaire, communication with stakeholders, gathering data
Andrej Čotar	REA Kvarner	Energy Advisor	Project Assistant
Danijel Frka	Rijeka promet d.o.o.	Urban traffic and mobility expert	Defining the measures of LCTP.

WORK-PLAN			
task	time	responsibilities	comment
Meeting with the Commission of cruise development in Rijeka	May 2017.	REA Kvarner	
I. st participatory process	May-October 2017.	REA Kvarner/Port of Rijeka Authority	
Development of context analysis	July 2017.	REA Kvarner/Port of Rijeka Authority	
Defining the LCTP measures (draft)	October/November 2017	REA Kvarner/Port of Rijeka Authority	
LCTP draft	November 2017.	Port of Rijeka Authority	
II. Participatory process	January – March 2018.	REA Kvarner/Port of Rijeka Authority	
Finalizing the measures	March 2018.		

WORK-PLAN			
task	time	responsibilities	comment
Acceptance of measures by the Port of Rijeka Authority management	April 2018.	Port of Rijeka Authority	
Letters of support from the key stakeholders	May 2018.	Port of Rijeka Authority	

## 1.1. STEP 1: INITIAL ASSESSMENT

### 1.1.1. CONTEXT ANALYSIS

#### 1. EU, NATIONAL, REGIONAL AND LOCAL FRAMEWORK OF REFERENCE.

##### General context – linked to EU policies

- Common transport policy
- Fuel Sulphur Directive 2012/33/EU

##### National context – linked to national policies

- Transport Development Strategy of the Republic of Croatia
- Energy Strategy of the Republic of Croatia
- Action plan for the development of nautical tourism
- Study of sustainable development of cruise tourism in Croatia

##### Regional context – linked to regional policies

- Primorsko-goranska County Development Strategy, 2016.-2020.
- Strategic plan for tourism development Kvarner, 2016.-2020.

##### City context – linked to local policies/ plans/ strategies

- Spatial and urban plans of the city
- Rijeka - The starting port for cruise tourism, Action plan
- Study of possibilities for developing Rijeka as a cruising destination
- Action Plan for development Rijeka as a tourist destination - emphasising the segment of cruising tourism
- Sustainable energy Action Plan for the city of Rijeka
- Development Plans of the Rijeka Port Authority

## 2. CURRENT CRUISE-RELATED FLOWS FEATURES, TRENDS, ETC., IN THE CITY/PORT

The port of Rijeka is a port of call. The number of cruisers and passengers is shown in **the Picture 1.:**



Picture 1.: Number of cruisers and passengers, 2015.-2017.

At destination, cruiser is taking approximately 10 hours. According to that, about 35% of tourists stay on board. Tourists are offered with 3 to 7 trips, ranging from 2 to 164 kilometres, that last 4 to 7 hours and using 5 to 20 buses which are 16 to 50% full in capacity. For the tourists that remain in destination, a shuttle bus is organized (only Brajdica), starting at least every 30 minutes.

Within the questionnaire, the activities of a passengers and crew of the ships that remain in the destination, where investigated. The respondents were mostly from the United Kingdom, the United States and Australia. The highest number of respondents, in destination spent three hours. Moreover, the buss service used 13% of respondents, 6% taxi service, 2% bicycle, 1% motorcycle, and 78% of respondents did not use the means of transportation at their destination. Regarding the rate of traffic congestion, 61% of respondents rated low, very low 19%, high 15%, very high 4%, while 1% of respondents did not know.

Municipal waste is transported by the vehicles with an absorbing capacity of 5 m<sup>3</sup> at a distance of 17 km. Approximately 2-8 waste discharges are carry out. The oily waters are conveyed at a distance of 10 km, while all other waters at a distance of 1 km.

### **3. CRUISE-SECTOR MID- TO LONG-TERM (5 TO 10 YEARS) DEVELOPMENT TRENDS**

The forecast is given for a period of 10 years, for different scenarios as follows:

- 1. Worst-case scenario** in which no measure from this Plan is anticipated to be implemented.
- 2. The best possible scenario** in which all measures from this Plan are anticipated to be implemented in their best versions.
- 3. The most probable scenario** in which all measures from this Plan are anticipated to be implemented but in their initial versions.

#### **PASSENGER TRAFFIC**

Year	Scenario 1		Scenario 2		Scenario 3	
	No. of passengers	Index	No. of calls	No. of passengers	No. of calls	No. of passengers
<b>2018</b>	15.000		16	15.000	16	15.000

<b>2019</b>	20.000	33%	20	20.000	33%	20	20.000	33%	20
<b>2020</b>	28.000	40%	27	28.000	40%	27	28.000	40%	27
<b>2021</b>	30.800	10%	28	30.800	10%	28	30.800	10%	28
<b>2022</b>	33.880	10%	30	35.420	15%	30	33.880	10%	30
<b>2027</b>	47.518	7%	46	71.242	15%	45	68.145	15%	34

Table 1. Traffic forecast up until 2027

Year	Scenario 1	Index	Scenario 2	Index	Scenario 3	Index
<b>2017</b>	1.113		1.113		1.113	
<b>2018</b>	1.157	4%	1.157	4%	1.157	4%
<b>2019</b>	1.203	4%	1.203	4%	1.203	4%
<b>2020</b>	1.251	4%	1.251	4%	1.251	4%
<b>2021</b>	1.302	4%	1.302	4%	1.302	4%
<b>2022</b>	1.354	4%	1.380	6%	1.354	4%
<b>2027</b>	1.647	4%	1.846	6%	1.811	6%

Table 2. Forecast of the median number of passengers per cruise ship call in Rijeka

## EXCURSION BUS TRAFFIC

Year	Scenario 1	Scenario 2	Scenario 3
<b>2017</b>	10	10	10
<b>2018</b>	10	10	10
<b>2022</b>	12	12	12
<b>2027</b>	15	17	16

Table 3. The average bus travel time from the passenger terminal to Road D404 and vice versa, expressed in minutes

## SHUTTLE BUS TRAFFIC

Year	Scenario 1	Scenario 2	Scenario 3
<b>2017</b>	9	9	9
<b>2018</b>	9	9	9
<b>2022</b>	11	1	11
<b>2027</b>	13	1	2

Table 4. The average number of shuttle bus rounds per one cruise ship call at Rijeka

Year	Scenario 1		Scenario 2		Scenario 3	
	CT Brajdica	Breakwater	CT Brajdica	Breakwater	CT Brajdica	Breakwater
<b>2017</b>	43%	57%	43%	57%	43%	57%
<b>2018</b>	45%	55%	45%	55%	45%	55%
<b>2019</b>	47%	53%	47%	53%	47%	53%
<b>2020</b>	49%	51%	49%	51%	49%	51%
<b>2021</b>	51%	49%	51%	49%	51%	49%
<b>2022</b>	53%	47%	4%	96%	53%	47%
<b>2027</b>	64%	36%	5%	95%	10%	90%

Table 5. The percentage of cruise ship calls per pier

## SERVICE OF DISPOSAL OF VARIOUS TYPES OF WASTE

Year	Scenario 1	Scenario 2	Scenario 3
2017	4	4	4
2018	4	4	4
2022	5	5	5
2027	6	7	7

Table 6. The average number of waste disposal service rounds per one cruise ship call at Rijeka

Year	Scenario 1	Scenario 2	Scenario 3
2017	1	1	1
2018	1	1	1
2022	1	1	1
2027	1	2	2

Table 7. The average number of oily water disposal service rounds per one cruise ship call at Rijeka

Year	Scenario 1	Scenario 2	Scenario 3
2017	1	1	1
2018	1	1	1
2022	1	1	1
2027	1	2	2

Table 8. The average number of other water disposal service rounds per one cruise ship call at Rijeka

**ELECTRIC SCOOTER TRAFFIC**

Year	Scenario 1	Scenario 2	Scenario 3
2017	0	0	0
2018	0	0	0
2022	0	0	0
2027	0	55	54

Table 9 The median number of passengers per one call using electric scooters

#### **4. CURRENT CRUISE-RELATED MOBILITY AND TRANSPORT MANAGEMENT POLICIES AND PUBLIC & PRIVATE INITIATIVES ADDRESSING THE EXISTING FLOWS.**

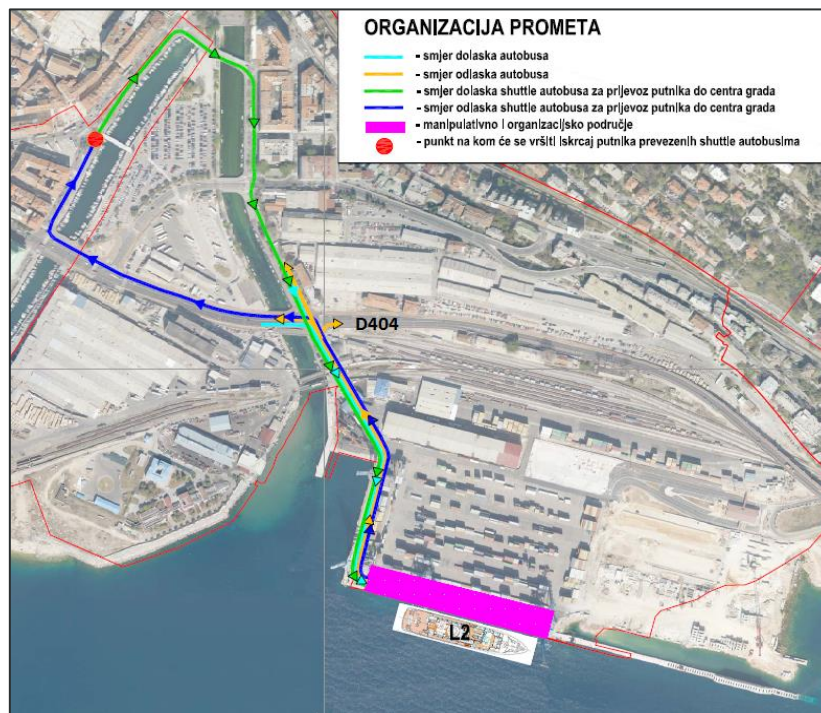
The cruise pier on the breakwater is located 300 metres from the city centre and there is no need to arrange a shuttle service from the ship to the city centre. The distance between the pier and the high speed Road D404 is 300 metres.





Picture 1. Breakwater – transport flow

The cruise berth on the container terminal is located 800 meters from the city centre and the shuttle service is organised to transport tourists to the city centre.



Picture 2 Brajdica Container Terminal

The local public transport is provided by KD Autotrolej d.o.o. Rijeka has 51 lines, connecting 12 towns and municipalities with the County centre (City of Rijeka). The city transport in Rijeka is conducted on 19 lines. The lines cover the entire city area.

Rijeka Airport is located on the island of Krk, about 17 km from the pier (in a direct line), or 25 km by road. It is common to use a taxi or a bus service to reach the airport.



## 5. WEIGHTED LIST OF NEGATIVE IMPACTS LINKED TO CRUISE-RELATED FLOWS

Description of negative effect	Priority	Description of negative effect on the local level
Road traffic congestion	High	A bottleneck is created due to the narrow road and the fact that the road passes around the market.
More pronounced occupancy of land for the construction of parking spaces and road infrastructure	High	The problem of connecting the breakwater with Road D404 is in the occupation of the terrain with existing facilities. It is anticipated that the new road will partly pass through the area of the existing car park or the overhang under which timber is stored.
Air and noise pollution	Moderate	Air and noise pollution currently don't have a major effect, but with the anticipation of increased traffic this negative effect may have a tendency for growth.
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 exit from the breakwater and there is also a problem of cyclists' safety on city roads. In traffic, cyclists are not equal to motor vehicles.
Increased tension in the local community	Low	Surveys have shown that there is no tension in the local community that comes with the arrival of cruise ships to the city.

## 6. EXISTING ROAD NETWORK, TRANSPORT SERVICES AND INFRASTRUCTURE IN THE CITY/ PORT

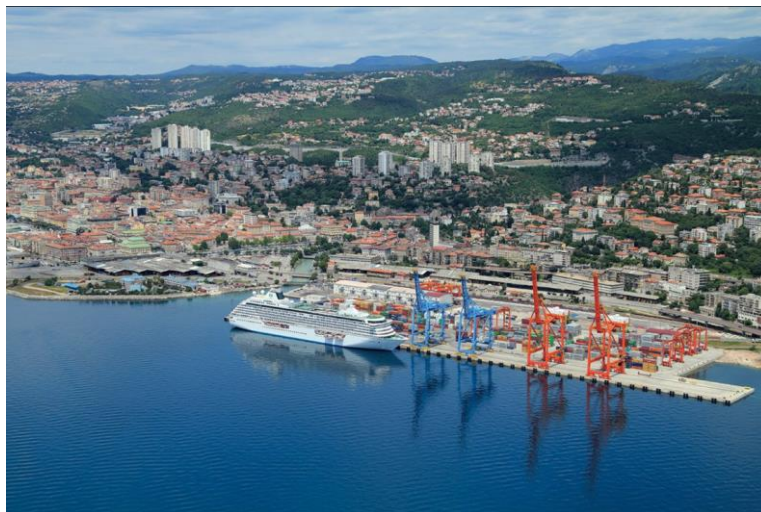
Since 2012, Rijeka has started to develop cruise ship tourism more intensively, which represents a new challenge in organizing all activities related to the flow of passengers/goods from cruise ships. The Port of Rijeka does not have an adequate terminal with ancillary infrastructure intended for berthing of cruise ships, but their berthing is possible on two locations, both limited by certain parameters. One location is on the passenger part of the Rijeka basin on the breakwater's inner side, while the other one is located in the Sušak basin, on the Brajdica Container Terminal.

The most notable negative characteristic of the breakwater pier is its sea depth, limiting the arrival of large cruise ships. A further problem is the width of the breakwater operating surface of only 12 metres which makes it difficult to manoeuvre buses and other vehicles for the needs of passengers/goods transport.



Picture 3. Location at breakwater

The total length of the pier at the container terminal is 628 m, with a maximum depth of 13,5 m and a possibility of simultaneous reception of two container ships of maximum 367 metres. The Brajdica Container Terminal serves for reception of cruise ships in case their draught is over 7 metres. The container terminal can accept cruise ships of all sizes.



Picture 4. Location at container terminal Brajdica

### 1.1.2 SWOT/CAME ANALYSIS

STRENGTHS	WEAKNESSES
<p>Geographical position</p> <ul style="list-style-type: none"> <li>- Part of the Mediterranean most deeply indented in the European mainland</li> <li>- Proximity of emissive markets</li> </ul> <p>Resource/attractions base</p> <ul style="list-style-type: none"> <li>- Possibility of excursions to surrounding places</li> <li>- High degree of ecological preservation</li> <li>- Agreeable climate</li> <li>- High number of cultural and historical monuments</li> </ul> <p>Good traffic connections</p> <p>Port infrastructure</p> <ul style="list-style-type: none"> <li>- Navigational safety</li> <li>- Port safety</li> <li>- Personal safety</li> </ul> <p>Existing accompanying tourism infrastructure and superstructure</p> <ul style="list-style-type: none"> <li>- Accommodation facilities</li> <li>- Human resources</li> </ul> <p>CNG filling station</p> <p>Green energy sources</p> <p>Intellectual capacities</p> <p>Passenger terminal in the city centre</p> <p>Tourists walking around the city</p> <p>Inability to supply ship from the shore</p>	<p>Port infrastructure</p> <ul style="list-style-type: none"> <li>- inadequate passenger terminal</li> <li>- use of container terminal for reception of cruise ships</li> <li>- lack of parking areas for buses and cars</li> </ul> <p>Different degrees of interest for the development of cruise ship tourism</p> <p>Conflicts with other types of tourism</p> <p>Lack of common development initiative</p> <p>Environmental pollution</p> <p>Lack of space for construction of infrastructure</p> <p>Insufficient tourist offer</p> <p>Lack of accommodation facilities in the event of Rijeka becoming a home port</p> <p>Crowds in the city centre</p> <p>Crowds at the exit from the passenger terminal</p> <p>Centralised tourist offer</p> <p>Insufficient information on traffic trends in the city (insufficient number of displays, flyers)</p> <p>Insufficient experience in cruise ship tourism</p> <p>Inability to develop bicycle infrastructure (terrain configuration, narrow roads)</p>
OPPORTUNITIES	THREATS
<p>Expected stability in the region</p> <p>Trends in tourism</p> <ul style="list-style-type: none"> <li>- Growth in demand for cruising tourism in the world</li> <li>- Favourable position of the northern Adriatic on the world tourist market</li> <li>- Expected growth of cruise ship tourism in the Mediterranean</li> <li>- Expected diversification of offer in cruise ship tourism - demand for new ports</li> </ul> <p>Further improvement of traffic accessibility – particularly new low-cost airlines</p> <p>Increase in the quality of other tourist offers</p> <p>Green energy sources</p> <p>Construction of LNG terminal</p> <p>Study on development of cycling in the city</p>	<p>Political instability in the region</p> <p>Terrorism</p> <p>Emergence of new infectious diseases</p> <p>Disorders on emissive markets</p> <p>Environmental pollution</p> <p>Fast development of other destinations</p> <p>Development of unhealthy competition between ports</p> <p>Development of offer in other destinations</p> <p>Conflicts with other resource users</p> <p>Insufficient political will in the implementation of the LCTP</p>

Table 10. SWOT analysis

## 1.2 STEP 2: PARTICIPATORY PROCESS

### 1. STAKEHOLDERS IDENTIFICATION

Stakeholders	Stakeholder's importance in the project (low/high)	Stakeholder's influence on the project (low/high)	Stakeholder's contribution
<b>Port of Rijeka Authority</b>	High	High	The main responsible entity for drafting the Plan and further implementation and monitoring of measures.
<b>REA Kvarner</b>	High	High	Participating in the development of the plan. Collecting data from all stakeholders. Surveying tourists and citizens.
<b>Rijeka Tourist Board</b>	Low	High	Providing information and data on the flow of cruise ship tourists and signing a support letter for the implementation of the measures/Plan.
<b>Experts from the fields of mobility and transport:</b> Rijeka promet d.d.	High	High	Detailed breakdown of measures per scenarios and calculation of greenhouse gas emission reductions per passenger. Signing the support letter for the implementation of the measures/Plan.
<b>Public city carrier:</b> Autotrolej d.o.o.	Low	Low	Providing information and data.
<b>Utility company:</b> Čistoća d.o.o.	Low	High	Providing information and data on the collection of waste from cruise ships and signing the support letter for the implementation of the measures/Plan.
<b>Bus operator:</b> Autotrans d.o.o.	Low	Low	Providing information and data.
<b>Taxi service</b>	Low	Low	Providing information and data on the use of taxi services by tourists.
<b>Tourist agencies:</b> ID Riva Tours	Low	Low	Providing information and data on the number of excursions per each cruise ship.
<b>Tourists</b>	High	Low	Surveying, which contributed to the development of tourist mobility statistics.
<b>Citizens</b>	High	Low	Surveying, which contributed to the development of tourist satisfaction statistics and citizens' attitudes towards cruise ships.
<b>Private companies:</b> Dezinsekcija d.o.o., IND-EKO d.o.o.	Low	Low	Providing information and data on the reception of waste and oily waters from cruise ships.

Table 11. Stakeholder identification

## 2. PARTICIPATORY PROCESS DESIGN AND IMPLEMENTATION

The initial activity in the development of the Low-Carbon Transport and Mobility Plan is to determine the timeline for implementing the Plan i.e. achieving the set goals. Therefore, a period of 10 years from the adoption of the Plan by the evaluation body of the project LOCATIONS was taken as a reference timeframe.

One of the two specific goals is to reduce the CO<sub>2</sub> emissions per cruise ship passenger by 5% in the given time frame. The following consumers which are connected to cruise ships and serve for the carriage of passengers/cargo at the destination are taken into consideration:

- Buses for organized excursions engaged by cruising companies (different bus operators);
- Shuttle bus for the carriage of cruise ship passengers to the city centre and vice versa;
- Vehicle for the disposal and carriage of waste;
- Vehicle for the disposal of waste waters.

For the purposes of calculating CO<sub>2</sub> emissions per passenger, the following data has been taken from the past three years:

- Cruise ship passenger traffic per years and piers;
- Retention of a cruise ship at the destination;
- Number of excursion buses per cruise ship;
- Destinations for which excursions are organized and their distances from the pier;
- Mileage that a shuttle bus makes in one round;
- Frequency of shuttle buses per cruise ship;
- Number of vehicles for the disposal of waste, oily and waste waters per cruise ship;
- Distances of the landfill and facilities for the treatment of oily and waste waters;
- The time it takes for buses to cross the distance from the breakwater to Road D404 and vice versa.
- The structure and characteristics of all vehicles.

Since good-quality data is a key prerequisite for successful making of the Plan context, and its result are the entry data for calculation of CO<sub>2</sub> emission per passenger, **systematic collection and processing of collected data** is one of the most important, if not the most important, activity of the Low-Carbon Transport and Mobility Plan.

Methodology used	Who, when and how?	Results
<b>Interview</b>	An interview with Mr. Rajko Jurman, President of the Commission for the Development of Cruise Ship Tourism in Rijeka, was held in April 2017 at the premises of the Port of Rijeka Authority. The interview was held in order to get as much information as possible about the current state of	Based on the information and documentation obtained, a foundation for the development of the <b>Plan context</b> was laid. Contacts from the Rijeka Tourist Board and mobility and transport



	infrastructure, tourist flows, <b>issues</b> and the development of cruise ship tourism in the city of Rijeka.	specialists who have already participated in the existing transport and mobility solutions connected with cruise ships were also obtained.
<b>“Face to face” meetings</b>	This type of meeting was held with the following stakeholders: the Rijeka Tourist Board, tourist agency ID Riva Tours, utility company Čistoća d.o.o., private companies: Dezinsekcija d.o.o., IND-EKO d.o.o. The meetings were held in order to get more information about cruise ship passenger flows and collection of waste, oily and waste waters from cruise ships.	Based on the information received, detailed statistics for development of the <b>Plan context</b> were obtained.
<b>Surveying</b>	The survey of tourists was carried out personally on the ground, while the survey of citizens was carried out via a digital poll.	Detailed survey results are presented in the <b>Plan context</b> , chapter 3.4.3.
<b>PAME</b>	After each meeting with individual stakeholders, a meeting between the Port of Rijeka Authority and REA Kvarner.	Analysis of information and data obtained from various stakeholders presented in the <b>Plan context</b> .
<b>Delphi method</b>	This type of method was applied to transport and mobility specialists after the Plan context was defined. Several meetings were held at which the initial measures were presented and then given to the Port of Rijeka Authority management for the ultimately acceptance.	Definition of <b>goals and specific measures</b> which will solve the existing problems and reduce the negative impacts of cruise ships on the city and the environment.
<b>Scenarios</b>	This type of method was applied to transport and mobility specialists in order to define a vision and different scenarios of the Plan. For each measure, an easier and more difficult implementation scenario was anticipated.	Definition of the <b>vision</b> and different measure <b>scenarios</b> .

Table 12. Methodologies used for data collection

## 1.3 STEP 3: DESIGN OF THE PLAN

### 1. DEFINITION OF THE CURRENT SCENARIO

The existing state and statistic of the passengers and goods flows related to cruise activity is detailed described in STEP 1, chapters 2 and 3.

### 2. DEFINITION OF VISION AND OBJECTIVES

#### VISION

As a new destination, Rijeka is aware of all negative impacts brought by the flow of tourists/goods related to cruise ships and looks into the future with the aspect of a sustainable way of developing the cruise ship tourism. A new berth is defined for cruise ships on the breakwater by the passenger terminal which will accept more than 90% of all cruise ships calling at this destination, and in a sustainable way transport all passengers to destinations all over the city, county and wider area. Sustainable way of transport is the lowest possible interaction of vehicles for transportation of passengers with the local traffic and promotion of cleaner, alternative types of transportation of cruise ship passengers/cargo.

**GENERAL GOALS:**

- To reduce the pollution and accelerate the flow of vehicles used for the transport of passengers/goods connected to cruise ships in order to reduce the jams at the connection point between the breakwater and Road D404;
- To promote alternative means of transport to the main destination attractions.

**3. DEFINITION OF ACTIONS AND INDICATORS****1). Increasing the capacity of cruise berth at the breakwater**

This measure is a prerequisite for the implementation of all measures except M2. With the increase of the capacity of the breakwater pier, further development of cruising tourism in Rijeka will be ensured. By ensuring the acceptance of cruise ships at that location, multiple benefits are achieved:

- Use of the Brajdica Container Terminal as a pier for cruise ships is reduced,
- No interference with cargo traffic,
- Pier availability of 24 hours and reception of cruise ships at any time,
- Proximity of the city centre (walking distance),
- Attractive location (views of the whole city),
- Proximity of Road D404,
- Proximity of the passenger terminal.

There are two versions of implementation of this measure:

- a. Deepening of the pier on the inner side of the breakwater, which would enable the berthing of ships with a draught of 9 metres;
- b. Instalment of distancers to keep the cruise ship away from the pier, which would enable the berthing of ships with a draught of 8 metres.

**2). Introducing the CNG drive into the municipal waste trucks**

The existing vehicles for collection of waste are diesel vehicles. With the introduction of the CNG drive in vehicles for collection of waste which service cruise ships as part of regular activities, **the emission of greenhouse gases will be reduced.**

A CNG filling station already exists and it is mostly used for supplying the public transport vehicles.

Procurement of one vehicle to be used for collecting waste from cruise ships is anticipated.

**3). Removal of bottleneck between the breakwater and the road D 404**

There are two versions of implementation of this measure:

- a. A road that involves a reconstruction of the existing (rotating) bridge and a construction of a bridge next to the existing one in order to allow two-way traffic. The road is anticipated to pass over the existing halls on Delta to the intersection on D404.
- b. A road that involves a reconstruction of the existing bridge with alternating traffic. The road is envisaged to further pass Grobnička riva to the existing intersection on D404.

#### **4). Introducing the electro scooters with charging station**

This measure envisages a point with electric scooters and a charging station at the passenger terminal as well as at other points in the city. The aim is to offer cruise ship passengers an option to use simple personal means of transport for two persons to distances within 10 km from the rental point. In this way, an adventurous dimension of the tour of the city and its surroundings is opened to passengers, while simultaneously using an ecologically acceptable means of transport without CO2 emissions, which contributes to a better overall traffic situation.

Two variants of implementation of this measure are anticipated:

- a. Variant with a fixed battery in the scooter and two charging stations with two connectors;
- b. Variant with a replaceable battery in the scooter with one charging station and a module for charging 30 batteries.

#### **5). Traditional shuttle boat on hybrid drive**

This measure involves the examination of the interest of potential concessionaires for introducing traditional shuttle boats for local transportation Breakwater - Adamić Pier or Karolina Riječka Pier, or for sightseeing tours of the city and the surrounding coastal area (Port of Rijeka – Kantrida – Volosko - Opatija). Such a boat would be powered by a hybrid or a steam engine.

**The aim is to offer cruise ship passengers an alternative aspect of maritime traffic via a traditional boat used at the end of the 19th and beginning of the 20th century for the carriage of passengers.**

#### **6). Installing the informative panel board at the Port Passenger Terminal**

Two variants of implementation of this measure are anticipated:

- a. Installation of one interactive information panel on the passenger terminal;
- b. Installation of three interactive information panels on Trsat, complex Benčić and on the passenger terminal.

## 4. DEVELOPMENT OF FUTURE SCENARIOS

Due to the complexity of the context and many external factors which may affect the implementation of this Plan, this chapter describes the possible scenarios of the implementation of measures. It is impossible to anticipate all potential scenarios, so three scenarios are selected in accordance with the recommendations of the Manual for the Development of this Plan. Chapter 3.4.4. brings 10-year forecasts of cruise ship traffic flows which are also defined according to the scenarios from this chapter. Those forecasts were taken into consideration when calculating the CO<sub>2</sub> emissions. Below is a description of each scenario and their impact on the achievement of goals set out in this Plan.

MEASURE		SCENARIO 1	SCENARIO 2	SCENARIO 3
M1	a	x	✓	x
	b	x	x	✓
M2		x	✓	✓
M3	a	x	✓	✓
	b	x	✓	x
M4	a	x	✓	x
	b	x	x	✓
M5		x	✓	✓
M6	a	x	✓	✓
	b	x	✓	x

### 1.4 STEP 4: MONITORING AND FUNDING

#### 1.4.1 MONITORING LCTP IMPLEMENTATION

The implementation of the plan is defined in three parts:

1. Acceptance of the plan by the Port of Rijeka Authority;
2. Implementation of measures with the given timeframe. The Port of Rijeka Authority is responsible for the implementation of the Plan within the given time frame in coordination with key stakeholders who have supported the implementation of measures (support letter). This Plan proposes the coordinator is a person from the Port of Rijeka Authority responsible for the development of cruise ship tourism in Rijeka;
3. Monitoring and control of the implementation of measures. The monitoring and control of the implementation of measures and their results differs in this part. The body in charge of monitoring and controlling the implementation of measures is the Port of Rijeka Authority i.e. its management. Its main task is to monitor the work of the coordinator and support the implementation of measures.

#### 1.4.2 FUNDING

MEASURE 1	INCREASE OF THE CAPACITY OF THE PIER FOR CRUISE SHIPS AT THE LOCATION BREAKWATER		
ACTIVITY	Design documentation	Building permits	Works

<b>AMOUNT (V1)</b>	20.000,00 €	/	1.000.000,00 €
<b>AMOUNT (V2)</b>	10.000,00 €	/	400.000,00 €
<b>RESPONSIBILITY OF</b>	Port of Rijeka Authority	Port of Rijeka Authority	Port of Rijeka Authority
<b>SOURCE OF FINANCING</b>	Port of Rijeka Authority's resources	/	Port of Rijeka Authority's resources

<b>MEASURE 2</b>	<b>INTRODUCTION OF THE CNG DRIVE IN WASTE DISPOSAL VEHICLES</b>		
<b>ACTIVITY</b>	Services of the introduction of CNG drive in waste disposal vehicles		
<b>AMOUNT</b>	65.000,00 €		
<b>RESPONSIBILITY OF</b>	Čistoća d.o.o.		
<b>SOURCE OF FINANCING</b>	Čistoća d.o.o., Regional funds, IEE programme		

<b>MEASURE 3</b>	<b>ELIMINATION OF THE BOTTLENECK BETWEEN THE BREAKWATER AND ROAD D404</b>		
<b>ACTIVITY</b>	Design documentation	Building permits	Works
<b>AMOUNT (V1)</b>	20.000,00 €	/	850.000,00 €
<b>AMOUNT (V2)</b>	8.000,00 €	/	160.000,00 €
<b>RESPONSIBILITY OF</b>	Port of Rijeka Authority	Port of Rijeka Authority	Port of Rijeka Authority
<b>SOURCE OF FINANCING</b>	Port of Rijeka Authority's resources		Port of Rijeka Authority's resources

<b>MEASURE 4</b>	<b>INTRODUCTION OF ELECTRIC SCOOTERS AND CHARGING STATIONS</b>			
<b>ACTIVITY</b>	Concession tender	Installation of charging station	Procurement of electric scooters	Connection, arrangement of location
<b>AMOUNT (V1)</b>	/	12.000,00 €	30.000,00 €	3.000,00 €
<b>AMOUNT (V2)</b>	/	9.000,00 €	30.000,00 €	3.000,00 €
<b>RESPONSIBILITY OF</b>	Port of Rijeka Authority	Concessionaire	Concessionaire	Concessionaire
<b>SOURCE OF FINANCING</b>	Port of Rijeka Authority's resources	Concessionaire, Regional/national funds, IEE programme	Concessionaire, Regional/national funds, IEE programme	Concessionaire, Regional/national funds, IEE programme

<b>MEASURE 5</b>	<b>TRADITIONAL SHUTTLE BOAT</b>	
<b>ACTIVITY</b>	Eol for concession	Production of the concession tender
<b>AMOUNT</b>	/	/
<b>RESPONSIBILITY OF</b>	Port of Rijeka Authority	Port of Rijeka Authority
<b>SOURCE OF FINANCING</b>	/	/



<b>MEASURE 6</b>	<b>INFORMATION PANEL ON THE PASSENGER TERMINAL</b>
<b>ACTIVITY</b>	Installation of the panel
<b>AMOUNT (V1)</b>	6.600,00 €
<b>AMOUNT (V2)</b>	19.800,00 €
<b>RESPONSIBILITY OF</b>	Port of Rijeka Authority, Grad Rijeka
<b>SOURCE OF FINANCING</b>	Port of Rijeka Authority, Grad Rijeka