

EU PROJECT REMEDIO – TRAFFIC CONGESTION MINIMIZATION AND TOURISM INTEGRATION IN THE CITY OF SPLIT

CITY OF SPLIT

TOMO ŠUNDOV, CITY OF SPLIT

CITY OF SPLIT

- The second largest city in Croatia and the largest city on the Croatian coast of Adriatic (178,102 inhabitants)
- Center of the most administrative, economic and transportation activities in the region of Dalmatia (about 500,000 inhabitants) with growing entrepreneurship and excellent traffic connections
- The cultural, sports, academical and historical center of Croatia with rich, diverse and globally attractive cultural and historical heritage
- Well educated labour force

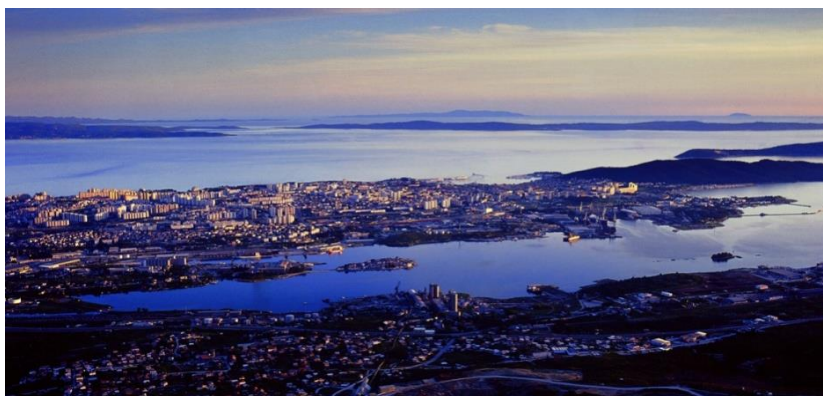


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CITY OF SPLIT

- A mild Mediterranean climate, City situated on peninsula
- With 2700 sunny hours per year and more than 300 sunny days a year
- 15 kilometres of beaches located around the city centre, with blue flags that proves sea cleanness
- One of the cities with the largest potential for further tourism development in Croatia



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CITY OF SPLIT

- 1700 year's Old City where the Roman Emperor Diocletian built his spectacular Palace - Diocletian's Palace (on the UNESCO World Heritage List from 1979.)
- Numerous medieval churches
- Three theaters
- Fourteen museums and galleries
- Attractive promenades and squares



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CITY OF CULTURE, EVENTS, FAIRS, EXHIBITIONS, CONFERENCES AND CONVENTIONS

- Sudamja - traditional celebration of the Patron of Split, St. Domnius (May)
- Days of Diocletian (May – September)
- Split Summer Festival - program of dramas, operas, concerts, dances and other performances (June)
- Mediterranean Film Festival Split and Split Film Festival (June and September)
- Ultra Music Festival (July)
- Split Music Festival - the most popular pop music festival in Croatia (July)



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CITY OF CULTURE, EVENTS, FAIRS, EXHIBITIONS, CONFERENCES AND CONVENTIONS

- GAST - fair of food products, beverages, wines, coffee, hotel and restaurant equipment, furniture... (March)
- Croatia Boat Show - one of the top ten nautical shows worldwide with more than 400 boats on an exhibition area of 120,000 sq.m. (April)
- Shift conference – presents inovators, start-ups from the IT sector, software and know-how from all around the world (June)
- SASO - fair of civil construction, timber industry, metal industry, tools, machinery, equipment... (October)



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SPLIT – TRANSPORTATION HUB OF DALMATIA REGION

SEA PORT OF SPLIT

- Second largest Croatian port almost 5 million passengers and 733.000 vehicles in 2016.
- 286 cruisers in 2016.
- 2.745.000 tons of cargo in 2016.



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SPLIT – TRANSPORTATION HUB OF DALMATIA REGION

- Highway A1 Zagreb–Split-Dubrovnik
- International railway station
- International bus station



AIRPORT OF SPLIT

- The second largest airport in Croatia by volume of traffic, with 3,12 million passengers in 2018. (new bigger airport building and terminal will be opened by the end of June 2019.)
- Direct regular flight connections with more than 40 cities in Europe



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TOURIST STATISTICS – 2018.

- eVisitor data (central electronic system used for collection of data of tourist check-ins and check-outs that connects all Local and Regional Tourist Communities in the Republic of Croatia

REPUBLIC OF CROATIA

- 19,719,329 - tourist arrivals
- 106,056,638 – overnight stays

CITY OF SPLIT

- 861,530 – tourist arrivals – an increase of 18% in compare to 2017.
- 2,508,725 – overnight stays – an increase of 16% in compare to 2017.



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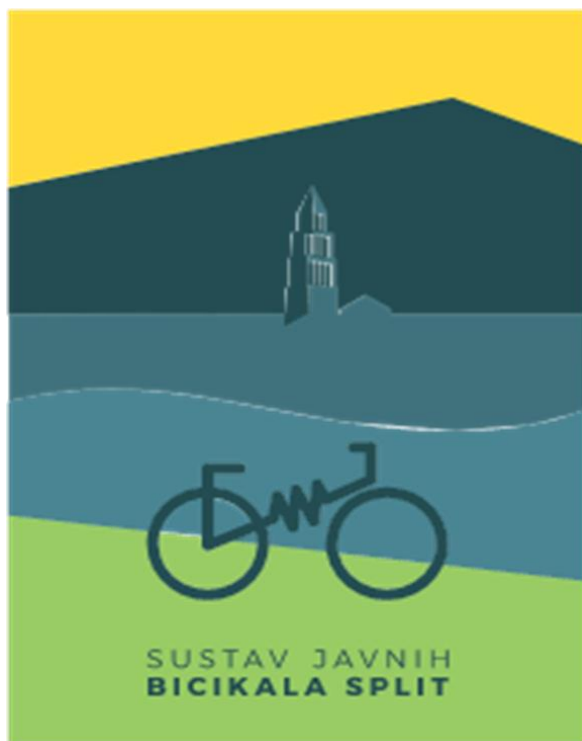
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INCREASED TRAFFIC CONGESTION ESPECIALLY DURING THE SUMMER SEASON!



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REMEDIO

REgenerating mixed-use ***MED***
urban communities congested
by traffic through Innovative
low carbon mobility sOlutions



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Project co-financed by the European Regional Development Fund, through Interreg Mediterranean Programme.

The project, which brings together five European countries in the Mediterranean, Italy, Greece, Portugal, Spain and Croatia, has a total of 8 project partners, including Lead partner and 13 associated partners, including the Split-Dalmatia County.



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- Overall project budget : 2.215.512,50 €
- Project budget of City of Split: 267.500,00 €, co-financing rate: 85%
- Project duration: 30 months+6 months prolongation - 01.11.2016. - 31.10.2019.
- The general objective of the REMEDIO project is to encourage the use of low-carbon transport systems through the testing of integrated modeling tools in congested traffic management and traffic overloaded urban areas, which is a common problem of medium-sized Mediterranean cities lacking appropriate transport solutions, including the City of Split
- Specific objectives of the project are to improve the ecological indicators and mobility indicators at critical points in traffic through the adoption of low-carbon mobility scenarios and the development of innovative models of participatory management to encourage the implementation of low-carbon mobility plans.



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„PILLARS” OF THE REMEDIO PROJECT

- **1. INTEGRATED MODELING TOOL – IMT**
- **2. PARTICIPATORY GOVERNANCE MODEL**



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1. INTEGRATED MODELING TOOL - IMT

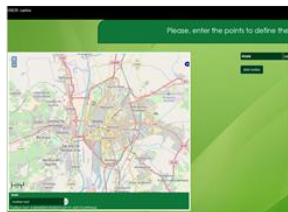
- A custom integrated modeling tool used to simulate scenarios of testing pilot activities related to low-carbon traffic solutions. The tool has several modules that handle transport, fuel consumption, noise levels, air quality, health effects, and more.
- IMT was created by a professional project consortium – REMEDIO project partners - Technical Institute of Lisbon, University of Seville, and Aristotle University of Thessaloniki.
- Based on the simulation results, the level of performance of the low - carbon solution on the planned route was analyzed, and this basis was used for developing guidelines for further implementation of low - carbon transport solutions in the pilot area as one of the prerequisites for developing a Sustainable Urban Mobility Plan - SUMP).



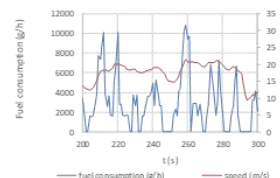
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DATA INPUT



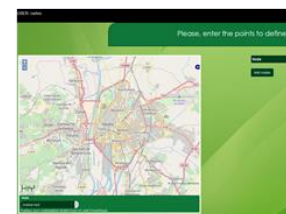
SIMULATION



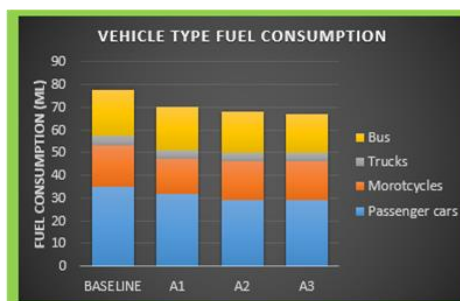
RESULTS ANALYSIS

SOFT
ACTIONS

DATA INPUT (CHANGES)



SIMULATION



RESULTS COMPARISON

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REMEDIO Pilot-Areas



Loures

158 km²
205'000
inhabitants

Treviso

56 km²
84'500
inhabitants

Split

79 km²
179'000
inhabitants

Thessaloni ki

1,455 km²
1'110'312
inhabitants

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PILOT ACTIVITY IN THE CITY OF SPLIT

The Integrated Public Transport System will be implemented in Split through a mixed contingent of 20 electric and 30 classic bicycles worth 110,000.00 € on 8 locations, in cooperation with public procurement joint partner Split Parking LTD (City of Split's Public Utility Company).

The implementation and design of a complete system solution for public bicycles includes procurement, transportation, delivery, assembly and installation of:

- classic and electric bikes
- parking stands for electric and classic bicycles
- terminals with communication units
- RFID user cards
- application software
- license for a public bicycle system
- management and maintenance of the system for a year



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Selection of pilot area

Traffic flows in the Split area were determined by field research, road traffic counting, face-to-face surveys and online surveys.

TRAFFIC PEAK HOUR (motorized) – 8-9 a.m. – 13-14 p.m.

TRAFFIC PEAK HOUR (pedestrians and cyclists) – 7-8 a.m. – 19-20 p.m.

As the simulation tool was calibrated for top-of-the-day simulation, on the basis of day-to-day traffic counting, the morning and afternoon peak clocks were identified for motorized and unmotorized traffic, and a morning and afternoon peak analysis was performed at all traffic counting locations.



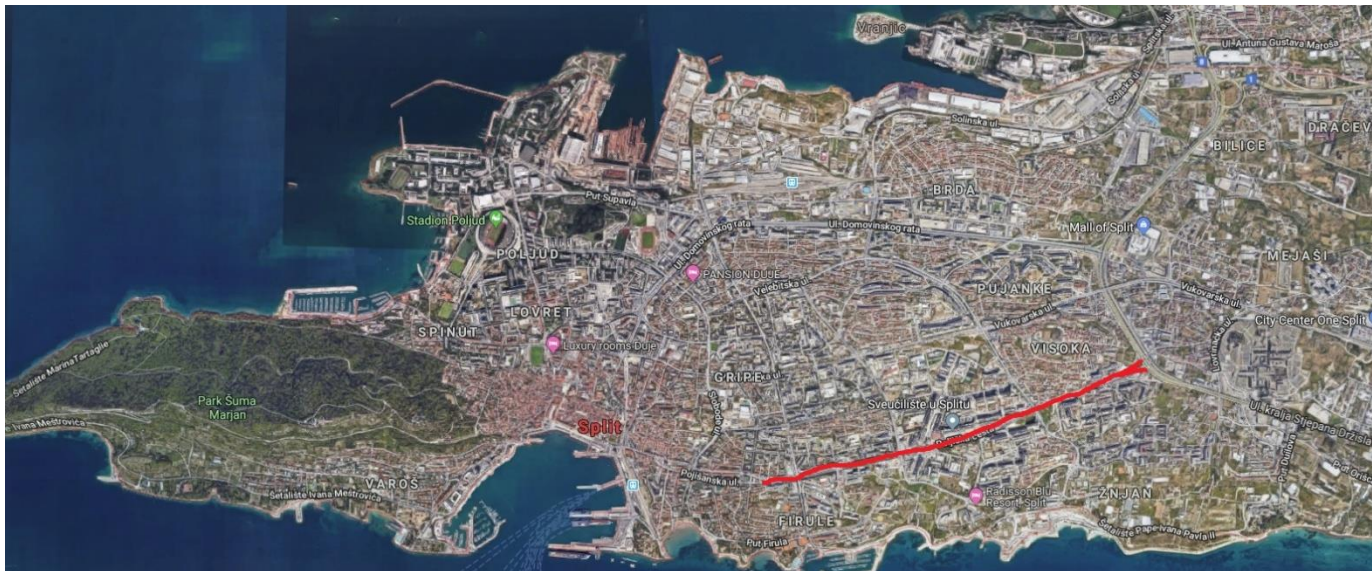
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CONCLUSION OF THE ANALYSIS

Based on the conducted analysis, it was defined that Poljička road is the most traffic congested part of the City of Split. It is an important route often used for lightweight and heavy duty vehicles and tourists going to the port (ferry) on the nearby islands, and in peak hours shows signs of traffic congestion even in the off-season.

Consequently, the Poljička road (link City - Split 3 – University Campus) was chosen as the optimal pilot area. The pilot area, given its characteristics and traffic congestion, best suits the objectives of the REMEDIO project in terms of reducing traffic congestion and CO2 emissions.



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Mobility Survey

The Mobility Survey was conducted in two ways:

Web Survey Available (579)

Survey conducted at certain locations in the City of Split (203 face to face surveys)

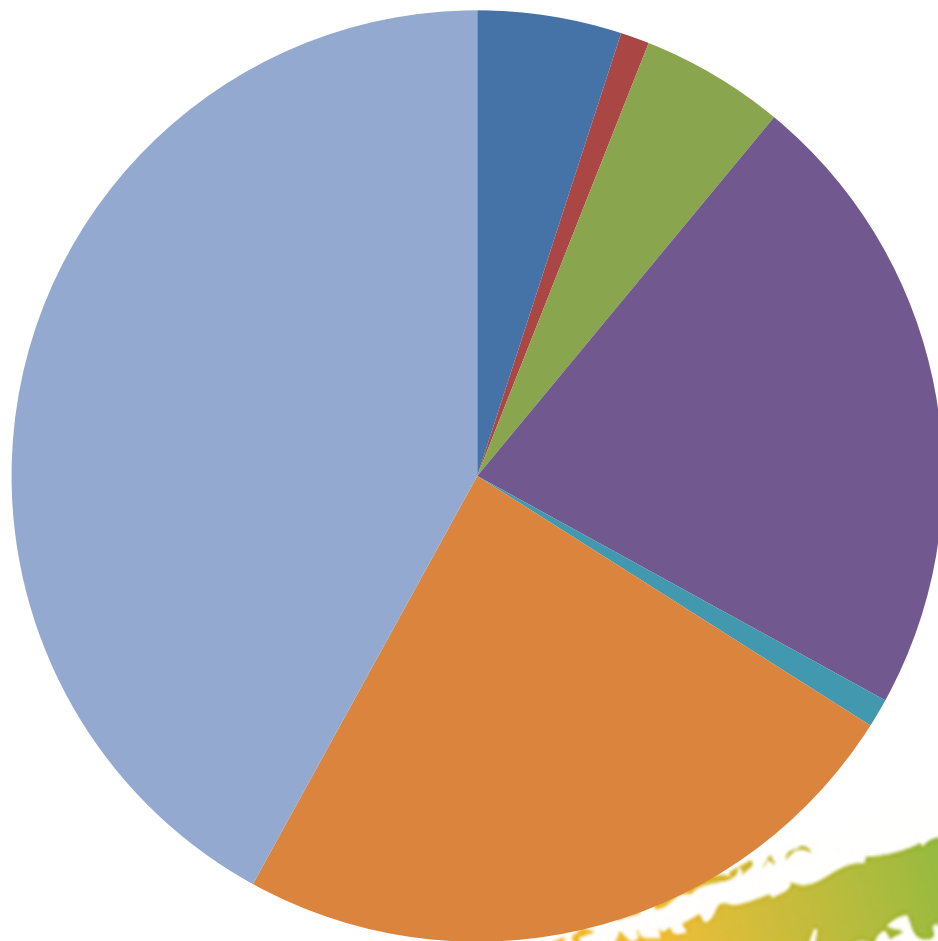
Based on the implementation of the "face to face" mobility survey and the online distribution of the media channels of the City of Split, data were collected to provide information on the existing mode of "modal split" (distribution by mode of transport) total traffic flow.



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Modal Split

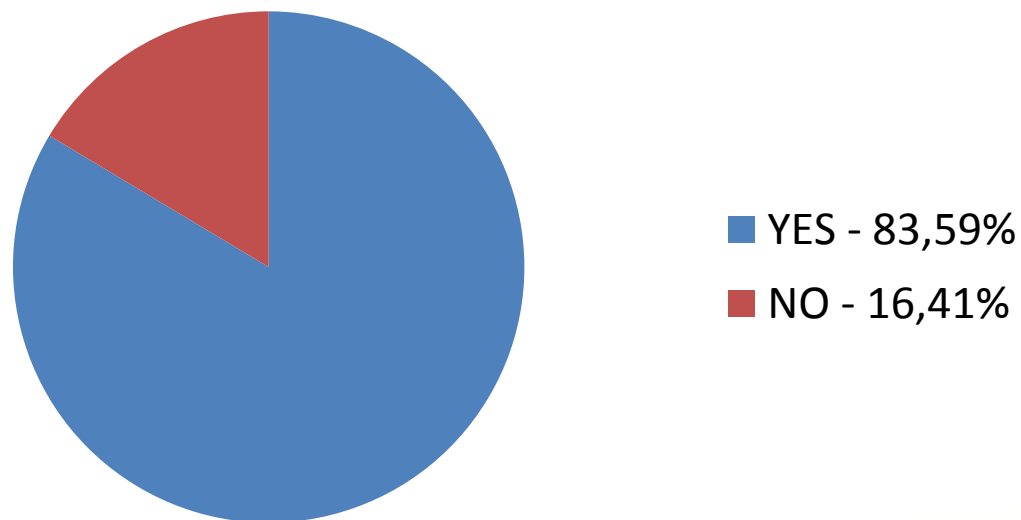


- CAR (as passenger) - 5%
- TAXI - 1%
- BICYCLE - 5%
- PUBLIC TRANSPORTATION - 22%
- MOTORBIKE - 1%
- WALKING - 24%
- CAR (as driver) - 42%

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Answer to the question: Do you think that bicycle and public transportation can be a good mobility alternative to a personal vehicle in Split?



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Locations for implementation of Public Bike System



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Locations for implementation of Public Bike System



City Center



Poljička street



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TARGET GROUPS

1. Student and High School Population

- Desirable target group for the public bicycle system (two terminals are set up at Student University Campus)
- Age and limited use of money make the bicycle a real option as a mean of transport
- Over 20.000 students make a great long-term potential for attraction of new users

2. Tourists

- Split is a tourist town that annually makes over 2.5 million tourist overnight stays.
- The public bicycle system can be an attractive means of transport for tourists who come to visit for a few days.
- Furthermore, this part of the population should be linked to recreational cycling as part of Split's tourist offer. For example defining tourist destinations of Split that are most convenient for bicycles (like positioning terminals near the beaches during the season is an attractive option not only for tourists but also for local population)

3. Total Citizenship of Split

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2. PARTICIPATORY GOVERNANCE MODEL

The aim of participatory management is to gather opinions from relevant stakeholders as well as the general public in order to better detect the real needs of all target groups of the REMEDIO project on improving the traffic situation while planning future activities. In this way, measures will be taken to meet these needs.

This encourages direct public communication with the governing bodies, and provides local authorities with an insight into the real needs of the population. Such a method of communication between the administration and the field will lead to jointly addressing the problems of social importance and increase the ability of the investment to be in line with the real needs of the pilot area and the wider public.

ACTIVITIES:

- "Face to face" and online surveys
- Workshops
- Collecting of informations, critics, commentaries and suggestions of the stakeholders



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MEMORANDUM OF UNDERSTANDING - MoU

A strategic document outlining the problems and solutions for an effective public bicycle system.

It will be signed primarily with City's Public Utility Company Split Parking LTD, which will ensure long-term sustainability of the project.

The Memorandum will be devoted to describing the current status of traffic in Split and the possibilities for improving the situation. Special attention will be paid to the system of public bicycles in Split, which will be committed to the maintenance of Split Parking LTD upon completion of the project and signing of the Memorandum.



SPLIT
PARKING



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SUMMARY

- The public bicycle system can find its public but will survive only if it is shown as an efficient, profitable and pleasant public transport experience. To this end, the conditions for using bicycles should be changed first. This will also have a certain impact on the spatial planning of the city of Split, especially in building the new cycling paths, in order to make the public bicycles more efficient as an alternative mode of transport.
- Although more expensive to maintain, electric bicycles are an important element of public bicycle systems. The reason for this is certainly the geographic position of Split as a relatively hilly town, making it difficult to use bicycles, especially for older generations. A larger amount of electric bicycles will be purchased from future projects, such as the SUTRA project (Interreg Italy-Croatia).
- The application for public bicycle system greatly facilitates access and use of bicycles. The application would give information on how many bikes are available, how much time for bicycle users remains for individual use and similar things that make it easier to use the system.



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SUMMARY

- The public bicycle system, as well as any form of transport, has the potential for development and other sectors of the economy and tourism even in smaller volumes. In this regard, a recreational tour can be designed together with food, drink and vacation stations and can further promote and maintain interest in public bicycles for both of local populace and also an increasing number of tourists.
- This will have a great impact on both the city of Split's tourist offer and reduction of the increased traffic congestion, especially during the summer season.



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