

ACTION PLAN FOR TRANSPORT AND MOBILITY WITHIN REGIO-MOB PROJECT FOUNDED THROUGH INTERREG EUROPE PROGRAM



Beneficiary: **REGIONAL DEVELOPMENT AGENCY SOUTH-WEST OLTENIA**

Elaborated by: **SIGMA MOBILITY ENGINEERING**

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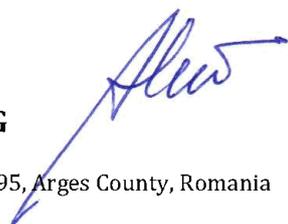
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1. INTRODUCTION

1.1. REGIO-MOB Project

REGIO-MOB project - *Interregional Learning towards Sustainable Mobility in Europe, funded under the Interreg Europe Program*, is developed in partnership by a consortium consisting of:

1. *Andalusian Institute of Technology from Spain;*
2. *Institute of Traffic and Transport Ljubljana from Slovenia;*
3. *Regional Association of Lazio Municipalities, Italy;*
4. *Niepolomice Municipality from Poland;*
5. *Regional Development Agency South West Oltenia (RDA SW Oltenia) from Romania;*
6. *The Western Macedonia Region from Greece;*
7. *South-East Scotland Transport Partnership.*

Since March 2017, the consortium has only six partners, without the first one on the list above.

The overall objective of the project is to support sustainable growth in Europe by promoting sustainable mobility, as a result of influencing relevant policy instruments in each partner territory, promoting intermodality, technical innovation and the use of cleaner and more efficient mobility systems.

The overall objective is based on the following specific objectives:

- (i). *Learning and transferring examples of good practice between local and regional authorities within the project in order to develop, improve and implement regional mobility plans;*
- (ii). *Promoting sustainable, coordinated and secure mobility in participating regions;*
- (iii). *Adopting an integrated approach to climate changes in regional mobility plans not only to influence the natural environment but also to influence the economic and social environment;*
- (iv). *Presentation of the potential benefits of Information and Communication Technologies (ICT) as key drivers of innovation, knowledge creation and e-commerce in the transport sector;*
- (v). *Strengthening the economical growth and creating new jobs in sustainable mobility;*

- (vi). *Ensuring the involvement of local actors during process, both at regional level (regional groups of actors) and at interregional level (learning platforms), encouraging them to play an active role in achieving the expected results.*

The activities of the REGIO - MOB project are the following:

- *developing a S.W.O.T. analysis on mobility and transport in the region;*
- *developing an analysis of needs and best practices on mobility;*
- *identification of 5 good practice examples which are relevant to transport and mobility in each region, out of which 2 will be transferred to project partners during the study visits;*
- *development of action plans aimed at improving the existing policies;*
- *creation of local stakeholder communities which will be informed and consulted on mobility policies and ways to improve its implementation;*
- *monitoring the implementation of the improved policy (2019-2020).*

So, as a partner in the REGIO-MOB project, RDA SW Oltenia aims to optimize and consolidate the specific policy instruments in the territory of The South-West Oltenia Region in Romania and to contribute to the improvement of their performance as a result of interregional learning.

1.2. Transport infrastructure in The South West Oltenia Region – general characteristics

The South-West Oltenia Region, located in the south-western part of Romania, comprises the counties Dolj, Olt, Valcea, Mehedinți and Gorj, totalizing an area of 29,212 km², which represents 12.25 % of the country. The transport infrastructure is specific to all present modes at national level (road, railway, aerial and naval), forming a complex intermodal network.

ROAD TRANSPORT INFRASTRUCTURE

In The South-West Oltenia Region, the road transport network consists of administrative-territorial public roads structured in the following categories: (i) *of national interest*, (ii) *of county interest*, and (iii) *of local interest*. The TEN-T (Central and Extended) European transport network partially overlaps the existing public road network or provides new infrastructure elements.

The infrastructure road surface is largely upgraded or made with lightweight systems, but there are still significant percentages (36%) of cobbled roads or roads without asphalt. (Figure 1.1).

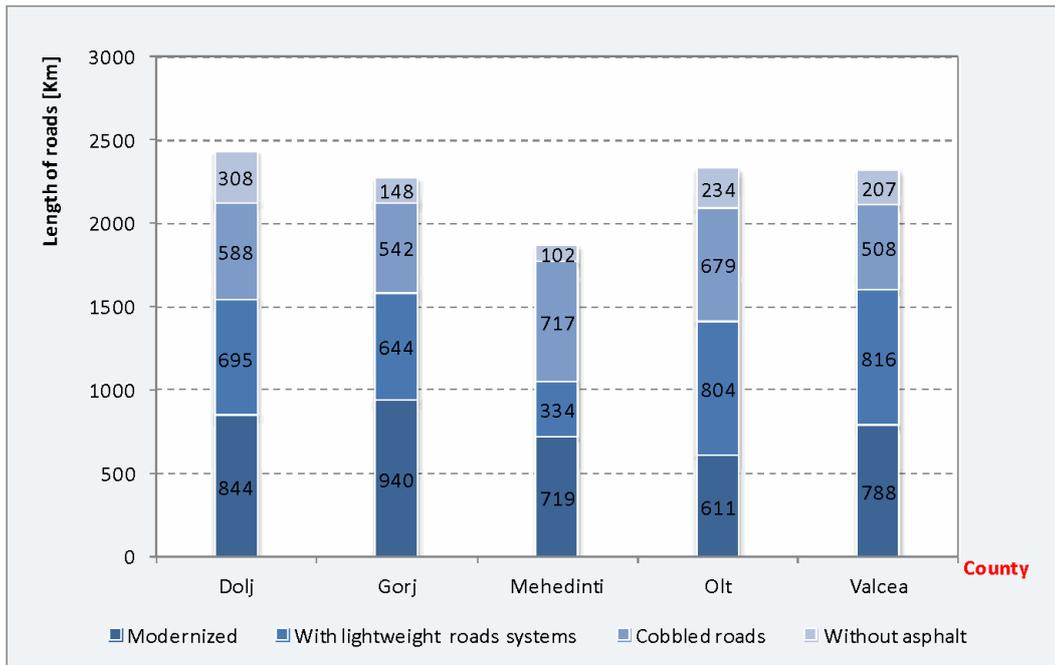


Figure 1.1. Road categories in the region, at county level, by the type of road clothing.

Source: "Study on Transport and Mobility within The South-West Oltenia Region", 2015.

The national roads network represents 19% of the total length of regional public roads, with a density of 0.07 km/km². Most of them are upgraded and are in a good and in a very good technical condition.

At regional level, the highest percentage of public roads is allocated to the county roads (41%). More than half of them have rolling surface made of light road clothing, but there are still roads without asphalt.

Communal roads, representing 39% of the total length of the public road network, are 70% cobbled or unpaved roads.

RAILWAY TRANSPORT INFRASTRUCTURE

At the level of The South-West Oltenia Region, the Rhine-Danube and Eastern / Mediterranean corridors of the European railway network TEN-T overlap over the railway line 900, Bucharest - Roşiori Nord - Craiova - Filiaşi - Caransebeş - 912, Craiova - Calafat (central TEN-T) and the lines 202, Filiaşi - Târgu Jiu - Petroşani and 221, Târgu Jiu - Rovinari - Gura Motrului (extended TEN-T). More than half of the railway network in the region is electrified (Figure 1.2).

Regarding the stations and moving halls, at the level of The South-West Oltenia Region there are 45, of which 14 are classified as railway nodes: Caracal, Craiova, Filiaşi, Gura Motrului, Strehaia (from Magistrali 900); Piatra Olt (Line 901); Jiu Hm, Golenti (Line 912); Motru (Line 914); Băbeni (line 201); Cărbuneşti, Târgu Jiu (Line 202); Amaradia, Turceni (Line 221). Calafat Station (Line 912) is a border station open to goods and passengers traffic.

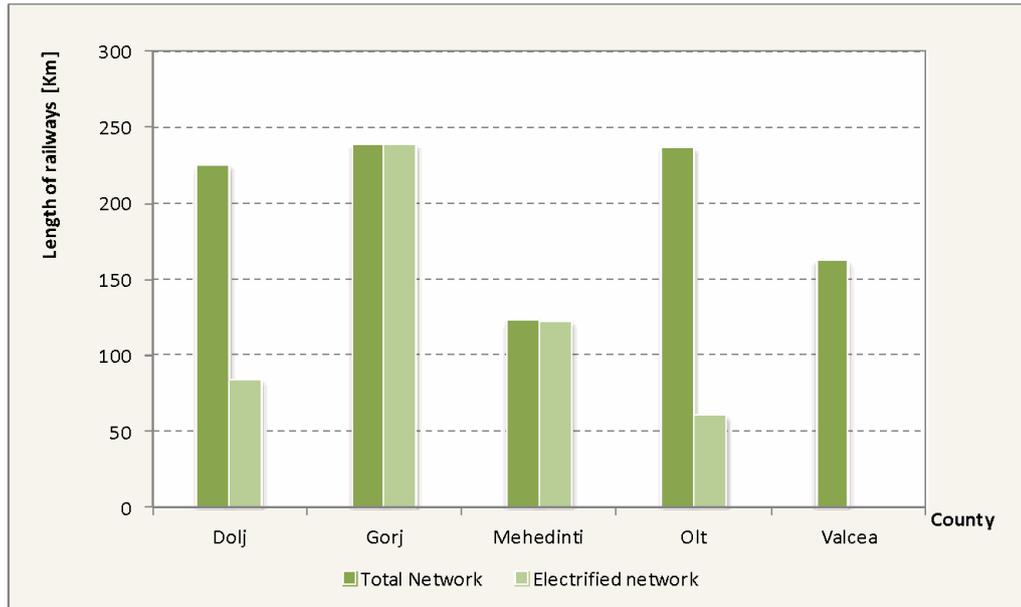


Figure 1.2. The total length of the railway network and the electrified network at each county level.
Source: "Study on Transport and Mobility within The South-West Oltenia Region", 2015.

AIR TRANSPORT INFRASTRUCTURE

The specific infrastructure for air transport is represented by Craiova International Airport through which the Region connects to the international air transport network. Its location in the central area of the Region, in the proximity of the main socio-economic pole and with access from the national road DN 65 Craiova - Pitești, ensures a high accessibility and connectivity (Figure 1.3).

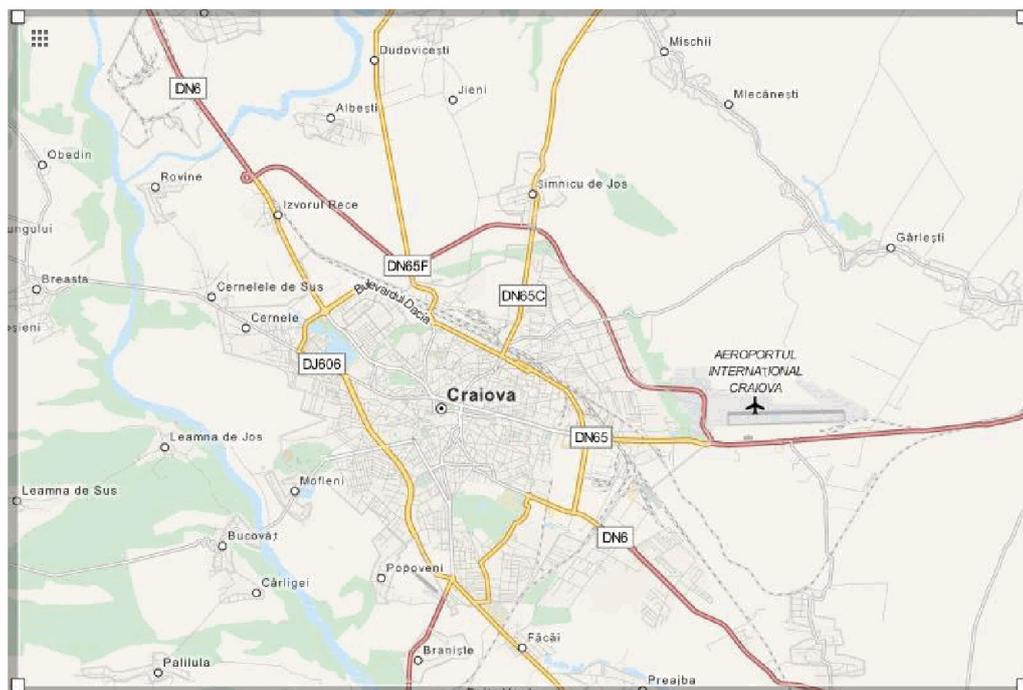


Figure 1.3. The location of the International Airport near Craiova and National Road 65.
Source: "Study on Transport and Mobility within The South-West Oltenia Region", 2015.

The terminal is equipped with an airport infrastructure that allows the operation of the air service for both passengers and goods

NAVAL TRANSPORT INFRASTRUCTURE

Thanks to the proximity in the southern part of the Danube River, the mode of naval shipping in The South-West Oltenia Region is represented by the segment of the waterway adjacent to the region (385 km in total) along with the river ports distributed along this navigable sector: Drobeta Turnu Severin and Orsova (in Mehedinți County), Bechet, Cetate and Calafat (in Dolj County) and Corabia (in Olt County).

The Drobeta Turnu Severin Port is located at km 931-933, in the storage lake - the Hydropower and Navigation Complex "The Iron Gates II". The harbor is between km 927 and km 934. The Port is connected to the railway infrastructure by the Railroad 900 in Dr Tr Severin train station, and to the road infrastructure through the National Road 6.

The Orșova Port is located at km 955, in the upstream area of the storage lake - the Hydro-Power and Navigation Complex "The Iron Gates I", with 100 m long and 500 m long vertical quays. Near the infrastructure for freight transport, the port has a modern passenger terminal with a river station at European standards. It connects with the road network through the national roads National Road 6 and National Road 57.

The Bechet Harbor is located at km 679. It features 600 meters long quays, RO-RO river ramp ramps and a low-loader platform. It is connected to the road network via the National Road 55.

The Cetate Harbor is located at km 811, it has a harbor line from km 810 to km 813. It has stone wall sheds built over a length of 1000 meters. It is connected to the road network via the 56A National Road.

Calafat Harbor is located at km 794-795, with a harbor line from km 793 to km 796. It has a traffic capacity of 270,000 t / year, allowing the mooring of barges up to a maximum of 2,000 tons. Access to water is provided directly from the Danube's waterway, the mooring depth being 3 meters.

The port of Corabia is located at km 629 - 630, the harbor line stretching from km 627.6 to km 633. The port has quay walls on a length of 1400 meters serving as grain silos.

From all of these, only the ports of Drobeta Turnu Severin and Calafat are included in the central TEN-T network (Figure 1.4).

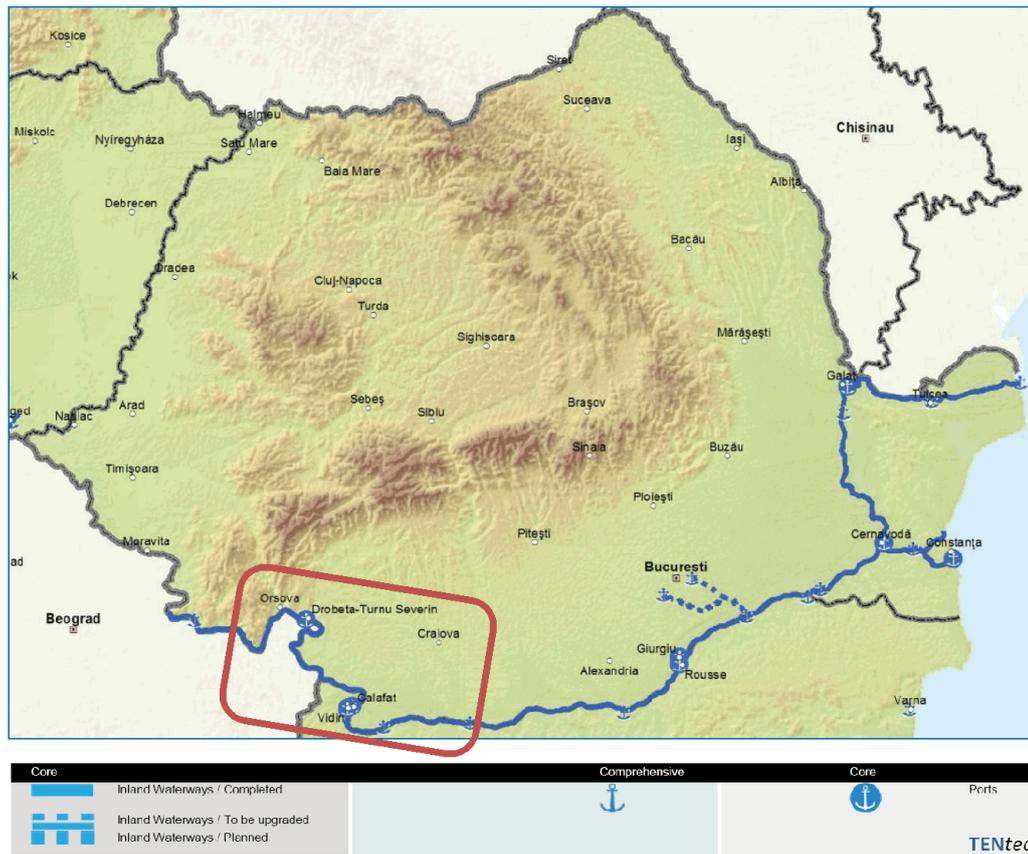


Figure 1.4. The location of the Drobeta Turnu Severin and Calafat ports on the TEN-T network.
Source: "Study on Transport and Mobility within The South-West Oltenia Region", 2015.

PUBLIC TRANSPORT

The brief analysis of the local public transport systems, based on the data and information existing in the Sustainable Urban Mobility Plans of the county's municipalities capitals, a category of urban areas where the local public transport service is functioning, reveals quasi-uniform problems, such as the poor technical condition of infrastructure, the age of the means of transport, the lack of management systems for public transport. In the absence of investments, these deficiencies have been accentuated in the last. The reported problems are accompanied by negative effects, which lead to a reduction in citizens' quality of life (atmospheric pollution, noise pollution, greenhouse gas emissions, high travel costs, low accessibility and low safety).

In the other urban areas of the region, there are no functioning local public transport systems, although this kind of service is part of the community services of public utility and should be present in most urban areas.

Below are presented the main features of the public transport systems in the five county seats: Craiova Municipality, Râmnicu Vâlcea Municipality, Drobeta Turnu Severin Municipality, Târgu Jiu Municipality and Slatina Municipality.

CRAIOVA MUNICIPALITY

The public transport service in Craiova is under the authority of Craiova City Hall and is provided by two operators: (1) *The Autonomous Transport Company from Craiova - R.A.T.* (subordinated to the City Hall operating the tram line, 11 bus lines and 6 minibuses) and (2) *Frații Bacriz S.R.L.* (private operator which operates 4 minibuses lines).

The fleet of vehicles of R.A.T. operator includes 29 trams (more than 30 years old), 33 minibuses (over 12 years old), 123 buses (on average 15 years old, only 17 of them being operated for less than 10 years), 17 new buses (purchased at the end of 2014). On average, the 33 Frații Bacriz's 33 minibuses are 4 years old. The current fleet of public transport vehicles generally are more than 10 years old, in the most difficult situation being the tram fleet.

In general, the public transport network has a good coverage at the level of the city, serving all the densely populated areas, the routes reaching the main socio-economic points of interest in the city (Figure 1.5).

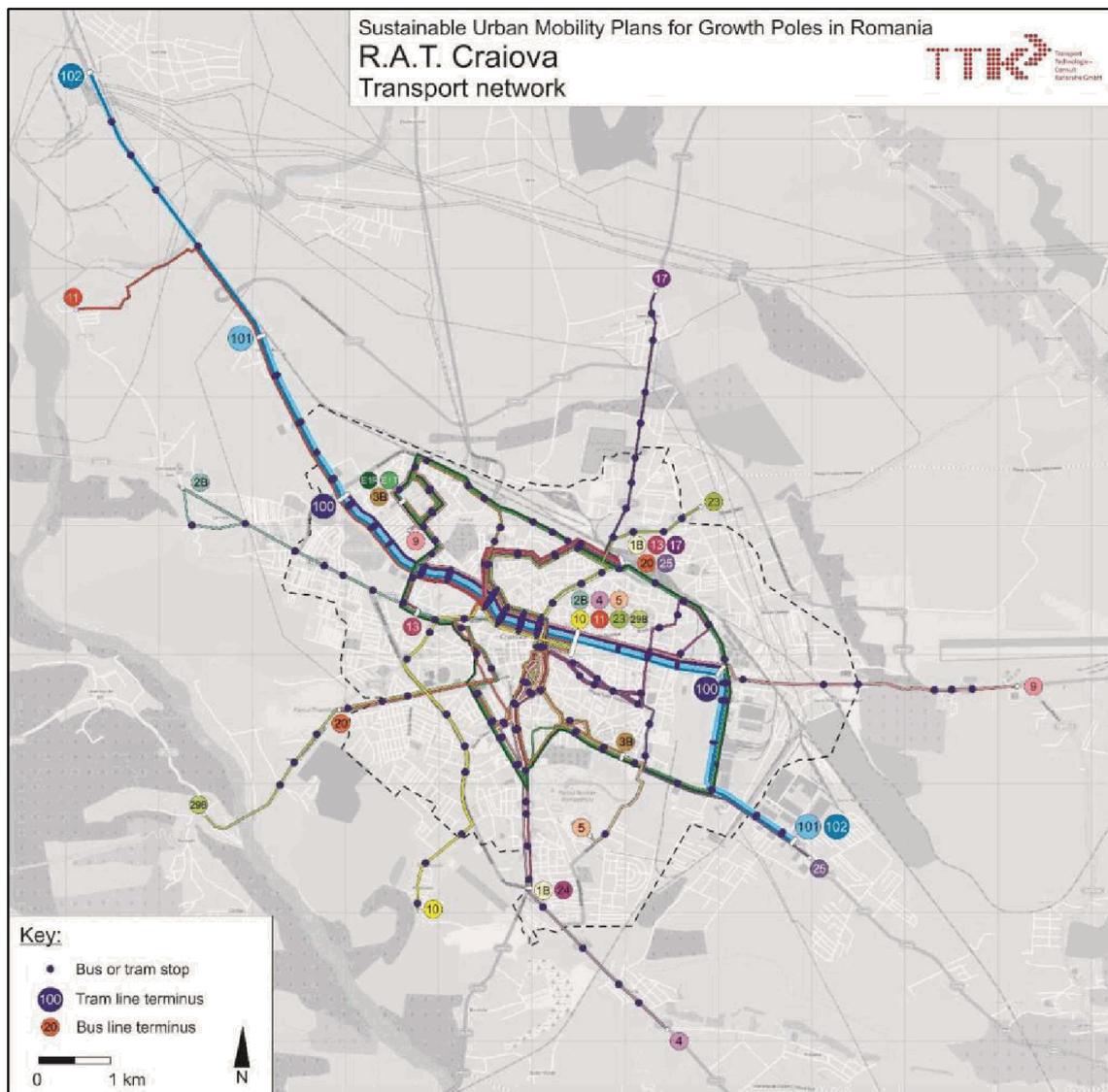


Figure 1.5. The public transport network operated by R.A.T. Craiova.

Source: "Sustainable Urban Mobility Plan for Craiova Growth Pole", 2015.

In terms of accessibility, the following areas not covered or poorly covered by public transport have been identified: in the East (Carpenului Street and the eastern part of Bordei district); in the West (west of Râului Street and both sides of Știrbei Vodă Boulevard); in the South (Veteranilor district). These areas either have a very low density of housing, especially in the south and northeast, where they are also virgin lands or have poor road infrastructure in the southwest and west. In the central area of the city there is a high accessibility to the public transport network, the area being crossed by numerous public transport lines.

In terms of technical performance of the network, the analysis of the indicators reveals a good use of the network. Lines 100, 24 and 2b are particularly performing. Regarding the line 17, the high figure of the average number of passengers transported per kilometer compared to the low number of races should be highlighted. The other bus lines have satisfactory performance indicators.

An opportunity to develop public transport infrastructure is to implement solutions that give priority to public transport services. This can be achieved through several tools, such as: specific bus station design solutions, dedicated lanes, priority for public transport vehicles in signalized intersections. There is also a need to develop a clear policy on the use of the tramway rails for general traffic. The implementation of the exclusive tramway rails would increase not only the attractiveness of public transport, but it would also contribute to the improvement of the road capacity in general.

The conditions in stations can be improved by providing more real-time information to travelers and, depending on the investment, by providing more shelters. Passenger safety issues must also be considered as priorities, being absolutely necessary some stations to be reviewed.

The following issues illustrate the main issues of public transport networks:

- ☑ The main problem is that the current paying system is mainly based on tickets and bus subscriptions for one or two lines. This system limits the possibility of transfers between lines and thus does not facilitate an efficient organization of networks which now rely on the concentration of the number of lines on the main arteries;
- ☑ Another problem in the context of organizing the network is the lack of information and communication between operators and authorities able to carry out this organization. Operators do not provide the usual information about the lines they operate, such as: the number of kilometers covered by each line, the number of tickets and subscriptions sold, the number of passengers transported, etc. This situation impedes the analysis and identification of weaknesses;
- ☑ At the level of the growth pole / county, the number of operators is very high, and some lines are often operated by three different operators. The paying system is not harmonized and so it can be difficult for users to understand how the public transport system works;
- ☑ There is also the problem of unauthorized services with regard to both county operators serving customers using the lines inside the city or the operator serving the population outside the city limits. Difficulties that arise are due to the division of competences into several authorities in organizing the urban and county services.

For the public transport network, in parallel with the technical performance, it was analyzed in S.U.M.P. also the economic performance in order to determine the global public transport network coefficients and to identify the major source of revenues, as well as the operating costs of the network. For this analysis only data provided by the R.A.T. operator was used. In the tables below are presented the basic information on performance indicators of the public transport network, the revenues and the operational expenses of the public operator R.A.T.

Table 1.1. Performance indicators of the public transport network in Craiova.

Source: "Sustainable Urban Mobility Plan for Craiova Growth Pole", 2015.

General indicators			
Year	Population served [inhabitants]	Number of journeys	Distance traveled by vehicles [km]
2011	269,506	23,987,000	6,488,000
2012	268,998	19,988,000	6,198,000
2013	268,053	21,256,000	5,976,000

Table 1.2. The R.A.T. revenues.

Source: "Sustainable Urban Mobility Plan for Craiova Growth Pole", 2015.

Operator incomes [RON]				
Year	Revenue from passengers	Subvention	Others	TOTAL
2011	19,060,197	7,271,353	6,205,647	32,537,197
2012	16,127,816	18,016,516	6,443,567	40,587,899
2013	16,480,854	16,126,170	6,402,599	39,009,623

Table 1.3. Operational expenses of R.A.T.

Source: "Sustainable Urban Mobility Plan for Craiova Growth Pole", 2015.

Operator expenses [RON]								
Year	Energy (electricity, fuel)	Maintenance	Staff	Taxes	Investments (in vehicles)	Others	TOTAL for operation	TOTAL for investments
2011	10,781,617	317,322	19,519,599	463,282	48,775	6,599,336	37,681,156	37,729,931
2012	12,539,126	468,955	19,429,071	1,254,842	10,752	6,494,466	40,197,212	40,207,964
2013	10,197,170	784,736	18,914,361	1,409,934	0	6,484,054	37,790,255	37,790,255

RÂMNICU VÂLCEA MUNICIPALITY

The local public transport in Râmnicu Vâlcea operates on the basis of a delegation management contract directly attributed to the municipal operator S.C. ETA S.A. The urban public transport network is made up of 24 lines, with 125 stations. According to the traffic schedule, the succession interval at peak traffic hours is between 10 and 60 minutes, varying depending on the route. According to the measurements made on the occasion of the establishment of the S.U.M.P., the average daily number of trips in working days is 14,559, and in the non-working days is 5,503.

The circulating operator's public transport means consist of 38 buses with an average age of 15 years old and 11 minibuses with an average age of 12 years old. Of the total means of transport, 10 enroll in the Euro 6 / EEV depollution rules, with the remainder falling into lower categories, including non-Euros.

The existing paying system provides the use of valid current tickets and subscriptions, which can be valid for 1 to 4 weeks, on 1, 2 or all lines respectively. The price of a ticket is 2,5 Ron for the purchase from the distribution kiosks and 3,0 Ron from the bus driver.

The problems emerged from the analysis carried out in P.M.U.D. are:

- the lack of a depot in the northern part of the city, which would reduce the "zero" displacements of the vehicles for the entrance/exit on/from the route;
- relatively large vehicle fleet age;
- lack of equipment in public transport stations;
- the lack of information boards in both stations and means of transport;
- public transport crosses congested road sections, with traffic jams, especially at rush hours, in the central area: Traian's Way, Str. General Magheru, Str. Carol I;
- poor discipline of drivers and pedestrians, which often occupy public transport stations by parking private cars, resulting in traffic congestion, as well as traffic safety problems.

Concerning traffic safety, the main points of conflict, potential accident precursor, in terms of public transport are: Traian's Way, București Way, General Magheru Street, N. Balcescu Street and Tineretului. Street

DROBETA TURNU SEVERIN MUNICIPALITY

In Drobeta Turnu Severin Municipality the local public transport of passengers by regular services was concessioned to operator S.C. Urban Public Transport Drobeta S.A. for a 6-year period. The service is mainly used by pensioners and pupils. Due to the low level of company revenue, there are not foreseen investments in modernizing and improving the fleet. Investments are in progress to build 3 new stations. The company provides a quarterly report on transport capacity and number of passengers. In future, the possibility of promoting cultural events via public transport means, as well as their use for the dissemination of public interest information, will be assessed. There are 51 stations, out of which 25 are unequipped. The main characteristics of the public transport system are presented in the table below.

Table 1.4. The main characteristics of the public transport system in Drobeta Turnu Severin.

Source: "Sustainable Urban Mobility Plan of Drobeta Turnu Severin Municipality", 2017.

Route	Terminus stations	Number of stations Round-trip	Distance [km] Round-trip	Frequency of circulation [min.]	Comercial speed [km/h]
Route 1	Bus Depot CPL – Shipyard	11/10	4.5/4.5	30	9.00
Route 1R	Revoluției (Stomatology) – Shipyard	11/11	6/6	15	24.00
Route 3	Bus Depot CPL – Hydropower	19/17	14.75/14.75	45	19.67
Route 3R	Bus Depot CPL – Hydropower	23/21	16/16	45	21.33
Route 4	Bus Depot – Crihala Forest	19/18	10.5/10.5	60	10.50
Route 5	CPL – Crihala Forest	7/10	6/6	25	14.40
Route 7	Bus Depot CPL – Dudașul Schelei	16/15	8.5/8.5	40	12.75

The 2015 specific data provided by the operator reveals the following:

- - the average age of the public transport fleet is approximately 20 years;
- - the total number of means of public transport is 44;
- - the total capacity of the public transport means is 2,200 seats;
- - the total number of means of public transport equipped with a ramp for people with special needs is 7.

In 2015 the number of subscriptions sold was 5,644, the tickets sold 47,091 and subsidized subscriptions of 43,108. The revenues generated by the sale of tickets and public transport subscriptions in 2015 amounted to 1,801,173 RON, increasing by about 1% compared to 2014. Given the low number of passengers correlated with the tariff level, it was found that income levels cannot support a reasonable investment plan that includes increasing the level of conditions and / or upgrading the fleet. Travel tickets are purchased directly from inside the means of transport, with no information or street maps displayed about the routes and travel possibilities with public transport at the city level.

TÂRGU JIU MUNICIPALITY

In Târgu Jiu Municipality, the local public transport is provided by the operator S.C. TRANSLOC S.A. In order to meet the travel demand by public transport, the carrier operates two types of networks: the bus transport network and, since 1991, a trolleybus network on a 13,5 km long dual track route. Operator's means of transport serve 8 routes and 73 stopping points. The structure of the public transport routes is radial, all 8 routes starting from the downtown to the localities of Târgu Jiu. The routes of the two types of means of transport overlap in the highly circulated central area, both by the inhabitants of the city and by the inhabitants of the neighboring communes, but especially by the tourists, taking into consideration that in this area is located the Brâncuși Ensemble.

The figure below shows the public transport network of Târgu Jiu Municipality.

The trolleybus contact network, over 20 years old, has problems, particularly with regard to DC power, through the two recovery substations, due to equipment not subject to the necessary checks and interventions and, in particular, due to lack of spare parts. It is necessary to rehabilitate the whole electric transport system, as well as to extend the trolleybus network, focusing on electric traction, given its favorable impact on the reduction of pollutant emissions.

The current fleet of vehicles consists of 17 trolleybuses, 21 buses and 1 coach. Trolleybuses exhibit an advanced wear condition, which leads to an extra cost of maintenance and an increased unavailability due to repeated malfunctions. The same thing happens in the case of the bus fleet that is more than 20 years old.

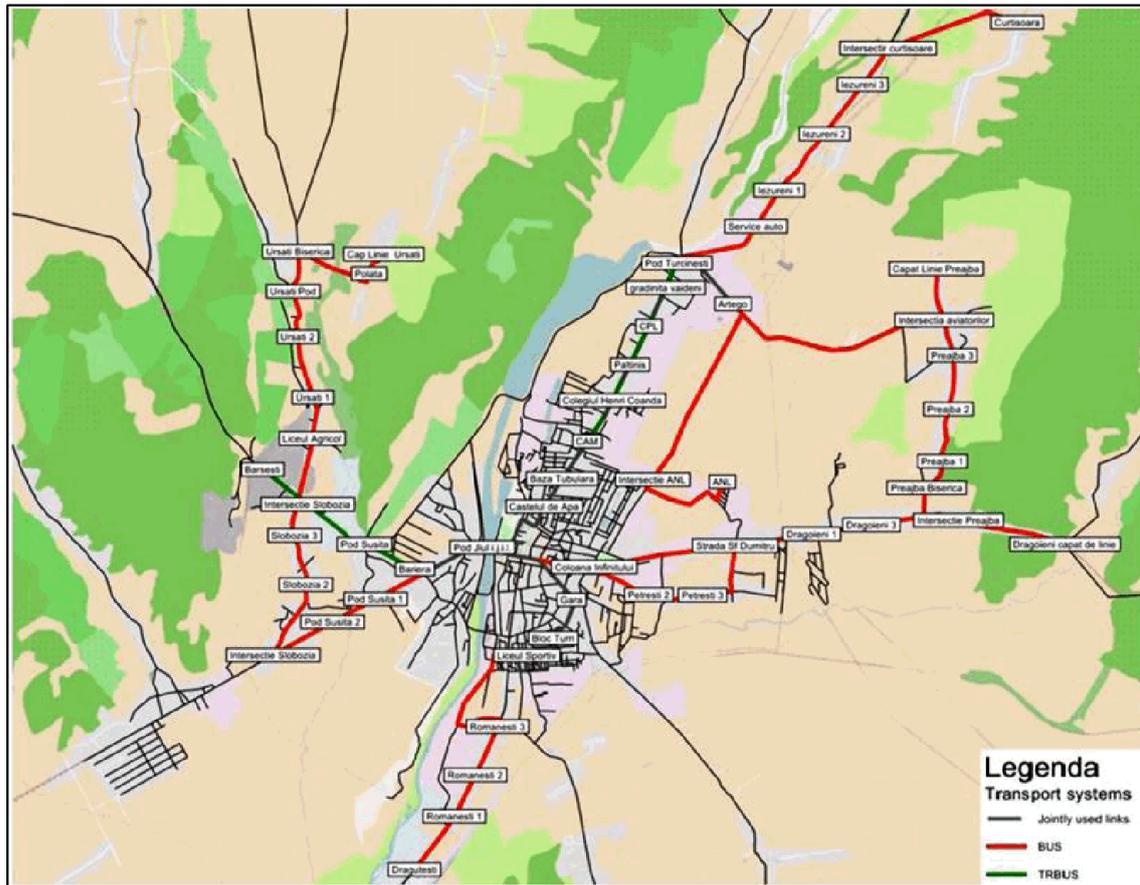


Figure 1.6. Routes and stations of public transport.

Source: "Sustainable Urban Mobility Plan of Târgu Jiu Municipality", 2016.

Means of transport are very old and polluting, which makes them unsafe in traffic, endangering the physical and mental integrity of travelers, while also affecting the environment. Moreover, because of the technical condition, they have a very low average speed, which leads to increased operating costs and high levels of noxious air and delays in the passenger program. The bus and trolleybus circulation programs were designed to meet the mobility requirements of the city's inhabitants. There are no fixed tracking intervals between vehicles over a day. These vary in different time intervals, depending on the working hours of the inhabitants. The table below presents the basic characteristics of the public transport offer in Târgu Jiu.

Table 1.5. The characteristics of the public transport offer in Târgu Jiu.

Source: "Sustainable Urban Mobility Plan of Târgu Jiu Municipality", 2016.

Type of vehicle	Total number of seats	Average number of seats per vehicle	Daily number of routes	Capacity of transport offered [passengers/day]
Trolleybus	2300	135	193	26055
Bus	2206	110	100	11000

SLATINA MUNICIPALITY

Nowadays, public transport by buses in Slatina Municipality is carried out by the public operator S.C. Loctrans S.A. It operates on 27 routes, covering 39 km of street network and 62 stations. The total length of the of journeys on route sin 2016 was 293,323 km.

The public transport fleet includes 15 buses, over 10 years old enrolling in Euro 3 pollution standard. Due to these aspects, the environmental impact is high and the safety and comfort of the passengers are low.

The pricing of the public transport service provides the issuance of tickets valid for the journey in question and for subscriptions with validity that vary according to the time period, the number of lines and the social category of the user. According to the published data, 20,000 tickets, 2,500 monthly subscriptions for pensioners, 1,200 monthly subscriptions for pupils and 400 monthly subscriptions for employees are sold / released during the average month of the year.

Regarding the degree of coverage of the territory by the public transport network, the graphical representation below shows that the public transport routes cover to a large extent the main transport corridors inside the city (Figure 1.7).

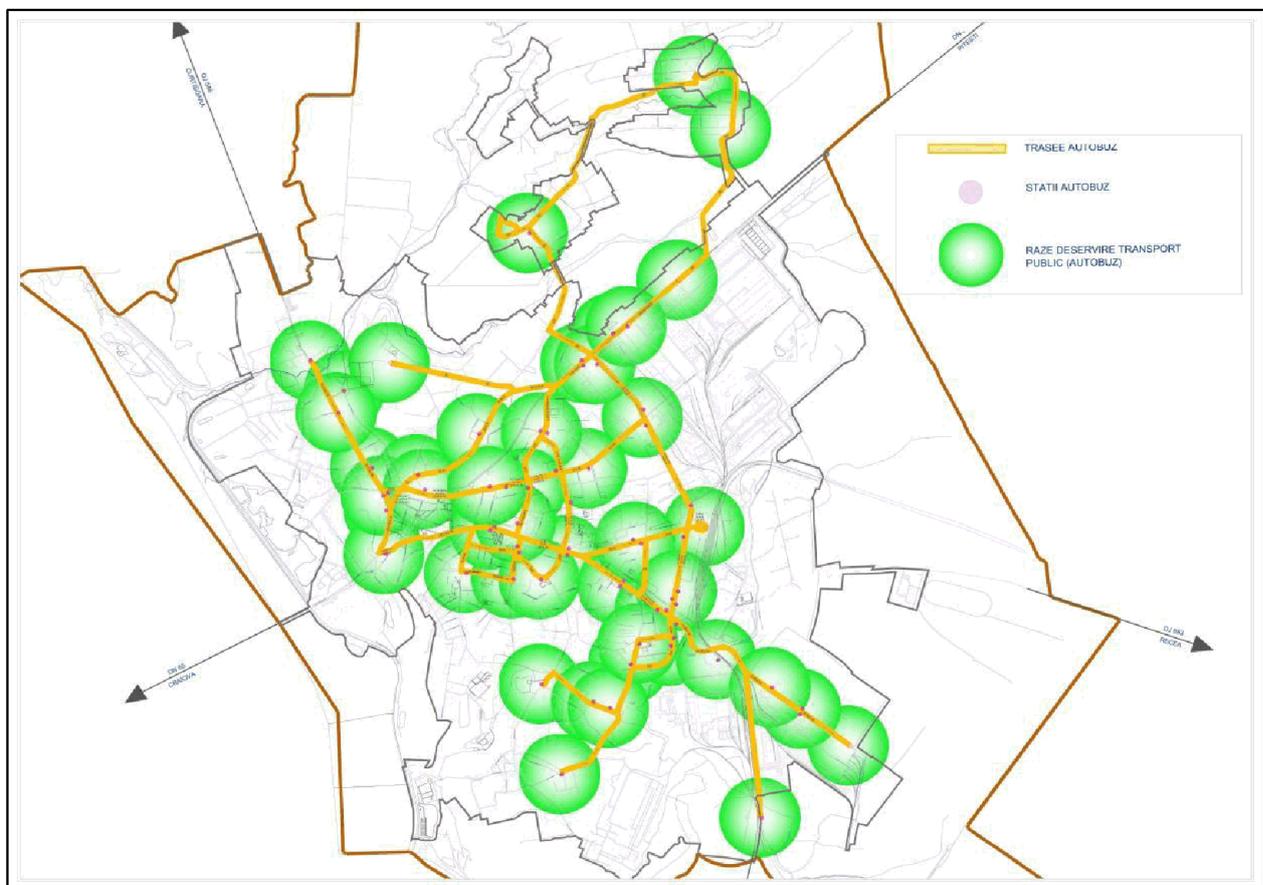


Figure 1.7. Local public transport network and service areas.
Source: "Sustainable Urban Mobility Plan for Slatina Municipality", 2017.

At the level of public transport system, traffic management solutions are not implemented to ensure prioritization of access to public transport means, which is why buses often cross areas affected by congestion and bottlenecks of traffic flows, leading to significant delays and non-

observance of the traffic chart. These aspects influence in the favor of the personal car use the choices that users make when traveling.

Lately, the traffic studies and the sustainable urban mobility plans in the region show a high degree of congestion on the road network, with the associated negative effects: increased noise and chemical pollution, high levels of CO₂ discharged into the atmosphere, delays in travel, low speeds, etc., both in urban agglomerations and on roads between them. In order to eliminate or reduce these negative effects of road transport, it is necessary to build new highways or express roads between the cities of the region and measures to guide travel to sustainable modes of transport (non-motorized, clean and non- / or public transport).

For rail mode, the main drawback is related to its poor attractiveness for travelers, a situation that is caused by insufficient or inadequate offer. The commercial speeds on the rail transport network are reduced, the technical condition of both the infrastructure and the means of transport being poor. Development perspectives should focus on major investments in rail transport systems, including local public transport in the region (railways, trams, stations, management systems in Craiova).

Craiova International Airport has recently made a positive development in terms of passenger and goods flows through the investments made. The development of other modes of transport should also take into account the connectivity with this important transport node in the region.

Naval passenger transportation is poorly represented in the region due to poor connectivity with other modes. Development perspectives should be geared towards encouraging trips for tourism on the Danube in order to capitalize on the major potential offered by the presence of the second largest river in Europe in The South-West Oltenia Region.

It is presented below a S.W.O.T. analysis on the current situation of the transport infrastructure at the level of the region, for all present modes of transport (road, railway, aerial, naval, as well as for public transport).

STRENGTHS	WEAKNESSES
ROAD MODE	
<ul style="list-style-type: none"> - the mode of road transport is the most used, both for goods and for persons; - good accessibility and connectivity with the other regions of Romania and with Europe; - the overlapping of some road infrastructure elements across pan-European Corridor IV; - the existence of a dense network of national, county and communal roads; - linking the main urban density settlements to national roads; - the existence of junction points between road and other modes. 	<ul style="list-style-type: none"> - lack of motorways and express roads; - lack of detour belts in many large cities crossed by European or national roads with heavy traffic (eg Slatina, Balș, Filiași, etc.); - inadequate technical condition of some road infrastructure segments; - inadequate quality of many road rehabilitation and modernization works (especially in the case of county and communal ones); - low road safety (mainly generated by the existence of a single traffic lane, which leads to the need for frequent overtaking); - medium moving speeds; - delays in traveling; - the lack of local public transport system in average-sized and small towns and cities; - local public transport vehicles whose normal service life is exceeded, a situation that is available in most cities where there is a public transport service; - local public transport with a high level of pollution; - deficiencies in the area of urban and periurban public transport; - low performance of local public transport due to the lack of traffic management systems; - poorly developed facilities for clean, pedestrian and bicycle means of transport.
RAILWAY MODE	
<ul style="list-style-type: none"> - satisfactory railway infrastructure developed throughout the Region; - increased density and accessibility; - the railway network allows access to all areas and ensures a good connection with other regions of Romania. 	<ul style="list-style-type: none"> - the inadequate state of the railway infrastructure and the severe shortage of maintenance and capital repairs have resulted in the expiration of the assets' life, in speed restrictions and lower average speeds within the network; - obsolete and inadequately maintained rolling stock; - decrease of the number of passengers; - decrease of the modal share allocated to rail transport; - relatively high tariffs, reported to the purchasing power in Romania; high prices limit the opportunities to attract new passengers and reduce the net revenue of the railway system; - traffic hours not adapted to user requirements; - low average travel speed;

STRENGTHS	WEAKNESSES
	<ul style="list-style-type: none"> - the old age of the means of transport.
AERIAL MODE	
<ul style="list-style-type: none"> - is the most important means of ensuring international connectivity; - Craiova International Airport is the only air transport provider in the Region; - within the General Transport Master Plan of Romania, Craiova airport is classified as an international airport, with 30% of traffic at rush hour. 	<ul style="list-style-type: none"> - low number of routes, operators and service offerings; - reduced connectivity of Craiova municipality to the neighboring airport through public transport services; - the lack of internal air transport offers to connect Craiova with other airports in Romania; - limited supply of logistics services.
NAVAL MODE	
<ul style="list-style-type: none"> - the operating costs specific to this mode are the lowest; - The South-West Region Oltenia has a naval infrastructure that allows connection with the other Romanian ports on the Danube, as well as with important European ports; - Calafat Port is part of the Southern TEN-T Corridor IV and uses the road and railway bridge connecting the city of Vidin from Bulgaria to Romania; - The Drobeta Turnu Severin Port has a strategic location as a transshipment point on the Danube for traffic to northwest Romania and cities like Craiova, being the port of the TEN-T core network; - Orșova Port operates commodities such as building materials and mineral products, but there is no dominant industry or predominant quantity of commodities. 	<ul style="list-style-type: none"> - very low traffic of persons and goods in the Danube ports from the region; - advanced state of degradation of port infrastructure; - storage facilities are not suited to modern logistics practices; - the lack of investment in managing rivers that reduce the value of waterways, with traffic losses to other modes of transport; - the small number and poor quality of the vessels; - limited supply of logistics services.
PUBLIC TRANSPORT	
<ul style="list-style-type: none"> - the existence of public transport systems in all 5 municipalities county capitals in the South-West Oltenia Region; - the functioning in the regional transport pole - Craiova Municipality - of the high capacity and ecologically public transport system by trams; - the recent rehabilitation of the tram infrastructure in Craiova Municipality; - the good connectivity of the local public transport systems with the railway mode (there are routes serving the railway stations); - unit costs per kilometer lower than other modes of public transport (taxi, for example) or than the use of personal vehicles. 	<ul style="list-style-type: none"> - in municipalities and towns that are not county capitals, local public transport systems by regular services are missing (either they have never existed or were disbanded many years ago, as in the case of Bailesti Municipality); - the age of the fleet of vehicles operating within the local public transport systems; - the poor technical condition of these means of transport; - high levels of chemical and noise pollution caused by the public transport vehicles; - the lack of traffic management systems that should prioritize the circulation of public transport;

STRENGTHS	WEAKNESSES
	<ul style="list-style-type: none"> -the lack of efficient tariff integration systems between local public transport, bicycle and regional public transport (peri-urban, county, inter-county, etc.); - the absence of Park & Ride facilities that should stimulate intermodality and reduce the number of journeys made by personal cars in urban areas; - the lack of intermodal terminals for the transfer between urban short distance journeys and long journeys; - poor public transport facilities (not providing appropriate information, comfort and security to users); - the lack of arrangements to facilitate the access of people with special needs to public transport.

OPPORTUNITIES	THREATS
ROAD MODE	
<ul style="list-style-type: none"> - supporting investments in the development of sustainable transport systems through the 2014-2020 Regional Operational Program through two axes that promote carbon emission reduction in urban settlements through investments based on sustainable urban mobility plans; - increasing the motoring index; - recent investments in the national road network; - less attractiveness of rail transport services; - the development and implementation of projects with European funding aimed at the modernization and construction of roads to ensure the accessibility of cities of local and regional importance; - capitalizing on the tourism potential and increasing the flow of tourists as a result of improving the access to tourist areas; - reducing the pollution generated by road transport as a result of technological advances of cars. 	<ul style="list-style-type: none"> - the more and more frequent option of choosing the car and not the public transport to travel; - increasing the number of passengers * kilometer for the way of traveling by car; - delaying the investments needed to modernize and expand the road infrastructure; - continuous degradation of road transport infrastructure; - low accessibility to international trade, - deterioration of the road surface as a result of non-compliance with the axle load; - delaying the development of the inter-modal transport system; - increasing the externalities generated by road transport.
RAILWAY MODE	
<ul style="list-style-type: none"> - development and implementation of projects with European funding aimed at modernizing the railway infrastructure; - improving access to all areas of the region, including those that currently have a poor 	<ul style="list-style-type: none"> - delaying the investments needed to modernize and expand the railway infrastructure; - roadside competition (through lower prices, lower journey times, greater regularity and punctuality);

OPPORTUNITIES	THREATS
<p>railway infrastructure.</p> <ul style="list-style-type: none"> - ensuring quick connections between The South-West Oltenia Region and the other regions of Romania; - the development of the railways between Turkey and Europe as part of an extensive process of modernizing the railway system in Turkey. 	<ul style="list-style-type: none"> - continuing degradation of the rail transport infrastructure; - increasing the disproportion between road transport and rail transport, delaying the inter-modal transport system.
AERIAL MODE	
<ul style="list-style-type: none"> - developing and implementing projects with European funding aimed at modernizing the air infrastructure to ensure increased competitiveness, attractiveness and accessibility of the air transport system; - the number of companies operating in Romania and the number of passengers using the services offered by them are constantly increasing; - diversification of air transport services; - increasing demand for services provided by companies operating at Craiova Airport; - setting the bases for the development of intermodal freight transport. 	<ul style="list-style-type: none"> - lack of capacity of Craiova Airport Terminals by 2020; - lack of capacity of Craiova Airport platforms by 2020; - competition with other airports in Romania and Bulgaria, which may lead to the loss of business opportunities in their favor (implantation of airline and logistics representatives at these airports, loss of development financing opportunities); - air transport infrastructure requires significant upgrades, attractive tariffs and service levels; - lack of personal qualification in logistics and lack of logistics qualification services.
NAVAL MODE	
<ul style="list-style-type: none"> - development and implementation of projects with European funding aiming at the modernization of the river infrastructure to ensure the competitiveness, attractiveness and accessibility of the river transport system; - the level of containerization of the growing goods transported; - the existence of freight flows with potential to be attracted to all ports in the Region; - capitalizing on tourism potential and increasing the flow of tourists as a result of improving the river access to the Region and then to tourist areas. 	<ul style="list-style-type: none"> - the competition with the other Danube ports, which could lead to the loss of business opportunities for them (implantation of shipbuilding and logistics companies in these ports, loss of development finance opportunities); - lack of qualified logistics staff and lack of logistics qualification services; - the development of the railways between Turkey and Europe by modernizing the Turkish railway system, which will allow the increase of the volume of goods transported by rail to the detriment of the shipping; - delaying the investments needed to modernize and expand the river infrastructure; - continuing the degradation of the shipping infrastructure.
PUBLIC TRANSPORT	
<ul style="list-style-type: none"> - the availability of funding sources (Regional Operational Program, Investment Priorities 3.2 and 4.1) that can be accessed to improve urban public transport systems or to set up new ones; these funding programs support investments both in environmental friendly means of transport and 	<ul style="list-style-type: none"> - continuous increase of the motorization index; - citizens' appetite to use private transport, even for short distance journeys within cities; - poor public awareness of the benefits generated by the using of public transport; - the difficulty of changing the citizens' habits on

OPPORTUNITIES	THREATS
<p><i>in infrastructure, as well as in public transport management systems;</i></p> <ul style="list-style-type: none"> - recent technological advances in the field (environmental friendly means of transport, with an increased autonomy, transport means that use renewable energy); - the existence of local plans and strategies that encourage public transport. 	<p><i>how to travel;</i></p> <ul style="list-style-type: none"> - the existence of national policies that encourage the purchase of new cars for both physical and legal persons; - the lack of restrictions on the possibility of registering vehicles with lower depollution standards in Romania.

2. DESCRIPTION OF THE POLICY INSTRUMENT OF RDA SW OLTENIA

Within the REGIO-MOB project, the RDA SW Oltenia partner is responsible for the *Policy Instrument 5 - ERDF Regional Operational Program (ROP), Objective 4 - Supporting the transition to a low-carbon economy in all sectors*. This policy instrument is closely linked to the Investment Priorities 3.2 and 4.1 of the *Regional Operational Program ROP 2014-2020 - Promoting carbon reduction strategies for all types of territory, in particular urban areas, including the promotion of sustainable urban mobility plans, and of relevant measures to attenuate the adaptations*.

Below is a description of the existing national policy, applicable at the development region level, to support the transition to a low-carbon economy in transport and urban mobility.

European specialist forums have called for energy efficiency measures in the urban area to contribute to fighting climate change, a demand based on objective facts, bearing in mind that 72% of European citizens live in urban areas, where 75% of the total energy is consumed, and where 98% of the urban travel is less than 5 km in length.

The Regional Operational Program 2014-2020 supports the European Union strategy for smart, sustainable and inclusive growth and the achievement of economic, social and territorial cohesion through 13 priority axes, out of which two (i) *Priority Axis 3 - "Supporting the Transition to a low-carbon economy"* and (ii) *Priority Axis 4 - "Supporting sustainable urban development"* - promote the reduction of carbon emissions in urban settlements through investments based on sustainable urban mobility plans for them.

The Investment Priority 3.2 addresses the urban areas, excepting the county capital municipalities, and Investment Priority 4.1 is dedicated to county capital municipalities.

With a high population density and a large share of short distance trips, cities have great potential for low-carbon transport compared to the overall transport system (by reorienting to pedestrians, bicycle public transport, and the rapid introduction of alternative fuel-propulsed vehicles on the market).

In order to achieve the specific objectives of the two mentioned priorities, within the ROP 2014-2020 strategy, identifying a series of investments whose implementation will lead to the realization of sustainable urban transport systems by achieving the following results:

- *reducing air pollution and noise pollution, as well as energy consumption;*
- *ensuring the accessibility to the public and private transport system for all citizens;*
- *development of infrastructure for non-motorized transport means;*
- *increasing the attractiveness and improving the quality of the environment and urban space.*

In order to implement the European policy to support the transition to a low-carbon economy, the following types of financing actions are considered under the two investment priorities:

A. Investments Meant to Improve the Urban Public Transport:

- *purchase of electric rolling stock / environmentally friendly vehicles, including those with the Euro 6 depollution standard, including for the introduction of public transport in urban areas;*
- *modernization / rehabilitation / extension / introduction / reintroduction of public electric transport routes;*
- *modernization of electric rolling stock (trams);*
- *modernization / rehabilitation of the public transport depots and related technical infrastructure, including the construction of new depots;*
- *the creation of separate routes for public transport vehicles;*
- *improvement of the existing public transport stations, including the construction of new intermodal stations and intermodal terminals for public transport;*
- *development / extension of e-ticketing systems for passengers;*
- *building / upgrading / rehabilitation of road infrastructure (on corridors served by public transport) in order to increase the level of safety and efficiency in the circulation and operation of the transport network;*
- *building / upgrading (including the introduction of bicycle paths) / rehabilitation of road infrastructure (in corridors served by public transport) to increase the level of safety and efficiency in the traffic and operation of the transport network, etc.).*

B. Investments for electric and non-motorized transport:

- *building the necessary infrastructure for electrical transport (including power stations for electric cars);*
- *building / upgrading / rehabilitation of bicycle paths / tracks and related technical infrastructure (rental systems, bicycle parking systems, etc.);*
- *creation / upgrading of pedestrian zones and trails, including measures to reduce traffic in certain areas, etc.).*

C. Other investments to reduce CO₂ emissions in the urban area:

- *creation / upgrading / extension of traffic management systems, including video surveillance, as well as other intelligent transport systems;*
- *modernization / rehabilitation of road infrastructure based on the measures proposed by Sustainable Urban Mobility Plans to reduce CO₂ emissions;*
- *realization of park and ride systems;*
- *realization of forest curtains - trees alignments with high CO₂ retention capacity.*

By financing the investments mentioned above, it is intended to achieve the objectives assumed by Romania in solving the following problem, identified and prioritized as the most relevant in the urban areas, in the context of the present stage of socio-economic development of the regions of Romania, as well as of the main directions of the strategic action mentioned in the relevant national and European strategic documents:

→ **High level of greenhouse gas emissions and pollution generated by road transport at urban level**

The existing data confirm that much of city pollution and increased CO₂ content is due to motorized traffic within them, both for individual cars and freight cars, as well as obsolete public transport. Traffic congestion is a quasi-general problem in all the major municipalities of Romania. The number of urban public transport users is steadily decreasing at the city level, together with the intensive increase in the number of personal vehicles with effects on pollution, the increase of traffic congestion and high energy consumption, noting that the number of passengers transported by the transport operators in these areas the urban traffic dropped from over 3.5 billion passengers / year in 1992 to less than 2 billion passengers / year in 2012.

Reducing the number of cities and municipalities managing public transport services and reducing the quantity and quality of services offered occurred in the context of the disappearance of many industrial platforms, the reduction of the number of people employed in industry (in urban areas) and the opportunities offered by personal cars. In addition, the continuous spatial dynamics of urban localities has accentuated the problem of traffic in cities and the intensive use of their own cars in the absence of high-quality urban public transport. The degree of pollution in cities has also increased due to massive use of commercial car transport, the transit traffic through the city's central area being a problem in urban areas that do not have bypasses or detours. Romania has an insufficient number of pedestrian areas and green spaces in the 320 cities and municipalities, and the use of the bicycle as a means of locomotion (and not recreational) is still perceived as being in its infancy.

In view of the above, it can be concluded that the policy instruments addressed to Investment Priorities 3.2 and 4.1 are tools for transport and mobility policy implementation. The program itself responds to challenges identified by Romania in the Partnership Agreement negotiated with the European Commission, interventions funded by ESI funds contributing to the achievement of the Romanian authorities' goal under the National Reform Plan, which will ensure the reduction of gas emissions by 2020 with a greenhouse effect of at least 19% compared to 2005.

In order to finance the actions in the three main categories (*A. Investment to improve urban public transport, B. Investments for electric and non-motorized transport, C. Other investments to reduce CO₂ emissions in the urban area*) as specified in the Applicant's Guide for the two Specific objectives (3.2 and 4.1), the application for funding must be accompanied by a series of annexes. These are presented centrally in Table 2.1.

Table 2.1. Annexes Applications for Funding – I.P. 3.2 and I.P. 4.1.

I.P. 3.2	I.P. 4.1
1. If the project team has been established, CVs of project team members and job descriptions	1. If the project team has been established, CVs of project team members and job descriptions
2. Declaration of eligibility of the applicant and, if applicable, of the partners	2. Declaration of eligibility of the applicant and, if applicable, of the partners
3. Declaration of commitment of the applicant and, if applicable, of the partners	3. Declaration of commitment of the applicant and, if applicable, of the partners
4. Declaration of eligibility for VAT, if applicable	4. Declaration of eligibility for VAT, if applicable

I.P. 3.2	I.P. 4.1
5. Agreement on Partnership Implementation of the Project, if applicable	5. Agreement on Partnership Implementation of the Project, if applicable
6. List of equipment, endowments, means of transport, works and / or services, fitting them into the eligible / ineligible expenditure section	6. List of equipment, endowments, means of transport, works and / or services, fitting them into the eligible / ineligible expenditure section
7. Sustainable Urban Mobility Plan (S.U.M.P.)	7. Sustainable Urban Mobility Plan (S.U.M.P.)
8. Traffic study	8. Traffic study
9. Instruments for calculating CO ₂ emissions in the transport sector	9. Instruments for calculating CO ₂ emissions in the transport sector
10. Technical and economical documentation, including the works contract and additional documents, if applicable	10. Technical and economic documentation, including the works contract and additional documents, if applicable
11. Documents on ownership / administration / superficies / use	11. Documents on ownership / administration / superficies / use
12. Urbanism certificate and / or building permit, notices / agreements, as appropriate	12. Urbanism certificate and / or building permit, notices / agreements, as appropriate
13. The decision of the project classification stage in the environmental impact assessment procedure, or the classification of the notification issued by the environmental protection authority in accordance with GD no. 445/2009 on the assessment of the impact of certain public and private projects on the environment, with subsequent amendments and modifications	13. The decision of the project classification stage in the environmental impact assessment procedure, or the classification of the notification issued by the environmental protection authority in accordance with GD no. 445/2009 on the assessment of the impact of certain public and private projects on the environment, with subsequent amendments and modifications
14. Applicant's decision / partners' decisions, as appropriate, for approval of technical and economic documentation (Phase D / Documentation for Endorsement of Intervention Works / Opportunity Study / Technical Project / Public Procurement Contract) and technical and economic indicators	14. Applicant's decision / partners' decisions, as appropriate, for approval of technical and economic documentation (Phase D / Documentation for Endorsement of Intervention Works / Opportunity Study / Technical Project / Public Procurement Contract) and technical and economic indicators
15. Physical stage of investment report (Model G)	15. Physical stage of investment report (Model G)
16. Note on compliance with cost standards (Model K)	16. Note on compliance with cost standards (Model K)
17. Documents regarding the compliance of the delegation contract for the management of the public passenger transport service / the decision to administer the provision of the public passenger transport service with Regulation (EC) no. 1370/2007	17. Documents regarding the compliance of the delegation contract for the management of the public passenger transport service / the decision to administer the provision of the public passenger transport service with Regulation (EC) no. 1370/2007
18. In the case of S.U.M.P. is developed in partnership, and the expenditure is included in the budget of the financing application submitted in partnership, the Association Agreement on the elaboration of S.U.M.P. from which to show the financial contribution of the partner leader and partners for this expense	18. In the case of S.U.M.P. is developed in partnership, and the expenditure is included in the budget of the financing application submitted in partnership, the Association Agreement on the elaboration of S.U.M.P. from which to show the financial contribution of the partner leader and partners for this expense
19. The decision (or decisions) of the Local Council of the applicant to show the	19. The decision (or decisions) of the Local Council of the applicant to show the

I.P. 3.2	I.P. 4.1
regulation of the parking policy at the level of the study area of the project	regulation of the parking policy at the level of the study area of the project
20. Expenditure on item related to expenses in sub-category 181, in accordance with the legislation in force, as the case may be	20. Expenditure on item related to expenses in sub-category 181, in accordance with the legislation in force, as the case may be
21. Supporting documents on the complementarity of activities, as appropriate	21. Supporting documents on the complementarity of activities, as appropriate
22. Opinion on the compliance of the project with the Integrated Strategy for Sustainable Development of the Danube Delta (for call ROP / 2017/3 / 3.2 / 1 / ITI)	22. In order to demonstrate a more advanced degree of maturity of the project, the technical project, the building permit, the works / supply contract awarded after 01.01.2014, proof of the launching of the public procurement procedures for the works / services of the tram / means of transport and equipment, as appropriate
23. The Administrator's / Custodian's opinion (or application ranking) for interventions taking place in a protected natural area, in accordance with the provisions of GEO 57/2007 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna, further completions (for call ROP / 2017/3 / 3.2 / 1 / ITI)	23. Extract from the list of projects related to Priority Axis 4 of the ROP 2014-2020 of ESI Funding Document 2014-2020
24. If applicable, Extract from the Project Portfolio of the Integrated Urban Development Strategy, developed at Intercommunity Development Association, Metropolitan Area / Growth Pole or at Partner level with a county capital and (if this document is completed) the list of projects annexed to the EIA 2014-2020 Supporting Document under Priority Axis 4 of ROP 2014-2020 - Support for sustainable urban development	24. The decision of the project classification stage in the environmental impact assessment procedure, or the classification of the notification issued by the environmental protection authority in accordance with GD no. 445/2009 on the assessment of the impact of certain public and private projects on the environment, with subsequent amendments and modifications
25. In order to demonstrate a more advanced degree of maturity of the project, the technical project, the building permit, the works / supply contract awarded after 01.01.2014, the evidence of the launching of the public procurement procedures for the works / services of the tram / means of transport and equipment, as appropriate	
26. Other documents, <i>if the applicant considers it appropriate to attach them</i>	

For a number of annexes outlined in the above table, a framework is required or mandatory elements to be addressed are mentioned, which are found in the analysis frames of compliance and the quality of the technical and economic documentation related to the investments included in the application for financing.

From the above table it can be noticed that for the two Investment Priorities there is homogeneity regarding the substantiation documents. Also, the minimum content requested for the annexes to the grant application is the same. The situation is mainly due to the fact that the specific

guidelines for the two Specific Objectives are drawn up taking into account European and national legislation. An element of novelty in the regulations on spatial planning and urban planning is the Sustainable Urban Mobility Plan (S.U.M.P.). With the 2013 update of Law No. 350/2001 on the spatial planning and urbanism, S.U.M.P. is a complementary documentation to the Territorial Development Strategy and the General Urban Plan. The content of S.U.M.P. is regulated by the Methodological Norms for the application of Law no. 350/2001 on spatial planning and urbanism and elaboration and updating of urban planning documents (Order of the Minister of Regional Development and Public Administration, No. 233/2016).

The Applicant Guidelines for the two Investment Priorities 3.2 and 4.1 are accompanied by the administrative compliance checkpoints and the admissibility of the S.U.M.P., which highlights key issues that need to be addressed at chapter / subchapter level. This breakdown is beneficial to the quality of the resulting strategic documents, but in the current situation where the first generations of complex mobility studies are being developed; there are difficulties in obtaining basic primary data on citizens' mobility behavior. In the figure below is presented the comparative analysis of the modal allocation in urban areas in Germany, from 1972 to 2013, based on periodic surveys conducted among the population. In-depth analyzes (as in Figure 2.1) for Romanian cities are impossible to achieve because there is no statistical data in the field.

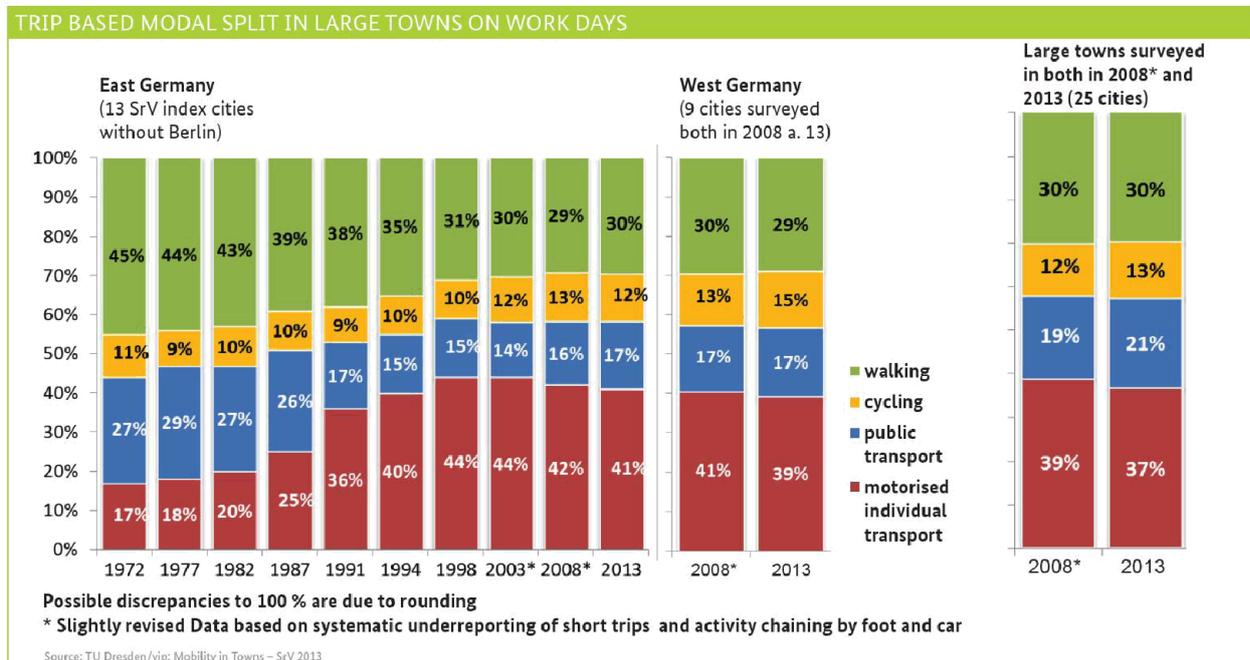


Figure 2.1. Results of population mobility surveys - urban areas in Germany.

Source: *New directions in urban transport in Germany*, www.german-sustainable-mobility.de

To improve the Policy Instrument of Regional Operational Program (ROP) ERDF, *Objective 4 - Supporting the transition to a low-carbon economy in all sectors*, it is advisable to support the necessity and opportunity of periodic national collection of a set of statistical data on behavior mobility of citizens. Thus, complex analyzes of the interaction between the system of activities, the transport system and the mobility of the population will be made possible, facilitating the identification of optimal solutions for achieving a low-carbon economy in transport.

As for the actions supported for financing, the same approach is maintained from the level of the two Investment Priorities. Given that the mobility problems and causes leading to the increase of the use of personal motor vehicles in the two categories of urban areas (municipalities with the county capital and the rest of the towns and municipalities) are not the same, it results that this homogeneity is not justified. A concrete example of this is related to the financing of road infrastructure. In the case of Specific Objective 4.1, these investments are eligible up to 30% of the total cost of transport acquisition and basic investment expenditure, and for the specific Objective 3.2, the maximum eligible amount is capped at 40% of the value total expenditure on the purchase of means of transport and the expenses for the basic investment. If in the case of municipalities with county capital (eligible applicants for projects submitted under the specific Objective 4.1 call for projects), which have significant growth potential and impact at sub-regional level, we are confronted with the continuous increase in traffic intensity, which generates a higher degree of pollution, traffic jams, economic losses, increased accidents, health problems for citizens and high fuel consumption from non-renewable sources, due to the low attractiveness of public transport, it is justified to limit the support of interventions to improve road infrastructure in the case of the other urban areas (eligible applicants for projects submitted in the context of the call for projects under specific Objective 3.2) where the main mobility issues are related to the low territorial accessibility of the public transport network, mainly due to the poor quality of road infrastructure, limiting the support of interventions in the field of road infrastructure will lead to difficulties in meeting the CO₂ reduction targets. Many small - scale administrative - territorial units include local or sub - localities located at distances up to 15 km from the urban area. In most cases, connecting roads between component / resident localities and the urban area are not upgraded, which makes the operation of the public transport system not attractive. For this reason, the localities included in these categories are poorly serviced by public transport systems, the only alternative being the use of the individual car transport, which leads to the agglomeration of the street network in the urban area where the socio-economic and administrative objectives are concentrated. In these situations, increasing the degree of support for investments in the modernization of road infrastructure used by local public transport is a measure to improve the policy instrument so as to achieve the overall objective of reducing CO₂ emissions associated with transport activity.

In conclusion, given the requirements for the documentation required for the submission of a grant application and their content, as well as the conclusions drawn from the working groups organized with the representatives of the potential eligible applicants, it is recommended to:

→ Support the necessity and timeliness of national collection of a set of statistical data on citizens' mobility behavior.

***Expected outcomes:** To provide realistic solutions to sustainable urban mobility solutions and to reduce the impediments associated with adapting the citizens' mobility behavior to the transition to a low-carbon economy.*

→ Change the eligible actions in order to increase the financial support of the investments in the modernization of the road infrastructure used by the local public transport, respectively the elimination / reconsideration of the 30% and 40% limits and considering all necessary expenses for the rehabilitation of the roads on which the means of public transport circulate as eligible expenditure.

Expected outcomes: Ensure the necessary conditions for the operation of a local public transport service, which offers territorial accessibility throughout the locality. The operation of an attractive public transport system will help to reduce the penetration journeys made by the personal vehicle in the urban area - the core of the administrative-territorial unit of which the component and belonging localities are involved and implicitly the reduction of the CO₂ emissions associated with the transport activity. If the streets are not rehabilitated, the running speed of the public transport will be lower and, implicitly, it will increase the level of noxes.

- Prioritization of public transport to be made in accordance with the existing infrastructure situation at the level of each administrative-territorial unit. For example, imposing a dedicated lane for public transport only may not be in line with the reality on the ground. Implementing effective traffic management solutions can lead to CO₂ emissions reduction also in the absence of a public transport lane;
- The conditions in the Specific Guidelines must be adapted to the existing needs and situations;
- Establishment of protocols at the level of ministries or state institutions for correlating the deadlines for the issuance of agreements / authorizations with submission deadlines for project calls (e.g. with Environmental Protection Agencies, Public Utilities Providers, etc.);
- Reassessment of Criterion 1.3 from the Technical and Financial Assessment Grid - *Increase in the number of passengers transported by local / regional public transport within the project area*, given that in most cities / municipalities eligible under the Investment Priority 3.2 there is no public passenger transport system, so there are no baseline values specific to the "no project" scenario against which to calculate the percentage increases;
- Integrated measures must be taken to reduce CO₂ emissions; it is not possible to reduce the level of emissions only through POR I.P. 32. / I.P. 4.1, but the measures must be correlated and coordinated at national level. (e.g.: higher taxes for vehicles that pollute more, according to principle "polluter pays"); In addition, according to the program-specific indicators, the Greenhouse Gas Emissions Indicator from road transport has as its source the data from the Ministry of Environment and Climate Change, so all sources of greenhouse gas emissions must be considered, not only from the transport sector;
- Elaboration of S.U.M.P. (Sustainable Urban Mobility Plan) in the pre-launch period, prior to call origination, similar to I.P. 6.1, S.U.M.P. to be an annex to Guides;
- Encouragement to establish partnerships for areas adjacent to cities or metropolitan areas, with the aim of future development of S.U.M.P.s at the district / county / region level;
- Gathering information from grant recipients about the difficulties encountered in preparing the necessary documentation, in order to create future tailored policies to avoid these difficulties at the next calls for projects / funding axes.

PERFORMANCE INDICATORS specific to the eligible investment priorities are differentiated on the following two categories of regions:

- *more developed region* (Bucharest-Ilfov region);
- *less developed region* (all seven including South-West Oltenia Development Region).

COMMON AND PROGRAM INDICATORS OF PROGRAM, at the global level of all the less developed regions, are the following:

Specific objective 3.2:

- **Specific Indicator: "Operations implemented for public and non-motorized transport"**, the target value in 2023: 25 operations;
- **Specific Indicator: "Implementation of Operations to Reduce CO₂ Emissions (Other than for Public and Non-Motorized Transport)"**, the target value in 2023: 20 operations.

Specific objective 4.1:

- **Common Indicator: "Population living in areas with integrated urban development strategies"**, the target value in 2023: 5,143,438 people;
- **Common Indicator: "Total length of new or improved tramways / metro lines"**, target value in year 2023: 50 kilometers;
- **Specific Indicator: "Operations implemented for public and non-motorized transport"**, the target value in 2023: 50 operations;
- **Specific Indicator: "Implementation of Operations to Reduce CO₂ Emissions (Other than for Public and Non-Motorized Transport)"**, the target value in 2023: 20 operations

RESULT INDICATORS specific to the ROP program, valid for both Specific Objectives 4.1 and 3.2, are:

- **Specific Indicator: "Passengers Carried in Urban Public Transport in Romania":**
 - the reference value in 2012: 0.97 billion passengers;
 - the target value in 2023: 1.11 billion passengers.
- **Specific indicator: "GHG emissions from road transport":**
 - the reference value in 2012: 14,211.38 thousand tons of CO₂ equivalent / year;
 - the target value in 2023: 17,750.44 thousand tonnes CO₂ equivalent / year

3. GOOD PRACTICE EXAMPLES SELECTED TO BE TRANSFERRED BETWEEN PARTNERS IN THE REGIO-MOB PROJECT

Each partner of the REGIO-MOB Project has developed a regional transport and mobility analysis, identifying examples of good practice specific to the region it represents, and a total of 43 examples of regional mobility are collected at the project level (Table 3.1).

Table 3.1. Examples of good practice gathered from partners in the Regio-Mob Project.

No.	Selected no.	Good practice example	Country/Partner
1.		<i>Management of urban and metropolitan transport of travelers in Andalusia through a regional law</i>	Spain / IAT
2.	1.	<i>Regional coordination of the sustainable mobility strategies: Model of Consortium as the Metropolitan Transport Authority</i>	
3.		<i>Technological Network of Transport with Open Architecture: Standardization and Homologation</i>	
4.	2.	<i>Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport</i>	
5.		<i>Intermodal Transport Title for all the transport modes and in all the Andalusia metropolitan areas</i>	
6.		<i>ECOTRIP - Emission and Consumption Calculation Software Based on Trip Data Measured by Vehicle On-Board Unit</i>	Italy / ANCI LAZIO
7.		<i>Road Safety Plan of Rome</i>	
8.		<i>CATCH – MR - Cooperative Approaches to Transport - Challenges in Metropolitan Regions</i>	
9.	3.	<i>PASTA – Physical Activity Through Sustainable Transport Approach</i>	
10.	4.	<i>Limit4WeDA - Light Mobility for Weak Demand Areas</i>	
11.		<i>RETROFIT – National Regulation concerning the installation procedures of Energy Regeneration System for Electric Vehicle, originally registered with combustion engine</i>	Slovenia / PROMETNI
12.		<i>Gorenjska Electro Trip: Network of charging stations for electric cars, electric bikes and electric scooters</i>	
13.		<i>First regional spatial development concept and strategy with the active participation of municipalities in Ljubljana Urban region</i>	

No.	Selected no.	Good practice example	Country/Partner
14.	5.	Implementation of Park and Ride (P+R) network in Ljubljana urban region (LUR)	
15.		Demand-Responsive Transport service and Public transport identification Cards for persons with disabilities in Ljubljana urban region	
16.		Subsidized tickets for pupils, students and education of the adult participants	
17.	6.	Supporting the preparation of Sustainable Urban Mobility Plans (S.U.M.P.s) and its implementation in municipalities with EU Funds	
18.	7.	Fast Agglomeration Railway	Poland / Niepolomice
19.		Biogas from inoperative landfill	
20.		Ecodriving techniques	
21.		Good planning when using heavy machines	
22.	8.	Tele-Bus	
23.	9.	Car-sharing /car-pooling	Romania / RDA SW Oltenia
24.	10.	E-BIKE NET	
25.		HYPERION, The first electric train in Romania – Improving the regional mobility	
26.		Ring Road for Dragasani Municipality – Intercities mobility and accessibility	
27.		Ring Road for Targu Jiu Municipality – Intercities mobility and accessibility	
28.		Orientation and Coordination tool for projects regarding transportation and mobility in South West Oltenia Region	
29.		Egnatia Motorway (traffic) Observatory	Greece / Region of Western Macedonia
30.	11.	Evaluation of road traffic accident data in Western Macedonia	
31.		National Wildlife Observation Network	
32.		Planning of waste transport/transfer of the Integrated Waste Management System of W Macedonia	
33.	12.	Green eMotion	
34.		Flow Centre	United Kingdom (SEStran)
35.		Bus Priority Lanes – “Green ways”	
36.	13.	Park & Ride Facilities	
37.	14.	Specific Route Queue Management (ICT)	
38.		Bus Real Time Passenger Information (RTPI)	
39.		SEStran Sustainable and Active Travel Grants	
40.		Coordinated development of the region’s Transport Strategy (RTS) and Strategic Development Plan (SDP)	
41.		Strategic Cross Boundary Cycle Development	
42.		Thistle Card (Equality Forum)	
43.		SEStran Tripshare	

To select the best examples of good practice, a prioritization methodology was applied based on the following criteria:

- *correlation with regional strategies;*
- *ease with which they can be replicated in the region;*
- *the expected impact potential in most regions.*

The projects thus selected are those highlighted in the table above. These were presented in the workshops and underpin the outline of the action plans developed at the level of the regions represented by each partner.

4. THE ACTION PLAN

4.1. Description of the proposed actions

In order to identify and substantiate the actions proposed in the plan, the following documents were analyzed:

- *Regional Operational Program 2014-2020, version September 2017;*
- *Regional Analysis within the REGIO-MOB project carried out by the partner RDA SW Oltenia;*
- *REGIO-MOB - Guidelines for Best Practices in Sustainable Mobility;*
- *Newsletter # 2, April 2017 - Interregional Learning Towards Sustainable Mobility in Europe: REGIO-MOB Experience;*
- *Presentation "Interregional Learning Towards Sustainable Mobility in Europe: REGIO-MOB, Brussels, 12 October 2017";*
- *Specific literature in the field of transport and mobility;*
- *Urban Sustainable Mobility Plans of Municipalities County Residence in The South-West Region Oltenia:*
 - *"Sustainable Urban Mobility Plan for Growth Pole Craiova";*
 - *"Sustainable Urban Mobility Plan for Slatina Municipality";*
 - *"Sustainable Urban Mobility Plan of Râmnicu Vâlcea Municipality";*
 - *"Sustainable Urban Mobility Plan of Târgu Jiu Municipality";*
 - *"Sustainable Urban Mobility Plan of Drobeta Turnu Severin Municipality".*
- *Sustainable Urban Mobility Plans of Municipalities and Towns of The South-West Oltenia Region made and available until the date of this report.*

The necessity and opportunity of choosing the actions was based on data and information on the current situation of the transport and mobility systems specific to the urban areas of The SW Oltenia Region.

Moreover, it was taken into account that the Romanian legislation requires that the mobility plan should be a tool for territorial strategic planning that will be related to the territorial

development of the periurban / metropolitan areas with the mobility and transport needs of the persons and material goods. The main purpose of the sustainable urban mobility plan is to improve the accessibility of localities and the coherent integration of all modes of mobility and transport.

The Urban Sustainable Mobility Plan should include grouped actions in the following mobility themes:

Topic 1: Major network-based interventions - must include solutions to adapt the existing network to ensure improved traffic as a result of distribution of traffic flows, increase territorial accessibility and reduce external costs;

Topic 2: Public transport - the plan should provide a strategy for the development of the local public transport service, covering infrastructure components, means of transport and operating techniques (traffic management);

Topic 3: Freight transport - Measures should be taken to transpose to the peripheral areas the routes to which freight vehicles are permitted to access and to improve the efficiency of urban logistics - delivery of goods to the urban environment by reducing adjacent external factors such as noise, emissions CO₂, emissions of pollutants;

Topic 4: Alternative mobility means (systems) - the plan should include a package of measures to increase the attractiveness, safety and security of walking and cycling as alternatives to the use of personal vehicles;

Topic 5: Traffic management - a key element for urban mobility planning, traffic management supports decision-makers in achieving their goals and managing traffic operations, while helping end-users and citizens by presenting sustainable mobility options;

Topic 6: Areas of high complexity - in addition to the solutions already implemented in areas with high levels of complexity, public space arrangements and traffic regulations should be proposed to ensure accessibility and safety for pedestrians (including persons with special needs) and for bicycle trips;

Topic 7: Intermodal structure and urban planning required - the measures proposed in this theme should contribute to better integration of available modes of transport;

Topic 8: Institutional aspects - interventions should be proposed to monitor the implementation of the action plan and the implementation of European and national transport legislation.

There was made a detailed analysis of the project portfolio of the Sustainable Urban Mobility Plans existing at the level of The SW Oltenia Region, both mentioned above, and those of other municipalities and towns in the region.

The analysis identified the potential (eligible) projects within Investment Priorities 3.2 and 4.1, which support the implementation of the policy on the transition to a low-carbon economy.

The themes of the projects analyzed were given with the examples of good practice identified by the REGIO-MOB partners and presented in the *Guidelines for Best Practices in Sustainable Mobility*.

Thus, it is proposed that the Action Plan for The South-West Oltenia Region should include the following 5 actions, correlated with the examples of good practice transferred between the partners (Table 4.1) and the themes of the sustainable urban mobility plans described above:

1. Development / revision of S.U.M.P. at the Administrative Territorial Unit (ATU) level in The South West Oltenia Region
2. Establishment of a regional structure aimed at correlating transport projects at regional level
3. Investments for the use of low-emission transport options - Acquisition of means of transport
4. Investments in modern infrastructure for public transport
5. Elements of traffic management systems

Table 4.1. Correlation of proposed actions with selected good practice examples.

Projects selected as good practice examples	Thematic coverage	Indicators	Lessons learned	Action proposed by the partner Regional Development Agency SW Oltenia
1. Regional coordination of the sustainable mobility strategies: Model of Consortium as the Metropolitan Transport Authority (Spain)	<ul style="list-style-type: none"> - Measures to coordinate transport services - Mobility patterns between cities - Economic and financial issues - Dashboard and monitoring procedures 	<ul style="list-style-type: none"> - % Municipalities involved in the implementation of the sustainable mobility plan; - % Efficient connections in transport in the region; - % Passengers using public transportation. 	<ul style="list-style-type: none"> - It is necessary to develop a significant level of detail at regard the administrative organization to achieve the maximum coordination. - The participation of the citizens' participation and social agents is key for the success. 	2. Establishment of a regional structure aimed at correlating transport projects at regional level
2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain)	<ul style="list-style-type: none"> - Measures to coordinate transport services - Cycling routes and footpaths - Modal share 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. - % Passengers using public transportation. - % Increase of quality of life of the citizens. - % Journeys undertaken by public and private travel or low energy vehicles. 	<ul style="list-style-type: none"> - Link the transport card to the combined use of the bus and bicycle is a good measure to boost the use of the public transport. - The combination between the public transport and bicycle is efficient and attractive when the cities have a good cycle paths connecting the different centers of generation and attraction of journeys. - Public transport and bicycle do not compete but complement each other in a common objective of reducing the private vehicles to improve the quality of the environment in our cities and regions. 	3. Investments for the use of low-emission transport options - Acquisition of means of transport 4. Investments in modern infrastructure for public transport
3. Fast Agglomeration Railway - Park & Ride system combined with regional railway transport services (Poland)	<ul style="list-style-type: none"> - Location and characteristics of platforms for public transport - Mobility patterns between cities - Modal share 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. - % Efficient connections in transport in the region. - % Passengers using 	<ul style="list-style-type: none"> - The P&R combined with fast, regular agglomeration railway will reduce the share of individual transport to public transport which will contribute to reducing emissions. In the case of an efficient public transport system, residents are able to change their habits. - Very important during the constructing works of P&R system is to take into account all the needs of travellers (parking place for: bicycles, motorbikes, cars, buses, pedestrians' zone). 	4. Investments in modern infrastructure for public transport

Projects selected as good practice examples	Thematic coverage	Indicators	Lessons learned	Action proposed by the partner Regional Development Agency SW Oltenia
		<ul style="list-style-type: none"> public transportation. - % Increase of quality of life of the citizens. 	<ul style="list-style-type: none"> - There is a clear need to develop this system associated with the feeder lines. 	
4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland)	<ul style="list-style-type: none"> - Modal share 	<ul style="list-style-type: none"> - % Efficient connections in transport in the region. - % Passengers using public transportation. 	<ul style="list-style-type: none"> - The service can be used in districts with low-density residential and industrial areas where a conventional public transport service is inappropriate. This successful project has been watched by other Polish cities, and some of them are giving consideration to the Tele-Bus flexible lines as an alternative to the conventional service in new areas not yet covered by public transport. This means that there is a real chance for the further development of demand responsive transport services in Poland. 	<ul style="list-style-type: none"> 3. Investments for the use of low-emission transport options - Acquisition of means of transport 4. Investments in modern infrastructure for public transport 5. Elements of traffic management systems
5. Car-sharing / Carpooling - introduced through the CHUMS project (Romania)	<ul style="list-style-type: none"> - Mobility patterns between cities - Modal share - Economic and financial issues 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Increase of quality of life of the citizens. 	<ul style="list-style-type: none"> - CHUMS initiative will raise wider general awareness of carpooling and contribute towards changing the mind-sets of the local car commuters. This will be of great value for when the carpool scheme is extended to cover the whole of the west industrial area, which contributes 7000 cars a day on the city streets in rush hour. 	<ul style="list-style-type: none"> 5. Elements of traffic management systems 1. Development / revision of S.U.M.P. at the ATU level in the SW Oltenia Region
6. E-BIKE NET - Electric bicycle rental system in 16 cities in the Danube area, including the Oltenia Region of Drobeta-Turnu Severin, Craiova, Caracal, Slatina and Calafat (Romania)	<ul style="list-style-type: none"> - Cycling routes and footpaths - Mobility patterns between cities 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Increase of quality of life of the citizens. - % Journeys undertaken by public and private travel or low energy vehicles. 	<ul style="list-style-type: none"> - 1 common mechanism created (the e-bike network). - The cross border population (95.000 persons), served by the modernized infrastructure. 	<ul style="list-style-type: none"> 1. Development / revision of S.U.M.P. at the ATU level in the SW Oltenia Region 2. Establishment of a regional structure aimed at correlating transport projects at regional level
7. Implementation of Park and Ride (P+R) network in Ljubljana urban region (LUR) (Slovenia)	<ul style="list-style-type: none"> - Location and characteristics of platforms for public transport - Mobility patterns between cities - Modal share 	<ul style="list-style-type: none"> - % Efficient connections in transport in the region. - % Passengers using public transportation. - % Journeys undertaken by public and private travel or low energy vehicles. 	<ul style="list-style-type: none"> - Importance of public participation in decision making process and participation of main stakeholders in the earlier stages of Park&Ride study and implementation; - Importance of constant communication among main stakeholders; - Alternatives on "limitation measures" should always be offered; - Importance to establish strong cooperation among supporting projects (cooperation with Urban bus transport companies and their projects, bus operators integration, development of infrastructure); - It has been learned that strong consensus must be reached among all the stakeholders, 	<ul style="list-style-type: none"> 4. Investments in modern infrastructure for public transport 5. Elements of traffic management systems

Projects selected as good practice examples	Thematic coverage	Indicators	Lessons learned	Action proposed by the partner Regional Development Agency SW Oltenia
			<p>local communities and state government responsible for transport and infrastructure sector;</p> <ul style="list-style-type: none"> - When implementing Park&Ride one has to be aware about the greater positive impacts on society and daily transport changes take its time. It is a slow process, reaching even beyond project scope; - Study vs. Reality: It has to be taken into consideration that not everything that is planned is realized in to the same extend (local characteristics); - When planning Park&Ride close cooperation with transport operators (rail, urban bus, regional bus) must be established; - Payment and transaction systems need to be well defined before implementation. 	
<p>8. Supporting the preparation of Sustainable Urban Mobility Plans (SUMP) and its implementation in municipalities with EU Funds through the Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020 (Slovenia)</p>	<ul style="list-style-type: none"> - Measures to coordinate transport services - Location and characteristics of platforms for public transport - Cycling routes and footpaths - Mobility patterns between cities - Modal share - Economic and financial issues 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. - % Efficient connections in transport in the region. - % Passengers using public transportation. - % Increase of quality of life of the citizens. - % Journeys undertaken by public and private travel or low energy vehicles. 	<ul style="list-style-type: none"> - Only the guidelines and presentation of good practice is not sufficient to stimulate a wide range of local authorities to be efficient in a field of sustainable mobility. - Expert work should be supported with co-financing. That kind of approach brought results and common satisfaction on local and national level. 	<p>1. Development / revision of S.U.M.P. at the ATU level in the SW Oltenia Region</p>
<p>9. Park & Ride facilities in Scotland, Edinburgh metropolitan area (UK)</p>	<ul style="list-style-type: none"> - Measures to coordinate transport services - Location and characteristics of platforms for public transport - Mobility patterns between cities - Modal share - Economic and financial issues 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. - % Efficient connections in transport in the region. - % Passengers using public transportation. - % Increase of quality of life of the citizens. - % Journeys undertaken by public 	<ul style="list-style-type: none"> - Location of sites critical and associated road infrastructure needs to be adequate to avoid unnecessary delay to private and public transport. - Facilities at the sites should be of a high standard and maintained. - Partnership with operators is essential. 	<p>4. Investments in modern infrastructure for public transport 5. Elements of traffic management systems</p>

Projects selected as good practice examples	Thematic coverage	Indicators	Lessons learned	Action proposed by the partner Regional Development Agency SW Oltenia
		and private travel or low energy vehicles.		
10. Specific Route Queue Management (ICT) (UK)	<ul style="list-style-type: none"> - Measures to coordinate transport services - Mobility patterns between cities - Modal share - Economic and financial issues - Dashboard and monitoring procedures 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. - % Efficient connections in transport in the region. - % Passengers using public transportation. - % Increase of quality of life of the citizens. - % Journeys undertaken by public and private travel or low energy vehicles. 	<ul style="list-style-type: none"> - Bus priority need not be at the expense of other vehicles and can be achieved with minimal investment in additional infrastructure by using existing slip roads, etc. 	5. Elements of traffic management systems
11. Evaluation of road traffic accident data in Western Macedonia (Greece)	<ul style="list-style-type: none"> - Measures to coordinate transport services - Dashboard and monitoring procedures 	<ul style="list-style-type: none"> - % Efficient connections in transport in the region. - % Increase of quality of life of the citizens. 	<ul style="list-style-type: none"> - Environmental and health benefits (less injuries and fatalities because of less crashes, collisions and casualties, less damages in road network). - Mitigate the impact on socio-economic aspects of road accidents (fatalities cost of injuries etc.) - Best practice could be upgraded, taking into consideration: User of the road (driving culture and behaviour) and Vehicle Safety Standards. 	5. Elements of traffic management systems
12. Green eMotion - Kozani, Western Macedonia (Greece)	<ul style="list-style-type: none"> - Measures to coordinate transport services - Location and characteristics of platforms for public transport - Economic and financial issues 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. 	<ul style="list-style-type: none"> - There is a small number of EV owners in Greece. - Economic crisis and lack of incentives are not supporting a mass EV market, even if the first signs are quite promising. - Neighbourhoods in the same city with quite different social and economic profile meaning geographical differentiation in EVs' diffusion (applies to large cities like Athens, and not to Kozani, which is a medium sized city). - Most of the Greek cities have traffic congestion issues, providing sometimes unexpected travel delays. - Local authorities unable, due to financial or technical reasons, to invest in charging post networks. - Private investors look for a minimum number of EV customers to support a sustainable investment. - A chicken-or-egg problem between EV diffusion and 	5. Elements of traffic management systems

Projects selected as good practice examples	Thematic coverage	Indicators	Lessons learned	Action proposed by the partner Regional Development Agency SW Oltenia
			<ul style="list-style-type: none"> - charging post availability. - In order to support e-mobility in Greece, a combination of the two models is proposed, thus providing the necessary confidence to potential EV owners leading to increase the EVs' number, permitting thus, private investments in a stable market with open competition. - A main charging station backbone-network will be implemented upon certain criteria according to the Distribution System Operator model (by the Distribution System Operator or with the Distribution System Operator participation) as part of the regulated grid asset. - Private market players should have the possibility (according to predefined rules and licenses) to install public charging stations in the area of their interest, which assure their investment's sustainability. - The backbone-network's owner - operator (Distribution System Operator or with Distribution System Operator participation) will provide an open platform permitting multi-vendors use of the charging stations' network in a not discriminatory way for all e-mobility service providers. - These could be either companies owning their own network according to the integrated market model or e mobility service providers holding a contractual relation with an electricity supplier and no ownership of charging stations. 	
<p>13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy)</p>	<ul style="list-style-type: none"> - Cycling routes and footpaths 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Passengers using public transportation. - % Increase of quality of life of the citizens. 	<ul style="list-style-type: none"> - Half of all trips shorter than five kilometres are undertaken by car. - Active commuting is associated with 20 percent reduced risk of mortality for all causes. - 30 minutes of daily cycling or walking is associated with reduced mortality in the range of 30 percent - developing an indicator set to help understand active mobility and the conditions which support or constrain it - a better understanding of framework conditions and their relations can help decision makers to choose the most appropriate packages of measures to increase active mobility 	<p>3. Investments for the use of low-emission transport options - Acquisition of means of transport</p>

Projects selected as good practice examples	Thematic coverage	Indicators	Lessons learned	Action proposed by the partner Regional Development Agency SW Oltenia
<p>14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)</p>	<ul style="list-style-type: none"> - Measures to coordinate transport services 	<ul style="list-style-type: none"> - % Reduction of CO₂ emissions associated to transport. - % Municipalities involved in the implementation of the sustainable mobility plan. - % Reduction of PM₁₀ in the provincial capitals. 	<ul style="list-style-type: none"> - Capability to reach larger number of people through the web portal - Flexibility of the carpooling service - Adaptability to different users: residents and tourists, workers and students - Thematic transport connected to events can easily help local authorities to find private sponsors - Integration with local transport policies (Urban Mobility Plan) and with other local policies - Use of Automatic Vehicle Monitoring (AVM) system - Complete Flexibility of times (no time tables) and routes (no fixed ways), flexibility to users' needs and characteristics (old and young people, residents or tourists, etc.) - Flexibility as a new way to satisfy people's needs of mobility - Educating people to change its habits - Use of new technologies to mapping origin/destination of people and to monitor and evaluate project results - Innovation of transport way and environmental sustainability due to natural gas fueled buses - Economic sustainability of the pilot experimentation: -30% of costs in comparison with traditional system - Cheaper transport system but not free: its cost makes more responsible and educates people to its correct use - Cooperation between different levels of public local bodies as a way to integrate different abilities and competences - Accurate definition and good choice of the place for experimentation as important success factor - Innovative content for the territory 	<ul style="list-style-type: none"> 3. Investments for the use of low-emission transport options - Acquisition of means of transport 4. Investments in modern infrastructure for public transport

4.2. Details of the proposed actions

PART I - General information

Project	REGIO-MOB
Partner Organization	Regional Development Agency South-West Oltenia
Other partner organizations involved	<ul style="list-style-type: none"> ▪ Institute of Traffic and Transport Ljubljana from Slovenia; ▪ Regional Association of Lazio Municipalities, Italy; ▪ Niepolomice Municipality from Poland; ▪ The Western Macedonia Region from Greece; ▪ South-East Scotland Transport Partnership.
Country	Romania
NUTS2 code of the region	RO41
Contact person	Magda LUNGU
E-mail Address	office@adroltenia.ro
Phone	0040251411869

PART II - The context of politics

The Action Plan targets the:	<input type="checkbox"/> Development and Jobs Investment Program <input type="checkbox"/> Regional Territorial Cooperation Program <input checked="" type="checkbox"/> Another regional development policy tool
Name of the policy instrument addressed:	<i>Policy Instrument 5 - Regional Operational Program (ROP) ERDF, Thematic Objective 4 - Supporting the transition to a low-carbon economy in all sectors</i>

PART III - Details of the proposed actions

ACTION 1: DEVELOPMENT / REVIEW OF S.U.M.P.s AT THE TERRITORIAL ADMINISTRATIVE UNIT LEVEL FROM THE SW OLTENIA REGION

Substantiation

The monitoring of the elaboration / revision of the Urban Sustainable Mobility Plans elaborated at the level of the administrative-territorial units in The SW Oltenia Region will be based on the lessons learned from the following example of good practice studied within the REGIO-MOB project:

- *Supporting the preparation of Sustainable Urban Mobility Plans and their implementation in municipalities benefiting from European funds through the Operational Program for the Implementation of the EU Cohesion Policy in 2014-2020 (Slovenia)*

Lessons learned to support the development of Sustainable Urban Mobility Plans to identify actions to guide sustainable mobility in urban areas is that:

- *Providing guidelines and good practices are not enough to stimulate a wide range of local authorities to be effective in the field of sustainable mobility;*
- *The costs of elaborating S.U.M.P. should be supported by co-financing. This type of approach has brought joint results and satisfaction at local and national level.*

In the current situation in The SW Oltenia Region were developed Sustainable Urban Mobility Plans for Growth Pole Craiova and the other four county capitals (Ramnicu Valcea, Drobeta Turnu Severin, Targu Jiu, Slatina). Their content has been subjected to the conformity and admissibility check process at the level of RDA SW Oltenia, the Urban Development Support Compartment.

In the framework of the policy analyzed (*Regional Operational Program 2014-2020, Objective Theme 4 - Supporting the shift towards a low-carbon all sectors*), implemented by the investment priorities 3.2 and 4.1, in addition to basic investment in shares lead to sustainable urban mobility, horizontal activities are also funded, including the development of Sustainable Urban Mobility Plans, including their projects / activities proposed for funding through the 4E, OS 3.2. and O.S. 4.1. S.U.M.P. for the Craiova Pole of Growth was financed through the Regional Operational Program 2007 - 2013, Axis 6 "Technical Assistance".

Regarding the remaining towns and municipalities (which have been imposed checking S.U.M.P. the Department Support Urban Development in the Regional Development Agency South-West Oltenia (RDA SW Oltenia) before filing of applications) from ads public consultation published on the websites of the Environmental Protection Agency to

	<p>identified that some of these urban areas have developed or started developing S.U.M.P. (Bailești and Motru Municipalities, Dăbuleni, Segarcea, Bumbăești-Jiu, Novaci, Brezoi, Rovinari, Calafat).</p>
The action	<p>From the description of the current situation regarding the realization of S.U.M.P. carried out at the substantive stage of the action, it results that below 50% of the total of the 40 cities and municipalities in The SW Oltenia Region have developed these strategic planning documents in the field of mobility. In addition to the necessity to include the Urban Sustainable Mobility Plan as a complementary document in the Urban Plan of each locality and its submission as a mandatory annex to the application for funding submitted in the context of calls for projects related to the Investment Priorities 4e, 3.2. and O.S. 4.1., S.U.M.P. from which to show the necessity of making investments for which funding is requested under Priority Axis 13, Investment Priority 9B, Specific Objective 13.1 - Improving the quality of life of the population in the small and medium cities in Romania, will lead to an additional score in the stage technical and financial evaluation.</p> <p>As a consequence, in the following period it is considered necessary to support the local authorities in the realization of S.U.M.P. In this respect, RDA SW Oltenia will carry out actions to monitor the state of development / revision of mobility planning documents so as to achieve a high degree of coordinated planning of mobility actions at the level of urban areas in the region and implicitly the reduction of carbon dioxide emissions, a general objective of the policy tool represented within the REGIO-MOB project by the partner RDA SW Oltenia.</p> <p>Actions will be materialized through:</p> <ul style="list-style-type: none"> → <i>Monitoring the elaboration of S.U.M.P. by the administrative-territorial units in the region;</i> → <i>Information on the necessity of S.U.M.P. elaboration;</i> → <i>Information on the opportunities to obtain funding for the elaboration / revision of the S.U.M.P.</i>
The actors involved	<ul style="list-style-type: none"> → <i>RDA South West Oltenia - having the role of coordinator</i> → <i>Local Public Authorities in Urban Areas - having the role of beneficiaries of funding for the implementation / revision of S.U.M.P.</i>
Costs	<p>EUR 300,000 (estimated SUMP development / revision costs for municipalities and cities estimated to be applying for ROP 2014-2020, Priority Intervention 3.2 and 4.1).</p>
Financing sources	<p><i>ROP 2014-2020</i></p>

ACTION 2: ESTABLISHING A STRUCTURE AT REGIONAL LEVEL INTENDED TO CORRELATE THE PROJECTS IN THE FIELD OF TRANSPORTATION

Substantiation

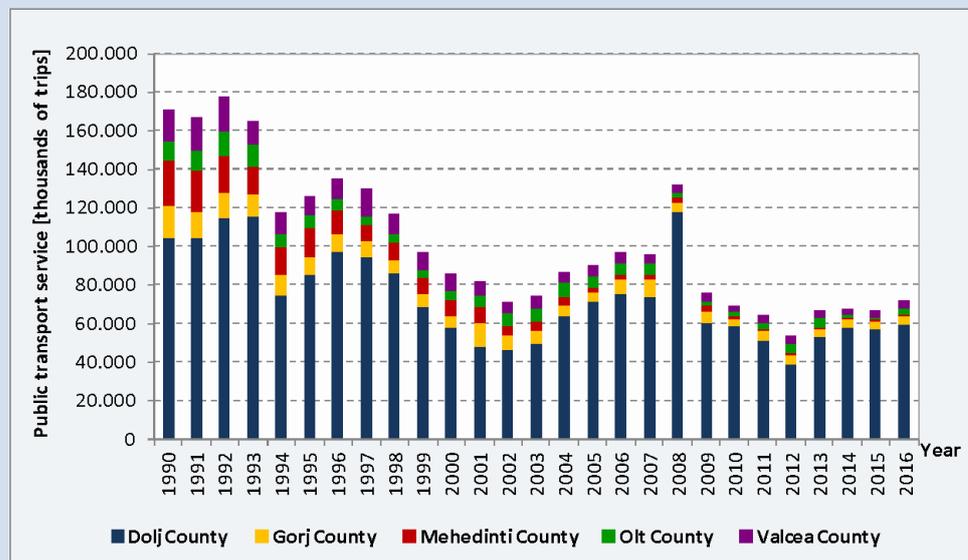
The establishment of a regional structure for the purpose of linking transport projects will be based on the lessons learned from the following example of good practice studied within the REGIO-MOB project:

- *Regional Coordination of Sustainable Mobility Strategies: Association as Model of Metropolitan Transport Authority (Spain)*

Lessons learned on association to develop a unitary transport system that is attractive to citizens and is financially efficient refers to the fact that:

- *In order to achieve optimal coordination at the level of association, a detailed administrative organization is required;*
- *Participation of the main local and regional actors in the process of project planning and implementation is the key to success.*

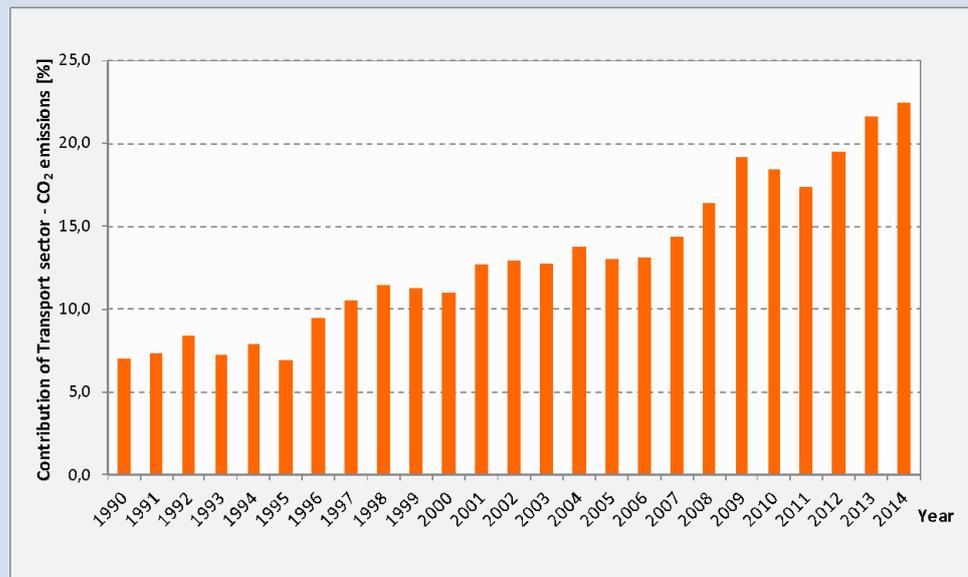
In the last 25 years the attractiveness of local public transport in Romania has experienced a considerable decline, especially in medium and small towns. The statistical data available at county level indicate that the number of journeys made by urban public transport in the urban areas of the SW Oltenia Region was reduced by 58% between 1990 and 2016. The county that faced the largest loss of the number of users of this mode transport is Mehedinți. In 1990, 23,296,000 public transport journeys were made in the cities and municipalities of Mehedinți County. The value of the same indicator in the year 2016 was 289,000 trips, which represents 1.2% of the value for 1990. There were substantial reductions in demand for transport attracted by the local public transport systems in Valcea (-74%) and Gorj (-72%). The annual variations of journeys made by the public transport in each county are shown in the figure below.



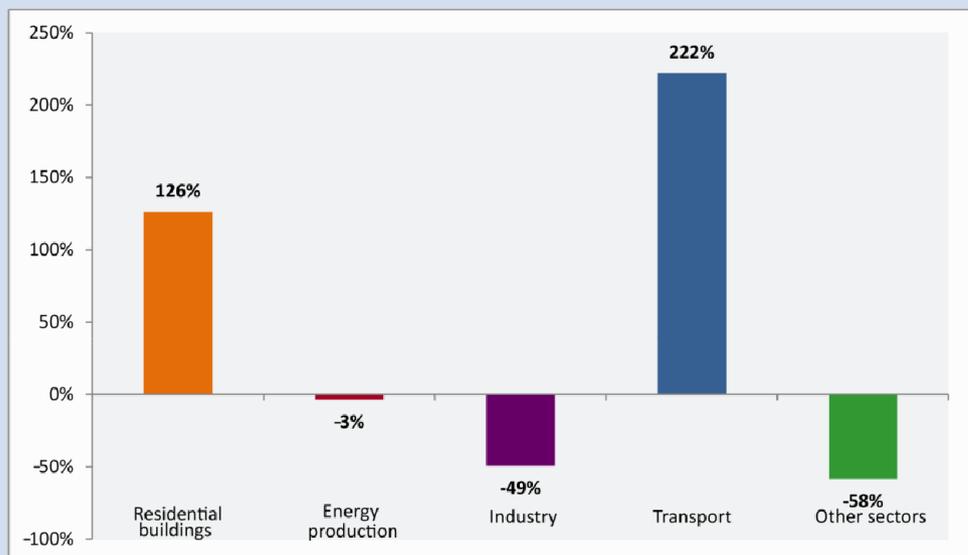
Data source: INS, 2018

Among the causes that led to the registration of the statistical data presented above are: the reduction of the number of inhabitants, the reduction of the number of employees on the large industrial platforms, the changes of the land use functions, the increase of the motor index, the increased availability of the use of the personal vehicle, reduction of public transport supply, reduction of intermodality between periurban and local public transport, etc. In addition to this, poor coordination is added in the development of mobility actions at local, periurban, metropolitan, regional level.

The effects of modal relocation, from public transport to personal transport, have led to a significant increase in the contribution of the transport sector to total national CO₂ emissions between 1990 and 2014, according to data released by the World Bank.



Data source: <https://data.worldbank.org/indicator/>, 2018



Data source: <https://data.worldbank.org/indicator/>, 2018

Analyzing the variation in the contribution of the main sectors responsible for CO₂ emissions reveals a strong positive trend in the negative impact of transport performance at national level, from 7% in 1990 to 22.4% in 2014 (World Bank data).

Taking into account those that were presented, the action needs to be implemented to support the transition to a low-CO₂ economy with a focus on the transport sector.

Action

An analysis of the current situation, based on available statistical data on public transport activity and the impact of the transport sector on CO₂ emissions, concludes that there is a close correlation between reducing the use of public transport and increasing the contribution of transport in general to total CO₂ emissions registered at a national level.

As a consequence, action is needed in the period ahead to reestablish the mode of public transport in user preferences, including intermodal / multimodal transport solutions. In order to achieve these results, coordinated development of integrated transport systems at local, county, regional level is necessary.

In this respect, RDA SW Oltenia aims to implement the lessons learned within the REGIO-MOB project in the field of coordinated development of transport facilities through the organization of a regional structure involving the local and county public authorities responsible for the development of the transport infrastructure and the operation of public utility services in the field of mobility. By carrying out this action, it will facilitate the exposition of the action plan of each administrative-territorial unit in the fields of interest - transport and mobility, creating an environment conducive to integrated planning between neighboring administrative-territorial units, respectively between administrative-territorial units of different level (counties / municipalities / towns / communes).

This will create the premises for an attractive, integrated transport system that prioritises shifts in environment-friendly modes of transport, reducing the negative effects of CO₂ emissions.

Actions will be materialized through:

- The establishment of a regional structure to which local and regional actors will be invited to join;
- The coordination of the working groups that will take place at the level of the created structure;
- The periodic consultation of the members of the structure created on the transport and mobility action plans and dissemination of information at the level of the working groups.

The actors involved

- *RDA South West Oltenia* - having the role of coordinator
- *Local and county public authorities* - having the role of potential beneficiaries of projects implemented in a correlated way
- *Public transport operators* - having the role of potential beneficiaries of projects implemented in a correlated way.

ACTION 3: INVESTMENTS FOR THE USE OF LOW CARBON EMISSION MEANS OF TRANSPORTATION - ACQUISITION OF MEANS OF TRANSPORTATION

Substantiation

Supporting the procurement of environmentally friendly public transport means the implementation of innovative mobility solutions identified among the lessons learned from examples of good practice studied in the framework of the Regio-Mob project, such as:

- *Implementation of a combined bus + bicycle service for sustainable urban and metropolitan transport (Spain);*
- *Tele-Bus - Public transport service in residential and industrial areas with low residential density (Poland);*
- *PASTA - Physical activity through a sustainable transport approach (Italy);*
- *Limit4WeDA - Sustainable Mobility Solutions in Low Demand Zone (Italy).*

Thus, lessons learned on association to develop a unitary transport system that is attractive to citizens and is financially efficient, tariff integration between bicycle and public transport services, the flexibility of the circulation of the means public transport and the routes they run to serve as many users as possible will be promoted among local administrations in order to implement, in a timely manner, the acquisition of environmentally friendly public transport, an eligible investment in the Investment Priorities 3.2 and 4.1. The lessons learned include:

- *The existence of an integrated card-based tariff system, which takes into account the use of bicycles and public transport means, represents an opportunity;*
- *Integrated use of the public transport system and the bicycle is efficient and attractive when there is a bicycle infrastructure linking travel generation / attractiveness centers;*
- *Public transport and bicycle are not concurrent but complementary modes of transport, the use of which leads to a reduction in the number of private vehicles in traffic, improving the quality of the environment in our cities and regions;*
- *The flexible public transport service is a real opportunity for the development of the public transport system in densely populated areas or reduced economic activities.*

The qualitative characteristics of the public transport means from the composition of the available parks in the urban areas in the Oltenia Region do not contribute to ensuring an attractive offer of the public transport system. A brief presentation of the public transport means being carried out in the five county municipalities in the region.

Craiova Municipality

The public transport service in Craiova is under the authority of the Craiova City Hall and is provided by two operators: Craiova Autonomous Transport Department and Fratii Bacriz S.R.L. The vehicle fleet consists of more than 30 years of transport. Only 17 buses out of a total of 123 are less than 8 years old (normal running time).



Râmnicu Vâlcea Municipality

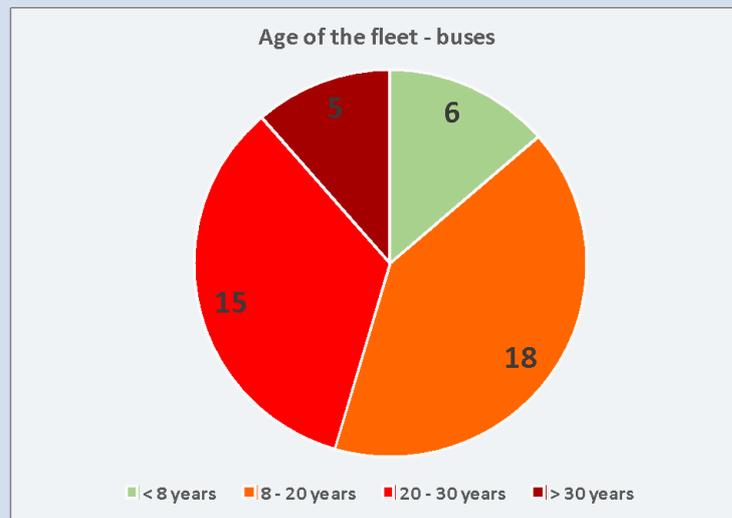
Local public transport in Râmnicu Vâlcea is the responsibility of S.C. ETA S.A., a company subordinated to the Râmnicu Vâlcea City Hall. The public park includes 38 buses and 11 minibuses. All means of transport have a length of service that exceeds normal service life.



The age of the means of transport implies their inclusion in lower depollution rules, including non-Euros.

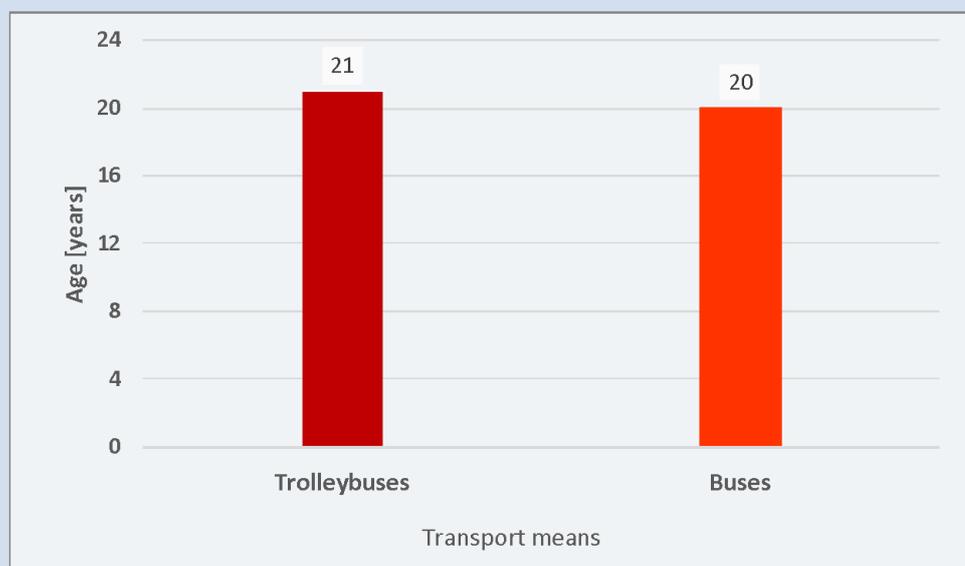
Drobeta Turnu Severin Municipality

City of Drobeta Turnu Severin Local public transport of persons by regular services is leased to S.C. Transport Public Urban Drobeta S.A. Of the total transport fleet of 44 buses and minibuses, only 6 are less than 8 years old.



Târgu Jiu Municipality

In Târgu Jiu Municipality, local public transport is provided by S.C. Transloc S.A. The current fleet consists of 17 trolleybuses and 21 buses with a minimum age of 20 years. The pollution degree of the means of transport is very high, 15 of the buses are covered by the non-Euro depollution rule.



Slatina Municipality

At the moment, the public transport by buses in Slatina Municipality is provided by S.C. Loctrans S.A. The public transport fleet consists of 15 buses with a homogeneous uniformity of 10 years and the pollution standard Euro 3.

Taking into account the presented characteristics regarding the structure of the vehicle fleets with which the operation of the local public transport services in the analyzed urban areas is performed, the following conclusions can be drawn:

- *The means of transport are very old, which raises traffic safety problems and generates discomfort for the passengers;*
- *Because of the long use, they have a very low average speed, which leads, on the one hand, to increased repair and maintenance costs and, on the other hand, to delays in the traffic program;*
- *The age of the means of transport generates a significant negative impact on the environment.*

Action

As shown in the analysis of the current situation, based on the information presented in the sustainable urban mobility plans elaborated at the level of the urban areas in the SW Oltenia Region, the main dysfunction of the urban public transport system is given by the age of the fleet of vehicles.

From the action plans of S.U.M.P. realized for the county capital of the municipalities resulted that some of these administrative-territorial units are proposing the acquisition of transport means, as follows:

Craiova Municipality

→ **Tramways**

Phase	Units	Implementation period	Costs [EURO]
I	9	2016 - 2018	16,200,000
II	2	2019 - 2023	3,600,000
III	3	2019 - 2023	5,400,000
IV	3	2024 - 2030	2,003,000

→ **Buses**

Phase	Units	Implementation period	Costs [EURO]
I	30	2016 - 2018	13,500,000
II	5		2,250,000
III	3		1,200,000
IV	8	2019 - 2023	800,000
V	10	2024 - 2030	1,000,000
VI	14		1,300,000
VII	18 BRT		1,153,000

Târgu Jiu Municipality

Phase	Type	Units	Implementation period	Costs [EURO]
I	Trolleybus	20	2015 - 2020	6,021,505
	Bus	30		10,322,581
II	Minibus	10	2026 - 2035	1,182,796

Slatina Municipality

Units	Implementation period	Costs [EURO]
10	2017 – 2019	4,180,000

The other municipalities and cities in the region do not have local public transport systems in common through regular services (some of them only have taxi services). This is a major dysfunction of local mobility, as also identified in the analysis of mobility plans. Consequently, they contain proposals for the establishment of local public transport services that will be operated with ecological means, and the financing will be through the ROP 2014-2020. These S.U.M.P. proposals are in full consistency with the actions identified for the Action Plan. Thus, within this action, it is estimated that public transport means will be purchased in accordance with the existing S.U.M.P.s provisions as follows: Băilești - 4 pcs.; Motru - 5 pcs.; Dăbuleni - 3 pcs.; Segarcea - 3 pcs.; Bumbăești-Jiu - 2 pcs.; Novaci - 4 pcs.; Brezoi - 3 pcs.; Rovinari - 2 pcs.; Calafat - 2 pcs.

Therefore, in the coming period, it is considered necessary to support the improvement of the public transport fleet with environmentally friendly means of transport. In this respect, RDA SW Oltenia will carry out actions to monitor the investments to be made in order to renew the public transport fleet, so as to improve the current policy, which provides support for the realization of basic investments in means of transport.

The actors involved

- *Local Public Authorities* - having the role of beneficiaries of projects concerning the establishment of public transport systems and the acquisition of environmentally friendly means of transport;
- *Public transport operators* - having the role of beneficiaries of modern and ecological technical equipment with which they will be able to offer to the citizens quality services.

Costs

EUR 94,004,086 (total costs were estimated on the basis of proposals for the procurement of available means of transport from the S.U.M.P.s available, 2018-2023 (for Craiova - 60 units worth EUR 42,950,000, Râmnicu-Vâlcea - 19,450,000 Slatina - 10 units worth EUR 4,180,000, Târgu-Jiu - 50 units worth EUR 16,344,086) or have been estimated on the basis of the unitary cost of such a means of transport, considering a necessary of 28 pieces for Bailești, Motru, Dăbuleni, Segarcea, Bumbăești-Jiu, Novaci, Brezoi, Rovinari, Calafat.

Financing sources ROP 2014-2020

ACTION 4: INVESTMENTS IN MODERN INFRASTRUCTURE FOR PUBLIC TRANSPORT

Substantiation

Supporting the improvement of public transport infrastructure is the basis for the implementation of innovative mobility solutions identified among the lessons learned from examples of good practice studied within the REGIO-MOB project, such as:

- *Implementation of a combined bus + bicycle service for sustainable urban and metropolitan transport (Spain);*
- *Tele-Bus - Public transport service in residential and industrial areas with low residential density (Poland);*
- *Implementation of the Park & Ride Network in Ljubljana (Slovenia);*
- *Park & Ride facilities in Scotland, Edinburgh metropolitan area (UK);*
- *Limit4WeDA - Sustainable Mobility Solutions in Low Demand Zone (Italy).*

Further on, the lessons learned on association to develop a unitary transport system that is attractive to citizens and is financially efficient, developing facilities for modal transfer in the case of penetrating journeys between private transportation with the atmosphere and public or bicycle transport, the flexibility of the public transport program and the routes it runs to serve as many users as possible will be promoted among local administrations for implementation in a synchronized way development of infrastructure elements within the urban public transport system, eligible investments under Investment Priorities 3.2 and 4.1.

The lessons of good practice are:

- *The existence of an integrated card-based tariff system, which takes into account the use of bicycles and public transport means;*
- *The inherent use of the public transport system and of the bicycle is efficient and attractive when there is a bicycle infrastructure linking travel generation / attractiveness centers;*
- *Public transport and bicycle are not concurrent but complementary transport modes, the use of which leads to the reduction of private vehicles in traffic, improving the quality of the environment in our cities and regions;*
- *The importance of establishing close cooperation with complementary projects (cooperation with public transport operators in order to serve the objectives, adaptation of the circulation program and tariff integration, cooperation with neighboring administrative / territorial authorities in order to link the infrastructure development projects);*
- *Need to develop a pricing plan and a charging system before implementation;*
- *The flexible public transport service is a real opportunity for the development of the public transport system in low density populated areas or reduced economic activities.*

In general, the infrastructure associated with public transport systems in the analyzed urban areas is obsolete, the only investments made in the last 25 years are the modernization of the tramway run in Craiova and the station planning. But they are not equipped with equipment to provide real-time information to travelers, security systems or facilities for people with disabilities. In view of the above, among the dysfunctions identified at the level of the public transport infrastructure in Râmnicu Vâlcea, there is a lack of a public transport depot in the northern part of the city, which reduces the "zero" of the vehicles at the entrance / exit on the route. In Tîrgu-Jiu, the trolleybuses contact network, more than 20 years old, has problems, especially for DC power. In this case, it is necessary to rehabilitate the entire electric transport system as well as to extend the trolleybus network, focusing on electric traction, given its favorable impact on the reduction of pollutant emissions.

In the rest of the urban areas of the region, in the current situation there are no local public transport systems in common through regular services and, consequently, no associated infrastructure.

Action

From the analysis of the current situation regarding the local public transport systems, based on the information presented within the sustainable urban mobility plans elaborated at the level of the urban areas of The SW Oltenia Region, the following dysfunctions occur:

- *Poor condition of the infrastructure, which results in low commercial speeds, high operating costs and traffic safety problems;*
- *The poor condition of technical equipment in public transport depots, which generates high maintenance and repair costs;*
- *Poor provision of public transport stations with passenger shelters, information systems, security systems, aspects that contribute to a reduced attractiveness of public transport.*

Therefore, in the coming period, it is considered necessary to support the development / modernization of the public transport infrastructure in order to:

- *The operation of public transport systems in the context of associations between local and / or county public authorities, serving territories around the major attractiveness poles (county capital municipalities) - intermodal bus / terminals;*
- *The development of facilities to allow modal shift for external trips (Park & Ride intermodal platforms);*
- *Transport development that integrates environment-friendly modes (public transport, bicycle, pedestrian);*
- *Serving low-demand areas, which are specific to small towns and which currently do not have a local public transport system.*

From the action plans of S.U.M.P. realized for the county capital of the municipalities resulted that these administrative-territorial units are proposing the acquisition of the following infrastructure elements:

Craiova Municipality

- Extension of public transport infrastructure in the Craiova Noua District;
- Extension of public transport infrastructure in the Carpathian Quarter;
- Strips dedicated to public transport;
- Establishment of a new passenger terminal in the southern area of Craiova municipality;
- Establishment of a new South Terminal passenger terminal with adequate facilities (including Park & Ride / Bike & Ride) for the transfer of passengers between urban and county modes of transport in terms of accessibility and safety;
- Modernization of the tramway (in its own way) from Calea Severinului;
- Extension of public transport infrastructure in Henry Ford Street;
- Modernization of the depot and modernization of the repair stations for electric tram supply;
- Modernization of public transport stations (I);
- Modernization of public transport stations (II);
- Upgrading (with the possibility of moving) the stations in the public transport network (equipped with information panels, improvement of the accessibility and safety conditions);
- Arranging intermodal points in relation to the tram network (I);
- Set up main intermodal points by modernizing public transport stations in the Electroputere Passage area integrated with Park & Ride projects in Electroputere Passage Area;
- Arranging intermodal points in relation to the tram network (II);
- Establishment of main intermodal points by modernization of public transport stations in Calea Severinului / Pelendavasi Street, Banie / Caracal / Center integrated with Park & Ride projects in Calea Severinului / Pelendava and Park & Ride on Banie / Caracal;
- Modernization of public transport stations along public transport lines complementary to the core network (equipped with information panels, improvement of accessibility and safety conditions).

Râmnicu Vâlcea Municipality

- Introducing a real-time information system on bus services in the main stations and equipping all buses with GPS / monitoring and information systems;
- Introduction of a specialized railway line for penetration-diffusion flows;
- Construction of an intermodal terminal in the central station area;
- Modernization of boarding and disboarding stations (and

uniformization - personalization of these contact points between the operator and the public);

- Construction of two public transport depots in the northern area of the city.

Târgu Jiu Municipality

- Rehabilitation and extension of trolleybus routes;
- Establish an automatic tolling system.

Drobeta Turnu Severin Municipality

- Modernization of 23 public transport stations;
- Intermodal public transport terminal of Drobeta Turnu Severin Municipality.

Slatina Municipality

- Modernization of 62 public transport stations to provide comfortable waiting conditions for public transport;
- Introduction of a multimodal passenger information system;
- Arranging a public transport depot with three charging stations for electric vehicles;
- Implementation of an integrated payment system for community services (including public transport).

Concerning the other cities and municipalities in the region, the major dysfunction related to the lack of the public transport system will be eliminated through its development, as evidenced by the mobility plans made. Public transport stations, intermodal terminals, depots for means of transport, etc.) are proposed.

Therefore, in the coming period, it is considered necessary to support investment in modern infrastructure for public transport systems.

The actors involved

- *Local Public Authorities* - as beneficiaries of projects concerning the establishment of public transport systems and the acquisition of environmentally friendly means of transport
- *Public transport operators* - having the role of beneficiaries of modern and ecological technical equipment with which they will be able to offer to the citizens quality services.

Costs

EUR 48,691,101 (total costs were estimated on the basis of the proposals for modern infrastructure for public transport available from the PMUD, 2018-2023 (for Craiova - 14,701,500 EUR, Râmnicu-Vâlcea - 5,966,000 EUR, Slatina - EUR 2,570,000, Târgu-Jiu - EUR 14,453,601, Drobeta-Turnu Severin - EUR 2,000,000), or were estimated to be the average unit cost of a package of such infrastructure (stations, public transport depots, terminals) to the value of EUR 1,000,000 for the towns of Băilești, Motru, Dăbuleni, Segarcea, Bumbăști-Jiu, Novaci, Brezoi, Rovinari and Calafat.

Financing sources

ROP 2014-2020

ACTION 5: ELEMENTS OF TRAFFIC MANAGEMENT SYSTEMS

Substantiation

Supporting the implementation of traffic management elements underlies the implementation of innovative and efficient mobility solutions identified among the lessons learned from examples of good practice studied within the REGIO-MOB project, such as:

- *Tele-Bus - Public transport service in residential and industrial areas with low residential density (Poland);*
- *The administration of the queue management system on the A90 road in Scotland (UK);*
- *Assessment of traffic accident data in Western Macedonia (Greece);*
- *Green eMotion - Kozani, Western Macedonia (Greece).*

Lessons learned on waiting queue management on main access roads in crowded urban areas, identifying vulnerabilities in terms of traffic safety, developing power station power network networks for electric vehicles will be promoted among local governments for implementation in view of the fact that these actions constitute eligible investments under the Investment Priorities 3.2 and 4.1. Among the lessons learned are:

- *Bus priority may not be at the expense of other vehicles and can be achieved with minimal investment in additional infrastructure by using existing slip roads;*
- *Attenuation of socio-economic impact of traffic accidents, as a result of the introduction of an efficient traffic management system;*
- *Cooperation between different levels of local government as a way to integrate different skills and competences.*

In the current situation, with the exception of Craiova Municipality, where a traffic management system is implemented, there are major deficiencies in traffic management at the level of transport networks in the analyzed urban areas.

In the short and medium term, all local public authorities intend to develop such systems, which will lead to optimizing the use of street infrastructure and prioritizing public transport.

Action

The analysis of the current situation regarding the traffic management systems, based on the information presented within the sustainable urban mobility plans elaborated at the level of the urban areas in the Region of Oltenia, reveals shortcomings in this area. From the action plans of S.U.M.P. realized for the county capital of the municipalities resulted that these administrative-territorial units propose the implementation of the following traffic management elements / systems, as follows:

Craiova Municipality

- *Modernization of the traffic management center in Craiova;*
- *Prioritization of local public transport and bicycle transport in*

Craiova;

- Extension of the traffic management system by integrating new traffic-light crossings with adaptive operation and communication system.

Râmnicu Vâlcea Municipality

- Establishment of an organizational structure and planning of transport activity for the metropolitan area - Association for Intercommunity Transport Development;
- Preparation of a circulation program for the metropolitan area (especially to Calimanesti and Olanesti resorts, but also to Ocnele Mari);
- Development of a center equipped with a general traffic management system in the city.

Slatina Municipality

- Parking and Access Management System in Restricted Areas;
- Intelligent lighting system for urban mobility.

Taking into account that traffic management is a key element in the planning of urban mobility, for the other municipalities and towns in the region considered (Bailești, Motru, Dăbuleni, Segarcea, Bumbăști-Jiu, Novaci, Brezoi, Rovinari and Calafat) the following types of actions were analyzed: elaboration of traffic studies for the projects for which funding will be requested within ROP 2014-2020, policy development of parking, implementation of traffic management systems, elaboration and implementation of regulations on the introduction of speed restrictions movement in vulnerable areas, elaboration and implementation of regulations regarding the program for realization of public utilities services, etc.

In order to reduce travel times at urban transport networks, it is recommended to improve traffic management systems.

The involved actors

- *Local Public Authorities* - as beneficiaries of projects aimed at implementing traffic management systems as sustainable mobility measures.
- *Public transport operators* - as beneficiaries of traffic management systems that will allow them to operate at lower and safest costs

Costs

24.214.300 EUR (the total costs were estimated on the basis of the investment proposals regarding traffic management systems from available S.U.M.P.s, for the period 2018-2023: Craiova - 12,914,300 EUR ; Râmnicu-Vâlcea – 5,800,000 EUR; Slatina – 5,500,000 EUR).

Financing sources

ROP 2014-2020

4.3. Analysis of the project portfolios of S.U.M.P.s existing at the level of the region in correlation with the proposed actions

Sustainable Urban Mobility Plans of the Municipalities and Towns of the South West Oltenia Development Region were analyzed until the date of elaboration of this report, most of them containing in the project portfolio proposals in line with three proposed actions (Action 3, Action 4 and Action 5). For these, the corresponding measures in the sustainable urban mobility plans of the 5 county municipalities that are part of the South-West Development Region of Oltenia are analyzed below.

Action 3. Investments for the use of low-emission transport options - acquisition of means of transport

CRAIOVA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
<p>The public transport service in Craiova is under the authority of the Craiova City Hall and is provided by two operators: Craiova Autonomous Transport Administration (subordinated to the Craiova City Hall, operating the tram line, 11 bus lines and 6 minibus lines) and Fratii Bacriz S.R.L. (private operator, serving 4 minibus lines). The composition of the vehicle fleet of the R.A.T. Craiova is: 29 trams (with more than 30 years of age); 33 minibuses (with an average age of 13 years); 123 buses (15 years old); 17 buses purchased by us at the end of 2014. The other operator's fleet includes 33 minibuses which are than 4 years old. The main dysfunction is represented by the age of the current fleet of public transport vehicles, in the most difficult situation being the tram fleet.</p>	<p>The renewal of the railway vehicle fleet. Purchase of 17 new trams in four stages, as follows: 9 pieces, 2 pieces, 3 pieces and 3 pieces respectively.</p>	<p>2016 – 2030, in four stages</p>	<p>27,203,000 Euro, in four stages</p>	<p>2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain)</p>
	<p>The renovation of the vehicle fleet intended for public transport (buses). When purchasing new vehicles it is recommended to consider criteria such as vehicle capacity, pollution rules, provision of facilities for people with reduced mobility, the opportunity to buy electric or hybrid buses. It is proposed to purchase 70 new buses and 18 BRT (Bus Rapid Transit) in 7 stages.</p>	<p>2016 – 2030, in seven stages</p>	<p>21,203,000 Euro, in seven stages</p>	<p>4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland)</p> <p>13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy)</p> <p>14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)</p>

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
Taking into account the age of the current fleet, it is necessary to renew it in the short and medium term and / or to modernize it. For the new vehicles, a three-stage multi-annual procurement program was proposed between: 2016-2018, 2019-2023 and 2024-2030 for both railway and road transport.				

RÂMNICU VÂLCEA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
Local public transport in Râmnicu Vâlcea is the responsibility of S.C. ETA S.A., a company subordinated to the Râmnicu Vâlcea City Hall, which operates on the basis of a management delegation contract. The public park includes 38 buses and 11 minibuses. The average length of buses is 15 years, and minibuses are 12 years old. The age of the park and the high degree of pollution are the main dysfunction. There are 5 non-euro buses, 6 Euro 1 buses, 6 Euro 2 buses, 11 Euro 3 buses, 8 Euro EEV buses, 2 Euro 6 buses, 9 Euro 3 buses and 2 Euro 5 minibuses.	The introduction of the electric transport system. In the spirit of sustainable development, which promotes clean transport systems, it is envisaged the possibility of introducing electric transport on those routes that are suitable for the conditions imposed by this mode of transport. For the normal operation of this system, it is also envisaged to have a battery charging station.	2 stages: 2017 – 2020 2021 – 2023	Stage I: 2,700,000 Euro Stage II: 1,750,000 Euro	2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain) 4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland)
	Alignment of S.C. ETA S.A. to the requirements of sustainable development. Renewing the fleet of vehicles with alternative fuel buses, modernizing the existing bus, including endowing with an alternative fuel station.	2017 – 2020	15.000.000 Euro	13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy) 14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)

DROBETA TURNU SEVERIN MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
Local public transport of persons by regular flights is leased to S.C. Public Transport Urban Drobeta S.A. The main characteristics of the car park	The purchase of Euro 6 Buses /	Are not specified	Costs for the procurement of public transport are not specified, but the	2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
are: the average age of the public transport fleet: approximately 20-21 years; total number of means of public transport: 44 pieces; total capacity of public transport: 2,200 seats; total number of means of public transport provided with a ramp for people with special needs: 7 pieces. Due to the low level of company revenue, there are no investments in modernizing and improving the fleet from its own sources.	Electrical		<i>estimated value of 4,000,000 Euro is mentioned for all public transport modernization projects.</i>	urban transport (Spain) 4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland) 13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy) 14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)

TÂRGU JIU MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
In Targu Jiu Municipality, local public transport is provided by S.C. Transloc S.A. In order to meet the need to travel by public transport, the transport operator operates two types of transport networks, a bus transport network and, since 1991, a trolleybus transport network, representing a route of 13.5 km double track and an access network within the maintenance base of approximately 3.7 km. The current fleet of vehicles consists of 17 trolleybuses; 21 buses; 1 coach. The means of transport are very old, polluting, which makes them unsafe in traffic, endangering the physical and mental integrity of travelers, while also affecting the environment. Moreover, because of wear, they have a very low average speed. This leads, on the one hand, to the increase in repairs costs, the	The renewal of the public transport operator's rolling stock. It is proposed to renew the rolling stock of the public transport operator by purchasing the following new means of transport: 20 trolleybuses; 30 buses and 10 minibuses. The vehicles will be low-floor and equipped with access ramps for people with locomotor disabilities, as well as with information systems, video surveillance, tolls and will ensure quality and comfort conditions at international standards. Buses / minibuses will be hybrid or electric.	The renewal of existing fleet of rolling stock (trolleybuses and buses): 2015-2020. The extra purchase of minibuses is in the long run in line with future urban development: 2026-2035.	81,500,000 RON, out of which: for trolleybuses: 28,000,000 RON for buses: 48,000,000 RON for minibuses: 5,500,000 RON	2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain) 4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland) 13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy) 14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
increase in the level of noxes and, on the other hand, delays in the travel program. The pollution degree of the means of transport is high (15 of the buses are part of the non-euro pollution standard, one has the pollution standard Euro 4 and only five have the Euro 5 depollution standard).				

SLATINA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
At the moment, the public transport by buses in Slatina is provided by S.C. Loctrans S.A. Under the Public Service Contract, it operates on 27 routes, covering 39 km of street network and 62 stations. At the end of 2016, the public transport fleet of S.C. Loctrans S.A. included 15 buses, all of 10 years old and Euro 3. Because of these aspects, the environmental impact is pronounced negative, and the safety and comfort of passengers is low. Purchase of new vehicles, clean vehicles (electric, hybrid) of small and large, and their introduction into circulation will act to reduce the environmental impact, given the European Commission's recommendations on reducing greenhouse gas emissions (CO ₂ equivalent). Bus fleet renewal is required and will bring a significant improvement, since the current situation all public transport vehicles are equipped with engines with lower pollution norm (Euro 3).	The renewal of the fleet by the acquisition of ecological buses. Upgrading the urban transport system by purchasing 10 electric / hybrid vehicles. Vehicles purchased must meet minimum passenger comfort conditions and be accessible to persons with reduced mobility.	2017 - 2019	4,180,000 Euro	<p>2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain)</p> <p>4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland)</p> <p>13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy)</p> <p>14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)</p>

Action 4. Investments in modern infrastructure for public transport

CRAIOVA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
<p>The infrastructure of the tram network in Craiova has a limited role in the overall quality of public transport services, with only one line. A rail rehabilitation program has recently been developed. These measures will ensure better service performance, especially higher rolling speed. However, the tram network in Craiova does not serve areas with a higher population density, such as the Tineretului Boulevard or Henri Coanda Street. Another opportunity to develop public transport infrastructure would be to implement solutions that give priority to public transport services. This could be accomplished through several tools, such as: specific bus station design solutions, dedicated bands, priority at signaling intersections. There is also a need to develop a clear policy on the use of the tramway for general traffic. The implementation of the tramway exclusive rails would increase not only the attractiveness of public transport, but it would also contribute to the improvement of the road capacity in general. Conditions at stations could also be improved by at least providing more real-time information to travelers and, depending on investment, by providing more shelters. Passenger safety issues must also be considered as priorities, with some stations being absolutely necessary to be reviewed.</p>	Extension of electric public transport infrastructure in Craiova Noua District	2019 - 2023	376,000 Euro	-
	Dedicated bus buses and prioritization measures specific to public bus transport	2016 - 2018	20,000 Euro	-
	Arranging a new passenger terminal in the southern area of Craiova	2019 - 2023	3,194,000 Euro	3. Fast Agglomeration Railway - Park & Ride system combined with regional railway transport services (Poland) 9. Park & Ride facilities in Scotland, Edinburgh metropolitan area (UK)
	Extension of electric public transport infrastructure in the Carpathians	2019 - 2023	328,100 Euro	-
	Modernization of the tramway (in its own way) from Calea Severinului, in the Cernele de Sus industrial area. It will be done in two stages: (i) contact network and power supply network; (II) track, track-side, station, etc.	Stage I: 2019 - 2023 Stage II: 2019 - 2023	10,250,100 Euro	-
	Modernization of the tramway (on its own) on Henry Ford Street in the Ford industrial area	2016 - 2018	6,152,100 Euro	-
	Implementation of the tram infrastructure in its own way	2016 - 2018	35,000 Euro	-
	Modernization of public transport stations (I). Modernization of public transport stations along public transport lines complementary to the core network (fitting information panels,	2016 - 2018	1,918,400 Euro	14. Limit4WeDA - Light Mobility for Weak Demand Areas (Italy)

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
	improving accessibility and safety). It will take place in 14 stages.			
	Modernization of public transport stations (II). Modernization (with the possibility of moving) of the public transport network (equipped with information panels, improvement of accessibility and safety conditions). It will take place in 8 stages.	2019 - 2023	1.067.000 Euro	
	Arranging intermodal points in relation to the tramway network (I).	2016 - 2018	97,700 Euro	3. Fast Agglomeration Railway - Park & Ride system combined with regional railway transport services (Poland)
	Arranging of intermodal points in relation to the tram network (II)	2019 - 2023	195,300 Euro	
	Arranging intermodal points in relation to the fast bus network (BRT)	2016 - 2018	386,700 Euro	7. Implementation of Park and Ride (P+R) network in Ljubljana urban region (LUR) (Slovenia)
	Modernization of the depot and modernization of the repair stations for power supply of trams. It will be carried out in two stages: (I) rectifying stations and related equipment, and (II) depot and related equipment.	2016 - 2018	7,505,000 Euro	-
	Modernization / extension of public transport management system and e-ticketing. It will be done in 5 stages.	2016 - 2018	1,812,100 Euro	1. Regional coordination of the sustainable mobility strategies: Model of Consortium as the Metropolitan Transport Authority (Spain)

RÂMNICU VÂLCEA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
Obviously found problems with the public transport infrastructure: lack of a bus in the northern part of the city, which would reduce the "zero" of the vehicles at the entry / exit on the route; lack of equipment in public transport stations; lack of information panels in both stations and means of transport.	Introducing a real-time information system on bus services in the main stations and equipping all buses with GPS / monitoring and information systems	Stage I: 2017 – 2020 Stage II: 2021 – 2023	295,000 Euro	-
	Making an application for your mobile phone to pay for your trip with public transport	2017 - 2020	15,000 Euro	4. Tele-Bus - Public transport service in residential and industrial areas with a reduced density of habitation (Poland)
	The construction of an intermodal terminal in the central station area	2021 – 2023	1,000,000 Euro	3. Fast Agglomeration Railway - Park & Ride system combined with regional railway transport services (Poland)
	The modernization of embarkation and unloading stations, uniformization - personalization of these contact points between the operator and the public	Stage I: 2017 - 2020 Stage II: 2021 – 2023	2,976,000	-
	The construction of 2 buses in the northern area of the city.	2017 – 2020	1,000,000	-

DROBETA TURNU SEVERIN MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
There are ongoing investments to build 3 new stations. The possibility of promoting cultural events by means of public transport as well as the use of public transport means for the dissemination of public interest information will be assessed. The county transport is organized by the Drobeta Turnu Severin Autogara in all necessary directions (Șimian, Cerneți, Orșova, Breznița Ocol, Izvoru Bârzii, Hinova, Malovăț, Prunișor, Ilovița, Șisești etc.).	The arranging 23 public transport stations	Short term	<i>unspecified</i>	-
	Intermodal public transport terminal of Drobeta Turnu Severin Municipality	Short term	2,000,000 Euro	3. Fast Agglomeration Railway - Park & Ride system combined with regional railway transport services (Poland)

TÂRGU JIU MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
The trolleybuses' contact network, over 20 years old, has problems, particularly with DC power, through the two recovery substations, due to equipment that has not been subjected to necessary checks and interventions and lack of spare parts. It is necessary to rehabilitate the whole electric transport system as well as to extend the trolleybus network, focusing on electric traction, given its favorable impact on the reduction of pollutant emissions.	Rehabilitation and extension of trolleybus routes. It is proposed to rehabilitate the existing contact network and extend it by 1.5 km, as well as to rehabilitate power stations, waiting stations and the premises and administrative buildings.	2015 - 2020	60,764,710 RON	-
	Making an automatic tolling system. It is proposed to implement an automatic toll system at the level of the local public transport system that will be implemented in the entire fleet of the operator and will be developed in correlation with the modernization and expansion of the vending machines.	2015 - 2020	6,300,000 RON	<p>1. Regional coordination of the sustainable mobility strategies: Model of Consortium as the Metropolitan Transport Authority (Spain)</p> <p>2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain)</p>

SLATINA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
Modernizing public transport stations to provide comfortable waiting times for public transport will increase the number of people willing to use public transport. Acquisition of ecological buses leads to the need for a new bus for S.C. Loctrans S.A which also includes 3 charging stations for electric vehicles. The implementation of modern ticketing systems (contactless cards, contactless bank cards, mobile ticketing solutions - mobile phones) are designed to increase the attractiveness of public transport by offering flexible travel purchase options.	Modernization of 62 public transport stations to provide comfortable waiting conditions for public transport.	2017 - 2020	1,240,000 Euro	-
	Introducing a multimodal passenger information system that will collect, process and display useful information for travelers	2017 - 2020	60,000 Euro	-
	Arranging a bus that includes three	2017 - 2020	270,000	-

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
	charging stations for electric vehicles.		Euro	
	Implementing an integrated payment system for Community services (including public transport).	2020 - 2023	1,000,000 Euro	1. Regional coordination of the sustainable mobility strategies: Model of Consortium as the Metropolitan Transport Authority (Spain)
	Introducing the public transport management system.	2017 - 2020	400,000 Euro	2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain)

Action 5. Elements of traffic management systems

CRAIOVA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
<p>In Craiova there are various message boards to inform the drivers. Regarding the management of the public transport system, a system has been implemented allowing: E - ticketing; Monitoring compliance with the schedule of each bus in service; Monitoring of fuel consumption; Real-time notification of drivers on advance / delay; Configuring a bus records database to check the quality of the service; Real time reporting of arrival times in each transport station; Better service quality.</p>	Modernization of the traffic management center in Craiova. It implies the arrangement of a space corresponding to the room and room operators as well as specific equipment.	2016 - 2018	2,596,100 Euro	11. Evaluation of road traffic accident data in Western Macedonia (Greece)
	Extending the traffic management system by integrating new traffic light signaling with adaptive operation and communication system (I). In the first phase, 18 existing intersections are proposed for retrofitting and the provision of 44 new intersections with traffic controllers; detection equipment; semaphores with LED optics. There are also 49 intersections for video surveillance systems.	2019 - 2023	2.330.400 Euro	

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
	Extending the traffic management system by integrating new traffic light traffic lights with adaptive operation and communication system (II). In the second phase, 29 new intersections are proposed for equipping and implementing the video surveillance system in 27 intersections.	2019 - 2023	7,407,800 Euro	
	Prioritize local public transport and bicycle transport in Craiova. Track public transport efficiency. For this, it is proposed to equip the entire fleet of vehicles and trams with transponders.	2016 - 2018	580,800 Euro	2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain) 10. Specific Route Queue Management (ICT) (UK)
	Integration of parking management in Craiova. It has as strategic objective the management of the demand for parking spaces.	2024 - 2030	1,546,700 Euro	12. Green eMotion - Kozani, Western Macedonia (Greece)

RÂMNICU VÂLCEA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
In Râmnicu Vâlcea there is no traffic management center to coordinate the main road network, traffic control limited to traffic lights and / or signaling of intersections and pedestrian crossings. Regarding public passenger transport, a modern traffic monitoring and tracking system with GPS tracking is in the process of being implemented, allowing for the planning of bus journeys, their tracking, their position on the stop stations, sending messages to transport managers for track corrections, and tracking all the means of transport monitored on the digital map of the city. The public transport operator's stations are not equipped with real time passenger information panels and public transport vehicles are not equipped with variable message information panels.	Development of a center equipped with a general traffic management system in the city.	2021 - 2023	5,800,000 Euro	11. Evaluation of road traffic accident data in Western Macedonia (Greece)

DROBETA TURNU SEVERIN MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
<p>At city level, there is no intelligent traffic management system that provides real-time data. Interventions in this area aimed at the development of a traffic management and monitoring system as a short-term project. The Traffic Management and Tracking System is a measure to mitigate carbon dioxide emissions from motorized transport.</p>	Traffic management and monitoring system	<i>Are not mentioned</i>	3,500,000 Euro	11. Evaluation of road traffic accident data in Western Macedonia (Greece)
	Creation of two power stations for electric cars in the parking lot of the town hall and in the park & ride at the entrance from Craiova (Banovitza area)	<i>Are not mentioned</i>	<i>Are not mentioned</i>	12. Green eMotion - Kozani, Western Macedonia (Greece)
	Creation of two power stations for electric cars in park & ride at the entrance from Timisoara and park & ride at the entrance from Targu Jiu	<i>Are not mentioned</i>	<i>Are not mentioned</i>	
	Creating public transport Drobeta Turnu Severin.	<i>Are not mentioned</i>	<i>Are not mentioned</i>	2. Implementation of a combined service BUS+BIKE for a sustainable metropolitan and urban transport (Spain)

TÂRGU JIU MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
<p>In Targu Jiu there are defined several arteries that have a versatility to all the streets with which they intersect. These include in particular the major traffic routes along the North-South direction (Ecaterina Teodoroiu and Victoria Street) and East-West (București Way, Unirii Street and Severinului Way, respectively Calera Tismanei), but also alternative arteries for transit of the city by heavy traffic (Merilor Street, Barajului Street, Thermocentralei Street and Narciselor Street).</p>	<p>Creating a traffic management system. It is proposed to implement a traffic management system at the major traffic arteries that will be linked to the public transport vehicle tracking system to prioritize them.</p>	2026 – 2035	34,000,000 RON	<p>10. Specific Route Queue Management (ICT) (UK)</p> <p>11. Evaluation of road traffic accident data in Western Macedonia (Greece)</p>

SLATINA MUNICIPALITY

1. The current situation. Problems identified	2. Proposals in S.U.M.P.	3. Planned periods for the implementation	4. Estimated costs	5. Example of good practice to be correlated with
<p>In Slatina, traffic management is ensured by static vertical and horizontal signaling, as well as dynamic signaling (traffic light). Because in most cases the available space allocated to transport can not be extended, it is proposed to use Intelligent Transport Systems (ITS) to increase the efficiency and safety of journeys. These systems allow the promotion of public transport (various facilities: own lanes, priority at intersections, etc.) and the reduction of the use of motor vehicles.</p>	<p>Parking management system and access to restricted areas. Maintains parking management (monitoring, information processing, information and interconnection) and access to restricted areas.</p>	<p>2017 - 2020</p>	<p>2,000,000 Euro</p>	<p>-</p>
	<p>Integrated Traffic and Urban Mobility Management System and Rules, Safety and Security. The integrated traffic management system will have as main elements: a traffic management and integration center for ITS systems in the urban and metropolitan area, communication system between local stations and the traffic management center, local traffic information gathering stations, and local traffic control stations at intersections and streets.</p>	<p>2017 - 2020</p>	<p>400,000 Euro</p>	<p>10. Specific Route Queue Management (ICT) (UK) 11. Evaluation of road traffic accident data in Western Macedonia (Greece)</p>
	<p>Intelligent lighting system for urban mobility. It will enable urban mobility to be improved through people's access to urban transport infrastructure and by optimizing mobility services and functions.</p>	<p>2017 - 2020</p>	<p>3,100,000 Euro</p>	<p>13. PASTA - Physical Activity Through Sustainable Transport Approach (Italy)</p>

At level of municipalities and cities in the South West Oltenia Development Region that are not a county residence, in most cases there is no local public transport system and the traffic management systems are poorly developed. Among the proposals in S.U.M.P. these include the establishment of local public transport systems and the development of elements of traffic management systems, in line with the actions identified for the Action Plan.

5. METHODS, INSTRUMENTS AND INDICATORS RELEVANT TO MONITORING AND EVALUATING THE ACTION PLAN

Monitoring and evaluation are important management tools for the planning and implementation of projects and plans that provide information on the efficiency of the efforts made in carrying out certain activities.

In the present case, monitoring and evaluation are used to plan and implement the proposals in the Mobility and Transport Action Plan drawn up at The South-West Oltenia Region level within the REGIO-MOB project.

Monitoring and evaluation provides information to plan activities more efficiently, allocate resources rationally and ensure the sustainability of the projects. The allocation of funds is conditional on the inclusion in the project proposals of a chapter dedicated to monitoring and evaluation, which subsequently allows the estimation of the efficiency of the allocated funds and the impact of the funded activities on the target group. Monitoring facilitates regular checking of what is currently being done. Information can be quantitative and qualitative indicators.

The evaluation achieves an objective appreciation of the project's success. Evaluation is the process by which the effectiveness and efficiency of the project / action are determined.

Monitoring and evaluation imply setting performance criteria and indicators.

To be able to monitor a project, you need to define the performance indicators. Monitoring implies the breakdown of the results to be achieved in distinct stages and their transposition into dual performance indicators:

- *periodic monitoring of the activity evolution;*
- *comparison of the intermediate or final results with those obtained.*

Performance indicators are the units of measurement used to assess performance in terms of established criteria:

- **Input indicators** - project resource indicators: provide information on the financial, human, material, materials used to implement a project;
- **Output indicators** - measures what has been achieved with the money earmarked for project implementation. Output indicators are extremely useful to project managers who are responsible for producing outputs;
- **Result indicators** - result indicators relate to the effects of the project and provide information on the changes made;

- **Impact indicators** - take into account the long-term consequences of the project beyond the immediate effects on the direct beneficiaries; they also address the consequences for individuals or organizations that are not direct beneficiaries. These indicators correspond to the evaluation process, not the monitoring process.

This subchapter presents the result indicators for each of the actions set out in the *Action Plan for transport and mobility within REGIO-MOB Project founded through Interreg Europe Program* under the REGIO-MOB Project (Table 6.1).

Table 6.1. Result indicators.

Action	Result indicators
1. Development / revision of S.U.M.P. at the ATU level in the SW Oltenia Region	■ Sustainable Urban Mobility Plans developed / revised: 14
2. Establishment of a regional structure aimed at correlating transport projects at regional level	■ Projects implemented in a correlated way: 5
3. Investments for the use of low-emission transport options - Acquisition of means of transport	■ Purchased public transport equipment: 148
4. Investments in modern infrastructure for public transport	■ Infrastructure elements for public transport implemented: 70
5. Elements of traffic management systems	■ Elements of the traffic management systems implemented: 14

In Figure 6.1. the timetable for implementing the Action Plan is presented.

