

## D.T4.4.5 LOCAL STRATEGIC PLAN FOR SEAMLESS MOBILITY - CITY OF OSIJEK

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Final

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## Executive summary

Under the framework of a common regional strategic planning approach promoting Shareplace approach and innovations, a local plan for the City of Osijek has been developed.

Objective of the plan is to define the actions to be implemented in order to carry on the implementation of the Shareplace vision and experiences beyond the project scope and timeframe, providing an effective support to the ongoing and future sustainable mobility planning process.

The document is structured in four parts, the first one describing the current mobility planning process at local, regional and national level.

The second chapter investigated the coherence between the current mobility planning framework and the main relevant Shareplace approaches and innovations, in order to identify spaces for valuable contributions building on the project and in particular pilot experience.

The third chapter summarizes the strategic elements to be promoted through the engagement of local partners and stakeholders, while the last one identifies the actions to be implemented in order to contribute actively and bring the project added value to the planning process.

## 1. Framework of mobility planning tools

### 1.1 Sustainable mobility planning in Osijek and Baranja County

The focus area is the City of Osijek as a center of Osijek – Baranja County and one of four macro-regional centers in the Republic of Croatia. It is also a gravitational point of an entire Eastern Croatia. In local terms, the City of Osijek is also a center of Osijek Urban agglomeration. The agglomeration has a population of 195.235, with 55% of inhabitants living in the City of Osijek. The administrative area of the City of Osijek has a population of 108.048.

At **local and regional** level, the reference mobility planning tool is the **transport development master plan of the City of Osijek and the Osijek-Baranja County**. The plan considers a part of the functional region of



Eastern Croatia<sup>1</sup> which includes the geographical area of the Osijek-Baranja County and the towns of Beli Manastir, Belišće, Donji Miholjac, Đakovo, Našice, Osijek and Valpovo and 35 municipalities.

The objective of the transport development master plan for Osijek and the Osijek-Baranja County is to set up foundations for the transport development of all cities in the Osijek-Baranja County. The plan is developed through the analysis of the potential transport connectivity improvements and the identification of possible solutions for improving the urban transport of the City of Osijek harmonised with the interurban transport lines (bus lines, railway lines, transport of personal and freight vehicles etc.) in order to support the sustainable development of the transport system in the whole Osijek-Baranja County area and in the functional region of Eastern Croatia. The master plan must be harmonised with the Transport development strategy of the Republic of Croatia (SPRRH) and its objectives.

While defining the measures composing the plan, special attention was paid to improving urban transport in the City of Osijek (by analysing the current state in the transport of the City of Osijek, the functionality of urban transport, bus and tram lines, cycle routes, signalization, pedestrian infrastructure etc.) In the final study of the master plan and through strategic scenarios, the need for expanding the existing infrastructure within public transport (mutual connection and expanding the existing tram lines and their harmonization with bus lines and harmonising urban transport in Osijek with all forms of inter-city transport) has been determined. An additional Objective is to propose solutions for the City of Osijek which will encourage the use of the services of public urban transport.

The specific objectives are:

- Ensuring the foundation for **sustainable development of the sector** (financial, technical, environmental etc.)
- Achieving an **integrated approach to planning transport on all levels** - national, (functional) regional, local, with all of them based on common methodology and determine a clear sequence of planning, starting from SPRRH
- Determining the **needs of local/regional mobility** in order to complement international mobility and long-distance mobility strategies determined in the Transport Development Strategy of the Republic of Croatia (SPRRH)
- Creating a **common planning tool** independent from the funds
- Analysing and proposing **improvements in the transport system from various perspectives** (organisation, management, functionality, infrastructure etc.)
- Determining **real needs for improvements in the transport system as a basis** for supporting the socio-economic development of the area

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<sup>1</sup> The functional region of Eastern Croatia, according to the description from the Transport development strategy of the Republic of Croatia, includes a greater geographical area than the one covered by the envisaged master plan. The functional region of Eastern Croatia has a northern border with Hungary, an eastern border with Serbia and a southern border with Bosnia and Herzegovina. To the west is the functional region of Central Croatia. Eastern Croatia has two main routes, the northern axis between Varaždin and Osijek which is partially bordered by the river Drava and the southern axis between the capital and Vinkovci along the river Sava. The main cities in the region are Osijek and Slavonski Brod. Osijek is near the border with Serbia and Hungary, and Slavonski Brod is close to the border with Bosnia and Herzegovina, so both cities are important transport and economic junctions in the international transport network.



- Planning the transport system **in accordance with the needs of other socio-economic sectors** (education, healthcare, solid waste, tourism, industry, logistics etc.)
- Determining the **required steps for the further development** of defined measures

Under a **national** and **broader regional perspective**, the reference plan is represented by the Transport Development Strategy of the Republic of Croatia (SPRRH). The strategy, the basis in developing the transport sector is defined as a tool supporting broad objectives of the economic and social policies.

Strategic planning considers transport as the key support that will provide high-quality mobility service to the inhabitants of Croatia, and at same time is an effective instrument for the economic and social development and territorial integrity. The Strategy designates basic guidelines for transport sector development in the Republic of Croatia in the medium and long-term period (2014-2030) with the objective of defining the total and comprehensive framework for ensuring the connection of infrastructure, transport policy and for enabling decision making.

The Strategy is a result of in-depth analyses and the thought process, but also of participation and a discussion open to the entire society. A high level of social and technical consensus is reached within the elaboration of the Strategy, with as high input data and transparency as possible. The possibility of participating and discussing is set as a procedure. As a result, the commitment of primary stakeholders in participation has been noted, and this way great contribution was obtained in the form of suggestions and proposals for the improvement and enrichment of the Strategy.

The development of the Transport Strategy was taken in the framework for sustainable development and concern and criteria of environmental protection. The Strategy represents the future for the Republic of Croatia, its economic development and competitiveness, its social and territorial cohesion, and the improvement of the quality of life of its inhabitants, by using a set of measures designed for creating a transport system that more integrated, safer, more efficient and environmentally friendly.

The Transport Development Strategy of the Republic of Croatia for the 2014-2030 period (Official Gazette (Narodne novine) No. 131/14), has been elaborated in accordance with the following documents: Transport Operational Programme for the 2007-2013 period and Operational Programme of Competitiveness and Cohesion (2014-2020), Thematic Objective 07 - Promoting sustainable transport and removing bottlenecks in key network infrastructures, Priority axis 7 "Connectivity and Mobility".

The new Transport Development Strategy of the Republic of Croatia represents the first, but not the only step in the definition of the National Strategy, as this is a dynamic process with continuous revisions. The strategic process goes through various phases, the existence of the Strategy represents the basis for creating new strategic processes in traffic planning, that Croatia initiated by developing this document. A key step in developing the strategic process is to observe the Transport Development Strategy of the Republic of Croatia. The Transport Development Strategy of the Republic of Croatia was finalized in 2016. The next revisions of the Transport Strategy will be prepared for the coming Europe development periods, and instances of great influence on the Croatian transport sector.

In the Transport Development Strategy of the Republic of Croatia for the 2014-2030 period, for the first time there are guidelines for prioritizing urban and suburban traffic and planning activities.

### **1.3 Shareplace outcomes and the planning cycle time frame**

The local master plan is supported by strategic documents of the transport sector on the national level, especially by the Transport Development Strategy of the Republic of Croatia for the 2014-2030 period.



The *Transport development master plan* is a basic strategic document that will enable the City of Osijek and Osijek-Baranjska County to make use of EU funds for transport projects in the time frame up until 2037. This master plan has been developed during the 2016 year. According to the integrated data and transport surveys, this kind of document should be regularly updated, approx. for 5 years period. Moreover, the statistical data on the population number is collected in the 2011 Census and the next Census is planned for the next year, 2021.

The **City of Osijek** is the administrative center of the county and as, a policymaker, brings decisions on planning processes in the field of mobility. The City of Osijek defines criteria and scope of different projects that should support the effectiveness of the overall transport system. **The results of Shareplace project are already promoted through the other relevant projects with the aim of further integration of various local and regional mobility services, traditional and flexible. The principles developed within the Shareplace project will be considered as the inputs and guidelines for the next strategic planning process.**

Furthermore, the **DRT study pilot element should be considered as a first step for the service implementation in Osijek urban agglomeration area.** During the living labs, on-demand public bus public has been recognized as the most suitable service to meet the mobility needs of the area. Public transport operator GPP aims to implement the DRT bus service according to the study based on practical experience and knowledge gained through the Shareplace project. This service should be provided in the wider Osijek region.

At regional and national level **Dyvolve Ltd.**, as a partner responsible for the development of the mobility services, **is presenting the achievements of Shareplace project to other regions and cities in Croatia** in order to ensure scaling up the results on a national level too.

## 2. Shareplace innovations in the context of local sustainable mobility planning

In this section we analyze the presence of elements referring to the Shareplace innovation approach in the existing sustainable mobility planning process, in order to plan the further integration of innovations in future steps and the proposal of targeted actions.

Shareplace innovations	References in the sustainable mobility planning process
<u>a) Participation, stakeholder engagement and living labs</u>	The Transport development master plan of the City of Osijek and Osijek-Baranja County has been designed through the participation of a restricted number of stakeholders. The main role of stakeholders was to provide the data for setting up the transport model and creating the diagnosis of current mobility status as well as for developing future scenarios based on planned infrastructure investments.



Shareplace innovations	References in the sustainable mobility planning process
<p><u>b.1) Integrated mobility, data, digitalization, Mobility as a Service</u></p>	<p>The master plan highlights the need of integration and digitalization of transport data, although no specific measure or solution is identified.</p> <p>In particular, the priority is to increase the efficiency and the physical, operational and organisational integration of all modes of transport (railways, trams and buses), in order to:</p> <ul style="list-style-type: none"> <li>– increase the capacity and use of urban public transport, promoting modal shift;</li> <li>– remove bottlenecks that prevent the development and functioning of the urban public transport system;</li> <li>– increase the use of zero-emissions types of transport in urban and suburban areas.</li> </ul> <p>The plan envisages the creation of an information infrastructure for system management and dissemination of information to users, and the introduction of a common integrated (tact/consecutive) timetable for all public transport operators.</p>
<p><u>b.2) Shared mobility</u></p>	<p>The master plan includes the car-sharing service which is in the implementation process.</p> <p>Car-sharing system is the system of public cars integrated in the public transport system. Introduction of the system is conducted with the objective of increasing mobility within urban and suburban populated areas in a sustainable and ecologically acceptable way. The system can be established as a city company or it can be put into concession. The result of this measure will be a reduced number of vehicles within the city and increased mobility of the citizens of Osijek and the Osijek-Baranja County, while remaining eco-friendly and sustainable. (CO2-M4 Introducing a car-sharing system)</p>
<p><u>b.3) Flexible services</u></p>	<p>The master plan defines the development of new DRT services, but they have not been implemented. [see c) The Osijek Pilot]</p>



Shareplace innovations	References in the sustainable mobility planning process
<p><u>c) The Osijek Pilot</u></p>	<p>The master plan envisages the development of new on demand service - DRT and the development of a web portal and mobile web applications for quick and easy planning of travel using the public transport services.</p> <p>Construction of necessary info “totems” at public transport stations with the objective of providing information about arrivals of public transport vehicles to the stations in real time, and the development of a web portal and mobile web applications for quick and easy planning of travel using the public transport services. (C11-M8 Creating an information infrastructure for system management and dissemination of information to users)</p> <p>“On-demand transport” service will be introduced in the areas where a conventional transport timetable can’t be introduced due to the lack of demand for transport (smaller populated areas). This service enables the connection of smaller populated areas with the public transport system and it is integrated with the rest of the public transport system. CO2-M2 Introducing on-demand public transport services)</p>

### 3. The strategy

The experience, main findings and lessons learned through the experience in the Shareplace project, will contribute to the development of a new strategic approach in the sustainable mobility planning process at local level. According to the Shareplace principles, the proposed strategy can be summarized as follows:

#### *Participation, stakeholder engagement and living labs*

- ✓ **Forming general mobility stakeholder groups** by themes and setting up formal engagement on a regular basis in order to avoid overlapping activities within different mobility project. This approach should lead to more efficient living labs and meetings.
- ✓ **Foster the participation of new mobility providers to the planning process and promoting the overall mobility vision** in order to ensure better integration of services and data exchange.

#### *Demand Responsive Transport (DRT)*

- ✓ Conduct more **accurate transport demand survey** in order to create detailed service development strategy in terms of on demand transport – DRT.
- ✓ **Setting up regulatory framework** as a basis for implementation of DRT bus service in full operational mode. Investigating the preconditions and circumstances in which DRT service can be implemented in a short term.
- ✓ **Organizing DRT service** by proposing it to other municipalities in the region and **expanding the operational area**.



*Data integration/multimodal trip planner*

- ✓ Promote the **benefits of the integration of transport service data** into one planning tool and the digitalization of the data of traditional mobility services.
- ✓ **Engage other transport operators and mobility providers**, expected to join the community in further stages.
- ✓ Elaborate a **regulation proposal** on open data.
- ✓ Integrate the **sharing of digital data in the service contracts**.
- ✓ Develop a **business plan for the creation of a MaaS platform**.

## 4. The action

In order to promote the business as usual adoption and scaling up of the co-designed services the following actions have been identified. Those actions consider operational, policy, business and digitalization options; and are targeted to the sustainable mobility planning process with specific focus on the next planning cycle.

Actions	Promoted by	Stakeholders to be involved	Expected timeline
<i>Operational</i>			
Create DRT implementation framework with precisely defined steps and actions for setting up the service in short term	City of Osijek Dyvolve	City of Osijek GPP – operator Dyvolve	02/2021
Promote and support service hub development as a basis for the integration of public transport services, traditional and flexible	City of Osijek (Interreg CE RegiaMobil project)	City of Osijek GPP – operator Providers of mobility services Dyvolve	03/2022
<i>Policy/Incentive</i>			
Raising awareness of the benefits of new services	City of Osijek	City of Osijek, GPP – operator Mobility focus groups and service providers	03/2022
<i>Business</i>			





Actions	Promoted by	Stakeholders to be involved	Expected timeline
Develop business plan for scaling up the services	City of Osijek Dyvolve	City of Osijek, Dyvolve, Public transport operators,  Regions and municipalities	02/2021
<i>Digitalization</i>			
Integrate new data in the existing tool	City of Osijek (Interreg CE RegiaMobil project)	City of Osijek GPP – operator Other public transport operators and service providers,  External IT developers	03/2022
Implement new functionalities in the tools	City of Osijek (Interreg CE RegiaMobil project)	City of Osijek GPP – operator Other public transport operators and service providers,  External IT developers	03/2022