D.T2.1.9 – Tribute Action Plan_Podgorica

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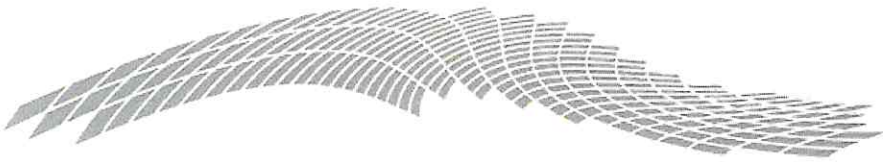

PP9 – Capital City Podgorica

Document Control Sheet

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Author(s)	Ajša Hadžibegović, Albina Međedović, Teodora Kusovac
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0. INTRODUCTION

The WP T2, called the *Identification of Action Plans supporting the implementation of innovative and sustainable mobility measures,* englobes the Action Plan development (Act.T2.1) and the Pilot Action implementation (Act. T2.2). Regarding the Action Plan development (Act.T2.1), this document accounts specifically for the ***Deliverable T2.1.9_Tribute Action Plan_PP9-Podgorica.***

The Action Plan of the PP9-Podgorica has been developed as a plan to improve the city mobility and decrease the traffic congestions. The Podgorica action plan identifies measures aimed at improving the public line transport and using of Podgorica digital cadastre of traffic signalisation as a smart city solution for urban mobility planning and management. Podgorica is among the cities dealing with the problem of easily noticeable car dependence with a rapid growth of motorization rate requiring a complex set of well-designed measures enabling an urban mobility shift toward sustainable transport modes resulting in an improved air quality, reduced traffic-generated noise, improved passenger safety and achieved universal accessibility. In this respect, the action plan envisages four sets of innovative intervention measures that provide strategic recommendations for achieving the overall goal of overcoming the traffic congestions.

This document is based in a documentational state of the art research (Annex 1 - Del T2.1.1 Proposed methodology for the Action Plan) to understand key projects and plans within the city of Podgorica that contribute to enhance alternative mobility modes at a local level with the revision of the SUMP (Sustainable Urban Mobility Plan) for the Capital City of Podgorica 2020-2025, and Strategic plan of development of Capital City Podgorica 2020-2025, along with the learnings from the Podgorica pilot action testing phase. Furthermore, the final measures are based on reflections, consultations and co-creation through living labs with diverse stakeholders. The following figure illustrates the Action Plan framework and base elements:

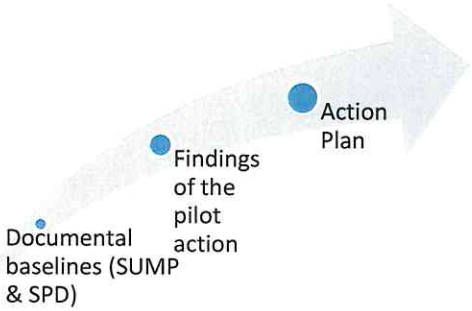

Figure 1 Action plan framework elements

This document describes practical actions and measures to aim at improving the city mobility and decreasing traffic congestions particularly focusing at three types of interventions in relation to the public transport. Those are relevant to the cities within the Adriatic-Ionian region or elsewhere, that are interested in facing and tackling similar challenges with inner-city mobility and traffic congestions. The action plan, object of this document, is divided into three parts as follows: 1. Measures and actions to improve city mobility and decrease traffic congestions; 2. Selection and definition of the measures and actions; 3. Protocol to assure the consisting implementation of the selected measures; and 4. Digital cadastre of traffic signalisation.

1. Scope of the action plan

The selected measures that will be described in this document are aligned and have synergyes with the different planning documents that have been revised in the document object of the annex 1. In this sense, the SUMP (Sustainable Urban Mobility Plan) for the Capital City of Podgorica 2020-2025, and Strategic plan of development of Capital City Podgorica 2020-2025, sets the aims and targets in relation to *Modernisation of public transport of passengers (Priority 1.2 of SDP),* as well as two relevant strategic goals of the SUMP: *Strategic transport planning; Balancing the development of all modes of transportation with focus on public urban and non-motorized transport.* Likewise, this action plan intends to recall these synergyes and strategies and contribute to them within the proposed measures and actions. Namely, the action plan is directly in line with

those two key policy documents, and it directly contributes to the Capital City Podgorica's intention to improve coordination between the city institutions.

This section describes three sets of measures that together with the specific list of associated actions have the objective of helping to improve city mobility and decrease traffic congestions. The proposed measures and associated actions focusing on the public ine transport are following:

1.1. Investment in overall quality and accessibility of public line transport

The public transport in Capital city is in the existing situation still far from the desired level. The city has invested in modernisation and accessibility of the bus fleet. Still, there are issues with the frequency, affordability and accessibility of the public line transport. Problem of making public transport atractive to all inhabitants and particularly to private vehicle users is multifaceted. However, it is more probable that the public line transport would be more attractive and in function of city mobility if the mentioned issues would be further addressed. Thus, the following actions are identified and suggested:

- Introduction of additional vehicles for public line transport in order to improve the coverage of the city territory with the public transport and increase the frequency of departures;
- Adaptation of existing bus stops in order to make them accessible for all the passengers (adjustment of platform heights; installation of transparent eaves providing cover from wind and rain on all bus stops as well as visibility – eaves covered by ads are a traffic safety issue; bus stops provided with easily readable and accurate timetables).

1.2. Improving the information about the public line transport

The public line transport could be considered as a relative novelty in the Capital City Podgorica. With new modern bus fleet and digital solution for interaction with public line transport (KlikBus.me), a progress has been made in the right direction. However, more trageted information placement would have greater chances at reaching more and potentially motivating more people to use the public line transport. The following actions are identified and suggested:

- Provision of accurate and easily accessible and available information on departures, routes and connections. Information should be provided and displayed through multiple channels, including social media.
- Campaigns targeting specifically youth and children as users of public transport are identified as required for raising awareness of availability of a safe and punctual passenger transport service in order to make this mode of transportation attracting for their daily commuting needs.

1.3. Monitoring the quality of local passenger transport operators

The public line transport in the Capital City Podgorica is provided both by private and public local passanger transport operators. The quality of the services provided by the local passenger transport operators in general is currently perceived by the general public as exceedingly low and is still burdened with the issues from period when only private passenger transport operators were operating. With the planned shift in expected quality standards to be obtained in the public line transport the City faced the need to proactively monitor and ensure that quality standards obtained by all local passenger transport operators. In this way, the measure is directly preventing passengers encountering problems and potentially giving-up on public line transport. As a result the following actions are identified and suggested:

- Operators' service quality should be controlled and sanctioned when necessary. In particular, this means introducing regular controls of the line bus drivers' licences; their general health and the way they behave with the passengers both while driving and providing travel-related information (drivers' communication skills).
- The existing passenger app "Klik-bus" providing passenger information (bus routes, lines, and departure times) should be integrated with the municipal police information system in order to enable passengers' reporting and timely reactions by the police.
- Improper parking practice provoking traffic congestion (blocking traffic flow) and preventing a safe use of biking and walking infrastructure should be dealt with through improved cooperation with the traffic police.
- Surprise inspection and „mystery passenger" concept is proposed to capture what does and doesn't work with the existing public line transport.

2. Selection and definition of measures and actions

2.1. Exploring the citizens willingness to use public line transport

It is suggested to engage through a survey with the citizens and/or through involvement of civil society organisations representing specific citizens groups in order to understand their willingness to use public line transport and reasons and obstacles that prevent them from doing so. In the city of Podgorica this process was made through public line transport related survey in 2019 for the status analysis as the basis for the city's SUMP. The survey showed that 73% of the citizens of Podgorica was "very dissatisfied" with the existing public transport situation, only 25% was "partly satisfied", and 2% was "very satisfied". The overwhelming majority agreed that the public transport needed to be at the top of the priority list. An online citizens' survey conducted in 2021 by the city administration placed the traffic infrastructure (19%) and public transport (13%) to the 2nd and 3rd place of the citizens' priority list, just under the parks and walkways (31%) at the top.

2.2. Stakeholders engagement process through a living lab

Once selecting the measures that were prioritized by the citizens they could be presented to the key stakeholders to decide together which measures could be effectively implemented. The process in which stakeholders could be engaged within the process could be a living lab framework, due to its flexibility to be structured in a way that best fits the local context.

A living lab could be used in the early and development stage of any data, software or infrastructure given project as it allows all different groups of stakeholders to act in a more synchronized way and achieve the proposed results more successfully. The living lab is a collaborative process with stakeholders to facilitate the measures implementation process. Following the quadruple helix approach where citizens, companies, researchers, and public administrations meet, discuss, and cooperate in order to share ("co-plan") new ideas and then implement and validate them.

Cities interested in following this approach may follow three main phases involving key stakeholders:

- Co-Planning
- Co-Implementation & Co-Monitoring
- Co-Validation & Co-Review

Stakeholders could be involved within multistakeholder meetings to being able to enrich and find potential synergies between stakeholders that could facilitate the implementation process. Key stakeholders could be involved within the three phases mentioned before.

In the case of Podgorica most of the stakeholders were engaged during three meetings within the the design and planning phase, as well as within the implementation of pilot action phase.

Furthermore, individual meetings were held with multiple stakeholders to discuss about the proposed measure package and to understand their interest regarding the implementation process of the measures and their potential roles during all phases. In particular:

- Living Lab 1 was held during design phase and was organized around the topic of design and needed functionalities of the software for traffic signalisation cadastre (TSC). The main topics tackled during the LL1 were related to functionalities of digital cadastre and how it could and should be used by different stakeholders.
- Living Lab 2 was held during design and testing phase and was organized on the topic of public line transport organisation particularly on micro-locations gravitating towards SouthWest bypass. Key focus was on increasing children and youth use of public line transport. The main topics tackled during the Living Lab were related to identifying measures to address weaknesses and threats in relation to public line transport and its use by children and youth.
- Living Lab 3 was held during implementation phase and was organized to discuss the presented results of the pilot action - launch of Podgorica's digital cadastre of traffic signalisation. The key area of interest for the participants were the improvement of the City's public transport in the context of the introduction of the new bus lines, particularly the passengers' safety.

The living lab is key for the definition and implementation of the measures object of the testing phase. More in detail, this tool could be used within the definition of the measures that would be planned and implemented to improve city mobility and decrease traffic congestion with special focus on public line transport, but also in relation to other possible solutions that might be context specific. Throughout the different encounters within the living lab with the different types of stakeholders, the public or local administration could be able to select from the package of pre-defined measures which ones would be implemented in line with the testing phase.

The advantages of using the living lab within the implementation of the proposed measures could be the following:

- Being able to discuss together with different types of stakeholders about a common topic for example passenger transport operators, associations of persons with disabilities, associations of students and parents, traffic police, and being able to understand how each sector may respond from their perspective to solving the same problem. This aspect is essential to enrich the whole planning and implementation process of the selected measures.
- Likewise, the condition of having meetings mixing different types of stakeholders could be positive because sometimes the needs or requirements from different groups could be very

similar. For example, the need to ensure quality standards are uphold by all passenger transport operators might be a common requirement for all types of stakeholders.

- Another advantage could be the possibility to create synergies and collaborations from associations or representatives of different sectors, for instance to communicate the chosen measures. For example in Podgorica associations of persons with disabilities communicated the measures through their communication channels to help spread the information and contribute to the success of the testing phase.
- It could be also an advantage being able to achieve innovative actions such as proposal for introducing a new feature in the KlikBus application that would allow citizens to report any irregularities and in general any instances of low quality of public line transportation.

Some disadvantages of using the living lab might be the following:

- If the availability of some key stakeholders and their general lack of responsiveness is persistent and then it could influence negatively on the motivation and involvement of already gathered stakeholders.
- If there are specific measures to discuss with a specific group and they disagree or not support in a constructive way the initiative, it could negatively influence the interaction with the other groups that are present in the same meeting.

3. Policy or protocol that could be adopted to assure a sustained implementation of the action plan

The protocol to assure a consisting implementation of the selected measures within public line transport organisation for a city is based on consistency and continuity of the implementation of the measures. Therefore, a protocol taylor made to each city context would need to be implemented in the framework of it's own public line transport organisation and quality assurance. In this way, the public and private passenger transport operators need to follow the protocol in order to being able to maintain licence for such service. The protocol for provision of public line transport for passengers could be structured in the following way:

I. The City (Secretariat for Transport) should fund, use and promote use of digital traffic signalisation cadastre as a public database that needs to be regularly updated and used for strategic and real-time sustainable urban mobility planning.

II. The Secretariat for Transport should rigorously implement the rules and procedures about the organisation of passenger transport both when granting licences and when monitoring the quality, and as needed sanctioning operators and revoking licences.

III. The company developing digital apps and/or e-tickets should incorporate features for easy reporting of iregualrities and in general complaints about low quality of service.

IV. The local public and private passenger transport operators should be able to get licence to operate lines in the inner city and in wider city area only upon evidence of having high quality comfortable, safe and accessible vehicles, that are considered relatively new and fit for local passenger transport.

V. The local public and private passenger transport operators need to make sure that bus drivers' have valid licences and clean traffic record. Furthermore, they need to provide evidence that drivers general health is satisfactory. Drivers should be instructed and where needed also trained to implement user-centered approach and thus, that the way they behave with the passengers both while driving and providing travel-related information is optimal.

VI. The Secretariat for Transport should actively use the cadastre of traffic signalisation to determine new ways to prioritise public line transport within the existing street infrastructure, particularly in inner-city area and near high traffic congestion spots (e.g. schools and kindergardens).

VII. The Secretariat for Transport should reguarly and systemically organise information campaigns about passenger line transport organisation available in the City and make available user-friendly, accurate and attractive information on multiple chanells (including digital and non-digital) and targeting different critical groups.

VIII. Implement an impact assessment procedure to monitor the impact of the selected measures on the short and long term. The following table (table no.1) gives an indication of the KPIs that could be monitored:

Table No.1 KPIs that could be monitored during the implementation of the measures within this action plan

Indicators or KPIs	Baseline	Target
MOBILITY		
Public transport use (general % and use by specific critical groups e.g. youth, people with disabilities)		
ENVIRONMENT		
Congestion (Number of passengers transported vs. Number of private vehicle users)		
Air pollution (relevant pollutant identification that is monitored within the city: Carbon monoxide, PM10 etc.)		
Noise level (monitored along the bus lines and/or near specifically targeted areas: schools and kindergardens)		
SAFETY		
Safety related accidents within and involving public line transport (Reported cases of threats, violence, thefts on the bus; traffic accidents involving buses and ratio of those for which bus driver was responsible)		
SOCIAL		
Population with low access to public transport		
Disabled accessibility		
Elderly accessibility		
Population with low interest for public transportation (e.g. youth, parents of small children, private vehicle owners)		
DECARBONIZATION OF TRANSPORT		
Low and zero emission zones along priority bus lines		
Transport infrastructure for new mobility modes, patterns and behaviours (priority corridors/lanes for public line transport, zones near schools and kindergardens not allowed for private vehicles etc.)		

4. Extension elements of the pilot action that could enhance its implementation

Traffic signalisation cadastre is an innovative digital tool that serves to improve urban mobility planning and management, but also to enable efficient coordination between the stakeholders in charge of maintenance of the urban mobility element and of the safety of the urban mobility participants. It enables coordination between the stakeholders in implementation of strategic urban mobility objectives as the basis for the proposed set of measures within the action plan, but it also sets the ground for an active stakeholders' participation through innovative use of publicly available data (creation of apps, use for analyses of traffic patterns, situation, etc). The e-cadastre development method and the software solution applied can be easily replicated by other local self-governments in Montenegro, including Podgorica's experience in its development and implementation as a pilot project.

Digital cadastre's elements with the potential to enhance the implementation of the action plan are:

- Possibility for multi-stakeholder use and coordination between the city's institutions;
- Cadastre's extension feature – possibility to add new data when required;
- Possibility for implementation of open-data policy in accordance with EU recommendations for possible application development APIs for broader use and interaction with the users (citizens).

Furthermore, digital cadastre of traffic infrastructure was assesed as usefull also for organization of the public line transport and in the following way:

- Improvement of departure frequency;
- Optimisation of bus stops;
- Optimisation of bus routes;
- Improvement of traffic safety.

5. Conclusion

This action plan suggested three sets of measures with specific actions that cities can implement to improve city mobility and decrease traffic congestion with particular focus on public line transport. Namely, the proposed measures have the objectives of:

- Increasing and better targeting investment in overall quality and accessibility of public line transport;
- Improving the information about the public line transport among different target groups;
- Monitoring the quality of service provided by local passenger transport operators

The proposed measures correspond to the ideal framework by which a city could implement these specific actions to build the tools to make public line transport among preferred modality of city mobility. However, the measures that will be implemented in each city should be chosen accordingly to the local context, the local regulations, and in communication with citizens.

In this sense, is important as stated in section number two, to involve citizens through a survey to identify the most popular measures to then discuss directly with the key stakeholders about the implementation process. Once this process is concluded it is recommended as stated in section number three, to stablish a protocol that is activated in relation to city public transport organisation. It is expected that by using in a consistent and repetitive way the selected measures that the modal shift into decreasing car dependency in the inner and wider city areas, by specific target groups.

In a prospective manner, the action plan finishes by describing a future uses of digital cadastre of traffic signalisation for optimisation of organization of the public line transport and particularly as regards: Improvement of departure frequency; Optimisation of bus stops; Optimisation of bus routes; Improvement of traffic safety. The digital cadastre has the objective of facilitating the exchange of information between multi-stakeholders for the planning, implementation, and monitoring of the selected measures.

This action plan lies under the willingness and need of cities to accomplish climate targets and achieve the decarbonization of transport in the upcoming decade. In this sense, these measures, actions, and guidelines could support cities into navigating this path.

Place, Date: Podgorica, 18 IX 2023

Name of Project Partner: Capital City Podgorica

Name of signatory: Olivera Injac, PhD, Mayor

Signature:

Olivera Injac

Stamp