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BETWEEN THE VISION AND REALITY

Five years into the implementation of the Belgrade and Podgorica Sustainable Urban Mobility Plans

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Glossary

Term/Abbreviation	Explanation
Modal split (division per mode of transport)	The percentage share of each mode of transport (walking, cycling, public transport, car) in the total number of trips in the city. One of the most significant individual indicators of the condition of traffic: it shows within a set of numbers to what extent the system is focused on sustainable modes of transport, and cars, respectively. "Sustainable modal split" is a sum of walking, cycling, and public transport).
Base (starting) year	Year of the existing condition based on which the city builds its goals — the point of reference used for measuring targeted values.
SUMP / POUM	Sustainable urban mobility plan, i.e., POUM (Serbian equivalent of the SUMP acronym) "SUMP" is the European term (used by Podgorica), "POUM" is the equivalent Serbian acronym used by Belgrade. Both terms are used herein to denote the same type of strategic document.
ELTIS/SUMP Guidelines	ELTIS is the European platform (European Local Transport Information Service) which publishes the official SUMP Guidelines. There are two editions: 1st edition (2014) and 2nd edition (2019).
PUT/PUST	Public urban transport and public urban and suburban transport of passengers — buses, trams, trolleybuses, and suburban rail transport, which is within the competence of the city.
BG VOZ	Belgrade's existing suburban-urban train system (Belgrade Trains)
SMT	Outer main road tangent— a major thoroughfare in Belgrade, which closes the arterial ring road; as presented in the Action Plan; it is connected to the Ada Huja bridge.

Term/Abbreviation	Explanation
UMP	Inner main semi-ring road — Belgrade's arterial road as presented in the POUM Action Plan.
MaaS (Mobility as a Service)	A model in which the passenger uses one app to plan, book, and pay for a combination of various modes of transport (public transport, bicycle, car sharing), as a single service, rather than separate services per relative system.
SECAP	The Sustainable Energy and Climate Action Plan — action plan for sustainable energy and climate, a local administration document for reducing emissions and adjusting to climate change.
MCDA / MCDM	Multi-criteria decision analysis/multi-criteria decision making — a multi-criteria analysis of decision making; the method of a simultaneous ranking of measures and scenarios per multiple criteria.
AHP	Analytic hierarchy process — the method of multi-criteria decision making which by comparing pairs allocates gravity to criteria.
Cost-Benefit analiza (CBA)	An analysis of costs and benefits — economic method used to measure whether the overall benefits of a project exceed relative costs.
BYPAD	Bicycle policy audit — the European methodology used for auditing a city's cycling policies.
Set of prompt measures	A group of interventions with early, promptly visible effects (ranging from several months to up to a year), these interventions not requiring major investments or lengthy procedures — e.g., changes in traffic regime, signage, minor rearranging of streetscape.
Push-and-pull approach	A combination of measures which at the same time disincentivise car reliance ("push" — parking fees, controlled access) and make the sustainable modes of transport more appealing ("pull" — better public transport, cycling infrastructure).

Term/Abbreviation	Explanation
Park & Ride (P+R)	Parking lots on the outskirts of the city, from which point the passenger continues trip by using public transport; the aim is keep cars away from the city centre.
Motorisation rates	The number of motor vehicles per 1,000 inhabitants — an indication of how many private cars a city 'has".
The "do nothing/do something/do everything" scenarios	Three versions of future development analysed in the Plan: without any change whatsoever, with a partial application of measures, and with a full application of measures. Belgrade reviewed them in terms of models, whereas Podgorica provided descriptive reviews.
GIZ / BMZ / SUMSEEC II	GIZ is the German Agency for International Cooperation; BMZ is the Federal Ministry for Economic Cooperation and Development, which funded the drafting of the Plan; SUMSEEC ii (Sustainable Urban Mobility in South-East European Countries II) is a technical assistance programme through which Podgorica received assistance for drafting of the Plan.
CIVITAS PLUS II	The European initiative and methodological framework for monitoring urban mobility.
PWDs	Persons with a disability.
Stakeholder ownership	A sense of ownership held by key stakeholders (administration, sectors, public companies) of the Plan — preparedness to implement it following its adoption.
Action Plan	A part of the SUMP which breaks down specific measures into activities, stakeholders, deadlines, and cost assessment. Its timeline is based mainly on phases.
Impact analysis	An assessment of the effects of the Plan implementation — what the gains of it being implemented are (e.g., change in modal split, a reduced number of traffic accidents).

Term/Abbreviation	Explanation
Amending budget	Amendments to the already adopted decision on budgeting during the year. These serve to adjust income and expenditures based on actual performance. A budget analysis is also to note the original decisions as well as key amendments, since the definitive amount is known only after them.
Provisional financing	A funding regime in which the city, until such time when the budget is adopted, spends on a monthly basis 1/12 of last year's spending. For the best part of 2024, Belgrade was in this regime, only for the budget to be adopted as late as in July.
Capital expenditures/ Capital budget	A portion of the budget intended for investments (building thoroughfares, public parking garages, infrastructure), as opposed to operating expenses (salaries, materials, services). The share of CapEx shows how "development-oriented" the budget is.
Modal shift (change from one mode of transport to another)	Passengers shifting from one mode of transport to another (e.g., from the car to public transport). The survey measures net modal shift — how many passengers changed to PUT vs. how many abandoned it.
ParkPAD	The European methodology for auditing parking policies; Podgorica applied this methodology for the Plan drafting purposes (along with BYPAD for cycling).
Superblock	A closed block (usually a neighbourhood) in which there are speed limits (up to 30 km/h), with pedestrians and cyclists having an advantage.
Yellow (bus) lanes	Lanes which are used solely by public transport vehicles in order to ensure a faster-moving and more reliable traffic; over time, the network of yellow (bus) lanes shrank.

Summary

Belgrade and Podgorica adopted their first sustainable urban mobility plans during the year 2020, in reliance upon the same European methodology (SUMP), however in different institutional, legal, and development circumstances. Five years later, both cities are providing an opportunity to look back on the extent to which these strategic documents succeeded in exacting impact on the development of traffic, improving the quality of the environment, and changing urban mobility patterns.

The analysis comprises two interconnected aspects. In the first section, there is a comparison between the content, methodologies, legal frameworks, goals, measures, and financial aspects of the Belgrade's and Podgorica's respective sustainable urban mobility plans. The second section focuses on the assessment of the Plans' implementation during the period 2020–2025, though an analysis of implemented measures, available monitoring-related data, budget allocations, and the results of residents' surveys in which the residents of both cities participated.

The results show that the Belgrade SUMP is substantially more comprehensive, more ambitious in financial terms, and more technically elaborated. The Belgrade Action Plan envisages investments amounting to multiple billion, it presents detailed infrastructure projects, and quantified goals for sustainable urban mobility development. The Podgorica Action Plan is smaller in size, but methodology-wise it is somewhat more modern, with a more pronounced focus on traffic safety, vulnerable groups, and the quality of public spaces.

At the same time, the analysis of implementation shows that a more ambitious plan does not necessarily mean a more successful realisation. During the period 2020–2025, Podgorica achieved a more consistent progress in implementing the planned measures, whereas in Belgrade, realisation was selective and not infrequently focused on individual infrastructure projects that did not arise directly from the priorities defined per the Sustainable Urban Mobility Plan.

Data relative to the monitoring of air quality and noise levels, as well as the results of residents' surveys, show that in both cities, road traffic is still one of the crucial sources of negative effects on the environment. In the survey, which was a part of this research and the analysis of the Plan application, the residents of Belgrade and Podgorica were almost unanimous in recognising the significance of investment in public transport, pedestrian and cycling infrastructure, as well as the increase in the size of green areas and natural shade along their daily routes.

The main conclusion of this analysis is that the quality of the Plan itself is not an indication enough of how successful the Plan is. Actual significance of sustainable urban mobility plans is measured by their impact on public policies, budgetary priorities, and day-to-day decisions which shape the development of the city. This is exactly why the assessment of implementation stands for the crucial criterion for evaluating how successful they are.

I Introduction - The context and methodological framework of the analysis

The subject of this analysis is the Sustainable Urban Mobility Plan of the Capital City of Podgorica, which was adopted on 24th February 2020, and the Sustainable Urban Mobility Plan of the City of Belgrade, which was adopted on 18th December 2020. Both documents were drafted in line with the European methodology for sustainable urban mobility planning (ELTIS), however in accordance with different editions of the Guidelines – the 2nd edition (2019) was used for the Podgorica Plan whereas the Belgrade Plan was drafted in line with the 1st edition of the Guidelines (2014).

The analysis is a combination of a normative analysis of relative planning documents with an analysis of their implementation during the period 2020–2025. In addition to the content of the relative Plans, the analysis also includes data which refer to the implementation of measures, results of air quality and noise levels monitoring, relevant planning documents, as well as the residents' perception as expressed in surveys conducted in Belgrade and Podgorica.

For data comparison purposes, it is necessary to bear in mind that the territorial coverage of the two Plans is not identical. The Belgrade POUM refers to the city's urban core and it covers ten out of a total seventeen city municipalities, whereas the seven suburban and outer municipalities were not the subject of a detailed analysis. Contrary to this, the Podgorica SUMP covers almost the entire administrative territory of the Capital City, with the exception of the Municipality of Tuzi, which in 2018 became a separate local administration unit.

A comparison between Belgrade and Podgorica is especially relevant if one keeps in mind that both cities adopted the relative sustainable urban mobility plans the same year, with an application of the European methodology, however in different institutional and legal frameworks, which makes it possible to evaluate the impact of various management models on the implementation of the two Plans.

II Significance and legal nature of the SUMPs

1. The European and regional framework of sustainable urban mobility

Sustainable urban mobility plans (SUMPs) stand for one of the key instruments of the European modern transport policies. Their purpose is not only to improve traffic but also to develop cities in which mobility adds to the quality of life, environmental protection, climate resilience, and social inclusion. Unlike traditional traffic planning, which primarily focuses on boosting the capacity of traffic infrastructure and vehicular traffic flow for motor vehicles, the concept of sustainable urban mobility has the needs of people and the residents' quality of life as the focal point of planning. The aim of such an approach is to develop a system of transport, which at the same time improves accessibility, promotes the use of sustainable modes of transport, diminishes negative impact on the environment, and contributes to climate resilience of cities.[1]

The importance of sustainable urban mobility plans has in recent years additionally strengthened within the European transport policies. The European Union recognises SUMP as one of the key instruments for achieving the goals of the European Green Deal and the Sustainable and Smart Mobility Strategy, bearing in mind that transport represents one of the major sources of greenhouse gas emissions and air pollution in urban areas.[2] This approach is additionally confirmed by **the Trans-European Transport Network (TEN-T) Regulation taking effect in 2024, whereby it is envisaged that urban nodes in the TEN-T network should adopt sustainable urban mobility plans and establish a system of regular monitoring of urban mobility indicators.** With this, the focus of the European policies gradually shifted from just adopting plans to their effective implementation and a continuous monitoring of results, and accordingly analyses of the implementation of the existing SUMPs also gained particular significance.[3]

The significance of sustainable urban mobility is especially distinct in the Western Balkan countries through the activities of the Transport Community organisation.

Based on the Treaty establishing the Transport Community, a framework for gradually aligning the transport sector in the region's countries with the EU legal acquis was set up, that is, with relevant regulations as mentioned in Annex I to the Treaty, among which is the TEN-T Regulation.[4]

1 European Commission, Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan (SUMP Guidelines); Commission Recommendation on National SUMP Support Programmes; ELTIS.
2 European Commission, Sustainable and Smart Mobility Strategy (2020).
3 Regulation (EU) 2024/1679 on Union guidelines for the development of the trans-European transport network (TEN-T); European Commission, Sustainable urban mobility planning and monitoring.
4 Treaty establishing the Transport Community (Council Decision (EU) 2019/392).

In accordance with this, the Strategy for Sustainable and Smart Mobility in the Western Balkans was developed, modelled on the EU Sustainable and Smart Mobility Strategy, with the aim of aligning the goals and measures of the European transport policies with the particularities of the region and ensuring a direction for transport decarbonisation, development of sustainable urban mobility, and improvement of the quality of the environment.[5]

The Strategy at the same time envisages that future EU regulations in the field of sustainable and smart mobility should gradually become a part of the Transport Community's legal framework, through a revision of Annex I to the Treaty, thereby confirming the direction of further aligning respective national transport policies with the European Union legal acquis.[6] **To the contracting members of the Transport Community, among which are both Serbia and Montenegro, this framework represents a foundation for gradually assuming and implementing European standards in the field of sustainable mobility.**

2. Legal status and the bindingness of sustainable urban mobility plans

In legal terms, sustainable urban mobility plans stand for strategic planning public policy documents. Their main role is not to regulate directly the rights and responsibilities of private individuals, legal entities, or investors, nor do they represent grounds for decision making in individual administrative proceedings. Instead, they offer a direction for future activities of public authorities by means of defining development goals, priorities, and measures in the fields of traffic, urban planning, environmental protection, energy, and other related sectors. In the hierarchy of legal acts, SUMP does not stand for a general legal act, but a strategic public policy document, whose bindingness is exercised primarily through its effects on public authority bodies and other holders of public authorisations.

Nevertheless, the fact that SUMP is not a regulation does not mean that it is not legally significant. On the contrary, its legal effect is reflected in relation to public authority bodies. Sustainable urban mobility plans represent a strategic framework which should provide directions for drafting other planning documents, rendering investment-related decisions, public investment planning, and traffic infrastructure development. Their purpose is not only to define the vision of development, but also to ensure a continuity of public policies and coordination across various sectors and management levels.

Although both the analysed Plans have the same role, their positions in the legal systems of Serbia and Montenegro are not identical. The Sustainable Urban Mobility

5 Transport Community Permanent Secretariat, Sustainable and Smart Mobility Strategy for the Western Balkans.
6 Ibid.

Plan of the City of Belgrade was adopted in line with the Law on the Planning System of the Republic of Serbia, which stipulates a single framework for drafting, implementing, monitoring, and assessing of planning documents. Such a legal framework establishes an institutional obligation to implement, monitor, report on, and assess planning documents, thereby ensuring a continuity of their implementation and periodic assessment of the realisation of defined objectives.[7]

On the other hand, the Sustainable Urban Mobility Plan of the Capital City of Podgorica was adopted based on the Articles of Association of the Capital City,[8] since in Montenegro there is not a special law that governs urban mobility plans, nor is there a single system for their monitoring and evaluation. The Plan's legal status arises from the system of local strategic planning, while the manner of its implementation, monitoring, and updating to a greater degree or extent depends on institutional practices and work process organisation of competent authorities.

This difference in legal frameworks can have practical implications on the implementation of the Plans. While the Law on the Planning System of the Republic of Serbia establishes a formal framework for monitoring and evaluating the implementation of strategic documents, the success of implementation in Montenegro to a large extent depends on the continuity of local policies, institutional capacities, and political willingness to keep sustainable mobility a long-term development priority.

At the same time, the formal legal status in itself is not an indication enough of the actual importance of a strategic document.

The effective bindingness of sustainable urban mobility plans is exercised primarily through their integration in other public policies – spatial and urban planning, budgetary planning, development programmes, and investment-related decisions, but also through day-to-day activities of competent institutions. This is exactly the reason why the analysis of implementation represents a key indication of true significance of these plans in practice. The quality of a plan cannot be evaluated solely according to how ambitious its goals are or how large the extent of envisaged measures is but primarily to what extent it affects the passing of public policies, investment-related decisions, and day-to-day activities of institutions in charge of the development of the city.

With this as a starting point, this analysis of the quality of the sustainable urban mobility plans is not assessed exclusively based on the content of these planning documents and quality of envisaged measures, but primarily according to the level of their implementation and to what extent they became an instrument for passing public policies and providing directions for the development of the cities.

7 Law on the Planning System of the Republic of Serbia (The Official Gazette of the Republic of Serbia, No. 30/2018), Art. 43, 19 (3).

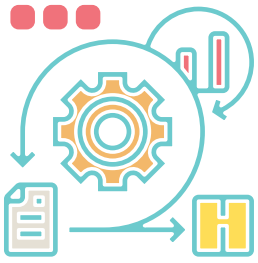
8 The Sustainable Urban Mobility Plan of the Capital City of Podgorica, adopted on 24th March 2020, https://starisajtskupstine.podgorica.me/wp-content/uploads/2020/02/19.-Prijedlog-plana-odr%C5%BEive-urbane-mobilnosti-Glavnog-grada-Podgorica.pdf.

3. Sustainable mobility and spatial planning

One of the main principles of the European SUMP methodology is the integration of planning mobility into spatial and urban planning. The European guidelines for drafting SUMPs take as a starting point the assumption that sustainable mobility cannot be observed as a separate traffic-related policy but rather as an integral part of the overall development of a city. The manner of using land, density of property development, layout of public amenities, and development of new residential and commercial areas, directly impact the patterns of population transit, need for transport, and possibilities for developing sustainable modes of mobility. For this reason, the level of alignment between SUMPs and spatial and urban plans represents one of the major indicators of institutional maturity of any city's management system.

From the spatial integration and traffic planning point of view, there are substantial differences between Belgrade and Podgorica.

Belgrade's currently prevailing Master Plan was adopted in 2016, i.e., four years before the adoption of the Sustainable Urban Mobility Plan. Since the Master Plan had been drafted before the SUMP, it could not recognise the latter's goals, measures, and indicators. At the same time, the currently prevailing Master Plan contains multiple principles which are in line with the modern concept of urban mobility – development of public transport, intermodality, environmental protection, improvement of accessibility, and a more rational space utilisation. However, these two documents do not share either a formal or functional connection which would allow spatial planning to become an instrument for achieving the goals of urban mobility. In practice, this makes it difficult for the goals of urban mobility to be systematically integrated into future decisions on spatial development of the city.



A similar conclusion can also be drawn regarding the new Draft Master Plan of Belgrade (by 2041). Although it was drafted after the SUMP had been adopted, almost all of the modern terminology is used in the mentioned Draft – sustainable mobility, multimodality, development of cycling and pedestrian traffic, improvement of public transport, reducing the negative impact of traffic – but at the same time it rarely, or almost never, makes a reference to the existing Sustainable Urban Mobility Plan, as a strategic document whose goals need to be operationalised by means of spatial planning. This gives the impression that the two documents work in parallel instead of constituting a single system of planning.

Contrary to this, in Podgorica, a higher degree of conceptual alignment between the Spatial-Urban Plan and the SUMP can be noticed. The Spatial-Urban Plan of the Capital City, adopted in 2014, represented the foundation on which the SUMP was later built. Although this planning document does not contain unambiguous references to the SUMP (which is understandable, given the timeline), both documents share the same development rationale. The development of new neighbourhoods, layout of public amenities, protection of public spaces, parking management, development of public transport, and the improvement of walking and cycling facilities, which are all seen as mutually connected elements of the city's overall development, rather than separate sectoral policies.

This difference is not just formal in nature. It is also reflected in the manner in which the cities plan respective development. **While in Belgrade one can still perceive a predominantly infrastructure-based approach, in which spatial development often comes before the system of urban mobility, Podgorica to a higher degree tries to observe spatial planning and transport as mutually conditioned processes.**

With the mentioned normative and methodological framework as a starting point, the below segment of the analysis examines to what extent the planned urban mobility measures were implemented in Podgorica during the period 2020–2025. Special focus is placed on the evaluation of whether the activities envisaged per the respective SUMPs resulted in measurable changes in the areas that had been recognised as their key goals, including the improvement of sustainable modes of transport, environmental protection, and the quality of life.

III A comparative analysis of the sustainable urban mobility plans

1. Starting condition

A comparison between the Belgrade and Podgorica sustainable urban mobility plans should be seen in a way that takes into account that the two cities at the time of the respective Plans being adopted were in substantially different traffic and urban circumstances. In addition to the difference in the size of the cities and size of relative populations, what is significantly different are motorisation rates, structure of trips, and the role of sustainable modes of transport in day-to-day mobility. Apart from this, territorial coverage of the Plans is not identical – the Belgrade PUOM refers to the city's urban core, i.e., 10 out of 17 city municipalities, whereas the Podgorica SUMP covers almost the entire administrative territory of the Capital City.

Figure 1 | Starting geographical and traffic indicators of Belgrade and Podgorica

Data	Belgrade	Podgorica
Population	≈ 1.2 million (10 municipalities — POUMs coverage); 1.66 million (all 17)	185,937 (the 2011 census); 199,715 (estimated in 2018)
Administrative area	3.222 km² (all 17 municipalities)	≈ 1.441 km² (entire territory)
Motorisation rate (2017)	≈ 307 passenger cars/1,000 inhabitants[9]	347 passenger cars/1,000 inhabitants[10]
Modal split — public transport	50%	—
Modal split — walking	25%	—
Modal split — car	24%	≈ 89% (motorised)
Modal split — cycling	0,8%	—
Modal split — other[11]	0,2%	—
Other methods (PUT + walking + cycling)	≈ 75,8%	11%

9 Belgrade's motorisation rate — the Belgrade POUM (adopted on 18th December 2020), starting condition — the Belgrade POUM, Closing report

10 Podgorica's motorisation rate and modal split — The Capital City of Podgorica SUMP (adopted on 24th February 2020)— The Podgorica SUMP

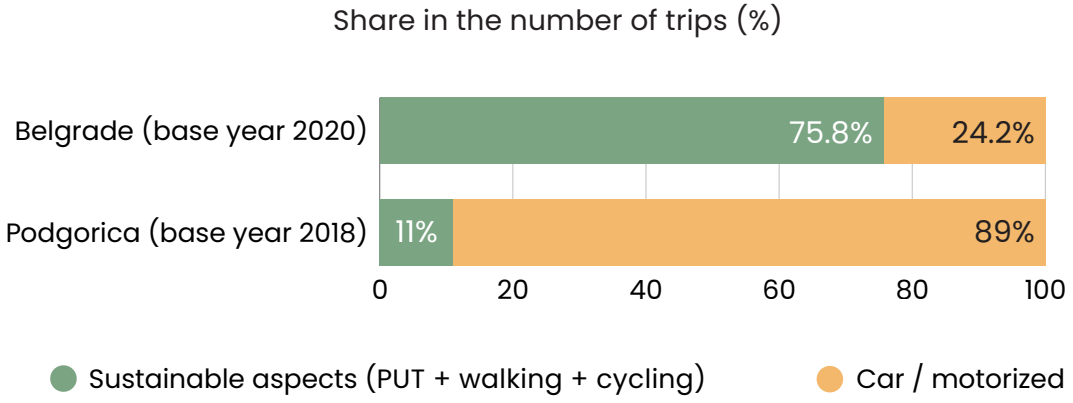
11 "Other" comprises other modes of transport, outside the four main categories, e.g., taxis, motorcycles, as well as combined and non-categorised modes of trips. It adds up to ≈0.2% in Belgrade's modal split.

One of the most important indicators of the starting condition is modal split, i.e., the share trips divided per mode of transport.[12]

During the base year, Belgrade had a much higher share of sustainable mobility modes (public transport, walking, cycling), with approximately 75.8% of all trips, primarily thanks to a high share of public transport and walking. Contrary to this, the share of sustainable mobility modes in Podgorica was as low as 11%, which is an indication of a much higher reliance on passenger cars. These differences represent an important basis for understanding the goals of both the Plans, and subsequent assessment of their respective implementation. However, a high share of public transport in Belgrade (50%) was not a reflection of the quality of this service but rather a result of financial and social circumstances. Subsequent studies of public transport, which were conducted after the SUMPs had been adopted, also flagged this issue. These showed that public transport, despite major investments, lost a considerable portion of travellers — the share dropped from 50% to approximately 40%, with a tendency of further decrease.

The causes are a major increase in motorisation rates and the inefficiency of public transport vs. passenger cars. This implies the presence of a trend which is contrary to the Plan's goals, which envisaged maintaining a high share of public transport.

Graph 1 | Modal split during the base year



12 Base (starting year) is not the same for the two Plans. In the Belgrade POUM, data relative to modal split derived from the 2015 transport model, but relative fine-tuning was carried out, so 2020 is considered to be the base year. With the Podgorica SUMP, specific goals were defined in relation to 2018, so 2018 is the base year for Podgorica. See the Glossary.

Different starting positions of the two cities provide an explanation for different aspirations of the two Plans, especially in terms of the goals relative to modal distribution and priority measures. The comparison is asymmetrical in some aspects since the same type of data were not available for both cities. As regards Podgorica, a detailed modal split per every mode (not just the cumulative share of sustainable modes) was not released, nor is there a mention of the precise administrative area in the Plan itself, or a confirmation of the adoption of envisaged strategies. As regards Belgrade, there is no data on the total number of participants, nor are there public reports on a monitoring system. Financial figures used for the drafting of the Plans are not fully publicly available for either of the cities. Where relative data are missing, this is explicitly mentioned in the text, with the estimates being clearly separated from documented values.

2. Main features of the Plans

Although the two Plans were adopted the same year, with both being based on the same European methodology for sustainable urban mobility planning, the Belgrade and Podgorica Plans are different in terms of coverage, methodological approach, time horizon, and priorities. These differences have an impact not only on the content of the Plans themselves, but also on the manner of their implementation and possibility of achieving the set goals.

Figure 2 | Main elements and main focus of the two Plans

Element	Belgrade	Podgorica
Adopted on	18th Dec 2020	24th Feb 2020
Time horizon	Action Plan phased by 2031	2020–2025 Plan, vision by 2035
ELTIS edition	1st (2014)	2nd (2019)
Territory	10 out of 17 municipalities (urban core)	entire administrative territory
Main focus	the environment and emissions, multimodal PUT	safety, vulnerable groups, children, gender aspect
Funding model for drafting	tender (city budget)	donation (GIZ/BMZ)

The differences between the two Plans do not arise solely from different sizes of the cities but also from different development priorities and methodological approaches. The Belgrade Plan places stronger focus on the improvement of public transport, multimodality, and a reduced negative impact of traffic on the environment, whereas the Podgorica Plan places stronger focus on the safety of traffic, vulnerable groups' needs, children, and the gender segment of mobility, as per the more recent edition of the ELTIS Guidelines.

3. The process of drafting and institutional framework

The Plans were drafted in different institutional frameworks. The Belgrade POUM was drafted following a public procurement process and was funded from the city's budget, whereas the Podgorica SUMP was drafted with international technical and financial support through the SUMSEEC II programme[13] effected by GIZ, with funding provided by BMZ. Despite the different methods of drafting, both Plans stand for the first strategic documents of sustainable urban mobility in those cities.

The manner of involving the public in drafting the Plans is also different. In Belgrade, 19 workshops and consultative events were held, along with a digital campaign and mapping of the stakeholders, whereas Podgorica carried out a markedly structured participatory process in which approximately 5,000 residents took part, including pupils and secondary school students, parents, cyclists, and other target groups. In addition to this, when the Podgorica SUMP was being drafted, a BYPAD audit of the cycling policies was conducted, as well as gender and mobility analyses.

The quality of the Belgrade Plan was also recognised on a European level, so in 2021, the Belgrade POUM was among the finalists for the European Commission's 9th SUMP Award, with some of other finalists being Grenoble (France) and Bilbao (Spain)[14]. The Belgrade SUMP received the award for ambitious implementation targets, despite a lack of quality infrastructure for active and sustainable modes of transport.

13 SUMEEC II — sustainable urban mobility technical assistance programme for Southeast Europe, funded by the German ministry BMZ and carried out by GIZ. Through this programme, Podgorica was provided the drafting of the Plan without a tender; see the Glossary.

14 EU Urban Mobility Observatory — Belgrade, finalist of the 9th SUMP Award — https://urban-mobility-observatory.transport.ec.europa.eu/resources/case-studies/belgrade-finalist-9th-sump-award-challenging-reality-meets-ambitious-targets_en

4. Visions and goals

Belgrade summarised its vision in the Serbian acronym "POKRET" (movement), and this vision is broken down into six principles. Podgorica provided a descriptive explanation of its vision — the city that focuses on the person and the quality of life, with an efficient, safer, accessible, and socially fair system — with 2035 as the time horizon.

Belgrade defined nine goals, of which the first four have quantifiable targets in terms of modal split: maintain walking at 25%, increase cycling from 0.8% to 4%, maintain public transport at a minimum of 48%, and decrease car reliance to 20%. The other five goals are qualitative. Podgorica has five strategic goals, with almost each of them having baseline values from 2018, and a quantitative target by 2025.

Figure 3 | Key targets of the two Plans

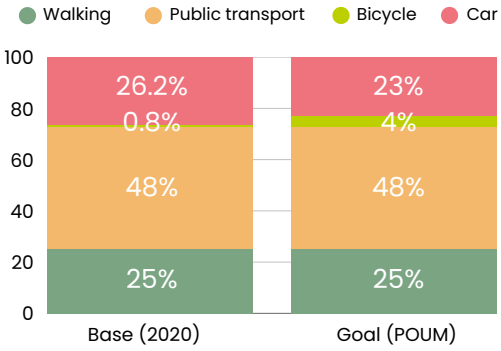
Belgrade — target (modal split)	Podgorica — target (by 2025)
Walking: maintain at 25%	Sustainable modal split: 11% → above 30%
Cycling: 0.8% → 4%	Public transport line frequency: 30 → 15 min
Public transport: minimum 48%	Parking charge fine: 25.11% → 100%
Car reliance: decrease to 20%	Accidents involving injuries: 527 → 369
+5 qualitative goals (social fairness, natural resources, emissions, urban quality, municipalities)	Driving children to school: 27%→13% / 20%→10%
	Average age of PUT vehicles: 16 → 14 yrs
	Increase in motorisation rates: 6.6% → under 3%

The difference in the type of these goals is essential. As shown above, Belgrade has more ambitious targets for modal split (increase in cycling from 0.8% to 4%, which is a fivefold increase). On the other hand, Podgorica has more moderate individual targets, but they are systematically broken down per group of passenger and subsystems, which makes the Plan measurable.

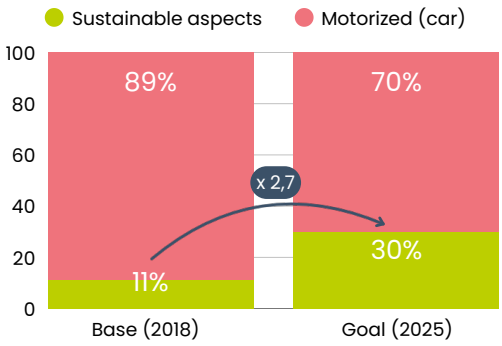
The visions of the two cities can be seen the most clearly through targeted modal split, i.e., where each of the Plans wants to shift the distribution of trips in relation to the base year.

Graph 2 | Targeted modal split. Belgrade upholds the high share and redistributes it towards cycling; Podgorica aims for an increase in sustainable modes of transport.

Target modal split - where each plan leads the trip distribution



Belgrade - defends a high share, only the bicycle is growing (0,8% → 4%)



Podgorica - leap of sustainable aspect (11% → above 30%)

Targeted modal split shows two different strategies of the development of sustainable mobility. The starting point for Belgrade is a much more sustainable modal split, since public transport and walking add up to three quarters of trips as it is.

In this context, Belgrade primarily aims to maintain the already high level of sustainable modes and to increase the share of bicycle traffic, and this from 0.8% to 4%. Unlike this, Podgorica starts from a low share of sustainable modes (as little as 11%) and sets the goal of their substantial increase, which is almost threefold (above 30%). As for Belgrade, it is striving to maintain and increase the existing share of sustainable modes, whereas Podgorica is trying to build a significantly higher share of sustainable mobility from a very low starting point.

These are two entirely different tasks, and accordingly there are different underlying risks in their implementation. These differences are important for subsequent assessments of implementation because the two Plans respectively define two completely different tasks, with different starting conditions.

5. Structure and elaboration of measures

Both Plans arrange measures in packages, but in a different manner. Belgrade makes a set of measures under nine goals, with two transverse packages — Package 0 (general activities) and Package 10 (infrastructure activities). Podgorica groups approximately 50 measures in packages within five strategic pillars.

The number of measures is similar (approximately 50 in both Plans), but with different levels of elaboration. The measures in Belgrade are elaborated in more detail and are defined more specifically. The best example of this is cycling: in Podgorica, this measure is worded "drafting a Cycling Strategy", while in the package entitled "Ensuring high-quality infrastructure", there is a mention of the measure worded "Implementation of measures from the Cycling Strategy", which leaves ample room for subsequent elaboration. In the Belgrade POUM, cycling corridors are precisely defined per stages, **with a total length of the network growing from 102 km to 493 km within ten years (approx. 145 km by 2023, 95 km by 2028, and 265 km by 2031)**.

Furthermore, Belgrade has a special set of prompt measures (early-effect interventions, ranging from a month to a year)[15], while Podgorica has no such measures. Belgrade performed an evaluation of measures within the Plan itself, whereas Podgorica envisaged an MCDA and cost-benefit analysis as late as the monitoring stage. This is to say that the Belgrade Plan is more elaborated and concrete in technical terms, whereas the Podgorica Plan leaves a major part of elaboration for later stages of implementation.

5.1. Link between the goals and measures

The schematic below shows how in both Plans the strategic goals/pillars are linked through appropriate packages of measures, more specifically, the right-hand side column lists and groups the measures whose realisation aims to accomplish specific goals, as presented in the Plans.

Figure 4a | Beograd — nine goals and two transverse packages (organisational chart of the measures)

No.	Goal/package	Types of measures within a goal
G1	Walking (maintain at 25%)	pedestrian zones and areas, improving streetscape, micro interventions
G2	Cycling (0.8% → 4%)	cycle tracks network 102→493 km in stages, a public bicycle system, bicycle parking
G3	Public transport (≥ 48%)	development of PUST, track subsystems, traffic prioritisation (yellow lanes), river public transport

15 "Set of prompt measures" — interventions with promptly visible effects, which do not require major investments or lengthy procedures (changes in traffic regime, signage, minor rearranging of streetscape). The timeframe is typically between several months and up to one year. See the Glossary.

No.	Goal/package	Types of measures within a goal
G4	Car reliance (decrease to 20%)	P+R on the outskirts, public parking garage, parking management, shared mobility, MaaS
G5	Traffic safety	blackspot remediation, traffic calming (qualitative goal)
G6	Social fairness and accessibility	accessibility for PWDs, equal service (qualitative goal)
G7	Preserving natural resources	green corridors, spatial protection (qualitative goal)
G8	Reducing emissions and energy consumption	e-mobility, emissions control, energy efficiency
G9	Balanced development of municipalities	connecting municipalities, equal development of the network
P0	Package 0 — general activities	institutional, planning, and organisational measures which serve all the goals
P10	Package 10 — infrastructure activities	major thoroughfares (SMTs, UMPs, bridges), upon which multiple goals rely

Figure 4b | Podgorica — five strategic goals (organisational chart of the measures)

No.	Strategic pillar	Types of measures within a strategic pillar
S1	Public transport	reorganisation of public transport providers, public transport line frequency, fleet renewal, providing information to passengers
S2	Non-motorised traffic (walking and cycling)	pedestrian zones, a Cycling Strategy, cycling infrastructure
S3	Traffic and parking management	controlled parking zones, controlled access, push-and-pull, dedicated use of generated income
S4	Safety and vulnerable groups	keeping children safe in school zones, accessibility for PWDs, gender aspect of mobility
S5	Institutional framework, monitoring, and the environment	sub-strategies, monitoring (MCDA/CBA), SECAP, and CO_2 emissions monitoring

Note on the source: *the schematic is drawn based on the structure of goals and pillars as defined in the Plans themselves[16]. Categorising certain measures under a goal is analytical, since the Plans do not always provide an explicit matrix of measures and targets; for goals which are qualitative, this is duly mentioned.*

16 Organisation of the goals/pillars and packages of measures — the City of Belgrade POUM (2020) and the Capital City of Podgorica SUMP (2020) — primary planning documents

6. Key priorities of the Plans

Car and parking management

Belgrade presents an infrastructure-service package: Park & Ride on the outskirts, public parking garages, shared mobility, MaaS, e-mobility.

Podgorica has a demand-based approach: controlled parking zones, push-and-pull logic, controlled access, and dedicated use of parking-fee-generated revenues. Belgrade to a higher degree envisages infrastructure and service-based responses to car reliance, whereas Podgorica places stronger focus on demand management and the control of car reliance.

The environment

Belgrade elaborates in more direct terms this aspect of the Plan, which can be seen in the measures it envisages: two explicitly environmental goals, building green corridors, emissions control, electric vehicle incentivisation.

In Podgorica, the environmental aspect is connected to SECAP and CO_2 emissions monitoring, as a consequence of other measures, rather than it being a separate pillar.

Safety and vulnerable groups

In terms of the safety and vulnerably groups, relevant focus is more pronounced in the Podgorica Plan. Safety, as a measurable goal, places focus on children, persons with disabilities, and the gender aspect.

Belgrade deals with these through the fifth goal, however without equivalent quantification and without the gender aspect. In short, Belgrade is “greener” on paper, while Podgorica is “more socially sensitive”.

IV Financial framework of the Plans

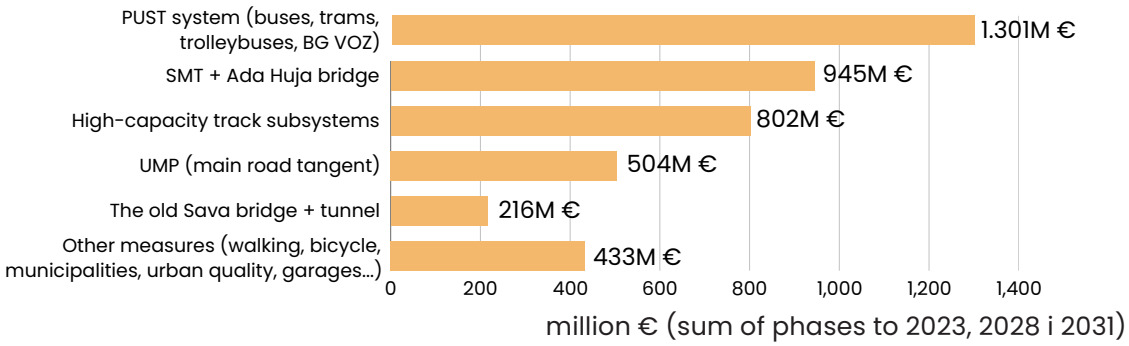
1. Value and structure of the Action Plans

One of the indicators of the scope and ambitions of the Plans are also relative financial frameworks anticipated for their realisation. The Action Plans in both sustainable urban mobility plans contain an estimate of budget required for implementing the planned measures, however, with major differences that can be identified between the two cities. The Belgrade Action Plan has stages in three cut-off years (by 2023, 2028, and 2031) and contains an estimated cost structure per measure and stage.

Planned investments envisaged per the Belgrade SUMP amount to several billion of EUR, which is an indication of an extremely ambitious investment framework. On the other hand, the Podgorica Plan envisages a substantially more modest financial framework, of as little as several million EUR, whereby the highest individual item refers to public transport subsidies (approx. EUR 500,000).

In order to make a realistic assessment of the Belgrade Plan, the **metro** should be observed as a separate project. Its value is estimated at **EUR 3,402 million** (for 30 km, in two phases: of 17 km and 13 km) and it is funded from an interstate agreement rather than the city's regular budget[17]. This project being observed separately offers a clearer picture of how financially encumbered by the SUMP the city itself would be. The graph below shows a cost structure that does not include the metro, as well as a total value of the Action Plan (without the metro), which **adds up to approximately EUR 4.2 billion**. The presented amount should be observed as a minimum estimated value of the Action Plan, since the document does not show in the estimated costs, the costs that relative to certain soft measures and a part of activities. The actual value of the Plan can therefore be slightly higher, which does not change the conclusion about its financial scope.

Graph 3 | Cost structure of the Belgrade Action Plan (without the metro). The PUST system and major thoroughfares are predominant.



Estimates from Table 7.2 POUM of Belgrade. Metro (€3,402M) excluded - financed from the interstate agreement. Some soft measures without an assigned value, so the amount is the lower limit.

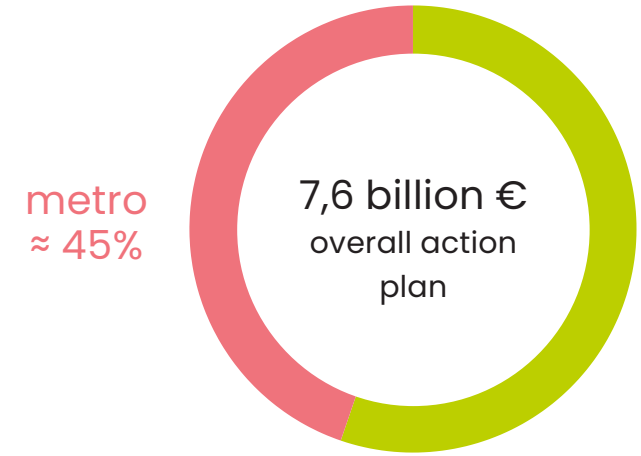
17 The Contract for the design and construction of the transport system for Line 1, Phase 1 of the Belgrade Metro — https://www.danas.rs/vesti/ekonomija/potpisan-ugovor-za-projektovanje-i-izgradnju-prve-linije-beogradskog-metroa/.

The majority of planned investments in Belgrade refer to the development of the public urban transport system (approx. EUR 1.3 billion) and the construction of major traffic infrastructure, primarily the outer main road tangent, with the Ada Huja bridge across the Danube, and the inner main road semi-ring. Contrary to this, the measures relative to active mobility, reduction in emissions, and the improvement of energy efficiency, add up to a small part of the total planned investments. Thus, the structure of the Action Plan shows that the focus of investments is mainly on the development of public transport and road infrastructure, whereas the so-called "green measures" have a significantly more modest financial share.

Graph 4 | The metro represents almost a half of the total value of the Action Plan (≈EUR 7.6 bln with the metro)

The rest of the plan ≈ 55% (of which JGTP ≈ 1.3 billion, highways ≈ 1.45 billion)

Metro is financed from an interstate agreement - that is why it stands out in the analysis.



Since the metro project is funded from a separate interstate arrangement, its value was not included in this analysis in order to get a clearer picture of the investment framework stemming from the POUM itself. **With the metro included, the overall value of the Action Plan is as much as approx. EUR 7.6 billion, of which the metro adds up to almost half the amount of the total planned investments (approx. 45%).** However, **even without the metro, the Belgrade Action Plan remains multiple times larger in terms of scope than is the case with the Podgorica Action Plan, and it also includes various projects of strategic importance for the development of the city's traffic system. The best illustration of this is the following comparison: the entire Podgorica Action Plan, with all its measures, is lower in value than one single item of the Belgrade's Action Plan — the construction of a new cycles track network (approx. EUR 30 million).** This piece of information does not necessarily show that the Podgorica Plan is lacking in quality, but mainly that there is a difference in the size of the two cities, and respective approaches to planning.

The difference between the two Plans becomes particularly noticeable if the value of planned investments is observed in relation to the size of relative populations, which is shown in the figure below.

Figure 5 | Value of the Action Plan, in absolute terms and per inhabitant

Indicator	Belgrade	Podgorica
Value of the Action Plan (in absolute terms, without the metro)	≈ EUR 4.2 billion	≈ EUR 1.5–2 million (estimated)
Population size	≈ 1.2 million	≈ 200.000
Value per inhabitant	≈ EUR 3,500 €/inhabitant	≈ EUR 8–10/inhabitant (estimated)
Time horizon of the Plan	by 2031	by 2025

A comparison per inhabitant confirms that the difference remains striking. Namely, the Belgrade Action Plan is in terms of size by several hundreds of times higher than the Podgorica Action Plan. In other words, not only is the difference a consequence of the size of the two cities, but it is also a reflection of essentially different ambitions and scopes: **the Belgrade Plan carries substantial traffic infrastructure (track systems, arterial roads, bridges), whereas the Podgorica Plan mainly comprises soft and organisational measures.** For interpretation purposes, one should keep in mind two facts: the Belgrade horizon is longer (by 2031 as opposed to Podgorica's, by 2025), and that Podgorica's total amount is an estimation since a part of the measures does not have an allocated monetary value.

2. Ratio of planned investments and the cities' budgets

The value of the respective Action Plans should also be observed in relation to the cities' financial capacities, so as to assess how realistic their achievability is. In doing so, one should keep in mind that the respective Action Plans represent multi-year investment frameworks, whereas the city's budgets are annual financial instruments. This is the reason why the total value of the respective Plans cannot be directly compared to one annual budget, so it is more appropriate to observe the average annual investments envisaged per the Plans.

During the observed period, Belgrade availed itself of the annual budget of approximately **EUR 1.1 to 1.8 billion**, whereas Podgorica's budget ranged between **EUR 90 to 165 million**. Although Belgrade's budget is approximately ten times the amount of Podgorica's budget, both cities saw a gradual increase in budget revenues throughout implementation periods of the Plans.

If observed through the average annual investments point of view, the Belgrade Action Plan (without the metro) stood at **EUR 380 million annually**, which is approximately **a quarter of the city's annual budget**. In financial terms, this represents an ambitious but achievable plan for a city the size of Belgrade, especially if one keeps in mind that a portion of the largest infrastructure project is funded from the Republic budget, proceeds of international loans, or from special financial arrangements.

Contrary to this, the estimated annual value of the Podgorica Action Plan is as little as around **EUR 300-400,000**, which is approximately **0.2-0.3% of the Capital City's annual budget**. Such a financial framework is an indication of the Plan not representing a major budget

encumbrance and that the major part of envisaged measures can be realised from local administration's regular activities, or with assistance from national and international sources of funding.

Figure 6 | Average annual investment from the Plan as a share in the city's annual budget

Indicator	Belgrade	Podgorica
Action Plan, total (without the metro)	≈ EUR 4.2 billion	≈ EUR 1.5-2 billion
Duration of the Plan	≈ 11 yrs (2020–2031)	≈ 6 yrs (2020–2025)
Annual average from the Plan	≈ EUR 380 million	≈ EUR 0.3–0.4 million
Annual budget of the city (roughly)	≈ EUR 1.6 billion	≈ EUR 130–160 million
Share of the Plan in annual budget	**≈ 24%**	**≈ 0,2–0,3%**

What is particularly worth mentioning is that the City of Belgrade is already allocating a substantial portion of its budget for traffic purposes.

In the 2026 budget, expenditures related to the organisation of traffic and traffic infrastructure added up to approximately **one third of the City's total budget (33.6%)**,[18] which makes this field the single largest item. Nevertheless, as shown in the analysis, the high allocations for traffic purposes were not necessarily directed at the realisation of priorities defined per the POUM but primarily at the construction and maintenance of roads and subsidising public transport rather than using the funds for a shift in modal split.

Podgorica's CapEX in 2025 amounted to approximately EUR 87 million (approx. 57% of the budget), of which the major portion went to the local infrastructure[19].

Overall, the cities' respective financial capacities in themselves do not explain the differences between the two Plans' implementation. The Belgrade Plan is much more demanding in financial terms but its realisation was not unachievable for a city the size of Belgrade. At the same time, the Podgorica Plan represented a relatively modest financial task. This leads to the conclusion that the differences in implementing the Plans should be primarily sought in the set priorities, institutional capacities and continuity of implementation, rather than solely in available financial resources.

18 The organisation of traffic is the single largest item in the 2026 City of Belgrade budget — RSD 63.84 billion/33.56% — https://www.radiostoplus.com/usvojen-budzet-grada-beograda-za-2026-godinu/.Podgorica's 2025 CapEx —

19 EUR 87.08 mln/≈57% of the budget — https://gradski.me/budzet-glavnog-grada-planiran-u-iznosu-od-153-miliona-20-vise-nego-ove-godine-za-kapitalne-projekte-87-miliona/.

V Five years of implementation: what was achieved?

1. Expected effects of a full implementation

Before assessing the level of achievement of the planned measures, it is useful to review the changes envisaged per both Plans, in the event of their full implementation. The Plans do not define the same indicators, nor do they share the same starting condition, due to which the expected effects are different in terms of scope and nature. What is shown below are the key targeted values, as presented in the Plans themselves, i.e., indicators based on which the cities measured expected success of the implementation of respective Plans.

Belgrade — the effect of a full realisation of the POUM

A full realisation of the Belgrade POUM would first of all entail that the already high share of sustainable modes of transport (approx. 77%) is maintained, with a gradual decrease in car reliance, and a substantial growth of bicycle traffic. **The most substantial quantitative step forward in the Plan is envisaged specifically in the development of cycling infrastructure (an increase of almost five times – from 102 km to 493 km), as well as a five times higher share of cycling in the total number of trips**, whereas the goals in terms of emissions reduction are defined in qualitative terms, without precisely defined targeted values.

Figure 7 | Belgrade — base and targeted values in the scenario of a full realisation of the POUM

Indicator	Starting condition	Goal (full POUM)
Share of car reliance	24%	20%
Share of bicycles	0,8%	4%
Cycle tracks network	102 km	493 km
Share of public transport	50%	≥ 48%
Walking	25%	25%
Sustainable modes total	75,8%	≈ 77%
Emissions and energy consumption	—	reduction

Podgorica — the effect of a full realisation of the SUMP (by 2025)

Unlike Belgrade, Podgorica's Plan envisages a **significantly noticeable change in the starting condition**. The goals include a threefold increase in the share of sustainable modes of transport, improved quality of public transport, and this in doubling the frequency of vehicle arrivals, a reduction of approx. one third in traffic accidents involving injuries, an approximately halved reduction in children driven to school by car, collecting all parking fines, renewed fleet, and a significantly slower increase in motorisation rates.

Nevertheless, if one keeps in mind a very low starting share of urban mobility, even in the event of a full Plan realisation, Podgorica would still remain the city in which car reliance is predominant (approx. 70% of motorised trips). In other words, the Plan primarily envisages a substantial step forward towards more sustainable urban mobility, rather than a radical change in the existing system, i.e., transit patterns.

Figure 8 | Podgorica — base and targeted values in the scenario of a full realisation of the SUMP

Indicator	Base value (2018)	Targeted (2025)
Sustainable modal split:	11%	above 30%
Public transport line frequency	30 min	15 min
Public suburban transport line frequency	120 min	60 min
Accidents involving injuries	527	369
Driving children to school (primary/ secondary schools)	27% / 20%	13% / 10%
Collection of parking fines	25,11%	100%
Average age of PUT vehicles	16 yrs	14 yrs
Traveller satisfaction with PUT	13%	above 20%
Annual increase in motorisation rates	6,6%	under 3%

When observed side by side, the Plans have a different development logic. The Belgrade POUM primarily aims to maintain the already high share of sustainable modes of transport and improve certain segments of the system, especially cycling infrastructure. In contrast to this, the Podgorica SUMP envisages a substantially deeper shift in the patterns of mobility, in terms of predominant car reliance. But, the starting point for this is substantially more disadvantageous, so a full success, that is to say, absolute implementation of all the measures, still would not make Podgorica a city that is "sustainable by European standards".

2. An assessment of the Plan implementation

Following a review of the objectives set by the Plans, what is considered below is to what extent these goals were achieved in the first five years of their implementation. The analysis is based on publicly available data, official reports, available information on the achievement of individual measures, as well as based on onsite visits.

In doing this, three limitations should be borne in mind. Firstly, public visibility of certain measures does not necessarily have to respond to their actual achievement, since infrastructure projects are much more easily monitored than organisational and regulatory measures. Secondly, available sources differ in terms of the scope and quality of information. Thirdly, a comparison between the two cities is not entirely symmetrical since the Podgorica Plan is envisages by 2025, while the Belgrade Plan was adopted by 2031. This is why implementation in Belgrade is assessed after the first half of the Plan-envisaged period, whereas for Podgorica, assessment is made for the almost completed period of implementation.

2.1. **Belgrade:** a weakening institutional support

The analysis of the Belgrade PUOM implementation shows that following its adoption, a continuity of institutional and political support necessary for consistent implementation of the Plan was not ensured. Namely, the period following December 2020 was marked by staffing changes in competent city Secretariats, while the commencement of implementation was followed by a municipal election and a long period of provisional financing, which made it additionally difficult to maintain continuity in the operation of city administration. A new set of organisational and staffing changes ensued.

According to experience of the experts who participated in the drafting of the POUM, it gradually started losing institutional "ownership" (stakeholder ownership) after the initial period. Although a working group for monitoring implementation was formally set up, there are no available reports on its activities nor are there any regular assessments of the level achievement of planned measures. At the same time, there is more and more indication of certain activities of the city having been planned and implemented beyond the priorities defined per the POUM, and in certain cases, they were in contrast to them. Since this is a strategic document whose period of implementation is envisaged until 2031, maintaining institutional continuity represents one of the crucial prerequisites for its successful implementation.

2.1.1. Walking

Measures for the improvement of pedestrian traffic were not systemically implemented. Instead, they were implemented through individual interventions whose scope was limited. Expanding the pedestrian zone towards the Sava slope, as envisaged per the POUM, was never realised, while interventions that were performed were mainly limited to the area around Skadarska Street. Given the fact that the Action Plan envisaged improvements to at least 10 to 15 km of pedestrian areas annually, the achieved scope of works remained significantly below what had been planned.

At the same time, during the observed period, there were some individual interventions which were not in line with the POUM's objectives. On certain locations, pedestrian crossings were cancelled, mainly for higher traffic flow purposes. This resulted in pedestrian routes becoming longer and less direct. Such interventions are an indication that in some cases, priorities in terms of traffic management were directed at increasing capacities for motor vehicles, rather than the improvement of conditions for walking, which is not in line with the main principles of urban mobility.

2.1.2. Bicycle traffic

Bicycle traffic stands for one of the key areas in terms of assessing the implementation of the Belgrade POUM, since the Plan envisaged an increase in the share of cycling in the total number of trips from 0.8% to 4%, as well as growing the cycle tracks network from 102 km to 493 km. This is specifically why the level of realisation of measures in this area represents one of the most significant indicators of how successful the Plan implementation was.

During the period 2020-2025, approximately 20 km of new cycle tracks were built, mainly as part of the Belgrade Waterfront complex. If observed from the absolute figures' point of view, this represents a larger scope than what was achieved during the same period in Podgorica. However, in relation to targeted values envisaged per the POUM, that is, an increase in the cycle tracks network from 102 km to 493 km, what was achieved is significantly below the achievement rate required for reaching the planned share of cycling (4%) in modal split.[20]

20 Cyclists in Belgrade — new kilometres of cycle tracks are taking forever — https://www.rts.rs/lat/vesti/drustvo/5423675/biciklisti-u-beogradu-moraju-da-se-snalaze--novi-kilometri-staza-nikako-da-osvanu-.html.

At the same time, a part of the built infrastructure was not preserved. During the observed period, cycle tracks were cancelled in Nikola Dobrović, Vasina, Crnogorska, and Studentska Streets, near 11th April St., while certain sections were turned into combined pedestrian-cycling areas. An especially illustrative example is that of Crnogorska St., where the cycle track was removed just several years after it had been built. Such interventions show a lack of consistency in the implementation of the Plan — city administration builds and demolishes the same infrastructure with the span of one term in office. There is no continuity in developing cycling infrastructure, which makes it difficult to achieve long-term goals defined per the Plan.

Also, there was no substantial improvement in terms of other measures envisaged per the POUM. A public bicycles system was never put in place, although the process of public procurement had been initiated, no contract was ever signed[21]. On the other hand, the development of shared mobility proceeded mainly through individual initiatives from the private sector, without any systemic support from the city, in a manner envisaged per the POUM, i.e., in the form of relative regulatory framework, dedicated parking locations, or integration with public transport.

Overall, the implemented activities do not reveal any systemic transformation of the conditions for developing bicycle traffic. In spite of individual infrastructure investments, the realisation of measures remained limited compared to the Plan's ambitions, whereas investments continued to be predominantly aimed at infrastructure necessary for motor traffic. All things considered – there is no development trend that correlates to modal split, it is even the opposite of the goals of sustainable urban mobility.

2.1.3. Public transport

During the period 2020-2025, the majority of investments into public transport referred to the fleet renewal. 25 new trams were purchased, procurement procedures for additional 100 trams were initiated,[22] as well as tenders for 130 articulated CNG buses and 170 single buses. Nevertheless, the activities were primarily aimed at the fleet renewal, whereas measures relative to the improvement of operation of the public transport system were lacking to a great extent.

21 Helbiz quits — plan for the public bicycles system in Belgrade to be changed. — https://srda.rs/helbiz-odustao-plan-se-menja-da-li-ce-beograd-dobiti-sistem-javnih-bicikli/.

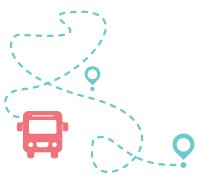
22 Belgrade's PUT to buy 100 more new trams — https://n1info.rs/biznis/gsp-beograd-nabavlja-jos-100-novih-tramvaja/.

At the same time, Belgrade introduced free public transport for all passengers, and thus became the only European city of this size with such a model of financing. This is a major social measure, but available data do not indicate that in the long run, it put an end to a long-term drop the share of public transport in modal split.

The achievement of the POUM-envisaged structural measures was much more modest. **No major improvements were achieved in terms of track subsystems, including the tram network and BG VOZ, while the development of river public transport, which the Plan recognised as one of the measures adjusted to particular geographic position of Belgrade, was never carried out.** So, investments were prevalently directed at renewing the existing system, rather than increasing its capacity and competitiveness level.

One of the key prerequisites for increasing the appeal of public transport is to ensure that it has priority in the street network. **However, no major expansion of the network of yellow lanes was made during the observed period, while the priority of public transport vehicles on signal-controlled junctions was never systemically introduced.** As a consequence, the average cruising speed remained low and therefore public transport vehicles, despite being new and more comfortable, remained a poor alternative to the passenger car.

In this regard, it can be concluded that there was no consistent application of the so-called push and pull measures, as envisaged per the POUM. The presumption of the Plan was that the appeal of public transport would increase along with an increase in its cruising speed, reliability, and quality, while gradually limiting the benefits of using the passenger car. Nevertheless, during the observed period, the opinion that it is relatively "easy" to drive a car in Belgrade, and that sometimes it was "hard" using public transport, never changed because the implemented measures were aimed at renewing the public transport fleet, whereas interventions that would have ensured actual advantages over the passenger car mainly did not come to fruition.



What should particularly be pointed out is that the improvement of Belgrade's train system stood for one of the key strategic measures per the POUM. **However, by 2025 no major steps were taken towards improving BG VOZ, as the existing urban and suburban train system, which with relatively modest investments could have represented an important mainstay of sustainable mobility and carried a major portion of trips.** Rather than building on the existing system, for the most part, focus and investments were directed at developing the metro, as an entirely new track system.

2.1.4. Parking management

Results in the field of parking management are inconsistent. On the one hand, disincentive measures for the cars were introduced by reducing allowed parking time in the city centre, which prevented longer parking time for cars. On the other hand, there was an increase in the number of parking spots, which was an incentive measure for car traffic and the exact opposite of the original intention. In this manner, what was implemented at the same time were the measures that disincentivised but also the measures that incentivised the use of passenger cars, due to which the measures' overall effect on a change in mobility patterns is hard to be assessed unambiguously.

European sustainable mobility practices show that the objective of parking policies is not to increase the number of parking spots continuously, but instead to manage demand for parking spots and gradually reduce car reliance. Such an approach can be successful only if it goes hand in hand with quality public transport, developed cycling infrastructure and safe pedestrian corridors.

2.1.5. EXPO 2027 as a new framework for traffic investments

In the last years of the observed period, a substantial portion of traffic investments in Belgrade had to do with the preparations for EXPO 2027, while the link between these investments and the POUM goals is often indirect or rather vague. The metro, fleet renewal, and construction of new bridges are carried out at the pace that is conditional upon preparations for EXPO 2027. Some part of it is in accordance with the Plan (metro, e-buses), while the other part is not, or it is contrary to the Plan (wider roadways, roundabouts for cars, cancelling cycle tracks). Free public transport for all passengers was introduced during the same period.[23] Although this measure was not envisaged per the POUM and despite the risk of it drawing passengers away from walking and cycling, its significance as a social measure is indisputable.

When major infrastructure projects with fixed deadlines, as is the case with EXPO, become a predominant framework for traffic policies, it is only natural to prioritise visibility and the construction of capacities within set completion deadlines, whereas measures which in the long run change daily mobility patterns get sidelined. This is exactly why, despite significant purchases of new vehicles, public transport is still losing passengers and has not become stronger competition to the passenger car, since structural issues, such as speed, reliability, and track traffic capacity, are not being resolved to the extent envisaged per the POUM.

23 Free public transport in Belgrade – https://www.beogradsad.rs/lat/inicijative/a94632/Javni-prevoz.html.

2.2. **Podgorica**: a gradual but consistent implementation

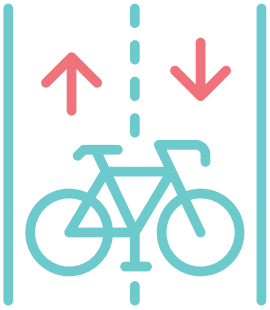
The situation in Podgorica is substantially different. The scope is smaller, but the general direction is in line with what was defined by the SUMP, while the Plan remained a city administration working document. For the sake of clearer comparison, what is shown below is the implementation of the Podgorica SUMP, presented per the same areas as in the above section.

2.2.1. Walking

Unlike Belgrade, where growing the pedestrian zone came to a standstill, Podgorica was active in designing the city centre for pedestrian purposes — reconstructions of Balšića, Miljana Vukova, and Vasa Raičkovića Streets were completed (the last street, with an explicit focus on child safety in the school zone), while Sloboda Street, the city's high street, was turned into a pedestrian zone[24]. At the same time, implementation limitations should be pointed out: implementing this regime in Sloboda Street is controlled poorly, so vehicles pass through it even after the allowed time of the day, due to which the pedestrian zone status in part remains just words on paper.[25] Still, the direction of interventions clearly and consistently applies what is required by the Plan, which is not the case with Belgrade, where some pedestrian crossings were cancelled.

2.2.2. Bicycle traffic

Cycling infrastructure is built selectively, however based on the modern profile: reconstruction of Vojislavljevića Blvd. (3.2 km) includes cycle tracks on both sides, pavements, and green belts[26], with a continuous partnership with the Bicilo.me NGO[27], in regard to educational campaigns. The scope is small — in terms of the absolute number of kilometres, during the same period Belgrade constructed more (approx. 20 km as opposed to mere few in Podgorica). However, there are two major differences between the two cities: in Podgorica, cycle tracks are constructed rather than cancelled, and they are built based on a more modern, integrated profile (track, pavement, green belt). In Belgrade, a portion of cycle tracks was constructed along new streets (in Belgrade Waterfront), while at the same time a portion of what already existed was cancelled, for the advantage of cars.



24 Podgorica's city centre becomes the pedestrian zone — https://www.portalanalitika.me/clanak/senic-centar-podgorice-postaje-pjesacka-zona.

25 Parking in the Sloboda St. pedestrian zone despite prohibition — https://gradski.me/podgorica/novi-izgled-stare-navike-parkiranje-u-pjesackoj-zoni-ulice-slobode-uprkos-zabrani/

26 Green belts, smart signals traffic, and cycle tracks on new boulevard in Podgorica — https://investitor.me/2025/05/13/zeleni-pojasevi-pametna-signalizacija-i-biciklisticke-staze-ovako-ce-izgledati-novi-bulevar-u-podgorici/

27 NGO Biciklo.me — cycling community and campaigns in Podgorica — https://biciklo.me/.

2.2.3. Public transport

Urban and suburban line transport was assumed by one public service provider (Putevi d.o.o.), and with this, one of the pivotal measures was achieved — the previous model of three private service providers was replaced by a public company[28].New lines were introduced (e.g. 53b Zabjelo–Komani), the schedule is updated on a regular basis, with real-time information provided to the passengers (vehicle movement, schedule, stops), and functionalities envisaged by the KLIK PODGORICA app, at least through the existing platforms, are ensured[29]. The fleet is renewed — new air-conditioned buses, adapted to persons with a disability, were introduced, further procurements are expected30. In addition to this, free public transport for pupils and secondary school students was introduced (starting from the academic year 2023/2024)[31]; unlike public transport in Belgrade, which is free for all passengers, the measure in Podgorica targeted specifically the group which the Plan highlights — children who come to school by car.

The extent of institutional change is the most clearly seen when compared to the situation before the SUMP was adopted and after the reorganisation of public transport, as shown in figure below.

Figure 9 | Podgorica public transport — before and after reorganisation (primary sources)

Indicator	Before the SUMP (≈2018–2019)	After reorganisation (May 2026)[32]
Number of lines	30 (13 urban+17 suburban)	29 (19 bus lines+10 minibus lines)
Fleet (in use)	not shown numerically in the Plan	62 buses+19 minibuses=81 vehicles
Organisation of public transport	three private service providers	public service provider
Average age of PUT vehicles	18 yrs	renewing the fleet (new, air-conditioned vehicles)
Record of passengers/tickets	unavailable	daily tickets: 1,285–8,661 (depending on the day)
Frequency	≈ 30 min	targeted per the Plan: 15 min (achieved in part)

28 Line Transport Division — Putevi d.o.o. Podgorica, news — https://putevi.me/category/rj-linijski-prevoz/novosti-rj-linijski-prevoz/

29 Podgorica public transport — passenger info point — https://podgorica.me/gradski-saobracaj/

30 New buses on the streets of Podgorica — https://www.cdm.me/drustvo/novi-autobusi-na-ulicama-podgorice-pocetkom-naredne-godine/

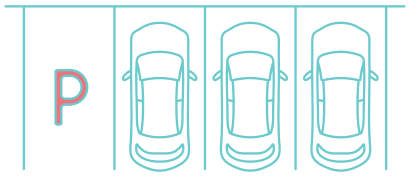
31 Free public transport for pupils and students — https://mondo.me/Info/Drustvo/a1263701/Podgorica-Besplatni-gradski-prevoz-za-ucenike-i-od-1.-oktobra.html

32 Condition after reorganisation: Source — memo from the Secretariat for Traffic of the Capital City of Podgorica, based on the report on activities realised by the Scheduled Service for Passenger Transit (May 2026): 29 public transport lines, of which 19 are bus lines (with 62 vehicles used) and 10 minibus lines (with 19 vehicles used). The number of sold daily tickets in May 2026: not less than 1,285, not more than 8.661 (subject to working day of the week, holidays, and academic year).

The results should be interpreted with two methodological notes. Firstly, the number of public transport lines did not increase — it even decreased by one (30 → 29) — but the crucial point is a change in the type of network (introducing minibus lines for certain directions) and, primarily, what public transport service providers are, and whether the service is measured at all. Shifting from three private service providers to a public service provider, with the introduction of a record of tickets, the fleet renewal, are specifically the very shift in the structure which was required by the SUMP — and which, as it turned out, was not implemented in Belgrade (with the exception of purchased vehicles, however, without a structural reform of the network and priorities). Secondly, data come from two different sources and two different points in time (the Plan vs. monthly report for May 2026), so they should be perceived more as a before and after situation rather than a continuous time series. Despite these limitations, data are indicative of a clear direction of shifting. **Podgorica rearranged public transport in institutional terms, whereas Belgrade's public transport structure-wise remained the same, except that it did become free, with a significantly renewed fleet with eco-friendly vehicles.**

2.2.4. Parking management

The controlled parking zones system (three zones), with payments by text messages, is fully operational. It represents an instrument for managing demand in the city centre — a prerequisite for the push-and-pull logic promoted by the Plan.[33] Unlike Belgrade's mixed situation (whereby at the same time parking times were decreased and the number of parking spots was increased), Podgorica's activities were consistent with the Plan's direction.



2.2.5. Institutional framework and monitoring

What remains unclear is what happened to formal strategic documents which were supposed to be adopted per the SUMP (Parking Strategy, Cycling Strategy, and Walking Infrastructure Plan). Although certain documents might have been drafted and adopted after all, no public information is available in this regard. This makes it difficult to monitor the Plan implementation and it is indication that the transparency of monitoring in Podgorica, and Belgrade alike, remains limited.

At the same time, available data indicate that in Podgorica, despite the mentioned limitations, there is a higher level of continuity in terms of implementing the SUMP. Although causality cannot be proved with certainty, it appears that a continuous support provided by international partners contributed to sustainable urban mobility issues remaining among local administration's priorities even after the adoption of the Plan. Such continuity was not equally noticeable in Belgrade, since following the adoption of the SUMP, what lacked was a visible mechanism which would have ensured its systematic implementation and monitoring.

33 Parking service Podgorica — general parking lots and zones — https://parkingservispg.me/usluge/opsta-parkiralista-zone/.

3. The environment and noise levels

3.1. Approach to environmental protection

The starting point of both the Belgrade and Podgorica sustainable urban mobility plans is that sustainable mobility should contribute to improving the quality of life and diminishing the negative effects of traffic on the environment. Nevertheless, the two Plans have different approaches to this matter.

The **Belgrade** sustainable urban mobility plan sets environmental protection as one of the central pillars of urban mobility. Sustainable mobility is defined as the instrument for decreasing air pollution levels, greenhouse gas emissions, noise levels, consumption of fossil fuels, and urban space degradation, while among the Plan's key goals are reducing pollution and emissions, improving the quality of urban landscape and the development of e-mobility.

The **Podgorica** SUMP also recognises the significance of environmental protection, however with a different approach to it. Environmental protection is not a separate strategic goal. It is instead observed as an expected outcome of the implementation of sustainable mobility measures. Unlike the Belgrade Plan, the Podgorica SUMP does not envisage a special set of measures whose aim is the development of green infrastructure or increase in the size of green areas. Instead, it expects improvements to the environment primarily through reduced volumes of car traffic and the development of sustainable modes of transport.

3.2. Goals and measures

Both Plans envisage the development of pedestrian and cycling infrastructure, improvements to public transport, and reduced car reliance, these being the main instruments for reducing the negative impact of traffic on the environment. Still, the difference is reflected in the level of elaboration and the manner in which environment-related goals are operationalised.

The Belgrade Plan integrates environmental protection through almost all prioritised areas of activity. Active mobility measures include improving pedestrian and cycling infrastructure, the development of pedestrian and integrated streets, superblocks, and a

public bicycle system, whereby these interventions are at the same time seen as traffic, environmental, and urban planning measures. The Plan additionally envisages the development of public transport, multimodality, a shared mobility system, parking management, and e-mobility, **as well as measures whose aim is to improve biodiversity, the development of green corridors, and rehabilitation of degraded areas.** In this manner, environmental protection is connected to the quality of public spaces, climate resilience, and the quality of life.

The Podgorica SUMP places the strongest focus on improving public transport, rational use of passenger cars, the development of cycling and pedestrian infrastructure, and incentivising active mobility. Environmental effects of these measures are primarily reflected in expected decrease in pollutant emissions, greenhouse gas emissions, and noise levels. **Unlike the Belgrade Plan, the issue of increasing the size of green areas, green infrastructure, and climate resilience were not elaborated in a separate set of measures, nor were they accompanied by separate indicators.**

3.3. Air quality following the adoption of the Plans

As regards pollution levels, air quality monitoring shows major differences between Belgrade and Podgorica but also certain similarities in terms of the predominant sources of emissions.

Data released by the City Institute for Public Health Belgrade for the period 2021–2024[34] show the highest concentrations of nitrogen dioxide (NO_2), which are continuously present in those measuring points that are located along the city's busiest thoroughfares. Although minor oscillations are seen across various years, **a clear trend of reduced concentrations of NO_2 on locations with the busiest traffic cannot be identified.** Throughout the entire observed period, multiple measuring points recorded concentrations which reach or exceed the annual threshold value of 40 μg/m³, with locations with the busiest traffic being Despot Stefan Blvd, Čukarička padina, Ada Ciganlija, and some other thoroughfares in the city. These data are an indication of pollution that is road-traffic-related, which remains one of the most challenging segments in terms of air quality in Belgrade.

The 2022 data are an additional illustration of such a pattern. On the Belgrade – Despota Stefana measuring point, the amount of measured annual NO_2 concentration was 54 μg/m³, which exceeds the annual threshold value of 40 μg/m³. On the same location, the same measuring point recorded 20 days with an exceeded daily threshold value, whereas the hourly value of 150 μg/m³ was exceeded by as many as 85 times. At the same time, national data on emissions show that the share of traffic in the total NO_2 emissions is 41%, which makes it the single highest individual source of this pollutant.[35]

The most recent available data confirm that this problem has not been overcome. The 2025 RERI analysis shows that during 2025 on the Belgrade – Mostar measuring point, the hourly threshold value for NO_2 was exceeded 22 times, that is, more times than is allowed on an annual level, per relative

34 The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2021, p. 39; The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2022, p. 42; The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2023, p. 42; The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2024, p. 45.

35 Renewables and Environmental Regulatory Institute (RERI), An analysis of the annual report on the air quality status in the Republic of Serbia for 2022, June 2024, p. 17.

prevailing regulations of the Republic of Serbia.[36] **Overall, data referring to the period 2021–2025 do not show a clear and continuous trend of a decrease in NO_2 concentrations on locations with the busiest traffic.**

Unlike Belgrade, data for 2021–2024, released by The Environmental Protection Agency of Montenegro, show that a median annual concentration of nitrogen dioxide (NO_2) in Podgorica during the observed period remained below the defined threshold value, which was also the case with a median annual concentration of suspended particulates – PM_{10}.[37] **At the same time, air quality monitoring on the territory of Podgorica shows that the highest concentrations of pollutants were recorded in the vicinity of busy thoroughfares and major junctions, with road traffic still being identified as one of the predominant sources of NO_2 emissions in urban zones. Available data show no indication of any substantial deterioration in air quality but there is a distinct trend of improvement, which could be connected to the implementation of sustainable urban mobility measures.**

A particular indication is that the *Report on Realisation of the Air Quality Monitoring Programme on the Territory of the Capital City of Podgorica in 2024* unequivocally mentions among the priorities in terms of air quality, support to the implementation of the Sustainable Urban Mobility Plan. The segments that stand out as priorities are improving public transport, reducing the use of passenger cars, developing pedestrian and cycling infrastructure, incentivising the use of eco-friendly vehicles, increase in the size of green areas, and creating green barriers for the purpose of protection against dust and noise. This confirms that the measures envisaged per the SUMP are still considered one of key instruments for improving air quality in Podgorica but also that there is still ample room for improvement.[38] Additionally, this is one of the examples of alignment between strategies and reports in the field in urban mobility even though they were adopted by different institutions – which is the case in Montenegro, unlike Serbia, i.e., planning documents adopted in Belgrade – which issue has already been discussed in the introduction.

For comparison purposes, monitoring shows that the issue of traffic-related air pollution is more marked in Belgrade, whereas Podgorica shows more favourable air quality indicators. At the same time, road traffic remains a predominant source of emissions in both cities, which confirms that measures envisaged per the respective sustainable urban mobility plans represent one of the key instruments for improving air quality. Nevertheless, the results of monitoring show that their potential has not entirely been fulfilled yet.

36 Renewables and Environmental Regulatory Institute (RERI), An analysis of the annual report on the air quality status in the Republic of Serbia for 2025, June 2026, p. 33.

37 The Environmental Protection Agency of Montenegro, Report on the condition of the environment in Montenegro based on indicators (2021-2024) with a Draft Action Plan for improving the condition of the environment and suggested measures for the period 2026-2029, June 2026.

38 The Centre for Ecotoxicological Research, Report on Realisation of the Air Quality Monitoring Programme on the Territory of the Capital City of Podgorica in 2024, November 2024

3.4. Noise levels monitoring following the adoption of the Plans

Noise level monitoring in both cities shows that road traffic is still the predominant source of noise in the urban environment, whereby data indicate that there is a more substantial reduction in the residents' exposure during the periods of implementation of the sustainable urban mobility plans.

Data released by the City Institute for Public Health Belgrade for the period 2021–2024 show that the spatial pattern of exposure to noise did not substantially change during the POUM implementation period. Monitoring was performed in the spring and autumn cycles, while starting from 2022, the network of measuring points grew from 35 to 40 locations. In spite of this, the annual reports year after year show that road traffic still remains the predominant source of noise, while the highest levels of exceeded threshold values were recorded along the busiest thoroughfares and in the city's central zones.

The highest noise levels during the entire observed period were recorded on the same or similar locations, from which stand out the following: Despot Stefan Blvd, King Alexander Blvd, Karađorđeva St., Arsenija Čarnojevića Blvd, and the area around Zeleni venac. On certain representative locations, daily noise level on a continuous basis ranged about or above 70 dB, with slight annual oscillations, however, without a clear decreasing trend. **Therefore, monitoring data do not show any substantial reduction in the population's exposure to traffic noise during the POUM implementation period, even though the Plan envisages as one of its goals a reduction in the negative impact of traffic on the environment, including noise as well.**[39]

A similar pattern can also be seen in Podgorica. Noise levels monitoring for the period 2021–2024 shows a continuity in high noise levels on the city's busiest thoroughfares, whereby available data do not show a clear trend of noise levels reduction. The highest noise levels continue to be recorded in the areas of busy road traffic, which confirms that road traffic remains the predominant source of communal noise in the city.

Unlike air quality, the results of noise levels monitoring show a similar pattern in both cities – the highest noise levels are still related to main traffic corridors, without a clear indication of them being reduced during the period of implementation of the respective sustainable urban mobility plans.

39 The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2021 (monitoring performed on 35 measuring points), p. 40-41; The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2022, (monitoring performed on 40 measuring points), p. 43-44; The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2023, (monitoring performed on 40 measuring points), p. 43-44; The City Institute for Public Health Belgrade, An Analysis of the Belgrade Residents' Health Condition in 2024, (monitoring performed on 40 measuring points), p. 47-48.

40 CETI, Report on research into noise levels in the environment – the Capital City of Podgorica, 2021-2022; CETI, Report on research into noise levels in the environment – the Capital City of Podgorica, 2025-2024

3.5. Residents' perception

The results of surveys conducted in Belgrade and Podgorica confirmed to a large extent the findings of monitoring and these surveys are an indication that the residents recognise the quality of the environment and public spaces as an important element of sustainable mobility, but that they do not feel any change for the better when it comes to air quality, pollution, and the amount of greenery in the cities. In both cities, the residents largely point out the significance of green spaces, natural shade, and quality public spaces for daily mobility, but they also stress that it is necessary for these to become a priority, and that a larger investment in these segments of urban development is necessary.

The majority of respondents in Belgrade believe that the condition of green spaces has not improved since 2021 – **65%** of them deem that there is less greenery than before, and merely **5%** think there is more of it.

At the same time, **93%** of the respondents think that the City of Belgrade does not invest sufficiently in greenery and lines of trees along pedestrian and cycling routes, while **92%** note that more greenery and natural shade would incentivise more frequent walking and cycling. The lack of shade represents a major problem, since **92%** of respondents believe that their daily routes are without sufficient trees and protection against the sun, while **78%** note that high temperatures during the summer affect their mobility in the city.

In addition to this, air quality stands for a markedly important factor for the purpose of selecting transit method – **37%** of the respondents mention that pollution is the reason why they opt for different routes and modes of transport, with additional **46%** being aware of the issue, even though they do not change their habits due to this.

The Podgorica residents' perception in terms of the quality of public spaces is somewhat more favourable. More than a half of the respondents (**62%**) think that the parks, promenades, and squares are now better arranged than was the case in 2020, while approximately one third of the respondents think that there is more greenery. However, the results of the survey at the same time show that the residents recognise that there is ample room for improvement. As many as **98%** of the respondents note that there is not enough shade along their daily routes while the same percentage believe that more investment into the lines of trees and greenery along walking routes is required.

Furthermore, almost two thirds of the respondents think that higher temperatures during the summer affect their patterns of transit, while almost **78%** note that more greenery and natural shade would incentivise more frequent walking and cycling.

Although the residents' perception in terms of the overall condition of public spaces is different, survey results show a high level of agreement when it comes to the importance that greenery and climate-resilient urban spaces have for sustainable mobility purposes. Both cities' residents are almost unanimous regarding the need for a higher investment in the lines of trees, greening of pedestrian and cycling routes, and creating better quality public spaces, while high temperatures during the summer more increasingly affect the patterns of their daily mobility. These findings confirm that the measures that contribute to more greenery, natural shade, and the quality public spaces are not important just in terms of environmental protection but also that they are an important prerequisite for incentivising the residents to use sustainable types of mobility.

4. Five years later: two different models of implementation

A comparative analysis shows two different approaches to implementing the two sustainable urban mobility plans. Regarding Belgrade, mainly major infrastructure projects were realised, while the implementation of organisational, regulatory, and other measures envisaged per the POUM was much more limited, with certain activities that were not aligned with the Plan-defined priorities. Contrary to this, Podgorica realised the measures which were more modest in financial terms but more consistent in substantive terms, primarily in the fields of organising public transport, pedestrian and cycling infrastructure, and mobility management.

This comparison shows that the success of implementation is not conditional solely upon the size of budget, scope of planned investments or technical elaboration of a planning document. What is equally important is institutional continuity, clearly defined responsibilities for implementation, and consistent monitoring of deliverables. This is specifically where the main difference between the two analysed cities lies.

Figure 10 | Two profiles of implementation — a summary

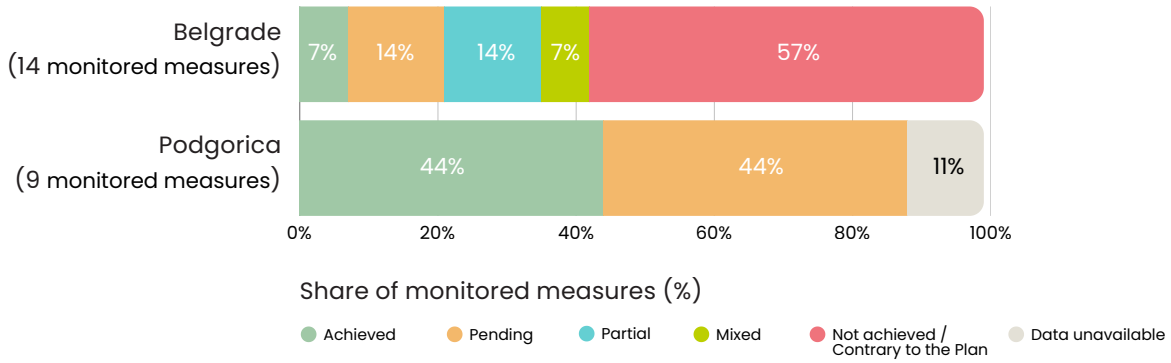
Dimension	Belgrade	Podgorica
What was achieved	major infrastructure (the metro, fleet)	organisational and service-related measures
Initiated by	EXPO 2027 (external agenda)	the Plan itself as a working document
Active mobility	lacking or reversed (cancelled cycle tracks)	ongoing on a small scale
Institutional continuity	disrupted (staffing changes, elections)	maintained (with the support of donations)
Monitoring	has not come to life	data unavailable
Deliverables vs. the Plan	activities occasionally beyond/contrary to the Plan	activities mainly in the Plan's direction

Although the Belgrade POUM is more ambitious in financial terms and more elaborated as a document, the above analysis shows that during the period 2020–2025 Podgorica was more consistent in implementing the planned measures. The key difference between the two cities is not reflected primarily in the quality of the Plans themselves but in the continuity of their implementation following adoption.

VI An overview of the achievement of measures

An overview of all measures envisaged per the sustainable urban mobility plans of Belgrade and Podgorica is presented in this segment of the analysis, as well as a review of their status of achievement. The graph below summarises an overall extent of implementation of the measures in both cities, whereas detailed results are shown in the Figures that follow.

Graph 5 | The status of monitored measures per city. For Belgrade, not achieved and contrary to the Plan are prevalent, while for Podgorica, it is achieved or pending.



1. **Belgrade** — all measures according to the POUM Action Plan and the status of implementation (2020–2025)[41]

Measure (from the Plan)	Status	Explanation
G1 Walking		
Improvements to the existing walking infrastructure (10+30+20 km)	Partial	Individual and to a small extent (area around Skadarska St); not the Sava slope.
Improved connections to other modes of transport	Data unavailable	No public record of a systemic achievement.
Development of pedestrian and integrated streets, superblocks, and spaces	Not achieved	Pedestrian crossings cancelled in some places, for traffic flow purposes.

41 Legend of statuses: Achieved · Pending · Partial · Mixed· Not achieved/Contrary to the Plan · Public data unavailable

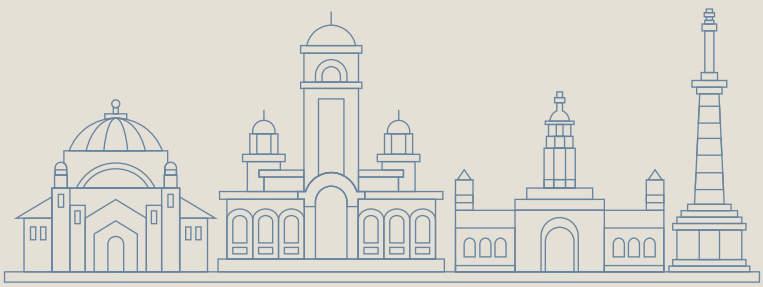
Measure (from the Plan)	Status	Explanation
G2 Bicycles		
Development of the cycling network — tracks, lanes, parking locations (102→493 km)	Partial	~20 km was constructed (mainly along new streets, Belgrade Waterfront), a small portion of the planned 493 km.
Improvements to the existing cycling infrastructure	Contrary to the Plan	Certain cycle tracks were cancelled (Crnogorska St. — constructed, then cancelled, after two years); some cycle tracks were turned into mixed-purpose areas.
Implementation of the public bicycle system (bike sharing, 150 stops)	Not achieved	No agreement was signed.
Allowing the transport of bicycles in PUST vehicles	Not achieved	Not achieved
Promotion of cycle tourism (EuroVelo, bed-and-bike)	Data unavailable	Without any visible campaigns on a Plan level.
G3 PUT		
Development of structure and functioning of the entire PUST system	Not achieved	Investments in the fleet, not the infrastructure (network, priority).
Development of high-capacity track subsystems of PUT (22+38 km)	Not achieved	No essential improvements to trams and BG VOZ.
Development of a public river transport subsystem	Not achieved	Envisaged per the Plan; impression: the city abandoned the idea.
G4 Car/MaaS		
Development of e-mobility services (PUST and micromobility)	Partial	E-buses for EXPO; remained inconsistent.
Car-sharing	Partial	Small scale, private sector, no collaboration with the city.
Car-pooling	Data unavailable	No public record.
Bike & ride (at BG VOZ stops)	Not achieved	-
Park & ride on the city outskirts' terminuses	Not achieved	The system was not established.
Development of MaaS (Mobility-as-a-Service) concept	Not achieved	Not initiated.

Measure (from the Plan)	Status	Explanation
Management of parking options	Mixed	Shorter time (disincent.), but more parking spots (incentivising).
G5 Safety/vulnerable groups		
Safety of public spaces	Data unavailable	No public record of locations.
Increased safety of pedestrians and non-motorised passengers	Contrary to the Plan	Results do not work in favour of the goal — cancelled pedestrian crossings and cycle tracks decrease the safety of vulnerable passengers.
Adapting the infrastructure to "vulnerable" groups (accessibility)	Data unavailable	No systemic report.
Adapting PUSTS to the needs of "vulnerable" groups	Partial	New vehicles provide accessibility.
Programmes for the integration of jeopardised groups	Data unavailable	—
Traffic design in hospital campuses	Data unavailable	—
C6 Green corridors		
Design of green transport corridors ("urban tissue")	Data unavailable	—
Hiking and cycle tracks in parks and protected areas	Pending	Line Park, other: on a small scale
Promotion of biodiversity in collaboration with NGOs	Data unavailable	—
Remediation of unregulated landfills and habitats	Data unavailable	—
G7 Emissions/energy		
Energy efficient solution for communal traffic vehicles (el./LPG/CNG)	Pending	Procurement of CNG and el. buses.
Contaminant emissions and noise level controls	Data unavailable	Mainly regulatory provisions.
Incentivisation of el. cars for taxi and ride-sharing (chargers)	Data unavailable	—

Measure (from the Plan)	Status	Explanation
G8 Meeting points		
A network of meeting points connected by line corridors (Line Park along the Danube)	Partial	On a small scale
Design and management of public spaces (urban pockets)	Partial	Individual interventions.
Removing parking lots from public spaces (block parking garages)	Partial	Some public parking garages; with an increased number of spots on other locations.
Development of the city logistics	Data unavailable	—
G9 Municipalities		
Equal planning of amenities in the municipalities	Data unavailable	—
Removing public communal services from the central zones	Data unavailable	—
Subsidies for business premises outside the city centre	Data unavailable	—
P10 Infrastructure		
Completion of UMP (inner main semi-ring road)	Pending	Part of the road tangent agenda; prompted by EXPO
Completion of SMT (outer main road tangent) with the Ada Huja bridge	Pending	Construction of a major thoroughfare in the pipeline.
The old Sava bridge and connection via tunnel between the Sava and Danube slopes	Pending	Measure initiated — digging of the tunnel to start soon.
The Metro (2 phases: 17+13 km)	Pending	Preparatory works, the Makiš Depo; contract: 2025; deadline: 2030. Commencement of works announced
Construction of public parking garages	Partial	Some public parking garages in the pipeline.
Park & ride on the city outskirts' terminuses	Not achieved	The system was not established.
Extension of Gospodara Vučića–Aradska–Čingrijina–D. Tucovića Streets	Data unavailable	—

Measure (from the Plan)	Status	Explanation
The Ada Ciganlija–New Belgrade blocs pedestrian bridge	Pending	Plan adopted
Reconstruction of Zrenjanin Road leading to SMT	Data unavailable	—
Transforming the existing junctions to roundabouts	Pending	Part of the activities contrary to the Plan (favours cars).
P0 General		
Educational programmes and promo campaigns (5 a year)	Data unavailable	On a small scale
Improvements to the regulations and fiscal incentives	Data unavailable	—
Big-data platform and innovation of the transport model	Data unavailable	—
Capacity building and engaging the local community	Data unavailable	—
Support for the drafting of the POUMs in suburban municipalities (beyond the Master Plan)	Data unavailable	—
Monitoring		
The Plan monitoring system (45 indicators, CIVITAS PLUS II)	Has not come to life	Working group with no visible work and reports.
Beyond the Plan		
Free PUT for all passengers	✓ **Achieved**	Charging abolished in 2024 Not a POUM-defined measure; carries the risk of less walking/ cycling.

Source of the measures: Figure 7.2 (Action Plan — estimate) the City of Belgrade POUM. Status: onsite visits and public sources; "data unavailable" means that there is no public record, not necessarily that the implementation of a particular measure did not initiate.



2. **Podgorica** — all measures according to the SUMP Action Plan (pillars I–VI) and the status of implementation (2020–2025)

Measure (from the Plan)	Status	Explanation
I Institutional framework and monitoring		
Recruiting/appointing a person who is competent for urban mobility.	Data unavailable	The position exists in job classification; absence of a publicly available report.
Audit and drafting of a new sustainable urban mobility plan	Data unavailable	The cycle by the year 2025 ended; audit status unknown.
Establishing a system for assessing the impact of traffic on new generators	Data unavailable	—
Regular monitoring and participation in EU projects	Pending	Topic maintained with donation support (GIZ).
Regular education and training of persons in charge of traffic	Nema javnih podataka	Partial
Audit of the road network hierarchy and pilot "superblocks"	Data unavailable	—
II Public transport		
Public service provider assumed line transport	✓ **Achieved**	Three private service providers replaced by a public company (Putevi d.o.o.).
Introduction of new lines and regular updates to the timetable	Pending	E.g., line 53b Zabjelo–Komani.
Digitalisation and providing real-time information to passengers (KLIK PODGORICA).	✓ **Achieved**	Vehicle monitoring, timetable, stops.
The fleet (air-conditioned buses, accessibility for PWDs)	Pending	New buses introduced; further procurements expected.
Free public transport for pupils and secondary school students	✓ **Achieved**	Since the academic year 2023/2024; targets children who come to school by car.
Campaigns promoting available services and the advantages of public transport	Data unavailable	—

Measure (from the Plan)	Status	Explanation
III Traffic and parking management		
Controlled parking zones system (three zones), with payments made by text messages	✓ Achieved	An operational instrument of managing demand in the city centre.
Expanding controlled parking zones and a cadastre of parking spots	Data unavailable	—
Use of parking-fees-generated revenue for the SUMP measures (push-and-pull)	Data unavailable	No public record of dedicated spending.
Control of access as a means of support to walking	Partial	Mobility regime Sloboda St. controlled poorly.
Systemic thoroughfare management	Data unavailable	—
IV Cycling		
Drafting a cycling strategy and cycle tracks network	Data unavailable	No public confirmation of its adoption.
Implementing measures form the cycling strategy	Pending	Vojislavljevića Blvd. (3.2 km) with a cycle track on both sides.
Drafting guidelines for cycling infrastructure (safety)	Data unavailable	—
Database of blackspots for cyclists	Data unavailable	—
Creating conditions for bike-sharing	Data unavailable	—
Educational campaigns (collaboration with the Bicilo.me NGO)	Data unavailable	A continuous partnership in campaigns and education.
V Walking		
Ensuring high-quality walking infrastructure	Pending	Reconstruction of Balšića, Miljana Vukova, Vasa Raičkovića Streets.
Pedestrian zone in the city centre (Sloboda St.)	Pending	Introduced; poor control of regime.
Database of blackspots for pedestrians	Data unavailable	—
Campaigns promoting walking and walking incentivisation	Data unavailable	—

Measure (from the Plan)	Status	Explanation
VI Safety and integrated measures		
Traffic safety with a focus on children in school zones	Pending	Vasa Raičkovića St. designed with a focus on child safety.
Accessibility for persons with a disability (PWDs)	Pending	New buses adapted to PWDs
The gender aspect of mobility (gender and mobility analysis)	Data unavailable	Implemented in the Plan drafting; subsequent application unknown.
Implementation of integrated measures (superblocks, pilot areas)	Data unavailable	—
SECAP and monitoring CO_2 emissions	Data unavailable	A SECAP-related environmental aspect; drafting status unknown.

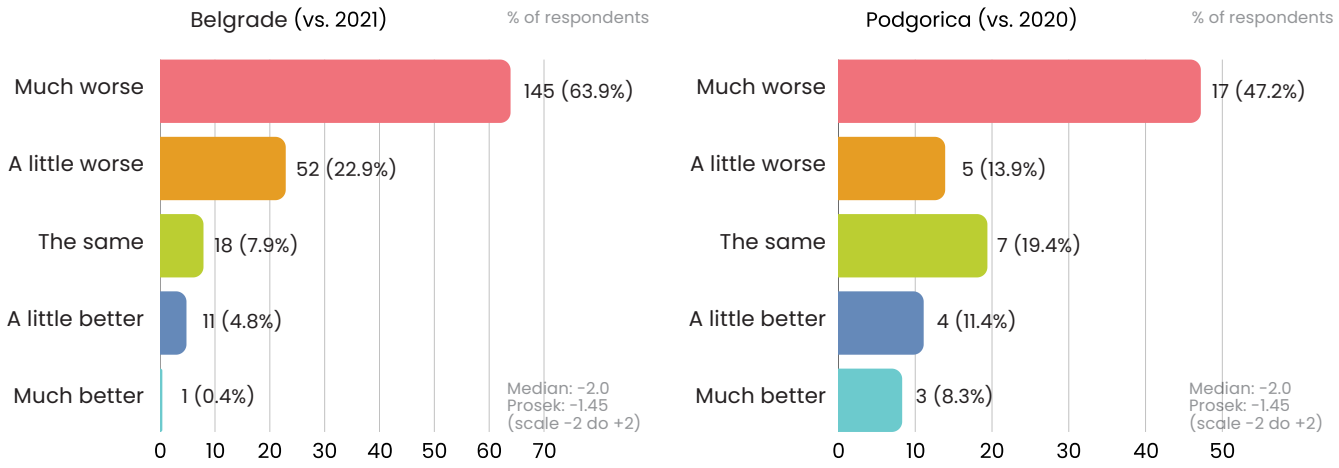
Source of the measures: Action Plan of the Capital City of Podgorica SUMP. Status: onsite reviews and public sources.

VII Residents' perception: what changed in day-to-day mobility and do residents feel the effects of the SUMPs' implementation?

The poll-based survey that was conducted in May and June 2026, six years after the adoption of the Plans, offers an insight into how the residents perceive changes envisaged per the sustainable urban mobility plans. **In Belgrade, 86.8% out of 227 respondents thought that the condition of traffic was worse or much poorer than was the case in 2021**, with the median response corresponding to -2 on a five-level scale. It is particularly important that this assessment is not different across passengers who use different modes of transport (Kruskal–Wallis, H= 1.64; p=0.650), **which shows that there is a negative perception of the traffic system regardless of what the predominant mode of mobility may be.** The perception in Podgorica is somewhat more favourable – 61.1% of the respondents deem that the condition is negative, with a median of –1%, while for statistical purposes, the difference between the two cities is significant (Mann–Whitney U, p=0,006). Since the Podgorica sample is small (N=36), these results should be interpreted with a certain level of caution but still their direction matches the findings of the comparative analysis of implementation.

Graph 6 | Distribution of the assessment of traffic per city

Traffic score today compared to the base year

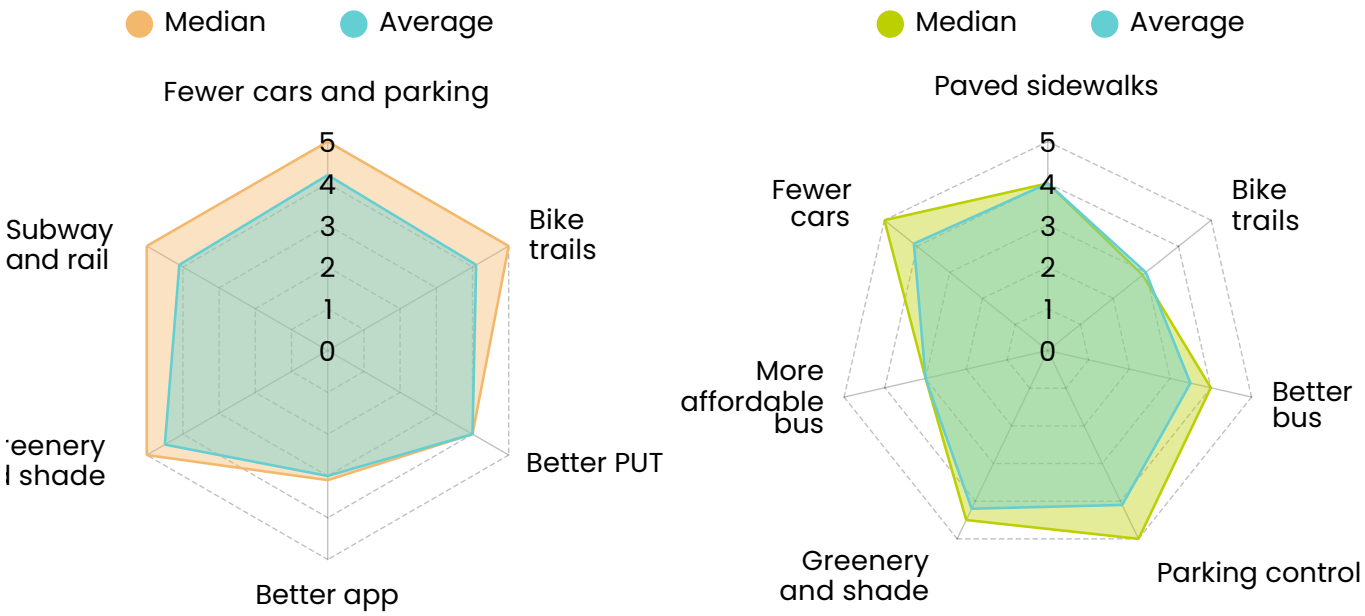


The most concrete confirmation of the difference between respective implementations comes from the assessment of public transport. The **Belgrade respondents assessed PUT with a median of 3 for all four aspects that were measured — accuracy, frequency, comfort, and availability of information — which means neutral, neither better nor worse than was the case in 2021. The Podgorica respondents' median was 4, with a statistically relevant difference in terms of comfort (p<0.001) and accuracy (p=0.005). This perception to a large**

extent corresponds to the findings of implementation analysis. Podgorica shifted to a public service provider, introduced new air-conditioned buses, and free public transport for pupils and secondary school students – and the residents recognise the effects of these measures, while in Belgrade the fleet renewal was not accompanied by measures which would result in an increased cruising speed and reliability of public transport, such as wider priority lanes or right of way for public transport vehicles (at junctions). The Spearman correlation between the average assessment of PUT and overall assessment of traffic ($\rho=0.419$, $p<0.001$) confirms that the quality of public transport stands for one of key factors in the overall perception of the traffic system. Finally, a shift in mobility habits speaks volumes: in Belgrade, shifts to and away from public transport are almost symmetrical (11.0% shifted to PUT, 11.9% abandoned PUT due to deterioration), with the net effect being close to zero; in Podgorica, the number of respondents who shifted to PUT is twice the number of those who abandoned it (11.1% vs. 5.6%). **Survey results indicate that the residents' perception to a large extent matches the findings of implementation analysis and it also represents an important indication of the effect of implemented measures on day-to-day experience of passengers.**

Finally, the survey measured what the biggest change in their daily mobility would be. The results show an interesting pattern. In terms of priority, the respondents in both cities at the same time point out a reduction in the number of cars and increase in the size of green areas, but in the majority of cases they also stress the need for better solutions in the segment of parking. Such a finding shows that despite a growing support for sustainable mobility, the residents' daily needs still to a large extent depend on the use of passenger cars.

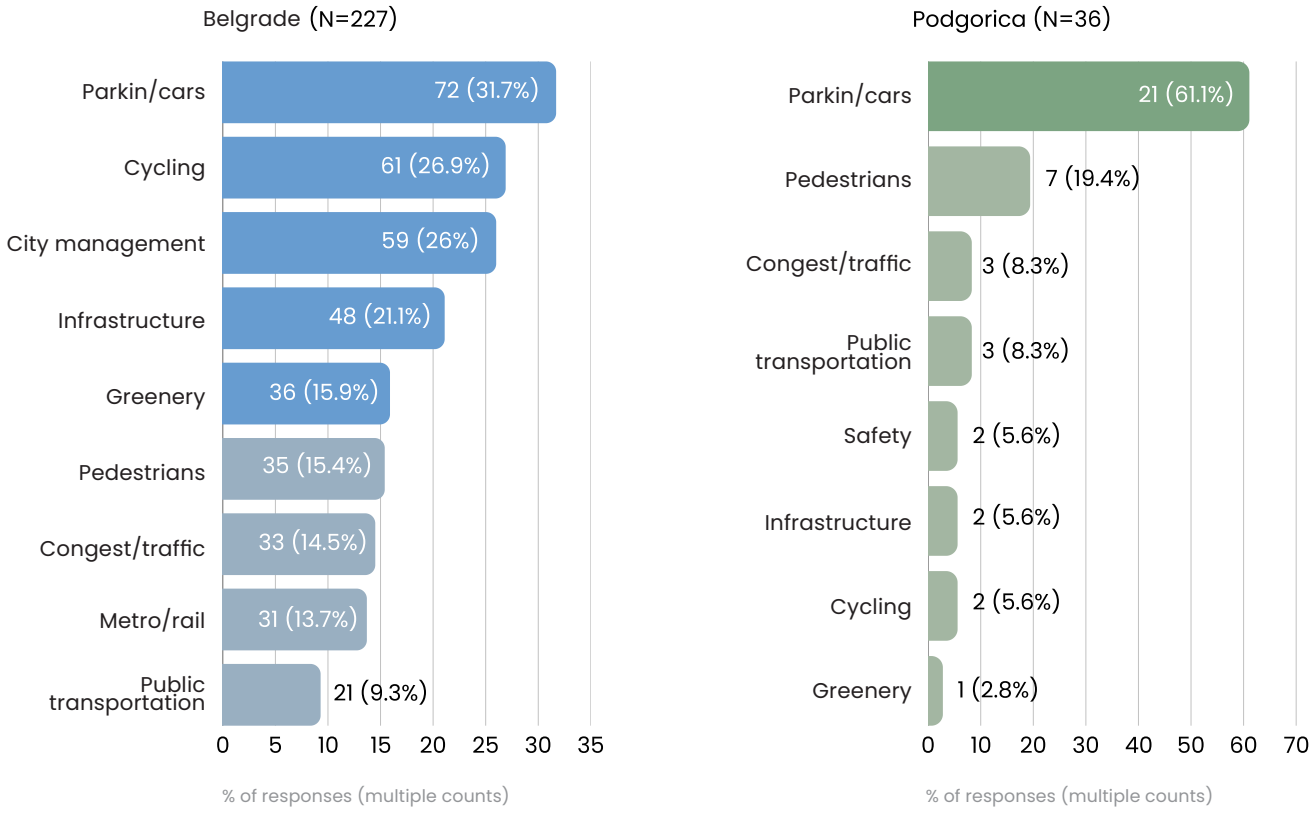
Graph 7 | The respondents' priorities for improving mobility (median 1–5)



The analysis of topics of open (free) answers to the question of the biggest unsolved problem confirms similar issues in both cities. In both cities, the most frequently mentioned topics are parking and cars — in Podgorica, as many as 61.1% of the answers specifically mentioned these. The structure in Belgrade is more diverse: parking is immediately followed by cycling and management of the city, which corresponds to the results of this analysis, which precisely in these segments identified the biggest deviations between the planned and implemented measures.

Graph 8 | The analysis of open answers shows a similar pattern.

What do you think is the biggest unsolved movement problem?



VIII Conclusion and recommendations

A comparative analysis shows that **the key difference between the two cities is not reflected primarily in the quality of planning documents themselves but in their implementation**. The Belgrade POUM is more elaborated in technical terms, with higher financial ambitions, and is an internationally recognised document, whereas the Podgorica SUMP is more modern methodology-wise, with a smaller scope. However, the differences identified by the analysis occurred primarily following the adoption of the Plans.

After the adoption of the Belgrade POUM, institutional continuity necessary for its implementation gradually weakened. The monitoring system never came to life, the priorities of the city's traffic policies over time became distant from the Plan-defined priorities, while certain implemented measures were contrary to its basic goals. Contrary to this, the Podgorica SUMP maintained to a higher degree the role of the operational framework in terms of planning and implementing urban mobility measures.

The analysis also shows that sustainable mobility policies cannot be observed separately from urban development. Strong residential and commercial development activities, an increase in development density and pressures on public spaces additionally emphasise the importance of adjusting traffic and spatial planning. **So, sustainable urban mobility cannot be achieved solely through individual traffic projects. Its objectives can be achieved only if the sustainable urban mobility plans are aligned with spatial and urban planning, environmental protection policies, and investment-related decisions.** This is exactly why one of the key challenges for the next cycle of the Plan is strengthening the SUMPs' integration into the system of city development plans.

The results of this analysis have significance that goes beyond a comparison between Belgrade and Podgorica. The two cities developed their respective Plans based on the European sustainable urban mobility concept, however with substantially different results achieved during the first five years of implementation.

This shows that the SUMPs' success does not depend primarily on the quality of the document itself but on the existence of institutional continuity, clear responsibilities for implementation, and consistent monitoring of the realisation of planned measures. Furthermore, integration of the SUMP into day-to-day decision making in terms of managing the city is extremely important, while the guiding idea of those decisions should be that one of the core principles of sustainable urban mobility are improvements to the quality of life.

It is specifically there that lies the most important lesson for other cities in the region, which are preparing or initiating the implementation of their sustainable urban mobility plans. **A sustainable urban mobility plan does not prove its actual value at the time of its adoption but through decisions which the city renders in the years following adoption.**

Recommendations

Based on the findings of the comparative analysis, recommendations for the improvement of the Belgrade POUM have been made, these referring to the remaining period of its application, as well as to the next cycle of planning sustainable urban mobility in Podgorica. Given a broader scope of identified findings, the recommendations can also be helpful to other cities which are drafting, revising, and implementing sustainable urban mobility plans.

- **Integration of the SUMP into other public policies:** ensure that the sustainable urban mobility plan constitutes a mandatory reference framework for the drafting and implementing public policy documents in the fields of urban planning, traffic, environmental protection, budget planning and investment-related decisions
- **Alignment of investments with the plan:** introduce a mandatory verification of compliance of all major traffic investments with the valid SUMP
- **Permanent monitoring authority:** establish a permanent institutional body with a mandate and resources (instead of a working group), responsible for coordinating implementation, independent of election cycles
- **Responsibility for the implementation of measures:** clearly define stakeholders, deadlines, and publicly available indicators for the realisation of each measure individually
- **Mandatory regular reporting:** introduce mandatory annual reporting on the status of realisation of each measure individually
- **Publicly available monitoring:** establish a publicly available digital platform with realisation status for all measures, indicators, and explanation of potential deviations from the plan
- **Regular monitoring of the residents' perception:** include regular surveys of the residents' perception into the monitoring system, as a complementary tool for technical indicators of plan implementation, since the survey results show that the residents' assessments to a large extent correspond to the findings of implementation and monitoring analyses
- **Continuous participation of the public:** ensure regular involvement of citizens, professional community and civil society organisations in monitoring the implementation of SUMP, rather than them being involved just during the Plan drafting and adoption stages

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