CEE Smart Cities Mobility Sprint 2026:

Trends radar





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01

Executive summary



Cities across the CEE region are at a turning point. Years of Sustainable Urban Mobility Plan development and tightening regulations have shifted the urban mobility approach. Now it goes beyond transport infrastructure and focuses on smart mobility and new opportunities for action. The challenge is to align regulatory pressure, strategic ambition, and public value, and turn these priorities into funded, operational, and measurable actions.

The CEE Smart Cities Mobility Sprint 2026 provides an overview of how 18 CEE cities are navigating this complexity.

This joint initiative by PwC CEE, PSNM (The New Mobility Association) and EIT Urban Mobility, is a follow-up to the CEE Smart Cities Mobility Index 2024, which was an honest assessment of the smart city thinking and activities across the region. The Sprint 2026 continues that journey, but this time focuses on how cities are responding to new regulatory expectations and what actions they are taking to ensure compliance.

Balancing priorities

This report explores how cities are navigating difficult decisions and making choices about priorities. Cities must respond to regulatory requirements while also improving accessibility, air quality, resilience, and competitiveness of mobility. Success will increasingly depend on the ability to finance, govern, monitor, and deliver a strategy while maintaining public support.



Key findings

Governance and social:

78% **of cities rate sustainable urban mobility plan (SUMP) as a high or very high priority in their city development agendas, although only 17% have a dedicated budget.**

Data, digital, and AI:

89% **use or plan to adopt smart city and smart mobility indicators, while only 44% have an operational or advanced technology driven platform.**

Funding/financing:

72% **rely on EU funding as a strategic resource for financing urban mobility systems, but only 24% have specific financial instruments for SUMPs.**

Competitiveness, resilience and security:

83% **aim to connect urban mobility planning with the needs of the construction sector, logistics operators, and strategic infrastructure delivery.**

Environment:

71% **of actions to reduce transport-related air pollution focus on public transport renewal and electrification, yet cities increasingly recognise the need for broader measures.**

“The CEE Smart Cities Mobility Sprint 2026 highlights how cities across CEE are transforming urban mobility and turning ambitious goals into practical solutions. Not every approach will transfer unchanged, but the evidence is clear: workable models exist across CEE. Our priority now is to learn from one another, adapt what works to local needs, and accelerate progress across the region.”



Anda Rojanschi

PwC Partner, CEE Chief Markets Officer

02

Strategic city readiness



Sustainable urban mobility planning has moved from a voluntary framework to a core requirement for European cities. Under the revised TEN-T Regulation, 431 urban nodes will be required to adopt a SUMP by the end of 2027. SUMP is a strategic plan designed to meet the mobility needs of people and businesses in a city and its surrounding functional urban area, while improving quality of life. It advocates for fact-based decision-making guided by a long-term vision for sustainable mobility.

Cities are also expected to support climate-neutrality objectives and meet the stricter air pollutant limits introduced by the revised Ambient Air Quality Directive by 2030. It also strengthens requirements for monitoring, modelling, public information, air quality plans, and air quality roadmaps (where there is a risk of missing the 2030 standards).

CEE cities are positioning SUMPs as instruments for long-term change:

- 67% see SUMPs as an instrument to drive long-term urban development and sustainable change, 5%—to solve current mobility issues and improve performance, while 28%—both.
- 78% of cities rate SUMP as a high or very high priority in their city development agendas.

This ambition is increasingly reflected in formal planning arrangements:

- 83% of cities report an official SUMP or smart mobility roadmap/action plan.
- 56% have an air quality roadmap in place.

The strategic mobility planning is now relatively well established across the region. But cities need to convert this ambition into funded, coordinated, measurable implementation. This requires clear ownership, delivery timelines, and indicators that connect mobility measures with regulatory and environmental outcomes.

Air quality readiness remains less complete and, in several cities, depends on regional programmes, national transposition, or future updates to existing environmental plans. The gap is therefore not necessarily an absence of environmental action: many cities already pursue public transport electrification, active mobility, traffic management, and other emission-reduction measures. Rather, these measures are not always consolidated into a comprehensive roadmap with explicit local responsibilities, pollutant-specific targets, and implementation timelines aligned with the recast Directive.

CEE cities have established a strong strategic foundation, but the next phase will be defined by the quality of implementation. They need to connect their plans with real budgets that will have diverse sources and track data that will help make informed decisions. National and public support matter just as much. People need to see that their cities are becoming better.

No city can deliver this transition alone. The opportunity for CEE smart mobility will depend on structural improvements and sustained collaboration. Solutions already exist across the region, and cities can learn from each other and from the stakeholders in their ecosystems, including businesses, academia, and innovators. Working together, these actors can move the region from individual plans and pilots towards mobility systems that bring improvements to people's everyday lives."



Jens Hörning

PwC Partner, CEE Industrials & Services and Automotive Industry Leader

Mobility visions are broadly aligned, but regulatory readiness varies across cities:



Belgrade, Serbia

Belgrade currently lacks an action plan for smart city or smart mobility development, and these areas remain a low priority on the city's urban development agenda. However, the city has an air quality plan aligned with national and international standards and requirements.



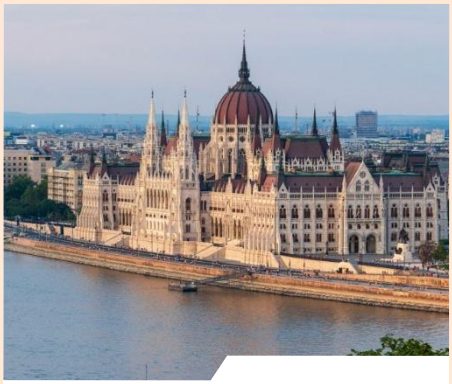
Bratislava, Slovakia

Bratislava launched the SUMP preparation process in 2026, which is highly prioritised in the city's development agenda. While the city has no separate air quality roadmap, this area is addressed through the regional Air Quality Improvement Programme (PZKO) for the Bratislava zone and agglomeration, with a new draft publicly consulted in 2026.



Bucharest, Romania

The city places a very high priority on sustainable urban mobility planning. Both its SUMP (2016–2030) and the existing air quality plan are currently being updated.



Budapest, Hungary

Budapest demonstrates a well-established approach to mobility planning, led by BKK Ltd, a professional organisation owned by the municipality. The SUMP cycle is fully embedded in BKK's operations and guided by an official roadmap. However, the city didn't confirm its regulatory preparedness regarding air quality.



Gdańsk, Poland

Gdańsk demonstrates strong strategic and governance readiness, supported by an official SUMP roadmap and a formal air quality plan. The city highlights the importance of aligning transport-related strategic documents within a single coordinating framework to ensure consistency and prevent duplication.



Katowice, Poland

The city has a new SUMP, entitled "Good Mobility 30/50," prepared by the Upper Silesian-Dąbrowa Basin Metropolis (GZM) for the wider metropolitan area, with Katowice at its centre. The city also has an established air-quality plan, reinforced by the Clean Transport Zone and investment in public transport.



Košice, Slovakia

A new SUMP is now Košice's main mobility planning initiative, with preparation launched through an EU-funded tender in April 2025. However, the current air quality plan will need to be updated once the revised Ambient Air Quality Directive is implemented into national law.



Ljubljana, Slovenia

The new SUMP is a very high priority for Ljubljana's urban development. The city has both an official strategic mobility plan, adopted in October 2025, and a formal air quality roadmap.



Lviv, Ukraine

Smart city mobility initiatives are an important part of Lviv's urban development agenda. However, the city lacks an official roadmap for smart city and/or smart mobility development, as well as a formal air quality plan, although some measures are already in place.



Łódź, Poland

Łódź has established both a formal process for preparing a SUMP and a comprehensive air-quality roadmap. Strategic mobility planning is a high priority for the city's urban development, supported by formal metropolitan governance arrangements, stakeholder engagement, and national guidance.



Ostrava, Czech Republic

Ostrava places less importance on a new SUMP compared with other CEE cities, while air quality compliance is prioritised more highly. The city has a comprehensive air quality action plan based on the regional Air Quality Improvement Programme (PZKO).



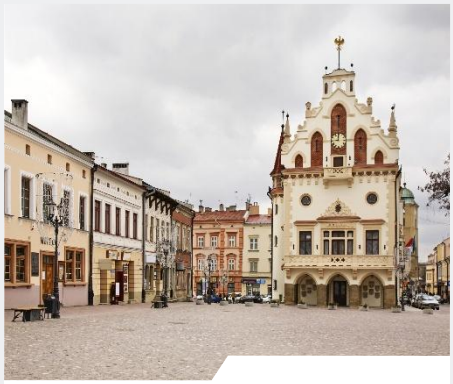
Prague, Czech Republic

Although SUMP currently has moderate priority in Prague's urban development agenda, the city has established an official roadmap and preparation process. A formal air quality plan is expected to be developed as part of the national implementation process, which is anticipated to begin in late 2028.



Riga, Latvia

Riga has both SUMP and air quality roadmaps in place. The city applied principles of multi-level governance and broad stakeholder engagement throughout the SUMP development process.



Rzeszów, Poland

Rzeszów places a great importance on SUMP and air-quality planning and has strategic plans in place for both. These efforts are also supported by the city's climate contract and its climate-neutrality framework. Rzeszów is one of the EU's 100 Climate-Neutral and Smart Cities.



Tallinn, Estonia

Tallinn has an action plan for the new SUMP. Although not all measures in the mobility plan have yet been fully reflected in the city's budget strategy, Tallinn places a high priority on the SUMP within its urban development agenda. However, the status of an air quality roadmap was not confirmed.



Warsaw, Poland

The city combines a new, high-priority SUMP with clear governance, national-level support, and advanced data capabilities. An air quality plan is also in place, supported by measures such as the Clean Transport Zone and extensive traffic monitoring.



Wrocław, Poland

Wrocław places great importance on sustainable mobility in urban development and has both a SUMP roadmap and an air quality plan. The city also prioritises citizen participation and public consultation in shaping its urban mobility agenda.

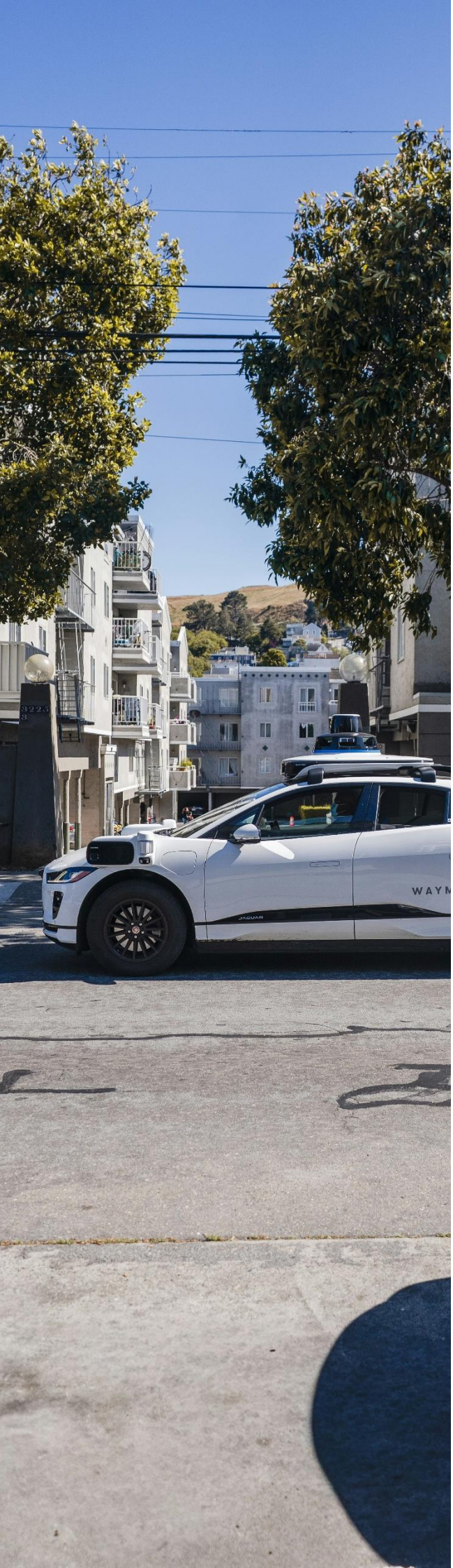


Zagreb, Croatia

Zagreb highly prioritises the development of a new SUMP and has an official roadmap. Air quality is currently addressed through existing statutory documents, while a new aligned strategy is expected to be initiated following the adoption of the updated national framework in late 2027 or early 2028.

03

Barriers to smart mobility development



To realise strategic plans and transform CEE cities, stakeholders have to overcome barriers on their way.

These challenges span five key areas: governance and social; data, digital, and AI; funding and financing; competitiveness, resilience and security; environment. Beyond these, other factors can also influence smart mobility development in the region. For example, energy and supply chain disruptions linked to the recent conflict in the Middle East are affecting urban mobility systems in CEE.

Governance and social

SUMP preparation requires clear institutional organisation and allocation of responsibilities. Most cities have an official mandate to prepare a new SUMP. However, while 17 responding cities confirmed that they have designated technical leadership, only 12 reported having an identified public engagement champion. The remaining cities rely on department-led or process-based participation, without assigning clear accountability to a specific role.

National support also remains uneven. 45% of cities report insufficient support for SUMP development and smart mobility initiatives, particularly in terms of financing and practical implementation assistance.

Data, digital, and AI

Cities demonstrate strong ambition to make urban mobility more data-driven. 89% of cities use or plan to adopt smart city and smart mobility indicators. 82%* plan to use advanced data-management techniques, such as AI and digital twins, to collect and/or update data for sustainable urban mobility indicators. However, this ambition has not yet translated consistently into citywide infrastructure or the routine use of advanced digital tools. Implementation maturity remains uneven across the region:



33%

have fully operational metropolitan- or city-wide digital infrastructure for data transmission and management. In other cities, these systems are incomplete (11%), under development (33%), at an early stage (17%), or absent (6%).



28%

use digital twins or simulation environments regularly in planning or operations. Only one city reports that such tools are integrated into its mobility management systems.



44%

have advanced or operational urban data platforms that integrate mobility datasets, while 56% have only basic or planned platforms.



39%

regularly use AI to analyse mobility data and support decision-making.

Implementation of cities' digital ambitions is progressing at different speeds. Indicators and advanced data techniques are widely planned, while the underlying infrastructure, integrated platforms, digital twins, and routine AI use remain less mature.



* Base: Comparable city responses (n = 17).



Funding and financing

Municipal budgets, transfer payments from the national level, and external funding usually are the main financing sources for urban mobility systems. The interviews reveal that the key financial barriers that cities face in preparing and implementing the next generation of SUMPs are:

- Insufficient municipal resources or lack of dedicated funding
- Dependence on EU and external funding
- Need to finance both infrastructure delivery and long-term monitoring/maintenance
- Regulatory, procurement, permitting, and financing constraints.



Key numbers

72% of cities rely on EU funding as a strategic resource for financing urban mobility systems.

17% have a dedicated separate budget for smart mobility initiatives.

24%* have specific financial instruments (e.g., bonds, internal budgetary funds, public-private partnerships (PPPs) and special credit lines) for SUMP delivery.

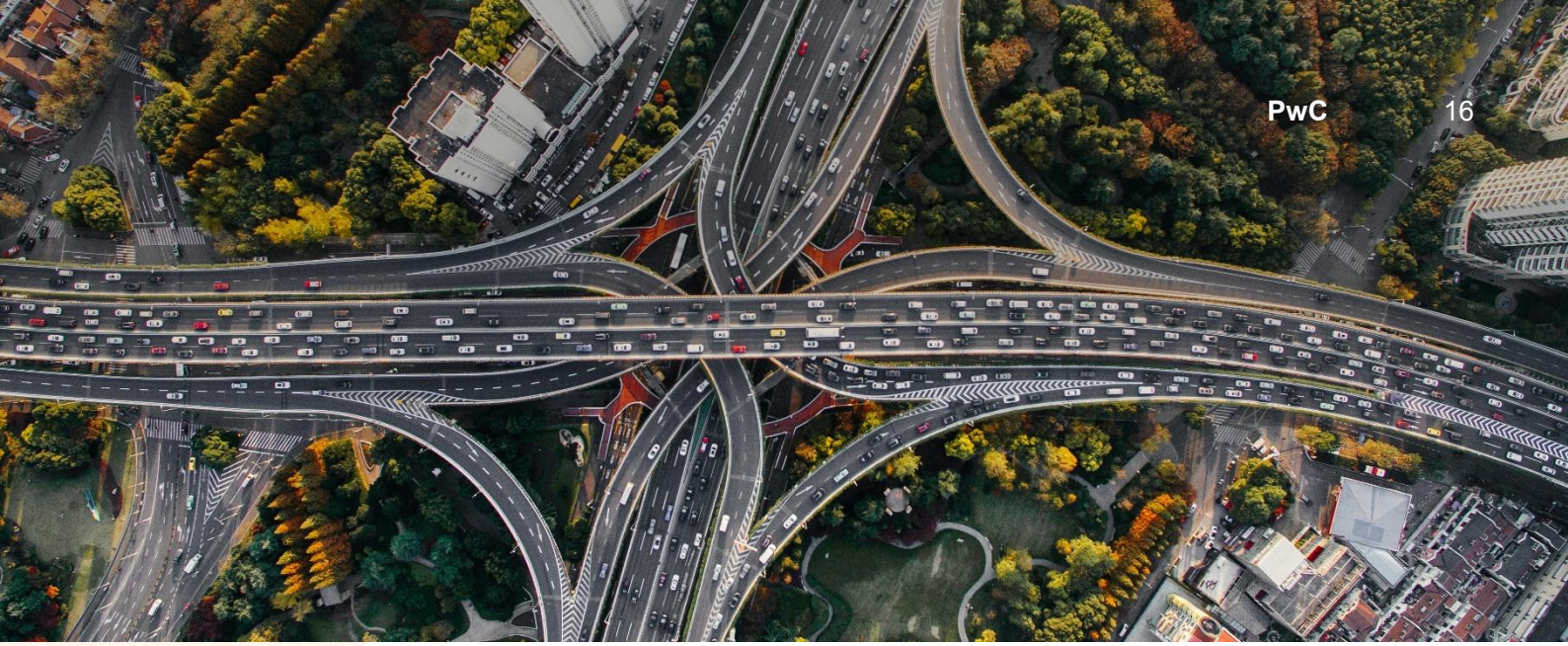
The current financing model of cities remains stronger at securing projects than sustaining transformation.

Several cities highlighted that current EU and national operational programmes primarily support ‘soft’ mobility infrastructure, such as cycling and pedestrian paths, interchange hubs, and public transport, while dedicated co-financing for road network investments remains limited.

One city noted that EU funding may cover capital investments, but the structural pressure is shifting towards the operation of the mobility system.

Another city also reported no major financial barriers to preparing the SUMP, as the project was co-financed by the EU. However, implementing the 79 measures in the Action Plan by 2032 could be financially challenging.

* Base: Comparable city responses (n = 17).



Competitiveness, resilience and security

Mobility is increasingly recognised as a driver of economic development. However, many cities still lack a long-term vision for transport infrastructure and multimodal services, either within their SUMP or linked to it. Key barriers to urban resilience include:

- **Fragmented approach to energy resilience**

  89% of cities consider fuel security, alternative fuels, and energy resilience in future transport planning. However, most focus on cleaner vehicles and supporting infrastructure rather than broader fuel security and crisis preparedness.

- **Digitalisation is advancing faster than cybersecurity capacity**

  Growing use of data management tools, digital twins, simulation environments, and AI is increasing cities' dependence on digital infrastructure. Yet gaps remain in funding, expertise, system integration, and cybersecurity responsibilities.

- **Uneven integration of resilience and dual-use needs in mobility plans**

  Defence-related needs, military mobility, and dual-use infrastructure are not yet systematically integrated into several cities' mobility plans. Responsibilities often sit at the national level or remain unclear, creating uncertainty around mandates, funding, infrastructure standards, and coordination between relevant authorities.

Environment

Smart mobility goes beyond efficient transport. It is also about creating cleaner, healthier, more accessible, and more resilient urban spaces. However, interviews identified several interconnected barriers to cleaner mobility and regulatory compliance:

- **Car dependency and resistance to demand-management measures**

  Shifting travel away from private cars remains a challenge. Solutions such as clean transport zones, parking restrictions, traffic calming, and road-space reallocation often face political and public resistance.

- **Fragmented governance and regulatory readiness**

  Air pollution and commuting extend beyond city boundaries, but transport, environmental, and investment responsibilities are divided across different levels of government. Some cities also report a lack of national guidance on emerging air-quality requirements, leading them to develop their own approaches to measures such as clean transport zones.

- **Infrastructure development can conflict with environmental objectives**

  New road infrastructure is often seen as a solution to congestion, but it can also generate additional traffic. Several cities suggested that public debate often overestimates the ability of new road infrastructure to reduce traffic volumes within cities and underestimates its potential to induce additional demand, which may lead to higher overall emissions.





Urban mobility response to the recent energy supply chain disruptions

Interviews indicate that instability in global energy-exporting regions is strengthening existing decarbonisation and resilience efforts in CEE cities rather than resulting in new conflict-specific programmes.

- 50% of cities rated the contribution of urban mobility measures to addressing the economic, social, and environmental impacts of the Middle East conflict as moderate, while 28% rated it as low.
- For 59%* of cities, recent instability resulted in only minor changes to existing energy-transition plans or had no significant impact. Only two cities accelerated their existing efforts.

Cities increasingly recognise that diversified fleets, electric public transport, active mobility, local renewable energy, and flexible infrastructure can reduce exposure to energy shocks. Dedicated conflict-response plans, conflict-specific digital measures, and evidence of their effectiveness remain limited.

* Base: Comparable city responses (n = 17).

04

Transformation enablers in smart mobility



Cities are already implementing effective solutions in public engagement, traffic management, data integration, sustainable financing, clean mobility, and urban resilience. The priority now is to connect and expand approaches that are already working.

The section returns to the same five key areas covered in Section 3, this time looking at what's helping cities push past those barriers. Cities are already incorporating data-driven decision-making, funding and financing mechanisms, and security, environmental, governance, and social aspects into their urban mobility planning.

Governance and social

In contrast to traditional planning approaches, a SUMP places particular emphasis on engagement and cooperation across different levels of government, as well as with citizens, stakeholders and private-sector actors. Citizen engagement is particularly important because a SUMP focuses primarily on meeting people's mobility needs.

Some cities already demonstrate strong examples of mature and institutionalised public engagement models. Wrocław's dedicated Department of Citizen Participation coordinates citywide consultations, supported by an external NGO selected through a biennial public tender. Its "Wrocław Rozmawia" ("Wrocław Talks") platform provides transparent access to consultation materials and shows how residents' input has informed decisions.

Beyond public engagement, effective cooperation across different levels of government is also important. Tallinn, for example, involves political and management leaders before launching wider stakeholder community that helps to build trust in the SUMP.

In terms of national support for high-quality SUMP development, cities especially value methodological guidance and effective coordination through national institutions/contact points.

Data, digital, and AI

Digitalisation is becoming an important tool for strengthening mobility planning, traffic management, and infrastructure resilience, while driving smart urban mobility transformation. To support this, cities are increasingly implementing:

- **Real-time traffic management and public-transport priority**

  67% of cities use advanced or integrated traffic-management platforms, including control centres, adaptive signals and network-wide coordination.

  Gdańsk's TRISTAR system includes signal priority for trams and buses. Ostrava is developing a central traffic-control environment linked to upgraded controllers and detectors. Zagreb combines smart cameras, automated classification, and adaptive signalling to optimise traffic flows and strengthen public transport priority.

- **Integrated data and passenger-information platforms**

  Cities are consolidating mobility data through municipal portals, data warehouses, dashboards, and user-facing applications. Riga's GEO RIGA portal provides access to municipal geospatial data and is being expanded into a metropolitan mobility-data ecosystem. Bratislava uses interactive dashboards to analyse public transport and parking.

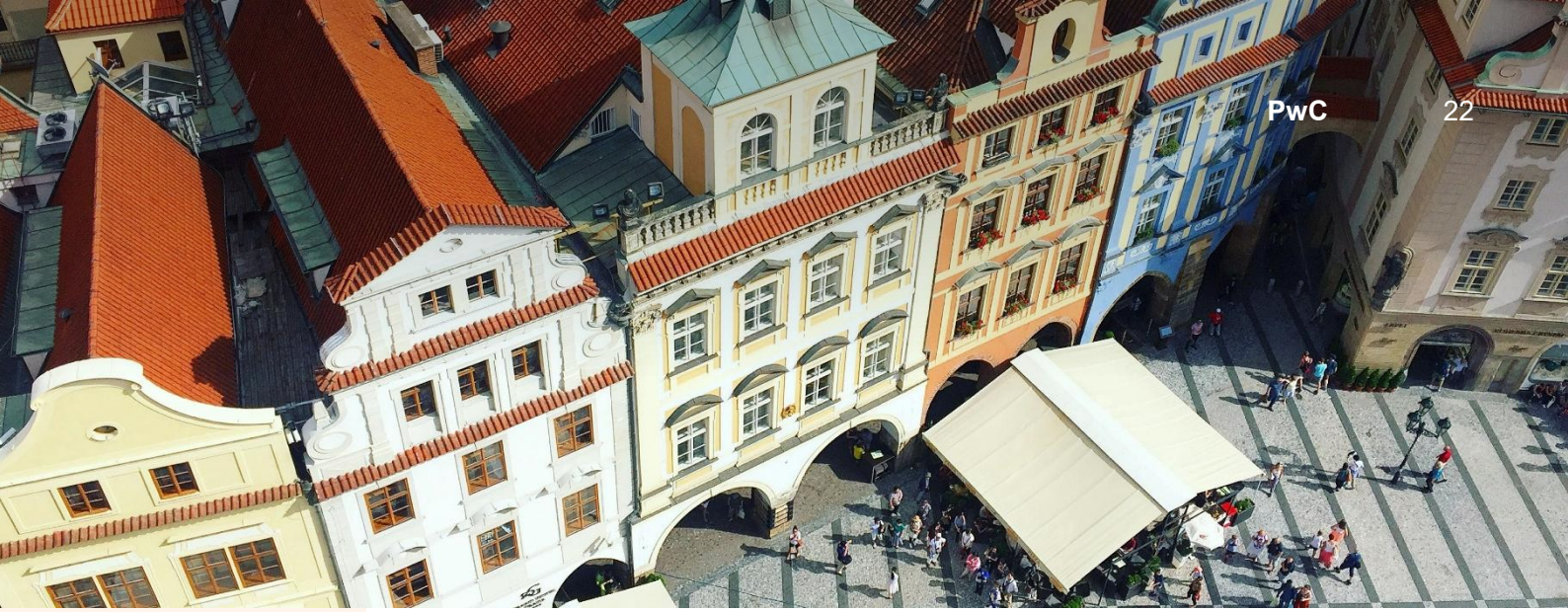
- **Automated sensing as the new evidence base**

  Continuous data collection is replacing manual surveys. Cities are using cameras, pedestrian and bicycle counters, automatic passenger-counting systems, licence-plate recognition, and anonymised mobile data. Warsaw uses LiDAR (light detection and ranging) scanning and AI-based object recognition to maintain a digital representation of its road network. Wrocław combines an in-house traffic-simulation model with citywide testing of camera-based systems and sensors for pedestrians and cyclists.

- **Simulation is scaling faster than AI**

  Transport models already support infrastructure design, scenario testing and investment prioritisation, while digital twins remain mostly experimental. Cities are also testing AI for traffic management, public transport planning, and road-safety analysis, but its use is not yet systematic.

  Although cross-platform integration remains uneven, cities are gradually moving beyond stand-alone digital tools towards connected mobility-management ecosystems.



Funding and financing

The use of bonds, internal funds and dedicated credit lines to finance SUMP measures remains limited, although some cities demonstrate the value of diversification. Bucharest uses bonds, loans and dedicated credit lines. Rzeszów combines international financing with private-sector contributions under Municipal Mobility Plans and Integrated Investment Plans. Łódź, the first Polish city to issue municipal green bonds, uses them alongside green loans to finance pedestrian and cycling routes and green infrastructure.

Although the role of PPPs remains limited across CEE cities, several cities aim to expand their use in the future. PPPs currently support EV charging, parking, shared mobility, and public transport operations. Examples of established applications include Gdańsk, where PPPs support capital-intensive road and infrastructure projects, and Belgrade, where the public transport company and private operators function within a unified public transport system.

Competitiveness, resilience and security

- 83% of surveyed cities aim to better align mobility planning with construction projects, logistics needs, and strategic infrastructure development. For example, Rzeszów has already integrated urban logistics measures into its SUMP, including vehicle-weight screening and dedicated unloading zones.

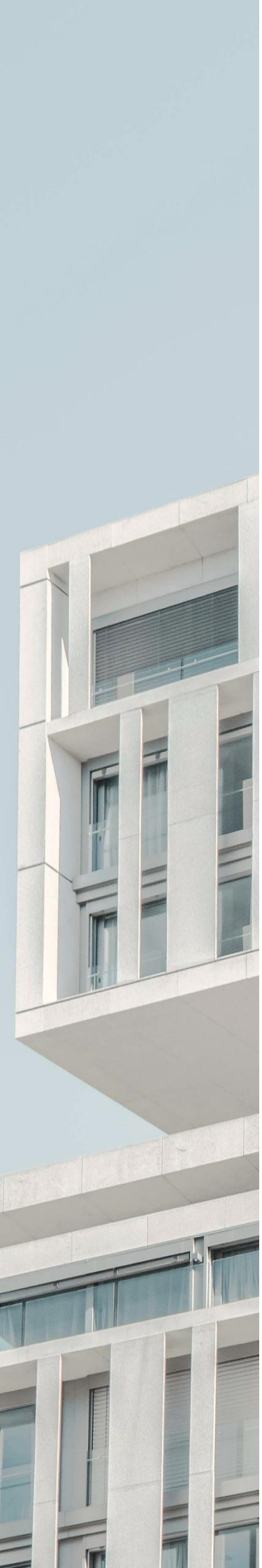
Cities are investing in electric, hydrogen, and CNG fleets, public transport electrification, charging infrastructure, and depot upgrades. For example, Zagreb is replacing fossil-fuel buses with electric and planned hydrogen-powered vehicles.

> CEE cities are increasingly embracing the role of energy resilience in the urban mobility transition. It is heartening to see the progress cities are making by expanding electric public transport fleets, upgrading energy infrastructure, and investing in energy security. The next step is to ensure that decarbonisation also reduces energy dependencies by diversifying energy sources, strengthening supply chains, and looking beyond battery-electric vehicles to build more resilient transport systems."



Jason Wardell

PwC Partner, CEE Energy, Utility and Resources Leader



Beyond ensuring the safe, reliable, and accessible movement of people and goods, cities are increasingly focused on strengthening resilience to climate change, energy disruptions, geopolitical instability, cyber threats, and other emerging pressures. Key responses include:

Climate change

Public transport electrification, urban greening, Clean Transport Zones, emission reduction, climate adaptation, and participation in the EU's 100 Climate-Neutral Cities by 2030 mission.

Zagreb is integrating greening, depaving, and public drinking fountains into mobility and urban development projects, alongside measures to address flooding, heat stress, and other environmental challenges. Riga addresses climate resilience through its SECAP 2030 and Smart Riga frameworks.

Geopolitical instability

Crisis and business continuity planning, the use of dual-use instruments for strategically important road investments, defence-related infrastructure, and the development of strategic transport corridors and logistics capacity.

Public buildings are also being adapted as civil shelters. Under the Underground Shield project, Warsaw will adapt stations and technical facilities to shelter more than 100,000 people and maintain emergency supply reserves.

Cybersecurity

Security audits, certifications, and contractual requirements; backup systems and physically separate infrastructure; controlled municipal communications infrastructure; and cybersecurity requirements in procurement and data governance.

Zagreb benefits from municipally managed communications infrastructure through Zagreb Digital City, which supports a more controlled and resilient digital operating environment.

Environment

CEE cities are entering a more demanding phase of environmental mobility policy. The revised Ambient Air Quality Directive sets new or updated standards for 12 pollutants to be met by 2030 and strengthens requirements for monitoring, modelling and air-quality planning. Although 44% of surveyed cities still lack a formal roadmap aligned with these requirements, many are already implementing relevant measures:

- 71% prioritise public transport renewal and electrification, the most frequently cited environmental measure.
- 61% promote active mobility, including cycling, walking, bike-sharing and pedestrianisation.
- Cities are increasingly using access, parking, and traffic-demand measures.
- A smaller but distinctive group of cities is using monitoring and citizen-generated data to strengthen the evidence base and improve the environmental performance of mobility investments.

Riga's "Elpo, Rīga" ("Breathe, Riga") initiative equipped 117 students and commuters with portable sensors to measure local PM2.5 and PM10 exposure. Budapest increased cycling's modal share from around 2% in 2021 to 5% in 2024 through targeted infrastructure investment. Warsaw is reallocating road space to pedestrians, cyclists, public transport, and greenery.

"CEE cities do not lack ambition. The decisive challenge is translating mobility plans into scalable execution. Closing this gap requires cities, national governments and industry to connect data, infrastructure and financing around clear outcomes for citizens and businesses. If the region gets this ecosystem model right, smart mobility can become more than a compliance exercise: it can strengthen quality of life, resilience and economic competitiveness."



Heiko Seitz

PwC Strategy& Partner and PwC Global eMobility Leader

05

Smart mobility strategies



Local leaders in the public sector face both the opportunity in smart mobility and the responsibility. Cities must accelerate action and align investment with long-term outcomes. They are expected to deliver tangible progress and place public value at the centre of decision-making.

Looking ahead, several strategic priorities stand out:

Translate SUMP and air-quality ambitions into one measurable delivery programme

Air-quality and mobility planning should operate as a single delivery framework, rather than as parallel processes. Currently, 44% of cities don't have a comprehensive air-quality framework aligned with the emerging requirements. At the same time, most identified measures focus on public transport renewal and electrification, even though cities increasingly recognise that cleaner fleets alone will not deliver the required outcomes.

To accelerate the transition, cities should:

- Turn air-quality objectives into SUMP targets and measures
- Link pollutant indicators, particularly PM2.5, PM10 and NO_2, to transport, accessibility, safety, and modal-share indicators
- Establish clear responsibilities across mobility, environment, spatial planning, and public health authorities
- Align implementation timelines, investment programmes, and monitoring cycles
- Define how measures will be financed, operated, and maintained
- Coordinate action across the functional urban area, recognising that commuting patterns and pollution extend beyond municipal boundaries.

This approach would allow cities to test whether planned investments improve environmental outcomes and to adjust measures where progress is insufficient. It would also provide a stronger evidence base for explaining why interventions such as public transport priority, parking reform, active mobility, cleaner logistics, and access management are needed.

Strengthening national support

Higher levels of governance play an important role in enabling city-level action. Under the revised TEN-T Regulation, SUMP development and implementation should follow an integrated approach based on strong cooperation, coordination and consultation across different levels of government and relevant authorities. National-level involvement is particularly important, as EU member states are required to designate a national SUMP contact point and establish a national SUMP programme supporting cities in adopting and implementing strategic plans.

National government support is particularly important in:

- Providing regulatory flexibility so that cities can test and adapt new mobility solutions
- Ensuring long-term funding models that support both infrastructure development and implementation capacity
- Strengthening knowledge exchange to help cities replicate successful delivery approaches
- Providing practical methodologies for SUMP preparation, indicators, evaluation, and alignment with air-quality objectives.

Together, these actions can help cities move beyond isolated projects towards integrated mobility systems capable of delivering lasting change.



Build relevant knowledge and capacity to unlock diverse mobility funding/financing

To bridge the financing gap, cities need to explore innovative funding and financing solutions beyond traditional public budgets and EU funds. However, there is no one-size-fits-all mix of instruments suitable for every project and every location. What's required is the knowledge and organisational capacity to assess and combine options such as grants, institutional lending, green or municipal bonds, public-private partnerships, private investment, dedicated internal funds and specialised credit lines.

The financing mix should be tailored to each project, taking into account its scale and nature, the municipality's fiscal position, cities' legal competences, and the availability of regional, national and European funding.

Crucially, funding and financing plans should cover the entire SUMP package and account for interactions with other planned measures. Their development should also be coordinated across municipal departments, including fiscal administrations, and with neighbouring municipalities.

Examples from Łódź, which used municipal green bonds for low-carbon transport investment, and Ljubljana, which applies a long-term PPP model to shared electric mobility, demonstrate the value of matching the financing instrument, delivery model and allocation of responsibilities to a clearly defined mobility need.



Harnessing stakeholder collaboration and knowledge exchange

Urban mobility is increasingly interconnected with the construction sector, logistics, strategic infrastructure delivery, energy, air quality, digital infrastructure, resilience, and economic development. Delivering it sustainably depends on effective collaboration among local authorities, national and regional governments, transport operators, businesses, investors, technology providers, civil society, academia, and the wider innovation ecosystem.

Knowledge exchange is particularly valuable when it connects cities facing similar constraints rather than focusing solely on flagship projects.

Metropolitan and city networks can enable smaller municipalities to access technical expertise, learn from both implementation successes and failures, and adapt solutions to their institutional and financial contexts.

For example, Bratislava's metropolitan SUMP process involves city, regional, district, transport operator, ministry, and cross-border stakeholders. Warsaw participates in networks of local authorities. Both demonstrate how partnerships can build capacity beyond individual projects.

Appendix





About the report

- This report was created by PwC's Central and Eastern Europe Smart Mobility team as part of the CEE Smart Cities Mobility Sprint initiative, which focuses on advancing innovative and sustainable mobility solutions across the region. The project was supported by PwC specialists from multiple CEE countries, integrating insights from consulting, technology, and urban mobility.

Acknowledgments

- We extend our sincere thanks to PSNM and EIT Urban Mobility for their support throughout this initiative. Our appreciation also goes to the local authorities from 18 cities across CEE who generously contributed their insights through interviews. We further acknowledge the dedication and collaboration of PwC teams throughout the region, whose efforts were essential in delivering this report.

Case studies



Co-creation of sustainable mobility through SUMP

Bratislava, Slovakia

Area: Governance and social

Urban mobility challenge: Meeting EU requirements to develop and adopt a SUMP for the Bratislava Metropolitan Region while coordinating multi-level and cross-border transport planning.

Solution: In June 2026, the City of Bratislava and the Bratislava Self-Governing Region launched preparations for a joint SUMP for the Bratislava Metropolitan Region. The plan will coordinate public transport, active mobility, and private car use across the city, surrounding municipalities, and cross-border areas. It'll create a shared framework for addressing the growing number of cars, worsening traffic congestion, and rising regional mobility demands. Its development brings together municipal, regional, national, transport, and cross-border stakeholders to support integrated mobility planning across the functional metropolitan region.

Results (expected): The expected outcome is an integrated mobility strategy that coordinates transport development, daily commuting, and the sustainable development of the region.

Weblink



Protecting urban nature for a healthier, more resilient city

Bucharest, Romania

Area: Environment

Urban mobility challenge: Rapid urbanisation, traffic-related pollution, urban heat, and the loss of natural areas are reducing the quality and attractiveness of public space, making it more difficult for residents to engage in active mobility.

Solution: Instead of converting the site of the unfinished hydrotechnical project into a new built-up area, the city chose to protect its naturally regenerated ecosystem. In 2016, the site was designated as Văcărești Nature Park, Romania's first urban protected natural area and the country's largest protected urban wetland. Today, the park is an important component of Bucharest's green infrastructure, providing essential ecosystem services within one of the capital's most densely urbanised areas. Under the Management Plan approved in 2025, the park administration aims to strengthen this role through systematic biodiversity monitoring, responsible visitor management, low-impact infrastructure, and expanded environmental education and community engagement programmes.

Results: The park preserves approximately 183 hectares of urban wetland, supporting 204 bird species and diverse aquatic and marsh ecosystems. It also provides environmental education and access to nature in a densely urbanised city, contributing to a healthier, more resilient, and more people-friendly Bucharest.



Digital integration of public transport services

Budapest, Hungary

Area: Data, digital, and AI

Urban mobility challenge: Making public transport more accessible, convenient, and attractive to urban travellers.

Solution: The city has developed BudapestGO as an integrated digital platform that brings together essential public transport services in a single application, including journey planning, ticketing, and real-time information on public transport and traffic conditions. Budapest's public transport company, Budapesti Közlekedési Központ (BKK), continues to enhance the application and is now focused on integrating parking-related functionalities. In parallel, BKK is developing a comprehensive electronic ticketing platform, which is expected to be fully implemented by 2028.

Results: The solution provides residents and visitors with a simple, intuitive, and user-friendly digital experience, enabling their seamless integration into the city's transport network and broader mobility ecosystem.

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Clean Transport Zone for healthier urban mobility



Katowice, Poland

Area: Environment

Urban mobility challenge: Transport-related emissions contributing to poor air quality, health risks, and pressure to meet stricter air-quality requirements.

Solution: In June 2026, Katowice introduced a Clean Transport Zone covering the city centre, restricting access for vehicles that do not meet European emissions standards. The zone sets minimum Euro emission requirements, which will become progressively stricter over time, while granting broad exemptions to vehicles owned by residents of Katowice and the wider GZM metropolitan area. It is the third such zone established in Poland and currently covers a relatively small part of the city centre. However, in response to future requirements under the Ambient Air Quality Directive, the zone may be expanded.

Results (expected): The zone is expected to reduce transport-related NO_2 emissions, improve air quality, and support Katowice's compliance with stricter Ambient Air Quality Directive requirements.

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Strategic framework for sustainable public transport

Košice, Slovakia

Area: Governance and social

Urban mobility challenge: The existing Public Transport Service Plan, adopted in 2008, is outdated and no longer reflects current passenger needs or public transport priorities.

Solution: The City of Košice has launched the development of its Public Transport Service Plan (Plán dopravnej obslužnosti, PDO) for 2026–2036, a strategic framework for developing sustainable public passenger transport. Supported by the EU funding, the plan will include demand forecasting, spatial analysis, passenger travel diaries and surveys, and multi-year projections. It will address the integration of tram, bus, and regional services and define service standards, network design, and vehicle requirements.

Results (expected): The plan will provide Košice with a data-driven and evidence-based foundation for decision-making on public passenger transport and the contracting of public transport services.

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Public-private partnership model for shared electric mobility

Ljubljana, Slovenia

Area: Funding and financing

Urban mobility challenge: Reduce congestion, emissions, and private car dependency by improving access to efficient, shared electric mobility.

Solution: The City of Ljubljana has entered a 20-year public-private partnership with Avant Car to establish and operate a public electric-vehicle rental and car-sharing system in the municipality. The project includes the deployment of 400 shared electric vehicles, 400 designated parking spaces, and 160 charging stations, complemented by additional services delivered by the private partner.

Results (expected): By expanding access to shared electric mobility, the city aims to reduce private vehicle ownership, support modal shifts toward sustainable transport, improve the efficiency of urban mobility, and contribute to its climate neutrality goals.

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Innovative green financing for urban mobility

Łódź, Poland

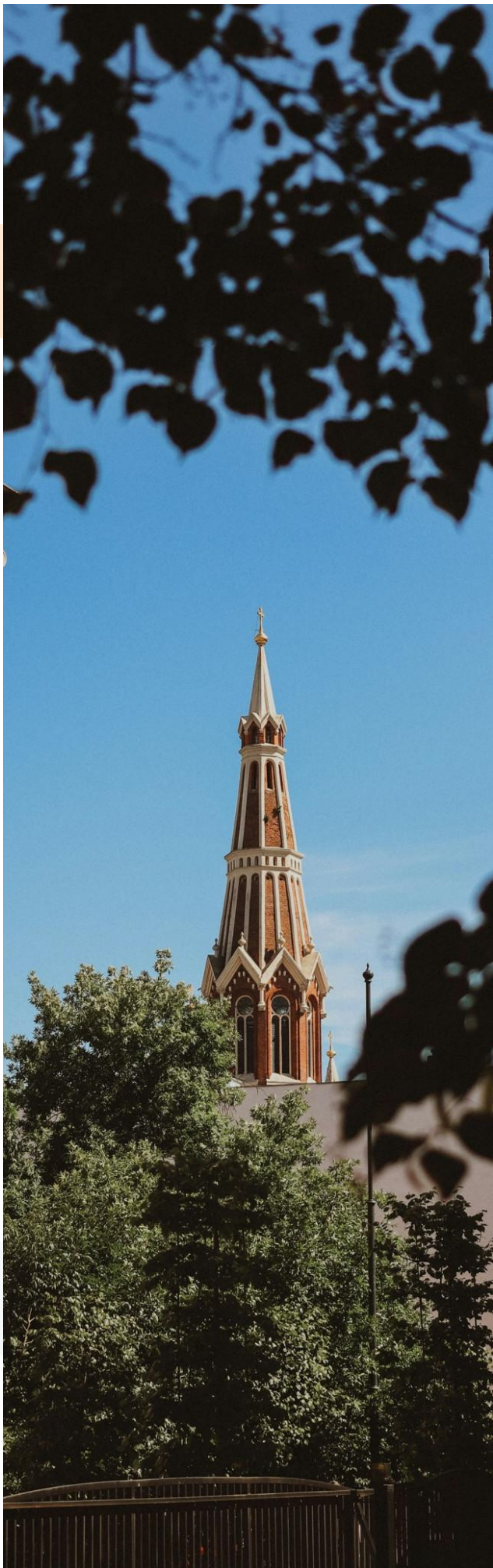
Area: Funding and financing

Urban mobility challenge: Limited public funding for accelerating sustainable urban mobility investments.

Solution: In 2021, Łódź became the first Polish municipality to issue green bonds, raising PLN50m to finance environmentally sustainable urban investments. In the mobility sector, the proceeds supported the Clean Transportation Project, including the low-carbon redevelopment of Przybyszewskiego Street, tram-track modernisation, construction of an interchange hub, upgrades to roads and viaducts, and improvements to supporting infrastructure. The project aims to improve transport accessibility, enhance public transport quality and safety, and accelerate the shift towards sustainable urban mobility.

Results: Nearly half of Łódź's PLN50m green bond issuance supported clean transport investments, accelerating public transport modernisation and the shift to low-carbon mobility.

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Optimising road space for better mobility

Lviv, Ukraine

Area: Environment

Urban mobility challenge: Enhancing road safety and public transport flow within the existing street space.

Solution: The city optimised lane widths on Stryiska and Taras Shevchenko streets without widening the roadway or changing the overall street configuration. On Stryiska Street, excessively wide lanes were narrowed to standard dimensions, creating space for an additional public transport lane within the existing roadway. A similar approach on Taras Shevchenko Street enabled more efficient use of the available space and greater priority for public transport.

Results: The practice allows the city to improve public transit priority and speed without major construction or disruption to existing street infrastructure. It demonstrates how quick, relatively cost-effective mobility improvements can be achieved primarily by reorganising traffic flows and road markings, rather than undertaking a complete street reconstruction.



Improving traffic flow through data-driven mobility management

Ostrava, Czech Republica

Area: Data, digital, and AI

Urban mobility challenge: Limited intersection capacity is causing traffic congestion, delays, and reduced efficiency in urban mobility.

Solution: With EU support, the City of Ostrava is implementing the “Increasing the Throughput of Intersections in Ostrava” project from April 2025 to the end of 2026. The initiative includes constructing a traffic management centre, replacing traffic signal controllers, establishing a centralised traffic signal control system, installing strategic traffic detectors, and deploying traffic-modelling software. Its main objective is to improve traffic flow along key routes and enable better monitoring of private and public transport.

Results (expected): The solution is expected to increase the capacity, safety, and efficiency of the transport network, provide travellers with better information, and make public transport more attractive and convenient.

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Improving energy efficiency in public transport infrastructure

Prague, Czech Republic

Area: Competitiveness, resilience and security

Urban mobility challenge: Enhancing the energy efficiency, resilience, and self-sufficiency of urban transport infrastructure.

Solution: Between 2024 and 2026, Prague Public Transit Company (DPP), together with ČEZ ESCO, ENESA and Metrostav CZ, implemented a large-scale pilot project to improve energy efficiency across its facilities. As part of the initiative, photovoltaic systems with a combined capacity of 1.5 MW were installed at DPP facilities, alongside other modernisation works. The electricity generated will be used on site, with some potentially supplied to metro facilities. Supported partly by the National Recovery Plan, the investment totalled approximately CZK767m excluding VAT.

Results: The modernisation will reduce energy consumption across selected DPP facilities by approximately 30%, generating annual savings of at least CZK15.2m. The project demonstrates the innovative use of photovoltaic technology in urban transport infrastructure and supports DPP's long-term goal of increasing energy self-sufficiency and the use of renewable energy sources.

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Engaging citizens in local air quality monitoring

Riga, Latvia

Area: Environment

Urban mobility challenge: Fixed air-quality monitoring stations provide accurate data but cannot capture people's changing exposure to pollution across the city.

Solution: Between late 2025 and early 2026, Riga launched an extensive citizen-science campaign called "Breathe, Riga!". As part of the initiative, 117 students and daily commuters were equipped with calibrated, ultra-portable air-quality sensors to measure localised exposure to PM2.5 and PM10 in the city centre. The data collected is intended to support smarter, evidence-based decisions and guide targeted measures to improve air quality across the city.

Results: The initiative collected more than 696,000 air-quality measurements, revealing a 9–10% increase in particulate pollution during rush hours. These findings provided Riga with valuable evidence to inform and implement targeted solutions.

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Integrated mobility data ecosystem for sustainable urban transport

Riga, Latvia

Area: Data, digital, and AI

Urban mobility challenge: Fragmented mobility-data storage limits the ability to effectively analyse traffic flows, public-transport operations, and sustainable-mobility development.

Solution: With EU support, the city has developed a unified mobility data ecosystem that integrates information from multiple municipal systems into a centralised platform. It combines expanded sensor networks, collection, validation, and identification of essential mobility datasets, automated reporting, and smart analytics tools, enabling real-time monitoring, advanced analytics, traffic modelling, and data-driven transport planning. The initiative aims to establish and implement a smart mobility data management system that enhances transport planning and traffic organisation while promoting sustainable mobility development across the metropolitan area.

Results: The project cuts mobility-planning and modelling time by 10%, supports faster decision-making, reduces data-processing time, and enables the city to respond more quickly to traffic challenges.

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Enhancing urban parking through smart technology

Rzeszów, Poland

Area: Data, digital, and AI

Urban mobility challenge: Inefficient parking management leads to longer searches for available spaces, increased traffic congestion, and higher vehicle emissions.

Solution: The city has implemented Metropolis.ISPP, an intelligent parking management system that monitors approximately 2,200 parking spaces in real time using 338 cameras and more than 300 ground sensors. Supported by neural network-based image analysis, the system provides accurate, up-to-date information through a mobile app that guides drivers to the nearest available parking space.

Results: The app attracts an average of 730 active users per month and has helped reduce parking search times and vehicle traffic. The system enhances operational efficiency, lowers emissions from circulating vehicles, and improves the safety and performance of city services.

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AI-driven real-time traffic management and optimisation

Tallinn, Estonia

Area: Data, digital, and AI

Urban mobility challenge: Traffic congestion and intersection blockages caused by static traffic signal management.

Solution: Tallinn is transforming urban mobility by implementing smart technological solutions that enable real-time traffic-flow management and optimisation. With support from the EU, the city launched a project to test machine-readable, demand-responsive, AI-driven traffic lights designed to prevent intersection blockages, reduce traffic congestion, and establish emergency evacuation routes.

Results (expected): If the solution proves successful in the test area, it will gradually be extended to other parts of Tallinn. The goal is to make mobility across the city safer, smoother, and more environmentally friendly.

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Digital twin for road network management (mobile laser scanning + AI)

Warsaw, Poland

Area: Data, digital, and AI

Urban mobility challenge: Lack of accurate, up-to-date and comprehensive information on road infrastructure conditions, combined with the high cost of repeated manual surveys.

Solution: In 2025, Warsaw used mobile laser scanning to map approximately 800 km of its main streets and surrounding road corridors, creating a detailed 3D point-cloud model known as ZDM View. The model enables centimetre-accurate measurements, while AI algorithms automatically detect and classify infrastructure elements, including road signs and markings, poles, traffic lights, technical boxes, and advertisements. City staff can remotely inspect, measure, and analyse these assets directly from their computers.

Results: The city uses ZDM View daily to support infrastructure management, surveying, and planning, reducing the need for repeated field visits. However, as the model provides a static snapshot of the road network and regular rescanning would be costly, Warsaw is developing a separate dynamic traffic model in parallel.

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Citywide in-house traffic simulation model

Wrocław, Poland

Area: Data, digital, and AI

Urban mobility challenge: Inconsistent traffic forecasts and fragmented modelling practices make it difficult to evaluate transport projects consistently and coordinate infrastructure planning across the city.

Solution: Wrocław is the only city in Poland to own and operate an in-house, citywide traffic-simulation model. The model integrates traffic, road-network, and intelligent transport system (ITS) data to assess transport projects, test mobility scenarios, and support evidence-based traffic management and infrastructure planning. It is recalibrated every five years using comprehensive traffic surveys. Forecasts for all infrastructure projects are validated against this single model, ensuring a consistent approach across the city.

Results: The model improves transport planning by enabling data-driven decision-making, testing of investment scenarios, and optimisation of traffic management measures before implementation.



Empowering urban mobility through telecom data

Zagreb, Croatia

Area: Data, digital, and AI

Urban mobility challenge: Limited data-driven insight into citywide mobility flows and travel patterns.

Solution: Zagreb uses anonymised mobile data to support evidence-based mobility planning and policy development. Known as URBANMOVE, the solution was developed by Algebra Bernays University Zagreb and Croatian Telecom. It combines aggregated, anonymised mobile-network data with mathematical and spatial analysis to identify movement patterns between residential areas, business districts, transport hubs, and other important locations across the city. The initiative aims to support smarter urban planning, optimise transport systems, and improve quality of life by aligning infrastructure development with actual mobility needs.

Results: The solution delivered a validated prototype that transforms anonymised mobile data into actionable mobility insights, supporting more evidence-based transport and infrastructure planning in Zagreb.

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Thank you

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