

# Delivering the EU Climate-Neutral and Smart Cities Mission: Importance of the Traffic Improvements in Historical Cities

Policy brief

Contribution to the Climate Neutrality by Renewal of the Public Transport and Promotion of Sustainable Mobility



## Key Messages

Strategic mission membership, embedded in Sarajevo's formal inclusion in the EU's "100 Climate-Neutral and Smart Cities" list since 2021 served as the primary driver for its ambitious air quality and pollution control measures. This Bosnia and Herzegovina's capital city study case is the base for present policy brief, due to the key messages their experience brings:

- Electrification of Public Transport was the key action as the city has prioritized the modernization of its main longitudinal tram line and trolleybus network, which form the backbone of Sarajevo's electric-powered transportation system.
- Transition to gas-fueled vehicles was also one of the actions and the city is continually replacing older petrol-powered buses with gas-operated vehicles. Additionally, subsidies covering up to 10% of the cost for citizens to purchase electric vehicles.
- Revival of cycling infrastructure in Sarajevo successfully established a bicycle lane network that now surrounds nearly the entire city, supported by smart mobile applications for renting bikes and electric scooters to reduce traffic congestion.
- High financial commitment of the implementation by significant funding, including 20 million KM from the Canton's own budget for new trolleybuses and a 10 million EUR loan from the European Bank for Reconstruction and Development.
- Smart and green integration by the city's current leadership has unified all efforts under a "Smart City" strategy and a "Green City" platform, ensuring that digital and ecological improvements work together to enhance urban livability.
- Pollution mitigation for public health as the key message focuses on reducing PM2.5 concentrations (mainly coming from fossil fuels in traffic) to protect vulnerable populations, especially during the winter months when topographical factors contribute to intense air pollution.

## Policy Problem

Sarajevo's proactive engagement with the EU Cities Mission is demonstrably evident through its comprehensive strategy to modernize its urban mobility infrastructure, which is a pivotal step towards achieving climate neutrality and enhancing urban livability. Specifically, the city's focus on electrifying public transport and fostering active mobility paradigms represents a tangible commitment to the Green Deal's aspirations for a significant reduction in transport-related emissions. This aligns with the EU Urban Mobility Framework, which promotes sustainable, multimodal transport systems, and reflects a growing trend among Danube-region cities to prioritize mobility and public space interventions for climate neutrality.

Such initiatives include comprehensive packages for the electrification of public transport, the expansion of cycling and walking infrastructure, and the strategic introduction of low- and zero-emission zones, mirroring successful strategies observed in other European urban centers. These actions position Sarajevo to significantly reduce its particulate matter concentrations, aligning with efforts in other major cities to improve air quality and public health outcomes. The strategic integration of regulatory and strategic planning approach was crucial for ensuring the effective implementation of initiatives, linking diverse sectors in the overarching goal of climate neutrality. In particular, it was important to align local urban development policies with overarching EU frameworks like the European Green Deal and the Urban Agenda, which prioritize sustainable urban mobility, air quality, and climate change adaptation.

City also needed to develop comprehensive urban mapping and data integration systems to identify gaps and optimize the integration of nature-based solutions within its planning frameworks for obtain measurable outcomes. A redefinition of the city's governance structure will foster collaborative frameworks between municipal departments, public transport operators, and local communities and facilitate integrated decision-making and resource allocation for sustainable urban mobility projects. These communication channels and citizen engagement initiatives will be vital for building public consensus and ensuring the equitable distribution of benefits from enhanced transportation infrastructure.

## Why Traffic Improvements in Historical Cities are Important

Making traffic more sustainable is as important as ever all around the world, but in historic cities such as Sarajevo, they are particularly life-changing because:

- In many historic cities such as Sarajevo itself, geographic and architectural constraints are pronounced. These cities are often situated in a narrow valleys with a historical urban fabric originally designed for walking and horse riding, creating dense urban blocks and narrow traffic corridors that cannot accommodate modern high-capacity motor traffic without significant congestion.
- Traffic measures can mitigate severe air pollution coming from these topography if the fossil fuel vehicles are dominant (particularly in winter) and transitioning to "clean" electric vehicles like trams and trolleybuses is a primary measure for reducing harmful exhaust gases and protecting public.
- For managing at the same time the influx of millions of tourists and their own population growth, historical cities need to introduce high-capacity systems like the tram network to provide reliable and safe transport.
- Repurposing of green areas and public use can be achieved especially with the collective mobility and revitalized bicycle infrastructure which will reduce car dependency and the need for expansive parking.
- Decarbonisation of the transport sector which is the largest contributor to the greenhouse gas emission will lead to achieving climate neutrality and to meet the 2030 climate goals of Sarajevo and other historical cities.

## Evidence and Good Practice

### *Sarajevo as a Good Practice Example in Traffic Culture Transformation*

*Sarajevo's approach to urban mobility serves as a compelling example because it demonstrates how a city with complex geographic and historical challenges can align with the European Green Deal through strategic modernization and cultural shifts. The city's success is rooted in its ability to integrate traditional electric infrastructure with modern smart technologies and inclusive social policies. Main points determining this success are:*

#### **Levering a Legacy of Electrified Transport**

*Unlike many cities that must build electric infrastructure from scratch, Sarajevo has leveraged its long-standing reliance on electric-powered public transportation, specifically its tram and trolleybus networks. By prioritizing the modernization of these systems—moving toward a high-capacity light rail system—the city is improving safety and reliability while maintaining a zero-emission backbone for urban transit.*

#### **Integration of Active and Micromobility**

A key factor in Sarajevo's recognition as a leader in sustainable mobility is the rapid expansion of its "active mobility" ecosystem. The city administration has established a bicycle lane network that now nearly surrounds the entire city, offering a practical and healthy alternative to car use. The introduction of shared mobility services, such as "Nextbike" and electric scooter rentals since 2020, has seamlessly integrated into the city's broader Smart City strategy. These initiatives have proven particularly effective in reducing congestion and providing flexible options for the "last mile" of daily commutes.

#### **Social Inclusion and Behavioral Change**

Sarajevo's model is notable for its focus on social equity and public engagement. Good practice is evidenced by:

**Economic Incentives:** The city offers discounted monthly transit cards for all population segments, ensuring that sustainable travel is affordable.

**Subsidies:** To accelerate the transition to cleaner private transport, local authorities have provided subsidies of up to 10% for the purchase of electric vehicles.

**Cultural Shift:** There is a concerted effort to move away from the "private car as a status symbol" culture toward integrated "Park and Ride" and "bus-bike" co-modality models.

#### **Strategic Alignment with EU Standards**

Finally, Sarajevo's efforts are a good practice because they are not isolated projects but part of a cohesive smart city strategy embedded in Green City Action Plan and Sustainable Urban Mobility Plan which harmonizes local needs with EU climate-neutral objectives. Sarajevo has provided a scalable blueprint for other transitional cities in the region looking to improve their traffic culture and environmental footprint.



## Recommended Policies and Procedures (implementations mechanisms) for Danube Region Countries

Sarajevo's experience as one of the 112 cities selected for the EU Mission for Climate-Neutral and Smart Cities offers a strategic blueprint for other urban centers in the Danube region facing similar post-socialist infrastructure and governance challenge. Based on Sarajevo's progress in sustainable mobility and traffic modernization, the following policy recommendations are proposed to Sarajevo and from Sarajevo:

### Policy 1: Establish National Mission Support Platforms

Harmonmissions project identified that Danube region cities often suffer from fragmented governance and limited administrative capacity. Following the Romanian M100 hub model, national governments in the region, including the Bosnia and Herzegovina, should establish coordination platforms to bridge the gap between EU-level ambitions and city-level implementation, providing technical and financial expertise to local authorities.

### Policy 2: Prioritize Policy-Bundling for Fleet Modernization

Sarajevo's success in revitalizing its tram and trolleybus networks demonstrates that fleet upgrades are most effective when bundled with broader urban planning. Policy makers should combine investments in electric public transport with active mobility infrastructure to create synergistic effects in reducing greenhouse gas emissions.

### Policy 3: Integrate Mobility with Nature-Based Solutions

Sarajevo's focus on green city platforms suggests that mobility transitions should not occur in isolation. Both Sarajevo and other Mission Cities in the Danube region should align traffic improvements with the development of cool streets and green corridors that combine shading, vegetation, and water retention, enhancing both urban liveability and climate resilience.

### Policy 4: Diversify Financial Instruments Beyond Donor Reliance

A critical challenge identified in the Bosnia and Herzegovina context is the heavy reliance on short-term donor programs. Danube cities should advocate for dedicated national climate funds, green bonds, and public-private partnership frameworks to ensure the long-term financial sustainability of large-scale infrastructure projects.

## Expected Impacts

- Environmental and urban resilience reflected in the significant emission reductions.
- Resource efficiency by shifting toward active mobility.
- Public health and safety through the reduced morbidity and mortality with increased physical activity combined with improved air quality.
- Enhanced urban safety by reducing the frequency of traffic-related accidents.
- Socioeconomic equity and accessibility through the mobility affordable and accessible for all population segments.
- Cultural and strategic transformation to accept the daily trips by public transport more integrated and diminish the status symbol of the car ownership.

## Conclusion

The transformation of Sarajevo's urban mobility landscape demonstrates that achieving the objectives of the EU Mission for Climate-Neutral and Smart Cities is attainable for transitional cities by combining historical infrastructure with modern strategic planning. Sarajevo's success is built upon a "zero-emission backbone," leveraging its existing tram and trolleybus networks while simultaneously integrating smart technologies and active mobility solutions.

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