Poltava, Ukraine

Sustainable Urban Mobility Plan — Completed

Basic information

Urban area	→	106,4 km²
Population	→	287,000
Growth rate	→	+1.1%
GDP per capita	→	USD 4,621.31
Baseline motorisation rate	→	152 cars / 1,000 inhab.
Modal share		
Formal public transport	→	55.2%
Walking	→	30.5%
Cycling	→	1.8%
Private cars	→	12.4%

Context

Poltava, located in central Ukraine, is the administrative centre of Poltava Oblast and a medium-sized regional city with strategic importance in the country's agricultural heartland. Situated between Kyiv and Kharkiv along major rail and road corridors, the city serves as an important regional transport and logistics node. While not among Ukraine's largest metropolitan areas, Poltava plays a significant role in supporting regional trade, agricultural value chains, and industrial activity.

Support from the Partnership

Technical Assistance: Support to develop a Sustainable Urban Mobility Plan (SUMP)
Funded by: German Ministry for Economic Cooperation and Development (BMZ), Swiss Federation State Secretariat for Economic Affairs (SECO)
Funding amount: Included in the Integrated Urban Development in Ukraine project, which has a budget of EUR 9,100,000 to support multiple cities
Implemented by: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through the project Integrated urban development in Ukraine
Local counterpart: Poltava City Council
Consultant(s) involved: Dornier Consulting International GmbH, Rupprecht Consult GmbH
Final Sump report: Sustainable urban mobility plan for Poltava | MobiliseYourCity

SUMP Summary

SUMP Status	Approved
SUMP Development Timeline	Joined MobiliseYourCity in June 2017 MobiliseDays in September 2018 Start of SUMP elaboration in 2019 SUMP completed and approved in 2020
SUMP Vision	"Making Poltava a more liveable urban environment and a powerful regional centre, integrated into the national and global economy. The focal points of the SUMP are strengthening the city's economy and promoting a healthier and more inclusive lifestyle."

SUMP preparation process and stakeholder involvement

Thanks to BMZ funding, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has supported the Poltava City Council in developing a Sustainable Urban Mobility Plan (SUMP). The project includes diagnosing the current situation, defining sustainable urban mobility priorities and goals, analysing possible future scenarios, and finally identifying priority measures.

Although participatory processes had previously taken place in the city, such as online public consultations and civil society actions, the project went much further, ensuring a very broad involvement of residents and specialised professionals in the area.

The implementation and development of the selected SUMP measures are expected to provide access to transport for the entire population, especially low-mobility groups, to increase ecological compatibility and to strengthen the city's economy and tourist attractiveness.

Diagnosis: Urban Mobility in Poltava

Poltava is an important regional city characterised by a flat terrain, with the maximum relief of the plains at +159.2 m above sea level. The demographic growth in its urban area is negative, characterised by low fertility and high mortality rates. However, the level of motorisation by 2031 is expected to increase by 330 cars / 1000 inhabitants, which will have a significant impact on the city's road network and traffic.

The spatial organisation of the city is heterogeneous. Although the average population density is high, it varies widely across micro-districts. The majority of workplaces and points of interest are located in the centre, the southern station area, and the southern part of the city. The northern part of the city is less populated.

These indicators are important for analysing the mobility of its inhabitants and the formation of a public transport system. Working trips account for a significant share of traffic in the city and affect the loading of the road network during the morning peak period in the direction home-work, and vice versa in the evening.

Mobility demand and transport services

According to the mobility survey carried out in May 2018, Poltava's daily travel rate is 2.1 trips per person. As shown in Figure 1, the modal split highlights the current dominance of motorised travel (cars and public transport), which accounts for 67.6% of trips, compared with 32.3% for non-motorised modes (walking and cycling).

75% of households do not own a car, and the share of car users is lower than in cities of the same size in Ukraine or elsewhere in Europe. Consequently, the share of public transport is high (55.2%), making it the most frequently used mode in Poltava. Walking is the second-most-used mode, accounting for 30.5% of all trips.

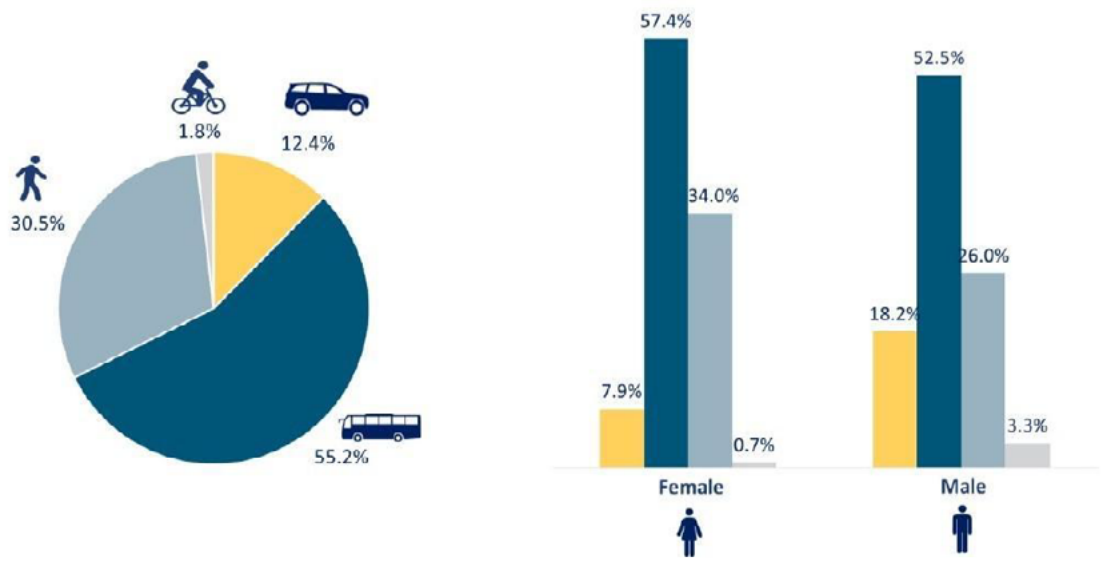

Figure 1 Modal split

Overview of the mobility services:

Public transport services (trolleybus and bus)

The city has 10 trolleybuses and 65 bus routes[1]. 15% of the final stops of these bus routes are located outside the city's territorial borders, making the city's route network accessible to the population in nearby settlements. 87.9% of residents live within 500 m of public transport stops.

The length of the network of urban electric transport (trolleybuses) is 73 km, while the total length of the network is 250 km3 (Figure 2). The public transport system has 407 stopping points.

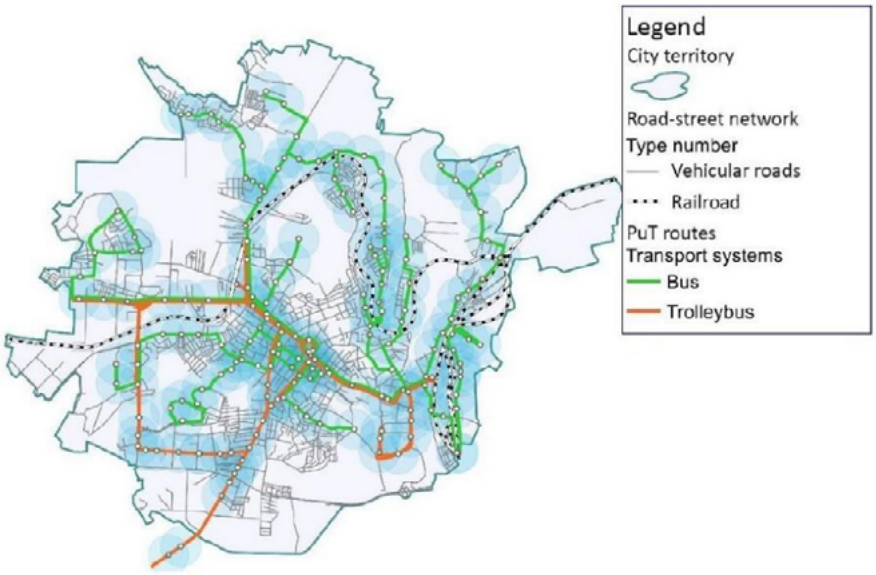

Figure 2 Public transport network

Although the network is relatively well developed, a renewal of both the bus fleet and the electric trolleybuses is necessary. Today, 49% of Poltava's bus fleet consists of low-capacity buses, while 70% of the trolleybus fleet's rolling stock is over 15 years old.

Walking

Streets in Poltava do not systematically account for pedestrian needs. An acute challenge for the city is to ensure barrier-free pedestrian space for people with limited mobility, since 10% of Poltava's population has disabilities. Besides, all sorts of obstacles often occupy pedestrian space, impeding the free movement of pedestrians.

Cycling

The cycling infrastructure is still underdeveloped in the city, but its geographical characteristics, as well as its wide streets, represent great potential for its emergence.

Private vehicles

Although private cars represent a limited share of the modal split, Poltava faces significant issues related to mass spontaneous street parking, as the city lacks a single scheme for parking space management and a control system for parking.

[1] Register of urban passenger transport routes as of December 1, 2017, Poltava Transport and Communications Department

Social issues

The diagnosis revealed that the existing public transport equipment does not provide adequate service for vulnerable groups, such as older people and people with limited mobility.

In addition, several surveys highlighted gender issues, especially related to cycling. Among all active bicycle users in Poltava, only 9% are women[2]. This gender gap indicates the perception of cycling as a highly dangerous mode. On the other hand, women are more likely to use electric trolleybuses compared to men.

Road safety represents an important concern in Poltava, especially for pedestrians, who are the most frequent victims. Based on the analysis of heat maps of traffic violence with victims, places not meeting the minimal standards for pedestrian accessibility and barrier-free space (for example, underground pedestrian crossings) are usually the most dangerous for pedestrians in Poltava.

SUMP vision and goals

> "Poltava is a city of healthy lifestyles, friendly to young people, that values and supports the elderly. It is a tolerant and safe city with a strong, socially responsible community."

Poltava's SUMP identifies six main priorities and related goals to improve mobility.

Priority 1: Improving the attractiveness of public transport

- Improve the quality of public transport services
- Introduce an efficient public transport management system
- Improve conditions for people with limited mobility
- Develop a multimodal and integrated public transport system
- Prioritise public transport in traffic

Priority 2: Improvement of parking space

- Unload roads and sidewalks in the city centre from the parking
- Provide a sufficient parking space in residential areas
- Implement parking management near public and commercial institutions
- Reduce large-sized vehicles from the city centre

Priority 3: Collection and analysis of data and creation of an intelligent transport system

- Create a unified information system
- Implement an electronic payment system for transport services
- Provide information to road users
- Renew infrastructure in accordance with the latest technologies

Priority 4: Cycling development

- Promote cycling among citizens and tourists
- Create a management mechanism for cycling development
- Improve cycling infrastructure to ensure quick and safe trips

Priority 5: Development of pedestrian spaces and accessibility

- Increase the attractiveness of walking as a transport mode
- Develop safe and comfortable facilities for pedestrians
- Create a municipal management system for walking facilities

[2] According to the cyclists survey results of "CITYLAB", 2015-2016

Priority 6: Increasing road safety

- Create a safe urban environment
- Improve the traffic culture

Key SUMP measures

Within the SUMP framework, specific measures were identified for each priority area. They can be divided into five points:

- Infrastructure measures to enhance inclusiveness and safe access to transport, and to ensure the city's long-term resilience.
- Management and organisational measures relevant to the development of management systems and strategic documents to support a high-quality urban environment and mobility.
- Monitoring and data collection are essential for assessing the urban transport landscape and identifying its problems.
- Capacity-building measures aimed at raising awareness among the main stakeholders, such as politicians and planners, about sustainable mobility.
- Promotion and awareness measures aiming at scaling up citizens' participation and understanding of the sustainable urban mobility transition.

The following table presents the main measures planned in the short term.

Measure	Cost estimates (EUR)	Proposed financing source	Implementation by
Physical investments (Infrastructure, rolling stock, etc.)			
Short term acquisition of 11 buses	800,000	Domestic financing	2019
Acquisition of 40 low floor trolleybuses and modernization of 3 traction substations	10,000,000	European Bank for Reconstructions and Development (EBRD) loan	2021
Technical (studies, plans, designs, etc.)			
Setup of a working group for cycling infrastructure and appointment of a cycling envoy	N/A	N/A	N/A

Projected results and impact

The implementation of the measures listed above will help Poltava consolidate its regional importance as an ecologically oriented city seeking to improve its citizens' quality of life. The following table presents the expected results and impact.

Impact area	Expected Impact	
GHG emissions (SDG 11)	Improved but not quantified	
Accessibility (SDG 11)	Accessibility for the entire population • Baseline: 87.9%[3] • Improved but not quantified	Accessibility for people with reduced mobility • Baseline: 11%[4] • Improved but not quantified
Air pollution (SDG 11)	Improved but not quantified	
Modal share	Percentage of total trips by public transport • Baseline: 55%[5] • SUMP scenario: improved but not quantified	
Road safety (SDG 3)	• Baseline: 0.04 accident/ 1000 inhabit.[6] • Improved but not quantified	
Mobilized finance (SDG 17)	• EUR 10 million - Loan leveraged through MobiliseYourCity (EBRD)	
Infrastructure and assets with committed financing (SDG 9)	The first priority of Poltava's SUMP is to improve the attractiveness of public transport. For that reason, most of Poltava SUMP measures are related to the optimization and reorganization of the route network. The main actions are: • Reduce duplication on urban public transport routes; • Unload the network from small-capacity vehicles; • Reduce travel time for passengers; • Optimize the transport system operational cost; • Build a network with the most efficient vehicles; • Increase electric transport; • Introduce additional trolleybus routes; • Introduce new types of public transport, such as car sharing, ride sharing (i.e., Uber), bike sharing or municipal taxis • Upgrade infrastructure in accordance with the latest available technologies; • Introduce bicycle infrastructure in all areas of the city with recreational areas and tourist facilities.	
Expected institutional impact	Poltava's SUMP includes several actions related to governance aiming at building effective management systems to guarantee the achievement of its goals and priorities. The expected impact at the institutional level can be deducted by the following list of recommended measures: • Creation of a single centralized management system of public transport in the city; • Creation of a municipal management system of walking facilities; • Creation and approval at the municipal level the responsible for the development of cycling transport terms of reference; • Establishment of a responsible authority for the organisation and management of the unified data system; • Creation of municipal service for the control of parking; • Conduct regular training in the field of management, development of public transport and the collection and analysis of traffic data to members of the relevant local authorities; • Development and implementation of a Programme for Street Design; • The creation and approval at the municipal level the responsible for the development of pedestrian infrastructure terms of reference; • Establishment of a municipal authority responsible for the road safety coordination in Poltava; • Inclusion of an independent "road safety audit" component to the projects of streets repairing and reconstruction.	

[3] Based on data about place of voters registration.
[4] Characteristics of Urban Passenger Transport, 2008.
[5] Estimated based of Mobility Survey, Dornier Consulting International GmbH, 2018.
[6] Information of the Police Department of Poltava in 2015.

Highlights in the past year

Two years after the adoption of the SUMP, significant progress has been made to make public transport and cycling more attractive in Poltava.

Since the SUMP was approved by the Poltava City Council in 2020, the most progress has been made in priority 1, increasing the attractiveness of public transport, and in priority 4, the development of cycling.

Priority 1: attractiveness of public transport

- Effective purchase of 11 buses in 2019, as well as 40 low-floor new trolleybuses in 2020 (financed by EBRD).
- Real-time information systems for passengers, including a mobile app and GPS trackers embedded in trolleybuses.
- A transport model has been developed to improve public transport routes.
- 23 public transport stops repaired, 10 equipped with real-time information systems for passengers.
- Preparation of a EUR 4.5 million investment project by the European Investment Bank (EIB), to develop the trolleybus network lines and infrastructure, including a power station.
- The process to integrate fares has started.

Priority 4: development of cycling

- A working group has been established to develop cycling infrastructure.
- A specific action plan for cycling in Poltava has been prepared and approved.
- The development of bicycle infrastructure is ongoing, with further support from GIZ, including bike park installations for schools, libraries and sports infrastructures, shared bicycles for public administration and the identification of new cycling routes.
- Communication and advocacy efforts have been made through local media and schools, in collaboration with the police, to improve the attractiveness and safety of cycling in Poltava.

The political situation is impeding the domestic financing of SUMP measures.

The main obstacle to the SUMP implementation is access to domestic public financing, aggravated by the political situation and the reallocation of budgetary resources to national defence. As international tensions have escalated littleinto a military conflict with the Russian Federation, there is hardly any reason to believe this situation will improve in the short term.

Last updated December 2023