

Poltava, Ukraine

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 106.4 km²

Population: 106.4 km² | Growth rate: 0%

GDP per capita: USD 4,621,31

By bridging its economic and touristic goals, Poltava puts in place a Sustainable Urban Mobility Plan focused on public transport attractiveness and active mobility.

Key Facts

City, Country	Poltava, Ukraine
Population ¹	287,000
Land area (Poltava City) ²	106,4 km ²
GDP per capita	USD 4,621,31
Baseline motorisation rate ³	152 cars / 1,000 inhabitants
Local Partner (organisation)	Poltava City Council
Implementing partners	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through the project Integrated urban development in Ukraine
Donors supporting technical assistance for SUMP	<ul style="list-style-type: none"> German Ministry for Economic Cooperation and Development (BMZ) Swiss Federation State Secretariat for Economic Affairs (SECO)
Amount in technical assistance	Included in the Integrated Urban Development in Ukraine project which has a budget of 9,100,000 EUR to support multiple cities
SUMP implementation timeline	<ul style="list-style-type: none"> 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

¹ State Statistics Service

² Poltava City Master Plan

³ Regional service centre in Poltava region, Ministry of Internal Affairs of Ukraine, 2015

Thanks to the funding of BMZ, 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 the diagnosis of the current situation, the definition of sustainable urban mobility priorities and goals, the analysis of possible future scenarios and, finally, the identification of 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 and ensured a very broad involvement of residents and specialised professionals in the area.

The implementation and development of the selected SUMP measures is expected to give access to transport to the entire population, especially low-mobility groups, increase the ecological compatibility and strengthen the economy and touristic attractiveness of the city.

Diagnosis: Urban Mobility in Poltava

Poltava is an important regional city characterized mostly by a flat territory with a maximum level of relief plains fixed at +159,2 m above sea level. The demographic growth is negative in its urban area, characterized by low fertility and high mortality rates. However, the level of motorisation until 2031 is expected to grow by 330 cars / 1000 inhabitants, which will have a significant impact on the road network and traffic of the city.

The spatial organisation of the city is heterogenous. Although the average population density is high, it is very different among micro districts. The majority of workplaces and points of attraction are located in the centre, the surroundings of the southern station and in 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 make a significant share of traffic in the city and affect the loading of the road network in 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 motorized travels (car and public transport), which represent 67.6% of trips against 32.3% of non-motorised modes (walking and cycling).

75 % of households do not own a car and the share of car users is limited compared to cities of the same size in Ukraine or elsewhere in Europe. Consequently, the share of public transport is high (55.2 %), making public transport the most often-used mode in Poltava. Walking is the second most often-used mode, with a share of 30.5 % of all trips.

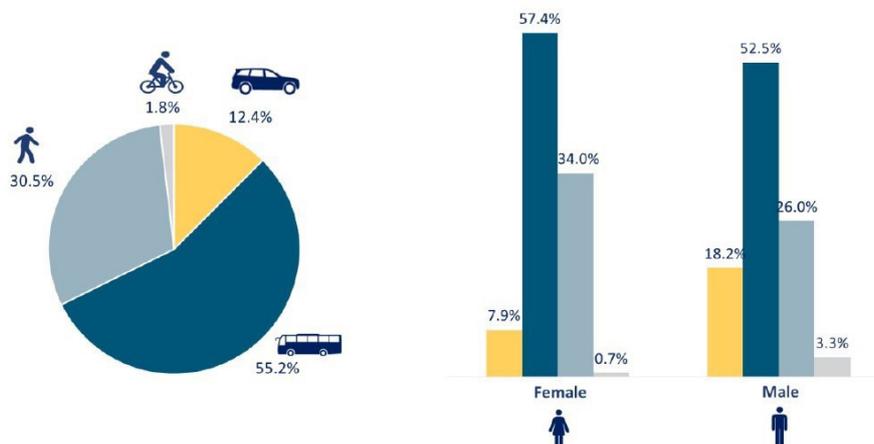


Figure 1. Modal split

Overview of the mobility services:

Public transport services (trolleybus and bus)

The city counts 10 trolleybus and 65 bus routes.⁴ 15% of the final stops of these bus routes are located outside the territorial borders of the city, which makes the route network of the city accessible to the population in the near settlements. 87.9% of local residents live within 500 m to public transport stops.

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

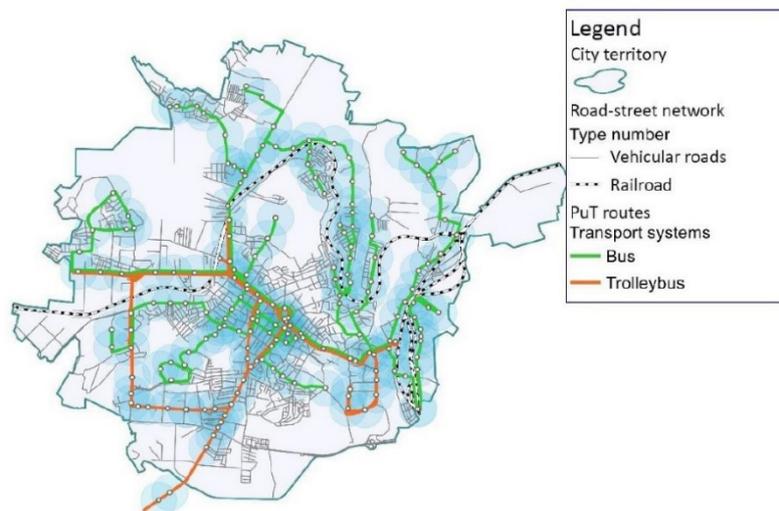


Figure 2. Public transport network

Although the network is relatively well developed, a renewal of both bus fleet and electric trolleybuses is necessary. Today 49% of Poltava's bus fleet are low-capacity buses, while the current age of 70% of the rolling stock of the trolleybus fleet exceeds 15 years⁵.

Walking

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

Cycling

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

Private vehicles

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

⁴ Register of urban passenger transport routes as of December 1, 2017, Poltava Transport and Communications Department

⁵ According to the data of KP "Poltvaelektroavtotrans" as of 01.12.2017

Social issues

The diagnosis revealed that the existing public transport vehicle equipment does not offer adequate service to vulnerable groups, such as elderly 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 women⁶. 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

Vision for urban mobility in Poltava

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

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

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
- Prioritize 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

⁶ According to the cyclists survey results of "CITYLAB", 2015-2016

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 of walking facilities

Priority 6: Increasing road safety

- Create a safe urban environment
- Improve the traffic culture

Key SUMP measures

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

- **Infrastructure measures** to enhance inclusiveness and safe access to transport and to ensure city resilience in the long-term.
- **Management and organisation measure** relevant for the development of management systems and strategic documents to support a high-quality urban environment and mobility.
- **Monitoring and data collection measures**, essential to assess the urban transport skyline and identify its problems.
- **Capacity building measures** aiming at raising the awareness of 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 on the short term.

Measures	Cost estimates in M€	Proposed Financing Source	Implementation by
Physical investments (Infrastructure, rolling stock, etc.)			
Short term acquisition of 11 buses	0.8M€	Domestic financing	2019
Acquisition of 40 low floor trolleybuses and modernisation of 3 traction substations	10M€	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			

Projected results and impact

The implementation of the measures listed before will lead Poltava to consolidate its regional importance as an ecologically oriented city desiring 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)	<table border="1"> <thead> <tr> <th>Accessibility for the entire population</th> <th>Accessibility for people with reduced mobility</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> • Baseline: 87.9%⁷ • Improved but not quantified </td> <td> <ul style="list-style-type: none"> • Baseline: 11%⁸ • Improved but not quantified </td> </tr> </tbody> </table>	Accessibility for the entire population	Accessibility for people with reduced mobility	<ul style="list-style-type: none"> • Baseline: 87.9%⁷ • Improved but not quantified 	<ul style="list-style-type: none"> • Baseline: 11%⁸ • Improved but not quantified
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Air pollution (SDG 11)	Improved but not quantified				
Modal share	Percentage of total trips by public transport <ul style="list-style-type: none"> • Baseline: 55%⁹ • SUMP scenario: improved but not quantified 				
Road safety (SDG 3)	<ul style="list-style-type: none"> • Baseline: 0.04 accident/ 1000 inhabit.¹⁰ • Improved but not quantified 				
Mobilized finance (SDG 17)	10M€ - Loan leveraged through MobiliseYourCity (EBRD)				
Infrastructure and assets with committed financing (SDG 9)	<p>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 reorganisation of the route network. The main actions are:</p> <ul style="list-style-type: none"> • 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	<p>Poltava's SUMP includes several actions related to governance aiming at building effective management systems to guarantee the achievement of its goals and priorities.</p> <p>The expected impact at the institutional level can be deducted by the following list of recommended measures:</p> <ul style="list-style-type: none"> • 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. 				

⁷ Based on data about place of voters registration

⁸ Characteristics of Urban Passenger Transport, 2008

⁹ Estimated based of Mobility Survey, Dornier Consulting International GmbH, 2018

¹⁰ Information of the Police Department of Poltava in 2015

Highlights

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 have been made in priority 1 *increase the attractiveness of public transport* and priority 4 *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 to passenger, including mobile app and GPS trackers embedded in trolleybuses.
- Transport model has been developed to improve public transport routes.
- 23 public transport stops repaired, 10 equipped with real-time information systems to passenger.
- Preparation of EUR 4.5 million investment project by the European Investment Bank (EIB), to develop the trolleybus network lines and infrastructure, including power station.
- Process to integrate fares has started.

Priority 4: development of cycling

- A working group has been created for cycling infrastructure development.
- 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 sport infrastructures, shared bicycle for public administration and the identification of new cycling routes.
- Communication and advocacy efforts have been made in the local media and schools, in collaboration with the police services, to improve attractiveness but also safety of cycling in Poltava.

The political situation is impeding the domestic financing of SUMP measures

The main obstacle for the SUMP implementation is the access to domestic public financing, aggravated by the political situation, and the reallocation of budget to national defence. As international tensions have transitioned to a military conflict with the Russian Federation, there is hardly any perspective that this situation will improve in the short term.