



Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 25-Mar-2020 | Report No: PIDA27612

**BASIC INFORMATION****A. Basic Project Data**

Country Ukraine	Project ID P170290	Project Name Kyiv Urban Mobility Project	Parent Project ID (if any)
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date 30-Mar-2020	Estimated Board Date 03-Sep-2020	Practice Area (Lead) Transport
Financing Instrument Investment Project Financing	Borrower(s) Ukraine	Implementing Agency Kyiv City State Administration	

Proposed Development Objective(s)

The Project Development Objective is to improve urban mobility and accessibility and to strengthen Kyiv City State Administration's capacity to plan and prepare investments in public transport.

Components

Component 1 - TRT Preparations
 Component 2 - Borshchahivka Rapid Tram & enhancement of Vokzalna Square
 Component 3 - Strengthening Kyiv's transport planning systems
 Front end fee

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	41.25
Total Financing	41.25
of which IBRD/IDA	40.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	40.00
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Non-World Bank Group Financing



Counterpart Funding	1.25
Local Govts. (Prov., District, City) of Borrowing Country	1.25

Environmental and Social Risk Classification
Substantial

Decision
The review did authorize the team to appraise and negotiate

B. Introduction and Context

- GDP growth was solid at 3.6% in the first half of 2019, driven by agriculture and sectors dependent on domestic consumption, while investment growth remained weak.** Real GDP grew by 2.5% in the first quarter of 2019 and by 4.6% in the second quarter of 2019, driven by a strong agricultural harvest, and sectors such as wholesale and retail, transport, and the financial sector. Household consumption continued to grow rapidly in the first quarter of 2019 (by 11.2%) supported by (i) one-off social transfers during the election cycle; (ii) continued strong remittances from labor migration to EU countries; and (iii) a resumption of consumer lending. Remittances continued to grow by 12% between January and September 2019. On the other hand, manufacturing and investment growth remained weak, with the manufacturing sector contracting by 0.2% and fixed investment growth slowing to 12%. The level of fixed investment at only 20% of GDP continues to remain too low for stronger and sustained economic growth.
- Ukraine's terms of trade saw a significant adjustment, while sound fiscal and monetary management and appreciation of the Hryvnia are helping reduce public debt and inflation in 2019.** Ukraine's terms of trade improved due to higher iron ore and wheat prices. Exports increased by 8% over the period January-September 2019, although imports grew faster than exports (8.3%), driven by intermediate goods. The fiscal deficit was contained at 2.1 % of GDP in 2018, which (together with appreciation of the Hryvnia) helped reduce public debt to 63% of GDP. The appreciation of the Hryvnia led to a shortfall of VAT on imported goods and other external trade-related proceeds, although this was offset by other revenue sources due to higher than expected GDP growth. On the expenditure side, a more prudent increase in the minimum wage in 2019, together with prudent monetary policy, helped reduce inflation.
- The situation in the labor market has recently improved.** Ukraine's unemployment rate dropped to 7.80 % in Jun 2019 from 8.3% in the second quarter of 2018. This was driven by the growing demand for labor from domestic companies and by a contraction of labor supply related to labor migration to EU countries, particularly Poland. Real wages grew by 9.5 percent, driven mostly from growth of salaries in



the private sector due to the pressures from outward labor migration. As a result of higher wages and consumption growth, poverty is also projected to decline to 14.5 percent by the end of 2019.

4. **Ukraine needs to safeguard macroeconomic stability by addressing current expenditure pressures and fiscal risks, while securing adequate financing.** Ukraine faces significant debt repayments in 2019- 2021, which will require mobilizing adequate international financing and further strengthening public finances to meet the fiscal deficit target. At the same time, Ukraine remains vulnerable to external shocks and commodity price cycles due to its reliance on commodity exports. The key to safeguarding fiscal sustainability going forward will be to address current expenditure pressures and keep the fiscal deficit at 2 percent GDP to ensure the sustainable debt reduction. Future reforms will similarly need to accelerate the structural transformation of its economy by boosting nontraditional and higher value-added exports.

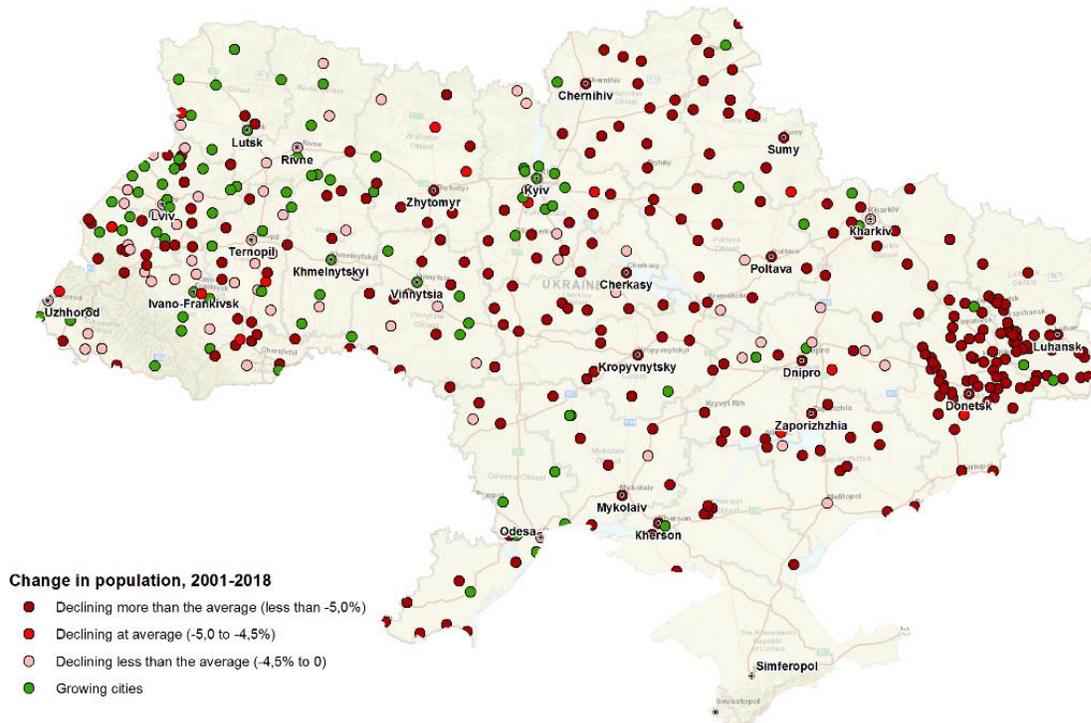
5. **The outlook for economic growth depends on delivering on the new government's key reform priorities to address bottlenecks to investment and productivity.** Given the strong performance in the first half of 2019, growth is projected to remain solid at 3.6 percent in 2019 overall. Going forward, if the new government is able to deliver on its ambitious reform goals, it is estimated that growth can increase up to 4 percent by 2021. This will require progress in the following areas: (i) attracting private investment into tradable sectors by establishing a transparent market for agricultural land, privatizing state-owned enterprises, and tackling corruption; (ii) increasing the efficiency and growth of bank lending to the enterprise sector by completing the reform of state-owned banks and reducing non-performing loans (NPLs); and (iii) safeguarding macroeconomic stability to continue reducing inflation, interest rates, and public debt.

6. **Despite overall population decline in Ukraine, key economic centers continue to grow.** A decline in the fertility rate, aging and out-migration, accentuated by the ongoing conflict in the East, led to a decrease of more than 20% of the Ukrainian population in the last 20 years. Despite this trend, Kyiv and most of the large cities¹ continue to sustain population growth. This growth derives mainly from internal migration driven by better education and job opportunities and other benefits of agglomeration economies. However, the perceived value of these benefits can decrease where there are high transport costs and pollution related to poorly performing urban transport systems.

¹ With the exception of Dnipro



Figure 1: Population change from 2001 to 2018



B. Sectoral and Institutional Context

7. **Ukraine has a high urbanization rate, with around 69% of the total population living in urban areas.** The major cities are Kyiv (2.9 million people²), Kharkiv (about 1.5 million), Odessa (about 1 million) and Dnipro (about 1 million). These cities are surrounded by satellite cities that form agglomerations with additional populations that commute on a daily basis, putting additional pressure on transport infrastructure. High urbanization leads in turn to high demand for urban transport systems including trams, trolleybuses, buses and metros.

8. **Kyiv is the 8th largest city in Europe with a growing population and increasing demand for public transport.** Kyiv covers an area of more than 835 km² and is developing its culture, policies, and strategies to reflect a European-looking Ukrainian market economy. Kyiv is growing both spatially and economically, which has increased pressure on legacy transport systems. Approximately 500,000 people regularly commute on a daily basis to the capital either for work, education, or other purposes. As the city continues to grow, it is experiencing rising levels of private car ownership and use as well as increasing pressure on public transport, which is at or near full capacity. The public transport network has not changed much since independence beyond the continuous extension of metro lines, which in turn has exacerbated crowding. New trolleybus lines have been constructed recently, but in many cases these have replaced tram lines that suffered from dilapidated infrastructure and correspondingly deteriorating competitiveness.

² Source: ukrstat.org



9. **The post-independence transition to a market economy has impacted public transport in Ukrainian cities.** When Ukraine gained independence in 1991, Kyiv and Kharkiv had dense networks of public transport, comprising buses, trolleybuses, trams and metros with large fleets of rolling stock available. Transformation towards a market economy, the breakdown of economic ties and consequent economic decline had a strong influence on transport systems throughout the country. Funding shortages as well as changes to travel patterns following the disintegration of large industrial concentrations jointly impacted the attractiveness of public transport in Ukraine.

10. **Private unregulated services appeared in the 1990s to fill the gap in public provision.** Private operators entered the market using a variety of buses, from vans to medium-sized buses, new and used. They followed a soviet format called “route taxi”, consisting of small buses with higher fares and no fare concessions. They operated on, and continue to operate on, an alternative route network with multiple duplications of the public operator owned routes that have cannibalized public transport demand. These private minibuses, called “marshrutkas”, are currently operating in most Ukrainian cities, including Kyiv. While marshrutkas provide higher accessibility compared to public operators, with more routes, shorter headways and higher speeds, they operate under weakly regulated conditions, often provide poor conditions, unsafe and highly polluting vehicles, unsafe driving and no concessional fares.

11. **Road fatality rates remain high compared to EU countries, despite a slightly decreasing trend.** Both the number of road accidents and road deaths in Ukraine decreased in the past 10 years. However, the number of fatalities remains high compared to the EU average; over 4,500 fatalities were recorded in 2017. Similarly, data from 2017 show that there were over 160,000 road accidents and 34,000 road injuries in the country. Over-speeding is identified as of the main cause of accidents, while seat belt usage remains low. A recent survey shows that only about 30% of drivers in Kyiv use seatbelts. Data from 2018 found that 38,073 accidents, 139 fatalities and 2,524 injuries were recorded in Kyiv alone. About 40% of the accidents involve pedestrians, due to unsafe vehicle/pedestrian interaction at intersections and on sidewalks.

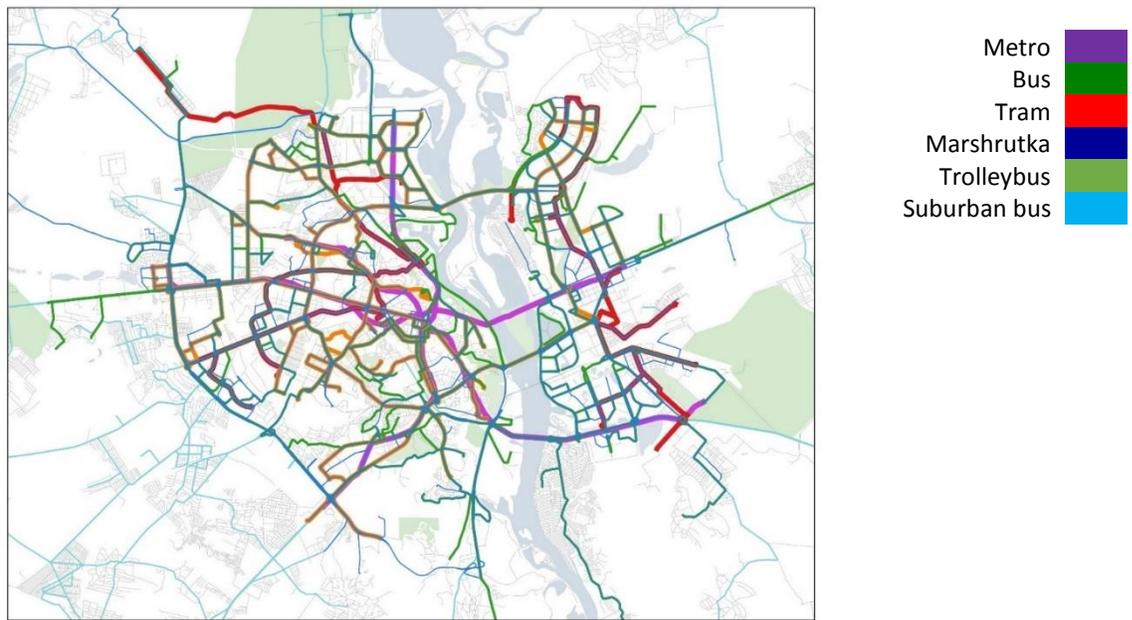
12. **Major gaps in planning and barriers to implementing investments in new mass transit systems are degrading urban mobility in Kyiv.** Kyiv has a master plan that identifies proposed mass rapid transit routes as well as enhancements to major transport infrastructure such as roads and bridges. However, the configuration of these elements largely dates from the late 1980s. Updates to the master plan have not kept pace with Kyiv’s transformation since transition such that the relevance of historic plans is questionable. Importantly, gaps in the planning process are not entirely technical and reflect a complex political economy related to land development, institutional bottlenecks, and the influence of powerful stakeholders. Kyiv’s track record of investment since transition is similarly mixed. Extension of existing metro lines has continued at steady pace – even during periods of crisis and severe fiscal constraint. However, the incremental benefit of longer metro lines is limited due to crowding constraints and the need for enhanced connectivity in Kyiv’s urban core. The development of additional capacity for mass rapid transit is particularly critical to addressing burgeoning traffic congestion, deteriorating air quality, increase in travel time and costs, increase in road traffic crashes and casualties, and loss of productivity.

13. **Kyiv’s Transport Master Plan is not fiscally constrained and requires a credible funding and financing strategy.** The current master plan envisaged roughly 150 billion UAH (US\$ 5.6 billion) of investment in transport for 15 years between 2015 and 2030. However, the Master Plan does not define



sources of funding or financing to meet this need. This results in a credibility gap given that historically only about five percent of annual budget has been allocated for development of transport infrastructure. The current master plan also does not envisage broader forms of funding and financing holistically as needed to address investment needs and structure payments over time. Specifically, there is a need for integrated planning to optimize different sources of funding (e.g. fares, public budget, parking fees, land use charges, vehicle related charges, etc.). Similarly, there is a need to analyze the size, timing, and volatility of funding streams with a view to securing different forms of financing, whether public, commercial, or from International Financial Institutions. The scale of Kyiv’s transport investment needs and the requirement for sustained multi-year programmatic investment approaches imply that integrating funding and financing dimensions into Kyiv’s transport planning process are critically important.

Figure 2: Public transport in Kyiv



14. **While Kyiv’s public transport network is dense, the quality of service is below expectations.** The public transport network in Kyiv comprises three metro lines, carrying about 1.5³ million passengers daily; around 140 public bus, trolleybus and marshrutka lines carrying around 1.5 million passengers daily; a very large number of private marshrutkas (about 140 lines carrying about 1 million passengers per day); and 21 tram lines carrying around 0.5 million passengers daily. There are also two ‘Rapid’ tram lines, one of which, the Borshchahivka Rapid Tram, carries 150,000 passengers daily. This dense network contrasts with the poor quality of services reflected by the low accessibility of some areas – including the city center – the condition of rolling stock, aggressive driver and driving behavior, low and unreliable frequencies, poor infrastructure for shelters and interchange hubs, poor user information and lack of integrated fare. Importantly, the level of access to public transport for persons with impaired mobility in Kyiv is weak. For example, only 12 of 52 metro stations are equipped with elevators. Kyiv’s marshrutka fleet lacks any form

³ All ridership data in this paragraph dates from 2014.



of disability access. While approximately 80% of the trolleybus fleet offers low-floor options, most of the other buses and trams that serve the city do not offer low floor features. Broader forms of accessibility enhancements for persons with visual, cognitive, auditory, or other impairments are limited. These facts misalign with obligations under Article 9 of the United Nations Convention on the Rights of Persons with Disabilities, which Ukraine ratified in 2009.

15. **Despite low quality of services, public transport is still the main transport mode for people who can access it - but this won't last without intervention.** Public transport accounts for 64% of all motorized journeys in Kyiv. It represents the main mode of travel for work, education, social, medical and shopping purposes. Private vehicles account for just 28% of total trips in Kyiv. Motorization in Kyiv increased from 213 to 257 cars per 1000 inhabitants between 2015 and 2018, which represents both increasing incomes and growing discontent with public transport. In recent surveys conducted in 2015 and 2019, only 5% of public transport customers reported being fully satisfied with services supplied⁴ while the three main issues identified by public transport users were the traffic jams, crowdedness and the comfort and safety of vehicles.

Figure 3: Surface public transport modes in Kyiv



16. **The localized and GHG emissions of transport in Kyiv need to improve.** The International Council on Clean Transportation estimated in 2015 that Kyiv was the fourth worst urban area for transport-attributable air pollution deaths per 100,000 people out of 100 cities considered. The estimated annual mean concentration of fine (PM 2.5) and coarse particulates (PM 10) in Kyiv's air were estimated to be 22 µg/m³ and 35 µg/m³ respectively according to the World Health Organization's Global Ambient Air Quality database. These figures represent 1.75 times and 2.2 times the recommended WHO limit for annual particulate concentrations. The National Ecology Center of Ukraine estimates that 87% of local pollution emissions come from traffic, of which 92% is due to private cars. GHG emissions from transport have been growing 2-3 times faster than Ukraine's nominal GDP since 2015, which implies the need for interventions that target longer term structural change in the sector. Importantly, about 71% of transport sector GHG emissions in Ukraine come from road-based modes. The proposed project integrates these considerations by i) addressing the gap between quality of transport and users increasing needs, and ii) supporting modal shift from polluting buses and cars to tramway and by improving KCSA's capacity in planning for greener transport.

17. **Disaster Risk Screening: Kyiv has experienced rising temperatures and significant flooding in the recent past.** Between 1901 and 2016, temperatures averaged a low of -4.83 Celsius in January and a high of 20.59 Celsius in July. Average temperatures are projected to increase by 2.5 Celsius by mid-century and

⁴ Data from a 2015 transport user survey



nearly 4.7 Celsius by the end of the century. Coupled with overcrowding issues, this has a tremendous impact on passengers, who suffer from extremely high temperatures on the tram (up to 43 degrees) and bus (over 50 degrees). Kyiv has also experienced severe flooding in the recent past due to extreme precipitation events which may become increasingly frequent due to climate change. For example, in July and August 2018 floods paralyzed sections of the urban transport network. This created significant disruptions to traffic and a number of sections along the Borshchahivka tram alignment. While the flood's consequences continued to affect underpasses and tunnels for 2-3 days, surface disruptions lasted for 12 hours with the tram network affected for 2-3 hours. Works supported under Component 2 of this proposed project will seek to demonstrate resilient design features that can be replicated in other areas of Kyiv's tram network (annex 6).

18. Mobility and access are key challenges that constrain economic development in sections of Kyiv and disproportionately affect lower income households, persons with impaired physical mobility, women, and youths. Spatial disparity with respect to household income levels is clearly visible in Kyiv. Lower income levels – and lower car ownership levels - are predominantly found in Troieshchyna and Dniprovs'kyi to the east of the city center, on the Left Bank of the Dnipro river; to the south of the city in Khodosivka, Pidhirtsi and Romankiv; and on the western periphery of the city in Svyatoshyns'kyi. These areas also correspond to lower accessibility levels – a trip by public transport between Troieshchyna and the center of Kyiv takes on average from 90 to 120 minutes. In addition, most of the transport users from these areas make in average at least one transfer, which leads to additional travel costs due to the lack of fare integration and further challenges persons with impaired mobility given the absence of improved interchange facilities. Similarly, private marshrutkas often do not accept passengers benefiting from concession fares⁵, implying that elderly and students have either to pay or to wait for extended periods of time. However, elderly and students are the two categories with the largest share of public transport users, and therefore more likely to be affected by the lack of accessibility; around 72% of students and 68% percent of elderly reported to regularly use public transport in Kyiv.

19. Specific groups are particularly affected by the poor state of infrastructure and overcrowding, which jointly reduce the number of trips and indirectly limit access to economic opportunities and services. Multiple factors are behind poor mobility of users, with a disproportionate impact on users with reduced mobility, the elderly and women when waiting and accessing the vehicles. The condition of infrastructure, including the interchange areas, bus stops/shelters, street lighting, is generally poor, and, coupled with parked and moving vehicles, it leads to uncomfortable, poorly-accessible service. These jointly lead to a reduction of the number of trips that users make and indirectly reduce access to economic opportunities and services. Commuters also suffer from unsafe interchanges and waiting areas and long trips in overcrowded vehicles. The phenomenon of overcrowding becomes particularly acute during winter, where passengers have to wait outside under harsh weather conditions (often down to -10 degrees Celsius).

20. Although transport projects may at first appear to benefit everyone equally, women's and men's experiences with transport systems differ, particularly with regard to accessibility, affordability, availability and safety. Many women who participated in focus group discussions held in preparation for this project in Kyiv reported not feeling safe or comfortable taking public transport, particularly when vehicles were overcrowded. Half of them reported to have experienced or heard of other women

⁵ An implicit rule is that a private marshrutkas will not take more than two concession passengers onboard at same time.



experiencing sexual harassment in public transport. Fear of physical violence or harassment was also identified as a significant barrier to using public transport. Situations of inappropriate touching and verbal comments were reported to be common. A key area of concern is the current point connecting Vokzalna Square with the current terminus of the Borshchahivka Rapid Tram which involves passing through the “Kishaka” passage (literally translated to mean “the intestine”). Issues such as this will need to be addressed as sexual harassment can curtail women’s mobility and employability. According to a report from the International Labor Organization⁶, in developing and emerging countries, poor transport was estimated to reduce the probability of the women seeking employment by 16.5% and 5.7 %, respectively. Violent crime in and around Kyiv’s public transport network also occurs occasionally. It is important to note that Kyiv does not have a municipal police force and policing falls exclusively under the purview of national government. Annex 5 includes more information on gender analysis as well as proposed steps to address this issue.

21. **Universal access remains an issue across Kyiv’s public transport system.** A lack of alternatives to stairs, high-floor rolling stock, unaccommodating driving behaviors and poor stop/station design characterize Kyiv’s transport network and are of particular relevance to passengers with disabilities and the elderly. These features also impact the mobility of other groups with special accessibility needs, an example being women in Kyiv whose mobility patterns frequently involve the accompaniment of infants. Vulnerable groups are restricted in their choice of mode and route, imposing costs and potentially limiting access to economic opportunities.

22. **The political and the institutional contexts in Kyiv are extremely complex.** The political situation became extremely complex following the Ukraine government decision to split the functions of Mayor and Head of KCSA Administration. The Mayor will hold executive powers while the Head of the Administration will chair the City Council. The current situation is marked by the transition between the old and the new models. In addition, the National Government attempted to bring forward the municipal elections from 2020 to December 2019, generating additional uncertainty and complexity. The institutional context is marked by a multiplicity of institutions with different mandates and authorities related to transport in Kyiv. The Metro (underground public transport), KyivPassTrans (surface public sector provided public transport), KyivAvtodor (road infrastructure), KyivDorServis (traffic management), Ukrzaliznitsya (Ukrainian Railways, infrastructure and maintenance for the city train), Directorate for the Construction of Road and Transport Structures (DRTCS) in charge of new infrastructure construction and Kyivtransparkservice (parking) are the main public companies in charge of transport. At KCSA, different departments have mandates related to transport, the Department of Transport Infrastructure is in charge of transport planning and investments, while the Department of Economics and Investments is in charge of the city strategy and of investment plans and decisions, the Department of Urban Development and Architecture is in charge of the city urban and transport master plans. These institutions/departments have no coordination mechanism and no mandate or incentive to coordinate, making decisions from Mayor or Deputy Mayor in charge of transport the de facto coordination mechanism, which is currently not fully operational for the political reasons mentioned above.

⁶ World Employment Social Outlook, Trends for Women, 2017, International Labor Organization, Geneva



C. Proposed Development Objective(s)

PDO Statement

The Project Development Objective is to improve urban mobility and accessibility and to strengthen Kyiv City State Administration’s capacity to prepare and plan investments in public transport.

PDO Level Indicators

#	Indicator	Description	Objectives
1.	Improved accessibility and mobility	Beneficiaries experience simplified access to critical interchange points with Kyiv’s three metro lines and central train station.	Reduce physical barriers and time required for customers to access Vokzalna train station, Palats Sportu metro station and Ploshcha Lva Tolstoho metro station from the Borshchahivka rapid tram.
2.	Demonstrated capacity for preparing major projects	Demonstrated ability to prepare a high profile, complex, mass rapid transport project to a standard that can source broad forms of investment.	Readiness according to an independent technical audit that assesses TRT project readiness across four dimensions: (i) technical; (ii) E&S impact management; (iii) beneficiary engagement; and (iv) commercial analysis.
3.	Improved capacity for planning investments in public transport	KCSA demonstrates ability to plan transport investments that respond to the city social, demographic and economic developments.	Preparation of the second generation of the Kyiv Urban Mobility Model and use of its results to update the Kyiv Transport Master Plan.



D. Project Description

23. The Kyiv Urban Mobility Project will deploy and Investment Project Finance (IPF) loan from IBRD to the Kyiv City State Administration (KCSA) that will finance three components. The first component aims to develop and demonstrate KCSA's ability to prepare major projects to the standard needed for crowding in finance from a broad range of sources. A second component aims at building KCSA's implementation capacity on a relatively small-scale project so that larger projects become increasingly within reach. A third and final component will finance improvements to KCSA's capabilities for using transport planning to shape Kyiv's spatial fabric. Together these interventions are meant to prepare KCSA for delivery of the future Troieshchyna Rapid Transit (TRT) project which would provide a mass rapid transport connection that has been missing from Kyiv's Troieshchyna district for 40 years. Detailed descriptions of each component are as follows:

Component 1: Troieshchyna Rapid Transit (TRT) enabling preparations (IBRD US\$ 7.82 million)

24. Residents of Troieshchyna – district located at the north left bank of Kyiv with a population between 300,000 - 400,000 inhabitants – have no direct access to mass rapid transit at present – despite legacy promises from the 1980s to develop an additional metro line. Their linkages to Kyiv's city center and metro network are currently limited to low quality options including infrequent and poorly integrated tramways and city train services, trolley buses, and marshrutkas that operate in mixed use right of way. All these services provide poor travel conditions, low level of accessibility and no fare integration. There is currently a technical and economic study underway using a World Bank Group (IFC+IBRD) supported grant for a new mass rapid transit system that will connect Troieshchyna. This includes analysis of mode, alignment alternatives, financial and economic assessment, and preliminary social and environmental baseline assessments. IFC has also launched a parallel study, in collaboration with IBRD, aimed at providing a deeper analysis of financing alternatives. Component 1 will build upon this work and support:

- i. Site surveys, hydrological study, geotechnical investigation, and ESIA / RPF / RAP of the proposed Troieshchyna Rapid Transit (TRT) system once it is identified under ongoing technical assistance;
- ii. Detailed engineering design of TRT civil works (excl. bridge);
- iii. TRT systems engineering & specification (signaling, ITS, vehicle control);
- iv. Detailed design of a bridge or bridge rehabilitation works needed for providing high capacity public transport access across the Dnipro river;
- v. Public outreach and communications consultancy;
- vi. Tender documentation; and
- vii. Independent technical audit by international mass rapid transit, social, and environmental experts to assess the TRT project's readiness for delivery.

Component 2: Borshchahivka Rapid Tram & enhancement of Vokzalna Square (IBRD US\$ 30.3 million; IFC 52.5 million)

25. The extension of Borshchahivka Rapid Tram and the reconstruction of Vokzalna square are the short term most critical priorities for transport investments in Kyiv and represent "quick wins" for impacting on commuters in Kyiv's city center. The Borshchahivka Rapid Tram connects the districts of Borshchahivka and Vidradny with the Vokzalna train and metro stations. From there, most passengers



change mode to metro, bus and marshrutkas to reach their final destination. This change generates additional cost and inconvenience for customers and exacerbates crowding at the Teatralna and Khreshchyatyk metro stations. The extension will bring time and cost⁷ savings and improve comfort for the users, generate time saving and comfort improvement for other metro users, provide modal shift for about 3,500 car users, and improve road safety in particular for pedestrians along the new section by reducing vehicle-pedestrian interaction. The extension of Borshchahivka Rapid Tram will also provide public transport customers with an alternative to accessing Vokzalna Square without traversing the “Kishaka” passage which includes not means of access for disabled customers and many public transport customers (especially women) have identified as unsafe after hours.

26. The Borshchahivka Rapid Tram currently terminates near Vokzalna square which is a main interchange hub for long distance passenger rail, metro, buses, taxis, and tram customers. Poor organization and regulation of traffic movements around the square lead to inconvenient and unsafe experience particularly for pedestrians. Access for persons with disabilities is similarly poor. Upgrading of the square is a priority for improving amenity and the inclusiveness of public space associated with transport interchange in Kyiv. Component 2 of the project will accordingly support:

For the Borshchahivka Rapid Tram extension:

- i. Field-based utilities validation and flood risk assessment for Borshchahivka Rapid Tram’s extended alignment;
- ii. Detailed design and tender documentation for Borshchahivka Rapid Tram extension; and
- iii. Civil works for the extension of the Borshchahivka Rapid Tram tracks totaling approximately 4 km (both directions of travel).

For the Vokzalna square:

- i. Vokzalna square’s master plan and phasing program for upgrading works;
- ii. Vokzalna square phase 1 engineering design;
- iii. Accessible pavers and vehicle waiting / drop-off areas;
- iv. Passenger coverings at interchange points;
- v. Vokzalna square accessibility upgrades along passenger interchanges;
- vi. Vokzalna square passenger amenity area;

For common elements under the project:

- i. Accessibility audits to inform planning and design and assess results after construction;
- ii. Supervision engineering services for all civil works; and
- iii. Civil works contingency to be deployed as needed across works.

⁷ By avoiding one transfer, since there is no fare integration in Kyiv.



27. Following the Maximizing Finance for Development (MFD) approach, the project seeks to attract broad forms of financing such as sub-sovereign investment and private financing to diversify Kyiv's available financial resources and crowd in investment beyond government guaranteed sources. The International Finance Corporation is considering co-financing options (subject to due diligence and IFC management approval) for approximately 15 trainsets that offer bidirectional operation in support of the Borshchahivka Rapid Tram's extension (approx. \$52 million). The use of bidirectional trams is critically important for meeting the level of transport demand envisaged along the extended route due to faster turnaround times that do not turnaround track loops. Bidirectional operation will also enable early turnback of trams along route to accommodate maintenance works or large-scale events around Palats Sportu (Kyiv's central sports arena) that may require closure to all vehicle movement.

Component 3 - Strengthening Kyiv's transport planning systems (IBRD 1.7 million)

28. This component will consist of technical assistance activities to support incremental project expenses and strengthen KCSA's transport planning systems including development of a city-wide fares policy, accessibility standards for common public transport works, and updates to Kyiv's transport model. Specifically, Component 3 will finance:

- i. IT upgrades for KPT, Urban Development and Architecture Department, and Institute of Master Plan;
- ii. Surveys, gender disaggregated data collection, and update of transport model and master plan components;
- iii. Training and skills development for KPT, Urban Development and Architecture Dept., and Institute of Master Plan;
- iv. Development of proposed fares policy and adjustment regime for Kyiv Public Transport;
- v. Development of accessibility design guidelines for public transport works that meet "Design for All" principles;
- vi. Consultancy support for KPT and other entities with project roles;
- vii. Mobilization of a "Citizen's Report" for transport in Kyiv that includes disaggregated reporting by gender; and
- viii. Procurement and financial management support for KPT



Project financing summary by component

<i>Component</i>	<i>US\$ IBRD</i>	<i>US\$ KCSA</i>	<i>TOTAL</i>	<i>% of Total</i>
Component 1 - TRT enabling preparations	7,817,000		7,817,000	19%
Component 2 - Borshchahivka Rapid Tram & enhancement of Vokzalna Square	30,348,000		30,348,000	73.60%
Component 3 – Strengthening Kyiv’s transport planning systems	1,735,000	1,250,000		7.2%
IBRD front end fee (.25% of IBRD principal)	100,000		100,000	.2%
Totals	40,000,000	1,250,000	41,250,000	
<i>% of total</i>	<i>97%</i>	<i>3%</i>		



Legal Operational Policies

Triggered?

Projects on International Waterways OP 7.50

No

Projects in Disputed Areas OP 7.60

No

Summary of Assessment of Environmental and Social Risks and Impacts

Environmental Risks: Substantial

29. Overall, the Environmental Risk Rating is Substantial, primarily due to the scale of potential adverse impacts and risk mitigation for Component 1, also low capacity of the Client to manage environmental issues. Component 1 is a TA and does not involve any civil work financed under this project. However, the potential adverse impacts and risk mitigation that must be identified and planned for are significant both in magnitude and probability due to the large-scale of proposed project and its setting amidst both industrial and natural zones of the city. For Component 2, the potential adverse risks and impacts of civil works supported by the project are predictable and site-specific, limited in duration (construction phase) and can be easily mitigated with the application of modern construction practices. The physical works to be undertaken are of medium scale and they take place in an urban setting on and around existing roads; therefore, the expected environmental risks can be mitigated with proper assessment and planning. These risks may include exposure to historical pollution at industrial sites within the project’s footprint; increased pollution due to improper care, handling and storage of construction material and waste; generation of excessive noise and dust levels from trucks and other construction machinery; soil disturbance during earth works; tree-cutting and loss of vegetation along roadsides; health and safety impacts caused by construction impediments on traffic safety situation (both for vehicles and pedestrians) due to narrowing of the roads and pavements; temporary impact on cross drainage; and, possibly, water/soils quality impacts in case of construction pollution. As described below, the borrower has prepared: 1) for Component 1, Terms-of-Reference for a full-scale Environmental and Social Impact Assessment and Environmental and Social Management Plan (ESIA/ESMP) for the proposed project; and 2) for Component, 2 an ESIA/ESMP for the planned works. Although the Client has some experience with the previous international projects, there is no experience and limited capacity in applying the ESF; therefore, significant efforts will be required to build the capacity of in the application of the new ESF.

Social Risk: Substantial

30. No adverse social impacts or risks including physical or economic displacement are anticipated under the Component 1 since the investments are mostly to support feasibility studies and technical designs. However, civil works supported under the Component 2 may cause economic displacement, temporary impacts on private assets and businesses, and disruptions to residents and local businesses. Also there might be damages to urban utility service lines, temporary access restrictions to residences and parking lots during constructions. Although land in urban areas is managed by KCST, a large extent of land in the Vokzalna Square and main transit area are still under influence of a few power holders who



may have political stake and opposition for some of the proposed interventions. Private marshrutka operators who are having major stakes and profit making business in providing public transport may also oppose certain interventions. In addition to political power holders and private sector transport service providers, there are a range of stakeholders who may have different level of interest and stake in the project and therefore stakeholder engagement will be a challenging task.

31. Social risks with respect to road safety, public transport of Kyiv could be greatly reduced through the improved through inner-city connections and infrastructures under the Component 1. Road accidents in Kyiv center and suburban road networks reported to have three times more fatality prone than some of its European peers, of road accident deaths rates compared with peer cities. The main issues of the project would be during construction period. Kyiv City residents make frequent trips to destinations within the city proper, for their jobs and to access services. The implementation of the project requires a comprehensive communications and public information campaign with messages to inform Kyiv residents of the project objectives and how it will change the way they travel, including route restructuring and Communication with affected passengers on specific routes as how their commute will change and the new options they will have for travel during the implementation of route changes. The social risk not having well planned public outreach may cause complains from commuters, residents, and possible reputational risks as well. Considering the above contextual, institutional and construction related impacts and risks, overall social risk rating is 'substantial'.

E. Implementation

32. The Project will be implemented by KyivPasTrans (KPT) under the administrative responsibility of KCSA. KPT staff will execute the following core functions: (i) procurement and contract management; (ii) financial management of IBRD funds; (iii) implementation of instruments required for compliance with the Environmental and Social Management Framework. KPT will also be the primary day-to-day point of contact for regular communications with IBRD during project implementation.

33. Capacity assessments regarding financial management, procurement, and capabilities for implementing the World Bank's Environmental and Social Management Framework have been undertaken for KPT as described in section IV. While KPT has experience with International Financial Institutions' financed investment from EIB/EBRD, these projects have been limited to rolling-stock purchase only. Consequently, gaps have been identified in the capacity of KPT to discharge its project related functions, primarily due to limited experience of implementing works with International Financial Institutions and inexperience with the World Bank's Environmental and Social Management Framework. The project accordingly includes the following additional support measures to augment KPT capacity while implementing the project:

1. Engagement of construction supervision engineers to maintain control of civil works in progress. The contract for these services will include FDIC roles and responsibilities for control of quantities and associated payments as well as provisions relating to the supervision of social and environmental impact mitigations that will be included in civil works contracts as provisional sums and / or grounds for contract termination.
2. Mobilization of technical assistance for environmental and social aspects. The purpose of this technical assistance will be to provide guidance and inputs to environmental and social tasks in



order to ensure compliance with World Bank’s Environmental and Social Management Framework.

- ix. Mobilization of technical assistance for procurement and financial management. The purpose of this technical assistance will be to provide guidance and inputs to procurement and financial management tasks in order to ensure compliance with World Bank procedures and achieve value for money in the project’s activities.
- x. Use of direct payment for contracts above US\$ 2 million. The project will use direct payment from IBRD for its large works and services contracts to simplify funds flows and provide risk mitigation in financial management.

34. Under Component 3 of the project (strengthening Kyiv’s transport planning systems) the Department of Urban Development and Architecture and Institute of Master Plan will have a technical role in implementation as they manage KCSA’s transport model and Master Plan for Kyiv. KPT will execute all procurement and financial management functions relating to the goods and services needed for the Department of Urban Development and Architecture and Institute of Master Plan’s role in the project.

35. In support of KPT, a Project Steering Committee, chaired by the Mayor and consisting of representatives of relevant institutions will be created to provide guidance, direction, and problem-solving support as needed to ensure timely implementation of the project. The composition of the Project Steering Committee is summarized in Annex 2.

36. The implementation structure for funds flow and financing under the Project will follow according to the legal structure for sovereign financing of local government projects in Ukraine (known as “Procedure 70”). This structure is currently in use for IBRD financing in Ukraine under the Second Urban Infrastructure Project (P132386) which includes financing to Kievvodokanal (Kyiv’s water supply and sanitation utility). Under this structure, IBRD’s financing agreement is directly with the Ministry of Finance and subsidiary agreements between the MOF, KCSA, and KPT govern the on-lending of resources for project purposes as well as the municipal guarantee that backs repayment to the Ministry of Finance. Under this structure, the Ministry of Infrastructure manages the Project’s budget program within the annual national budget and disbursement requests are made via the Ministry of Finance.

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