Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 21-Apr-2021 | Report No: PIDA31171

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Mongolia	P174007	Ulaanbaatar Sustainable Urban Transport Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	12-Apr-2021	16-Jun-2021	Transport
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Mongolia	Municipality of Ulaabaatar	

Proposed Development Objective(s)

The Project Development Objectives are: (1) to develop a comprehensive framework for sustainable urban mobility in Ulaanbaatar, and (2) to reduce congestion, improve road safety, and address climate resilience on selected transport corridors.

Components

Integrated Corridors
Sustainable Public Transport System
Effective Institutions for Transport Planning and Management
Contingent Emergency Response Component (CERC)

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	115.00
Total Financing	115.00
of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	100.00

Non-World Bank Group Financing	
Counterpart Funding	15.00
Local Govts. (Prov., District, City) of Borrowing Country	15.00

Environmental and Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Mongolia is a landlocked, lower-middle-income country with growth potential owing, in part, to its rich mineral resource endowment.** A traditionally agriculture-based economy has shifted to a mining-based economy during the past two decades, following the exploration of large mineral deposits and a large flow of foreign direct investments (FDIs) to the mining sector. The country's economy experienced rapid yet volatile growth over the last 15 years, creating a wave of economic prosperity across the country with investments in its infrastructure and social services. However, the mining-led growth has resulted in severe macroeconomic instability and is susceptible to external shocks, concentrated and enclave development, excessive capital accumulation and little innovation (World Bank, 2019). The poverty rate[1] has dropped between 2010 and 2018 from 38 percent to 28 percent but remains high (National Statistics Office, 2020). Currently, around 42 percent of the poor in Mongolia live in Ulaanbaatar (National Statistics Office, 2020).

2. **The Government of Mongolia (GoM) has set agenda to diversify its economy and achieve sustainable economic growth, demanding investment in transport infrastructure.** The key development strategies, as set out in the Three-Pillar Development Policy of 2018 and the Mongolia Sustainable Development Vision 2030, and more recently in the Mongolia Vision 2050, propose to diversify Mongolia's economy and to be based primarily on agriculture, tourism, and industry sectors. Infrastructure inadequacy that inhibits the competitiveness of these sectors has been highlighted in these policy documents as one of the bottlenecks to realize Mongolia's diversification agenda. The country has consistently lagged in global infrastructure rankings[2], and especially has low scores in transport and logistic infrastructure.[3] As the largest city in Mongolia inhabited by nearly half of the country's population, Ulaanbaatar faces urban transport issues that significantly affect the country's economic productivity. The recent Mongolia InfraSAP study (World Bank, 2020c) suggested five strategic infrastructure

[1] As calculated using the national poverty line, see: http://www.rilsp.gov.mn/upload/2018/argazui//Yduurliin_Undsen_Uzuuleltuudiig_Tootsoh_Argachlal.pdf

[2] See for example the World Economic Forum's *Global Competitiveness Report 2019,* which ranked Mongolia 101 out of 141 countries in infrastructure. Mongolia ranked 112 with regard to quality of roads, 112 with regard to road connectivity, and 117 with regard to efficiency of air transport.

[3] Mongolia ranks 130 out of 160 on the Logistics Performance Index, and 135 on the infrastructure aspect.

interventions to promote the diversification of the economy, which include urban mobility infrastructure to support the service sector including tourism.[4]

3. **Global climate change and the increased risk of climate-related disasters threaten the traditional way of living for many Mongolians who depend on raising and herding livestock.** Mongolia has a population of 3.17 million occupying 1.55 million km^2 of land (National Statistics Office, 2020). It is one of the least densely populated countries in the world with a density of 2 persons per square km. The rural population relies on pastoralism for their livelihood. The extreme cold and long winters cause *dzuds* – severe winters where many livestock die of starvation. *Dzuds* have become more frequent (occurring every four to five years compared to every 10 years before) and harsher, killing more livestock and threatening the livelihood of people. The Meteorology, Hydrology and Environmental Agency reported that 11.2 million livestock (30 percent of the total livestock) perished during the three winters of 1999 – 2002, and 10.3 million (23 percent of the total livestock) died during the 2009 and 2010 winters.

4. **Loss of livelihood due to *dzuds* has driven many rural Mongolians to the capital city Ulaanbaatar—the country's economic, financial, and political center—causing a massive rural-urban migration over the past two decades.** The population of Ulaanbaatar has increased from 780,000 in 2001 to 1.45 million in 2019, an 87 percent increase, while the national population grew only 32 percent during this time. Most of the rural migrants live in *ger* areas[5], which are characterized by low-density settlements lacking adequate access to basic services and infrastructure such as water, sanitation, paved roads, and formal public transport services. The built-up area of the city has increased three-fold between 1998 and 2017 from 160 km^2 to 537 km^2, mostly in *ger* areas (Ulaanbaatar Design Institute, 2018). *Ger* areas now comprise 83 percent of the city's built-up area and are home to 55 percent of its population (Ulaanbaatar Design Institute, 2018). The rapid and unorganized expansion of the city and the weak fiscal capacity of the municipality has resulted in a number of urban management challenges, including inadequate public/municipal services, poor municipal asset management, and unequal access to services and infrastructure. The poor are particularly at a disadvantage when it comes to the availability of essential services, including public transport, preventing them to access jobs and social services in the wider municipality (Singh, Guedes, Mulhausen, Dash, & Gadgil, 2017).

5. **The ongoing COVID-19 pandemic continues to escalate the heavy toll on the country's economy and is threatening the recent modest gains in poverty reduction[6].** Mongolia's economy was recovering from the 2016 economic downturn when the COVID-19 crisis hit. While the COVID-19 impact on public health continues to evolve, it has already exerted a significant shock on Mongolia's economy, public budget capacity, and welfare distribution. The unfolding economic reality has increased the vulnerability of the poor and unprivileged even further as one in three households reported income losses (as of December 2020) and half of the poor households[7] expressed concerns about their future food security and household finances. The socio-economic situation has created a new operating environment to provide immediate relief, responding to the health threat and mitigating economic impacts in the short term, while accentuating some of the fundamental development challenges in Mongolia including infrastructure such as disruptions in supply chains, funding cuts for construction,

[4] The other four sectors include: infrastructure for livestock value chains, infrastructure for mineral value chains, infrastructure for regional connectivity and trade with the Russian Federation and China, and energy infrastructure and renewable energy for export.
[5] *Ger* is a traditional dwelling hut which is portable, round and covered with felt as insulation. Ger area is a form of residential district, often in the outskirts of the city, where residents live in traditional gers (yurts) or in small houses.
[6] Mongolia Country Partnership Framework (CPF) Concept Note for Consultations, December 22, 2020
[7] Poverty status is based on the 2018 Household Socio-Economic Survey, Source: CPF Concept Note

repair and maintenance of roads, and access to basic services due to disruptions in public transport services in the cities. Yet, Mongolia has the opportunity to foster a more sustainable, inclusive, and resilient recovery that addresses its fundamental development challenges.

Sectoral and Institutional Context

6. **The Municipality of Ulaanbaatar (MUB) has been facing challenges to meet the increasing urban transport demand from rapid urbanization.** The city's latest Master Plan was approved in 2014 with its population projected to reach 1.4 million by 2030, which was surpassed in 2019 when the population reached 1.45 million. In addition, Ulaanbaatar has a relatively high motorization rate (392 registered motor vehicles per 1000 people as of 2019) compared to its peer cities with similar income levels.[8] In response to the rapid increase in private car ownership, from 258,000 in 2012 to about 615,000 in 2021 (National Statistics Office, 2020), the MUB tried implementing policies to restrict car use.[9] Walking trips have declined sharply since 2009 with trips by car increasing significantly. Of the 2.3 million person-trips Ulaanbaatar citizens made per day in 2016, over half were by public transport (37.3 percent) or walking (15.3 percent), with a slight increase in public transport trips but a sharp decline in walking trips compared with data in 2009; there was an increasing share of private car trips (38.5 percent) and a stable percentage[10] of trips by taxi (8.4 percent).[11]

7. **One top priority of the GoM is to solve traffic congestion in Ulaanbaatar.**[12] Average travel speed in the city has halved from 30–40 km per hour in 1998 to 16–20 km per hour in 2011.[13] In 2019, average travel speed was down to 13 km per hour on the arterial roads and only 9 km per hour during peak hours.[14] The traffic congestion issue reflects a dysfunctional urban mobility system in Ulaanbaatar. Rapid urbanization and growing motorization have generated increasing travel demand where origins and destinations are far apart due to low density and a sprawling urban form. Poor public transport services and extremely deficient nonmotorized transport (NMT) facilities make walking and public transport even less attractive and less efficient, which further encourages private car use. Due to the urban construction boom without proper land use and transport planning, Ulaanbaatar's current 1,100-km-long street network is sparse, and disconnected, and does not have a clear functional road hierarchy (FRH) resulting in inefficient traffic mixes. Traffic management and road safety facilities especially at junctions are insufficient and ineffective, causing delays and traffic crashes, which also contribute to congestion. Parking is not managed, and parked cars occupy and obstruct sidewalk and roadway in the most congested city center. The streets are of overall poor quality and vulnerable to climate hazards—resulting in frequent disruptions on streets and causing delays and traffic congestion.

[8] Ulaanbaatar has a total 568,866 registered vehicles and a total number of 1.45 million population (National Statistics Office, 2020)

[9] The License Plate Restriction rule regulates the use of vehicles in Ulaanbaatar based on the last digit of a vehicle's license plate number. Cars with license plate number ending with 1 or 6 cannot go on road in the city on Mondays, 2 or 7 on Tuesdays, and so on. During the past few years, this rule has often been converted to "odd-even" numbers (only either odd or even numbers drive on each day) in response to severe congestion problems often during national holidays/start of school/special high-level visits.

[10] 2009 and 2016 Ulaanbaatar Household Travel Survey, from Sustainable Financial Strategy for Urban Transport Sector in Ulaanbaatar. World Bank, 2018

[11] Ibid.

[12] For example, the 2021–2025 Strategic Development Directions, the Government Action Plan 2020-2024, and the Master Plan 2030

[13] Mongolia Ministry of Road and Transport Development (MRTD), 2013: https://www.uncrd.or.jp/content/documents/7EST-B1G4-3p.pdf.

[14] Japan International Cooperation Agency (JICA) traffic speed and traffic volume study in Ulaanbaatar, 2019.

8. **Ulaanbaatar is one of the most polluted capital cities in the world.**[15] In 2019, the city's $PM_{2.5}$ level was higher than the World Health Organization (WHO) safe level[16] for seven months of the year. Although the transport sector's footprint on Ulaanbaatar's air pollution is dwarfed by the city's power sector,[17] the transport sector contributes significantly to important pollutants, for example, approximately 20-30 percent of the annual average PM_{10}.[18] The root causes of air pollution from transport include the large size and age of the vehicles in circulation, exacerbated by traffic congestion and poor road pavement condition. The vehicle fleet in the city is old and mostly second-hand, predominantly from the Republic of Korea (56 percent of imported trucks) and Japan (93 percent of imported personal vehicles) (National Statistics Office, 2020). The latest data show that about 74 percent of the car fleet registered in Ulaanbaatar was over 10 years old and over 94 percent older than 7 years (National Statistics Office, 2020). In terms of buses, about 70 percent of the current bus fleet in Ulaanbaatar is over 8 years old, and about 30 percent of these buses are over 11 years old (PTSA, 2021).

9. **The increase in road crashes is damaging the economic competitiveness of the city.** Road traffic crashes have increased considerably since the 2000s due to rapid urbanization, growing motorization, and deteriorating road conditions. The majority (87 percent) of all road crashes in Mongolia take place in Ulaanbaatar (Transport Police Agency, 2019). In 2007, 5,464 road traffic crashes happened in Ulaanbaatar (9 deaths per 100,000 population) (EPOS Health Management, 2011) while 2019 reported a whopping 21,874 road traffic crashes (8.5 deaths per 100,000 population) (Transport Police Agency, 2019). Mongolia has recently enacted new road traffic rules and implemented a broad range of campaigns to promote safer road use, which has yielded positive results in reducing road crash fatalities in Ulaanbaatar (Transport Police Agency, 2019). Nevertheless, the cost of road crashes remains high for Mongolia, and is estimated as 5.5 percent of the national gross domestic product (GDP), with most fatalities and injuries (84 percent) occurring in the economically productive age groups (15–64 years) (World Bank, 2019). Since road safety falls under the responsibility of the Transport Police, most efforts have been focused on enforcement (revision of traffic regulations and equipment for traffic police) and education (campaigns to reduce speed, improve the use of seat belts, and safe driving behavior). Very few actions have been taken to improve transport infrastructure, as there is no institutional set-up, financial resources, or technical capacity for the identification, design, and implementation of targeted interventions.

10. **The public transport sector is struggling with service provision and financial sustainability.** The city's low density, sprawling land use, sparse road network, and congestion pose challenges to efficient public transport provision: while it is costly to cover low-demand peripheral areas, it is also inefficient to operate high-frequency services through heavily congested corridors in the central area. Ulaanbaatar currently has no rail-based mass transit or bus rapid transit (BRT) services, only conventional buses. The total fleet of 1,196 buses are operated by two state-owned operating companies (30 percent of the total fleet) and 16 other private bus operators (70 percent of the total fleet) (Transport Department of Capital City, 2019). The bus system serves 840,000 passengers per day, approximately 68 passengers per hour per bus (World Bank, 2018b), with an average day-time operating speed under 12 km per hour during weekdays.[19] While requiring high subsidies from the city

[15] Ulaanbaatar has been listed as the fifth most polluted capital city in the world in 2018, measured by the annual average $PM_{2.5}$: https://www.nationalgeographic.com/environment/2019/03/mongolia-air-pollution/.
[16] Air quality guideline is an annual mean concentration guideline for particulate matter from the WHO. The guideline stipulates that $PM_{2.5}$ should not exceed 10 µg/m³ annual mean, or 25 µg/m³ 24-hour mean.
[17] The main source of Ulaanbaatar's pollution is from household stoves fired by raw coal, which is the primary source of heat during winter months. There were 130,000 registered stoves in *ger* areas as of 2014 (Air Quality Agency; www.agaar.mn)
[18] Air Quality Agency; www.agaar.mn
[19] Data from:
https://www.uncrd.or.jp/content/documents/7197Presentation%203_Bulgaa%20Khurelbaatar%202018.09.30%20(1).pdf

budget, the public transport sector of Ulaanbaatar is struggling to provide adequate services. Subsidies for bus operation represented 15 percent of the total MUB budget in 2020, covering 57 percent of the total operating costs while the farebox revenue recovered the remaining 43 percent.[20] The burden of subsidies is sometimes higher as the city is taking the revenue risk. On one hand, citizens are not satisfied with the bus services including route coverage, frequency, reliability, or comfort; on the other hand, the public transport sector is underfunded with bus operators running an aging fleet with little profit or incentives to make improvements. This unsustainable financial situation stems from an inefficient route design and service plan, low fleet productivity due to traffic congestion, lack of bus priority, an ineffective and inflexible fare policy, high levels of fare evasion caused by an inefficient allocation of incentives, and the suboptimal contract with bus operators (World Bank, 2018b).

11. **Ulaanbaatar's urban mobility system is disrupted by more frequent and severe natural hazards.** Urban flooding, storm surges, and severe winter events are expected to have the strongest impact on the urban environment and transport infrastructure in Ulaanbaatar.[21] Besides changing temperature and precipitation patterns due to climate change, the construction boom in the city, the rapid expansion of *ger* areas, and the lack of flood prevention facilities have resulted in a drastic increase in flooding risks in the city. The infrastructure including existing flooding facilities has been deteriorating while maintenance has lagged and is insufficient. Currently, 10–36 percent of road assets, including sidewalks, and guardrails, among others, and only 18 percent of road pavement is above good condition[22]. Flooding and icing of roads and sidewalks seriously inhibit the mobility of the residents, cause safety issues, contribute to traffic congestion, and damage economic productivity. More frequent flooding of roads during the summer and freezing of the road asphalt during the winter have also resulted in a more rapid deterioration of road pavement. Climate vulnerability is exacerbated by weak planning and management capacity at the local level, with inadequate early warning systems, and a lack of an enabling legal environment as well as technical capacity.

12. **The shortcomings of Ulaanbaatar's urban transport system have been underscored and exacerbated by the COVID-19 pandemic.** The need for social distancing calls for a reallocation of road space to accommodate more trips on foot and bicycles and to release pressure on public transport (with higher service frequency and more waiting area at stations). Due to the inadequate conditions for pedestrians, cyclists and public transport users, a shift to private car trips has already been observed in Ulaanbaatar. This increases the pressure along vital corridors and makes access to critical destinations such as hospitals more challenging. Road space for NMT and public transport access needs to be rethought to prevent further deterioration of the city's already high levels of traffic congestion and air pollution, and a further increase in safety risks for vulnerable road users. Since the disruption created by COVID-19 has significantly changed people's perception of NMT, there is an opportunity to improve the currently inadequate conditions for cyclists and pedestrians. Currently, the absence of up-to-date travel activity data makes it difficult to respond to the impact of COVID-19 on travel demand and there is a requirement for innovative approaches for data collection to improve urban planning.

13. **The urban transport sector challenges described above hurt the vulnerable and low-income population disproportionately more.** Average commute time of Ulaanbaatar residents was estimated to be 37 minutes, which is relatively long given its total population and the size (World Bank, 2015). For those who do not own

[20] Farebox recovery ratio is estimated as 43 percent for the first seven months of 2019 (Transport Department of the Capital City, 2019), but is only around 30 percent for the surveyed bus operators in the TA study conducted by the World Bank team in 2017.
[21] Data from https://thinkhazard.org/en/
[22] Ulaanbaatar Transport Asset Management Plan, World Bank, 2020

private vehicles, commuting takes on average almost twice as long by public transport than by car due to the remoteness of bus stations and the need for frequent transfers to reach the destination (World Bank, 2015). The low-income population living on the periphery in *ger* areas has very poor accessibility and mobility options. Only 10 percent of the roads in the *ger* area are paved. Unpaved roads are particularly difficult to navigate and can become impassible in harsh weather conditions. Low density, difficult landscapes, and poor-quality unpaved roads in these peripheral areas make formal bus service provision extremely challenging. Transport costs for low-income families residing in the periphery areas can be prohibitive—adding up to 25–35 percent of the average household income in the *ger* area (World Bank, 2015). Among the 131 road crash fatalities in 2019 occurring in Ulaanbaatar[23], 67 percent were pedestrians, the most vulnerable road users (Transport Police Agency, 2019).

14. **Streets in Ulaanbaatar are neither safe nor convenient for women, limiting their mobility options.** Mongolia ranks 53 out of 159 countries globally in gender inequality.[24] Analysis by the WB team and consultation with civil groups found that streets in Ulaanbaatar in general lack adequate lighting, continuous sidewalks, protected crossings, warm and secure bus waiting areas, curb ramps for stroller and wheelchairs, and other safety facilities. Besides infrastructure deficiencies, the street space is also poorly maintained and managed, with sometimes deserted frontage (old garages, closed stores) and various blockages (unfinished construction, disorganized parking, dumpsters, exposed wires, and broken pavement) that make walking unsafe especially at night. Moreover, harassment and violence against women and girls on streets and public transport also reduce women's use of transportation and accessibility to services and job opportunities. Studies found that girls and women are exposed to psychological abuse and sexual harassment in public spaces and on buses, and women travelers are advised to avoid walking alone in the dark and to stay cautious when travelling by public transport in Ulaanbaatar.[25] The Mongolia UN Social Indicator Sample Survey of 2018 reported that only 50 percent of women felt safe while walking alone in an urban area compared to 79 percent of men. The street is the second leading location women reported incidents of assault in Mongolia.[26]

15. **The fragmented institutional arrangement of the urban transport sector in Ulaanbaatar adds to the challenges of addressing its multi-faceted urban transport issues.** The GoM is responsible for the approval, implementation, and overseeing of the overall development policies including those in the transport sector. Specifically, the MRTD oversees the execution of the sector-related legal and policy acts as well as formulates and approves relevant technical standards and norms. In the jurisdiction of Ulaanbaatar, the mandates to finance and deliver transport services such as the public transport and transport infrastructure including the roads, bridges, traffic signals and street lighting remain with the MUB (2011 Budget Law of Mongolia, Article 58.1). In Ulaanbaatar, the Road Development Agency (RDA) of MUB is mandated with the planning, design, and management of road infrastructure. The Public Transport Service Agency (PTSA) oversees public transport service delivery. The city's Traffic Control Center (TCC) and Transport Police oversee traffic management and road safety, respectively. In addition, the City Manager, appointed by the Governor of Ulaanbaatar oversees the local and private operators in the area of routine maintenance and flood protection of transport infrastructure assets in the city.

16. **The MUB lacks the institutional capacity to efficiently allocate its limited financial resources to the growing infrastructure investment needs.** It was estimated that a capital investment of more than US$ 20 billion

[23] At the national level, road fatalities were 561 as of 2019.
[24] Broaden Opportunities for Women Workers in Mongolia: New World Bank Report. March 27, 2018.
[25] Begzsuren, Tsolmon, and Veronica Mendizabal Joffre. 2018. "Translating Women's Voices into Action in Mongolia-Addressing Gender-Based Violence through Investments in Infrastructure". ADB East Asia Working Paper Series. No.14.
[26] Mongolia Social Indicator Sample Survey – 2018 INFOGRAPHIC. United Nations Children's Fund. 2008.

was needed to reach the long-term goals in the Ulaanbaatar Master Plan until 2030 (World Bank, 2018a). However, Ulaanbaatar reported total revenues ranging between US$195 million in 2016 and US$300 million in 2019, inclusive of intergovernmental transfers.[27] The lack of funding permeates through every aspect of the urban transport sector, and the effects of the financial constraints are further worsened with inefficient planning and management practices. The public transport sector is highly dependent on municipal subsidies, while not being able to ensure enough profit margins for bus operators to improve their fleets, operations, and services. The city's street network is quickly deteriorating with lags in repair and maintenance, resulting in costly rehabilitation and reconstruction. With the support from the World Bank, the city has just started to build an inventory of its transport infrastructure assets, and develop strategies towards long- and medium-term asset management as well as tools to effectively prioritize its investment (World Bank, 2020).

17. **Without a coherent vision or comprehensive strategy for urban transport, the MUB has been implementing piecemeal urban transport initiatives and programs over the past decade.** Investment decisions have been poorly coordinated and resources spread among unsolicited projects with financial assistance from bilateral and international partners. The Asian Development Bank (ADB) has the largest presence among other International Financial Institutions (IFIs) in terms of providing financial assistance to Mongolia in the transport sector. ADB's portfolio includes a multi-tranche investment program for the construction of a BRT system for Ulaanbaatar. The JICA financed the construction of a road, a flyover, and a pre-feasibility study for a light rail. The European Bank for Reconstruction and Development (EBRD) has provided financing for the construction of road sections and a pre-feasibility study on a Bus Fund for the upgrade of Ulaanbaatar's public transport fleet. A multitude of interventions from various development partners has been implemented with little coordination and an overall vision for improving Ulaanbaatar's urban transport system in a comprehensive manner.

18. **A comprehensive program is needed to address urban transport issues in Ulaanbaatar in a sustainable way.** The piecemeal urban transport interventions, uncoordinated project proposals and donor programs have resulted in inefficient (sometimes wasteful) investments that have had little effect on the city's traffic congestion, air pollution, road safety and quality of public transport services. Addressing Ulaanbaatar's multifaceted urban transport issues will require a comprehensive program that can build a well-functioning system to provide urban mobility for all users in a sustainable way. Over the last six years, the World Bank team and MUB officials have been working on a series of TA programs, including sector diagnostics, sector strategies with specific recommendations for improving capital investment planning, transport infrastructure asset management, public transport financial sustainability, bus management system, mass transit deployment, road safety, and climate resilience. The outcomes of these TAs have culminated with the identification of the Ulaanbaatar Sustainable Urban Transport (USUT) Program, designed to strengthen the policy, institutional, and financing framework governing the provision of urban transport services and includes a multi-year investment program to improve transport mobility for all users in a sustainable way, i.e. environmentally sustainable in that walking, biking, and public transport are encouraged and the system is also resilient to disasters, financially sustainable with funds efficiently allocated to both construction and maintenance, and socially sustainable as all users especially the most vulnerable groups also benefit in improved mobility as well as safety. The USUT Program will be implemented in the long run, requiring significant financial and institutional resources. The USUT Program will also help the MUB coordinate all future urban transport initiatives and investments, moving from its previous piecemeal approach to addressing the root causes of the urban transport issues discussed above in a comprehensive manner.

[27] Budget Amendments 2016 – 2019.

19. **The proposed project aims to build the foundations for the USUT Program—by establishing its framework and demonstrating its implementation.** At project preparation, the framework defines the project components and pool of candidate activities, as well as the selection methodology to identify and prioritize the activities. During implementation, responsible MUB agencies with the support of the Bank team will continue to use the Framework to select and implement the priority activities on a rolling basis, until all the loan amount is fully utilized. The framework approach aligns with the CPF 2021-25, where the World Bank Group is to stay flexible in its engagement with Mongolia due to the volatility of the Mongolian economy and politics and the ongoing COVID-19 crisis. Using the framework approach has two major advantages. Firstly, it provides the MUB and the Bank flexibility in activity selection and implementation sequencing depending on the Government's changing priorities, fiscal space, and implementation capacity. This will simplify the procedure and significantly reduce the transaction costs to adapt to changing and unforeseen circumstances, and thus avoid the bureaucratic burden of project restructuring and government approval during implementation. Second, the framework approach focuses on the capacity of the MUB and its relevant agencies in planning, designing, implementing, and managing urban transport activities, all of which would be gradually institutionalized to enhance client ownership, sustainability, and long-term impact.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

20. The Project Development Objectives (PDOs) are: (1) to develop a comprehensive framework for sustainable urban mobility in Ulaanbaatar, and (2) to reduce congestion, improve road safety, and address climate resilience on selected transport corridors.

Key Results

21. The achievement of the PDO will be measured by the following set of proposed indicators:

Develop a comprehensive framework for sustainable urban mobility

(1) Establishment of a comprehensive framework for sustainable urban mobility in Ulaanbaatar

Reduce congestion, improve road safety, and address climate resilience on selected transport corridors

(2) Travel time by buses and cars during peak hours on selected transport corridors
(3) Fatalities and serious injuries from road traffic crashes on selected transport corridors
(4) Application of climate resilience practice in design and implementation of selected transport corridors

Corporate commitments: citizen engagement and gender

(5) Percentage of pedestrians satisfied with the walking environment along selected transport corridors
(6) Women who walk on selected transport corridors because of safety improvement of the project

D. Project Description

1. The proposed USUT Project includes the following four components:

Component 1: Integrated Corridors (estimated total cost: US$90 million, IBRD loan: US$81 million)

2. Targeting Ulaanbaatar's sparse and disconnected street network and inadequate traffic management system, this component will improve transport corridors to promote efficient use of road spaces to benefit all types of road users (including vehicle occupants, pedestrians, bicyclists and public transport users) while reducing congestion, incorporating road safety, and addressing climate resilience.

3. Activities of Component 1 include corridor specific as well as city-wide interventions. Road reconfiguration, rehabilitation and construction activities will be focused on selected priority corridors, while Intelligent Transport Systems (ITS) and Smart Parking Management System will cover the city's entire road network.

4. The main government counterparts (implementing entities) for this component will be the RDA and the TCC of the MUB, with support from the Transport Police. Activities to be financed under the project are listed below, where ✓ shows activities that are ready to be implemented as soon as the project becomes effective.

Subcomponent 1.1: Corridor-specific infrastructure investments, including two types of works:

- ✓ **Type I corridor rehabilitation and reconfiguration.** Works will be done within the existing right-of-way, and works will constitute rehabilitation of roadway and sidewalk, reconfiguration of selected street cross-sections, intersection channelization, and installation of additional traffic engineering facilities such as signs and road markings, traffic signals and safety barriers.
- **Type II corridor upgrading.** This will mainly constitute new construction of road corridors to improve network connectivity and to provide accessibility to residents in *ger* areas. This type of work will need land acquisition to widen the existing roadway.

Subcomponent 1.2: Intelligent Transport Systems (ITS)

- Upgrade of centralized systems such as the Area Traffic Control (ATC) system and equipment
- Upgrade of on-street ITS equipment such as traffic signals, traffic enforcement and monitoring cameras

Subcomponent 1.3: Smart Parking Management System

- The development and operationalization of a smart parking management system, including the procurement of hardware and development of software, and the implementation of a zonal parking system with differentiated pricing.

Component 2: Sustainable Public Transport System (estimated total cost: US$15 million, IBRD loan: US$10 million)

5. This component aims to improve the quality and reliability of public transport services, expand access to previously unserved population groups, and facilitate integration with other modes. While this public transport component is essential for the USUT Program, activities to be implemented under this Project are limited in scope and scale (focusing on the public transport improvement on the corridors selected in Subcomponent 1.1) given the readiness consideration and resource constraints. The MUB is working with other development partners to implement major public transport investments, while this Project will help the MUB carry out the institutional

reforms needed (in Component 3) to improve the financial sustainability of the sector, demonstrating good infrastructure design, facilitating integration, and piloting the use of innovative technologies to complement other public transport interventions as needed. Candidate activities under this component include:

Subcomponent 2.1 Corridor-specific investments

- Installation of bus lanes on selected corridors
- Improvement of bus stops along project corridors

Subcomponent 2.2 City-wide investments

- Upgrade of bus management systems
- Deployment of on-demand transit services

Component 3: Effective Institutions for Transport Planning and Management (estimated total cost: US$10 million, IBRD loan: US$9 million)

6. This component will help the MUB develop a comprehensive and effective institutional framework for sustainable urban mobility by providing strategies, tools, methodologies in transport infrastructure planning, management, and service provision. The framework is to be sustained beyond the project's life.

7. The following is the list of proposed activities, and those activities with a ✓ are ready to be implemented as soon as the project becomes effective.

Subcomponent 3.1: Strategic studies:

(a) Vision and strategy

✓ A sustainable and resilient urban mobility strategy for Ulaanbaatar, including institutional, financial, and technical recommendations and action plans. This strategy will be supported by travel demand management, accessibility, and congestion analyses.

✓ A parking management plan including an institutional framework

(b) Transport infrastructure investment planning and management

✓ Transport Infrastructure Investment Plan (TIIP) and tools for transport investment planning based on proactive risk mitigation, lifecycle cost approach, transparent and objective investment prioritization. The TIIP will cover both new construction and repair and maintenance of road investments. As such, Transport Asset Management Plan (TAMP) will be part of TIIP.

(c) Road safety

✓ A Road Traffic Crash Data Platform (for example, deployment of the World Bank crash data analysis tool *Data for Road Incident Visualization Evaluation and Reporting*, [DRIVER]) leading to the identification and prioritization of remedial measures comprising engineering, education, and enforcement activities

✓ A speed management plan leading to more appropriate speeds on the road network, and identification of traffic calming measures

(d) Public transport

- Policy and institutional framework for private sector participation in Ulaanbaatar's urban transport sector, including the restructuring of public transport sector operation, fare setting, and operator contract structures
- Smart integrated public transport system towards Mobility-as-a-Service (MaaS) including bus network design and route planning, on-demand transit services, and integration with new mobility technologies

Subcomponent 3.2: Capacity building and implementation support

- ✓ Project management and implementation support, including Project Management Office (PMO) support, technical designs, environmental and social (E&S) studies, public consultation and engagement, and monitoring and evaluation (M&E)
- ✓ Feasibility studies and designs for project activities
- Capacity-building activities that will support the implementation of the above strategies: workshops, training, conferences, and study tours for government departments and technical staff

Component 4: Contingent Emergency Response Component (CERC) (total cost: US$0)

22. This zero-dollar component is designed to provide swift response in the event of an eligible crisis or emergency, by enabling Ulaanbaatar to request the World Bank to reallocate project funds to support emergency response and reconstruction where needed. A CERC annex will be included in the Project Operations Manual (POM), specifying the implementation arrangements for the component, including its activation process, roles and responsibilities of implementation agencies (IAs), a list of activities that may be financed, E&S aspects, and fiduciary arrangements. When the Government has determined that an eligible crisis or emergency has occurred, it can request and seek the agreement of the World Bank to include relevant activities under the project. In such situations, all E&S instruments required for the added activities need to be prepared, disclosed, and approved by the World Bank.

23. **Project cost and financing**. The total cost of the proposed project, including financing costs, is US$115 million, of which the IBRD loan will finance US$100 million. The MUB will provide counterpart funding of US$15 million. All land acquisition and resettlement costs will be financed by counterpart funds.

Project Component	Total Cost (US$, million)	Financing Plan		
		IBRD (US$, million)	Counterpart (US$, million)	% IBRD Financing
Component 1. Integrated corridors	90.00	81.00	9.00	90
Component 2. Sustainable public transport system	15.00	10.00	5.00	67
Component 3. Effective institutions for transport planning and management	10.00	9.00	1.00	90
Component 4. Contingent Emergency Response Component (CERC)	0.00	0.00	0.00	
Total Project Costs	**115.00**	**100.00**	**15.00**	**87**

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

24. The program is designed to improve systematic planning, infrastructure investments and management of the urban transport system in the Municipality of Ulaanbaatar (MUB). The investments are anticipated to bring overall Environmental and Social (E&S) benefits with improved drainage and climate resilience on critical corridors, reduced GHG emission from urban transport and improved transport safety and livability in the city.

25. The environmental risk of the project is proposed to be Substantial given the undetermined subproject activities and the limited capacity of the borrower, as follows: (a) The project-associated risks and impacts will be largely site-specific and will mainly occur during construction since works under the project will mainly involve rehabilitation and/or improvements of existing rights-of-way and other small-scaled construction activities. Nevertheless, road subprojects and their locations are largely undetermined at this point. (b) Potential environmental impacts mainly relate to construction nuisance that can be managed through the implementation of engineering measures and good construction management. Risks and impacts of corridor sub-projects be screened, assessed, and managed in site-specific Environmental and Social Impact Assessments (ESIAs)/ Environmental and Social Management Plans (ESMPs) to be prepared during project implementation when the locations of these roads are known and detailed designs are prepared. (c) Based on the recent engagement of the World Bank with the MUB and the capacity assessment included in the project Environmental and Social Management Framework (ESMF), the overall E&S capacity of the borrower is considered to be low, and necessary measures are proposed to strengthen the borrower's E&S management capacity as needed to support project preparation and implementation.

26. The social risks are Substantial. Urban transport and mobility projects have the potential to create or exacerbate a range of social risks if they do not adequately address the needs of, and include, vulnerable and otherwise excluded people in project prioritization and decision-making processes. Specific risks associated with land acquisition, business impacts and livelihoods can also be created if not properly assessed, understood, and effectively designed into the project. Although no land acquisition will be required (or permitted) for Type I physical investments, land acquisition can be expected to be relevant to Type II physical investments which are larger in scale. Notwithstanding that Type I works will not need land acquisition, parts of the road corridor in Ulaanbaatar accommodate informal businesses which operate on a permanent or seasonal basis; these and potentially other activities have the potential to be affected by the project and also to be complicated to manage. Type II works are likely to have more significant risks including land acquisition and potential impacts (and benefits) on vulnerable groups which will bring social and project delivery risks. Potential increased risk of GBV due to labor influx is considered moderate due to the nature of the project where the labor-force will be small, and all activities will be located in the Ulaanbaatar city areas removing the risks associated with construction camps and remoteness. The Substantial risk rating is proposed due to the risks associated with Type II works which will be assessed via the studies proposed during early implementation under Component 1.

27. An Environmental and Social Management Framework (ESMF) has been developed, along with a Resettlement Policy Framework (RPF), Labor Management Procedures (LMP), to address the above anticipated E&S risks/impacts of the Project activities (both physical and analytical) and any identified associated facilities against the requirements of the World Bank's Environmental and Social Framework (ESF) and the Environmental and Social Standards (ESSs). This ESMF is built on E&S impact assessment conducted for the project during preparation and establishes screening criteria for subprojects to exclude high E&S risk activities from project financing (for example, any land acquisition for Type 1 projects and significant land acquisition/resettlement for Type II projects). The social assessment included in the ESMF also defines additional assessment work to be undertaken during project preparation which will, in turn, inform the decision-making process for prioritization of certain corridors over others for project funding. The E&S instruments establish specific E&S management approaches for each type of physical investments as well as document critical matters for consideration in the range of analytical work. In addition, a generic ESMP has been developed as part of the ESMF to provide guidance on E&S mitigation strategies for road repair, maintenance and reconstruction works proposed under the Project. For sites/corridors chosen for project financing during implementation, subsequent ESIAs/ESMPs and other appropriate E&S instruments for subprojects will be prepared, disclosed, reviewed, and implemented following the ESMF requirements. Additionally, the ESMF also includes a tailored E&S capacity building plan to enhance the E&S management capacity of the Borrower, including internal staffing of at least one dedicated E&S coordinator, recruitment of external technical supports, and training program. Consistent with the Bank's policy requirements, the Executive Summary of the E&S package, including ESMF, RPF and SEP, has been disclosed locally on March 29, 2021, which, together with the ESCP, will be disclosed before appraisal at the World Bank website to seek views of stakeholders.

E. Implementation

Institutional and Implementation Arrangements

28. **The MUB will be responsible for the overall project implementation and oversight**, and a PMO will be established under the Governor's Office of Ulaanbaatar. A Project Steering Committee (PSC) will be established under the leadership of the MUB, with representation from the Citizen's Council, the MUB, Ministry of Road and Transport Development and the Ministry of Finance. The PMO director will be appointed by the Governor's Decree. The PMO will be responsible for project management and coordination, and the procurement of goods, works, and services; undertaking of FM including disbursement processing and project audit; public relations; implementation of E&S safeguards measures in compliance with the World Bank's requirements; preparation of periodical reports; M&E and their submission to the World Bank; and implementation of a grievance redress mechanism (GRM). The PMO will be staffed with a coordinator, specialists and consultants hired for the sole purpose of coordinating the proposed USUT Project, according to the Ministry of Finance (MOF) guidelines[28]. The PMO staff responsible for procurement and FM will be selected and appointed by the MOF. The establishment of a PMO with the composition, resources, and terms of references satisfactory to the IBRD is a condition of effectiveness.

29. Municipal agencies including the RDA, the TCC, and the PTSA will act as IAs. These IAs will implement and oversee specific activities related to their agency responsibilities and can be supported by specialist consultants hired. The IAs will be responsible for the definition of technical specifications, and contract

[28] Regulation on the use, implementation, monitoring and evaluation of projects financed by international loan, Ministry of Finance, Regulation #4, Jan 11, 2021

implementation of the contracts under their own components. Each of the IAs should maintain a capable technical team to provide technical support for the implementation of the project. Details of the project's institutional and implementation arrangements, including the PMO composition and financial resources, are further detailed in the POM.

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