MONGOLIA: IMPROVING ACCESSIBILITY OF ULAANBAATAR’S VULNERABLE POPULATION

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Population: 3.5 million
Land Area Size: 1.564 million km²
Capital City: Ulaanbaatar
Population Density: 2.6 person/km²
GDP Per Capita: USD 5,350 (current dollars)
Capital city: Ulaanbaatar
KEY TRANSPORT CHALLENGES IN ULAANBAATAR

- Traffic Congestion
- Air Pollution
- Road Crashes
- Poor Public Transport Services
- Financial Unsustainability
- Vulnerability To Natural Hazards
- Poor Accessibility For The Vulnerable
Root causes

➢ Low Density and Monocentric Land Use
➢ Sparse andDisconnected Street Network
➢ Poor Quality Public Transport and Pedestrian Facilities
➢ Lagging Traffic Management and Road Safety
➢ Lack of Comprehensive Planning and weak Management Capacity
ULAANBAATAR URBAN MOBILITY

Share (%) of daily trips in Ulaanbaatar by mode

- Public transport: 37.3%
- Private car: 38.5%
- Walking: 15.3%
- Taxi: 8.4%

Car ownership
0.32 cars per capita
Total: 513,000 personal vehicles

The lowest income households rely even more heavily on public transport.
Bus-based public transport system
520,000 passengers per day (147 million trips per year)
Fleet of ~1000 buses operate on 107 different bus routes
Trip to peripheral areas take as much as 120 minutes from downtown Ulaanbaatar
ULAANBAATAR SUSTAINABLE URBAN TRANSPORT PROJECT FINANCED BY THE WORLD BANK

Component 1: Integrated Corridors
- Rehabilitation, Reconfiguration, Construction of Corridors
- Upgrade of Intelligent Transport System
- Introduction of Smart Parking Management System

Component 2: Sustainable Public Transport System
- Corridor specific: Installation of bus lanes, improvement of bus stops
- City-wide: Deployment of on-demand transit services, upgrade of bus management systems

Component 3: Effective Institutions for Transport Planning and Management
- Sustainable Urban Mobility Strategy
- Transport Infrastructure Investment Plan
- Road Traffic Crash Data Platform
- Speed Management Plan
- Public Transport Master Plan
- Mobility as a Service Strategy and Systems
- Parking Management Plan
PLANNING FOR PUBLIC TRANSPORT AS PART OF A COMPREHENSIVE URBAN TRANSPORT PROGRAM

Time Horizon:
- Yearly
- 5 years
- 10 years

Level of Detail:
- City-wide & multimodal
- Network
- Route/corridor

Components:
1. Urban Mobility Vision
2. Urban Mobility Policies
3. Public Transport (PT) Strategic Plan
4. PT Operations and Service Planning

Component: 3
UBERN MOBILITY VISION

- Long Term
- Green
- Multimodal

- Define measurable targets for the entire urban mobility system to achieve
- Prioritize and allocate resources based on identified goals
MULTIMODALITY ENABLER: MOBILITY-AS-A-SERVICE

For users: MaaS provides an interface role which simplifies the link to multiple mobility service providers.

For the city: MaaS provides an integrator role for regulating and coordinating operations across modes.

For mobility providers: MaaS can expand customer base for services and, through standardization, provide a fairer playing field for competition.
MaaS FOR ULAANBAATAR

Stage 1. MaaS Study, funded by KGGTF:
- Recommend a multimodal mobility data policy framework for Ulaanbaatar
- Business models for implementing MaaS in Ulaanbaatar
- Institutional and technological structures

Stage 2. MaaS guideline and implementation plan for Ulaanbaatar

Stage 3. Development of the MaaS Platform for Ulaanbaatar
PLANNING FOR PUBLIC TRANSPORT AS PART OF A COMPREHENSIVE URBAN TRANSPORT PROGRAM

- **level of detail**
  - city-wide & multimodal
  - network
  - route/corridor

- **time horizon**
  - yearly
  - 5 years
  - 10 years

- **Component 3**
  - Urban Mobility Vision
  - Urban Mobility Policies
  - Public Transport (PT) Strategic Plan
  - PT Operations and Service Planning
PUBLIC TRANSPORT STRATEGIC PLAN

- Medium-term
- Public Transport specific
- Network-level

- Implementation plan for priority investments for high-demand, fixed route corridors (e.g., bus lanes)
- Pilot On-demand Transit Service program for lower-demand, underserved area
ON-DEMAND TRANSIT SERVICE (ODTS)

On Demand Transit Service
An alternative form of providing public transport services
Dynamic scheduling based on passenger demand

Typical use cases
- Low-density area
- First-last-mile connectivity
- Replacing underperforming bus routes

Success factor: finding the “sweet spot” is not easy
Enough density of demand in time and space
ON-DEMAND TRANSIT SERVICES FOR ULAANBAATAR

Stage 1. Pre-Feasibility Study for ODTS, funded by KGGTF
- Identification of potential geographic zone in UB to implement a pilot ODTS
- Analyze demand and willingness to pay and estimate ridership
- Define potential service route scenarios and technical options

Stage 2. Detailed technical and operational designs for the implementation of pilot ODTS

Stage 3. ODTS pilot
EXAMPLES AND LESSONS LEARNED FROM KOREA

➢ Dial-A-Ride for the physically challenged in Seoul
  ▪ Seoul and 12 neighboring cities
  ▪ Operation hours: 24/7
  ▪ Reservation: Prior: App, website, text message
  ▪ Fare: 1.5 USD – 3 USD

➢ Duruta in suburban area of Sejong
  ▪ 33 villages near Sejong city
  ▪ Operation hours: 07:00 – 20:00
  ▪ Reservation: Fixed route, reservation basis - 1 hour head
  ▪ Fare: 50 cents per person, up to 8 people in the car

➢ Shucle in Sejong City
  • 06:00 – 24:00
  • Real time reservation
  • Monthly pass: 55USD, or 1-4.35 USD per ride
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