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
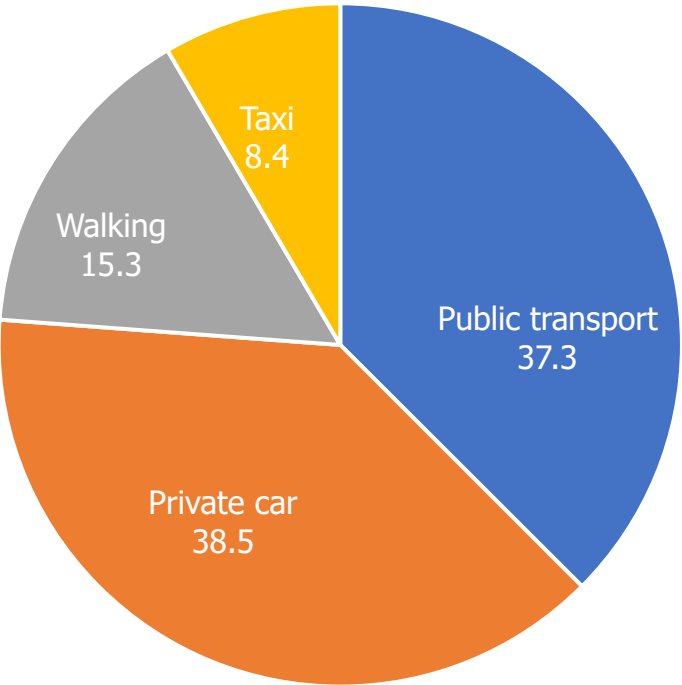- Poor Accessibility For The Vulnerable

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

The lowest income households rely even more heavily on public transport

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

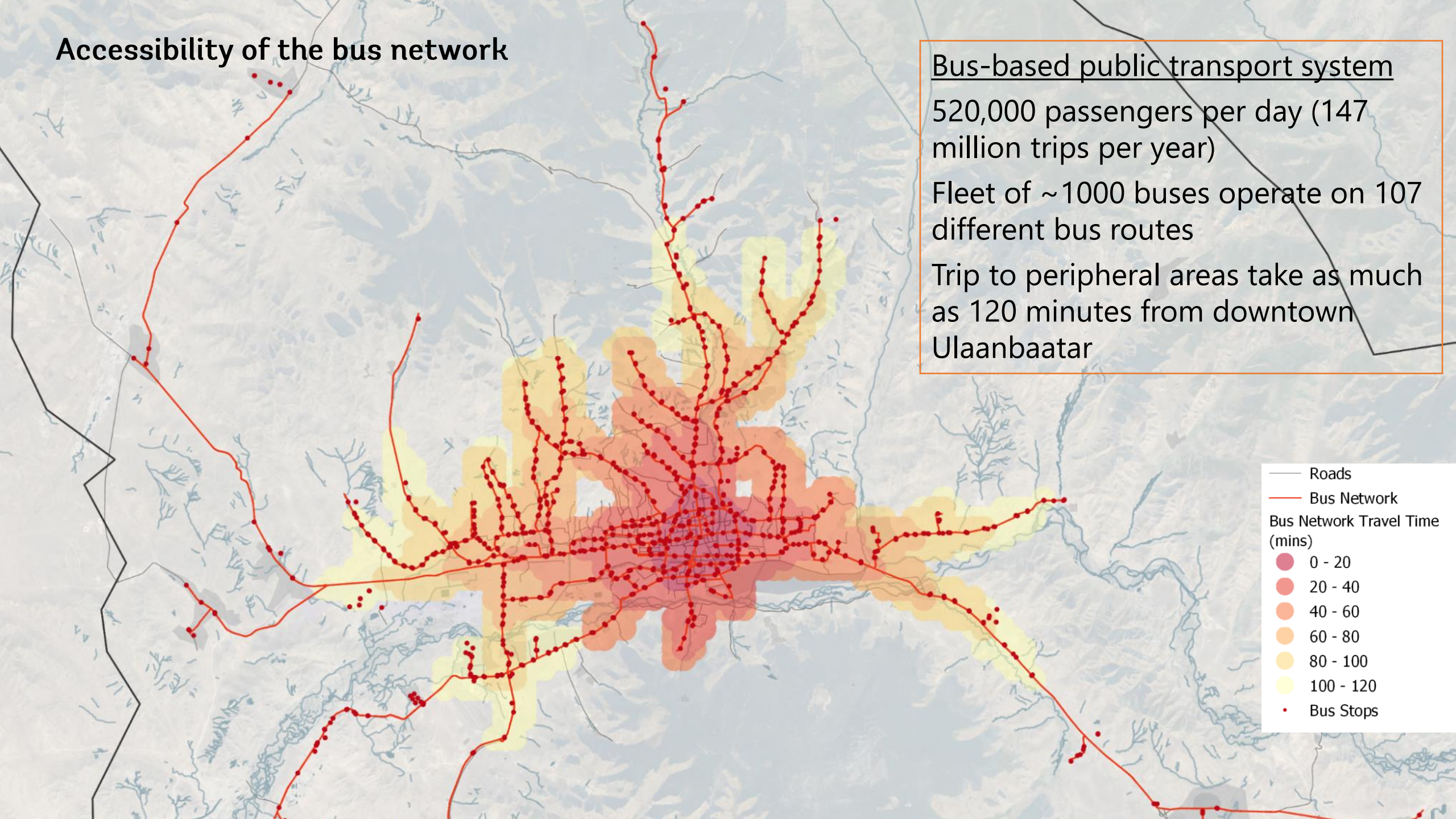| Year	Passenger automobile	Bus
2012	258,127	4,297
2013	289,324	4,570
2014	315,611	4,784
2015	337,181	4,928
2016	356,544	5,055
2017	377,071	4,942
2018	397,990	4,482
2019	417,383	11,021
2020	447,413	16,834
2021	478,469	16,573
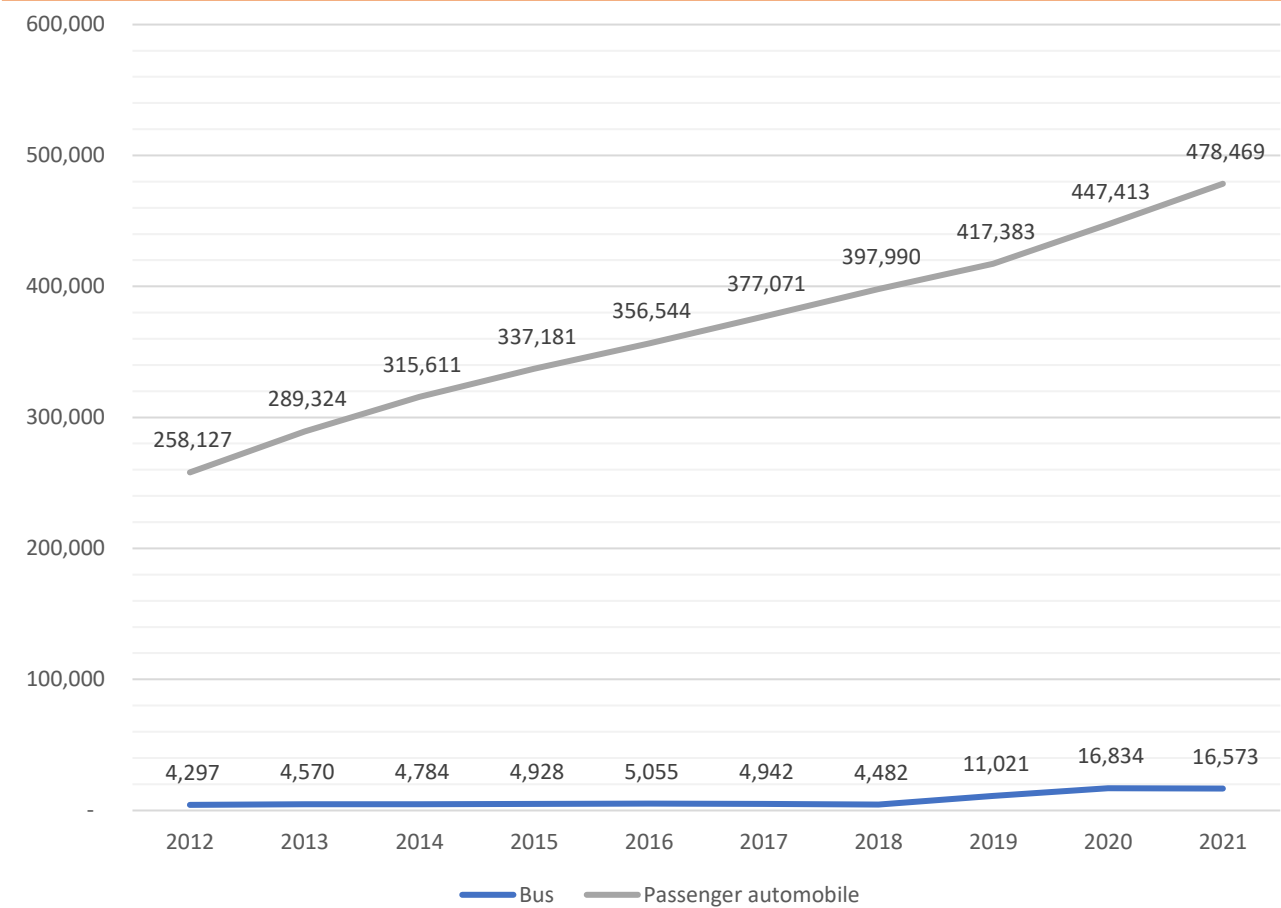
Accessibility of the bus network
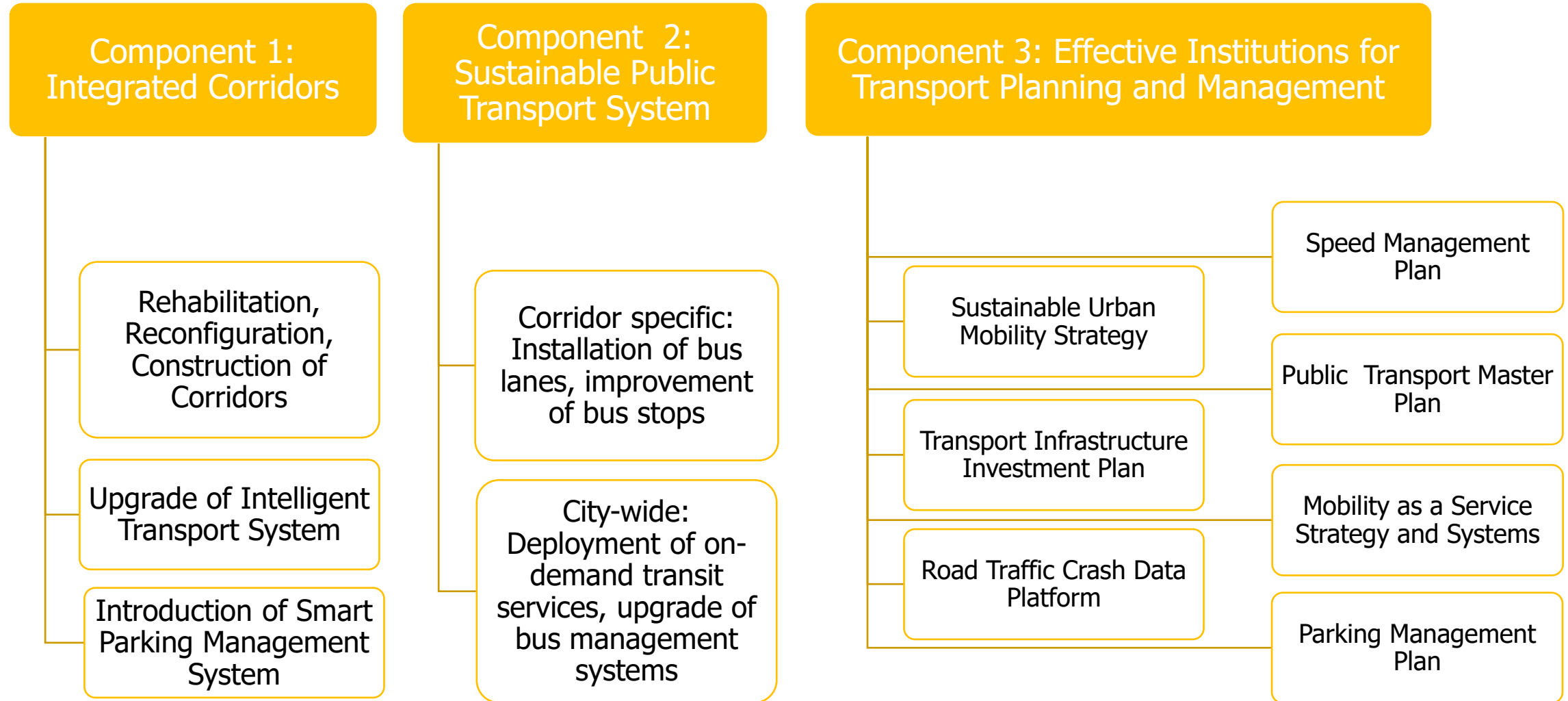
Bus-based public transport system

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
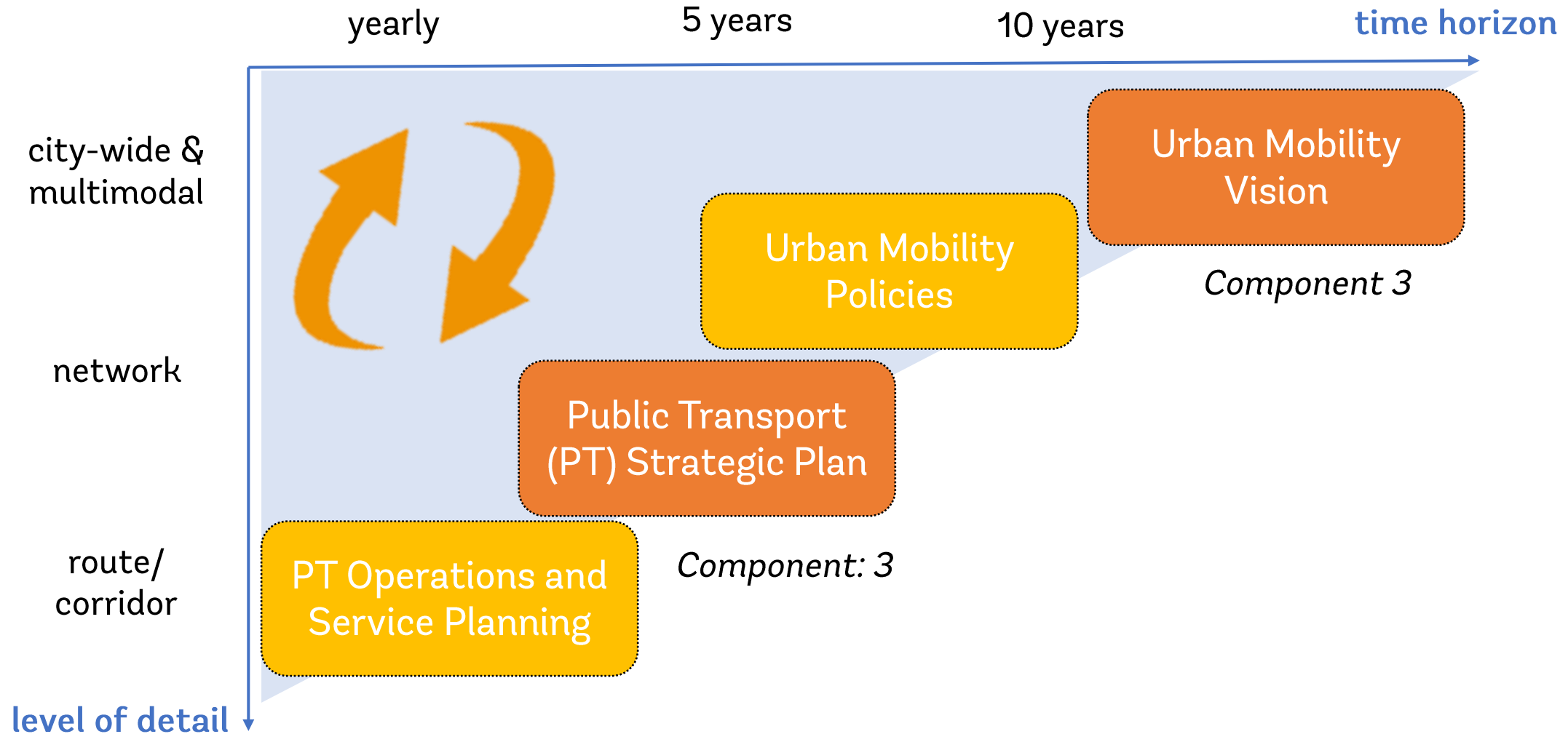
Roads
Bus Network
Bus Network Travel Time (mins)
- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100
- 100 - 120
- Bus Stops

ULAANBAATAR SUSTAINABLE URBAN TRANSPORT PROJECT FINANCED BY THE WORLD BANK

KGID CAIRO

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
- Speed Management Plan
- Public Transport Master Plan
- Transport Infrastructure Investment Plan
- Mobility as a Service Strategy and Systems
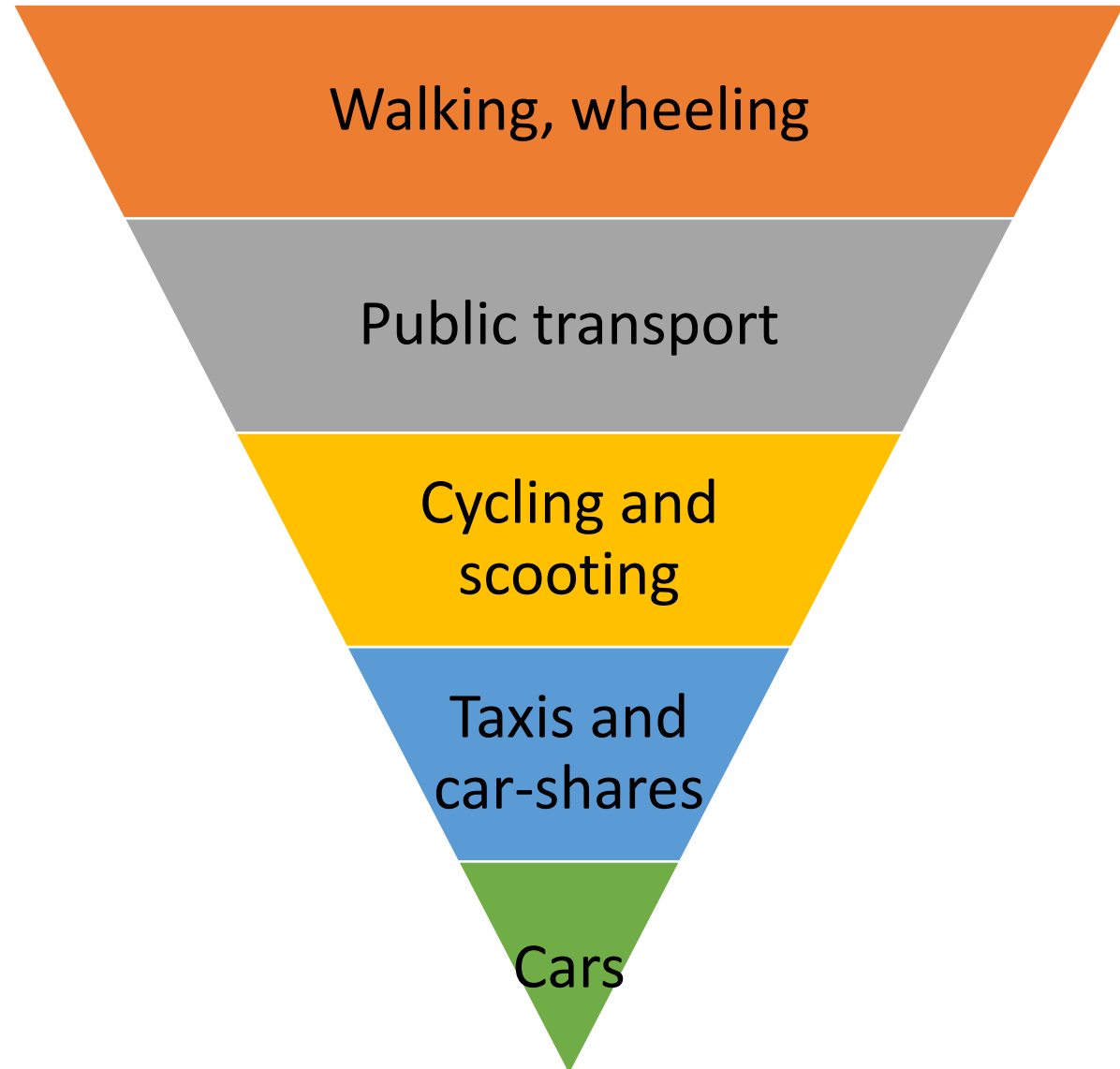- Road Traffic Crash Data Platform
- Parking Management Plan

# PLANNING FOR PUBLIC TRANSPORT AS PART OF A COMPREHENSIVE URBAN TRANSPORT PROGRAM

URBAN 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

Walking, wheeling

Public transport

Cycling and scooting

Taxis and car-shares

Cars

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
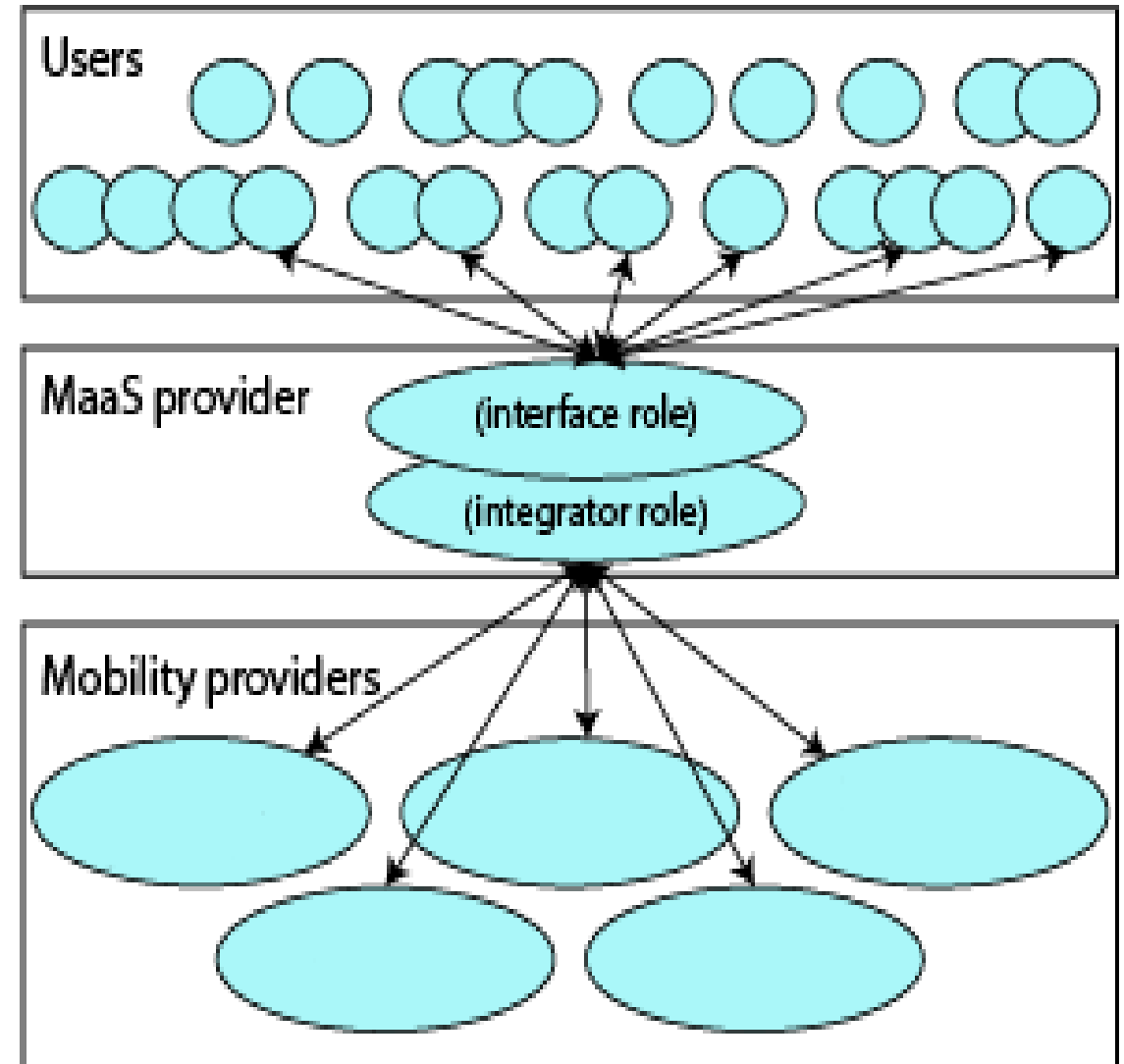
MaaS FOR ULAANBAATAR

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
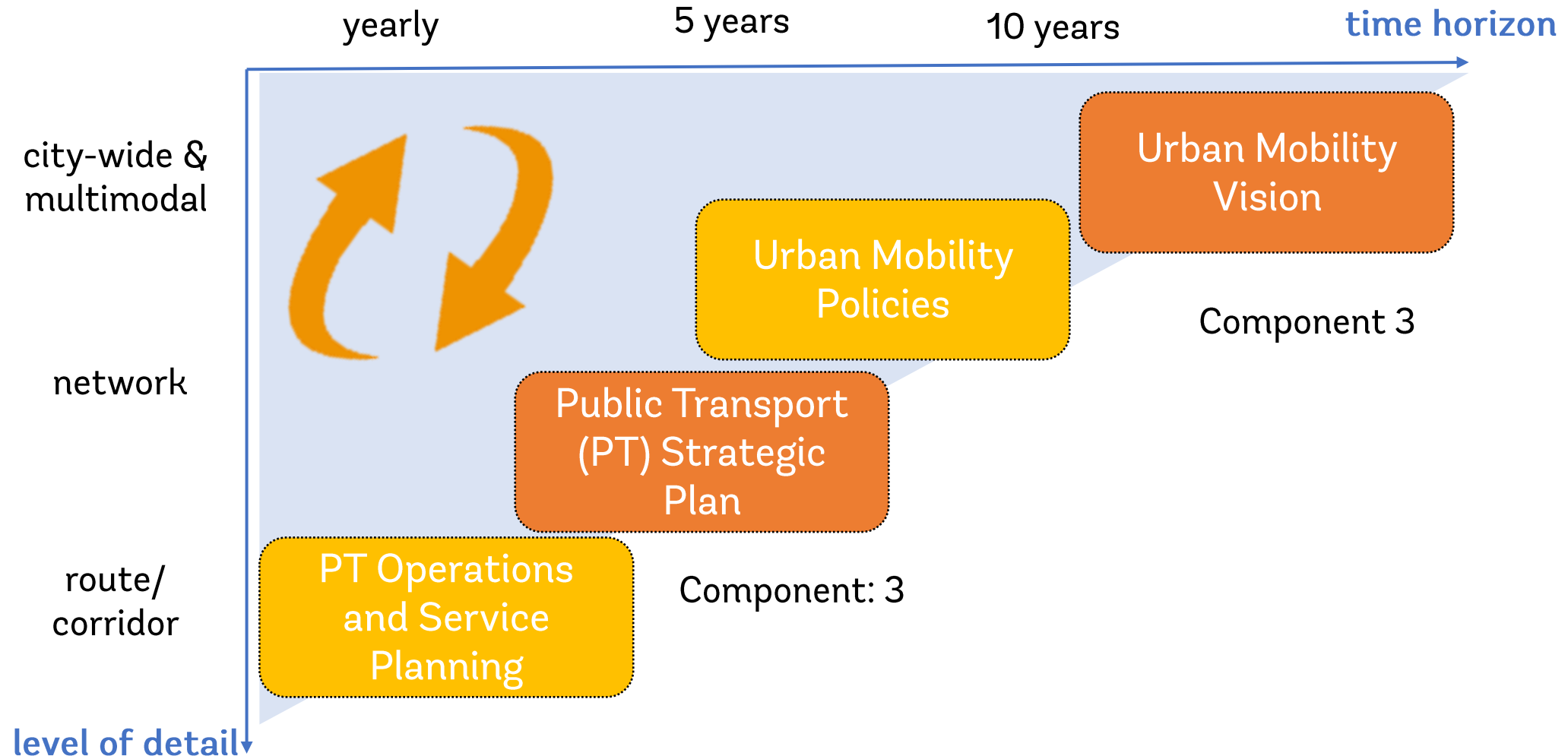
PUBLIC TRANSPORT STRATEGIC PLAN

- 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

Subsidy

Fare

Level of service (LOS) determines operating cost "hole"
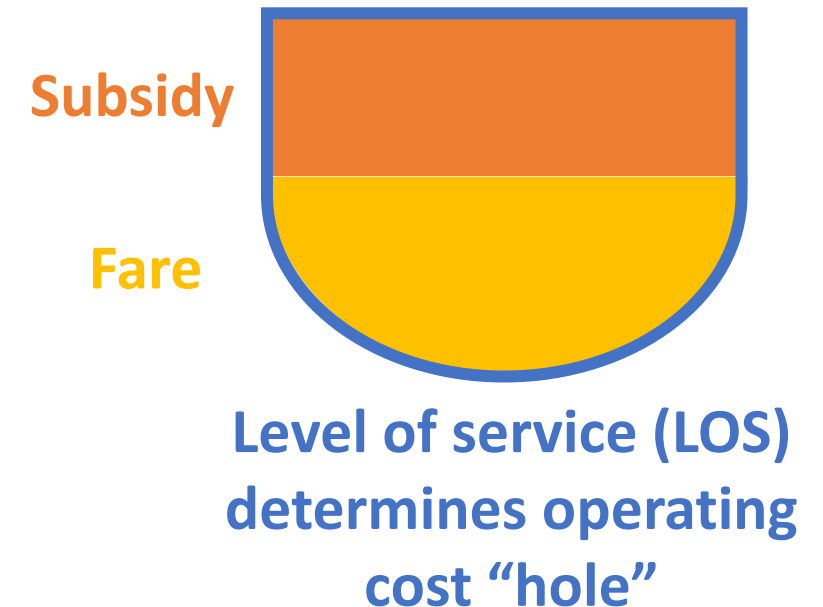
ON-DEMAND TRANSIT SERVICE (ODTS)

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

?

ODTS

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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