International Transport Forum

SIPA
Sustainable Infrastructure Programme in Asia

URBAN MOBILITY IMPROVEMENT PLAN FOR TASHKENT, UZBEKISTAN

Policy directions for sustainable urban mobility development with focus on public transport

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MINISTRY OF TRANSPORT
REPUBLIC OF UZBEKISTAN

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Outline

- **Local context of Tashkent**
- **Policy directions for sustainable urban mobility development**
  1. Improving institutional framework
  2. Incorporating land-use into transport planning
  3. Establishing financing mechanisms
  4. Improving public transport network and service
  5. Transforming informal public transport services
  6. Leveraging the role of micromobility, shared mobility and digitalisation
  7. Adopting additional policy measures
- **Key policy actions**
- **Timeline of implementing proposed measures**

Terms and abbreviations

- **BRT –** Bus Rapid Transit
- **CTA –** Commercial Transport App
- **EV –** Electric Vehicle
- **Informal public transport –** unscheduled services provided for the general population by weakly regulated or illegal operators that do not comply with technical and financial requirements.
- **ITS –** Intelligent Transport Systems
- **LRT –** Light Rail Transit
- **LVC –** Land Value Capture
- **Metropolitan Area –** a region that consists of a densely populated urban core and adjacent communities that have a high degree of economic and social integration with the core.
- **Micromobility –** a range of small, lightweight vehicles operating at speeds typically below 25 km/h (e.g. bicycles, e-bikes, e-scooters, three- and four-wheelers, etc.).
- **MTA –** Metropolitan Transport Authority
- **MoT –** Ministry of Transport of the Republic of Uzbekistan
- **On-demand transport –** a service where vehicles alter their routes for each journey based on particular demand without using a fixed route or timetabled journeys.
- **P+R –** Park & Ride
- **PPP –** Public-Private Partnerships
- **PT –** Public Transport
- **Shared mobility –** transportation services that are shared among users, either concurrently or one after another (e.g. bike-sharing, car-sharing, etc.)
- **SUMP –** Sustainable Urban Mobility Plan
- **TOD –** Transit-Oriented Development
- **Urban mobility –** all aspects of movement in urban settings, including transport infrastructure, trip specifications, travel flows, origin and destination characteristics, etc.

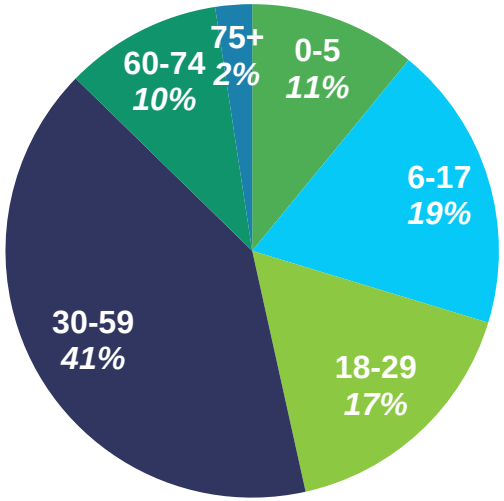
OVERVIEW
LOCAL CONTEXT OF TASHKENT

- **SOCIO-ECONOMIC PROFILE**
- **URBAN MOBILITY**
- **CHALLENGES IDENTIFIED**

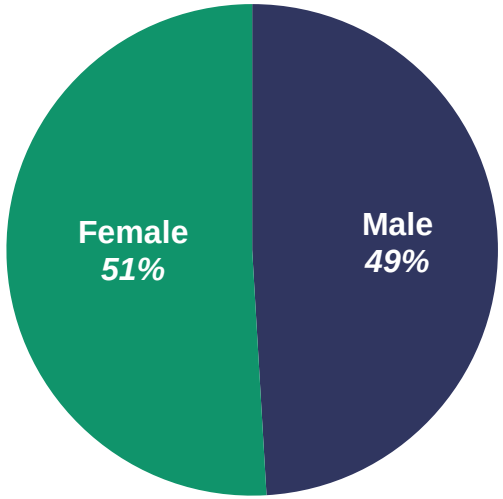
Socio-economic profile

- **Population:** 2,694,000 inhabitants
- **Population density:** 8000 inhabitants/km^2
- **Comparable cities:** Milan, Santiago, Singapore
- **Gross Regional Product:** average growth of 22% per year from 2012, resulting in approximate annual 4000 USD per capita in 2021

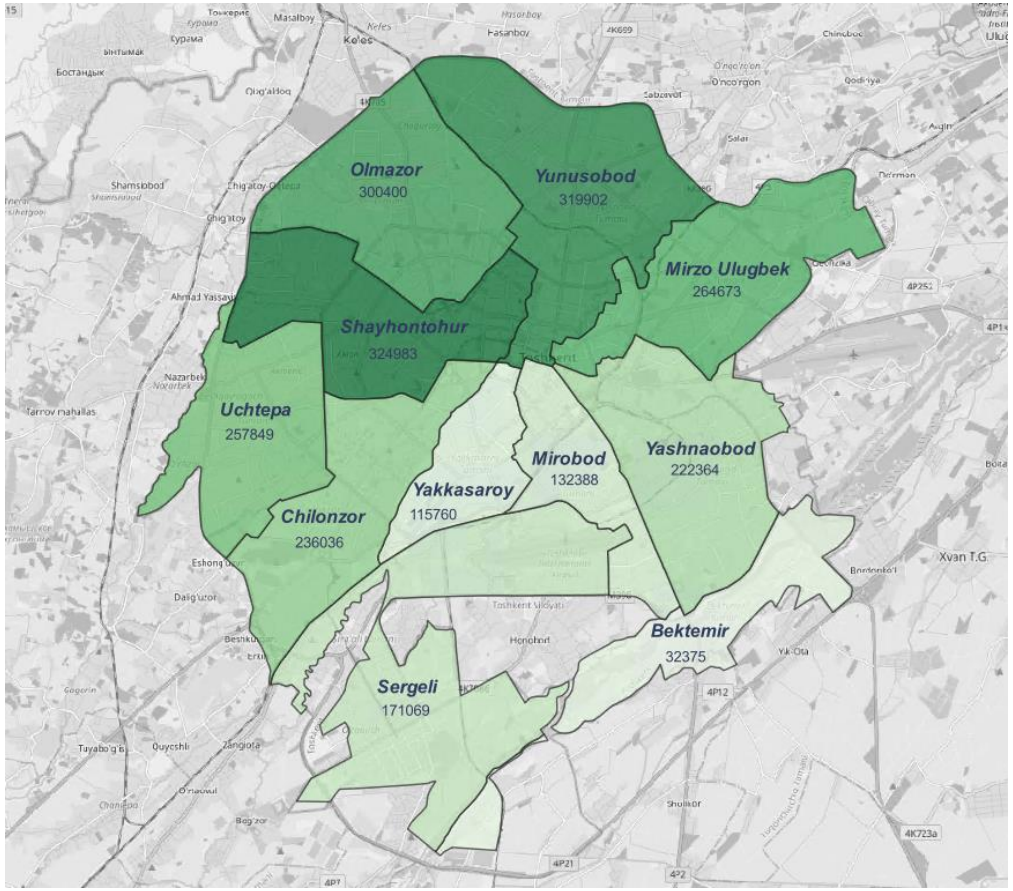
Age composition



Gender composition



Tashkent City and its population by districts

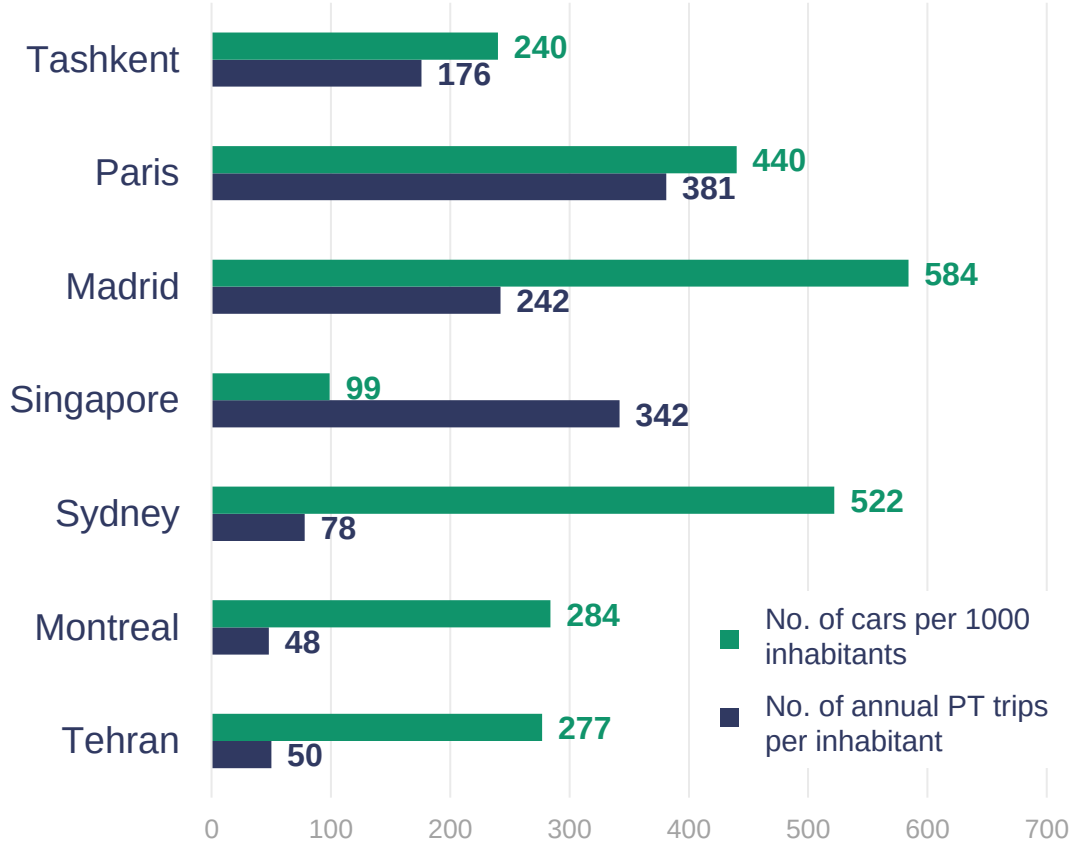


Source: ITF analysis based on OpenStreetMap

Urban mobility

- **Private car:** 640,000 registered vehicles, car ownership rate is 240 cars per 1000 inhabitants
- **Road network length**: 5893 km in total (1371 km primary, 1481 km secondary, 3041 km local)
- **Available public transport (PT) modes:** metro, bus, minibus, taxi
- **Transport service providers:** 1 metro operator, 13 bus operators, 55 private minibus companies, 400 taxi companies
- **Public transport (PT) ridership:** 1.3 million trips per day, with 0.5 million served by metro
- **Public transport (PT) modal share:** 21% as of 2021 (*vs 30-60% in major European and Asian cities*)

Car ownership and PT ridership worldwide



Source: CityTransitData (UITP)

Challenges identified

- **Inefficient** PT governance and financing
- **Outdated** fare system and **absence** of integrated ticketing
- **Segregated** land-use and transport development
- **Suboptimal** PT network design
- **Insufficient** and **old** vehicle stock
- **Long** waiting times, **irregular** service
- **Dominant** share of illegal taxis that win over PT
- **Unrealised** potential of shared and micromobility
- **Unorganised** on-street parking
- **Early-stage** technology and innovation
- **Brief** decarbonisation agenda in policymaking for urban mobility

POLICY DIRECTION 1
IMPROVE INSTITUTIONAL FRAMEWORK TO ENSURE SUSTAINABLE PUBLIC TRANSPORT DEVELOPMENT

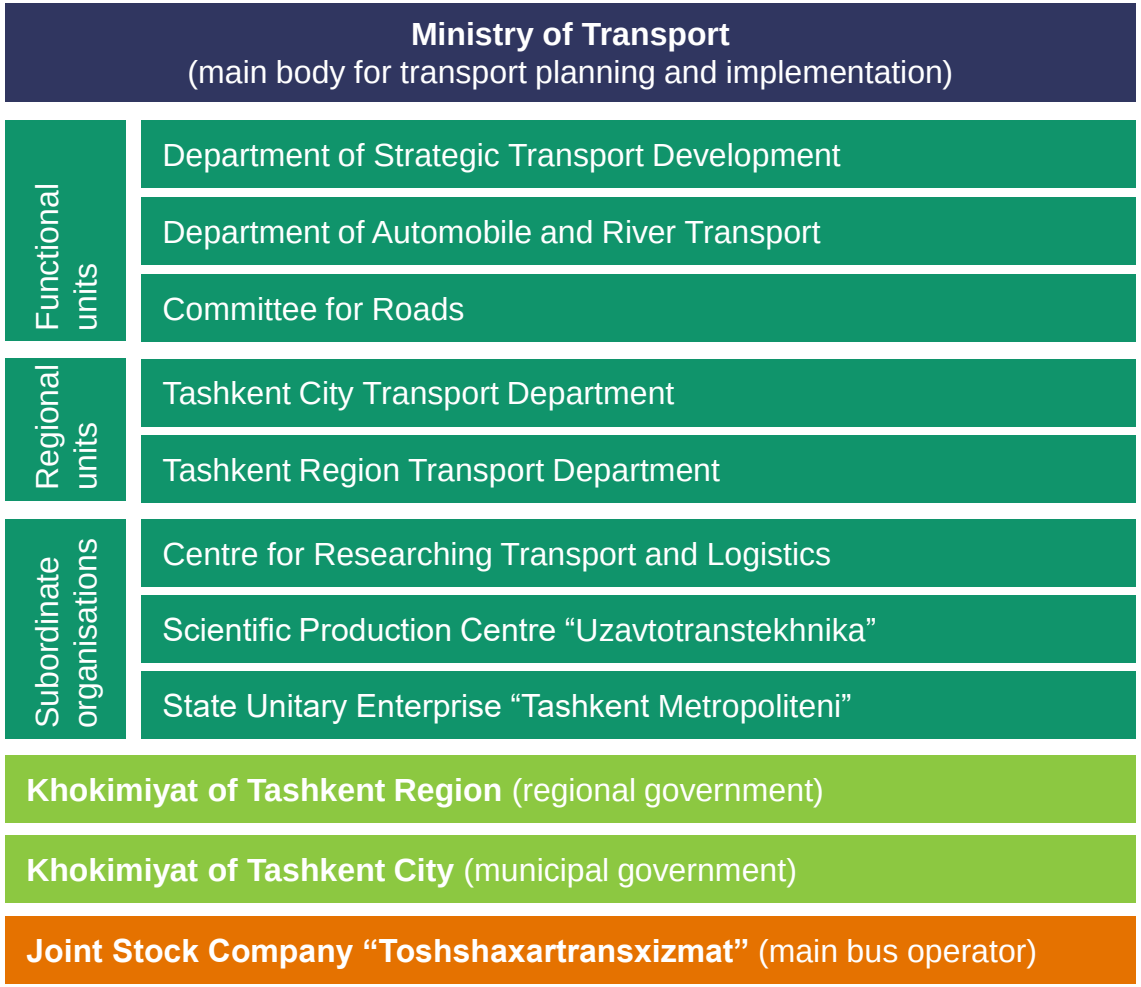
- **RESTRUCTURE SYSTEM-WIDE GOVERNANCE**
- **CONSOLIDATE AND MODERNISE PROCUREMENT**

Restructure system-wide governance

Current situation

The governance process has a limited degree of transparency, integration, responsibility allocation and institutional capacity.

- Ministry of Transport (MoT) consolidates all functions related to transport at the national and regional levels
- Duplicate areas of responsibility among various units and organisations at the Ministry of Transport (MoT)
- Urban mobility planning in Tashkent City and Tashkent Region is organised independently
- Low degree of involvement for the municipal and regional government in transport development
- Main bus operator in public ownership is granted privileges and is highly involved in governance
- Limited institutional resources and expertise



Restructure system-wide governance

Actions for improvement

✓ Decentralise PT planning and provision

Decentralise public transport planning and provision at the regional level to ensure that PT services adequately accommodate the local needs. This improves efficiency, flexibility and responsiveness in governance.

✓ Create a Metropolitan Transport Authority (MTA)

PT governance should cover both Tashkent City and its Metropolitan Area to ensure coherent and cohesive transport development. The best solution is to create a Metropolitan Transport Authority (MTA) with a council of national, regional and municipal members. The MTA should cover all modes and deal with local infrastructure projects, PT planning and operations, budget distribution, policymaking, procurement, etc.

✓ Set MoT's focus on national policies and strategic projects

MoT should primarily work with national policies, legislation and large infrastructure projects, outlining a general vision and setting strategic goals. All these elements should be discussed with local authorities and aligned at the regional and municipal levels before being operationalised.

Further reading: Policy Directions for Establishing an MTA for Korea's Capital Region (ITF), Public Transport Governance in Greater Barcelona (ITF)

Restructure system-wide governance

Actions for improvement

✓ Create a clear institutional structure, optimise administrative processes

Support the improvement of the institutional framework by establishing a clear structure within each organisation. This measure entails a systems thinking approach that optimises administrative processes, information flows, and resource distribution, synchronises operational workstreams and enhances digitalisation.

✓ Ensure more fair competition among PT operators

According to common practice, PT services are provided entirely by the private sector. However, operators in public ownership can remain alongside private sector companies. It is essential to create an enabling environment that would allow any operator to enter the market, given it can operate at an acceptable level of efficiency and is subject to identical rules and conditions, regardless of ownership.

✓ Organise capacity building for relevant stakeholders

Capacity building can address a wide range of skills and expertise in transport policymaking, planning, management and operations. It is recommended for governmental officials, the MTA, transport operators, enforcement agencies and other stakeholders involved in urban mobility. This can be delivered through training at work, seminars and programmes, knowledge exchange trips and secondments.

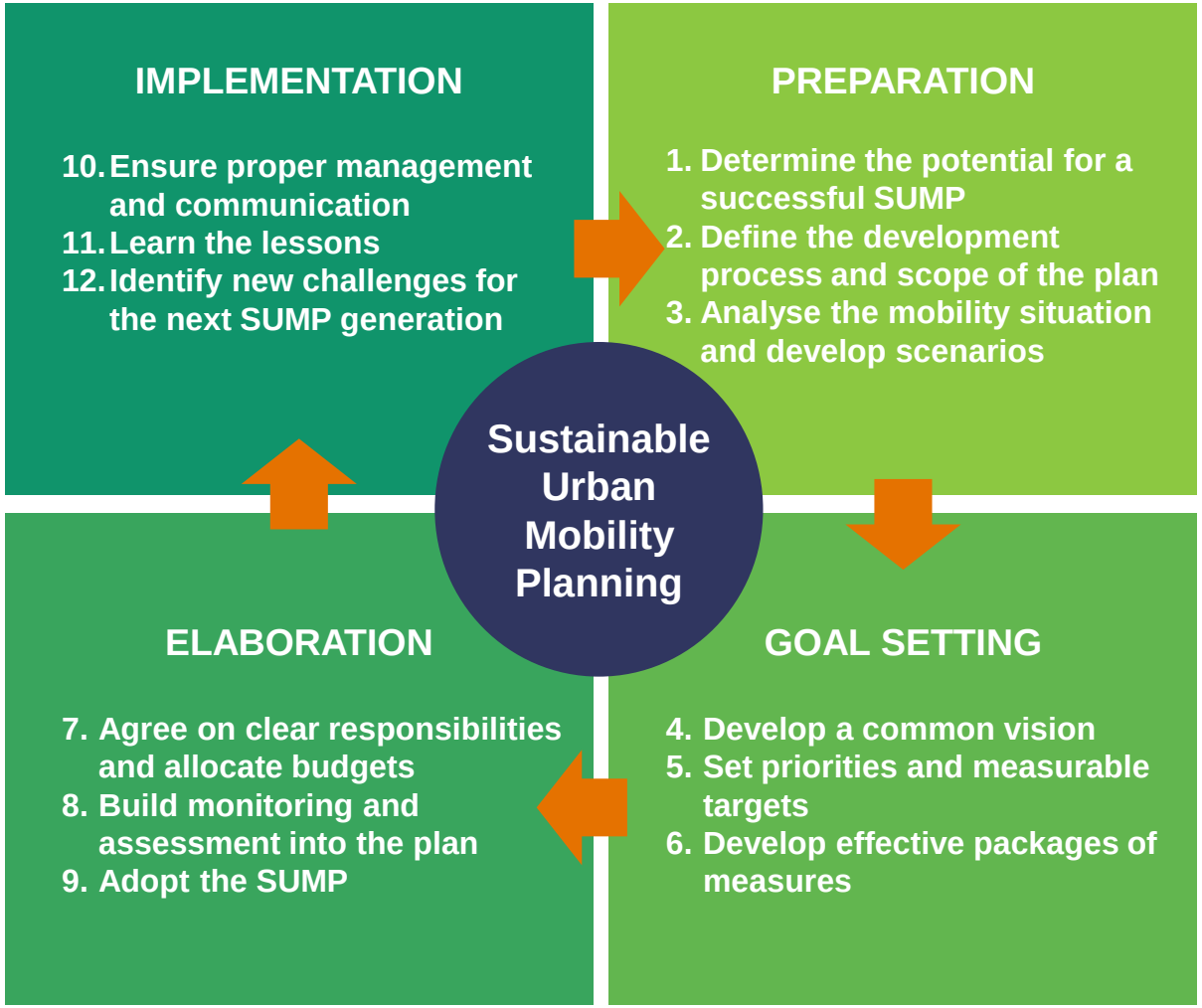
Restructure system-wide governance

Actions for improvement

✓ Adopt a Sustainable Urban Mobility Plan (SUMP)

The MTA should work on a SUMP - a document that sets objectives and priorities, comprehensive of all modes of transport with a metropolitan vision. It would serve as a roadmap to guide and coordinate transport policies and investment. It would also provide information on future transport schemes for the private sector and the wider public. The element of monitoring and assessment allows for reviewing achievements and updating the Plan regularly.

Further reading: [The Future of Passenger Mobility and Goods Transport in Estonia](#) (ITF)



Source: [Sustainable Urban Transport Project](#)

Consolidate and modernise procurement

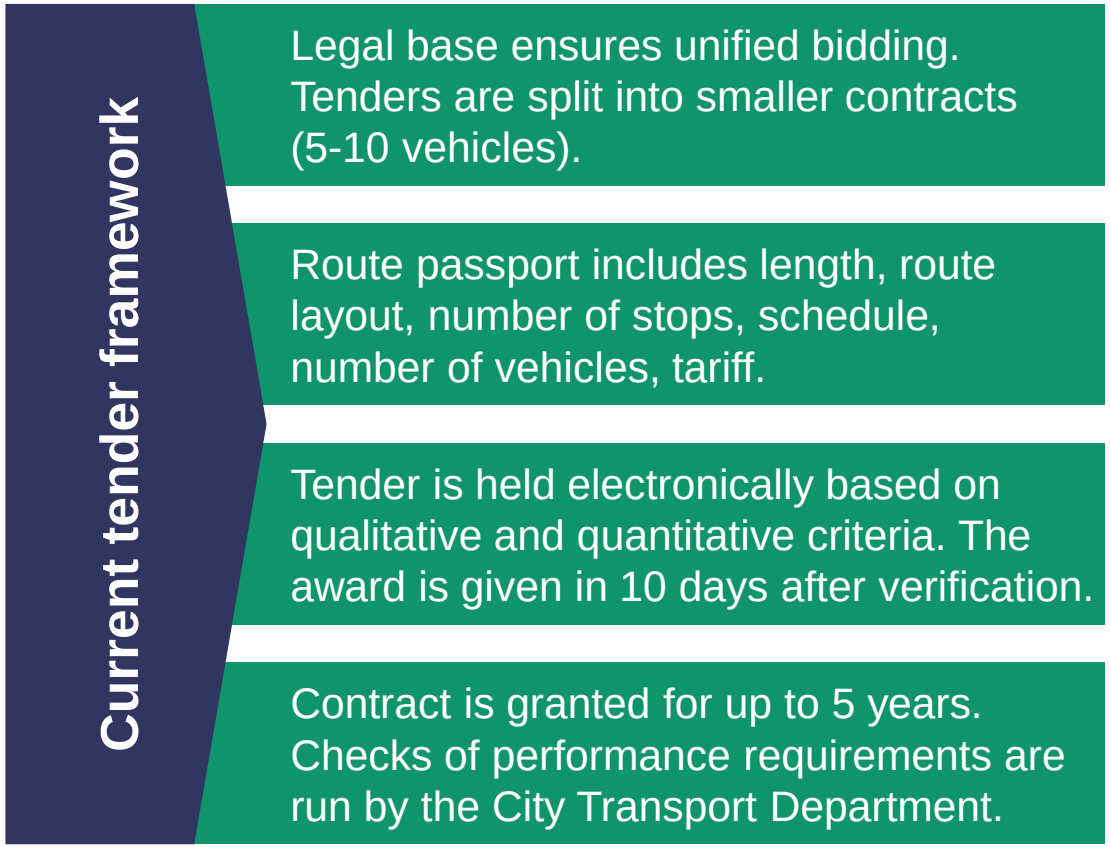
Current situation

Fragmented PT provision with minimal incentives for better performance.

- Tashkent City (Region) Transport Department leads the procurement process
- Bus service is currently provided by 68 operators with various fleet sizes and specifications
- Net-cost contracts are commonly used, leading to low motivation for operators in improving their level of service

Existing plan

- Performance monitoring of several indicators through the dispatcher centre (number of vehicles in operation, waiting times, adherence to the schedule)



Consolidate and modernise procurement

Actions for improvement

✓ Organise procurement for Tashkent City and its Metropolitan Area

The established MTA should take over this function and organise joint procurement for the city core and the periphery.

✓ Revise the existing tender framework

The minimum size of a contract is expected to be one full route. However, the preferable option is to involve only several operators of various sizes and capabilities and allocate route packages with similar requirements. The sector should reach its balance under the MTA's supervision. The contract length should not exceed five years to establish an open market with competition and transferability.

✓ Introduce Quality Incentive Contracts

The new contract type should build on a bonus/penalty system and monitor against contract Key Performance Indicators (KPIs). KPIs can include transport network performance, travel demand and customer satisfaction. The data can be acquired through surveys, technical reports, GPS and the automated fare collection system (GIZ Guide).

✓ Introduce a pre-tender verification procedure

Before entering a tender, the MTA should verify an operator and add to a database of approved contractors. This includes a preliminary assessment of the company's financial stability, health and safety and previous experience in the transport sector. A positive assessment means the operator meets the primary conditions to be considered further (Case of London).

Further reading: Reforming Public Transport Planning and Delivery (ITF), Good Practice Public Transport Concessions (ITF)

POLICY DIRECTION 2
LEVERAGE INTEGRATED LAND-USE AND TRANSPORT PLANNING FOR COHERENT AND COST-EFFECTIVE PUBLIC TRANSPORT SYSTEM

- **INCORPORATE LAND-USE INTO TRANSPORT PLANNING**

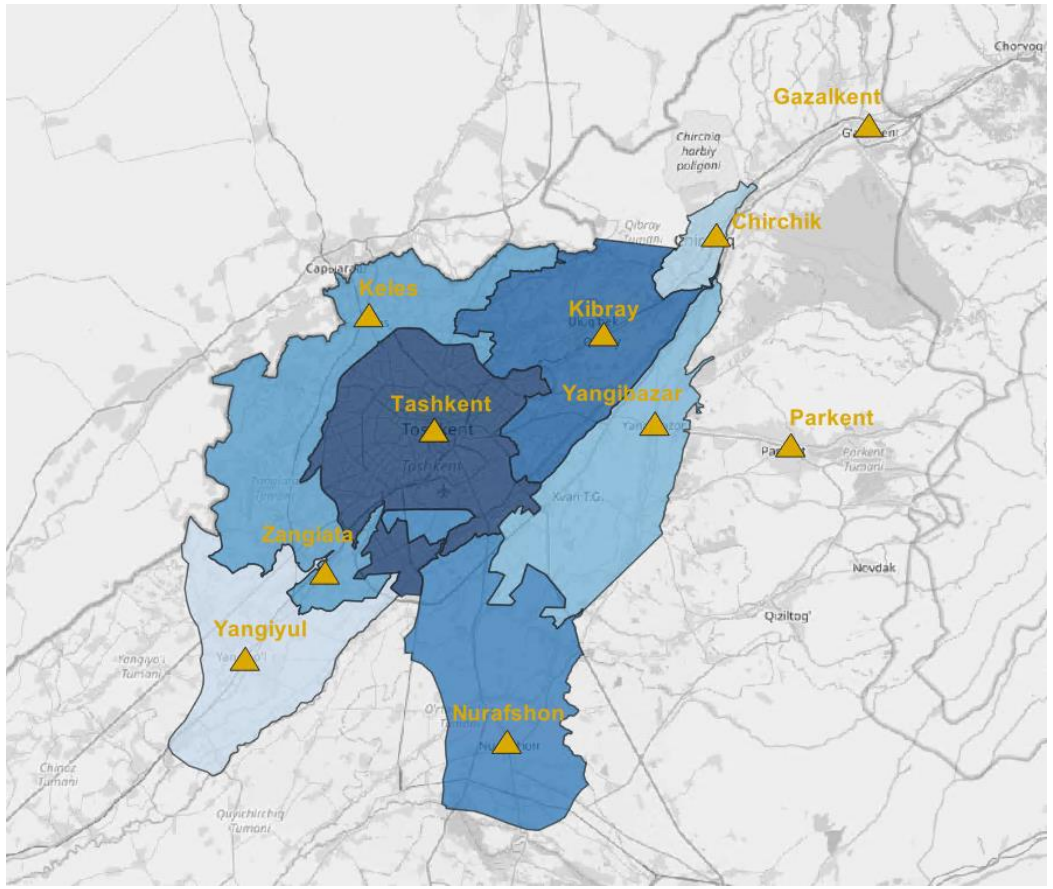
Incorporate land-use into transport planning

Current situation

Land-use elements are not integrated into PT planning which undermines the importance of mobility in sustainable urban development.

- Tashkent's city core and its agglomeration are highly interdependent
- 1.000.000 trips per day between the city and the agglomeration
- Diverse area functions in the city core
- Tashkent has a large potential to become polycentric
- A master plan for Tashkent is not available

Tashkent agglomeration with local centres



Source: ITF analysis based on OpenStreetMap

Incorporate land-use into transport planning

Actions for improvement

- ✓ **Develop an urban master plan**

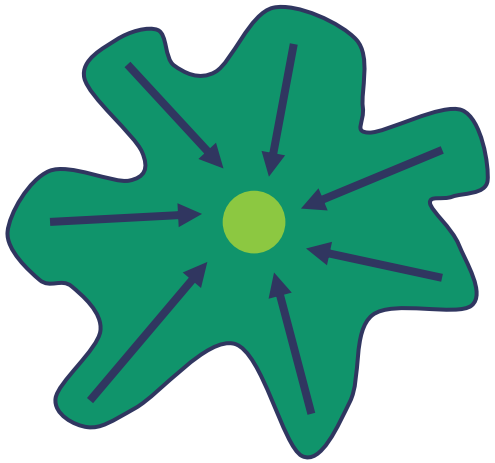
  Develop an urban master plan that will serve as a guiding document for all infrastructure projects and lay the basis for a more focused and detailed SUMP. The latter should always reflect the main provisions of the former.

- ✓ **Organise work at the level of the Tashkent Metropolitan Area**

  Given the high interdependency between the city and its periphery, the Metropolitan Area of Tashkent should be considered an integral part of urban land-use and transport planning. The area boundaries should be clearly defined (OECD Guide).

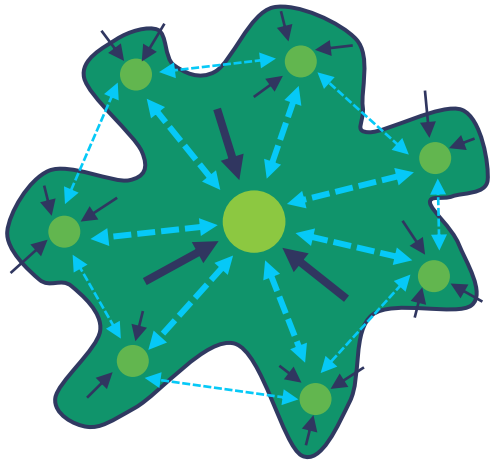
- ✓ **Invest in creating a clear polycentric structure**

  With several activity centres already present in Tashkent, it can be shaped as a polycentric city with mixed-use sub-centres that are well-connected to the dominant core (Case of Melbourne).



Classic monocentric model

Strong high-density centre with a high concentration of jobs and amenities. Radial movements of people from the periphery toward the centre.



Composite polycentric model

Dominant centre with several sub-centres. Jobs and amenities are dispersed across the built-up area. Simultaneous radial, circular and local movements in the urban area.

Source: Lin D. et al. (ISOCARP Congress)

Incorporate land-use into transport planning

Actions for improvement

✓ Create a regulatory framework for urban development

This includes guidelines for area zoning (e.g. density, degree of mixed-use, parking limits, transport infrastructure provision), an evaluation tool (Case of London), and institutional mechanisms for cooperation between public and private entities (city government, transport authorities, land developers, etc.) in urban development.

✓ Adopt practices of Transit-Oriented Development (TOD)

The practice of TOD implies the combined land-use and transport planning and development (see slides 20 and 21 for more information). It aims at reducing urban sprawl and promoting compact, walkable, pedestrian-oriented, mixed-use communities centred around high-quality PT systems. Several pilots can be organised to adjust TOD mechanisms to the local context and prove their effectiveness.

✓ Implement mitigation policies against adverse effects of densification

If not managed well, densification can result in potential adverse effects, such as increased congestion, air pollution, loss of recreational spaces, and unaffordable housing. Mitigation policies should be introduced along with land-use promotion to support the housing supply expansion and sustainable PT attractiveness.

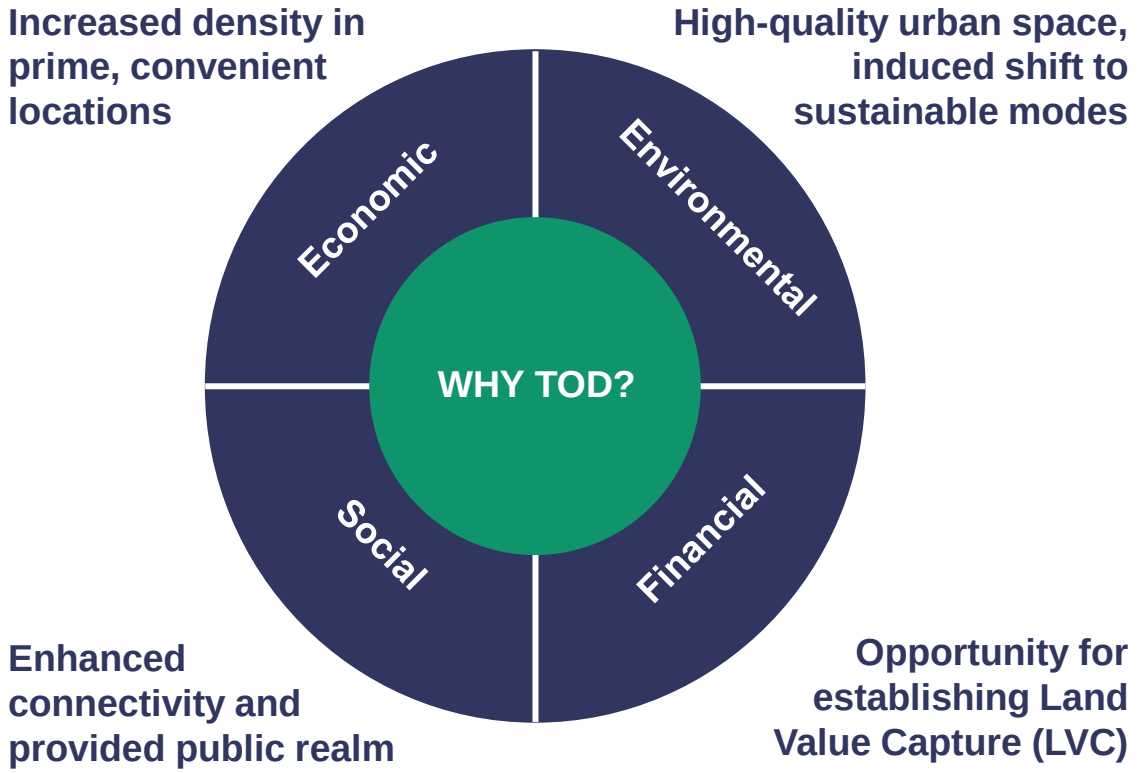
Further reading: Land-use Planning in Urban Areas – TCAD (ITF)

Incorporate land-use into transport planning

Practice of TOD

TOD implementation

- Set focus on both existing and future mass transit lines (metro, tram, Bus Rapid Transit (BRT), suburban rail).
- Select suitable station spacing (around 1.5 km), which is twice the average walking distance.
- Increase density in the direct vicinity of stations with a dominant share of offices, retail and services. The density should gradually decrease further away from stations while the land function should switch to residential with local services.
- Terminal stations have the potential of being linked with business, study, and leisure facilities to improve infrastructure utilisation.
- Some stations can be converted into multimodal hubs served by feeder transport that would expand the catchment area of each TOD location and improve connectivity.



Sources: Urban Planning and Travel Behaviour (ITF), Transit-Oriented Development (UNESCAP), TOD and Sustainable Urban Planning (Nordregio)

Incorporate land-use into transport planning

Land Value Capture (LVC)

TOD leads to a significant increase in real estate and commercial value along transport corridors. The government can leverage this to partially finance transport infrastructure development. Such a process is called LVC and can be realised with:

- Tax increment financing – an increase in future property taxes.
- Land/property tax – introducing a tax in certain districts along the mass transit.
- Land development – private developers are granted rights to invest in land along with the mass transit under the agreement of financing transport infrastructure development.
- Land readjustment – landowners pool their land together for reconfiguration and contribute a portion for sale to raise funds.
- Land lease – recurring payments for a stated period.
- Property lease – lease commercial space inside and around stations to private businesses.
- Royalties – portion of revenue from a third party.

LVC implementation

Create an inventory of potential sites for TOD and LVC and categorise them based on their potential (new land development, improving the mixed-use and attractiveness of the area, enhancing transport connectivity and multimodality).

Identify the need for legal and regulatory modifications

Coordinate and negotiate with existing landowners for access to the land and authorisation to implement TOD.

Attract investors by promoting the initiative, providing regulatory incentives and sharing risks.

Determine the best approach of the TOD and LVC for each location (development + financing scheme).

Cases of Dublin, San Francisco, Mumbai, Hong Kong, etc., pages 77-104

POLICY DIRECTION 3
ESTABLISH FINANCING MECHANISMS TO INCREASE VIABILITY OF PUBLIC TRANSPORT DEVELOPMENT AND OPERATIONS

- **IMPROVE PT FINANCING PROCEDURE**
- **ADJUST PT FARE-SETTING STRUCTURE**

Improve PT financing procedure

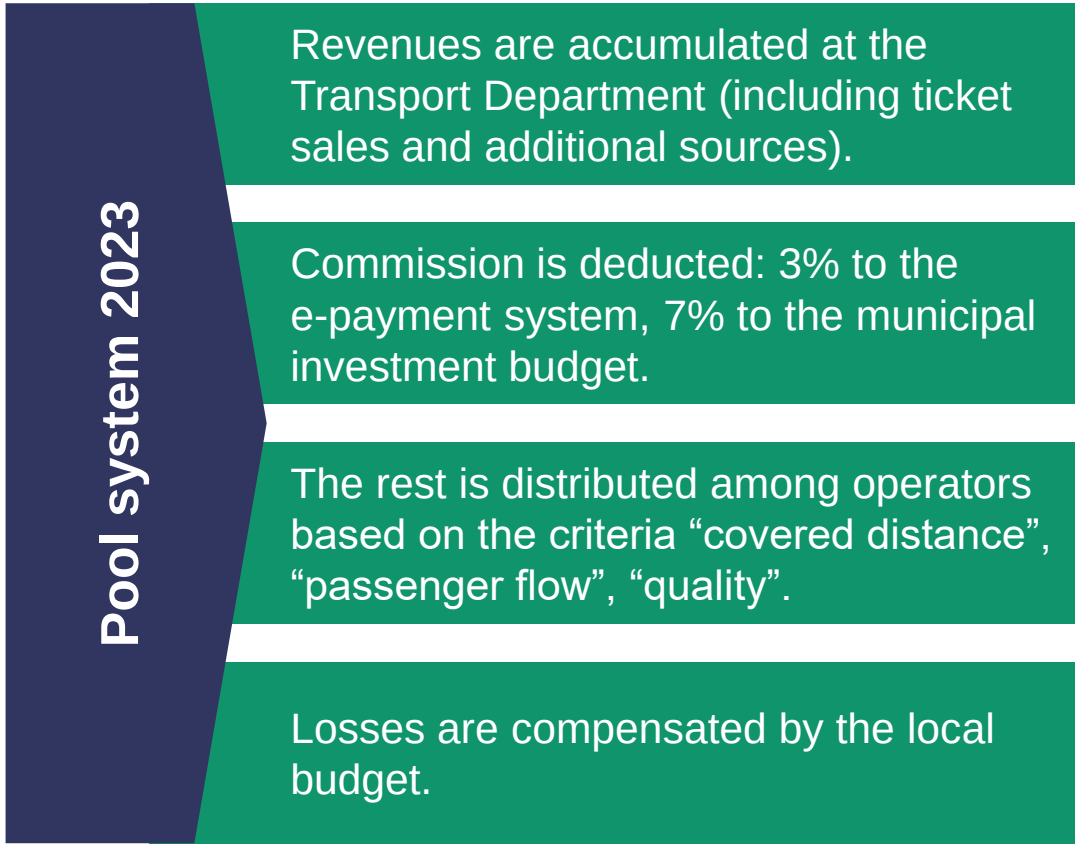
Current situation

Ambiguous and superficial financing system with a low degree of resilience that leads to limited economic support for PT.

- Two financing sources:
  - Farebox revenue that goes to the operators
  - Subsidy from the local budget (to cover losses from the operations and reduced fares)
- Limited economic accountability of operators, partly due to paper ticket sales
- The shadow economy's share (tax evasion) accounts for up to 60%

Existing plan

- New Pool System for revenue distribution as of 2023
- Additional revenue sources (paid parking, bus stop auction)



Improve PT financing procedure

Actions for improvement

✓ Establish MoT's key role in funding

The MoT should support the MTA by revising the regulatory framework and providing annual budgets and additional funding for large-scale infrastructure projects and mobility programmes. Moreover, MoT can contribute to attracting new financing sources, such as obtaining loans or participating in public-private partnerships (PPPs) (Case of Morocco and Brazil, page 18).

✓ Give full control of finance distribution to the MTA

Ideally, the MTA should have its own budget. This would allow it to maintain control regarding tariff policy and financial resources to achieve a higher coherence between mobility needs and budget allocation.

✓ Allocate a target share of the city's GDP to the transport budget

A long-term vision of stable and sufficient funding is crucial. One practice is assigning a certain share of the city's GDP to transport investments and operational needs. International practice for emerging economies suggests this share to be minimum 1-2% (Case of Belgrade and Teheran, page 11).

Improve PT financing procedure

Actions for improvement

✓ Diversify the range of funding streams

The MTA should diversify its funding streams for investments and operations (see slide 26). This should include but not be limited to the state budget, municipal subsidies, taxes (fuel, payroll), fare revenues, partnerships (PPPs, grants, loans), LVC, charges on private vehicles, advertisement and retailing.

- In the case of London, TfL's budget receives revenues from paid parking, congestion charging, and the low-emission zone.
- In the case of Paris, Ile-de-France Mobilités, a transport dedicated tax represents more than 60% of the agency's budget.

✓ Ensure a full rollout of the future Pool system

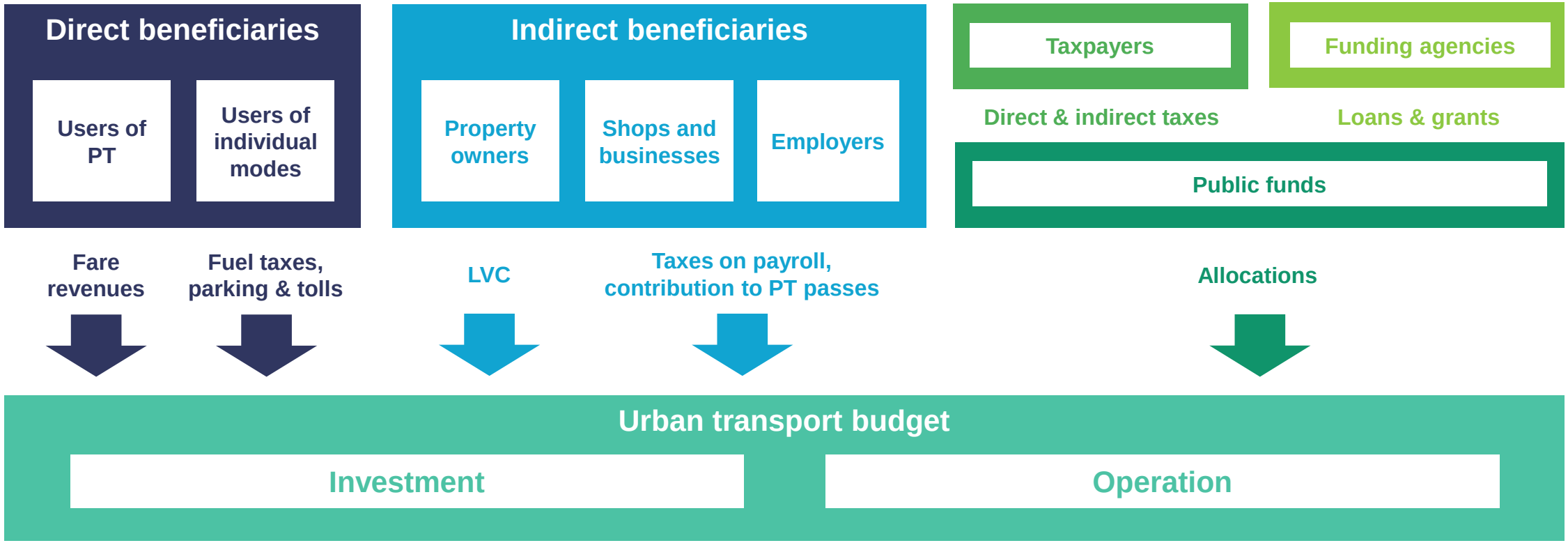
The Pool system has the potential to improve transparency and fairness, centralise control, promote better performance, and create a basis for a single ticket. The MTA should ensure consistent implementation with all operators to be integrated into the system.

✓ Improve the enforcement system

Reducing the scale of the shadow economy should become a priority by adopting a set of measures: transparent and structured procurement, the Pool System for revenue distribution, a complete shift to automated ticketing and cashless payments, and stricter enforcement (efficient financial reporting, much higher fines).

Improve PT financing procedure

Funding streams for PT



Source: [Who Pays What for Urban Transport?](#) (AFD)

Adjust PT fare-setting structure

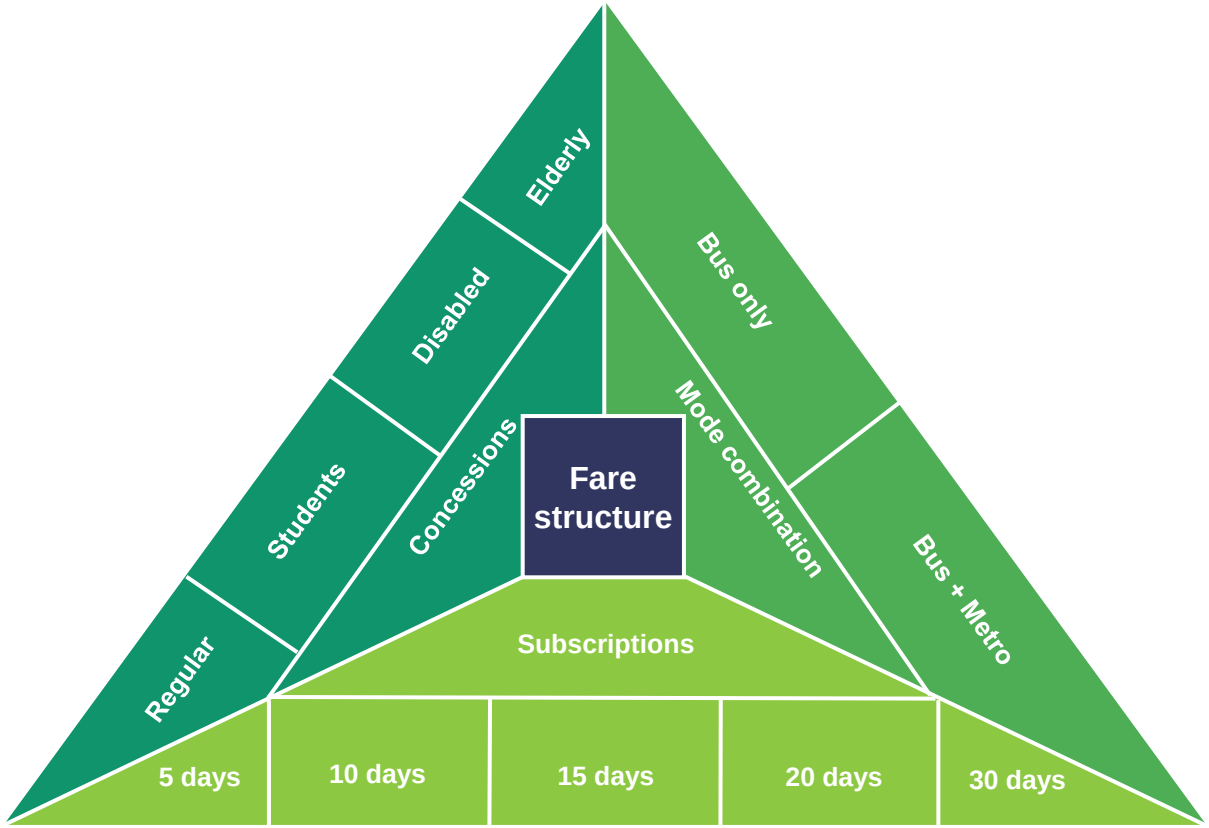
Current situation

Outdated fare system that lacks targeted user support and disincentivises multimodal PT trips.

- MoT regulates standard rates, and the municipal government applies tariffs within the existing ceiling.
- Flat fare for each ride with one mode
- Stable fare since 2018 that does not account for inflation, fuel costs, etc.
- Transport costs by PT constitute 10% of the average resident's monthly income.
- The public is opposed to any fare increase

Existing plan

- Introduce a single 40-minute ticket based on distance, route and mode



Source: Passenger tariff plans (ATTO)

Adjust PT fare-setting structure

Actions for improvement

- ✓ **Conduct fare level review annually**

  The MTA should determine fare levels. It is essential to review them regularly so that they reflect on the operators' costs for providing the service and do not undermine their viability.

- ✓ **Adjust the fare level reasonably upwards (< 15% of the average monthly income)**

  Given the socio-economic environment and the objective of making PT more attractive and inclusive, fare levels should be adjusted to a realistic yet acceptable level for the public. A more considerable fare increase can be introduced only after the first serious service improvements occur (Fare social efficiency, page 35).

- ✓ **Maintain a consistent, flexible and simple fare structure**

  Differentiating fares based on distance, route and mode would create a structure that is not transparent and user-friendly. Moreover, it can be challenging to administer and enforce. A graduated distance scale can be introduced only if the range of operational costs in the network is broad. Another point of attention is equity, as vulnerable groups can live further away and take longer trips.

Adjust PT fare-setting structure

Actions for improvement

✓ Implement a zonal system with a single ticket

After the operational cost assessment, consider implementing a zonal fare structure (around three zones, with the city core as zone 1) with a single ticket valid for 45-90 minutes. As the system develops and becomes more organised, more sophisticated fare structures may be introduced, such as time differentials and intermodal options.

✓ Issue “solidarity concessions”

Consider a more targeted approach with reduced fare categories. For instance, students and the elderly are generally more prone to have lower purchasing capability, but this might not be the case for all of them. A better way is to issue “solidarity concessions” based on household income and age (Case of Strasbourg, page 39).

✓ Offer special rates for mobility-related services

Beyond just PT, offering special rates for other mobility-related services to promote multimodal journeys is a promising direction. For example, this might include free tickets for Park & Ride (P+R) users or discounts on shared micromobility (Case of Grenoble, page 44).

Further reading: Public Transport Pricing – TCAD (ITF), Who Pays What for Urban Transport? (AFD)

POLICY DIRECTION 4

IMPROVE PUBLIC TRANSPORT NETWORK AND SERVICES TO INCREASE RIDERSHIP AND MEET FUTURE TRAVEL DEMAND

- **OPTIMISE PT NETWORK STRUCTURE**
- **ENLARGE AND RENEW PT FLEET**
- **ENHANCE LEVEL OF SERVICE**

Optimise PT network structure

Current situation

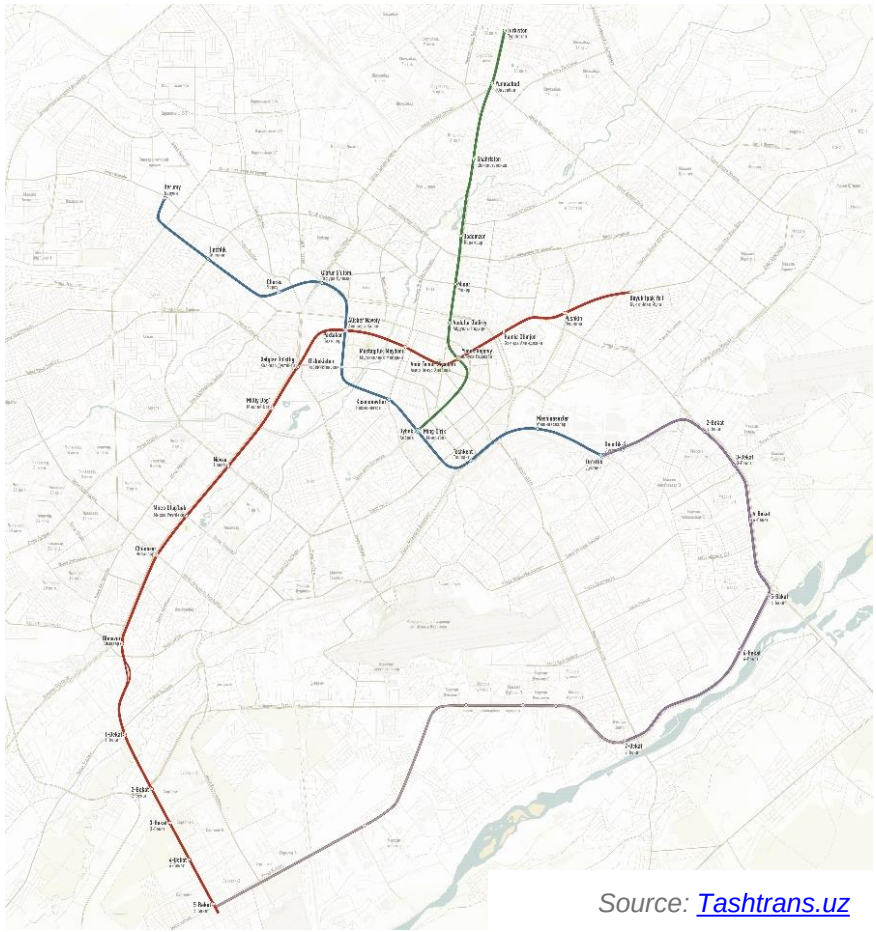
Decent network coverage that lacks optimisation – no hierarchy with overlapping and lengthy routes.

- Adequate total length of 216 PT routes (3884 km) (*144 km per 100K inhabitants vs 115 km in Milan*)
- Number of stops (2349 in total) per capita is on the lower side (*87 per 100K inhabitants vs 126 in Milan*)
- Average distance between bus stops is close to optimal (*300-600 m in the city centre*)

Existing plan

- Application of multi-level structure (trunk, ring, connecting, feeding) to 159 bus routes
- Renovation of 1160 bus stops without adding extra stops
- Extension of the existing metro lines with seven stations
- Construction of the 52 km ring metro line with 35 stations

Metro network of Tashkent



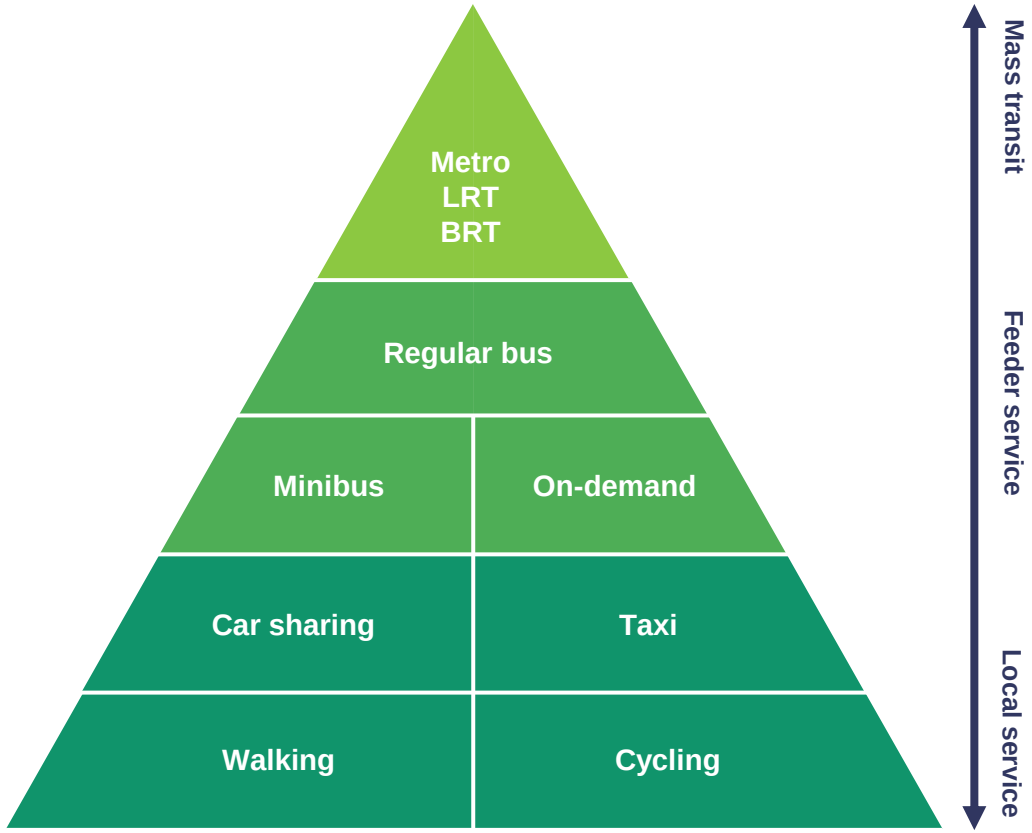
Source: Tashtrans.uz

Optimise PT network structure

Actions for improvement

- ✓ **Create a hierarchical, multimodal, interconnected PT network**
  - The PT network should build from mass transit as a backbone serving high-demand radial and circular connections with a wide range of transfer opportunities.
  - Regular buses are intended to be a feeder to mass transit and operate in local areas.
  - Minibus should serve less intensive but well-established and important routes to maintain the minimum level of access.
  - On-demand services can operate in remote and low-density areas.
- ✓ **Optimise PT service area coverage**

  Use network optimisation algorithms/tools to improve the allocation of PT lines and stops according to demand patterns. Add additional aspects to the equation, such as accessibility, to further improve the network optimisation.



Further reading: Enhanced Bus Networks - TCAD (ITF), Benchmarking Accessibility in Cities (ITF)

Optimise PT network structure

Actions for improvement

- ✓ **Improve connections between the city and its agglomeration**

  Introduce either direct lines that go beyond the city ring or transfer points at the city boundaries.

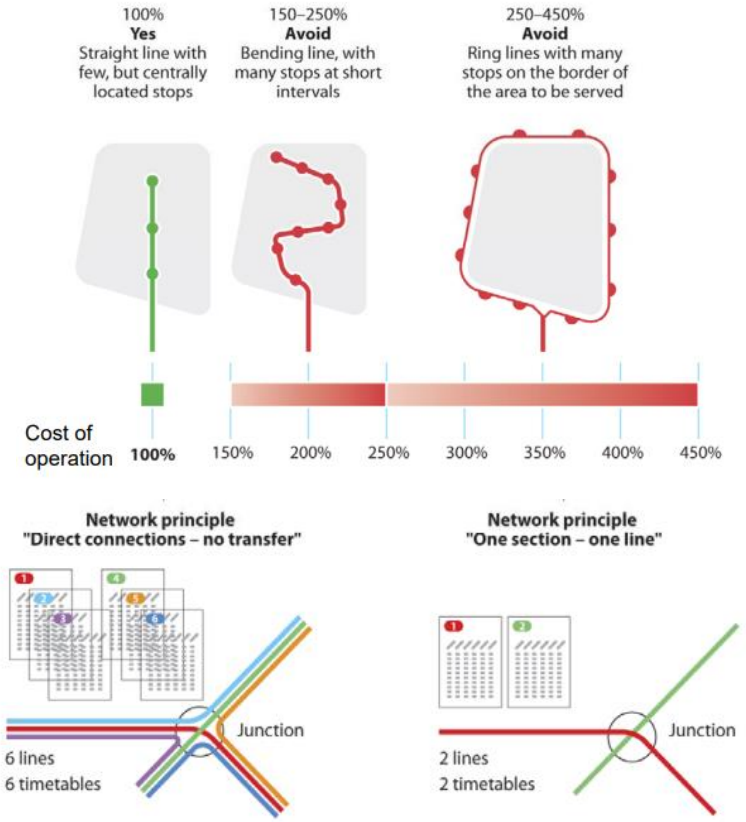
- ✓ **Consolidate parallel routes into simpler high-throughput routes**

  A straightforward route structure can contribute to a user-friendly, resilient and easy-to-operate network. Moreover, this will improve frequency, reliability and transfer quality.

- ✓ **Establish more interchange points between different modes**

  Introduce more points of contact/interchange between different modes. Prioritise transfer convenience so that everything from physical to digital infrastructure serves this purpose (Interchange Hub Functions, page 21).

Simple and consolidated routes



Source: Public Transport – Planning the Networks (HiTrans)

Optimise PT network structure

Actions for improvement

✓ Introduce a flexible and scalable BRT system

The BRT network can be developed gradually by increasing its scale and level of complexity (VREF, UITP and BRT+ COE guide):

1) Improve speeds on existing bus routes with prioritisation and minor infrastructure upgrades. The system can be operated with the current fleet (Argentina).
2) Introduce independent BRT services with dedicated infrastructure and a new fleet on routes that are easy to implement (Mexico).
3) Continue the service expansion with case-by-case planning to achieve a connected network under one brand (Colombia).

Planning should incorporate infrastructure flexibility to allow for possible conversion of the BRT system into Light Rail Transit (LRT). At later stages, passenger traffic volumes and potential revenue might increase to a level that justifies the investment and operating costs.

Indicator	BRT	LRT
Construction time	1-2 years	2-3 years
Right-of-way	Dedicated	Dedicated/ shared
Station spacing (km)	0.3-0.8	0.5-1.8
Vehicle capacity (passengers/vehicle)	160-270	170-280
Line capacity (passengers/ direction/hour/lane)	2.500-22.500	12.000-27.000
Maximum speed (km/h)	60-70	60-80
Average capital costs (USD million/km)	8.4	21.5
Average operating costs (USD / vehicle revenue km)	2.94	7.58

* Costs are calculated from US case studies, using the 2000 USD Consumer Price Index average

Source: BRT. An Efficient and Competitive Mode of Public Transport (IURD Berkeley)

Further reading: Bus Rapid Transit Network - TCAD (ITF)

Enlarge and renew PT fleet

Current situation

Insufficient bus fleet with low fuel efficiency and a significant share of ageing vehicles.

- Fleet size: 1184 buses (80% diesel-based) and 264 metro units
- Insufficient bus fleet for good service provision *(0.4 buses per 1000 inhabitants vs 0.85 in Milan)*
- Vehicles of older age categories experience frequent technical malfunctions:
  - Buses – 7.4 years on average *(12.8 years in EU)*, 30% > 10 years
  - Metro – 60% > 30 years

Existing plan

- Delivery of 1160 new buses by 2025 (total fleet size of 1359 buses)
- Delivery of 56 metro cars by 2022
- Increased metro train length for extra capacity (five units per train)

Source: Shutterstock (Marina Rich, Felix Lipov)

Enlarge and renew PT fleet

Actions for improvement

✓ Enlarge the bus fleet by renovating vehicles in use

At earlier stages, focus on renovating vehicles instead of complete fleet renewal to provide higher capacity and comfort on a large number of routes. Renovate vehicles no older than 8-10 years, and procure new vehicles (refurbishment and retrofitting with the shift from diesel vehicles to LNG or electric).

✓ Substitute vans with minibuses on regular routes

Improve and homogenise the level of service on low-demand routes and fully integrate them into the PT system. Passenger vans are currently operated by small private companies and usually serve routes with limited demand. Such services might not be perceived as part of the more extensive network due to the inconsistent level of comfort, safety and visual identity.

✓ Adapt vehicles to user demand, road space and traffic

Vehicle sizes should be adapted to passenger demand, road space and traffic conditions to ensure smooth and frequent operations, even on low-demand routes. Vehicle configurations also matter in striking a balance between comfort and efficiency, which involve the proportion of seated to standing passengers, the number of entrance/exit doors, floor height, climate control, etc.

Enlarge and renew PT fleet

Actions for improvement

- ✓ **Set focus on safety, comfort and universal access**

  Ensure that new vehicles provide safe and comfortable access to all groups of travellers, considering factors such as limited mobility, age, gender, etc.

- ✓ **Modernise depots and workshops**

  Beyond the fleet upgrade, the modernisation of depots and workshops, including the quality of spare parts, materials and service technology, can significantly improve vehicles' life cycle and operational reliability (Case of India).

- ✓ **Establish sustainable decommissioning processes**

  During the large-scale fleet renewal period, decommissioning processes should be established in a sustainable way. This includes refurbishment, export, scrapping, etc.

Source: Shutterstock (Try_my_best, Vladimir Mulder)

Enhance level of service

Current situation

Insufficient level of service, including poor reliability, convenience and user-friendliness.

- Relatively long scheduled headways (3-7 min for metro, 15 min for bus, 20 min for minibus)
- Bus waiting times reach 25-30 min during peak hours
- Transport user information is almost absent for all modes
- Unintegrated ticketing system
- Irregularity and overcrowded vehicles on important routes

Existing plan

- Double the average frequency
- Introduce priority lanes on 11 trunk bus routes
- Ensure reliability at 95%
- Improve average PT speed by 17% (e.g. by improved design, PT priority, smart traffic management)

Source: Shutterstock (Felix Lipov)

Enhance level of service

Actions for improvement

- ✓ **Adjust timetables to achieve the network effect**

  Establish “forget-the-timetable” headways (5-10 minutes) on key routes. For low-demand routes, introduce pulse timetables to accommodate better interchange. This implies a synchronisation of all departures and arrivals at certain important transport nodes and requires high reliability.

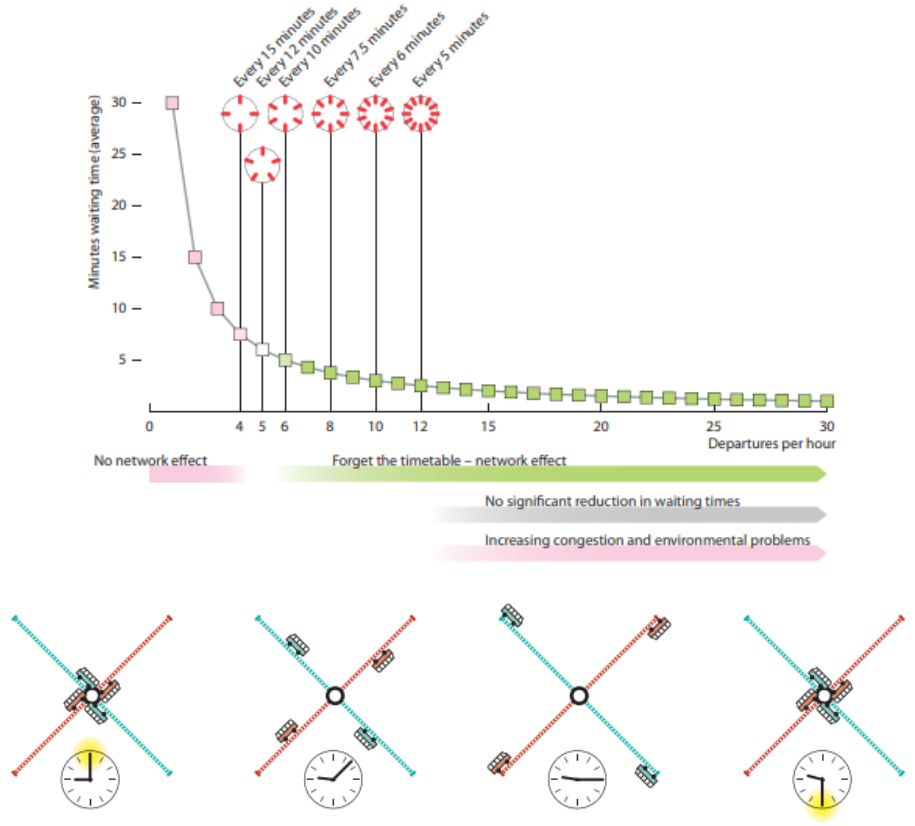
- ✓ **Keep headways consistent across the network**

  Headways should be consistent and straightforward across the entire network: for instance, trunk routes - 5 min, feeders – 10 min, local service – 15 min; this increases planning efficiency and user-friendliness.

- ✓ **Introduce flexible frequencies, express and skip-stop services**

  Flexible frequencies can be applied throughout the day and on certain parts of the route to cater for demand variations along each route. Express and skip-stop services can further support this strategy.

Headway adjustment for the network effect



Source: [Public Transport – Planning the Networks](#) *(HiTrans)*

Enhance level of service

Actions for improvement

✓ Improve transport information provision

The system of PT information includes real-time displays on board, at stops and stations; information stands with timetables, routes, network maps, transfer information, etc.; navigation and path-finding. PT information should be designed to accommodate frequent as well as occasional users and passengers with special needs.

✓ Develop a city-wide system of PT prioritisation

All trunk and feeder bus routes should be supported with priority measures to the largest extent possible. Such measures include dedicated lanes, transit signal priority and enforcement systems. When the urban space is scarce, jumper or intermittent lanes can work as an alternative. Ensure PT speeds are comparable to or higher than door-to-door travel by car.

✓ Launch integrated ticketing

Integrated ticketing facilitates PT transfers across different modes, operators or geographic zones. It includes a common payment mechanism, single tickets and coordinated fares. Integrated ticketing promotes multimodal trips and improves the ease and convenience of PT.

Further reading: Public Transport Information – TCAD (ITF), Integrated Ticketing – TCAD (ITF)

POLICY DIRECTION 5
TRANSFORM INFORMAL PUBLIC TRANSPORT SERVICES TO STRENGTHEN TRANSPORT SUPPLY AND IMPROVE EFFICIENCY

- **BETTER REGULATE TAXI SERVICE**
- **SHIFT FROM INFORMAL TO ON-DEMAND SERVICE**

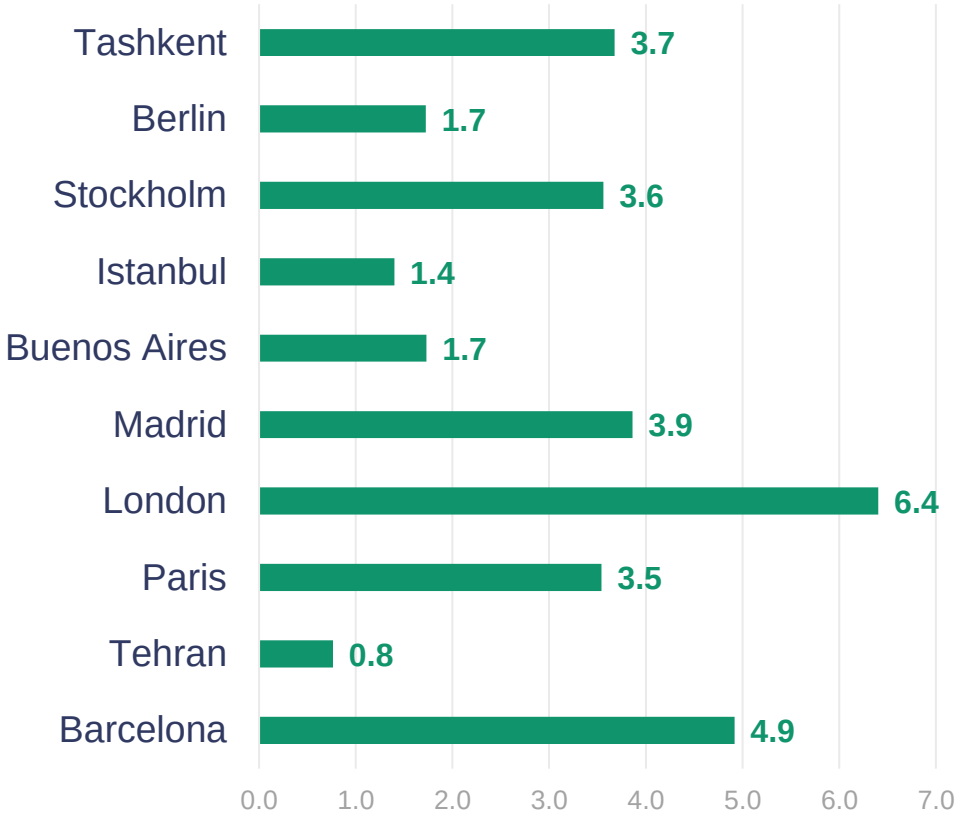
Better regulate taxi service

Current situation

Suboptimal legislation, working conditions, and weak enforcement lead to the rampage of illegal taxis.

- 3.7 vehicles (excl. unlicensed) per thousand inhabitants
- 70% of taxi services are unlicensed/illegal
- Illegal taxis cause serious issues:
  - Their low tariffs are excessively competitive with PT, affecting the PT demand
  - They compromise safety, comfort and reliability
  - They bring significant losses in municipal revenues due to untaxed taxi operations (approx. 1 million USD in 2010)

Number of taxis per 1000 inhabitants



Source: CityTransitData (UITP)

Better regulate taxi service

New presidential decrees 2021-2022 introduced an experiment to reform the taxi market.

- Individuals can directly operate as entrepreneurs
- Integrated digital system for administrative procedures (licensing, vehicle leasing, health and technical inspections)
- Drivers and their vehicles have to meet certain conditions
- Operations are allowed only via app-based aggregators as of September 2021
- Regulations for Commercial Transport App (CTA) companies
- Additional driving and parking rights for licensed vehicles (e.g. use of PT lanes, access and stopping at restricted areas, exemption from parking fees, etc.)

Source: Taxi legislation experiment (Газета.uz), Presidential decree №ПП-311 (LexUZ)

Source: Shutterstock (Kirill Skorobogatko)

Better regulate taxi service

Actions for improvement

✓ Scrutinise the effectiveness of the taxi reform during the trial period

The ultimate goal of the reform is to make taxis an integral element of the sustainable multimodal urban mobility system. The competition with PT should be eliminated or limited to the minimum, whereas complementarity should be strengthened. Legal taxi services should be established as a stable and financially viable alternative for companies and individual drivers.

✓ Explicitly revise the for-hire passenger transport legal framework

Specify regulations and quality parameters for drivers and CTA operators. Each step of the service procedure should be elaborated simply and consistently, from hiring a vehicle to submitting complaints. Responsibility areas for each party should be clearly distinguished (Case of the Philippines, page 32). Data reporting for monitoring and targeted regulation is another essential part of efficient policymaking.

✓ Introduce active enforcement against illegal taxi services

Effective enforcement can be carried out by the police, a special unit/body (Case of London), through citizen reporting and automated identification (Case of China).

Further reading: App-Based Ride and Taxi Services (ITF), Reporting Mobility Data (ITF)

Better regulate taxi service

Actions for improvement

- ✓ **Allow for soft market entry restrictions and elements of self-regulation**

  Control the total number of taxi vehicles operating in each city area to prevent oversupply or undersupply. Consider introducing certificate or franchise systems where the MTA regulates the number of operators but allows each operator to make proposals for the fleet size.

- ✓ **Introduce dynamic taxi fares for underserved areas/periods**

  This implies an additional dynamic charge for using public road space by CTA operators. Its size is defined by the impact of taxi operations on overall urban mobility. It helps to better distribute the taxi service in the city (Case of Sao Paulo, page 34).

- ✓ **Leverage vehicle age limit and emission standards to promote green technology**

  Various requirements can be applied to vehicles with different engine types. The greener the vehicle is, the longer it is allowed to operate without undergoing an inspection (Case of Edinburgh).

- ✓ **Protect vulnerable groups from digital exclusion**

  Social groups without access to digital platforms should not be excluded during ordering and payment. This can be accommodated by introducing an additional service standard for CTA operators or keeping conventional taxis on the market (Case of China).

Further reading: Ride Sharing / Ride Hailing – TCAD (ITF)

Shift from informal to on-demand service

Current situation

Damas is prohibited from operation in Tashkent due to its informal nature, while several areas in the city lack PT coverage.

- Damas is a 6-seat passenger car widely used in Uzbekistan
- Popularity comes from its low cost, economic performance and optimal capacity for flexible operations
- Damas is prohibited from entry and operation in Tashkent city due to safety and congestion concerns and its high competition with regular PT
- Several areas in the Tashkent Metropolitan Area do not have access to PT because of their remote location and low density

Source: Shutterstock (Karasev Viktor)

Shift from informal to on-demand service

Actions for improvement

✓ Transform Damas services into on-demand and connect them to the PT network

Service can be provided in two forms: first mile/last mile connections and direct access to essential destinations. It should target remote and underserved neighbourhoods, establishing a viable alternative to private cars in terms of travel time and cost. Ticketing should be integrated into the main PT system (Case of New South Wales, Australia).

✓ Follow the innovative implementation strategies

Be flexible with contract structure and terms in the early stages, combining piloting and expansion. On-demand service would require a new type of contract with a different system of payments (e.g. passenger-based subsidies instead of kilometre- or time-based) and KPIs (e.g. average waiting time instead of on-time operation).

The service should incorporate the latest digital solutions while maintaining traditional elements (e.g. booking through an app or by phone) to accommodate a broader range of potential users. Vehicle routes can be optimised in real-time to collect passengers in different locations efficiently.

Further reading: On-Demand Public Transport – TCAD (ITF), Next Generation Ridepooling (door2door)

POLICY DIRECTION 6
LEVERAGE THE ROLE OF MICROMOBILITY, SHARED MOBILITY AND DIGITALISATION FOR MULTIMODAL INTEGRATION

- **DEVELOP AND INTEGRATE MICROMOBILITY**
- **CREATE ENABLING CONDITIONS FOR SHARED MOBILITY**
- **ACCELERATE DIGITALISATION PACE**

Develop and integrate micromobility

Current situation

Micromobility is not yet a well-developed alternative. Under the right conditions, it could play a critical role in Tashkent's urban transport system.

- Tashkent has optimal scale, landscape, climate conditions and street profile for micromobility
- Cycling infrastructure is present on 12 streets (100 km in total)
- Modal share of micromobility is negligible

Existing plan

- Development of cycling (250 km) and pedestrian networks

Source: Shutterstock (Yashkin Ilya)

Develop and integrate micromobility

Actions for improvement

- ✓ **Integrate micromobility into the urban mobility plan**

  A dedicated plan should address design and construction guidelines, identified challenges, and actions to be taken each year (Case of Amsterdam, Case of Copenhagen). To support this financially, a fixed share of the city's budget should be assigned to this project (Case of Lisbon).

- ✓ **Begin with trials by temporarily reallocating road space for micromobility**

  Before new permanent infrastructure for micromobility is built, temporary measures can be implemented quickly. This includes speed reduction and reallocation of road space (Case of Paris). Such intervention could lead to a wide range of behavioural responses (Case of Oslo).

- ✓ **Incorporate a modal hierarchy into urban planning**

  Incorporate a modal hierarchy of street use into all urban planning projects. Street space and investments should be allocated gradually, starting from modes with the highest priority (Reallocate Road Space, page 79).

Source: Shutterstock (LukeOnTheRoad, Wandering views)

Further reading: Micromobility, Equity and Sustainability (ITF)

Develop and integrate micromobility

Actions for improvement

- ✓ **Develop a connected and convenient micromobility network**

  Besides focusing purely on further expansion of the cycling network, consider connectivity, convenience and attractiveness as essential factors.

- ✓ **Stimulate the use of electric mobility**

  Offer information, charging points or special incentives, and promote the use of electric bicycles and other lightweight vehicles.

- ✓ **Target behavioural changes with marketing and information campaigns**

  Communication strategies can address improved liveability and other benefits for citizens to avoid the impression of hostility towards the car (CIVITAS Guide).

Micromobility network

High degree of connectivity

Popular routes mapped through participatory design and traffic measurements and converted into a layered network of micromobility highways and connecting links.

Infrastructure improvements

Micromobility lanes along with road infrastructure (e.g. junctions, crossings) and traffic lights/signs for users' priority.

Quality and consistency

Focus on comfort, including pavement, parking and transfer facilities, service stations, and accommodation on PT vehicles.

Visual identity

Visual identity of the micromobility infrastructure and its seamless integration into the urban environment.

Create enabling conditions for shared mobility

Actions for improvement

Redesign **urban space** and improve **traffic management** for safer conditions and an attractive market

Develop **requirements for shared mobility users** (age, driving experience, identity verification, vehicle use, safe behaviour, etc.)

Set up administrative procedures for **issuing operating and parking permits** for selected providers

Develop **requirements for shared mobility operators** and admission mechanisms (licensing, insurance, vehicle fleet, revenue collection, etc.)

Introduce **incentives for shared mobility** that would be sustainable and complementary to PT (mode integration, subsidies/loans for electric vehicles)

Organise a **monitoring system** to track performance and steer the development of the fast-changing market

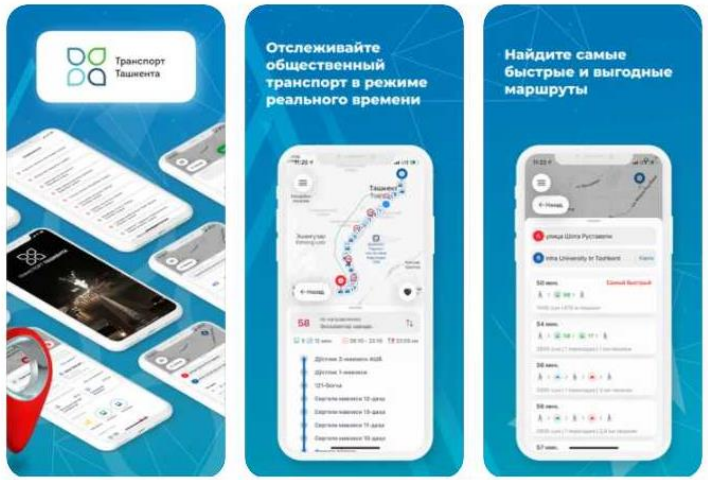
Further reading: Bike Sharing – TCAD (ITF), Car Sharing – TCAD (ITF), Car Sharing in Central Asia (UNECE)

Accelerate digitalisation pace

Current situation

Application of digital solutions and Intelligent Transport Systems (ITS) is at the early stage.

- The automatic payment system has been in operation since January 2020 and works only in the city core
- The payment system is used by 60% of passengers
- Dispatcher system ASDUM allows monitoring of bus operations in real-time (for the largest operator only)
- App “Tashkent Transport” provides real-time information and trip planning but has suboptimal design and limited functionality
- Passenger and vehicle data collection is limited
- No large-scale transport models are available for Tashkent (only micro models for individual streets and intersections)



Sources: ATTO, App Store

Accelerate digitalisation pace

Actions for improvement

- ✓ **Ensure the full rollout of the integrated ticketing system**

  The automated and integrated fare collection system should reach its full geographic coverage in the Tashkent Metropolitan Area and include all available and future modes. Diversify payment methods: ticket office, vending machine, internet, mobile phone. Consider integrating other services, such as car/bike sharing, parking, P+R, leisure activities, etc.

- ✓ **Create a network-wide travel planner based on the app "Tashkent Transport"**

  Consider ways to expand the app functionality, for instance, by adding new modes, access/egress options, a possibility to purchase a ticket, notifications during the trip, etc.

- ✓ **Equip all PT vehicles with an automatic vehicle location system**

  Devise the automatic vehicle location system (AVL) for more buses and metro, eventually covering 100% of vehicles. Leverage GPS data and the dispatcher system to manage operations in real-time.

Further reading: Integrating PT into MaaS (ITF), Innovative Ticketing Systems (CIVITAS)

Accelerate digitalisation pace

Actions for improvement

- ✓ **Introduce ITS for traffic management**

  ITS for traffic management applied to PT includes dynamic traffic light sequence with signal priority, intermittent bus lanes, automatic road enforcement, variable speed limits, etc.

- ✓ **Streamline wider data collection**

  Explore opportunities to establish data collection from diverse and reliable sources, e.g. household travel surveys, road traffic counts, passenger flow counts, video analysis, and parking occupancy (UNESCAP Guide, MobiliseYourCity Guide).

- ✓ **Develop a strategic transport model for the Tashkent Metropolitan Area**

  The model should be realised after the first phase of data collection. It can be built with one of the existing commercial packages.

- ✓ **Establish data-driven planning and policymaking**

  Incorporate data-driven decision-making at any stage of transport operations and development. For instance, ASDUM data and smart card records can be merged and utilised for tactical performance assessment and strategic demand-oriented planning.

Further reading: Enhanced Signalling – TCAD (ITF), Data-Driven Transport Policy (ITF)

POLICY DIRECTION 7
ADOPT ADDITIONAL POLICY MEASURES TO MAXIMIZE THE BENEFITS FOR PUBLIC TRANSPORT AND DECARBONISATION

- **INTRODUCE CITY-WIDE PARKING REFORM**
- **REINFORCE SUSTAINABLE MOBILITY CONTEXT**
- **STRENGTHEN DECARBONISATION AGENDA**

Introduce city-wide parking reform

Current situation

Unorganised parking in the city resulting in extra congestion and compromised road safety.

- Free of charge on-street parking
- Paid private parking at malls, markets, stations
- Average parking cost is 0.25 USD per hour, 0.9 USD per day
- Example – Abu Sakhiy Trade Centre (on the right)
  - Illegal parking on the streets, sidewalks and green areas
  - Congested entrances to the market, leading to queues of up to 30 minutes
  - Delayed PT operations

Existing plan

- Paid parking on 12 streets with further expansion

Sources: Shutterstock (Chamomile_Olya), Google Maps

Introduce city-wide parking reform

Actions for improvement

✓ Create a detailed inventory of the current situation

The inventory study should look at the existing on- and off-street parking spaces, demand patterns and sensitive areas in the city. Local communities can be consulted on experienced problems, attitudes toward the new regulation and its potential impacts. Engaging with relevant stakeholders and analysing the legal framework helps to determine appropriate implementation strategies.

✓ Introduce a city-wide parking reform

The reform should include supply and pricing regulations (see slide 59).

✓ Apply effective enforcement of parking regulations and compliance

This can be strengthened with administrative (creating a separate body), technological (licence plate recognition) and infrastructural (placing bollards) measures.

✓ Extend the parking reform to the urban planning system

In the longer term, the space for on-street parking should be reduced by utilising private property and delivering more underground facilities (e.g. through PPP contracts). A maximum parking space requirement should be introduced at residential locations based on the number of residents and transport alternatives.

Further reading: Integration of Parking and Access Management (CIVITAS), Parking Implementation Plan (City of Newcastle)

Introduce city-wide parking reform

Actions for improvement

Supply regulation

- Define geographic areas and restriction criteria for different vehicle classes or user categories. The degree of parking restriction should directly correlate with the availability of PT.
- Compensate vulnerable groups through targeted complementary measures (special parking permits or on-demand services).
- Give priority to residents and short-stay visitors to reduce the attractiveness for commuters.
- Accommodate delivery of urban goods with dynamic street space use.
- Manage neighbouring free parking areas in order to avoid traffic overflow (e.g. with P+R facilities).

Pricing regulation

- Design a tariff structure and other financial incentives.
- Apply dynamic pricing over space and time to achieve high occupancy rates and prevent cruising.
- Avoid offering discounts for long-term parking: daily rates should be set at least six times the hourly rates, and monthly rates at least 20 times daily rates.
- Provide users with sufficient information and various payment methods to achieve transparency and convenience (kiosk, app, SMS).

Further reading: Parking Pricing – TCAD (ITF), Parking Regulation – TCAD (ITF)

Reinforce sustainable mobility context

Actions for improvement

- ✓ **Carry out an extensive road safety audit**

  The audit includes an assessment of the entire road network with its key design and operating arrangements that affect the safety of various users. It should result in a list of potential issues and a programme comprising infrastructure upgrades and traffic management improvements.

- ✓ **Improve urban space and traffic management with “soft” measures**

  The renovation can start with relatively inexpensive “soft” initiatives: lane marking and signposting, rephasing traffic lights, traffic flow segregation, restrictions on turning movements, and speed reduction on residential roads.

- ✓ **Implement a series of fiscal measures targeting private car**

  To fully reflect on the negative externalities of private cars, fiscal policies can be introduced: taxes on vehicle purchase, registration, ownership and use, fuel tax, and road or congestion charging. These tools are not mutually exclusive and become most effective when applied in a package. By doing so, the authority can manage mode choice at the ownership stage and influence travel demand and its spatial and temporal distribution. However, fiscal policies should be carefully considered to prevent social exclusion.

Further reading: Road Charging and Tolls – TCAD (ITF), Congestion Pricing – TCAD (ITF), Speed Limitations – TCAD (ITF)

Reinforce sustainable mobility context

Actions for improvement

✓ Set up a process of participatory transport development

A large-scale urban mobility improvement programme with numerous changes will inevitably result in public controversy. Therefore, a well-designed and well-resourced public engagement process is essential at each stage of the development. This ensures maximum transparency of transport planning and enables more democratic and participatory decision-making.

✓ Promote a new mobility culture in Tashkent

Furthermore, promoting a new mobility culture in the city can also bring fruitful results. This can be achieved with:

- information strategies on positive environmental and health impacts of sustainable mobility;
- promotion and marketing campaigns for PT, walking and cycling, and shared mobility;
- public events (car-free days, temporary pedestrian zones, PT anniversary);
- learning platforms on clean vehicles, PT, intermodality, eco-driving, etc. (CIVITAS Guide).

✓ Introduce transport-focused educational programs

To support the implementation of the proposed plan, a new generation of domestic transport experts is needed. Thus, the existing education system should be updated with specialised transport-oriented programs that meet international standards.

Strengthen decarbonisation agenda

Current situation

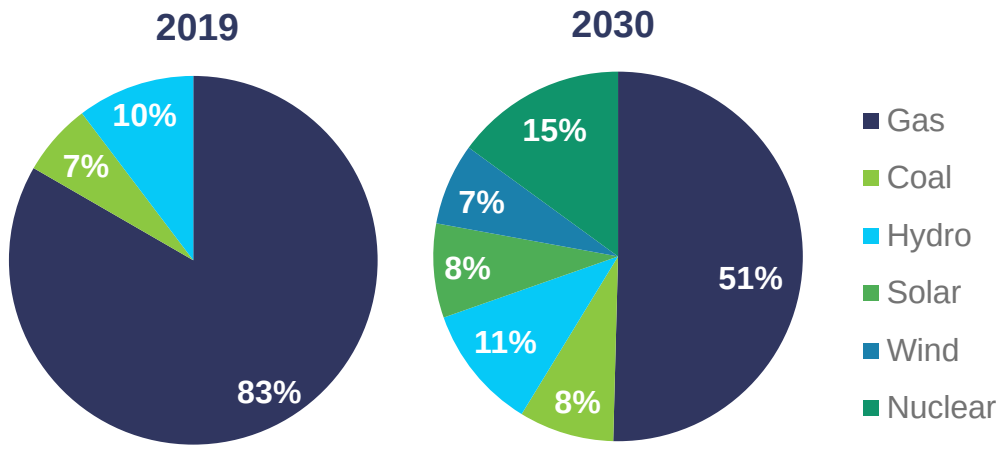
Decarbonisation is not explicitly addressed in the future strategic vision of urban mobility.

- Current share of electric vehicles (EVs) is negligible
- Tax-free import of EVs until 2026, including private vehicles and buses
- Special license plates for EVs allowing for certain privileges in the future
- Charging infrastructure is only available at private locations
- Absence of an environmental framework with targets, indicators and assessment tools

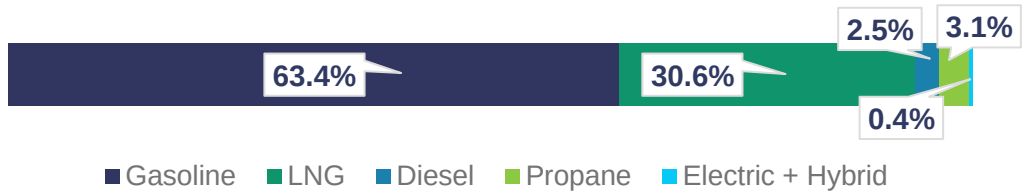
Existing plan

- Delivery of 230 electric buses by 2023
- Production of electric buses in Uzbekistan

Uzbekistan's energy profile



Vehicle technology composition in Tashkent



Sources: Ministry of Energy of the Republic of Uzbekistan, Ministry of Internal Affairs of the Republic of Uzbekistan

Strengthen decarbonisation agenda

Actions for improvement

- ✓ **Fully incorporate decarbonisation into policymaking**

  The goal is to incorporate as many elements as possible from the list on the right.

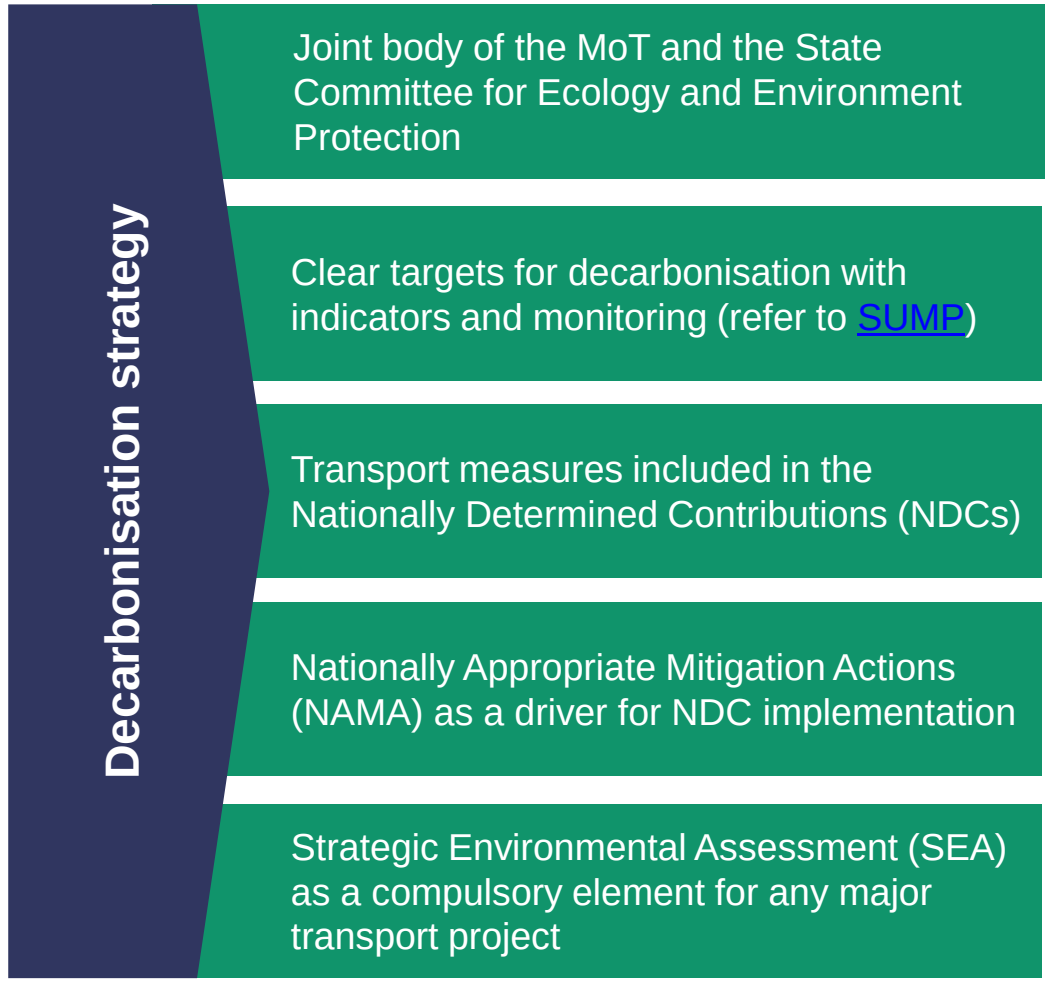
- ✓ **Attract additional funding through "climate financing"**

  Pursue sustainable transport development in order to receive additional funding from climate-related financial mechanisms. Some examples are major climate funds (The Global Environment Facility, The Clean Technology Fund), and The Clean Development Mechanism (Case of Hanoi, page 119).

- ✓ **Promote the uptake of EVs**

  Promote EV uptake through green procurement, purchase incentives, regulation of the second-hand market, and waivers for user costs (i.e. parking fees, road tolls)

Further reading: Green Public Procurement – TCAD (ITF)



Strengthen decarbonisation agenda

Actions for improvement

- ✓ **Develop a city-wide EV charging infrastructure**

  The main steps are presented on the right side of the slide (C40 Guide, ICCT Guide).

- ✓ **Implement a national eco-driving programme**

  This is one of the simplest and most cost-effective ways to reduce emissions by up to 10-20%. The main target groups are truck, bus and taxi drivers, but private car users can also attend seminars (Odyssee-Mure Brief).

- ✓ **Focus on decarbonising the whole Well-To-Wheel cycle**

  Apply a life-cycle assessment (LCA) in environmental analysis, considering the whole Well-To-Wheel process. The focus should be given to fuel production and vehicle use stages. As a result, the most suitable clean energy sources and technologies should be selected to fully decarbonise urban transport (EC JRC Report).

Further reading: Support Low Carbon Fuel Infrastructure – TCAD (ITF)

EV charging

- Start by building charging infrastructure for buses and municipal fleets. In parallel, begin to roll out charging for the public.
- Create a plan for numbers and types of chargers by assessing local factors including EV numbers, access to home charging, and future targets.
- Ensure standardisation and interoperability at early stages.
- Diversify locations and charging: rapid charging hubs, residential charging, curbside public stations, micromobility charging.
- Offer incentives and attract financing through PPPs or tenders (energy providers, retail companies, advertisement agencies, vehicle manufacturers).

SUMMARY
KEY POLICY ACTIONS AND RECOMMENDED TIMELINES FOR IMPLEMENTING PROPOSED MEASURES

Key policy actions

1. Establish a **Metropolitan Transport Authority** (MTA)
2. Adopt a **Sustainable Urban Mobility Plan** (SUMP)
3. Integrate **land-use and transport development**
4. Introduce **Quality Incentive Contracts** for procurement
5. Diversify the **range of funding streams**
6. Implement a **new fare structure** with a single ticket
7. Create a **hierarchical and intermodal PT network**
8. **Formalise the taxi market** and reduce its competitiveness
9. Develop **connected and convenient supporting mobility**
10. Adopt **data-driven transport planning and policymaking**

Timeline for implementing measures

Policy direction	Short term	Medium term	Long term
Governance and land-use	• Organise capacity building for all relevant stakeholders • Create a clear institutional structure, optimise administrative processes	• Continue capacity building for all relevant stakeholders • Establish a Metropolitan Transport Authority (MTA) • Draft a Sustainable Urban Mobility Plan (SUMP) for Tashkent	• Adopt and start implementing a Sustainable Urban Mobility Plan (SUMP) for Tashkent • Incorporate practices of Transit-Oriented Development (TOD)
Procurement	• Develop a set of KPIs for efficient and comprehensive monitoring • Launch contract packages with profitable and non-profitable routes	• Introduce a pre-tender verification procedure • Revise the number of operators and route packages	• Introduce Quality Incentive Contracts • Deliver procurement for the city core and the Metropolitan Area
Financing	• Continue with the implementation of the Pool system • Improve the enforcement system to control shadow economy • Review the current fare levels	• Diversify the range of funding streams • Ensure a full roll-out of the Pool system • Introduce a new fare structure with single ticket, zonal tariffs and solidarity concessions	• Give full control to the MTA in terms of tariff policy and finance distribution • Incorporate Land Value Capture (LVC) into financing • Implement more sophisticated fares (time differentials, intermodal options)
Public transport infrastructure and service	• Initiate an accessibility analysis with a follow-up network optimisation • Enlarge the bus fleet by renovating vehicles in use • Introduce flexible frequencies, express and skip-stop services • Improve transport information provision	• Create a hierarchical bus network • Continue the metro development • Launch the first stage of the Bus Rapid Transit (BRT) system • Develop efficient interchange facilities • Upgrade bus and metro fleet • Create bus priority lanes on trunk routes • Introduce consistent and straightforward timetables	• Continue the metro development • Continue the Bus Rapid Transit (BRT) development with a possible conversion into Light Rail Transit (LRT) • Develop major multimodal transport hubs • Upgrade bus and metro fleet • Develop a city-wide system of PT prioritization
Supporting mobility	• Finish the trial period of the taxi reform and assess its outcomes • Introduce active enforcement against illegal taxi services • Develop a comprehensive plan for micromobility with an independent budget • Shape the regulatory framework for shared mobility	• Further formalise the taxi market • Introduce dynamic taxi fares for underserved areas/time periods • Pilot several on-demand services in remote and low-density areas • Temporarily reallocate road space for micromobility • Open the market for shared mobility and steer its development	• Expand on-demand service and integrate it into the public transport system • Develop a connected and convenient micromobility network
Digitalisation	• Create a travel planner based on the app “Tashkent Transport” • Equip all public transport vehicles with an automatic vehicle location system (AVL)	• Finish the implementation of the integrated ticketing system • Streamline wider data collection • Merge ASDUM and smart card data for performance assessment and demand-based planning • Introduce Intelligent Transport Systems (ITS) for traffic management	• Connect other mobility-related services to the ticketing system • Establish data-driven policymaking • Develop a strategic urban transport model for the Tashkent Metropolitan Area
Supporting policies	• Carry out a detailed study of the current parking situation • Carry out an extensive road safety audit • Set up a process of public engagement for participatory transport development • Promote a new mobility culture	• Redesign urban space and improve traffic management with soft measures • Introduce a city-wide parking reform with supply and pricing regulations as well as effective enforcement • Implement the first package of fiscal measures targeting private car	• Introduce transport-focused educational programs that meet international standards • Extend the parking reform to the urban planning system • Expand the package of fiscal measures
Decarbonisation	• Include transport measures in the Nationally Determined Contributions (NDCs) • Introduce Strategic Environmental Assessment (SEA) for major transport projects • Take into account the entire Well-To-Wheel component in environmental analysis • Set clear targets for decarbonisation with indicators and monitoring	• Attract additional funding through “climate financing” • Implement and maintain a national eco-driving programme • Promote the uptake of EVs through green procurement, purchase incentives • Develop charging infrastructure for buses and municipal fleets	• Focus on decarbonising the Well-To-Tank component • Develop a city-wide electric vehicle charging infrastructure

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