



SYNOPSIS

POLICY REVIEW OF THE DEVELOPMENT OF THE PUBLIC TRANSPORT SECTOR IN KAZAKHSTAN

2017

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The review was prepared on the request of the UNDP-GEF Project «City Almaty sustainable transport» with the aim of promoting reforms in improving management and financing of the public transport sector in Kazakhstan. During the preparation of this review, a survey of public transport enterprises and decision-makers on the development of public transport policy was conducted. Preliminary discussion took place in July 2017 in Almaty.

Review was intended for civil servants, managers and experts in the field of urban transport, as well as for all interested in sustainable urban development.

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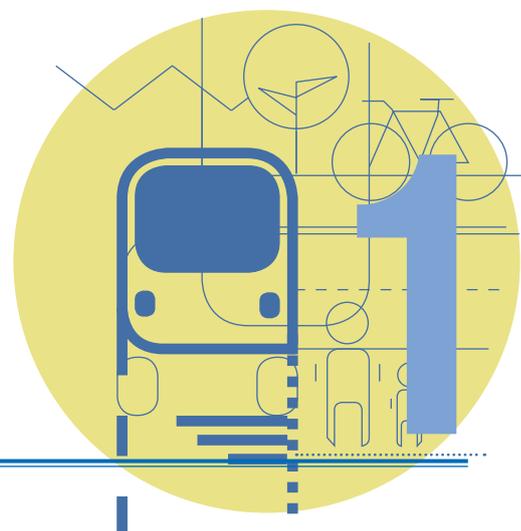
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LIST OF ABBREVIATIONS USED IN ALL DOCUMENTATION

ADB	Asian Development Bank
AFPRS	Automated Fare Payment and Recording System
ASTRA	Astana Public Transport Authority
AUA	Almaty Urban Air
AUTA	Almaty Urban Transport Authority
BOT	Build-Operate-Transfer
CAST	City of Almaty Sustainable Transport
CNG	Compressed Natural Gas
CO2	Carbon Dioxide
dBA	Decibel, A-weighted Sound Pressure Level
DBFM	Design-Build-Finance-Maintain
DBFOT	Design-Build-Finance-Operate-Transfer
DBOT	Design-Build-Operate-Transfer
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ELTIS	European Local Transport Information Service
EPOMM	European Program on Mobility Management
EFRE	European Fund for Regional Development
EU	European Union
BOT	Building- Operation- Transfer
DBFM	Design- Building -Financing-Maintenance
DBFOT	Design - Building - Financing - Operation - Transfer
DBOT	Design - Building - Operation - Transfer
GOST	Russian: ГОСТ; Abbreviation for Technical Standards defined by the Euro-Asian Council for Standardization, Metrology and Certification (EASC)
GRP	Gross Regional Product
GVBA	Public Transport Authority of Amsterdam
km	kilometre(s)
KPI	Key Performance Indicator
LEZ	Low-emission Zone
LLP	Limited Liability Partnership
LRT	Light Rapid Transit
MTA	Metropolitan Transport Authority
NO	Nitrogen Monoxide
NO2	Nitrogen Dioxide
OECD	Organization for Economic Co-operation and Development
PCC	Project Control Centre
P/T	Public Transport
P+R	Park and Ride
PM10	Particulate Matter
PPP	Public Private Partnership
PSC	Public Service Contract
PTA	Public Transport Authority
RENFE	Red Nacional de los Ferrocarriles Españoles
SOE	State-owned enterprise
SUMP	Sustainable Urban Mobility Plan
TMB	Transports Metropolitans de Barcelona
TOD	Transit-Oriented Development
UITP	Union Internationale des Transports Publics
UNDP	United Nations Development Program
USD	US-Dollars
VAT	Value Added Tax
VDV	Association of German Transport Companies (Verband Deutscher Verkehrsunternehmen)

INTRODUCTION, PURPOSE AND METHODOLOGICAL APPROACH



The aim of this synopsis is to summarize the findings conducted by means of a current and wide-spanning policy review of the public transport sector in Kazakhstan. It builds on the preceding work of the Sustainable Urban Transport Strategy 2013-2023 for Almaty as well as subsequent proposals for legislative adjustments to facilitate an understanding of possible ways forward and enable decision-making and the improvement of financing opportunities for enhanced urban transport infrastructure.

The synopsis draws together the detailed findings presented and referenced in the final (background) report. The focus is on the current situation in Kazakh cities and providing key recommendations for future efforts to further develop guiding and supporting policies to strengthen public transport service levels and quality. Where appropriate, lessons learned from international best practice have been included for illustrative purposes.

The following topics comprise the synopsis's content:

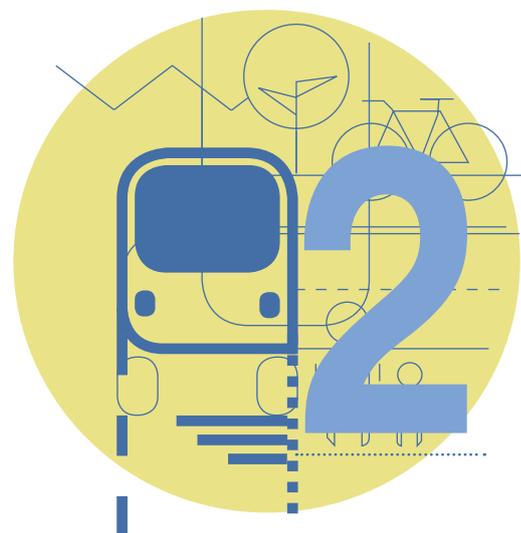
Table 1: Main topics and aims of the synopsis

Chapter	Key Topic(s)	Aim
2) Data availability and its consequences for Public transport analytical review and decision making	Data availability per key category (socio-economic, P/T related, legal, environmental) for urban public transportation	to highlight the existing sources and data issues in terms of availability, resolution and interpretation
3) Legal aspects of public transport organization and operation	Procurement and contracting in public transportation	to encourage economically sound operations and transparency of these to funding/ contracting bodies
	Review and assessment of the legal framework for public transportation in Kazakhstan and Kazakh cities	to highlight strengths and weaknesses of the current situation as well as propose modifications to encourage furthering the development of city-relevant, effective and qualitatively sound public transport service levels
4) Tendering and contracting in public transport	Current approach in Kazakhstan; PSC approach	to highlight procurement methods and advantages of specifically the PSC approach in urban public transport
5) Financing in public transport	Innovative approaches to P/T funding	to highlight the scope of options available to ensure basic service levels and adequate fares
	PPP as a funding option for P/T	to analyse the potential the PPP model can bring to close the funding gap in Kazakh urban transport
6) Key Performance Indicators in public transport	Indicator system development and considerations for selection, data consistency and relevance for PSCs	to back up monitoring and evaluation of public transport contracts and agreed service levels

The term “urban public transport” is used throughout this report to describe the system and its facilities consisting of the means and equipment (both mobile and stationary) necessary for moving passengers within a city. This includes all road and rail-based modes available to varying degrees per city (bus, trolleybus, Light Rail Transport – LRT / tramway, metro) but also walking and cycling. From a holistic transportation system’s view private cars are included in the approach due to shared road space. The broader definition, thus, also includes issues such as parking management schemes, cycle networks and parking facilities and pedestrian safety and guidance. The level of public transport development directly affects a city’s mobility options including infrastructure, sustainable network, Public Transport

(P/T) organization and management frameworks required, high quality and safety levels. The concept of urban mobility, thus, takes on the passenger-oriented perspective and inhabitants’ need for being on the move, travelling between A and B by various means of transportation (motorized, non-motorized, public, private). Urban public transportation is part of the solution to provide such adequate and sustainable urban mobility, forming a vital backbone to people’s mobility requirements and the quality of life in cities. Consequently all efforts to enhance urban P/T are always linked to issues of urban planning. This means that recommendations derived from the policy review at hand are not merely a matter of responsibility for transport planners but often a cross-sectorial topic for local governments.

DATA AVAILABILITY AND ITS CONSEQUENCES FOR PUBLIC TRANSPORT (PT) ANALYTICAL REVIEW AND DECISION-MAKING



The availability of relevant socio-economic and transport-related data is a key issue to successfully analysing and understanding past, current and future developments in cities and regions. Information on urbanization, population and income development as well as more detailed data regarding passenger flows, ticket revenues, motorization and others supports the planning process to reach relevant conclusions and recommendations for future sustainable urban transportation. Therefore the preliminary step to the policy review was devoted to the evaluation of existing data sources in terms of their potential contribution both to urban transport planning (overarching; external data) as well as operational monitoring (company-specific, internal data) (see Annex 1: Data Collection Overview and Annex 2: Data Review Overview).

Data gaps in terms of availability, resolution (spatial/temporal) and transparency therefore directly serve to highlight the need to include data matters into future policy recommendations in order to ensure a sound quantifiable and transparent base to monitoring and comparing public transport service levels and quality as well as the defining framework conditions such as potential passenger growth, purchasing power etc. The following data categories were reviewed:

2.1 SOCIO-ECONOMIC DATA

Key urban socio-economic facts must also be sought at the city-level, as the benchmark analysis covering 21 selected European and 10 Kazakh cities highlights. Usually annual averages were made available by means of publicly accessible sources (e.g. local council homepages). The timeliness of such data as city population sometimes suffered from a significant time-lag, meaning no up-to-date figures were available in some instances. Also, cities seem to handle city population forecast in various ways, from not reporting future projections to using different time-horizons – thereby rendering it challenging to perform calibrated benchmarks.

The following table summarizes the key socio-economic data valuable to a cross-sectorial approach to public transport planning; i.e. policy makers and transport planners should strive to widen their analytical scope at the urban level to discuss socio-economic projections and their potential consequences (positive and negative) for public transport service levels. More detailed information on socio-economic data in the benchmark cities outside Kazakhstan is available in the detailed back-ground report. (see Final Report, Chapter 2.2.1)

Table 3: Socio-economic data: scope and availability

Socio-economic and transport indicators	Current data availability for Kazakh Benchmark Cities	Key issues to consider
City population	City population readily available through Ministry of National Economy of the Republic of Kazakhstan Committee on Statistics.	Risk of underestimating the actual number of urban dwellers; unregistered internal and external migrants in cities ¹ Discrepancies directly affect governmental budgetary transfers and – in turn – the level of public services
Population density	Derived from city population and city size (square km)	See comment above Due to city growth in many Kazakh urban areas great care must be paid to updating official data sources reporting the area covered. Benchmark cities usually distinguish between core/inner-city areas and larger urban zone

Population growth rate	City growth forecasts not available from central source; generally foreseen growth only reported at national level	National demographic information cannot be equated with urban demographic forecasts; issues of "domestic" migration (cities function as pull-factors and attract many native migrants) must be monitored as well as birth rates For urban transport planners population growth rates are ideally computed at high spatial resolution, identifying those city areas with potential higher/lower demand for P/T services
GDP, GDP per capita (nominal)	National level statistics available through Ministry of National Economy of the Republic of Kazakhstan Committee on Statistics; data for urban level centrally unavailable, scant data only from heterogeneous sources ²	Cities are known to be strong GDP-contributors and to illustrate it; their contribution should be depicted in national statistics. GDP resolution by city would highlight how especially Almaty and Astana's contribution to national GDP has been on the rise in recent times ³ . Consequently transport planners should pay attention to the effects and developments of city-dwellers purchasing power when discussing fare-setting scenarios
Single ticket fare (Transport related)	Information available from city transport webpage (e.g. Almaty), unofficial travel information for Kazakhstan (posted by former tourists); data availability scant	Relevance for benchmarking policy-makers/transport planners in combination with information on urban level GDP (purchasing power) to foster regular recurring discussion on fare adjustments to ensure the highest possible yet simultaneously socially acceptable fare box revenue levels
Car ownership levels (Transport related)	The data is presented on the official statistical source ⁴ and includes monthly comparable reports. The data is presented for 14 regions and the cities of Almaty and Astana.	In terms of urban transport development the data should be collected on a city level (per transport mode). Spatial resolution: The comparable analysis should include number of owned cars in all cities and villages within relevant region of the country. Temporal resolution: Yearly data collection and analysis would suffice to use it in terms of PT planning/ modelling and future development.

2.1.1 Key recommendations for Socio-Economic data

Highlight the importance of key socio-economic data all governmental levels (national, re-gional, local) as it holds the key to analysing regional differences and should prompt the Kazakh national government to consider co-financing mechanisms (redistribution of tax revenue from prosperous to less affluent regions/centres) for public transportation in order to enable all cities and regions to introduce a sustainable urban transport system.

Cities/local authorities in a cross-departmental effort (i.e. this is not solely the responsibility of transport experts) should place emphasis on either:

- a) setting up sound local/regional databases for basic socio-economic indicators and time-lines (see Table 3) and making these publicly available by means of the internet and/or
- b) feeding their information into a national database such as Ministry of National Economy of the

Republic of Kazakhstan Committee on Statistics, allowing tailored analyses at the city level.

Expand currently available socio-economic data on Kazakh Ministry's website to include not just national but also regional/urban resolution for key information (for more detail on best practice examples such as Eurostat's urban audit, see detailed background report).

Clearly include a subsection for urban transport and related socio-economic data (a filter function can pick up on socio-economic data in various contexts and must allow data selection of e.g. population for the overarching public transport data category too) in the national database.

Ensure publicly available data is consistently exportable to Excel to enable bespoke analyses by transport planners/policy-makers.

Consider including mapping functions for key socio-economic data without the necessity for elaborate and costly mapping software (e.g. best practice example: Eurostat's Urban Audit)

Consider extending the spatial resolution of key data at the urban level to depict the difference between the city's core area and larger surrounding area, thereby allowing detailed analysis of the progression of urban growth.

1 OECD (2017) Urban Policy Reviews: Kazakhstan

2 Please refer to overview table in bibliography for listing of available GDP/capita information for select Kazakh cities

3 OECD (2017) Urban Policy Reviews: Kazakhstan

4 www.stat.gov.kz

2.2 KEY PUBLIC TRANSPORT DATA

In addition to socio-economic data, the chapter on Key Performance Indicators (see Chapter 6 Key Performance Indicators in PT; and Final Report, Chapter 7) identifies the most important transport and traffic-related data⁵ that are advisably collected but also further refined and adapted by municipalities and transport operators, e.g. in order to monitor service level quality and adapt service levels according to recorded demand (see Final Report, Chapter 2.2.2). The knowledge of the number of passengers travelling, tickets sold, passenger-km and bus/train-km

- allow for an understanding of passenger flows along different routes at different times of the day;
- enable more adequate planning of public transport services; and
- supply background information for adequate short-, medium- and long-term analysis of necessary financing of public transport services.

Given such data is primarily generated by the P/T operators themselves – if at all – it also remains the property of such organizations. Research as part of the best practice benchmark highlighted that public transport authorities and even some operators do, however, share certain public transport indicators with the interested public via their annual reports and/or a “facts and figures” section on their websites. This includes information on current:

- Network length (by road; track/rail)
- Number of serviced lines (by mode)
- Tariff information (price, zonal mapping etc.)
- Planned infrastructural enhancements (e.g. station/fleet modernization)

By law (decree no. 1370/2007), transport authorities in Europe, for example, are required to annually report (list not exhaustive):

- Number of individual P/T operators and duration of current concessions/contracts
- Total number of revenue-earning kilometres
- Total number of vehicles across all P/T fleets
- Description of applied tariff(s)
- Description of applied quality standards
- Total amount of compensation (not further specified by type of compensation) per service area (if applicable)

Research into the situation on availability and scope of dedicated P/T data in Kazakhstan and with a special focus on Kazakh cities suggests that data is predominantly available at the national level and can be accessed by means of the multi-lingual website for national statistics (www.stat.gov.kz). P/T relevant data resolution is by mode of transport (i.e. tramways, busses, trolleybuses), covers overall passenger flow (expressed in million passenger km and million people), number of operating fleet, route length and a

spatial resolution at the regional level. Detailed urban statistics for Kazakh cities for P/T are currently not available from this central source.

2.2.1 Key recommendations for Public Transport data

Consider/discuss whether key P/T data at the urban level should be included in the national statistics database, allowing interested parties (including transport planners and policy-makers) to search and filter by urban centre or whether this should be part of each respective Akimat’s remit to present such key information in a subsection of its homepage – final choice for the preferred way forward is principally determined by whether spatially dispersed and fragmented data (and this is exactly what P/T is) should be centralized and accessible by means of a one-stop-shop or whether the level of detail in reporting/publicly sharing should fall within the responsibility of the Akimats.

To develop a sound KPI basis, key public transport data relating to operations should be determined, along with the appropriate temporal and spatial resolution (annual averages at city-level) as well as data recording and calibration methods. The scope of relevant P/T data, including other modes as well (e.g. especially walking and cycling) should cover basic indicator categories as listed

- Network parameters: length in km by mode type, i.e. road/rail, number of serviced lines by mode
- Tariff and pricing parameters: ticket types and prices as well as revenue generated per mode and serviced line
- Fleet dimensioning parameters: number and type of vehicles
- Mobility uptake parameters: modal split, recoding of proportion of trips by car, bike, on foot or public transport (here representative surveying techniques need to be adhered to)

2.3 ENVIRONMENTAL DATA

Given public transport is both a contributor to environmental burdening as well as a mitigating factor (e.g. more “clean” public transport can lead to fewer cars), transport planners and policy-makers alike are advised to also include environmental data analyses in their background research to both the status quo and prospective urban scenarios – not least due to the fact that transport-related environmental pollution hampers the quality of life in cities (see Final Report, Chapter 2.2.3).

⁵ However it must be noted that no discussion on relevant P/T can take place in isolation of considering the framework conditions and monitoring needs linked to contracting P/T services, i.e. target values.

Available environmental data in Kazakhstan refers to levels of individual greenhouse gas (GHG) emissions (such as CO₂) and can be accessed via the Ministry's statistical website www.stat.gov.kz at a partially city level. The entry page dedicates a link to "Ecological indicators or environmental assessment". Here, Excel-exportable files on ambient air quality in select cities can be downloaded. These averages, however, are of a coarse temporal resolution (i.e. annual), offering little detailed insight into the intricate spatial and temporal fluctuations in any given city.

At city-level (and emissions are often both caused locally as well as affect the immediate area) the international benchmark highlighted that urban air quality monitoring stations and publicly available information (in real-time) regarding emissions levels are at hand. Daily data presented for the main pollutants along with the current weather conditions and an overall assessment of the air quality can be accessed via the web. For Kazakhstan the resolution at the urban level is not comprehensive (yet) and sources must be sought other than the official statistical website. It should also assist city planning and decision-making practices, as it stresses the pressing issue of both rising car use as well as environmentally damaging effects of old/outdated engines and fuel-types. Importantly, however, traffic-induced GHG emissions are not the only source contributing to urban pollution in Kazakh cities. Nearby industries are major contributors too and without adequate regulations here the overall environmental situation cannot be improved solely by efforts undertaken in the transport sector.

2.3.1 Key recommendations for environmental data

Continue to expand the centrally administered database on greenhouse gases to include further city data other than for Karaganda, Semey, Almaty and Atyrau to offer comprehensive (but temporally coarse) coverage at the urban level as a first point of reference and comparative source and to consistently record PM₁₀ PM_{2.5} levels (data availability currently very scant).

Initiate discussions regarding the adjustment (forecast/long-term) for all GHG currently recorded, as the recording timeframe 200-2015 suggests that the daily average limit value has remained unchanged throughout the entire recording period. Clearly commitments to environmental protection should also lead to striving for stricter acceptable targets with regards to annual averages too. Here currently no discernable pattern (see Figure 1) in value setting can be detected, i.e. no steady reduction in desirable levels for any of the GHG is recorded in the official source.

Environment – just as issues relating to housing and transport – is currently addressed by means of a sectorial planning approach in Kazakhstan, however, these topics are effectively interdisciplinary and require a broad and interlinked knowledge-base of experts⁶. Therefore it is advisable to include key findings from air quality monitoring (as environmental management is trans-sectorial) into transport planning.

Especially if "clean air" implementation measures (such as congestion charging, environmental zones to deter car use; green mobility initiatives such as electric P/T vehicles, higher Euro standards (4 or 5), enhancement of walking/cycling infrastructure to encourage more sustainable transport modes) are sought – a quantifiable before-and-after analysis based on environmental indicators such as greenhouse gases is paramount to highlight the benefits achieved. Therefore consider a roll-out of the AUA-approach in Almaty to other Kazakh cities, as this is a vital first step at educating the public and raising (quantifiable) awareness of the pressing environmental issues that car use bring

Linked to this, consider refining existing air quality monitoring stations and expanding such a network to currently uncovered urban areas and making the information publicly available.

2.4 LEGAL DATA

Available legal data in Kazakhstan shows a number of laws and regulations in public transport sector which guide and outline all procedures for P/T organization and service provision (see Final Report, Chapter 2.2.4). All the official Kazakhstan legislation documents and relevant articles were obtained from the official web resource www.online.zakon.kz and supplemented with documentation provided by UNDP. Overall data availability for legal issues in Kazakh public transport is comprehensive. <http://adilet.zan.kz/eng> offers a publicly accessible legal information system of regulatory and legal acts for Kazakhstan, covering more than 100.000 documents in Kazakh. It is under the responsibility of the Ministry of Justice of the Republic of Kazakhstan (centre for legal information) and also includes a section on relevant UN documents. This system allows keyword searches.

Furthermore, the legal framework for the public transport sector includes:

- existing health and safety standards in public transport sector, emerging as both very strict and comprehensive for public transport services;
- funds allocation procedures and subsidy approval process, stipulated by State Government level regulations.

Subsidy allocation rules cover the P/T operators, who serve non-profitable routes, considered as the socially important routes. The rules are approved by

⁶ OECD (2017) Urban Policy Reviews: Kazakhstan

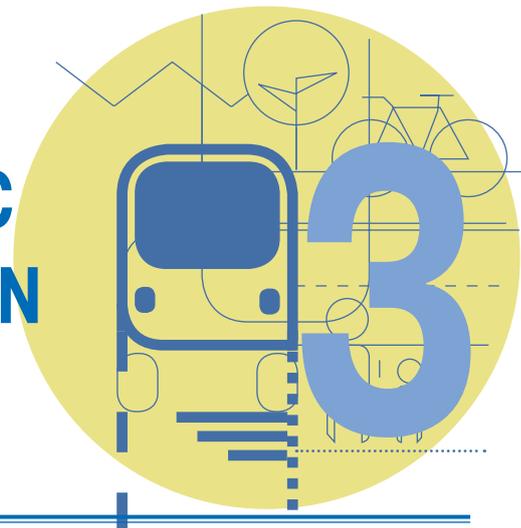
the order No. 883 of Acting Minister of investment and development, dated August 25, 2015.

2.4.1 Key Recommendations for Legal data

Continuously refine existing legal database with regards to the keyword search options, so that interested parties can conduct a search of all relevant laws for urban public transportation by entering common keywords relating to the topic. Extend translation of documents to English in order to allow an even wider range of interested parties to access the information.

Consider including links to relevant external documents important to prospective legal changes such as legislative proposals and draft regulations as well as governmental reports.

LEGAL ASPECTS OF PUBLIC TRANSPORT ORGANIZATION AND OPERATION



3.1 LEGAL DATA PROVISION

The analysed list of key Laws and regulations for Kazakhstan's public transport sector includes the following (see Final Report, Chapter 6.1):

- The Law # 156-XIII dated September 21, 1994 "On transport in the Republic of Kazakhstan" (amended on 13 June 2017);
- The Law #476-II dated July 4, 2003 "On motor vehicles" (amended on 5 May 2017).

Additionally regulations covering government decrees and ministerial orders issued for describing more specific information and detailed guidelines for P/T organization and controlling measures were included:

- The Order of Acting Minister of Investment and Development of the Republic of Kazakhstan #349 dated March 26, 2015 "The rules of transportation of passengers and luggage with motor vehicles."
- The Order of the Minister of Transport and Communication of the Republic of Kazakhstan #614 dated October 13, 2011 "On approval the tariff calculation methodology for public transportation services with regular routes".
- The Order of Acting Minister of Investment and Development of the Republic of Kazakhstan #883 dated August 25, 2015 "On approval the rules of subsidy allocation for remuneration of operator's losses with unprofitable routes, which are considered as socially-important".
- The Order of Acting Minister of Investment and Development of the Republic of Kazakhstan #348 dated March 26, 2015 "On approval the template of an agreement for Public Transport Services".

The analysed list of relevant key documents existing for health and safety standards in public transport sector, which considered as important, includes the following:

- Sanitary Rules "Sanitary-Epidemiological requirements for maintenance facilities for vehicles and passengers". Approved by the order

No156 of the Minister of National Economy, dated February 27, 2015.

- Sanitary Rules "Sanitary-Epidemiological requirements for vehicles, which shall be utilized for passengers and luggage transportation". Approved by the Order No240 of the Minister of National Economy, dated March 20, 2015.
- The rules of technical operations of vehicles. Approved by the Order No 547 of the Minister of investment and development of the Republic of Kazakhstan dated April 30, 2015
- The Standard ST RK No. 2273-2012 " Passenger transportation services with regular and not regular routes. General Technical Conditions".
- GOST 30594-97/GOST P51004-96 "Transport services. Passenger transportation. Quality indexes nomenclature."
- GOST 27815-88/ Rules of UNECE #36 "Buses. General Safety requirements"
- ST RK GOST P51709-2004 "Motor vehicles. Technical conditions' requirements related to traffic safety. Methods of inspection".
- GOST 17.2.2.03-87 "Environment protection. Atmosphere. Rates and methods of measuring carbon monoxide and hydrocarbons content in exhaust gases of petrol-engine vehicles. Safety requirements".
- GOST 17.2.2.01-84 "Environment protection. Atmosphere. Diesel for vehicles. Smoking at the exhaust. Norms and methods of measure."

The analysed key documents for funds allocation procedures and subsidy approval process include:

- Methodology of tariff calculation for public transport services with regular routes. Approved by the order No. 614 of Minister of Transport and Communication of the Republic of Kazakhstan, dated October 13,2011.

3.2 LEGAL FRAMEWORK

Kazakhstan has number of laws and regulations in the public transport sector, which guide and out-line the required procedures⁷ (see Final Report, Chapter 6.2.1). The National Government applies a centralized approach for governing and law-making procedures, providing not only the general strategic approach to transport-related issues but also by e.g. specifying certain technical and safety standards. Thereby it also demonstrates a political intent for not authorizing the cities' administration to establish their own rules and procedures considering specific requirements and conditions for each city in Kazakhstan. State-level norms were developed in a top-down approach to be applicable for the entire country.

Taking into consideration the list of analysed legislative documents (see 3.1), it emerges that the Kazakh regulatory system in the area of public transport is both

comprehensive and very strict. The current situation with overregulation though national legislation hampers the development of public transport area.

The organizational procedures of public transport are governed by the National legislation level and require significant efforts from the respective Akimat in terms of local implementation, however, without granting devolved powers to locally shape/adapt such implementation.

3.3 CENTRAL ISSUES FOR LEGAL FRAMEWORK

Nevertheless, still the following central issues emerge and relate both to the overarching structural approach to governing P/T organization as well as the operational aspects of P/T contracting (see Final Report, Chapters 6.2.2, 6.3 and 6.4):

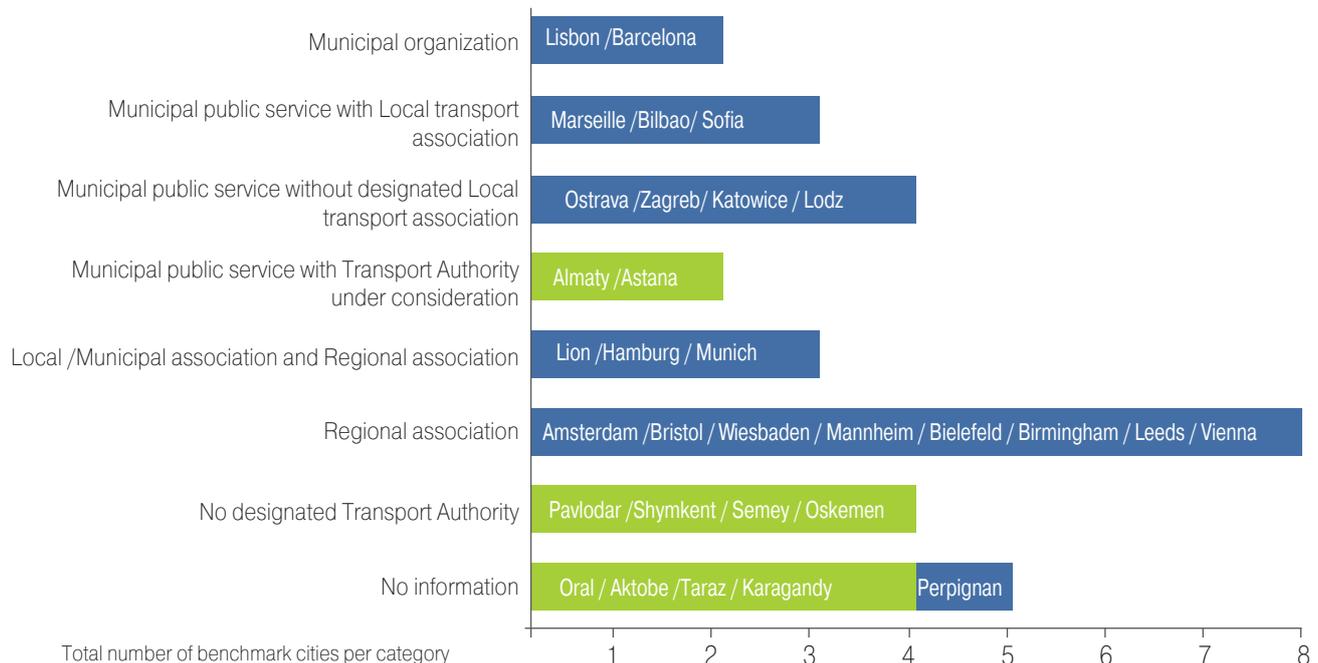
Table 4: Current regulatory issues and their manifestation in urban P/T

Issue	Manifestation
Top down P/T policy approach; partial exceptions for Almaty and Astana only	<p>P/T Policy in Kazakhstan is Top Down, therefore “blanketing” all cities in terms of regulations. However, local self-government is gradually being addressed as a central issue by implementing the Commission for the “Development of Democratic Reforms”. One of the results was the new constitution as of March 2017 that transfers more powers from the president to the parliament.</p> <ul style="list-style-type: none"> Local Government has no power or authority to apply special requirements concerning local aspects. For example, the methodology on tariff calculation is unified for all regions in Kazakhstan, except for Almaty and Astana. Consequently the cities have no devolved powers to design and adapt more intricate tariff systems (e.g. time-, distance-based) for their city/ regions in order to develop and raise customer revenue in a socially acceptable manner. Currently there is no delineated public transport authority on national and local levels which should be responsible for P/T organization and revenue distribution. In Kazakh cities the public transport is commonly organized (transport planning and organization, tendering and procurement, subsidies) by the department of housing and communal services' transport division, with the exception of Almaty and Astana where dedicated PTA's have been initiated. Results from the international benchmark show that a host of various P/T authority structures exist, mainly linked to the level and scope of devolved powers. Introducing PTA should be reviewed on a city-by-city basis to aid the implementation of a unified ticketing system and efficient network organization. Transport Association growth appears seemingly slow. Currently there are several associations which support transport however very few are dedicated to P/T. Consequently cities lack a tailored and structured framework to coordinate public transport planning and operations according to city-specific needs. Additionally, Kazakhstan's Strategy 2050 and its National Transport Policy primarily focus on national transportation with special emphasis on freight traffic and involvement in Eurasian corridors. The urban transport targets and future development strategy are not clearly specified within this framework. Consequently public transportation is paradoxically both primarily regulated by national law yet simultaneously underrepresented in overarching national strategic outlooks.
Budget approval and financial support level setting at different governmental levels	<p>Maslykhat is entitled to approve the budget and subsidy amount. Simultaneously the procedures of calculating subsidy levels are governed by national level regulations. Consequently disparities between the central set level and needs for financial support may diverge, risking either inefficient “over-funding” of P/T or the opposite – a lack of funding and hence marked loss-making for the transport operator(s).</p>

⁷ Please refer to respective Annex in the detailed main report

Gaps in procurement standards and concessionary agreements	<ul style="list-style-type: none"> Lack of the procurement standards (the standards do not entail specifications for transportation companies to fulfil their obligations in a contractually binding manner and to be held accountable if quality of services are not adhered to), and cumbersome procurement process. The Law on concessions is not comprehensive, gaps deter private sector investment in PPPs. No clear regulation to control PPP exists as well as the mechanism of transferring the state owned property to the private property in the P/T sector. Currently prospective and successful PPP in the P/T sector is rather unlikely in Kazakhstan due to unclear legal backdrop and expected low revenue. The attention needs to be paid to develop legal (design the normative acts and regulations) and institutional sectors (PPP financial and economic institutions, responsible state bodies for controlling and support PPP sector, providing analysis/ consultation to possible P/T projects). Lack of an available payment scheme; impossibility of using international arbitration; unwillingness to ensure creditors' step-in rights in case of default of the concessionaire; and treatment of the foreign exchange risks. The bus licenses are granted; however, the quality standards as re-quired by law on e.g. general safety requirements are not checked by the government. Therefore a monitoring and reporting system should be clearly set out and operators held accountable for meeting the defined standards.
Lack of regulation for privatization	The privatization processes for urban bus services lacks subsequent sufficient regulation. Consequently this runs risk of leading to low service (e.g. non-compliance with operational schedule, bad quality of the conditioner system in the salon, lack of route information, lack of mobility level offered to customers, under- or inadequately qualified personnel, non-compliance with a route destination) and safety quality (non-compliance with technical maintenance scheme and standards, operation using old/ non-modernized vehicles with a high amortization level).

Figure 2: Benchmark analysis showing comparably high number of Kazakh cities with no or unknown status for dedicated P/T Authority



3.4 KEY RECOMMENDATIONS FOR LEGAL FRAMEWORK

The current legal framework for public transport in Kazakhstan has a number of significant shortcomings (see Final Report, Chapter 6.5), and, therefore, a new national legislation for P/T, i.e. a Law on Urban Public Transport, is required. In contrary to the present situation the National government should

only set out a supportive legal framework for urban public transport. The new law rather should delegate the actual implementation of organisation and management of public transport on regional and local level to the respective regional and local governments. So, the National government should refrain from any detailed regulations and directives that hamper the development of public transport. The legislation should give freedom to local authorities to set

- (1) the tariffs and
- (2) the product range (type of tickets and travel passes offered).

The new legislation / Law on Urban Public Transport should recognise Public Service Contracts (PSC) as the main contractual document between the local Governments and the transport operators. Such contracts should set out the quantity and quality of the services to be delivered under the contract as well as any paid compensation by the local government to the transport operators for the agreed services. In any case, the new legislation should consider making Public Service Contracts obligatory under the law, which means that public transport cannot be delivered without a Public Service Contract in place. The new legislation should also recognise, in addition to all safety and quality aspects, and allow for that “price” can be a criterion for award of a PSC. This would foster the introduction of Public Service Contracts in Kazakhstan’s P/T. Therefore, the national Government should define a framework for tendering of public transport services including the nature and the minimum contents of such contracts, as it is, for

example, common in Europe, but without specifying the details.

National legislation for P/T in Kazakhstan as a top-down approach hems regional/local development of systems apt to meet the needs of the people living and working in urban areas. Recognizing this overregulated situation, efforts such as the CAST project address the bottom-up approach by identifying urban transport needs specific to a city’s spatial and economic situation (not simply now but prospective as well). The main background report details all recommendations clustered by action to be taken at the national, the regional and/or the local level Here, a summary of key recommendations is offered, clustered by main area to be addressed:

The following sections summarize the key recommendations relating to each of the overarching areas identified in the process of the policy review. Detailed elaborations on the condensed recommendations can be found in the detailed background report.

Figure 3: Overarching areas to be addressed with appropriate legal framework conditions

1) New Law on Urban public transport in Kazakhstan by handing over to the regional and local Akimats the responsibility for the organization and implementation of public transport services based on public service contracts (PSC)						
2) Organization of PT at the level of Akimats: To formalize and strengthen long-term strategic planning and locally relevant implementation	3.) Competitive tendering: To enable more efficiency for higher quality standards in PT services offers	4.) Financing and funding: Define adequate subsidies and means of cross subsidizing as effectively loss -making business as urban PT whilst ensuring socially acceptable fare s	5.) Tariff differentiation: To ensure that revenue maximally tailored to urban socio economic situation	6.) Safety and security: To ensure vehicle and service standards are met and adhered to throughout operations	7.) Environmental protection: To mitigate negative effect of PT and personal cars use on quality of life	8.) Paid parking: To ensure additional source of Akimat revenue as well as different for inner city car trips

3.4.1 Overarching efforts

(see Final Report, Chapter 6.5.1)

- Proceed with detailed analysis of the status of applicable regulations in P/T; assist with developing reasonable justification based on the best international practice (if necessary); participate in State working Group under responsible Ministry and assist with development of suitable amendments to laws and regulations.
- Develop concept proposals on the development of legislation for the Ministry of Investments and Development to create a dedicated organization which will deal with public transport organization procedures (this recommendation is inextricably linked with the following cluster).
- The Government should establish Urban Public Transport legislation delegating all responsibilities

for organizing and operating public transport to regional and local Akimats and minimize any (detailed) associated regulations. The current model where the Government is involved at detail level on PT organization has a strong negative factor for developing public transport in Kazakhstan. It is required to simplify and delegate the responsibilities thereby issue a complete new Public Transport Law.

- Consider the introduction of Public Service Contracts (PSC) for public transport and develop a more suitable template for this matter taking into account the different needs in the cities and regions (modular/functional approach), or cancel basic template approved by the Government, allowing Akimats to develop their templates considering terms and conditions suitable for their local need.

3.4.2 P/T Organization at national level as well as regional and city level (Akimat)

In order to implement the recommendation on establishing dedicated public transport authority on a national level as well as regional and city level (Akimats), at least the following laws and Decrees should be considered as the subject of amendment (see Final Report, Chapter 6.5.2):

- The Law # 156-XIII dated September 21, 1994 “On transport in the Republic of Kazakhstan” (amended on 13 June 2017);
- The Law #476-II dated July 4, 2003 “On motor vehicles” (amended on 5 May 2017);
- The Law # 148-II dated January 23, 2001 «On local public administration and self-government».

The authority and responsible bodies of regional / city Akimat’s regarding public transport planning need to be clearly defined (structurally in terms of required positions and qualified staff), their resources and financing legally need to be put in place. Akimat currently needs to establish the decision-making authority in long-term public transport planning.

It would be required to issue other types of new decrees and allocate a budget for the authority’s operation. This is under the assumption that such authority shall be created in the form of State-owned enterprise with the right of economic management by the Akimat.

The two most important cities of the Republic of Kazakhstan, Astana and Almaty, are governed by special regulations adopted by the Government. For instance, it is agreed to amend the regulations of Municipal Public Institution “Public transport and motorways Department” of Akimat of Almaty city, approved by the Decree #2/266 of Akimat of Almaty city dated June 10, 2016 authorizing Akimat’s department to create a new State-owned enterprise in order to gain authority over fiscal matters regarding public transport. This specified document is applicable to Almaty only.

The Government of Kazakhstan should identify a different approach including the development and management for the template of Public Service Contracts (public transport services agreement). This would significantly help local authorities to understand the methodology and proceed with the correct calculation.

The first step has been done for Almaty: The recommendations on differentiated tariff have been reflected in the Law #59-VI dated May 5, 2017 “On amendments to transport related regulations of the Republic of Kazakhstan”. This practice should be extended to the other regions and cities of Kazakhstan.

3.4.3 Competitive Tendering

(see Final Report, Chapter 6.5.3)

In future an Akimat should strive to organize P/T services and award contracts utilizing competitive tendering procedure with the concentration on price and quality. This intention should be backed by the Government before any further steps are taken (see Chapter 4).

3.4.4 Financing and funding

(see Final Report, Chapter 6.5.4)

Refine and reform existing subsidy agreements. Subsidy arrangements currently set out in Kazakh national legislation can be replaced by a model of compensation payments for services provided under contractual agreements (subject to tender) at the local/Akimat level. This approach follows the one adopted by EU in its regulation 1370/2007 on public passenger transport services by rail and by road by which compensation to public transport operators is covered by the mandatory rules for the content of the public service contracts (PSC).⁸

The payment can be based on a price per vehicle km but also involve further criteria, especially with regards to service quality. Ascertaining vehicle km correctly needs to be carefully addressed when drawing up the detailed contractual agreements. Basically a unified approach needs to be communicated to P/T operators. Suitable options to ascertain contractual payment are daily meter readings for actual km (this however includes dead mileage as well so a formula to subtract these needs to be devised) and/or (a calibration) with the contracted timetable and corresponding routes (= scheduled km) and other parameters like punctuality.

Create a close link between the provision of subsidies and the implementation of certain requirements to the transport company. Subsidies are never unconditional but tied to the level and type of services offered.

Decide on a principal approach (or a mixture of these) in either subject-financing (i.e. subsidizing fares for certain socio-economic groups) or supply-side subsidies (i.e. fund transfers to operators for certain services, regardless of passenger types).

Define and refine acceptable farebox revenue ratios. Take into consideration average utilization rates.

⁸ Regulation (EC) No 1370/2007, Clause 27: “The compensation granted by competent authorities to cover the costs incurred in discharging public service obligations should be calculated in a way that prevents overcompensation. Where a competent authority plans to award a public service contract without putting it out to competitive tender, it should also respect detailed rules ensuring that the amount of compensation is appropriate and reflecting a desire for efficiency and quality of service.”

Again, this discussion cannot happen in isolation from discussions about tariff setting. Existing KPI on farebox revenue would also greatly aid such discussions.

3.4.5 Tariff differentiation and regular review/actualization

(see Final Report, Chapter 6.5.5)

It is recommended to draw up a draft regulation on tariff differentiation and identify the differentiated tariff determination procedure. The National legislation should delegate any matters regarding payment options, tariffs and tickets to the local governments.

3.4.6 Safety and security

(see Final Report, Chapter 6.5.6)

Monitor Safety and Security Standards implementation. Make sure Public Transport Operators follows those standards accordingly. i.e. stipulated working conditions for employees in the area of P/T are met. The effort can be supplemented with the set of agreed and developed KPIs. However, clear target states and associated measurable target values must be developed and unambiguously communicated first. Especially with regards to perceived safety and security from a passenger's perspective, detailed knowledge regarding quality management and monitoring methods must be obtained.

At regional and city level (Akimat) ensure a decree is issued to implement the national Law on Safety and Security. This is of paramount importance for any prospective procurement efforts of public transport services.

At regional and city level (Akimat) also ensure relevant decrees are issued in order that existing national laws addressing vehicle standards are implemented and adherence is followed up and monitored (see first point on KPI).

3.4.7 Environmental

(see Final Report, Chapter 6.5.7)

Revise and improve technical standards for emissions from motor vehicles on a national level.

Introduce requirements for the implementation of cycling routes at the regional and city level (Akimat).

Improve regional level legal acts implementing injunction of high-emission private cars in downtown. Define areas of city centres for prohibition (e.g. see detailed background report for international benchmark on low emission zones and congestion charging schemes).

Develop and implement national level controlling mechanism for Euro-4 (or higher) standards.

Technical Standards of public transport vehicles: develop a decree to adopt the resolution and implement it technically on local level.

Define standards for sustainable forms of transportation: Clearly define the criteria of an environmental zone and their control mechanisms. Pass a decree to adopt the regional law, should the introduction of environmental zones be considered both desirable and viable.

Provide a regional/ local environmental plan as guideline for sustainability and improvement of air quality. This requires cross-sectorial cooperation with other urban planning departments (housing, energy...).

3.4.8 Paid Parking

(see Final Report, Chapter 6.5.8)

Develop legislative proposals on paid parking and public transport. Set up a decree for the definition of parking rules and parking fees in city centres at a general level, the details to be left to the local government and minimize any (detailed) connected regulations. Currently the benchmarking exercise revealed little to no information via publicly effective press releases that concerted efforts are being undertaken in this area. A parking strategy, outlining park and ride as an option would be apt.

Develop city-specific parking strategies at the level of Akimat. These should evaluate possible parking payment schemes and adopt the most suitable scenarios to the respective cities. The strategy should include a clear roll-out procedure including mass media efforts to inform the public and assure local residents and businesses located in downtown acknowledge and accept it.

3.4.9 Further relevant modifications

(see Final Report, Chapters 5.2.5, 5.2.6, 5.2.7)

Depending on its applicability, it is also advised to possibly define on regional and city level (Akimat) administrative regulations for public school transportation services. The regional law defines the allocation of responsibilities for organizing school transportation and also refers to respective national and regional regulations regarding financing of school transportation.

TENDERING AND CONTRACTING IN PUBLIC TRANSPORT



Generally public transportation systems are understood to be a public good and follow the key objective of serving the public will (see Final Report, Chapter 4). Public transport services can be offered by both private as well as public transport companies. One of the key criteria for public services is the affordability for a majority of citizens. It has therefore been experienced that public transport services usually cannot reach profitability and growth whilst remaining affordable under high quality measures. Therefore, public transport services are usually co-financed and subsidized by the government. It should be appreciated that they are potentially loss-making and not profitable. In cities and countries with a reliable and integrated public transportation system, it is therefore acknowledged that public transportation requires extensive funding from public sources, which can be diverse (as is elaborated in Chapter 5).

The procurement of urban public transport services including definition of both formal and qualitative selection criteria in the form of service contracts and service concessions, which specify the relationship between the commissioning public authority and the public transport operator.

It is recommended to consider the bid price as one of the main criteria for contract awarding in public service transport contracts. However, this requires that there is a sufficient number of potential bidders in the specific regional and local market.

The use of contracts and concessions is a viable solution for both the state and transport companies to arrange high-quality public transport services while simultaneously allowing transport companies to exist and thrive as well (be it private or state-owned). By means of service contracts and concessions various financial risks are allocated among the contracting parties.

Key aspects of this approach to public transportation as a form of public service contracts are:

- 1) Definition of the tasks and responsibilities/rights and obligations of both partners (timetable, tariffs, quality);

- 2) Definition of the public transport service with a fixed budget to be delivered;
- 3) Definition of penalties and rewards concerning quality of services;
- 4) Definition of the compensation payment to the operator;
- 5) Definition of the use and ownership of assets (rolling and infrastructure);
- 6) Monitoring;
- 7) Increase of transparency.

The decision-maker in Kazakhstan should therefore take forward a structured contractual set-up to enable the implementation of such a process. With regard to tender evaluation criteria, Kazakh local governments are advised to take responsibility of this by being the organizing body screening potential bids for price and quality levels.

4.1 CURRENT PUBLIC TRANSPORT PROCUREMENT PRACTICES IN KAZAKHSTAN

Procurement procedures of public transport services are governed by national level regulations and require significant efforts from the Akimat (local implementing authority) to proceed (see Final Report, Chapter 4.1). In accordance with the Law №476-II, scheduled public transport services for passengers and luggage are provided by private operators, which have to be in each case the successful bidder of a tender procedure. The successful bidders enter into an agreement on public transport services with the municipal authority and, thereafter, receive the authorization.

The tender procedure is specified in the Rules of Public Vehicle Transportation Services for Passengers and Luggage, approved by the Order № 349 of the Acting Minister for Investment and Development of the Republic of Kazakhstan, dated March 26, 2015 (hereinafter the Rules of Transportation Services).

Award criteria are specified in the Appendix 6 to the Rules of Transportation Services and include the following:

- Operating period of vehicles owned by the bidder;
- Number of vehicles owned by the bidder;
- Experience of the bidder with public transport services (period measured in calendar years);
- Infrastructure owned by the bidder;
- Fleet replacement plan and procedures;
- Additional improvements for passenger transportation services.

The procedures of arranging and conducting the tender are stipulated by Articles 165-183 of the Rules of Transportation Services. The articles outline details of the process, providing outstanding information on timelines and actions which are to be taken by organizers and tender participants. The information must be publicly available.

Akimat plays a key role in the tender process and acts as the tender initiator and organizer. Bid evaluation and contract award procedures are also conducted by Akimat.

The overall timeline for tender procedure and conclusion of the contract takes up to 105 calendar days. The actual time required for any particular case depends on how smooth the tender process goes:

- If all requirements are met and Akimat received two or more suitable applications, a tender will take up to 55 days.
- If Akimat receives one application only, a tender will be considered unsuccessful and a second Request for Proposal will be issued on the matter. If a second tender round is called for, the entire process may take up to 105 days.

A clear weak point of the tendering process is the fact that the price offers of the bidders plays no or only a minor role as a selection criterion. Often «soft» criteria play a decisive role. The award therefore is not always transparent. Furthermore, monitoring and enforcement of contracts is weak or non-existent. For the last 10 years there is no case known that a contract was terminated because the transport operator failed to adhere to the requirements in the contract or the services they promised to deliver under their own tender bid.

When the winner is identified, Akimat has to conclude the contract for public transport services (Public Service Contract – PSC) within 10 calendar days from the date of issuing the formal protocol on the successfully conducted tender.

In accordance with Article 13 of the Law №476-II, an authorized State body is in charge for development and approval of the template of the public transport services contract. The authorized State body is the Ministry for Investment and Development of the Republic of Kazakhstan. By Order № 348 dated

March 26, 2015 the Acting Minister for Investment and Development of the Republic of Kazakhstan approved the contract template. Its content is governed by the Law of the Republic of Kazakhstan dated July 4, 2003 № 476-II «On the motor vehicles». According to the Article 23 of the Law, a contract on regular public transportation services for passengers and luggage shall include:

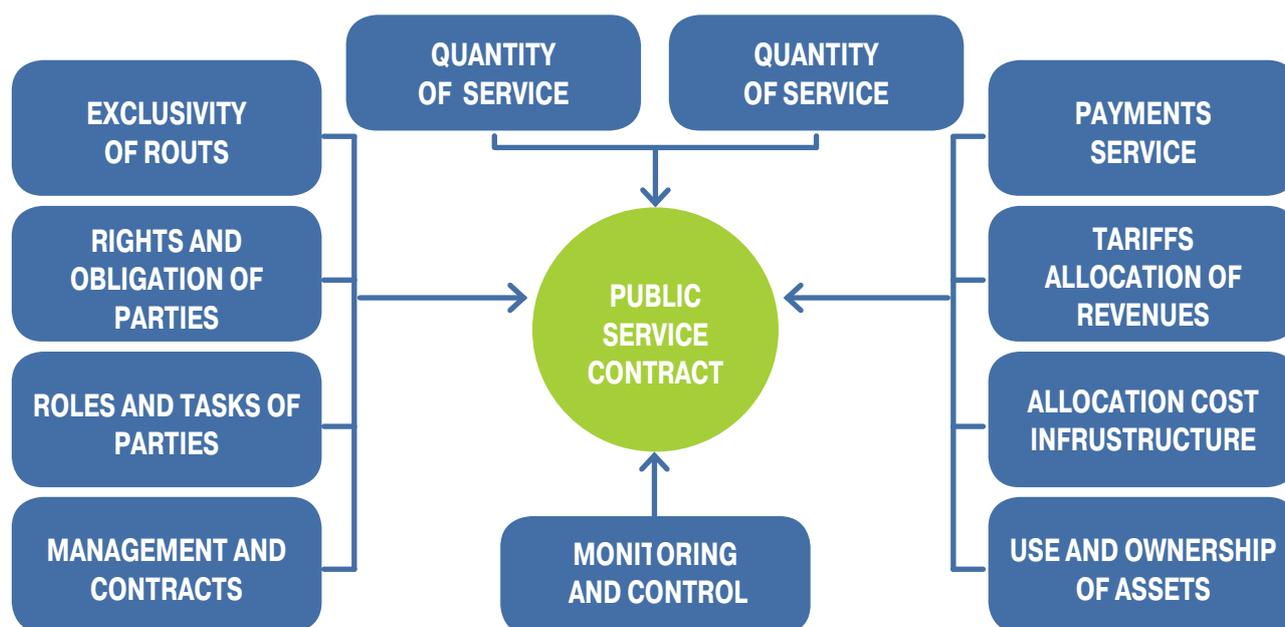
- tariff;
- the procedure of tickets' sales and sales places locations. Tickets control of passengers;
- the amount and timeline of subsidies allocated for the routes where the fare revenue does not cover all expenditures and transportation;
- timetables, type (class) and the number of buses, trolley buses, minibuses, operated on the route;
- requirements for bus fleet renewal/maintenance, including minibuses, trolley-buses as-signed to the route;
- sanctions in the case of a breach of contractual obligations or improper performance of obligations under the contract;
- the duration period of the contract (shall be 3+ years); and
- possible prolongation of the contract.

Public transport organization procedures in Kazakhstan are both comprehensive and time consuming. The current practice of tender processes and bid evaluation are wide-ranging and provide sufficient level of details, which allow Akimat to come up with fair and transparent tender results. Simultaneously, however, the Government of Kazakhstan has developed a very simple contract template for public transportation services, herewith tying the hands of the local Implementing Authority (Akimat). The analysis reveals that the level of detail provided by the national government is at times too high and doesn't allow for amendments and adaptations on local level, where it is needed. Also, the contract template needs to be revised considering actual needs and issues Akimat faces working with public transport operators. Thus, the regional and local level governments need to be given the authority to make changes taking into consideration local conditions.

4.2 PUBLIC TRANSPORT CONTRACTS AND PSC IN KAZAKHSTAN AND BEST PRACTICE EXAMPLES

A key aspect related to both public transport tendering and financing are public transport contracts / Public Service Contracts (see Final Report, Chapter 4.2). «Public service contract» means one or more legally binding acts confirming the agreement between a

Figure 4: PSC components



competent authority and a public service operator to entrust to that public service operator the management and operation of services subject to public service obligations; depending on the existing national legislation⁹.

The following figure gives the components for a PSC in P/T:

The template of the contract in Kazakhstan was analysed and the following weaknesses were identified:

- 1) Terms and conditions of the template are considered too simple;
- 2) The outlined roles and responsibilities of the parties are considered to be too general;
- 3) Terms of fleet modernisation and/or renewal are not detailed enough and do not provide different calculation mechanism based on a production date of vehicles.
- 4) The fact that templates for contracts were provided on national level and local Akimat are not allowed to make changes, leads to inflexibility and lack of adaptability to local conditions.
- 5) A conflict of authority and responsibility between Akimat and Maslykhat regarding the analysis of route profitability and subsidies: Subsidies for routes, which are the subject of the contract, are specified in the contract by date of signature. In case a route is newly developed, Akimat is not able to evaluate whether the route will be commercially unprofitable/profitable for an operator. The decision of profitability, which is the subject of subsidy, is the responsibility of the Maslykhat. In case a tariff is the subject of adjustment, Akimat shall proceed with contract's amendment and

specify new tariff therein accordingly. The fact that templates were provided on national level and local Akimat are not given the authority to make changes, lead to inflexibility and lack of adaptability to local conditions.

In public transportation, contracts generally fulfil the following functions:

- Definition of the costs of transport services.
- Criteria definition for public transportation services (timetable, tariffs, quality, ...).
- Responsibility definition of all stakeholders and contract partners involved
- Enabler for good governance.
- Provision of a medium and long-term time schedule and vision of current and future public transport services.
- Establishment of reliability for public transport services.
- Enabler for adaptation to changing circumstances (service level revision).

From best practice research a stringent and comprehensive approach can be identified. In European developed countries for example the procurement of urban public transport services including definition of both formal and qualitative selection criteria in the form of Public Service Contracts (PSC), which specifies the relationship between the commissioning public authority and the public transport operator. PSC are the essential backbone of an effective and efficient market organization, whether

⁹ Reference to the text of the "Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70"

contracts are awarded by competitive tendering or not, following the EU Regulation 1370/2007. The European rule demand the existence of a PSC whenever an authority decides to grant the operator an exclusive right and/or compensation in return for the discharge of public service obligations by setting minimum harmonised rules for tenders whose monetary value exceeds a certain threshold and which are presumed to be of cross-border interest. The Law ensures that the award of contracts of higher value for the provision of public goods and services must be fair, equitable, transparent and non-discriminatory. For tenders of lower value however, national rules apply, which nevertheless have to respect general principles of EU law.¹⁰ This includes detailed con-siderations prior to establishing a public transport contractual system:

- 1.) Select transport operators: In Europe for example, the European Commission requires an open market competition and thus EU-wide procurement procedures over a certain overall sum apply.
- 2.) Decide on type of contract: The type of contract chosen depends on the risks assumed with the services. In EU countries generally, net and gross cost contracts are differentiated in public transportation and dominate the contract landscape in Western Europe¹¹. For gross cost contracts the cost risk is with the operator, while the revenue risk is with the authority (PTA). If the revenues, as well as the difference between costs and revenues will become the responsibility of the local Government, then automatically the Government will become interested in tariff setting and revenues. Low fares means that the Government automatically has to pay more compensation and higher fares will reduce the amount of subsidy/compensation.

10 Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC)

11 Oliveira da Silva Cruz (n.d.), p. 38 ff: Net cost contracts: The risk lies with the transport operator. The public transport authority (PTA) provides government subsidies to cover the gap between expenditures and fare income. The entire fare intake thus remains with the transport operator; at the same time this cost and revenue risk lies with the transport op-erator. The transport company also has a high interest in providing high quality services and attracting more passengers. It is in the PTA's interest when more passengers and thus higher income from fares are generated; because this reduces the additional costs covered by the PTA. Gross cost contracts: The risk is shared by both the transport operator as well as the public transport authority. Through a public procurement process, the public transport authority chooses a transport operator who receives a fixed price for its services. Usually, transport operators are keen on providing services with lowest possible prices. Fares are collected by the transport operator on behalf of the PTA, who also carries the risk for the income generated by fares. Therefore, the PTA has an interest in making the tariffs and the transport demand by passengers as attractive as possible. In order to keep higher quality standards contracts usually contain incentives/penalty systems. "Incentive Agreements": when both net and gross contracts appear to be too inflexible, so-called incentive agreements can be drafted based on either a gross or net contract. Both types of contract can be combined by sanctioning and rewarding certain parts of the transport services.

For net cost contracts both, the cost risks and the revenue risks, are with the operator only. In both cases the required Service Payment will be subject to a transparent tender. Incentive/penalty regulations can be applied for both. Under net cost contracts, the transport operator usually has an intrinsic motivation and interest for good quality services in order to ensure high passenger rates and thus high incomes through fares and tickets. In gross cost contracts, this intrinsic motivation is not promoted, but can be applied trough incentives and/or penalties. But, under the present legislation, in Kazakhstan it is currently not possible to apply gross and net contracts. Therefore, the PSC has to become the recommended legal format for public transport organisation and operation in Kazakhstan.

- 3.) Clearly define contract duration: Europe contracts can cover 10 to 25 years, depending on the transport mode(s) and network coverage.
- 4.) Ensure transparency and adherence to contractual obligations: It is necessary to clearly define the criteria for transport services. For means of transparency, the transport operator should at least submit annual reports on the implementation of its services including number of delays, number of cancellation of services, reasons for delays/cancellations, maintenance situation of the vehicle fleet, analysis of passenger demand, implementation of quality management measures, etc. It is also suggested to decide whether to use an incentive or penalty-based contractual system to ensure adherence to contractual agreements.

PSC analysis reveals that public compliance (including passenger complaints) is an important re-quirement component that calls for reporting obligations from the P/T contractors. This is the most crucial feature of PSC for Kazakh public transport services, as it holds operators responsible, there-with significantly impacting on service quality. The authorized body may also request the establishment of user surveys and other forms of user feedback (e.g. mystery shopping). If not foreseen in the contract transport authorities may carry those surveys out themselves in order to monitor performance criteria. Such an approach would be truly novel to the current situation in Kazakhstan and would require considerable adjustment from operators who – to date – operate adhering primarily to technical standards.

Such a monitoring system should include the following:

1. Identification of the objectives and target criteria to be monitored (the quality criteria should be aligned with private operator conditions. For example without adequate com-pensation the operator cannot replace the old fleet or provide modernization, today a significant issue in most Kazakh cities).
2. Identification of acceptable the service quality target values

3. Identification of relevant indicators to measure the target criteria.
4. Identification of sound measurement methods for each quality indicator.
5. Definition of data collection and analysis method/ approach.
6. Access regulation for results and application of correction measures, where required.

Based on the best international experience implementing PSC in the public transport sector in Kazakhstan could have the following benefits/ impact:

- Stable long-term framework conditions necessary to efficiently and effectively run public transport services.
- Minimization of the higher-level political involvement in daily P/T operations and management.
- Risk sharing between parties in fleet operation and provision of stable passenger services.
- Clearly defined public transport organization with approved monitoring and reporting system (measuring the overall quality of the whole P/T system as the base to optimize P/T operational levels).
- Clearly defined (and allocated) tasks between the authorizing body and private operators.
- Transparent revenue collection and distribution (in case of integrated transport system with multiple operators).
- Fixed city budget for P/T sector development.
- Defined compensation payment to the operators therewith increasing the financial stability to plan fleet modernization/ or replacement (see chapter 5.1 of the current synopsis).
- Stable maintenance of the P/T infrastructure (stops/ tracks/ and electrified lines).
- Free Government access to the private operators' financial and operational indicators as required to be reported to the contracting authority according to PSC terms and conditions.
- High quality level of public transport service provision for the passengers (fixed operational schedule/ GPS navigation using smart stops, high travel speed, comfortable vehicle, accessibility for disabled people, etc.).
- On time technical maintenance and fleet repair using original spare parts thereby increasing safety in passenger transportation.

Currently Kazakhstan already partially analysed the possibility to introduce the PSC in public transport sector in various cities of the country. Such projects were mainly financed by EBRD and include: Pavlodar transport strategy project (currently ongoing); Pavlodar tram project: CDP; Almaty Bus Sector Reform – City of Almaty Urban Transport Regulatory Improvement;

Kyzylorda CNG Bus Project – Regulatory Framework Improvement Support and other.

As a practical example for organising a tender in P/T and concluding a PSC the city of Kyzylorda can be taken as typical. In 2013 the city Akimat structured the existing bus lines, set a common tariff structure for all operators, organised the foundation of a municipally guided bus operating company (“Avtobusny Park Kyzylorda” – APK) and tendered all separately existing lines in one lot. APK was the only potent partner to participate in the tender. The other existing private bus operators were not able to deliver viable offers. Thus, APK was awarded the contract for all lines and concluded the PSC, which was enforced by the city Akimat, with duration of 10 years. In order to ensure traffic on all lines, the APK was forced to complete subcontract agreements with existing private bus operators. Under the new PSC conditions the quality and safety of public transport on APK's own lines, operated by CNG busses, is higher than previously observed. But the subcontracted private operators in practice can do what they like, offering less services and safety than actually required by PSC without any implications.

Currently there are two main problems for PSC implementation:

- 1) Too complicated legislation which requires a lot of changes due to difficulties in compliance with PSC payment methodology. The introduction of the PSC process is inefficient due to a lengthy process of adapting relevant legislation and approving new approaches in public transport management.
- 2) Reluctance of private operators towards using an integrated transport network applying one ticket for all public transport modes in the city.

4.3 KEY RECOMMENDATIONS FOR TENDERING AND CONTRACTING

In order to establish a coordinated and integrated sustainable public transport system, it is therefore highly recommended (see Final Report, Chapter 4.4; European experiences - see Final Report, Chapter 4.3) to:

- recognise Public Service Contracts (PSC) as the main contractual document in P/T legislation between the regional and local Governments and the transport operators;
- ensure national government award guidelines and an overall framework for tendering and contractual procedures by means of adequate national procurement law and best practice service contracts), however, without a detailed regulatory scheme. Detailed tendering procedures should fall within the remit of local government;

- allow the possibility to tender on the basis of bidding “price” in addition to the tendering on the basis of quality and company requirements;
 - devise a diversified compensation/subsidy model:
 - a. take a distance from compensating a specific route; this approach is more sensible if it refers to school-related traffic, for instance. In this case, school/student transportation can be compensated separately (this should be covered in a dedicated school transportation law on regional/local level);
 - b. compensate specific passenger groups based on social criteria through fares; most commonly known are reduced fares for elderly, disabled, children, students & trainees and offer fares to attract and reward daily users, for instance through monthly/yearly tickets for employees;
 - c. make a qualified decision on whether to use net or gross contracts (please see Table 5: Advantages and disadvantages of net and gross P/T contracts for comparison);
 - d. Include a price variation clause in contracts: it allows for an adaptation of the prices paid for long-term contracts and services provided over a long period of time (often based on a formula, for instance in the basis of the inflation rate);
 - additionally discuss options of fiscal equalization schemes by which taxes from more prosperous regions/cities are relocated to subsidize public transport in economically weaker regions of Kazakhstan;
 - enable regional and local authorities to law-making and to defining own transparent pro-curement guidelines and selection criteria;
 - refrain from the current rather technocratic approach of norms, policies and regulations at the national level and move on to flexible decision-making and policy-making processes at the local level; provide a new Public Transport Law that delegates detailed policy-making and organizational issues towards regional and local governments;
 - decentralize and simplify the procurement and contracting process; the national government should prepare an overall framework, whilst allowing regional and local governments to own detailed directives, regulations and guidelines;
 - ensure early-on publication of future public transport tendering processes and contracting¹²
 - allow local governments to make decisions regarding
 - a. gross or net cost contracts
 - b. constructive or functional Terms of Reference for tendering public transport services¹³;
 - provide regional and local authorities as well as PTA’s with public service contract templates for gross contract of public transport services. Also allow these authorities to adapt the contracts, where deemed necessary;
 - include in PCS’s templates a standardized performance assessment/monitoring tool in order to motivate transport operators to good quality transport services and have the legal framework for control, including definition of incentives and deterrents;
 - define selection criteria based on a relationship between services and quality offered as well as bidding prices;
 - Generally it must be noted that prior to implementing PSC successfully for public transport in Kazakhstan, the following overarching requirements need to be met:
 - a. A working legal system must be in place that allows the enforcement of such contracts
 - b. The authorizing body (e.g. PTA) and the private operator(s) must be legally or at least organizationally separate entities
 - c. The PTA must be willing to make its arrangements both transparent and binding (e.g. by using long-term commitment in form of contractual duration)
- In case of considering the implementation of net or gross contracts paid by vehicle km it is necessary to analysis in advance associated advantages as well as disadvantages:

12 Regulation (EC) 1370/2007 suggests in Clause 29 to advertise future activities in this regard at least one year in advance: “With a view to the award of public service contracts, with the exception of emergency measures and contracts relating to modest distances, the competent authorities should take the necessary measures to advertise, at least one year in advance, the fact that they intend to award such contracts, so as to enable potential public service operators to react.”

13 When preparing and implementing a procurement process for public transport services, the Terms of Reference need to be defined by the contracting authority. This can be done in two ways: 1) Constructive ToR: the PTA/contracting authority provides a detailed description of services offered, quality measures, timetable, etc. 2) Functional ToR: the PTA only provides an overall framework (for instance number of routes), details are left to the transport operators for pro-posal. Source: <https://www.vdv.de/130911-vergabe-im-wettbewerb.pdf?forced=true>

Table 5: Advantages and disadvantages of net and gross P/T contracts

	Advantages	Disadvantages
Gross cost contract: Transport operator receives pre-defined compensation be vehicle-km	Reliable calculation for operator. Low barriers for market entry. High legal certainty. Enforcement of public interests (for ex-ample tariff). Unproblematic integration in P/T associations. Competition neutrality.	Low entrepreneurial interests by the transport operator to reach new passengers. High level of regulations. High monitoring efforts and combination with incentive/penalty systems Revenue risk lies with the authority; budget reliability for public authorities is certainly in place, but operator has no direct incentive to ensure revenue collection Service improvements are initiated by the authority which may result in a lack of innovation.
Net cost contract Transport operator receives the engrossed revenues and the purchasing charge	Transport operator has an entrepreneurial interest in attracting more passengers and providing good quality services Enforcement of public interests Transport authority has an interest in providing good quality services as higher revenues reduce the gap that is financed by the authority	Transport operator carries the primary revenue risk Lower influence of the transport authority over services provided More difficult integration into tariff associations, but possible

Making the right decision at the procurement stage allows for achieving the best cost-benefit ration for transport services provided whilst reducing associated risks. The following individual aspects should be taken into account¹⁴:

Table 6: Assessment of individual aspects regarding the implementation of Procurement processes in public transportation

Vehicle Requirements	Too detailed requirements provide no significant impact for the passenger Costs increase substantially when vehicles cannot be deployed flexibly Recommendation: lowest possible details
Ordering & Cancellation	Generally small level of flexibility High risks for more vehicles and drivers Recommendation: transparent regulation that covers possible additional costs
Size of Lots	Decide on whether to tender several lots at once Lot sizes should be friendly for various transport operator's sizes Use synergies in more than one lot Recommendation: no limits on Lots, allow for general proposal
Employee salaries	Open competition leads to pressure on salaries Staff quality needs to be maintained Recommendation: ensure that social standards are kept

¹⁴ <https://www.vdv.de/130911-vergabe-im-wettbewerb.pdf?forced=true>

FINANCING IN PUBLIC TRANSPORT



5.1 CURRENT P/T FINANCING IN KAZAKHSTAN

Contrary to many other countries around the world the national government of Kazakhstan is not financially contributing to urban public transport (see Final Report, Chapter 5). But, despite not financially contributing to urban public transport, the government is imposing a lot of regulatory restrictions on urban P/T. It is therefore recommended to apply the principle that the one who contributes financially can set the rules for operating issues of P/T (see Final Report, Chapter 5.1).

Pursuant to Article 19 of the Law 476-II, the fares/tariffs are specified by Akimat (local implementing authority) and agreed by Maslykhat.

Tariffs shall cover only those expenditures of the operator, which are considered by the Government of Kazakhstan to be directly linked to operating public transport services. For example, conditions of roads, maintenance, and installation of stops stations are to be managed by Akimat, not by the operator. Fares shall be calculated in accordance to the methodology of tariff calculation for public transport services with scheduled routes, approved by the order No. 614 of the Minister of Transport and Communication of the Republic of Kazakhstan, dated October 13, 2011.

In case Akimat applies a special tariff for socially important routes and the tariff does not cover the operator's expenditures related to particular route, such a route is considered eligible for subsidies.

The subsidy allocation procedure is outlined in the rules of subsidy allocation for remuneration of operator's losses. The Rules are approved by the Order of Acting Minister of Investment and Development of the Republic of Kazakhstan #883 dated August 25, 2015 (hereinafter – the Subsidy Allocation Rules).

According to the Subsidy Allocation Rules, financial losses of the operator equates to the difference between a route's tariff calculated in accordance to methodology approved by the Government and the tariff specified for social reasons.

The subsidy program is developed and approved by the Tariff Commission for a period of 3 years. The Commission shall be established by Akimat and includes representatives from Maslykhat. The goal of the commission is to justify tariff calculations provided by the operator and clarify whether they are consistent to the methodology approved by the Government.

If subsidies are required and confirmed by the Commission, Maslykhat shall approve the subsidy and proceed with local budget amendment accordingly. Thereafter, Akimat shall approve a 3 year program with the amount of the calculated subsidies for socially important routes and, reach a subsidy agreement with the operator. The agreement shall include the following:

- Parties' obligations;
- Predicted passengers volumes for the period of the next 3 years, indicating the value for every year;
- Subsidy value for 3 years indicating the value for every year;
- Approved tariff; and
- Tariff calculated in accordance with the methodology approved by the Government of Kazakhstan.

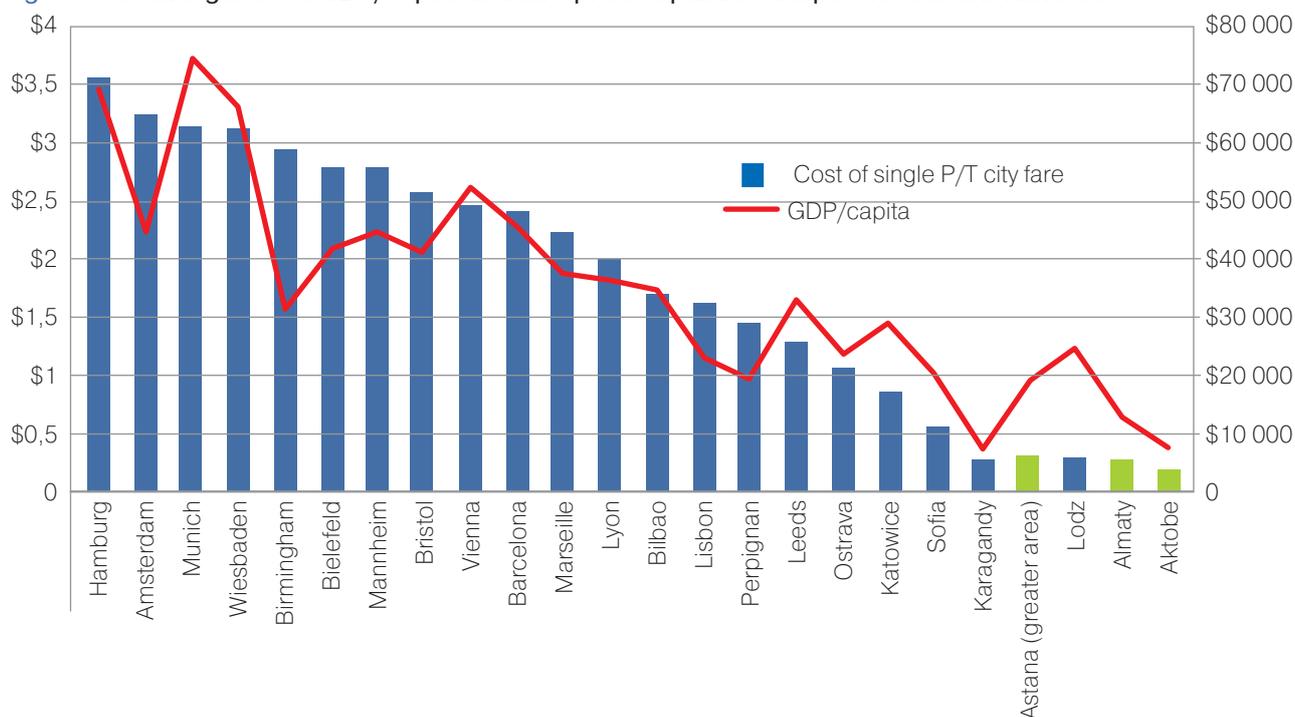
Additionally the contract template/subsidy agreement does not include performance assessment tools and indicators, which should motivate an operator to provide a good quality services.

In order to receive the subsidy the operator must submit the report confirming the passenger numbers to the Akimat on a monthly basis. The report must be very specific and include the following:

- Summary on tickets issued for reporting period; and
- Summary on revenues received from issued tickets.

If all information is provided on time and justified by the report, Akimat shall approve the report and sign an act of acceptance of the services. Once the act is signed, Akimat effects payment. The payment is made on a monthly basis in accordance with the amount specified by the subsidy program.

Figure 5: Convergence of GDP/capita and fare price in public transport for benchmark cities



The analysis of current financing and investing practices in urban public transport in Kazakhstan (e.g. cities of Astana, Almaty and Shymkent) shows that transport policies here require an investment strategy involving different levels of government, the private sector, investment banks and private operators. Coupled with the current “flat fare” practice of one ticket for one price and near to entirely revenue funded operations (with the exception of subsidies for socially important routes), financing public transport poses a great challenge in Kazakh cities today¹⁵.

In the European benchmark cities public transport funds are usually channelled from central government to the local level where dedicated transport authorities take on the responsibility for organizing and funding the local public transport operators as well as setting the relevant tariff system, reviewing this annual and updating it. Thereby the benchmark results showed that European cities closely align their fares with the city’s GDP. For Kazakh cities with available data for both GDP/capita and single fare price a greater disparity is apparent.

Tariffs in Kazakhstan are mostly only adjusted once in 5 years. It is recommended that a fare adjustment mechanism as applied in many other countries is implemented. A well-known and good example is Singapore. At least, P/T tariffs should be adjusted annually for inflation (CPI, indexation) and wages (WI), a common practice elsewhere.

Stakeholder interview results suggest that the expert opinion with regards to public transport financing deems a mixed financing procedure (both governmental subsidies and operational revenue) with the appropriate policy framework most suitable for financing public transport services in Kazakhstan.

5.2 MAIN FINDINGS FROM INTERNATIONAL BENCHMARK ANALYSIS

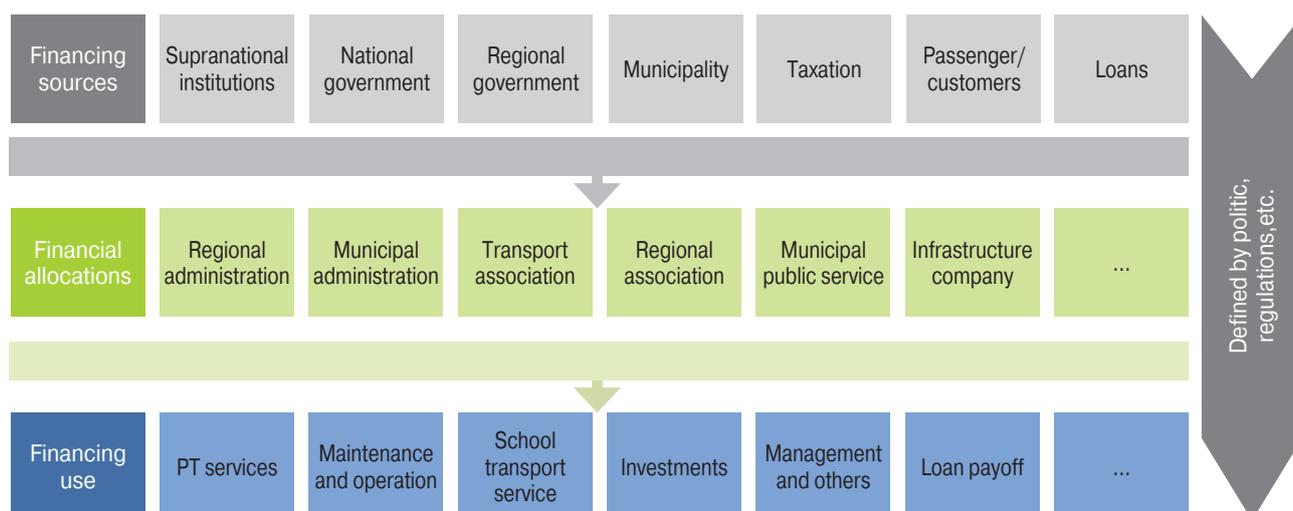
In general financing sources other than revenues from passengers encompass various funding options from national, regional and municipal budgets. In addition, governmental loans are often applied (see Final Report, Chapter 5.2).

Thus, the following funding forms (or a combination thereof) can be implemented (see Final Report, Chapter 5.2.1):

- 1) Revenue from passengers:
 - This refers to the income generated from tickets sold to passengers. It can refer to commercial fares from fares obtained by one or more transport operators. This is especially the case when no public transport authority exists. In this case, public transport companies / operators solely rely on the revenue from passengers. According to our understanding, this is currently the case in Kazakh cities regarding bus transportation.
 - The first step of integrating public transport services from various transport companies is usually the development of a tariff association. Several transport companies join to form an association and develop a common and integrated tariff and fare collection system. This then requires a revenue allocation system.
- 2) Funding from government budgets:
 - This includes fixed funding through national, regional, county/municipal household budgets

15 OECD Urban Policy Reviews OECD Urban Policy Reviews: Kazakhstan (2017)

Figure 6: General sources, allocation and use of public transport financing



that have been put in place through laws and regulations.

- When several regions or municipalities are funded by the national government it is usually necessary to define an allocation formula in order to allocate the funds according to demographic size and forecast development (net migration, age structure), traffic demand (measured in passenger-kilometers), infrastructure and operating costs, etc.

3) Taxation:

- Another source of funding includes the use of taxes, either directly for transportation or a tax applied levied for something entirely different and then relocated to public transportation. Two examples:
 - This is for instance the case in France: the Transportation Tax (Versement Transport – VT) is applied to employers and it funds on average between 30% and 40% of public transport services.
 - In Amsterdam (the Netherlands) the parking revenues are partially used to co-finance the Tramway “IJtram”, accounting for 1% of its financing¹⁶.

As is shown in Figure 6 the funds from various sources are transferred to respective stakeholders responsible for allocation of funds and public transport organization and implementation. This can be the regional or local administration or association as well as Public Transport Authorities, who are granted the funds and are responsible for financing their public transport services and related tasks.

The analysis of financing concepts in selected benchmark cities shows that heavy rail infrastructure and rolling stock are very often financed and organized through the national governments. This is performed either directly through an authority subordinate to the transport ministry or through a fully government owned limited liability company. Investments into local public transport systems through busses or tramways are

often co-financed and subsidized by both national and regional governments. These transfer the funding to the local public transport authority and the respective municipalities.

The public transport sector in European countries is commonly financed by the government through compensation of private operator as well as publicly owned company’ s losses. Compensations are given in accordance with competitive pricing or on the basis of predetermined parameters. The methodology and calculation defined by PSCs (concluded between transport authority and transport operator). Compensation levels can be calculated based on vehicle km, route length or by calculating the difference between planned costs and planned income from operated routes. In Germany, for example, the state government is contributing both to the operational and infrastructure costs of public transport. So, public transport is not a solely financial burden for municipal budget. If a national government recognises the importance of good public transport in cities, it should also financially contribute to it.

The calculation methodology for considering vehicle km (yearly, quarterly, monthly) should be out-lined in the PSC and clearly indicates:

1. Route name and destination.
2. Total route length (sum of all operated by the operator routes).
3. Total routes length by month (the operated km depend on week/ weekend/ holidays/ seasons period).
4. Distance between each stops.
5. Total route operational time.
6. Operational time between stops.

¹⁶ Source: Ubbels et al. 2001

7. Schedule for each route during week/ weekend/ holidays/ seasons.

For each route the number of operated vehicles per day should be identified. When determining the compensation amount it is important to set restrictions to the operated territory. The vehicle

operated km should only cover the length of the existing network in the city. The compensation should serve to match the gap between ticket sales revenue and total expenditure for daily operations of the P/T

services (staff costs, fuel, scheduled maintenance procedures) for the private operator to keep a stable and acceptable level of public transport operation in the city. The methodology for compensation should also consider a company revenue forecast during the contract period (preparing the financial model based on inflation index or historical financial indicators). This allows regular reviews and adjustments to the compensation amount.

Introducing PSC payment based on vehicle km the following advantages/ challenges must be noted:

Advantages	Challenges
<ul style="list-style-type: none"> Stable compensation payment amount to the private operator and in the same time possibility to forecast the needed city budget for the P/T sector. Securement of adequate levels of fleet maintenance using the compensations (thereby ensuring acceptable quality and safety levels for the passengers). No need to separately report on sold number of reduced tickets/ or transported people with special needs (as not subject-financing mechanism). Indirectly potential attracting foreign investment by means of ensuring solid and reliable service quality levels. 	<ul style="list-style-type: none"> Operators must strictly follow the determined P/T schedule as outlined in PSC, as vehicle km are determined based on the scheduled vehicle km (planned) and not carried out vehicle km (actual). Dead mileage is not directly included. This can be challenge for the operator who uses the old fleet. Installing suitable GPS system (might have a high costs for installing GPS in an old fleet). Complex monitoring system based on GPS (centre if required) and available professionals who can work with the program. Establishing suitable legislation to implement the calculation/ payment methods. Akimat should set the acceptable price per vehicle km with appropriate calculation methodology.

The payment process and timing should be clearly set in PSC (monthly, quarterly or yearly). The contract must indicate both parties' rights and obligations, monitoring and reporting system. The monitoring system will help the authorized body control the contract performance and to apply penalties when the private operator by any reasons could not fulfil his obligations. Penalties can also be applied when the operator does not provide required reports on time (in this case the acceptable rate is a deduction 0.1% of the amount due). The penalty evaluation scheme and calculation methodology should also be presented in the PSC.

Any penalty system to be devised and introduced in Kazakh P/T must consider and pay attention to the age of the operator's vehicle fleet. Fleet conditions vary and clearly directly impact quality measures.

The PSC calculation, monitoring and reporting systems are a subject to be reviewed after termination of the contract.

be mentioned for potential discussion regarding their suitability (see Final Report, Chapter 5.2.2).

These can include the following:

Table 7: Further revenue options for P/T

Funding mode	Example
Indirect funding via private modes: by using the "internalization of external costs"-principle, make use of income derived from taxation of other sources/ transport modes	Fuel tax Parking fees Congestion charging
Tax exemptions for public transport services	VAT Fuel discount
Use of commercial sources to generate additional income	Advertising Development of public land/real estate in or near stations

5.3 INNOVATIVE APPROACHES TO P/T FINANCING

Apart from the highlighted "conventional" funding categories such as ticket revenue, government compensation, loans and transportation tax a range of alternative means of public transport funding must

5.4 PRIVATE SECTOR PARTICIPATION TO CLOSE THE FUNDING GAP IN KAZAKHSTAN

Since 1991 Kazakhstan's economy depends on the income from natural resources such as oil, gas and

uranium, and thus is very dependent on oil prices and commodity exports. Kazakhstan faced a deep recession due to the collapse of oil prices since July 2008 during the financial crisis, damaging its commodity export-dependent economy. The heavy changes in prices impaired the government budget and jeopardized public sector funding. Due to the lack of government budget Kazakhstan's government has been actively seeking ways to attract private sector investment (see Final Report, Chapter 5.2.3). The key motivation considering Public-Private Partnerships (PPP) was the possibility of bringing in new sources of funding public infrastructure and service needs, attracting private sector investment to the public sector to fill the niche in "Kazakhstan 2050" Strategy, launched in 2015 by Kazakhstan's Deputy Minister for Investments and Development. US\$20 bn. shall be invested in all types of transport infrastructure by 2020; its development is the primary goal both for the Kazakhstan's government and the multilateral financial organizations such as World Bank, European Bank for Reconstruction and Development (EBRD) and the Asian Development Bank (ADB). Kazakhstan aims to attract investment into the economy and putting emphasis on developing PPPs. (Chikanayev 2015)

Public-Private Partnerships has shown potential as an alternative to meeting infrastructure funding needs. PPP solutions have been implemented across a wide range of sectors (including urban passenger transport such as Light rail, tram and metro transit systems as well as bus rapid transit) over the last couple of decades and concerns of cost-effectiveness, technological innovations, increased efficiency and service quality. PPPs are viewed as a special type of cooperation between the public and the private sector to share financial risks in the areas of social and infrastructure development, and attracting private investment. It has to balance the provision of public services against a bankable technical and economic solution. Nevertheless it is said that urban transport systems differ from many other public service models in that full cost recovery is not often met; the revenue income is often insufficient to fund capital and operational efforts. The Light rail line in Astana will be the first major PPP transaction in Kazakhstan's urban transport sector.

A primary form of PPP in Kazakhstan has been concession (Build-Transfer-Operate).

Between 1993 and 2006 no specific law on concessions had been passed, several concession projects occurred during that period relying on general provisions of the Civil Code of Kazakhstan, namely the execution of the concession agreement on construction and operation of:

- the railway "Shar-Ust-Kamenogorsk Station" (2005) and
- the inter-regional power line "North Kazakhstan – Aktobe Region".

The main PPP model in Kazakhstan is being based on the Build-Operate-Transfer (BOT) structure, wherein a private entity receives a concession from the private or public sector to finance, design, construct, own, and operates a facility stated in the concession contract. PPP projects throughout Kazakhstan have been largely carried out in transportation e.g. railway and airports (however not with a focus on urban public transportation), and energy.

Now two different laws regulate PPP projects in Kazakhstan. PPPs are governed by the Law of the Republic of Kazakhstan on Concessions No.167-III 3PK (the Law "On Concessions") (adopted 7 July 2006), which provided project types like BOT, resulting in a number of projects being planned on that basis such as

- Passenger Terminal of International Airport in Aktau City (2007),
- Yeraliyev-Kuryk railway line (2007),
- Electrification of the Makat-Kandyagash railway line (2007),
- Execution of the concession agreements on Gas Turbine Plant in Kandyagash City of Aktobe Oblast (2008) and
- Railway Line Korgas-Zhetygen (2008).

In order to continue the implementation of new concession-based infrastructure projects the government amended the existing Concession Law and specified its commitment to compensate the concessionaire if the national currency devalues by 5% and more.

The Law on PPPs (adopted in 2015) enabled the execution of the now specifically recognized by Kazakh law concession agreements with acknowledged risk-sharing as a key principle to design and manage large-scale PPP projects. The law provided other forms of PPP such as BOT (Build-Operate-Transfer), BOOT (Build-Own-Operate-Transfer) and DBFO (Design-Build-Finance-Operate). Where the BOT model is applied, the private party is responsible for construction (typically Greenfield) and operations while ownership is retained by the public agency. In the case of BOOT the private party retains ownership for the duration of the concession and has the responsibility for construction, operation and maintenance. With a DBFO the responsibility of land provision lies with the public entity and the responsibility of designing, building, financing and operating the entire project to the private party. At the termination of the contract, the private entity will transfer the operational control of the infrastructure system back to the government entity. Finally, the Law on PPPs is expected to ease the qualification conditions for the bidder. Instead of the current law's requirement for the concessionaire having their equity of 20% concession value, this will be 10%, or the concessionaire needs to obtain a bank's guarantee for an equivalent of the 10% concession value. (Chikanayev 2015)

Along with the development of a regulatory framework, two agencies to assist policies and to build competencies have then been established for PPP in Kazakhstan: 1) Kazakhstan Public-Private Partnership Centre (PPP Centre) and 2) the PPP Advisory Centre (PPPAC).

PPP implementation is expected to bring the following benefits to Kazakhstan:

- greater cost effectiveness and time efficiency in managing infrastructure projects;
- expanding financing options for infrastructure projects;
- risk sharing between the public and the private partner; and
- integrating modern technology into public infrastructure.

The transferability of these benefits, however, remains subject to detailed scrutiny when it comes to applying these procedures to urban public transport. Suitability for a PPP approach to urban P/T is, thus, one of the challenges for the Kazakh urban P/T sector.

5.5 CHALLENGES FOR PUBLIC PRIVATE PARTNERSHIPS (PPP) IN KAZAKHSTAN

Generally for PPP projects more sophisticated institutional governance and public intervention is required, because most complex infrastructure projects and urban transport systems suffer from a lack of feasibility since they do not cover full capital costs and only few cover operating costs (see Final Report, Chapter 5.2.4). Also, revenues are insufficient to cover debt service, so government support is needed to cover the gap between costs and revenues. This inevitable situation, and P/T is a loss-making business in many countries with maybe the very odd exception such as e.g. Hong Kong, Tokyo and Osaka, reduces the attractiveness to third party investments.

5.5.1 Political level

In Kazakhstan the majority of concession projects have been approved largely either after or around the time the PPP Centre was established (see Final Report, Chapter 5.2.4.1). The country has gained certain experience related to implementing concession infrastructure projects, not only in terms of concession projects but is now in the process of expanding into a wider range of PPP forms and on the path with "Kazakhstan 2050" Strategy. Encouragingly PPP project structuring has increasingly gained importance in modern political and economic development agenda in Kazakhstan. However no PPP project in urban transport has been successfully implemented yet.

Kazakhstan tries to attract private sector investment to compensate the funding gap with government funding. The Governments might be increasingly provided State guarantees to incentivize the private sector to participate in PPP projects. State Guarantees are defined as agreements under which the Government agrees to take some or all of the downside risks of a PPP project as a secondary obligation. If a specified event occurs during the project phase the Government is legally bound to take on an obligation which has been defined in the contract. In practice, State Guarantees are used when debt providers (e.g. commercial banks, financial institutions, and private equity funds) are unwilling to provide financing to a PPP company due to credit risk and potential loan losses.

5.5.2 Institutional Level

The governance structure must ensure that both the public and the private party are covered against risks (see Final Report, Chapter 5.2.4.2). The state should improve institutional governance and might not leave the private partner act on his own in order to avoid unexpected payments.

Further, if the government urges foreign investors to join new PPP projects, measures should be taken to stabilize the applicable PPP legislative framework. The PPP Centre has enabled to set up the accumulated experience gained by Kazakhstan in implementing concession-based projects. It has built certain human, expertise, and institutional knowledge regarding PPP development. To standardize the process and to improve preparation procedures of PPP projects, standard contracts and standard PPP models for certain industries could be developed and implemented.

To strengthen its institutional governance and to make it flexible in terms of decision-making and approval the PPP Centre and the PPP Advisory Centre might be reorganized in one autonomous unit. As a next step it might optimize its decision-making and approval processes, and to foster cooperation with private stakeholders and players by conducting working groups, educational campaigns, and round tables.

5.5.3 Financing

In order to balance risk sharing with the private sector and therefore enhanced feasibility and increased probability of success of a PPP project, certain financing options may need to be bundled with the PPP option preferred for the facility (see Final Report, Chapter 5.2.4.3). The bundled financing options may be in the form of Grant/Viability Gap Funding for capital or for operational expenditure or both.

Such financing and payment options may be bundled with PPP options either individually or together to reduce the project's risk profile thereby improving the

attractiveness of the facilities to the private sector. The optimal financing and payment mechanism result in the:

- Reduction of risks for private partners;
- Provision of value-for-money to the Government of Kazakhstan;
- Competitive determination of financing requirements.

5.5.4 Risk Management

One of the key drivers in a PPP delivery process is a detailed risk assessment process, a PPP model allows the government of Kazakhstan to transfer risks to the party that can best control and influence them. Furthermore, the private partner is better equipped to manage the relevant risk, such as financial risks due to cost overruns and construction delays in the construction phase as well as long-term maintenance in the operation phase. However PPP projects can face significant financial risks. So risks must be made clear to all partners as a prerequisite for a successful risk allocation. Lessons must be learned from other already implemented PPP projects in Kazakhstan and the both PPP agencies has to monitor these projects and to fully evaluate their financial and operational risks to avoid overestimation.

5.6 Key recommendations for successful PPP

The following recommendations are essential to any PPP procedure including urban public transport systems (see Final Report, Chapter 5.2.4.4):

- Bundle certain financing options, e.g. in form of Grant/Viability Gap Funding for capital expenditure (CAPEX) or for operational expenditure (OPEX) or both to move attractiveness of the facilities to the private sector.
- Establish detailed risk assessment process, PPP development risks and responsibilities should be adequately split between the government and private parties. In public transport or other risky PPP infrastructure projects full cost recovery is not often met; it requires fares to yield enough revenue to recover all the costs. Therefore it is important to compensate/subsidize the revenues, for instance by a Minimum Revenue Guarantee presents to reduce the traffic/revenue risk.
- Ensure consultations with potential investors, development partners and other financial institutions to arrive at a final choice on financing and payment options to arrive at a competitive determination of financing requirements.

KEY PERFORMANCE INDICATORS (KPI) IN PUBLIC TRANSPORT



Key Performance Indicators are widely used in all sectors of the economy in the world, including in Kazakhstan. At the same time, only a limited number of PT companies use them in Kazakhstan, which shows a low level of corporate governance in this sector. Best practice research into the nature and use of KPI in public transport suggest that more than 400 different performance indicators in various performance categories such as (see Final Report, Chapter 7):

- Availability
- Service delivery
- Community impact
- Travel time
- Safety and security
- Maintenance and construction

are used in the public transport industry today (Ohingra, 2011). Their design and definition can, thus, take on various levels – depending on what performance needs measuring and why. (see Final Report, Chapter 7.1).

However, no definite KPI selection can be undertaken in isolation. First, target values (or ranges) have to be identified. This will be closely linked to the policy objective or PSC/concessionary agreement that is to be met. Once a measurable target has been defined, the appropriate performance indicator can be selected. KPI case studies highlight that the overarching process in identifying and implementing such monitoring systems (no more than 30 KPI recommended) follows a set of steps that transport agencies (Ohingra, 2011) must:

- 1.) (required by law to) establish goals and objectives for improving services;
- 2.) develop strategies to meet these objectives;
- 3.) define performance criteria and targets (and include bespoke KPI in PSC/concessions, including detailed data standards with regards to resolution, reporting intervals and procedures as well as plausibility checks);

4.) measure progress (with data input from transport operators) and define inputs for future improvements; and

5.) periodically report results of performance evaluation.

KPI can be regarded both from the enterprise as well as the customer perspective and monitor progress or shortcomings both at the policy implementation as well as the microeconomic level (Ohingra, 2011) and thus have the ability to fulfil multiple purposes:

Figure 7: KPI data and evaluation interdependencies in P/T

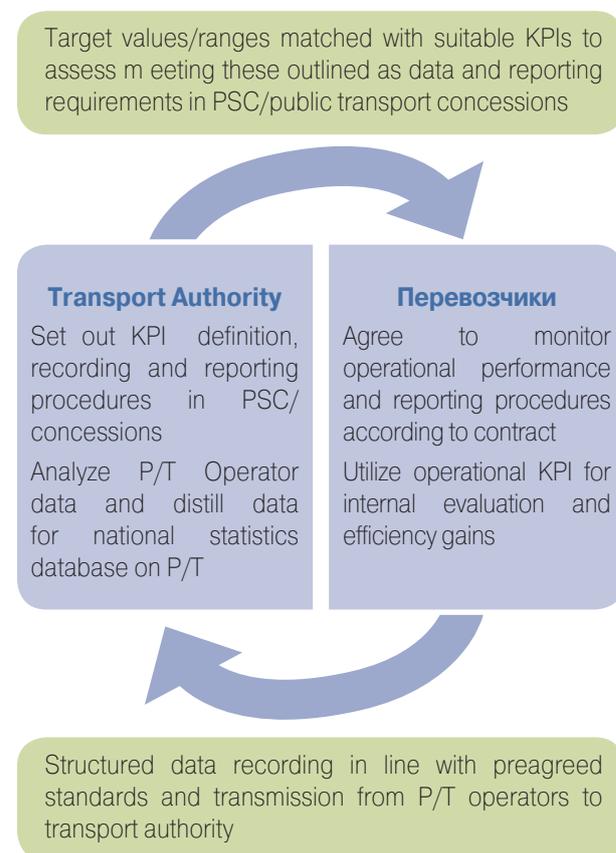


Table 9: KPI levels and perspectives in Public Transport

	Enterprise perspective	Customer perspective
Policy level	Infrastructure provision (network length)	Infrastructure quality (cleanliness of stops, available timetable information...evaluate service requirement standards)
	Vehicle fleet composition (age, environmental standards)	
Microeconomic level	Load factor	Convenience
	Costs per vehicle-km	Comfort
	Transport quality	Speed Reliability Affordability

17 e.g. for example for journeys to work in Urban Audit Database: Share by car, P/T, motorcycle, bicycle, foot (in %), annual KPI

In a first review of all available KPI for public transportation an initial “shortlist” has been drawn up for further analysis and tailoring to Kazakh urban public transport. It must be stressed that this list is neither comprehensive nor to be viewed as a set blueprint for KPI implementation but as a starting point for furthering the debate on introducing such a system. After reviewing KPI best practice ex-amples as well as widely consulted KPI handbooks and combining this information with the overarching themes (as depicted in the first column in Table 10) as emerged from the policy review, an overview table has been drawn up outlining

- Specific KPIs at the operational level
- Specific Urban Mobility Indicators (higher level KPI) at both the local and national level
- Key target groups potentially interested in evaluating/analysing the respective KPIs
- Data requirements to record/obtain specific KPI

This table is part of the detailed report and can be consulted. A brief selection and a comparison with these potential KPI to measure CAST policy progress/success has been included here:

Table 10: KPI excerpt and linkage to CAST measures

Theme	Aim	Suitable KPI examples (not exhaustive!)	Potential to evaluate the following CAST measures
Demographic	To monitor and forecast service area population	Number of inhabitants (actual and forecast)	n/a this is a baseline KPI
Safety and security	To assess situation (actual and perceived) both within network as well as on board the vehicles	Accident rate Crime rate Customer safety perception	1
Legal	framework requirements for operations determine KPI selection	Number and type of national level regulations for P/T	2 / 7 / 8
Operational	To measure reliability, to indicate scope of P/T offer and associated facilities (e.g. parking)	Vehicle kilometres Frequency of services Vehicle service hours Average vehicle age	1 / 3
Passenger service quality	To ascertain perceived and actual comfort and accessibility of services and information	Punctuality of services (% of service on schedule). Cleanliness and comfort at stops and on-board vehicles. Customer information levels during scheduled services and unforeseen events.	1 / 7 / 8
Economic/ Fiscal	To determine the utilization and efficiency of P/T and associated operations (e.g. parking)	Ridership (by age group; ticket type, service number/line) Labour cost per bus and/or kilometre Farebox recovery ratio Maintenance expenses	1 / 3 / 4
Environmental	To record vehicle standards, travel behaviour, emissions and noise	Modal Split (% of walking, cycling, P/T, car) ¹⁷ Number and age of private cars registered Length of bicycle network (dedicated cycle paths and lanes) – km	5 / 6 / 8

Measures as identified by CAST:

- 1.) Improve public transport service levels
- 2.) Integrate transport and urban planning
- 3.) Manage parking
- 4.) Manage traffic
- 5.) Promote cycling
- 6.) Promote low emission car-zones
- 7.) Integrate the suburban transport network with the city
- 8.) Develop road-based transport in a sustainable manner

With regards to the current situation on the availability of general economic data/indicators relevant to public transport, the expert workshop held by the Consultants' in Almaty in July 2017 highlighted that currently data unavailability exists with regards to:

- regional operator data in general;
- public transport financial development data; and
- information on passengers flows in urban areas and regions as well as operator-specific data on the number of employees.

The reason for this appears to be the underpinning issue that there is a lack of clear legislation for regional operator data generation.

6.1 KEY RECOMMENDATIONS

The following recommendations build upon each other and generally fall into three broad categories (see Final Report, Chapter 7.2):

- 1.) Strategic groundwork – paving the way
- 2.) Data-oriented, practical approach – preparation and implementation
- 3.) Long-term outlook – nice-to-have scenarios

It is therefore advisable to follow them in chronological order when working towards a bespoke KPI system in public transport in Kazakh cities. The recommendations are listed in more detail and with an allocation of the main responsibilities to the various stakeholder parties (national/central government, local/Akimat and P/T operator) in the detailed report.

6.1.1 Groundwork

(see Final Report, Chapter 7.2.1)

Define goals and targets from which the performance measures are derived in order to measures these. Such requirements should be common practice in the contractual agreement between Akimat and operator as PSCs contain a monitoring system to track and evaluate service quality levels. Considerable time and effort must be devoted to the pre-ceding steps

of setting up a sound contractual scheme. This step is inextricably linked to PSC design.

Set up a KPI Task Force within the local authority and include individuals from other departments (to foster cross-sectorial, strategic planning) as well, especially urban planners/architects as certain P/T related KPI will be of great interest and use to associated fields as well.

6.1.2 Data-oriented, practical approach

(see Final Report, Chapter 7.2.2)

Start small: define a key set of indicators and include obligations to record and share these key figures in future contractual agreements with (bus) operators. Clearly set out how ex-actly to determine key KPIs such as vehicle-km and in what temporal and spatial resolution these are required.

Remain pragmatic: Consider trade-off between data recording efforts and output significance; consider annual values as a sensible compromise but also devise updating algorithms for KPI that cannot be ascertained on an annual basis (for example manual passenger counts).

Ensure clarity: data definition needs to be consistent and clear to third-parties. Therefore ensure data comparability, so spend significant time and effort planning the KPI system, including the development of a staff handbook.

Secure time and funds: Consider and plan to allocate separate funds for corresponding hard- and software requirements, staff training and ongoing supervision both internally for those involved in data evaluation at local authority level as well as on the P/T operator side.

6.1.3 Long-term outlook

(see Final Report, Chapter 7.2.3)

Consider linking up with other cities in Kazakhstan to benchmark P/T efforts, environment improvements and modal split progress by sharing a set of predefined urban mobility indicators (derived from KPI experience).

Consider joining existing international benchmarking groups (e.g. International Bus Benchmarking Group) to foster joint learning and share information.

Consider introducing continuous data transmission (not only for operational daily running of Command and Control Centre) between vehicles and mandatory dispatcher system but also to record and evaluate real-time data (e.g. punctuality, break-down of services) and display this at bus stops. This approach guarantees valuable operator-specific KPI for internal use.

KEY RECOMMENDATIONS' SUMMARY



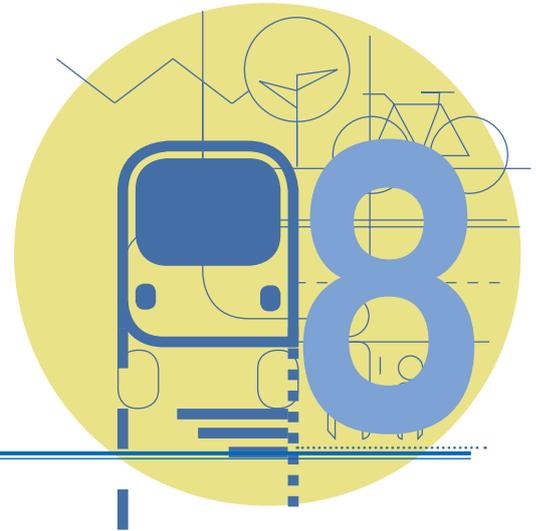
(see Final Report, Chapter 11)

Table 11: Key Recommendations

Key Recommendation	Time Frame	Level			
		National	Regional	Local	P/T Operator
KPI & Data Collection					
Set up KPI Task Force	Short-term			X	
Define performance measures and key set of indicators	Short-term			X	X
Sharing experience between Kazakh cities	Long-term		X	X	X
Data transmission between vehicles and traffic control centre	Long-term			X	X
Legal Framework					
Elaborate a new national legislation for P/T - Law on Urban Public Transport. National government should only set out a supportive legal framework for urban public transport; the legislation should give freedom to local authorities to organise and operate P/T	Short-/medium-term	X			
Recognise Public Service Contracts (PSC) as the main contractual document between the local Governments and the transport operators	Short-/medium-term	X	X	X	X
Incorporate P/T organization at Akimat level to formalize and strengthen long-term strategic planning and locally relevant implementation	Medium-term	X	X	X	
Reorganise financing and funding to ascertain both adequate subsidies and means of cross-subsidizing an effectively loss-making business such as urban P/T whilst ensuring socially acceptable fares	Medium-term	X	X	X	
Strengthen competitive tendering to enable more efficiency for higher quality standards in P/T service offers	Medium-term	X	X	X	
Implement tariff differentiation: to ensure revenue maximation tailored to urban socio-economic situations	Medium-term	X	X	X	
Strengthen Safety and Security to ensure that vehicle and service standards are met and adhered to throughout operations	Medium-term	X	X	X	
Assist environmental protection to address the negative impact, P/T and urban car use have on quality of life	Medium-term	X	X	X	

Implement Paid Parking: to ensure additional source of Akimat revenue as well as deterrent for inner-city car trips	Medium-term		X	X	
Tendering & Contracting					
Link KPI indicators and performance measures to PSC's design	Short-/medium-term	X ¹⁸		X	
Define the possibility to tender on the basis of bidding "price"	Short-/medium-term			X	
Define a monitoring system to be included in contracts	Short-term			X	
Increase responsibility of local authorities regarding contract design	Short-term			X	
Simplification of legislative framework regarding PSC's	Medium-term	X	X	X	
Define procurement procedures on local level	Short-term		X	X	
Ensure early-on publication and advertisement of upcoming procurement processes	Short-term			X	
Define gross and net model contracts that allow individual amendments	Short-term	X		X	
Financing & PPP					
Decide contribution of National Government to the operational and infrastructure costs of public transport at regional and local level	Medium-term	X			
Devise a differentiated subsidy and compensation model	Medium-term	X	X	X	
Bundle certain financing options for capital expenditure (CAPEX) or for operational expenditure (OPEX) or both	Medium-term	X	X		
Allow adjustment of P/T tariffs in shorter periods than 5 years and adjust annually for inflation and wages (WI)	Medium-term		X	X	
Establish detailed risk assessment process by adequately splitting of risks between the government and private parties.	Medium-term	X	X		
Ensure consultations with potential investors, development partners and other financial institutions	Medium-term	X	X		
Define goals and targets for performance and measurement of KPI in PSC.	Medium-term		X	X	
Set up a KPI Task Force for implementation.	Medium-term		X	X	
Define a data-oriented, practical approach for establishing KPI.	Medium-term		X	X	
Consider linking up with national and existing international benchmarking groups.	Long-term	X	X	X	
Consider introducing continuous data transmission for benchmarking.	Long-term	X	X	X	X

18 National government would be involved if their authority regarding contract design would remain the same.



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