



FINAL REPORT

Policies for Sustainable Accessibility and Mobility in Urban Areas of Nigeria

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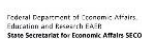
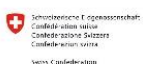
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Policies for Sustainable Accessibility and Mobility in Urban Areas of Nigeria



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List of Acronyms

ACOMORAN	Amalgamation of Commercial Motorcycles Riders Association of Nigeria
AFD	French Development Agency
AfDB	African Development Bank
AMAC	Abuja Municipal Area Council
ANACOWA	All Nigerian Autobike Commercial Owners and Workers Association
BRN	Bus Route Network
BRT	Bus Rapid Transit
CAROL	Control And Registration Of Licensing
CTRA	Commercial Transport and Regulatory Agency
DoH	Highway Department
DOPT	Department of Public Transportation
DRT&MTA	Department of Road Transport and Mass Transit Administration
EIG	Economic Interest Grouping
ERGP	Economic Recovery and Growth Plan
FCT	Federal Capital Territory
FCTA	Federal Capital Territory Administration
FMoT	Federal Ministry of Transportation
FMPWH	Federal Ministry of Power, Works and Housing
FRSC	Federal Road Safety Commission
GDP	Gross Domestic Product
GNP	Gross National Product
INDC	Intended Nationally Determined Contributions
ITPCC	Integrated Transport Policy Coordination Committee
ITS	Intelligent Transport System
ITTL	Intercity Transport Terminal Limited
LAMATA	Lagos Metropolitan Area Transport Authority
LASG	The Lagos State Government
LASTMA	Lagos State Traffic Management Authority
LASURA	Lagos Urban Renewal Agency
LASWA	Lagos Inland Waterways Authority
LAWMA	Lagos State Waste Management Authority

LFN	Laws of the Federation of Nigeria
LG	Local Governments
LGA	Local Government Areas
LRT	Light Rail Transit
LSFS	Lagos State Ferry Services
LSMPT	Lagos State Ministry of Public Transport
LSMT	Lagos State Ministry of Transportation
LSSTMP	Lagos State Strategic Transport Master Plan
LUTP	Lagos Urban Transport Project
MLSUP	Ministry of Lands, Survey and Urban Planning
MOALS	Motorcycles Operators Association of Lagos
MRT	Mass Rapid Transit
MVAA	Motor Vehicle Administration Agency
NAIDP	New Automotive Industry Development Plan
NARTO	Nigerian Association of Road Transport Owners
NGO	Non-Governmental Organizations
NIWA	National Inland Waterways Authority
NMT	Non-Motorized Transport
NPA	Nigeria Ports Authority
NRC	National Railway Commission
NSC	Highways and Nigerian Shippers Council
NT&TFC	National Trade & Transit Facilitation Committee
NTC	National Transport Commission
NTP	National Transport Policy
NURTW	National Union of Road Transport Workers
PPP	Public Private Participation
RTEAN	Road Transport Employers Association of Nigeria
SSATP	Africa Transport Policy Program
TCC	Traffic Control Center
TCF	Transport Commissioners Forum
TOD	Transport Oriented Development
TRASMIN	Travelers Sensitization and Mediation Initiative
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax

Executive summary

Urban Nigeria is facing multiple mobility challenges such as uncontrolled development, increased levels of motorization, urban congestion and mobility shortfalls, and institutional overlap. This report proposes a series of recommendations aimed at accelerating the implementation of a sustainable urban mobility policy. Improving urban accessibility and mobility is a complex task, these recommendations aim at mobilizing all stakeholders around them.

The SSATP Third Development Plan 2015-2018 (DP3) presents an opportunity for SSATP to focus on strategic priorities where it has a comparative advantage to effectively respond to the challenges facing the transport sector in Africa. SSATP's program of DP3 is structured around three thematic pillars:

- Pillar A: Integration, connectivity and cohesion ;
- Pillar B: Urban transport and mobility ;
- Pillar C: Road safety.

Within the framework of the urban transport and mobility pillar, the African Transport Policy Program (SSATP) launched an activity to support eight pilot countries (Ivory Coast, Ethiopia, Guinea, Ghana, Kenya, Nigeria, Rwanda, and Senegal) in the development of policies to improve accessibility and mobility in urban areas of Africa. Six thematic areas were considered as priorities:

- Strengthening the institutional framework for urban transport management
- Creating funding sources dedicated to the management of urban transport
- Promoting the effective participation of civil society in urban transport management
- Improving multi-modal planning and operation of city centers
- Improving the performance of public transport (in particular the reform of paratransit services)
- Organizing and implementing Federal Government assistance for the management of urban transport in secondary cities.

This report has been prepared in close partnership with the Nigeria Federal Ministry of Transportation (Lead Agency). The study team worked very closely with the Lead Agency to identify the relevant key stakeholders and to assess the situation on the ground and establish a baseline of the key issues in urban access and mobility in Nigeria. This was key to identifying priority areas for policy recommendations to assist in the development of visions and action plans for the country for improvement of urban access and mobility in the context of urban development

Interviews, workshops and focus group meetings were conducted at both the national and the local level, and the Consultant travelled to two secondary cities (Abuja and Uyo) to meet county officials. The first field mission allowed the Consultant to gather additional data and documentation, as well as to observe the field for analysis. The main findings of the missions were subsequently presented to the Steering Committee for validation.

The report first presents main findings of a diagnostic for each of the six above priority areas: Urban transport management in Nigeria suffers from coordination challenges as the country's three-tier federal-state-local system multiplies the number of stakeholders with differing institutional capacities. It explores private sector involvement in service provision and public transport performance, including the role of paratransit. It looks at cross sector issues relating to the environment, such as the climate impact of urban mobility and the effects of low quality fuels; looks at concerns around general road safety; the dynamics of informality and its relationship to social inclusion; the gender dimension to urban transport and the potential disruptive impact of new information technologies.

Main findings in respect of priority thematic areas

■ **Institutional framework for urban transport management**

The highly complex inter-relationships between Federal, State and Local entities regarding urban transport management including overlaps, duplication and unclear mandates creates a system require substantial coordination for effectiveness. Throughout Nigeria, inadequate regulation of the sector contributes to poor quality, unsafe, insecure and costly service delivery to the travelling public. Another challenge is the weak linkage between urban planning and transport planning processes. Out-dated documents are often left unimplemented and their medium- and long-term visions are not carried out.

Institutional shortcomings in the transportation system in could be attributed to:

- Absence of a well-articulated and adopted policy and strategic framework for the transport sector;
- Inappropriately mandated and under-resourced institutions leading to the inefficient provision of under-regulated services;
- Fragmentation and duplication of institutional responsibilities among the various bodies and levels of government;
- Lack of inter-agency coordination among the various bodies; and
- Absence of standard procedures for the technical and economic evaluation of programs and projects.

■ **Funding for urban transport management**

Public investment in urban transport has been historically under-resourced. In recent years however, the government has begun to pay more attention to the transport sector particularly the rail sector in terms of federal budgetary allocations. A key challenge for the paratransit sector is that operators - largely made up of private vehicle owners who are registered under operator unions and employ drivers to offer transport services - either do not generate sufficient profit or do not allocate a sufficient share of profits to cover their recapitalization requirements resulting in poor fleet quality, inefficient operations and poor profitability reinforcing a cycle of under-investment. Their informal nature tends to limit any formal funding options.

■ **Civil society participation in urban transport management**

Besides **private sector involvement** in the provision of services, examples of **civil society participation** in transport management of Nigerian cities are limited. In most other cities, nevertheless, Federal, State and Local authorities have all limited contact with civil society groups. A key part of LAMATA's strategy was, and still is, to improve multimodal transport in the state by encouraging stakeholder engagement. In most other cities, Federal, State and Local authorities have limited contact with civil society groups, partly because of the latter's lack of organization. One result is the very limited levels of education amongst the population on transport issues. **NGOs** related to urban transport, particularly Trasmin, are starting to be recognized and their vision taken into account. Other active trade unions include the National Union of Road Transport Workers (NURTW) whose leadership at both national and grassroots level seeks to promote social stability for all workers in the transport sector. The Nigerian Association of Road Transport Owners (NARTO) is another major stakeholder in freight and commercial transport operations.

■ **Multi-modal planning and operations for city centers**

One of the main problems in creating multimodal transport services for Nigerian cities is the lack of policy at the State level, the scale where multimodal planning and operations are meant to be developed. Without the vision, it is difficult to have a strategic plan that sets out the overall approach to deliver the vision, guiding improvements needed over the long term. Improvements are meant to match the scale of challenges to support growth, regeneration, and other social improvements. Lagos however is leading the way in this regard. Starting with the creation of LAMATA, the city has begun to develop a multimodal vision for urban transport. LAMATA has developed the Lagos Strategic Master

Plan which aims to develop a fully integrated transport system to cover activities centered in the mega city region. In other Nigerian cities, while efforts can be mentioned (for instance, Abuja’s recent program on bus service provision), the general situation is one where traffic management options, non-motorized transport planning and programs and parking policies are not necessarily top priorities for decision-makers. Principal threats in the development of a multimodal planning and operations might center on the role of the myriad of institutional stakeholders that seek isolated implementation of their projects.

■ **Public transport performance**

With the notable exception of Lagos, planning authorities tend to view paratransit as a mode that **needs to be eradicated** from the system. Framed within a less than welcoming environment, private service providers resort to aggressive defense of their interests (sometimes becoming relatively violent when reform programs arrive) and a general refusal to participate in any type of systemic reform processes. This situation creates a vicious cycle that is difficult to break: operators refuse to participate in reform efforts, authorities then view operators as obstructive elements that need to be withdrawn from the system and propose initiatives to this end which reinforces operator attitudes to refuse to participate. While the situation in Lagos is by no means the ideal situation for public transport, it does show promise, particularly in terms of creating adequate environments catering for paratransit-formal public transport complementarity arrangements. As many countries in the region, **Nigeria lacks financial resources** and, hence public transport service programs are scaled down in their scope and objectives to best adapt to available resources

■ **National government support for urban transport management in secondary cities**

Urban transport in the country is characterized by a number of challenges: a large and rapidly growing urban population inadequately served by the existing transport system; declining standards of public transport; overlaps and conflicts among the agencies responsible for planning and implementing transport solutions; massive growth in the use of paratransit services; rapid growth in ownership and use of cars and particularly motorcycles; inadequate and deteriorating transport infrastructure; and poor facilities for non-motorized transport (walking and bicycling). Lagos and Abuja, respectively, are the priority in terms of urban transport management. Project implementation demonstrates it. The attention given to the two cities results in a reduction of possibilities for secondary cities. There are, then, important disparities in the possibilities and prospects of carrying out plans and projects in secondary cities because of resources available and human and technical capacities of Departments of Transport of the different states.

To support decision-makers in improving the conditions of mobility and accessibility in Nigerian cities, the report proposes a series of recommendations aimed at accelerating the implementation of a sustainable urban mobility policy. There are 19 recommendations organized according to the EASI conceptual framework:

■ Recommendations focused on **enabling governance efficiency** as follows:

- Mandating the Department of Road Transport and Mass Transit Administration (DRT&MTA) to lead and coordinate integrated urban transport planning.
- Establishing a clear federal policy framework to assist State governments in the establishment of urban transport authorities.
- Creating a legislative instrument that enables state transport agencies to access dedicated sources of transport funding
- Setting-up local Urban Transport Funds
- Encouraging sustainable local private sector investment.
- Creating platforms for civil society coordination with Government agencies.

- Fostering and supporting existing civil society stakeholders towards the expected standard and creating sustainable links with Government agencies
- Extending policies to allow for engagement between major agencies in the state and private transport operators
- Establishing a cross-city platform for knowledge sharing and transfer
- Establishing a national urban mobility data collection and analysis observatory.
- Recommendations focused on **land use efficiency** including:
 - Putting in place a long-term integrated approach between land use and mobility planning to capture the value addition.
 - Addressing the needs of low-income households in mobility planning
 - Prioritizing non-motorized transport in the planning and implementing of urban mobility strategies.
- Recommendations focused on **shifting towards multimodality** including:
 - Strengthening revenue mobilization mechanism through digitization and electronic payments.
 - Revitalizing the inner cities with a focus on multi-modal and integrated transport planning system
 - Extending and modernizing the public transport network in major Nigerian cities.
 - Recognizing the paratransit sector role in the public transport system.
- Recommendations focused on **improving road space usage** including:
 - Supporting cities to improve the efficiency of their road networks and traffic management measures
 - Improving inter-city connectivity by facilitating inter-city and inter-state coordination in mobility planning.

These recommendations were widely discussed and validated during the national Urban Mobility Forum organized under the auspices of the Federal Ministry of Transportation (FMoT) on the 11th and 12th June 2018 in Abuja.

Introduction

Urban transport and mobility is one of the three pillars of the Africa Transport Policy Program (SSATP), which aims to provide African policymakers with tools to develop sustainable, safe and affordable urban transport in the cities of the continent. The actions of the program thus aim to support the implementation of Sustainable Development Goal 11: "Making cities and human settlements inclusive, safe, resilient and sustainable".

To this end, SSATP has launched a program to support the development of policies to improve accessibility and mobility in urban areas of Africa, based on an empirical study of a representative sample of African cities. **This work led to the publication in June 2015 of the Working Paper No. 106 entitled "Sustainable mobility and accessibility policies in African cities" (Stucki, 2015).**

The "EASI conceptual framework", described in this document, outlines a set of specific policy actions according to four areas of intervention:

- **ENABLE:** to establish an efficient and responsible system of governance capable of anticipating needs, guiding public action and ensuring the integrated management and development of urban transport systems;
- **AVOID:** minimize the need for individualized motorized journeys through appropriate land use, planning and management;
- **SHIFT:** maintain or increase the modal shares of public transport and non-motorized transport such as walking and cycling;
- **IMPROVE:** improve the efficiency and safety of transport modes while minimizing their environmental footprint.

The specific measures proposed may be adopted by African cities on each of these pillars of intervention.

The EASI conceptual framework is presented schematically below.

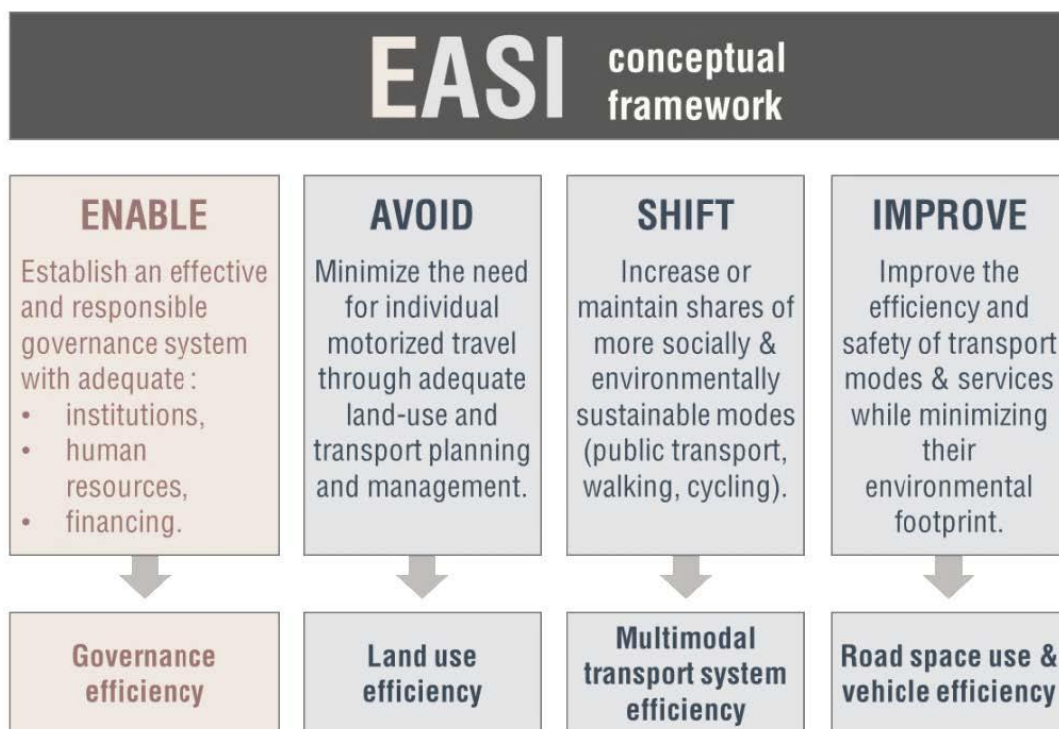


Figure 1: EASI, a conceptual framework to guide public action towards sustainable accessibility and mobility in African cities

Following this publication, a complementary work program has been defined for the implementation of these guidelines in eight program member countries (Ivory Coast, Ethiopia, Guinea, Ghana, Kenya, Nigeria, Rwanda, and Senegal), the result of the present study.

The methodology used for these studies in the eight countries concerned was the same in order to favor cross-national comparisons and to encourage the exchange of good practices. **This study aims to bring a change in the way of thinking about accessibility and mobility, and to sensitize decision-makers for the adoption at national and local level good policies, strategies and operational practices that effectively contribute to the improvement of urban transport and mobility in African cities.**

This report therefore proposes to start with a diagnosis of urban mobility in Nigeria. This was established through the experience of the mobilized experts, field visits to Abuja and Uyo, interviews with national and local political and technical leaders, as well as an in-depth analysis of the documents and data that have been collected and transmitted.

Led by the Federal Ministry of Transportation (FMoT), this work focused primarily on the main issues of mobility and accessibility in Rwandan cities by focusing on six priority areas:

- Strengthening the institutional framework for urban transport management;
- The creation of funding sources dedicated to the management of urban transport;
- Promoting the effective participation of civil society in urban transport management;
- Improvement of multi-modal planning and operation of city centers;
- Improving the performance of public transport (in particular the reform of small-scale transport);
- Organization and implementation of national government assistance for the management of urban transport in secondary cities.

This analysis led to the proposal of a list of priority recommendations, which are intended to be pragmatic and realistic, based on the EASI concept, as well as the draft of an action plan to transform the mobility conditions for the population living in urban areas.

These recommendations were widely discussed on 11th and 12th June 2018, as part of the Urban Mobility Forum organized under the auspices of the Federal Ministry of Transportation (FMoT). This forum introduced by the Director of the Department of Road Transport and Mass Transit Administration on behalf of the Federal Minister of Transportation. The forum brought together around forty (40) national actors and decision-makers who were invited to discuss these proposals. The results of this consultation are outlined in the last section of this report. The series of recommendations confirmed by the Urban Mobility Forum has been enriched with feedback to provide inspiration to Nigerian decision-makers.

Methodology

The process leading to the formulation of these recommendations (and of this final report), is presented schematically in the following flowchart. The Consultant started this assignment by submitting a Country Approach Document presenting the intended methodology, after carrying out a preliminary desk study of available documentation. During the first mission, this methodology was discussed with the beneficiary and the World Bank country team, who also contributed to the identification of relevant stakeholders to be consulted on the six thematic areas of the study. Interviews were conducted at both the national and the local level, and the Consultant travelled to two secondary cities (Abuja and Uyo) to meet county officials. The main findings of the missions were subsequently presented to the Steering Committee for validation. The first field mission also allowed the Consultant to gather additional data and documentation, as well as to make observations on the field. Building on the rich material gathered up to this point, the Consultant prepared its draft interim report, structured in three main sections. The first section provides a general diagnosis of urbanization and mobility trends in the country. The second section narrows down the diagnosis to the six thematic areas, providing a critical and synthetic assessment of each area. Based on these findings, recommendations are formulated in the third section of the report, organized along the four pillars of the EASI framework:

- **Enable** – How to enhance governance efficiency?
- **Avoid** – How to enhance land-use efficiency?
- **Shift** – How to enhance multimodal mobility efficiency?
- **Improve** – How to enhance road-space use and vehicle efficiency?

These recommendations occupied a central place in the National Urban Mobility forum organized in Abuja on 10 and 11 July 2018. Following a presentation of the study's findings, the recommendations were discussed in plenary session with high-level decision makers from the main ministries, agencies, authorities, and counties holding responsibilities in urban mobility. Break-out groups focusing on each of the six thematic areas engaged the participants in a technical review of the recommendations. This exercise was facilitated by the Consultant's team, starting with a SWOT analysis of each thematic area and continuing with a structured discussion on the proposed recommendations. The revised recommendations, amended with the inputs received, were then presented and collectively approved during the closing plenary session of the forum. The final recommendations presented in this report thus constitute the main output of the national urban mobility forum.

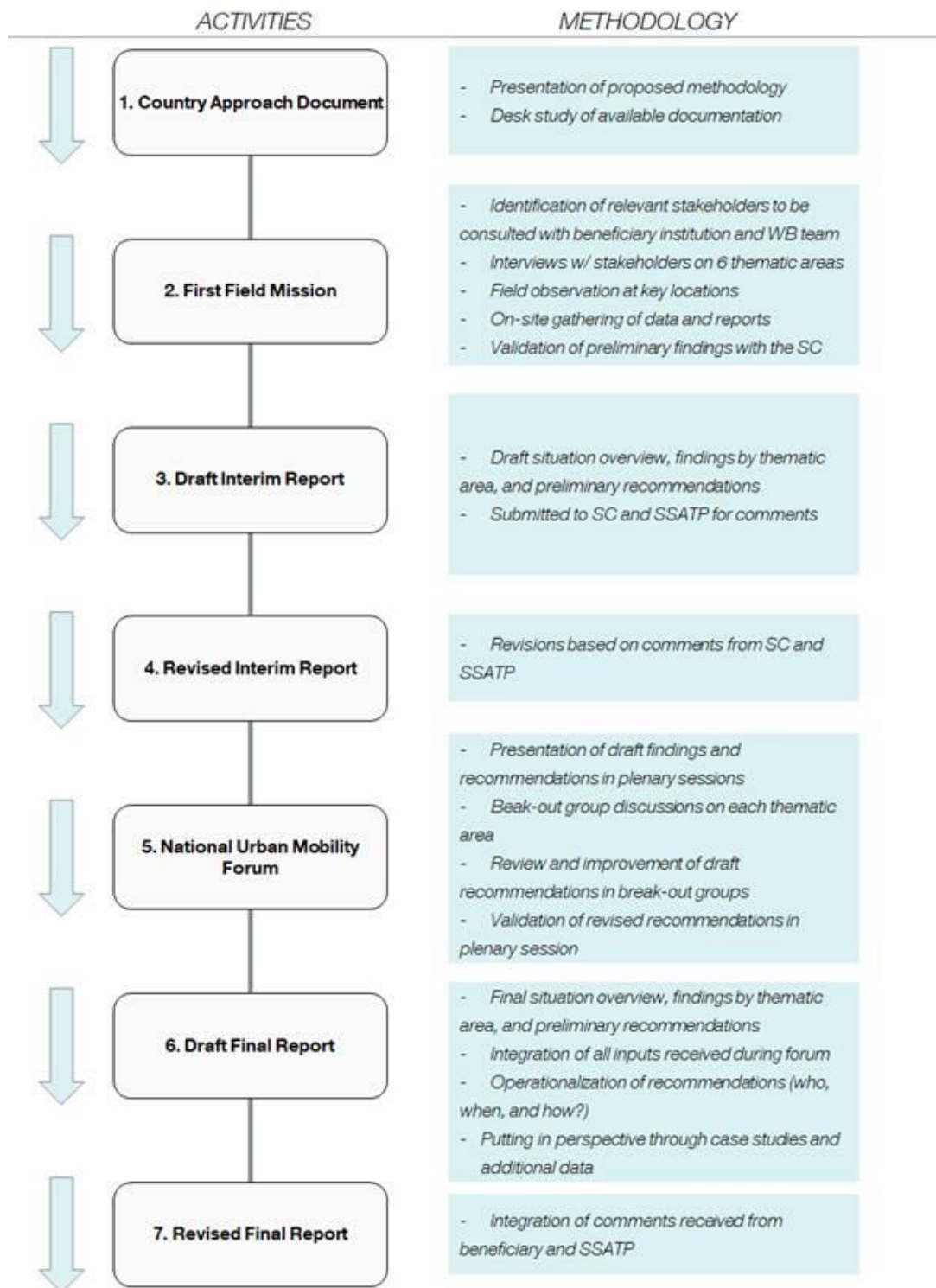


Figure 2: Process and Methodology followed

1. Urban mobility issues in Nigeria

1.1 National urban development

1.1.1 National trend

Nigeria has a national population of about 193 million (2016 estimate) and occupies a land area of 923 768 km². During the 1950s, urban dwellers accounted for approximately 10% of the national population. This figure has risen to an estimated 51% in 2013. By 2020, the country’s population is projected to be close to 204 million with an urban population of 57%. The country's main city, Lagos, is one of Africa’s most densely populated cities. Other Nigerian cities, such as Ikeja and Kano, also exhibit the same dynamics of population growth and densification. In these major cities and other metropolitan areas, urban population growth is occurring at a fast rate: cities such as Abuja, Ibadan, and other state capitals and smaller secondary cities present above-average growth rates.

Nigeria is currently ranked as the largest economy in Africa with a GDP of approximately USD 522 billion¹.

Nigeria has a federal system of government based on three levels: Federal, State and Local Governments (LGs). Pertaining to the political administration, the country is subdivided into 36 States and the Federal Capital Territory (FCT). This general institutional setup largely defines the possibilities and options open to States and cities to manage urban mobility in the country.

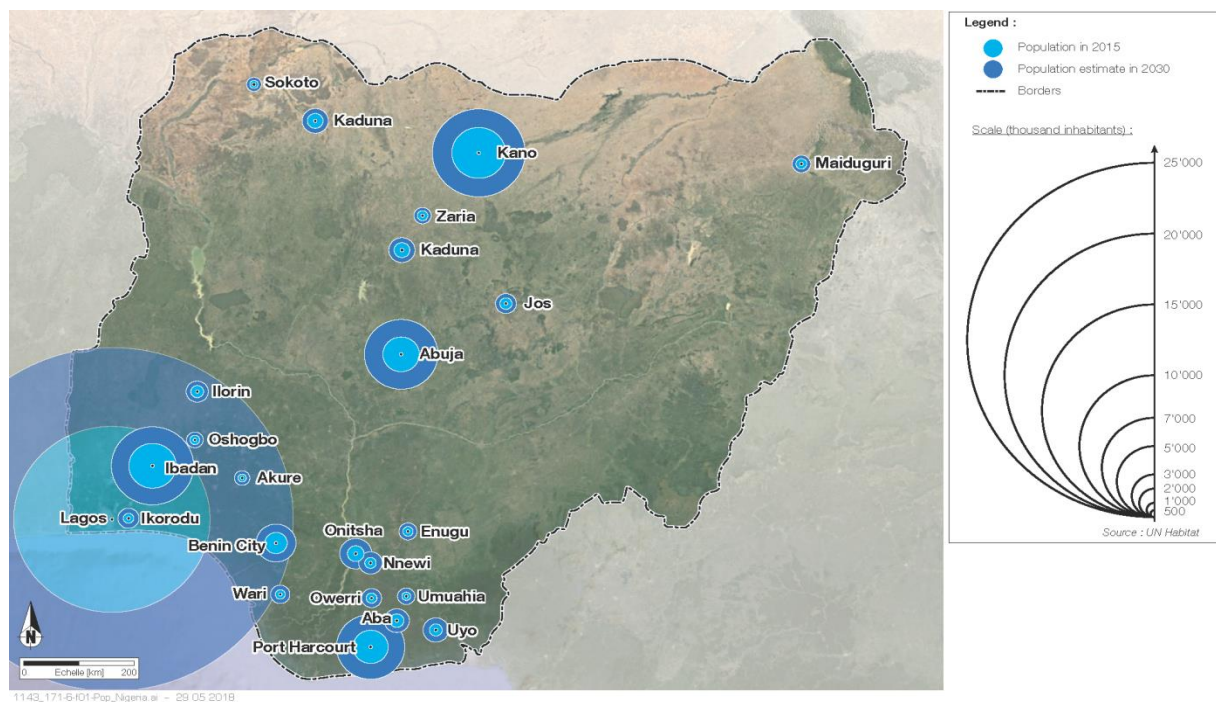


Figure 3: Map of Nigerian Cities (more than 500 000 inhabitants in 2015)²

¹ Source: UN Habitat 2016

² Source: UN Habitat 2015

	COTE D'IVOIRE	ETHIOPIA	GHANA	GUINEA	KENYA	NIGERIA	RWANDA	SENEGAL
DEMOGRAPHY								
Country population (million, 2016)	23,7	102,4	28,2	12,4	48,5	186,0	11,9	15,4
Country population projection (million, 2030)	28,1	137,1	34,2	16,2	62,8	226,9	16,7	19,6
Country density (pop. / sq. km)	75	102	124	50	85	204	483	80
URBANIZATION								
Urbanization Rate (% , 2016)	53%	20%	55%	38%	26%	49%	30%	43%
Urban Growth Rate (% , 2010-2015)	3,9%	5,0%	3,7%	3,5%	4,3%	4,6%	6,3%	3,6%
Urban areas with more than 300 000 inhabitants (2015)	3	2	4	2	4	42	1	1
ECONOMY								
GDP per capita (\$PPP, 2016)	3 693	1 734	4 293	1 966	3 151	5 861	1 913	2 567
Average economic growth rate (% / year, 2010-2015)	5,8%	10,6%	7,7%	4,5%	6,0%	5,2%	7,5%	4,1%
Poverty headcount ratio w/r to the international poverty line (2011 PPP, % of pop.)	28%	34%	14%	35%	34%	54%	60%	38%
Human Development Index (0-1 scale, 2015) 0 - low , 1 - high human development	0,47	0,45	0,58	0,41	0,56	0,53	0,50	0,49
BUSINESS AND GOVERNANCE								
Doing Business (Distance to Frontier, 2017) 0 - lowest, 100 - highest performance over time or "frontier"	52	46	57	49	63	48	70	49
Corruption Perceptions Index (1-100, 2016) 1 - low transparency or high corruption, 100 - high transparency or low corruption	34	34	43	27	26	28	54	45
MOTORIZATION								
Gazoline Price / Diesel Price (US\$ / L, 2016)	0,93 / 0,93	0,75 / 0,64	0,92 / 0,85	0,9 / 0,9	0,95 / 0,82	0,46 / 0,64	1,17 / 1,13	1,14 / 0,97
Private vehicles in use according to OICA (2015)	430 000	90 000	560 000	N/D	848 000	2 970 000	N/D	340 000
Private vehicles in use according to national data (2015)	640 000 (2018)	620 000 (2016)				11 500 000 (2017)		470 000 (2015)
Motorization Rate according to OICA (private vehicles / 1 000 inhabitants, 2015)	19	1	20	N/D	18	16	N/D	23
Road Safety Casualties (nb of casualties / 100 000 people, 2015)	24	27	26	28	30	21	33	28

Table 1: Statistical Data in the eight pilot countries³

1.1.2 Short description of main cities

Population in Nigeria could be grouped in four territorial clusters: the first one centered on Kano in the north; a second one in the Lagos to Ibadan corridor and surrounding area in the southwest; the third from Enugu down to Port Harcourt in the southeast corridor; and, the fourth, on a new corridor developing from the capital Abuja to Jos around the center of Nigeria. Even though it is relatively well-balanced across city-size classes, the degree and pace of urbanization is not uniform across the country and appears to cluster around major economic centers.

Lagos, one of the biggest African metropolises

Lagos is located in the Lagos State which lies in the south-western part of Nigeria and shares a border with Benin. Lagos emerged as a port city which started as a collection of islands but has grown into a megacity officially known as Lagos Metropolitan Area. Lagos is Nigeria’s economic, commercial and industrial hub. It is estimated that approximately half of the country’s skilled manpower resides in the city.

The Lagos Metropolitan Area consists of sixteen (16) local government areas (LGAs) out of the twenty (20) Lagos State’s local government areas, only Badagry, Epe, Ibeju-Lekki and Ikorodu are not part of the metropolitan area. It is an urban agglomeration which covers approximately 1 300 km² of the 3 577 km² land area of Lagos State. About 85% of the states’ population live in the Lagos Metropolitan Area. Most recent estimates confirm it is one of the most populated and fastest growing cities in Africa. Estimates are numerous and they place its current population between 15 and 21 million inhabitants.

The city has a growth rate currently estimated at 6% per annum and the population is expected to reach 35 million by 2020⁴. Sprawl and informality are characteristic of how the city expands:

The sprawling city now extends far beyond its original lagoon setting to encompass a vast expanse of mostly low-rise developments including as many as 200 different slums raging in size from clusters of shacks underneath highways to entire districts (...)

Source: Gandy 2006:372

Over the years, Lagos' urban territory has experienced rapid horizontal outward expansion and the proliferation of slums which are estimated to house 75% of the city's population. Furthermore, the quest for employment opportunities still remains a challenge in itself in a situation where informality dictates much of the city's logics. This is the consequence of the absence of effective land use management and housing policies⁵. These dynamics have substantially deteriorated the quality of life in the city. Indeed, as many other dynamic African cities, the urban territory is difficult to grasp in its entirety leading to dysfunctional situations hard to overcome, such as public transport provision.

In terms of transportation, Lagos area is naturally endowed with navigable creeks, lagoons and a water body that are suitable for urban transit services. It also has a rail line that links the commercial southern part of the city with the dormitory settlement of the North. As a result, Lagos has the potential of benefiting from a seamless transportation system. Ironically, road transport dominates more than 90% of all intra-urban movement⁶.

The transport system in Lagos is predominately road-based, nonetheless, available road infrastructure is not enough to meet demands. Lagos is known to have the worst traffic congestion and pollution levels in Nigeria. Before the beginning of the citywide reform started with the consolidation of urban transport policy and planning that led to the creation of LAMATA and the subsequent implementation of the city's BRT-Lite system aimed at improving mobility in the state, Lagos relied of a fleet of approximately 75 000 minibuses that sought users with short distance trips directed by a quest for profitability rather than an idea of service provision⁷. Like all cities in Nigeria, commuters depend heavily on these paratransit modes that include danfos, shared taxis, kekes (motorized three-wheelers) and okadas (motorcycle taxis).

LAMATA was further strengthened in 2007 to include planning and regulatory functions across the various modes of transport targeting increased economic efficiency through lower transport costs and prices, enhancement of employment and social opportunities. One of the key enablers to achieve this mission is to effectively address the transport challenges in metropolitan Lagos. To complement the multi-modal system required for effective mobility and accessibility in Lagos, LAMATA began the construction on the light rail system in 2011 and promotion of water transport by making the jetties safer for use. The phase 1 of Lagos Light Rail Project, also known as the Blue Line Rail, is expected to become operational in the year 2022.

While reform has undoubtedly produced beneficial results, it had not been able to address the key issues of overall inefficiencies and lack of adequate regulatory frameworks to tackle the challenges of Lagos urban transport system. Buses run mostly by individual operators remain a vital part of the Lagos transportation network as they outnumber other operators. Currently, public transportation is a mixture of minibuses (carrying 8 to 25 passengers) and molues (larger minibuses with a passenger capacity of 30 to 50), motorcycles, keke and large BRT buses (with a passenger capacity of 60 to 72). Recent mode split data suggests that about 70% of motorized trips are made using paratransit modes.

⁴ Source: LAMATA 2016.

⁵ Source: LAMATA & Lagos State Ministry of Transport 2018

⁶ Source: Oni 2004

⁷ Source: Kaenzig et al. 2010



Motorcycle Taxi (Okada)



Tricycle Taxi (Keke)



Minibus (Danfo)



Minibus (Molue)

Figure 4: Public Transport modes in Lagos⁸

Abuja, the fastest growing city in the world

Abuja City is located in the Federal Capital Territory (FCT) which has a landmass of approximately 7 315 km². The actual city of Abuja covers a land area of about 275 km² and has a density of 1 900 inhabitants/km², on average⁹.

According to the 2006 census by the National Population Commission of Nigeria, the city of Abuja had a population of 776 000 projecting it as one of the ten most populous cities in Nigeria. According to the United Nations, Abuja's population grew by 140 % between 2000 and 2010, making it the fastest growing city in the world¹⁰. As of 2015, with an estimated population reaching 2.5 million, the city is undergoing an annual growth of at least 35%, retaining its position as the fastest-growing city on the African continent and one of the fastest-growing in the world¹¹.

Abuja is strategically located in the geographic center of Nigeria and is a typical service and administrative city: home to head offices of key government and international agencies. Abuja is directly administered by the Federal Capital Territory Administration (FCTA). It is made up of six local councils, namely Abuja Municipal, Abaji, Bwari, Kuje, Gwagwalada and Kwali. The emergence of satellite towns such as Karu Urban Area, Suleja, Lugbe, and smaller settlements is evidence of sprawling dynamics.

⁸ Photos by Ajayi Oluwarotimi (okada); Lookman Oshodi (Keke); Bisola Bello (danfo), Eugene Agha (molue)

⁹ Source: Nwaogbe et al. 2013

¹⁰ Source: Boumphrey 2010

¹¹ Source: Abuja Facts 2015

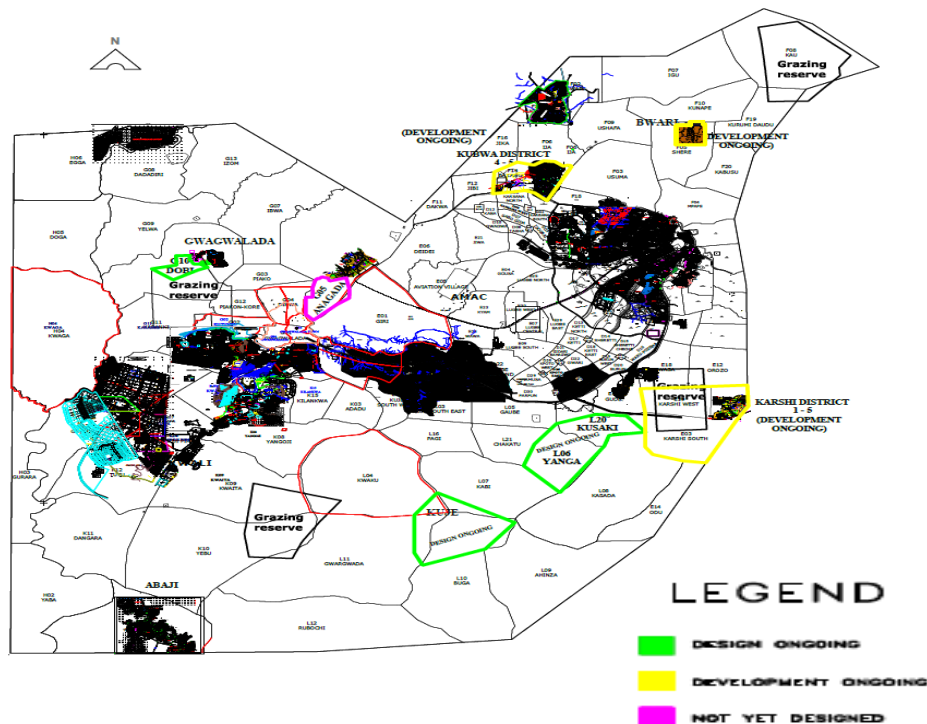


Figure 5: Map of the Federal Capital Territory (FCT)

Abuja is a relatively young city that has developed following the implementation of the 1979 Abuja Masterplan. The Master Plan was completed the same year and had a life span of 25 years (1980–2005). It was later reviewed in 2008. It has, however not been very successful in achieving its objective of delivering a sustainable city. Out of the five phases of the reviewed plan, the Phase I was commissioned on July 12, 2018 by the President Muhammadu Buhari, linking the Central Business District with the Nnamdi Azikwe Airport on a 28-kilometer stretch. According to Wapwera (2015), some of the transport infrastructure projects detailed in the master plans include:

- **Expansion and modernization of road network:** The most ambitious of the road projects are the Airport Road (re-named Umaru Yar-Adua Expressway) and the Kubwa/Zuba Expressway (Outer Northern Expressway). These are 10-lane super multi-highways.
- **The Metro System:** The master plan makes provision for the development of the Light Rail transport system in Abuja. Actual work begun in 2007 and is currently still under construction. The Abuja Metro project was planned to be the highlight of the Federal Capital public transport revolution.
- **Bus Rapid Transport:** The first mass transit buses were deployed in 2005 but the system had not been very successful. Presently, high capacity buses have been introduced to ply designated routes in the city centers while minibuses ply the feeder routes from satellite towns to defined terminals. Passengers then disembark and join taxis or the high capacity buses.
- **The Ultra-Modern Intra- and Inter-City Transport Terminal:** This is planned to be a world class transport terminal, located at Utako/Jabbi Park. It is to serve as an intra-and inter-city transport convergence point. Intercity Transport Terminal Limited (ITTL) is the proposed developer of the project. ITTL is Public Private Partnership between the FCTA, the Abuja Municipal Area Council (AMAC) and a consortium of private sector developers.

In all, the master plan was not fully implemented, and it had been grossly marred by changes and/or conversions of land uses, distortions, and contraventions. The short falls of the 1979 Master Plan, with regards to transportation, include an excessive focus on infrastructure, out of date proposals and lack of review. Currently, it appears that planning strategies are substantially fragmented and still out of

date. Initiatives fall in a planning vacuum where no institution effectively takes responsibility for transport planning as a whole.

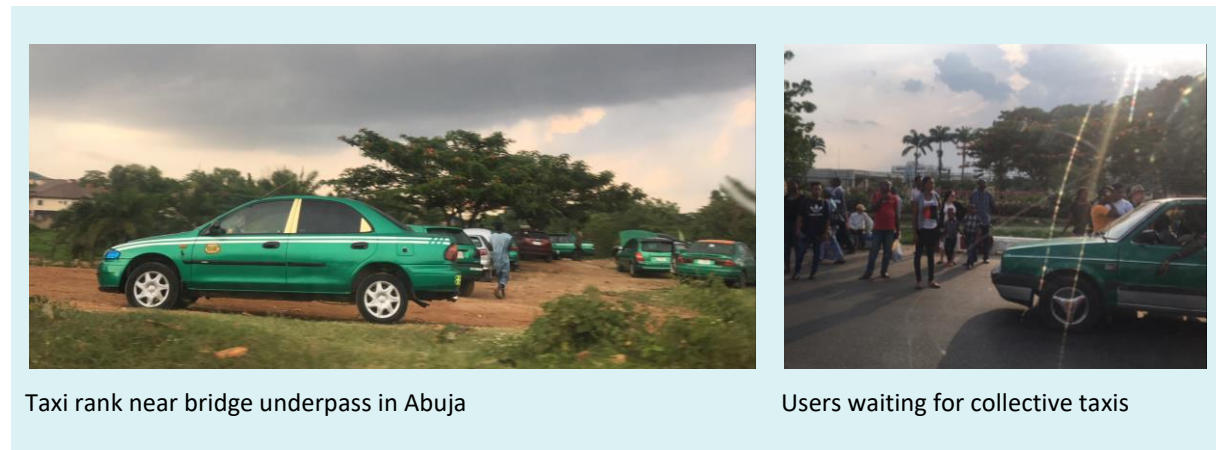


Figure 6: Taxis in Abuja¹²

Kano City, largest city in the North

The ancient city of Kano is the second largest city in Nigeria. It functions as the commercial and industrial hub for surrounding cities in the northern part of the country. The city has over 3.5 million inhabitants with an estimated annual growth rate of 3.1%. The urban territory has expanded over the years and is now believed to be the third largest conurbation in Nigeria comprising eight Local Government Areas (LGAs): Kano Municipal, Fagge, Dala, Gwale, Tarauni, Nasarawa, Ungogo and Kumbotso. The total area of Metropolitan Kano is about 499 km².

The city's urban transport system is largely characterized by disorganization. According to a 2016 report, there are more than 200 public transport (formal or informal) ranks, but only 40 of them have official recognition¹³. The city's public transport company disbanded in early 1980s due to financial woes, lack of government support and political interferences¹⁴; the current system is highly dependent on paratransit minibuses for daily mobility. Minibuses are, however, less than optimal in terms of operations as they stop often and anywhere on the road to board or alight passengers; they are also responsible for high accident rates¹⁵.

Port Harcourt, Nigeria's port city

Port Harcourt, capital of Rivers State, is the nexus of Nigeria's important oil and gas industry. Established as a colonial hub for coal exports in 1912, it has since grown to accommodate an estimated 2 million inhabitants and is among Nigeria's fastest growing cities with annual growth rates around 4%.¹⁶ The urban area is Nigeria's densest, however this is likely to change with plans to establish a new city called Greater Port-Harcourt City. A public authority carrying the same name was established by law in 2009 to manage development according to a masterplan aiming at a projected population of two million.

Port Harcourt hosts Nigeria's third busiest international airport, a number of universities including the well-ranked Uniport University and offices for the oil and gas industry. Freight traffic is heavy due to the presence of the port and oil refineries; both contribute to an ongoing cloud of soot, or heavy air pollution. The Greater Harcourt Masterplan, unveiled prior to the law in 2008, found private motorcycles to dominate intra-city movements. It envisions revising the road hierarchy and the

¹² Photo by [TRANSITEC](#)

¹³ Source: Ogwude 2016

¹⁴ Source: Aworemi et al. 2009

¹⁵ Source: Muttaka & Yunusa 2013

¹⁶ Source: Demographia 2018

creation of a BRT-system through PPPs to replace motorcycles as the main envisioned transport interventions.

Ibadan, a center for trade and education

Ibadan City is the capital of Oyo State; it has a population of approximately 3.1 million and a growth rate of 4.1% per annum (2015). Ibadan is one of Nigeria's most sprawling cities, particularly as new developments developed around existing highways to Lagos. Located in the south-western part of Nigeria, it is a trade and transport hub to the rest of Nigeria and hosts the second largest non-oil economy after Lagos to support trade activities. Its university is Nigeria's oldest. Its railway station is a major terminus connecting Lagos with Kano.

The Ibadan Metropolitan area is made up of eleven Local Governments consisting of five urban local governments in the city and six semi-urban local governments. Major transport modes include private vehicles and paratransit services: shared taxis, mini vans, commonly called danfos, and commercial motorcycles (referred to as okadas). In recent times, mass transit buses have commenced operations between various suburban areas and the city center.

1.2 Motorization trends

1.2.1 Increasing car and motorcycle ownership

Road transport is the predominant mode of transport in Nigeria in terms of passenger and freight movement. In Lagos, for example, private car ownership is growing at an annual rate of approximately 7%¹⁷. Considering data from 2008, the motorization rates of Lagos is high compared to other cities¹⁸ in the continent and it is the highest within Nigerian cities. As one of the most vibrant economies in Africa, increasing incomes are reflected in significant increase in private vehicle ownership and the proliferation of motorcycles in cities. As the urban extent grows, members of the middle class chose to purchase cars to increase their accessibility to jobs and opportunities, and share of economic growth. Lagos already represents approximately 25% to 30% of all private vehicles in the country.

In 2017, the Nigerian Bureau of Statistics estimated vehicle population in Nigeria at 11.5 million units. Commercial vehicles accounted for about 54% of the total vehicle population while private vehicles accounted for 44%. The remaining less than 2 % were made up of government and diplomat vehicles. The resulting private car ownership rate is approximately 24 vehicles per 1 000 inhabitants. With a total of about 6.2 million commercial vehicles to a population of approximately 193 million, Nigeria's general ownership rate (including all vehicles) is roughly 60 vehicles per 1 000 inhabitants.

Trends show that these numbers will continue increasing in years to come.

¹⁷ Source: Lagos Bureau of Statistics 2016

¹⁸ Source: Kumar & Barrett 2008

Nigeria's motorised vehicle fleet: 11,460 million units

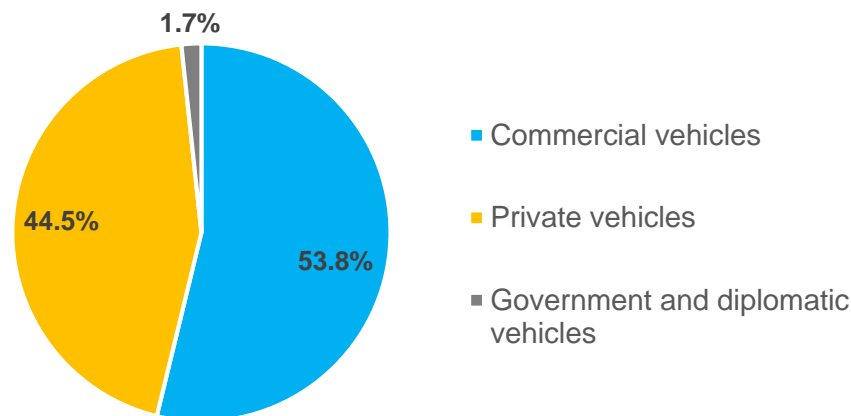


Figure 7: National Vehicle Population, 2017¹⁹

1.2.2 Vehicle Production and imports of vehicles

Vehicle imports are the second largest import category in Nigeria, and growing rapidly. Only 10% of vehicles imported are estimated to be new even if importers of used vehicles have to pay an additional 35% import duty. As vehicles remain out of reach for most of Nigerians, private and corporate buyers seek second-hand vehicles which dominate vehicle supply.²⁰ In 2014, Nigeria launched a New Automotive Industry Development Plan (NAIDP) which hiked import duties on second-hand vehicles while encouraging the development of an automotive sector that serves the domestic market.

Local assembly of vehicles spiked at an annual production capacity of 149,000 units in the 1980's during a public-sector push towards production; by the 2000's production had virtually ceased. The NAIDP aims to reverse this trend. It caused a sharp decline in motorization growth at implementation, which is likely to remain temporarily. The recommencement of the newly privatized local production of vehicle, expansion of access to finance and GDP growth could rapidly increase motorization rates yet again²¹. This represents a significant risk: motorization rates are still comparatively low by global standards, leaving space for further growth. Already high levels of road capacity utilization and congestion might thus worsen even more.

1.3 Description of Urban Mobility Challenges

1.3.1 Main issues in Lagos

Key challenges include: the large rapidly growing population that is inadequately served by the existing transport system; declining standards of public transport; overlaps and conflicts among the agencies responsible for planning and implementing transport solutions; massive growth in the use of minibus services; rapid growth in the use of cars and motorcycles; inadequate and deteriorating transport infrastructure; poor facilities for the non-motorized transport (walking and cycling) all resulting in severe traffic congestion.

A study from Lagos Metropolitan Area Transport Authority (LAMATA) noted that private cars occupy 65% of road space while minibuses occupy 28%. Study results attribute the traffic congestion to

¹⁹ Source: National Bureau of Statistics & Federal Road Safety Corps (FRSC) 2017

²⁰ Source: Deloitte Africa Automotive Insights – Ethiopia, Kenya and Nigeria, 2016

²¹ In 2017, Mitsubishi and Toyota announced implementation of new car assembling units.

inadequate road capacity, poor road pavement, poor traffic management, poor drainage system, poor driver behavior, poor parking, poor design junctions/round-about, presence of heavy trucks, lack of pedestrian facilities, lack of road furniture, lack of parking facilities and among other others²². Part of the causes for this problem are (i) illegal roadside parking and (ii) lack of geospatial information necessary to tackle the spatial challenges. The effects these have are wasted time, delayed movement, stress, accidents, inability to forecast travel time, increased fuel consumption, road rage events, relocation, night driving, and environmental pollution.

These are accompanied by noise and air pollution and the high costs associated with burning of fuels from stationary vehicles. The Nigerian Federal Road Safety Corps in their traffic statistics in Nigeria (First quarter, 2017) reports that Lagos State recorded a total of 287 traffic accidents with 34 fatalities within the first quarter of the year 2017 making it one of the highest in the region²³.

This problem is not limited to traditional cities such Lagos: it can also be observed in Abuja, Kano, Port Harcourt, Kaduna, Ibadan, and Benin City. Indeed, every state capital city in Nigeria has to contend with the problem of traffic congestion. This problem has consequently rendered the city immobile over time and space²⁴. The end results of these traffic congestion levels in Lagos are more time spent between origin and destination, culminating in high costs of transportation, excessive energy consumption and its attendant effects of air and noise pollution.

Freight movement, an often-overlooked aspect of the transportation system, also suffers from congestion as well as being a major contributor to the congestion problem particularly along major corridors of the city.

Interestingly, over the years, capacity expansion and building more road infrastructure has been regarded as a major solution to road traffic congestion in Lagos, but the construction of new roads and expansion of old ones has not effectively dealt with the problem. Demand has always superseded supply because vehicular volume for passengers and freight as well as human population in Lagos has continued to increase over the years.

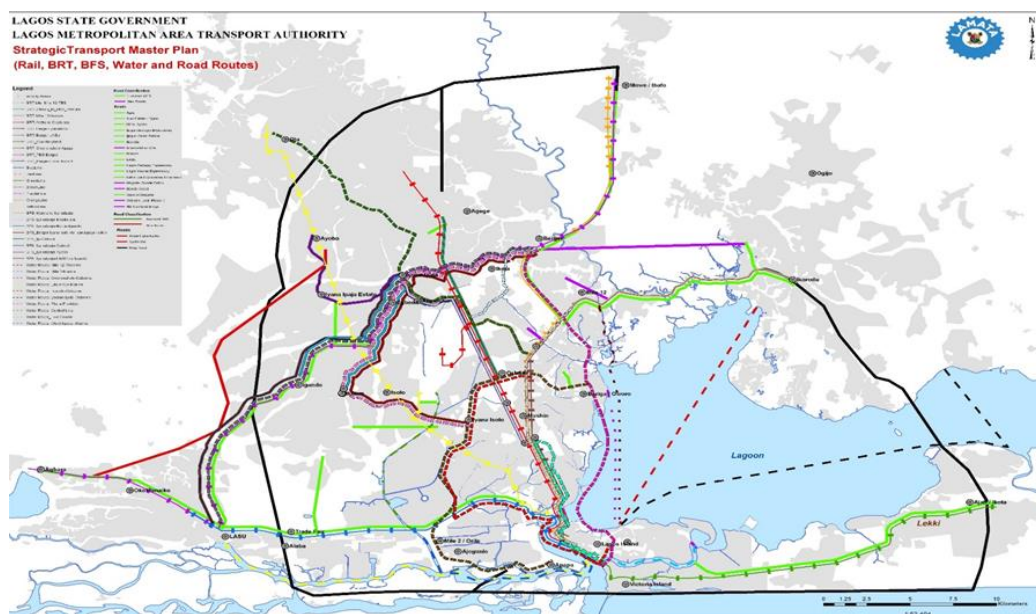


Figure 8: The Strategic Transport Master Plan for Lagos²⁵

²² Source: Abiola & Adeniji 2013

²³ Source: FRSC 2017

²⁴ Source: Taiwo 2005

²⁵ Source: LAMATA 2017

A study by LAMATA estimated trip demand for all modes (including walking) in the Lagos megacity as 24 million per weekday. The same study also projected demand to reach 40 million trips per day by the year 2032²⁶. Walk trips alone account for 40% of this total. Of the 14 million motorized trips left, 72% are catered for by minibuses, 19% by cars and 4% by BRT and regulated buses. The rest are split between motorcycles (2%), water transport (2%) and rail-based services (1%).

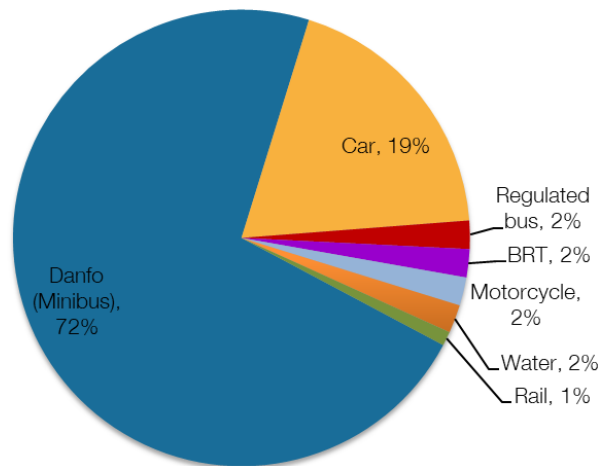


Figure 9: Trip Motorized Mode Share in Lagos Metropolitan Area²⁷

Since its establishment, LAMATA has dedicated significant resources to provide more transport connectivity options to citizens, to improve multi-modal transportation by building light rail and improving water transport as alternatives to road transport, to improve traffic conditions, to shift trips from private cars to public transport, and to support intelligent transport solutions for economic regeneration. LAMATA's objective is to improve transport to serve economic growth in Lagos by widening labor markets, unlocking sites for development, providing attractive centers for business location, giving people access to skills, education and training, encouraging high value growth clusters and agglomeration, and reducing business costs for links from suppliers to producers to markets.

LAMATA has developed the Lagos State Strategic Transport Master Plan. It is a strategic long-term path aimed at transforming the Lagos transport sector beyond its current challenges. The plan seeks to identify possible transport infrastructure and services that are necessary to meeting the travel demand by for Lagos by the year 2032.

Key strategic urban transport features within the master plan are:

- Developing a comprehensive Mass Rapid Transit (MRT) system covering the whole metropolitan area.
- Introducing walking and cycling facilities to promote Non-Motorized Transport (NMT).

In regard to implementing comprehensive MRT, LAMATA has been key in enabling implementation of the BRT program. The BRT-Lite has since been operational from March 2008 and has achieved high passenger volumes. This is now being expanded with the new BRT line construction from Abule Egba to Oshodi.

LAMATA also has a strong focus on developing a rail mass-transit system for Lagos. The idea is that the Lagos Urban Rail Network will eventually comprise seven high volume commuter rail lines within and beyond metropolitan Lagos spanning 264 km. It would be fully integrated with planned and existing water transport as well as the BRT routes. LAMATA has prioritized two routes given their projected impact.

²⁶ Source: LAMATA 2016

²⁷ Source: LAMATA 2016

The 27-km Blue Line will run from Okokomaiko to Lagos Island West. The 24-km Red Line as planned will run from Agbado (Lagos North) to Lagos Marina with a connection to the International Airport in Ikeja. It is projected that each line was projected to carry over 200 million passengers per year. The plans assume that railway operations and maintenance will be handled by a private operator with the rail infrastructure being funded by the State.

After many delays, Phase 1 of the initial Blue Line component of this system is scheduled to become operational in 2022. The Red Line faces even more challenging institutional and practical hurdles that need to be overcome before this project can be viable.

In regard to non-motorized transport, LAMATA has supervised the provision of pedestrian walkways in some parts of the city. One of these projects was used as a pilot to re-introduce cycling and walking lanes on Wempco Road, in the Ikeja axis of Lagos, where a bicycle lane and a walkway on the stretch of the road were specifically created.

Other programs led by LAMATA seek generalized urban transport improvements, a number of imminent projects can be listed, and they include:

- Bringing 13 new bus terminals,
- Implementing new environmentally friendly high capacity buses,
- Providing 300 new bus stops,
- Introducing lay-by for buses and the use of Intelligent Transport Systems to transform bus travel.

A range of projects are underway to boost water transportation including the construction of nine jetties with shelter and shoreline protection, channelization of four new ferry routes and expanding the ferry fleet.

Provision of bus public transport is highly fragmented with multiple private operators operating small sized buses of poor quality. LAMATA was created by an act signed into law on January 13, 2002 in order to set up a regulatory framework to solve this situation with the vision to facilitate sustainable and effective integrated transport system. As depicted above, the law establishing LAMATA was further strengthened in 2007 to include planning and regulatory functions across the various modes of transport targeting increasing economic efficiency through lower transport costs and prices, enhancement of employment and social opportunities.

However, and as it was stated above, like any other state in Nigeria, Lagos State still struggles with institutional capacity and funding for the management of transport infrastructure to meet the demand of its growing population.

1.3.2 Main mobility issues in other cities, the case of Abuja

Abuja is heavily dependent on the private vehicle usage. Furthermore, the city suffers from limited provision of non-motorized transport infrastructure and opportunities. Public transport is made up of motorized tricycles, taxis (without clear distinction between metered taxis and collective taxis), private buses and the state-owned Abuja Urban Mass Transit, mainly operating conventional buses. The quality of public transport is poor due to the inadequacy of vehicles and unreliable frequencies. Public transport in Abuja has some particularities when compared with other Nigerian cities: for instance, minibuses and mototaxis are banned from the city and only operate as feeders from neighboring satellite towns. The situation hinges on a weak regulatory framework: it involves too many agencies lacking minimal levels of coordination.

State ministries of transportation are responsible for the planning and implementation of transportation interventions in their respective states and cities. State ministries of transport liaise with the Federal Ministry of Transportation and other relevant government agencies for the formulating and implementation of transport policies as well as regulating the transport sector. This

presents a complex arrangement between the agencies that are responsible for transportation in Nigerian cities. There are often overlapping responsibilities and turf protection among agencies results in weak coordination in addressing transportation problems. Such is the case in Abuja.

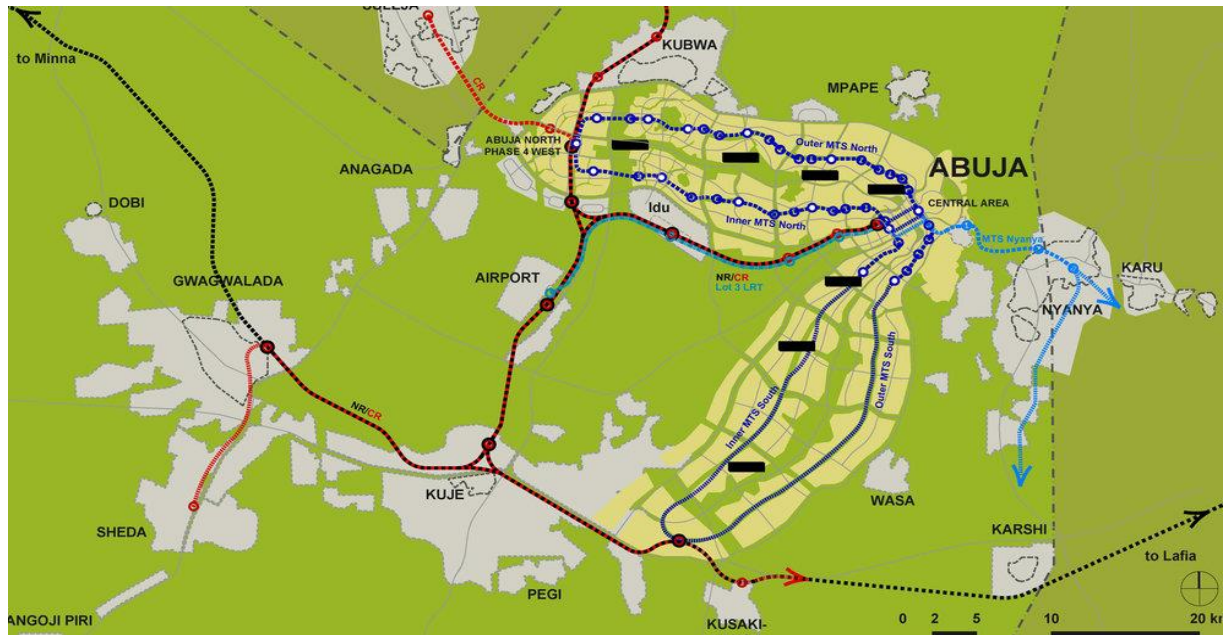


Figure 10: Public Transport Master Plan for Abuja²⁸

Abuja is predominantly a service city with high concentration of economic and administrative activities at the city center. Large proportions of the city's dwellers who reside at the periphery of the city have to commute daily to the city center using private cars. This is due to the fact that government functions, commercial activities and key private sector organizations are located in the city center. The urban form and urban structure of the city was designed for motorized travel, and not for pedestrian movement. Indeed, personal vehicle is the predominant mode of transport followed by taxis. A 2012 study stated that of the nearly 600 000 vehicles circulating the roads of Abuja city daily, about 520 000 are privately owned²⁹.

Public transport system in Abuja is not very reliable, nor is it efficient. General transport challenges in Abuja include (i) solving situations where passengers have to queue for a long time, thus resulting in generalized long waiting time for public transport and stampeding when vehicle arrive; and (ii) improving currently unreliable services and uncomfortable rides³⁰. Bus services are unregulated and largely controlled by the private sector. Molue, danfo and keke make up the existing offer. However, due to the ban imposed by the Abuja FCT, okada and keke services are not allowed in the city center, basing this decision on road safety problem grounds. They only operate as feeders to the major transport routes.

In order to deal with the urban transport challenge, the Abuja Urban Mass Transit Company was established by the Federal Capital Territory Administration to provide reliable transit services. Apart from the 192 buses which ply different satellite towns within the city, the FCT procured additional 200 medium- to high-capacity buses in order to improve the quality of transport services and to solve most glaring mobility challenges. This strategy, however, does not seem to solve the problems of administrative challenges, inadequate infrastructure, poor services and maintenance practices.

Abuja has very impressive road transport infrastructure, but it is lacking in infrastructural provision of public transport and non-motorized transport. There are limited provisions for bus laybys, terminals,

²⁸ Source: <http://www.as-p.com/projects/project/oeffentlicher-verkehr-in-der-metropolregion-abuja-13/show/>

²⁹ Source: Femi 2012

³⁰ Source: Nwankwo 2016

pedestrians crossing and walkways. Due to the inadequacy of public bus terminals, some public transport operators use major bus stops as illegal bus terminals and they often turn main crossings to taxi ranks and parking areas. Similarly, buses from the satellite towns that are not allowed to operate on roads in the city center use bus stops on the peripheries as terminals. Thus, it is common to see inter-state buses and taxis waiting for passengers at these illegal bus terminals in both commercial and residential districts in the city.

The Abuja Light Rail System which is an integral part of the Abuja Rail Mass Transit System and the FCT Transportation Master Plan has been under construction since 2007. The first phase of the Abuja light rail system with two lines connecting to the airport and the national rail network was opened in July 2018. This phase comprises 45 km of track and includes 12 stations. It is the intention to complete an entire 290 km system over six phases. The primary purpose of the light rail system is to move people within and between the satellite towns such as Kubwa, Gwagwa, Kuje, Mpape, Kasrshi, Gwagwalada, Suleja, Kwali, Mararaba, and Karu and the central city. It was a key part of Abuja's 1977 masterplan. The first phase was built by China Civil Engineering and Construction at a cost of \$824 million, partly funded by loans from the Export -Import Bank of China which is also providing loan funding for 48 coaches.

Box 1 - Abuja Mass Transit (AbuTrans) presentation

The Abuja Transport Initiative, AbuTrans is the FCT's 12-year plan for public transport services. The objective of the program is to construct and operate rail lines, and implement, expand and improve bus services and park and- ride facilities in the metropolitan area of Abuja.

AbuTrans includes:

- Lots 1, 2 and 3: 286 km light rail and commuter rail lines.
- 66 km of bus rapid transit service.
- Expanded bus service in all areas.
- 33,000 parking spaces at rail and bus stations.

The concept follows the proposals of the original Abuja Master Plan, which planned for two transit-way lines within Abuja city. These transit-way lines are dedicated transport corridors including grade-separated (mainly on-ground) metro tracks as well as exclusive bus lanes for express bus services on sections near stations. Area-wide bus services in the city sectors and in the Central Area supplement and feed the transport corridors of the transit-ways.

Bus service concessions were given to operators in 2005. Three operational zones have been implemented, North, South and Central. The routes have been set up according to a Bus Route Study (ASTAC). A planned LRT line to the Nnamdi Azikiwe International Airport will supplement the rail services.

The objective of this project was to connect focal urban areas by fast, affordable and direct public transport to the Abuja Central Area. Long-term requirements were considered which will support ongoing and initiate future developments. The study was based on the existing structures within the FCT and the findings of the Master Plan for Abuja and other significant studies, plans and projects related to the regional development of the northern part of the FCT.

The design of Abuja transport network in the city is such that the transitways are within exclusive right of ways (ROWS) while other transit services utilize existing road networks. The proposed 50m width of the Transitways are designed to be sufficient to allow for reserved lanes of buses as well as a double track rail system. Transit ways as designed pass through the sector centers and the distance between the transitways with provision for transport terminals at these centers.



Figure 11: A Station under construction

	Abuja	Lagos
DEMOGRAPHY		
Metropolitan population (<i>million, 2015</i>)	2,4	13,1
Percentage of the national population residing in the urban agglomeration (<i>%, 2015</i>)	1%	7%
Urban population growth rate (<i>% / year, 2015-2020</i>)	5,5%	4,2%
QUALITY OF LIFE		
Quality of life in African cities (<i>EPFL-AMB ranking, 2017</i>)	44/100	43/100
Urban mobility Index 2.0 - UITP (<i>grade 0-100, 2014</i>)	N/D	N/D
MOBILITY DEMAND		
Motorization rate (<i>vehicules / 1'000 inhabitants</i>)	250,0	
Number of trips per day (<i>million</i>)	-	24 M
Number of motorized trips per day (<i>million</i>)	-	14 M
Number of motorized trips per day per inhabitants (<i>million</i>)	-	-
Average trip distance (km)	-	-
Modal split - Personal Vehicles (%)	-	0,1
Modal split - Public Transport, including paratransit (%)	-	0,5
Modal split - Non Motorised Transport (%)	-	0,4
TRANSPORT SUPPLY		
Number of public buses	392,0	
Number of paratransit vehicules (<i>taxis excluded</i>)		
Length of existing urban rail road and/or reserved bus lanes (<i>km</i>)	23 km MRT (from July 18)	22 km BRT
Length of planned urban rail road and/or reserved bus lanes (<i>km</i>)	78 km MRT	264 km MRT

Table 2: Statistical data in Abuja and Lagos³¹

1.3.3 General overview of urban transport conditions in Nigerian cities

Public transport overview

Pertaining to public transport supply in other Nigerian cities, okada and keke are important means of passenger transportation in most urban and semi-urban centers³². It is estimated that 70% of cities in Nigeria with a population over 250 000 depend on moto-taxis for moving within the city³³. These moto-taxis offer convenience in negotiating traffic in congested cities and poorly maintained roads as well as offering services to locations that are not served by public transport. It is worthy of note that the use of motorcycles for commercial transport not only involves the movement of passengers but also of goods.

Although the contributions of motorcycles have increased the mobility rate of commuters in Nigeria over the years, they also come with high levels road crashes and fatalities. Dangers associated with okada usage is substantial, judging from the wave of losses suffered as a result of accidents arising

³¹ Sources: UN Habitat, EPFL-AMB, UITP and national data. Details of sources in the appendix.

³² Source: Ogunsanya & Galtima 1993

³³ Source: Oluwaseyi et al. 2014

from the conflict between motor vehicles and motorcycles in most urban centers in the country³⁴. This is one of the reasons moto-taxis and tricycles have been restricted from operating in the city centers in some major states.

Non-motorized transport overview

Even if in terms of sheer percentages and, hence, of quantity, non-motorized modes, and mainly walking, are the most used mode in Nigerian cities, this is not translated into policies that focus on these users. This situation is not necessarily an only Nigerian problem as WHO estimated in 2013 that pedestrian fatalities accounted for 38% of all traffic-related fatalities in Africa, when the worldwide average is 22%. Indeed, any African city poses more dangers to pedestrians than a city in any other continent. To explain this highly problematic context, several reasons have been put forward³⁵:

- Inadequate or inexistent sidewalks: without proper infrastructure, pedestrians are not protected, and they become ever more vulnerable in traffic accidents.
- Lack of separation on busy roads: where pedestrian grade separation is needed, this is seldom constructed, and it creates problems because of high speeds of motorized vehicles.
- Lack of traffic signals and lack of road markings.
- Poor night public lighting, ugly road scenery and lack of shades.

In order to address this issue, the Federal Ministry of Transportation has initiated programs that seek a paradigm shift. First in Lagos, and expected to be deployed in other Nigerian cities, by seeking to strengthen the vision that NMT is an integral mode in transport planning practices. The Lagos state government has developed and passed the Lagos NMT Transport Policy as part of initiatives towards multi-modal transport and prioritizing non-motorized transport. The objective is to start designing the city for pedestrians as opposed to motor vehicles as was previously the case.

Freight traffic overview

Cities feel consequences of a lack of control and regulation for freight transport inside their territories. The level of traffic will directly be linked to the city size (bigger cities receive more traffic) and their interurban connections with main ports. Secondary cities, irrespective of their size, will act as regional points for commercial activities, yet they often lack appropriate policies for freight movement³⁶.

Oftentimes, freight traffic is over-represented. In Ibadan, for instance, freight vehicles account for approximately 29% of all traffic, yet only 3% in terms of registered vehicles in Oyo State³⁷. What is more, heavy duty vehicles do not make up the bulk of passing traffic; it is delivery vehicles that account for largest percentages of traffic, approximately 45% of freight traffic. This situation results inevitably in increased volumes on urban roads. High capacity vehicles, while less present, pose different problems as their place in the city's transport system is not defined and they create important externalities to all other modes by occupying large areas of road space (while passing or while being stationary).

1.3.4 Data availability

The availability of data is very different in the country. In Lagos, LAMATA is used to collect data and regularly updates the transport masterplan for Lagos. There are efforts to extend the BRT to other key areas where there is demand. LAMATA is working on Phase 3 currently. The masterplan now includes rail based public transport and NMT. There is also a connection by water transport. LAMATA is also monitoring air quality. Currently the AFD is funding further studies and implementation of the strategic

³⁴ Source: Oluwaseyi et al. 2014

³⁵ Source: Nwakaire et al. 2017

³⁶ Source: Adetunji & Atomode 2014

³⁷ Source: Idem

transport masterplan for Lagos which includes urban mobility, urban transport and traffic management measures. In other cities, data collection is much less common. When data are available, it seems to result more from research studies than decision making process.

Data	Scope/area	Mode and year of acquisition	Owner/custodian of data	Availability and format of data	Regular updates	Comment
Land use						
Spatial distribution of population and jobs	National	2006 Census, Job Creation Survey 2012	National Bureau of Statistics	Aggregated data available online https://nigerianstat.gov.ng/eLibrary	Yes	The Last Official Population census was conducted in 2006, this has been the basis for annual population projections. No spatial data on jobs distribution.
Travel demand						
Modal split	Lagos	LAMATA Strategic Transport Master Plan, 2016	LAMATA	LAMATA Strategic Transport Master Plan	n/a	The strategic transportmaster plan for Lagos contains information on Modal split
Origin-Destination data	Lagos	Transport masterplan	LAMATA	LAMATA	YES	Not available
Traffic						
Traffic counts	n/a	n/a	n/a	n/a	n/a	Not available
Parking						
Occupation and rotation data	n/a	n/a	n/a	n/a	n/a	Not available
Public transport						
Route itineraries and stops	Lagos	LAMATA BRT Route Map	LAMATA	LAMATA, Lagos	Yes	LaMATA has a route map for all its Transport services. Route map is available at LAMATA although not readily available online
Level of service	Lagos	Field Survey 2017	LAMATA	LAMATA, Lagos	n/a	LAMATA carried out a study on passenger's preference to determine the level of service offered by BRT and other buses along Ikorodu road in 2017
Users satisfaction data	Lagos	Field Survey 2018	LAMATA			
NMTs						
Pedestrian/bicycle counts	Lagos	Yes	LAMATA	LAMATA	Yes	Data available
Users satisfaction data	Lagos	User survey 2017	LAMATA	LAMATA	Yes	Data available
Models						
Traffic model	Lagos	Model 2016/17	LAMATA	LAMATA	Yes	model available
Transport model	Lagos	Model 2016/17	LAMATA	LAMATA	Yes	Model available
Externalities						
Road Safety	National/State	Annual Road Transport Data	National Bureau of Statistics	Quarterly Reports and data available online https://nigerianstat.gov.ng/eLibrary	Yes	Data on traffic related accidents, offences are categorised and presented on quarterly basis
Air Quality	Lagos	LAMATA 2017	LAMATA	LAMATA	YES	Data available
Gender issues	n/a	n/a	n/a	n/a	n/a	Data not available

Table 3: Data availability in Nigeria

1.4 National Context

1.4.1 Legal framework

Nigeria, being a federal country, operates on three levels on governance: Federal, State and Local Government. The country is made up of thirty-six states. The Federal Ministry of Transportation is responsible for transport at the national level while each State has a State Ministry of Transport that collaborates with the Federal Ministry of Transportation.

At the Federal level, agencies involved in urban transport management include: (i) Federal Ministry of Power, Works and Housing, (ii) Federal Ministry of Transportation, (iii) National Inland Waterways Authority (NIWA), (iv) Federal Road Safety Commission (FRSC), (v) Nigeria Ports Authority (NPA) and (vi) the Traffic Unit of the Nigeria Police.

At the State level, institutional arrangement and responsibilities vary and they are peculiar to each State. However, the general arrangement is that each State has ministries that are responsible for planning, and implementing the state’s policies and strategies.

National Urban Development Policy

Recent urban development initiatives by the federal government include the 1991 Housing policy and the 1992 Nigerian urban and regional planning law No. 88 and the National Urban Development Policy (2006). However, these policies and interventions have been met with stiff difficulties in implementation, application and maintenance. The new National Urban Development Policy was approved in June 2012 by the Federal Government of Nigeria³⁸.

The National Urban Development Policy 2012

The goal of the National Urban Development Policy is to promote a dynamic system of urban settlements, which fosters sustainable economic growth, promotes efficient urban and regional planning and development, as well as ensures improved standard of living and well-being of all Nigerians (FGN, 2012).

The Policy has 13 Objectives including the following:

- Facilitate efficient urban development, management and good governance;
- Ensure that all three levels of Government effectively carry out their functions and responsibilities with regard to plan implementation and are accountable for them;
- Strengthen the capacity of the urban centers to manage economic growth, social development and the alleviation of poverty;

The Policy has 18 Strategies including the following:

- Establish an appropriate institutional framework for ensuring orderly development and efficient management of Nigerian urban settlements;
- Classify and profile towns and cities in Nigeria for the purpose of policy intervention;
- Review and restructure all existing public institutions involved in urban management at the three tiers of Government, and where necessary create new ones, with a view to ensuring effective responses to the challenges of urbanization in Nigeria.

The National Urban Development Policy, 2012 represents an attempt by the Federal Government to lay a strong foundation for a sustainable urban development in Nigeria. ³⁹

National Transport Policy 2017

The Draft National Transport Policy of 2017 has been submitted to the Federal Ministry of Transportation and is currently awaiting approval from the Federal Government. It is the revised version of the Draft National Transport of 2010. The National Transport Policy seeks to establish a framework to guide the sustainable planning and development of an integrated transportation system for the social and economic development of Nigeria. The policy is a response for the country’s need for an integrated, modern and efficient transportation system.

The policy is also keen on promoting the establishment and the strengthening of key institutions that are crucial to the funding, planning and implementation of an integrated multi-modal transport system. Previous urban transport strategies and interventions appeared to be mostly infrastructure driven and not clearly coordinated. The policy also has, as one of its urban transport objectives, the development of an Urban Transport Policy.

³⁸ Source: Charles Kyom Bijimi 2015

³⁹ Source: Zubairu 2015

The revised National Transport Policy of 2017 has a fundamental goal of “*developing an adequate, safe, secure, efficient, affordable, preferred and integrated transport system within the framework of a progressive and competitive market economy*”. Among the objectives and strategies of the National Transport Policy are:

- To support States, the Federal Capital Territory and Local Governments in the development and promotion of urban transport systems and connectivity to rural communities;
- To increase capacity, and to improve quality and productivity through technology and modernization of transport infrastructure;
- To increase generation of internal resources and other mechanisms for funding and financing of transport infrastructure;
- To establish and to strengthen institutions and agencies that will set standards, enforce, monitor and manage the transport system;
- To promote collaboration and cooperation at all levels: inter-government, public private partnership, transport operators and users, and other related critical stakeholders in the transport sector;
- To encourage and to remove all barriers towards private sector participation in the development, provision, maintenance, operation, and upgrading of transport infrastructure and services.

The Draft National Transport policy also has a chapter on urban transport. Currently, the majority of the urban populations rely on private cars, taxis and minibuses, controlled mainly by the private sector, for their transportation needs. The following are the listed goals and objectives of the policy in addressing urban transport challenges:

- To develop an efficient, affordable, self-sustaining and reliable multimodal public transport system that meets the needs of the growing population of Nigerian cities;
- To develop a National Urban Transportation Policy for detailed provisions on urban transportation for uniform and ease of implementation;
- To improve the infrastructure and institutional framework for public transport service delivery;
- To develop an affordable, accessible, attractive and efficient public transport and non-motorized transport (NMT) system.

1.4.2 Main Actors of urban mobility

1.4.2.1 The Federal Ministry of Transportation

The Federal Ministry of Transportation is the lead agency for transport policy, planning and investment at the federal level in Nigeria. Its vision is to build a secure world-class transportation system in Nigeria. It is mandated to ensure the delivery of a fast, safe efficient affordable and seamless inter-modal and convenient transport system that is sustainable and crucial to the socio-economic development and enhancing the quality of life for Nigerians. Parts of its responsibilities include promoting and coordinating the development of an integrated, efficient and sustainable transport system. It is also responsible for coordinating responses to Federal, State and Local Government transport policy reform initiatives.

Its functions include:

- Formulating and implementing policies on transportation by roads, rail, air, maritime and inland waterways in line with Government’s goals and objectives;
- Ensuring the provision of a safe, secure and adequate inter-modal transport system to facilitate Nigeria’s socio-economic development and the welfare of the public;

- Planning and promoting funding and investment in transport infrastructure in Nigeria through Public Private Partnership and related schemes;
- Ensuring high standards of safety and security measures in line with the standards set by international organizations and conventions;
- Organizing National Council on Transportation meetings to elicit stakeholders' inputs into the formulation and implementation of policies in the various sub-sectors of transportation.
- Technical Departments under the Federal Ministry of Transportation are:
- Rail Transport Services;
- Maritime Services;
- Maritime Safety and Security;
- Road Transport and Mass Transit Administration;
- Engineering Services;
- Air Safety and Technical Policy;
- Air Transport Management;
- Transportation Planning, Budget, Research and Statistics.

The Federal Ministry of Transportation is the umbrella ministry for several entities concerned with transport and, to a lesser extent, urban transport. The Nigerian Railway Corporation, the Nigerian Ports Authority, the Nigeria Maritime Safety Administration Agency and the National Inland Waterways Authority are a few of these entities. It is, however, important to note that road safety issues, issuing of drivers' licenses and production of number plates are direct responsibility of the National Government, by way of the Federal Road Safety Commission.

The Department of Road Transport and Mass Transit Administration under the Federal Ministry of Transportation is responsible for coordinating all road transport and mass transit policies and strategies from the Federal Ministry of Transportation.

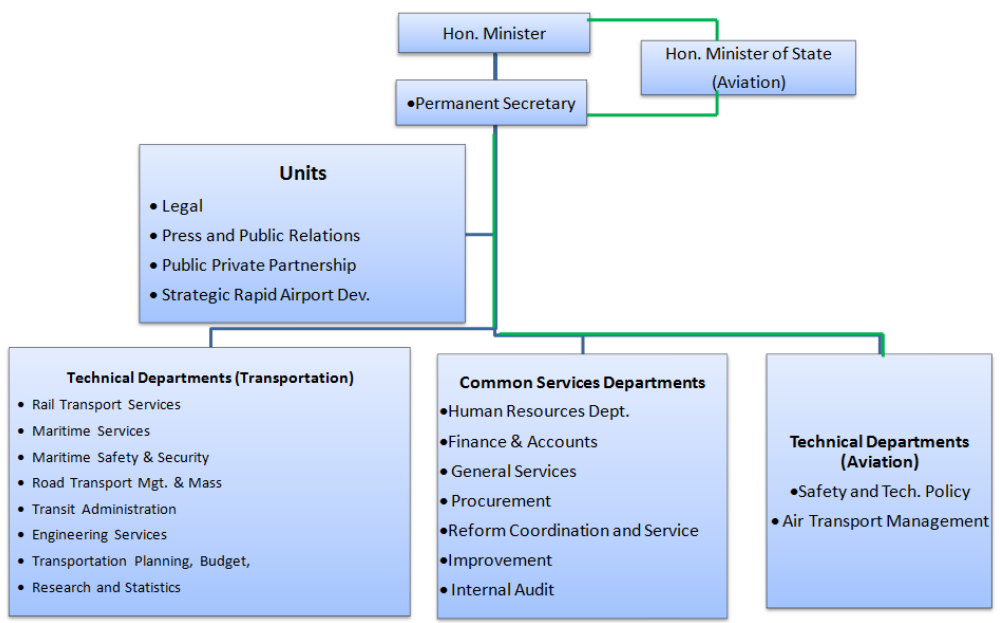


Figure 12: Organogram for Federal Ministry of Transportation⁴⁰

⁴⁰ Source: Committee on the Review of the Structure of Ministries, Departments and Agencies 2015

1.4.2.2 Ministry of Power, Works and Housing

The Federal Ministry of Power, Works and Housing is charged with several statutory responsibilities among which are the construction and rehabilitation of federal highways, highways planning and design, monitoring and maintenance of federal roads and bridges and the provision of engineering infrastructure. The ministry has three technical departments, namely, Department of Power, Department of Works, and Department of Housing. The Department of Works oversees:

- Highway Construction and Rehabilitation;
- Highway Design;
- Highway Materials, Geo-technics and Quality Control;
- Highway Planning, Budgets , Research and Statistics;
- Engineering Services.

Some of the functions of the Department of Works are:

- Planning, constructing, rehabilitating and maintaining federal roads and bridges along federal highways;
- Providing facilities such as streetlights, road signs, markings, etc. on federal roads;
- Supporting domestic technology development and enhancing scientific research and innovation in the road sector;
- Promoting investment in road infrastructure development and support services.

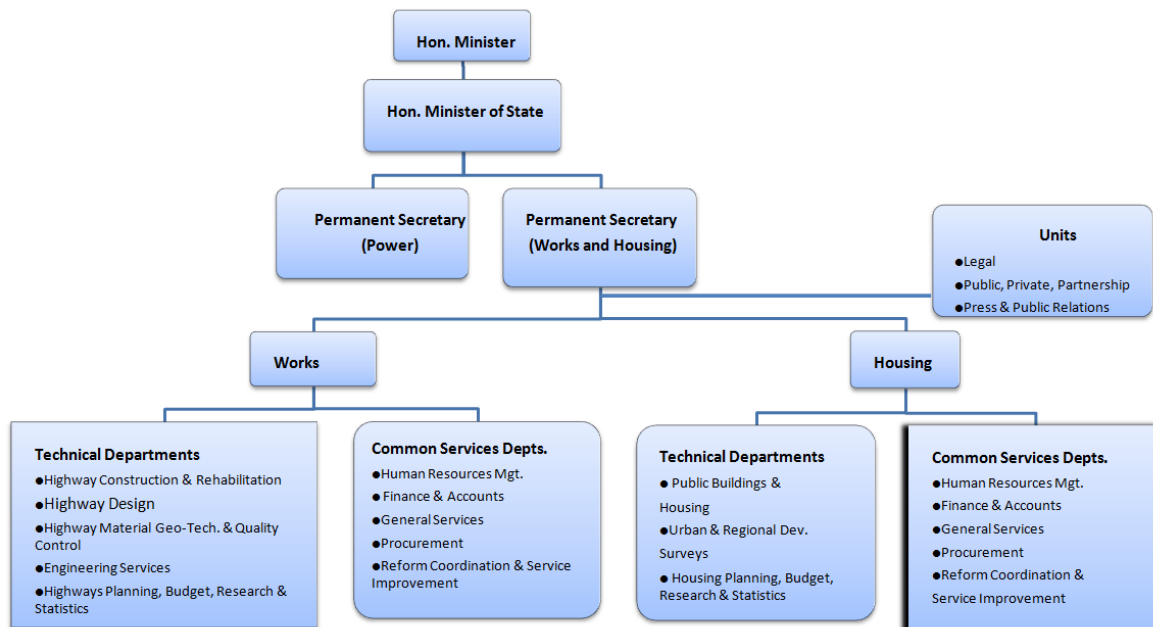


Figure 13: Organogram for Federal Ministry of Power, Works and Housing⁴¹

1.4.2.3 Other relevant stakeholders

National Transport Commission (NTC)

The transport policy recommends the establishment of a National Transport Commission. The National Transport commission bill was recently passed into law in March 2018. The National Transport

⁴¹ Source: Committee on the Review of the Structure of Ministries, Departments and Agencies 2015

Commission is to promote the implementation of the National Transport Policy and will be responsible for regulating public transit operation in the states. Ownership and operation of transportation assets and services has natural monopolistic characteristics. Government liberalization and deregulation of the transport industry and active involvement of the private sector necessitates urgent establishment of an economic regulator.

Key functions of the NTC include:

- Economic regulatory framework for the provision of transport services and facilities
- Facilitate effective competition, promote competitive market, conduct and ensure that the misuse of monopoly or non-transitory market power is prevented in the provision of transport services
- Promote private sector participation in the provision of transport services
- Ensure that operators and users have equitable access to the use of transport facilities, services, channels and routes while having regard to the level of competition and efficiency of the regulated transport industry
- Monitor performance of the regulated sector
- The transport commission will constitute six commissioners appointed by the President.

Integrated Transport Policy Coordination Committee (ITPCC)

The Nigerian Revised National Transport Policy indicates that Federal Government intends to set up a new independent body to provide advice to Government on the implementation of integrated transport policy, to monitor developments across transport, environment, health and other sectors and to review progress towards meeting the policy objectives.

National Trade & Transit Facilitation Committee (NT&TFC)

The National & Transit Facilitation Committee (NT&TFC) was established by the Federal Ministry of Transportation. It is charged of monitoring and reporting on all public transport impediments including need for the provision of inter-modal infrastructure and facilities such as model truck parks and motor parks, vital linkage roads to highways, airports, railways and inland waterways jetties and inland container depots or freight stations. The members of the NT&TFC are drawn from relevant departments and agencies in the Ministries of Transportation, and Power, Works and Housing, such as Departments of Maritime Services, Rail Transportation, Highways and Nigerian Shippers Council (NSC).

State Ministries of Transportation and FCT Transport Department

The State Ministries of Transportation (36 states in total) and the FCT Transportation Secretariat, like the Federal Ministry of Transportation, will have the responsibility of ensuring it communicates National Transport strategies from the Federal level down to the Local Government Area or Council Transport Departments and of promoting a cohesive and dynamic policy implementation mechanism.

Federal Road Safety Corps (FRSC)

The Federal Road Safety Corps is a paramilitary organization and lead agency in road traffic administration and safety management. First proposed in 1988, it was ultimately enacted by Federal Act in 2007. The FRSC mission is to "regulate, enforce and coordinate all road traffic and safety management activities".

In order to fulfil it, FRSC conducts the following activities:

- Sustained public enlightenment.
- Promotion of stakeholders' cooperation.
- Robust data management.
- Improved vehicle administration.

- Prompt rescue services.
- Effective patrol operation.

National Inland Waterways Authority (NIWA)

The National Inland Waterways Authority was created by the act of the National Assembly, CAP 47, Laws of the Federation of Nigeria (LFN), 2004 (Decree No. 13 of 1997) with the responsibility of improving and developing Nigeria's inland waterways for navigation. Parts of its statutory roles include regulating inland water navigation and the development of infrastructural facilities for a national inland waterways connectivity with economic centers using the River Ports and nodal points for inter-nodal exchanges. NIWA is also responsible for licensing inland navigation, piers, jellies, dockyards and river toll collection. NIWA also has a number of vessels which operate ferry services.

Lagos State Ministry of Transportation

Lagos State in one particular territory where institutions have recently developed and evolved towards a more adapted organization to deal with urban transport issues and challenges. The LSMT is responsible for the management of the transport sector in its territory, largely occupied by the Lagos metropolitan area. Its main objective is to develop a safe, efficient and coordinated inter-modal transportation system in line with the objectives of socio-economic development of the State. Amongst its responsibilities, without being exhaustive, the following are key in the management of urban transport:

- Public transport policies and control.
- Supervision of policies and programs pertaining to all modes of transport.
- Formulation of laws affecting transport.
- Provision of road infrastructure and furniture needed to manage and control traffic.
- Oversight of all transport related State-agencies.

Lagos Metropolitan Area Transport Authority (LAMATA)

LAMATA was signed into law by Lagos State in 2002, to coordinate transport policies, programs and actions of all agencies at different tiers of Government. The detailed framework considered functions and responsibilities of the existing Lagos State Government transport-related ministries, departments and agencies, and in this context, proposed LAMATA's roles including its core functions, organizational structure, resource requirements and relationship with stakeholders. It was established as a semi-autonomous corporate body and a board responsible for formulation, coordination and implementation of urban transport policies and programs in Lagos State.

The authority has the overall responsibility for transport planning and coordination in the Lagos State with the primary mandate to play a lead role in carrying out transport planning, assist in transport policy formulation, coordination of major operational and investment decisions and implementation. The law grants LAMATA several powers to facilitate the discharge of its statutory functions, including the power to levy and collect user charges in connection with the provision of its services and to collect any other tariffs, fees and road taxes as may be authorized by the Governor⁴².

LAMATA activities are mainly funded by the Lagos State Government and financed by international development partners such as the World Bank and the French Development Agency (AFD). It is also interesting to note that the State struggles to benefit from additional (federal) budgetary allocations to support LAMATA. LAMATA, together with the State Government, set up a transport fund to ensure the long term self-sustainable funding of LAMATA. Government funds and a proportion of transport user charges are channeled into this fund.

⁴² Source: Heinrich Böll Stiftung Nigeria 2016

Motor Vehicle Administration Agency (MVAA)

The Motor Vehicle Administration Agency (MVAA) was created by the Lagos State Government to provide and maintain a robust motor Vehicle Administration Database and encourage private/public sector participation towards ensuring improved revenue generation and mobilization. It was established in April 2007 with a primary mandate to formulate a sustainable policy direction on motor vehicle documentation and other related matters. It is a robust initiative structured by the Lagos State Government to realize the huge potentials of modernized vehicle licensing and registration machinery by the automation of its system and processes which has resulted in more efficient public-interface, greater public confidence and increased level of compliance. The agency is also major database which is crucial for security and planning purposes. The MVAA has four major departments namely; Licensing and records department, Control and registration of licensing (CAROL), Dealer’s license department and Monitoring and internal control department.

Road Transport Employers’ Associations of Nigeria (RTEAN) and National Union of Road Transport Workers (NURTW)

Two private entities/associations are also worth including in the case of Lagos State. The RTEAN and the NURTW promote their members welfare (mainly) and, then, they cooperate with State institutions to ensure safe transportation and free flow of traffic in the city. While RTEAN are vehicle owners, NURTW are operators (drivers, mainly) of these vehicles; this relationship is often tenuous and results in substantial conflicts primarily related to payments or retributions. Under the umbrella of the NURTW, various associations represent the myriad of transport modes. There are, mainly, *okada* drivers’ associations, *keke* associations and taxi drivers’ associations.

Civil Societies and Semi-formal institutions for transportation

There are numerous civil societies and transportation stakeholders in Nigeria Among these there are 2 major semi-formal institutions with numerous affiliates that have high influence in transportation. These associations are the Road Transport Employers Association of Nigeria (RTEAN) and the National Union of Road Transport Workers (NURTW). These are described as semi-formal because although they are registered with the government, they coordinate large members within public transport and are mainly trade associations with significant influence on Nigerian transport system.

Their roles are mainly to promote the welfare of the members, promote safe and quality transportation system and collaborate with the government in ensuring safe transportation and free flow of traffic in the city⁴³.

Other associations include:

- Nigerian Association of Road Transport Owners (NARTO)
- Motorcycles Operators Association of Lagos (MOALS)
- All Nigerian Autobike Commercial Owners and Workers Association (ANACOWA)
- Amalgamation of Commercial Motorcycles Riders Association of Nigeria (ACOMORAN)
- Lagos State Taxi Drivers and Cab Operators Association
- Tricycle Owners and Operators Association of Nigeria
- Travelers Sensitization and Mediation Initiative (TRASMIN)

⁴³ Idem

Governance matrix for Lagos State

Sector		Urban Planning	Transport public					Public spaces				
			Institutional collective transport (train, metro, bus, boats, etc)	Bus stations (or bus terminals)	Paratransit		Taxis (shared taxis, mototaxis and three-wheelers)	Road infrastructure and road network	Traffic management	Parking	Non-motorized modes	
					Professionalized	Non professionalized (minibus, shared taxis)					Walking	Cycling
Strategic level <i>What strategies? With what resources?</i>	Policy and planning	Lagos State Ministry of Physical Planning and Urban Development	Federal Ministry of Works and Federal Ministry of Transportation								Lagos State Ministry of Transportation/ LGA - Transport Planning Units	
	Financing	Lagos State Ministry of Finance	Lagos Metropolitan Area Transport Authority (LAMATA)	Federal Govt. allocations /Lagos State Ministry of Transportation	Lagos State Ministry of Transportation			Lagos State Ministry of Transportation				
Tactic level <i>What services ought to be developed? How to go about it?</i>	Regulation	Ministry of Urban Planning and Physical Development	Lagos State Ministry of Transportation					Federal Ministry of Works and Federal Ministry of Transportation	Lagos State Traffic Management Agency (LASTMA)			
	Licensing, permits and contracting	Motor Vehicle Administration Agency (MVAA)	Lagos Metropolitan Area Transport Authority (LAMATA)	Motor Vehicle Administration Agency (MVAA)					LAMATA			
	Fare setting		Lagos Metropolitan Area Transport Authority (LAMATA)	Lagos State Ministry of Transportation			Lagos State Ministry of Transportation			Lagos State Ministry of Transportation		
	Infrastructure, Facilities	Lagos Urban Renewal Agency (LASURA)	Lagos Metropolitan Area Transport Authority (LAMATA)	Federal Ministry of Works and Federal Ministry of Transportation			Lagos State Ministry of Transportation	Federal Ministry of Works	Federal Ministry of Works/ Lagos State Ministry of Works and Infrastructure	Lagos State Ministry of Works and Infrastructure	Lagos State Ministry of Works and Infrastructure	
Operational level <i>How to efficiently implement services?</i>	Operations / Maintenance		Lagos Bus Services Limited/ Lagos Metropolitan Area Transport Authority (LAMATA)	Lagos Bus Services Limited	LAGBUS Asset Management Limited/ Nigerian Railway Corporation (NRC)	Nigerian Association of Road Transport Owners (NARTO)/ Road Transport Employers Association of Nigeria	Three Wheelers Association of Lagos State Tricycle Owners and Operators Association of Nigeria/ Lagos State Taxi Drivers and Cab Operators Association	Lagos Metropolitan Area Transport Authority (LAMATA)/ Lagos Bus Services Limited/ Federal Roads Maintenance Agency	Federal Ministry of Works	LGA - Transport Planning Units	LAGOS STATE INFRASTRUCTURE MANAGEMENT AGENCY LASIAMA	

Problematic Responsibilities not allocated, unexercised or conflicts between actors annihilating the action
Insufficient Responsibilities not sufficiently defined and latent conflicts between stakeholders
Non applicable

Figure 14: Governance matrix for Lagos State

Governance Matrix for Abuja

Sector		Urban Planning	Transport public						Public spaces				
			Institutional collective transport (Bus)	Institutional collective transport (Rail)	Bus stations (or bus terminals)	Paratransit		Taxis (shared taxis, mototaxis and three-wheelers)	Road infrastructure and road network	Traffic management	Parking	Non-motorized modes	
						Professionalized	Non professionalized (minibus, shared taxis)					Walking	Cycling
Strategic level <i>What strategies? With what resources?</i>	Policy and planning	Federal Capital Development Authority (FCDA)	Federal Ministry of Works and Federal Ministry of Transportation									FCTA	
	Financing	FCTA	Federal Capital Territory Administration	Federal Capital Territory Administration/China Export-Import	FCTA	FCTA		FCTA/ Private					
Tactic level <i>What services ought to be developed? How to go about it?</i>	Regulation	Department of Urban and Regional Planning	FCT Transport Secretariat				Federal Ministry of Works/ FCTA	FCTA					
	Licensing, permits and contracting	FCTA	FCTA		Federal Road Safety Corps/ FCT Transport Secretariat					FCTA			
	Fare setting		FCTA	FCTA	FCTA	Federal Capital Territory Administration (FCTA)		Federal Ministry of Transportation			FCTA		
	Infrastructure, Facilities	Federal Capital Development Authority	Department of Engineering Services FCDA	FCTA	Department of Engineering Services FCDA	Federal Ministry of Works and Federal Ministry of Transportation		Federal Ministry of Works	Federal Ministry of Works	FCTA	FCTA	FCTA	
Operational level <i>How to efficiently implement services?</i>	Operations / Maintenance		AUMTCO (public company), NUTCO/other private bus companies	Abuja Rail Mass Transit/Nigeria Railway Corporation (NRC)	AUMTCO	FCTA	Nigerian Association of Road Transport Owners (NARTO)/ Road Transport Employers Association of Nigeria	Painted Abuja Taxi (PAT)/ Private Taxi Drivers	Federal Ministry of Works	Directorate of Road Traffic Services(FCT)	AUMTCO	FCTA/ Private	
Problematic		<i>Responsibilities not allocated, unexercised or conflicts between actors annihilating the action</i>											
Insufficient		<i>Responsibilities not sufficiently defined and latent conflicts between stakeholders</i>											
Non applicable													

Figure 15: Governance Matrix for Abuja

2. Main findings in respect of priority thematic areas

2.1 Institutional framework for urban transport management

Nigeria is a country where **contrasts between cities** are evident; its territory shows disparities and the logics of a federal system are well justified. However, pertaining to urban transport management in particular, it generates a system where relationships between Federal, State and Local entities require substantial **coordination**. Throughout Nigeria, **inadequate regulation** of the sector contributes to poor quality, unsafe, insecure and costly service delivery to the travelling public. Indeed, the highly complex arrangement between Federal, State and Local entities is a path dependency that needs to be properly taken into account in any program concerning the management of urban transport. Federal-State-Local arrangements are particular to each city, yet the myriad of actors is a constant for all cities.

On top of the above, Federal entities suffer from a glaring lack of coordination. Institutions and their human and financial resources are the main instruments for **policy implementation**. Where they are not adequate, and/or are inappropriate, it is difficult to have good policy implementation. Presently, there are three ministries responsible for overseeing activities in the transport sector, two of them directly concerned by urban transport. The Ministry of Transport and the Ministry of Power, Works and Housing have overlapping responsibilities and, as a result, send mixed signals to their State and Local counterparts. Secondary cities, due to their comparative less availability in resources, are likely to suffer the most from the problematic situation. The division of **responsibility among the ministries** is understood to be as follows:

- Transport: responsible for overall policy formulation and coordination and for rail, sea and inland waterways and road transport regulation;
- Power, Works and Housing: responsible for road transport infrastructure.

Recent programs, and namely the **National Transport Policy (NTP)** – even if not directly dealing with urban transport in its entirety –, demonstrate a renewed interest in planning and management of transport in Nigeria. Excluding the experiences of LAMATA (and, eventually, the mass transport projects of Lagos), the country's cities had gone through a period where there were few plans and restructuring programs were carried out. Initiatives for new institutional frameworks were few and far between. As per with urban development master planning, transport planning relied on outdated plans and institutional setups did not adapt to current conditions. The **excessive focus on infrastructure projects** further exacerbated gaps in service provision of public transport.

The strategy in support of the stated policy for the recently approved NTP is as follows:

- Undertake a review of the **allocation of responsibility** between the different ministries and, more specifically, between the different agencies in the sector to ensure their consistency with the modernization agenda for the sector and the new policy direction. Such a review could reveal opportunities for achieving efficiency and effectiveness gains and cost reduction. However, its main objectives should be seen as ensuring that transport sector agencies are appropriately mandated in line with the new policy direction of the government and coordinated. Areas of overlap should be removed and currently un- or under- addressed area (e.g., urban transport) assigned to the most appropriate existing or new agency. The review will likely reveal areas where existing legislation is inadequate.
- Set **measurable performance targets** for agencies and their key officers based on the publicly monitored results of the above review of responsibilities. Indeed, appointment of key officers of some strategic agencies may need to be delayed till completion of the above proposed functional review.

Another – yet related to the above – pitfall in the problems of transport management in Nigeria is the lack of a link between urban planning and transport planning processes. Out-dated documents are often left unimplemented and their medium- and long-term visions are not carried out. In general, urgent decisions in transport management take priority over long term visions and they hamper the latter's objectives creating path-dependencies difficult to overcome. In striving to improve mobility for its citizens, the Government needs to recognize that streamlining transport governance is very important and a continuous process. There is no Transportation Master Plan from the Federal Government that guides its transport infrastructure plans. Such a plan must be constantly updated to adapt to urban mobility changes and better reflect Nigeria's present transport needs. It would be used both to plan and assess future infrastructure developments, as well as to develop initiatives and measures that will benefit citizens' daily lives.

Taking into account the complicated arrangement that involves Federal, State and Local entities, transport authorities are likely to play a major role in grouping key responsibilities for urban transport. This should be the role for NTP, where the authority will support **integration of all transport stakeholders** in order to attain more effective planning, implementation, monitoring and development of mobility solutions for Nigerians. The recent experience of LAMATA, with its ups and downs, is an in-house example that shows the advantages of one such approach.

Nonetheless, the situation has advantages that can be used to their full potential to produce institutional setups best suited to each city. Indeed, in this case, the Federal-State-Local arrangement is likely to create context-conscious solutions most adapted to each city's urgencies and long-term visions. Nigeria, being one of the richest countries in the region and in the continent, has untapped potential in terms of **human and financial resources** that can be put to use in the urban transport domain. The LAMATA experience is proof that it is possible.

The creation of LAMATA in Lagos sought to address the issue of institutional complexity:

[There] are almost 100 agencies, ministries and local government departments at local, state and federal level government levels playing a role in transport provision and/or services in Lagos. Often most develop and implement their own policies and programs in isolation and without much regard to their effects on the policies or activities of other agencies operating in the city. [LAMATA] was therefore created in 2003 to provide overall vision and strategic planning basis for addressing the long-neglected transport needs of the metropolis and to coordinate the activities of the different executing agencies to provide a common and consistent basis for implementation.

Source: Mobereola 2006

Oftentimes, **differences in political focus and strategic direction between Federal Government and the State Government** result in poor cooperation between State and Federal agencies. LAMATA, for instance, has been unable to assume control of the declared road network in Lagos which is part of federal roads networks. This is because LAMATA is seen as a State body by the Federal Government. The differences in focus and direction leads to inadequate regulation of the sector contributing to poor quality, unsafe, insecure and costly service delivery to the traveling public. The lack of National Transport Policy, plan and implementation strategy has meant that Lagos State has to develop policy, plan and implement by herself in isolation without the input or leadership from the Federal Government to address the persistent mobility problem of Lagos.

Box 2 - Critical success factors for LAMATA

Different success factors have been identified to explain LAMATA's current success. The list includes the following elements:

- Establishment backed with robust legal and regulatory framework with a clear vision and power to address urban transport issues.

- Sufficient political will: strong political support and commitment from government was a demonstration of trust in LAMATA to address urban transport issues in Lagos.
- Leadership and professionalism: LAMATA was well resourced (technically and financially) and empowered transport institution.
- Technical and financial support (World Bank).
- Dedicated and predictable sources of funding for infrastructure and rolling stock.
- Adequate stakeholder engagement: generation of a public acceptance of the scheme through education, interaction and quality service experience.
- Environment and social safeguards.
- Public confidence gains through commitment to providing good public transport Infrastructure.

Without Federal government commitment to synergy, policy and funding, responsibility to solving the mobility of Lagos has shifted to the States, local government and the private sector with less funding capacity. Nevertheless, LAMATA has continued in its effort to build a strong relationship with the Federal Government by actively demonstrating the desire to cooperate and support the objectives and initiatives of the latter.

Considering the above analysis, **institutional shortcomings** in the transportation system in Lagos could be attributed to:

- Absence of a well-articulated and adopted policy and strategic framework for the transport sector;
- Inappropriately mandated and under-resourced institutions leading to inefficient provision of unregulated services;
- Fragmentation and duplication of institutional responsibilities among the various bodies; and levels of government;
- Lack of inter-agency coordination among the various bodies; and
- Absence of standard procedures for the technical and economic evaluation of programs and projects.

At the State level, the institutional setup is still relatively atomized, but coordination efforts have come to fruition. Agencies commissioned by the Lagos State Government for public transport management include: Lagos State Traffic Management Authority (LASTMA), LAMATA, Lagos State Ferry Services (LSFS), Lagos Inland Waterways Authority (LASWA), Lagos State Ministry of Public Transport (LSMPT) and Vehicle Inspection Unit (under the State Ministry of Public Transport) in Nigeria.

Many and varied infrastructure and service provision initiatives can be combined with the potential availability of resources to kick-start reforms pertaining to the institutional setup at the Federal level. Indeed, similar to what the BRT-Lite produced in Lagos, such programs can be a catalyst for change. **Opportunities** exist and it is the responsibility of Nigerian decision-makers to seize them and to create a long-term vision that harmonizes local needs with international partners' involvement in the management of urban transport. International partners can have divergent approaches, sometimes contradictory, and it ought to be acknowledged by decision-makers that they need to coordinate their action in their territory. While these international partners have evident interest in participating in programs and projects in the country, they do not follow a roadmap as can be imagined by Federal and State decision-makers.

Lastly, it is important that authorities develop a **long-term vision** and that they share this vision with all decision-making levels. Political change is not to introduce new visions each time political officials

take office. While not a Nigerian-only issue, technical long-term visions are often molded and overlooked as political change happens. Ideally, the vision should remain through political change.

Strengths	Weaknesses
<ul style="list-style-type: none"> ■ Renewed recognition from Federal authorities that institutional change needed. ■ Federal prioritization of urban mobility reflected in ERGP with its emphasis on transport as an enabler, adoption of a National Transport Policy and new emphasis on NMT and green transport ■ Emerging potential for public-private partnership re urban transport (recent ERGP focus lab has produced quick results amounting to millions of dollars) ■ Example of LAMATA proves that implementing transport authorities is possible in the institutional framework of Nigeria’s urban transport systems. 	<ul style="list-style-type: none"> ■ Link between urban planning and transport planning is weak. ■ Non-alignment of road construction and maintenance with urban transport policy and planning ■ Planning documents not fully implemented. ■ Excessive focus on infrastructure programs. ■ Too many managing entities. ■ Responsibilities of MoT and MPW&H not clearly defined with some overlaps ■ LG in charge of largest share of roads, but lacks necessary resources (human/financial) ■ Lack of political will to provide funding for road transportation management – lack of maintenance culture ■ 75% of states still need to establish fully fledged Ministries of Transportation ■ Lack of good urban transport data for planning.
Opportunities	Threats
<ul style="list-style-type: none"> ■ Human and technical resources by being one of the richest countries in Africa. ■ Recent infrastructure and transport service initiatives can serve as a catalyst for change. ■ Interest from international partners taking part in transport-related programs in Nigeria ■ Pressure from citizens for better transportation ■ Potential to use vocational schools/universities to grow required transportation skills. ■ Leveraging legislative/policy progress where children, gender and disability rights for inclusive approach. ■ Leveraging job creation and revenue potential of urban transport to increase public investment ■ Leveraging better relationships between federal and states (such as transport commissioners forum and stakeholders conference). 	<ul style="list-style-type: none"> ■ Different visions from Nigerian and international partners might contradict one another, thus reducing effectiveness of programs. ■ Political changes tend to halt on-going programs. ■ Rate of urban population growth exceeds government capacity to manage it ■ Impacts of climate change, security threats on urban transport and roads ■ Lack of financing mechanisms (such as soft loans) to enable procurement of vehicles in line with a growing population ■ Lack of consultation regarding transport projects can undermine projects (vandalism, project abandonment).

Table 4: SWOT analysis of stakes linked to the institutional framework

2.2 Funding for urban transport management

In general, the urban transport sector in Nigerian cities is dominated by paratransit sector that has its own financial logics. A key challenge for the paratransit sector is that operators - largely made up of private vehicle owners who are registered under Operator Unions and employ drivers to offer transport services - either do not generate sufficient profit or do not allocate a sufficient share of profits to cover their recapitalization requirements resulting in poor fleet quality, inefficient operations resulting in poor profitability reinforcing a cycle of under-investment.

As a characteristic of the paratransit logics that guide the current system, any profit being made is quickly taken out of the system into private hands thus avoiding reinvesting them in the public transport sector. Elements of paratransit reform need to be considered when opting to improve efficiency of revenue collection from the system: consolidation and professionalization campaigns are likely scenarios. Once a minimal level of professionalization is achieved (and this is not necessarily full-fledged formalization of the sector), operators can realize the importance of fleet renewals and quality improvements on their side. Some of their profits could then be put back in the system.

But for the moment informality is dominant in the economy. While, for instance, street vendors are practically everywhere in Lagos, the State Ministry of Environment considers them a damaging practice for the city, setting fines of up to U\$ 33 and a likely imprisonment term of six months⁴⁴. Yet, the level of informality is at the base of economic empowerment and development in the region: 75% of the cities' basic needs, including transport services, are provided by the informal sector⁴⁵, and Lagos is no exception to the rule. The risk is then that informality is considered in all its negative definition and initiatives' quests are aimed solely at its eradication. Indeed, considering the above situation, not acknowledging a certain dichotomy in the management of urban transport provision will likely result in blockage from incumbent paratransit operators.

Moreover, the current logics of paratransit service provision are indeed a likely hurdle in creating original funding opportunities. As they design their services in a quest for daily profitability, overlooking monthly and long-term capitalization needs, the timeframes and the general logics for decision-making are still different between operators and authorities. As above, this antagonism between operators and authorities is a threat to any original funding options that involves the incumbent private, mainly, molues and danfos operators but also okada and keke services when looking at a longer-term vision.

Local and national governments need to find ways to ensure sufficient funding in the sector to improve the quality of provision through professionalization programs. But Nigerian cities require also funds for regulation and planning, investment in infrastructures, etc.

⁴⁴ Source: Lawanson & Omoegun 2018

⁴⁵ Source: Simone 2004

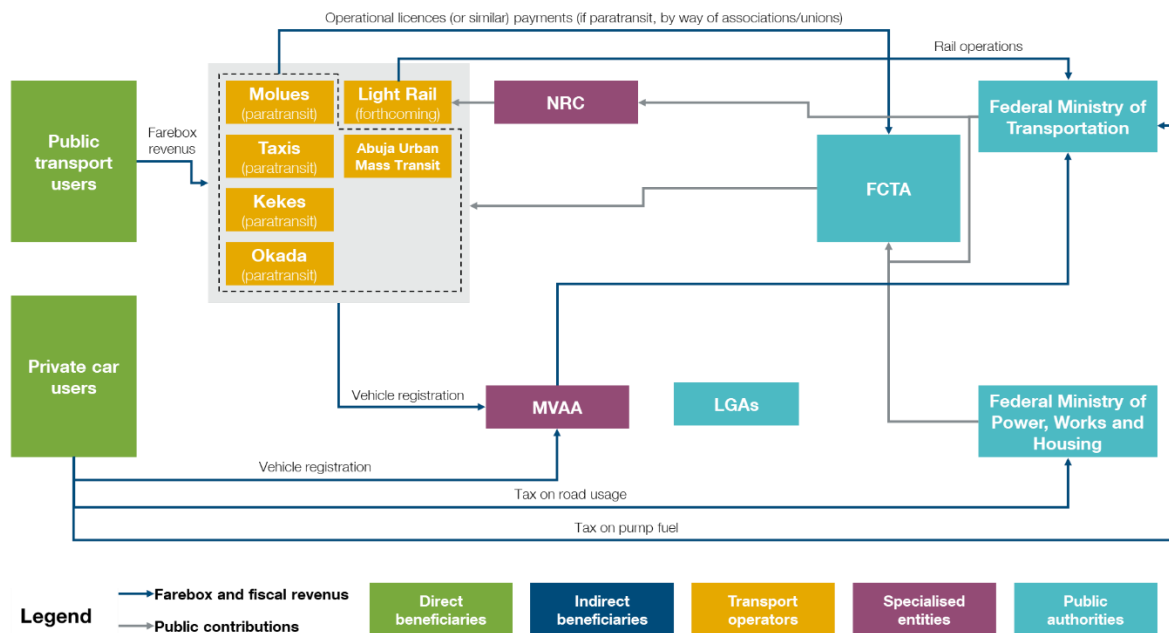


Figure 16: Financial Flows for the Transportation Sector in Abuja

In order to implement adequate projects and programs, Nigerian cities can get inspiration from the recent evolution in Lagos State; where funding for urban transportation has been done in different ways over the years. The Lagos State Government (LASG), through LAMATA, has used innovative ways of funding transport infrastructure projects. Initially, the spread of the funding was skewed largely towards the international donors, later through Lagos State budgetary allocation because of confidence the State has developed in LAMATA. Sources of funding include:

- **Borrow from International donors** – The initial funding for LUTP was borrowed from the World Bank and French Development Agency (AFD). The funding included rehabilitation and maintenance of major roads to improve public transport performance.
- **Lagos State government** – The State Government is the main contributor for funding of urban transport through budgetary allocations. These resources are mostly for infrastructure development whilst the operations are handled by the private sector.
- **Public Private Participation (PPP)** – Participation by the private sector to purchase, operate and maintain buses based on Key Performance Indicators introduced and regulated by LAMATA.
- **Lagos State Transport Fund** through the Motor Vehicle Administration Agency law was enacted stipulating that 50% of MVAAs revenue should be remitted to the Transport fund which will be utilized by LAMATA.

International partners and donors who support transportation in Nigeria, include the World Bank (WB), African Development Bank (AfDB), JICA, AFD and the Chinese Government. The activities of these main donors are summarized below.

Since 2012 the World Bank has provided assistance to the urban transport sector in Nigeria through the Lagos State Urban Transport Project (LUTP), which includes the establishment of LAMATA, development of BRT system, rehabilitation of roads, capacity building, and so on. Since 2010, the World Bank has been in a co-finance scheme (parallel) with AFD.

The World Bank provided 100 million USD funding for the 135 million USD Lagos Urban Transport Project LUTP 1 between 2002 and 2010. Under this program LAMATA was established, the BRT system was launched, and capacity building of the stakeholders was carried out.

Between 2010 – 2015 the World Bank and the AFD co-financed (parallel) the LUTP 2. The total project cost was 325 million USD with the World Bank and AFD providing 190 million and USD 100 million USD

respectively. Successes of this project include the launching of new BRT routes, road renovation, and capacity building.

FINANCIER	COMMITMENTS
LUPT 1 (2002–2010)	
International Development Association (Ida)	USD 100 million
Nigerian Govt.	USD 35 million
Total Project Cost	USD 135 million
LUPT 2 (2010–2015)	
French Agency For Development (AFD)	USD 100 million
International Development Association (Ida)	USD 190 million
Nigerian Govt.	USD 35 million
Total Project Cost	USD 325 million

Table 5: World Bank Initiatives in Nigeria

The World Bank is also conducting detailed design (DD) of BRT control centers, automatic vehicle location system, and customer information system (CIS) in Lagos.

The first BRT project to be financed by the AfDB Group is the development of a Bus Rapid Transport (BRT) system in Abuja. The Phase I (pilot phase) of the project is estimated at USD 158.10 million; however, the AfDB Group has allocated about USD 50 million under ADF. The AfDB Group will also leverage funding (another USD 50 million) from the Clean Technology Fund (CTF). AfDB also plans to extend 60 million USD through private sector financing for the 275 million USD Lagos cable car project

China’s assistance for Nigeria tends to be on a bi-lateral basis and does not follow the Official Development Assistance (ODA) framework. China’s developmental support to Nigeria has taken the form of State sponsored Chinese companies participating in infrastructure construction and PPP projects. These companies are indirectly supported by funds and loan guarantees from China’s public financial institutions such as The Export-Import Bank of China. Export Import (Exim) Bank on the basis of 60% from the Chinese and 40% from the FCT administration

The Transport Fund is a valid example of how funding for urban transport management can be organized in other Nigerian cities: the Motor Vehicle Administration Agency (MVAA) law was enacted stipulating that 50% of MVAA revenue should be remitted to the Transport Fund which will be utilized by LAMATA to fund transport infrastructure development and services provision. The 2017 budget for Lagos projected a revenue of about \$16.4 million from the Motor Vehicle Administration Agency⁴⁶.

⁴⁶ Source: Lagos State Government 2017

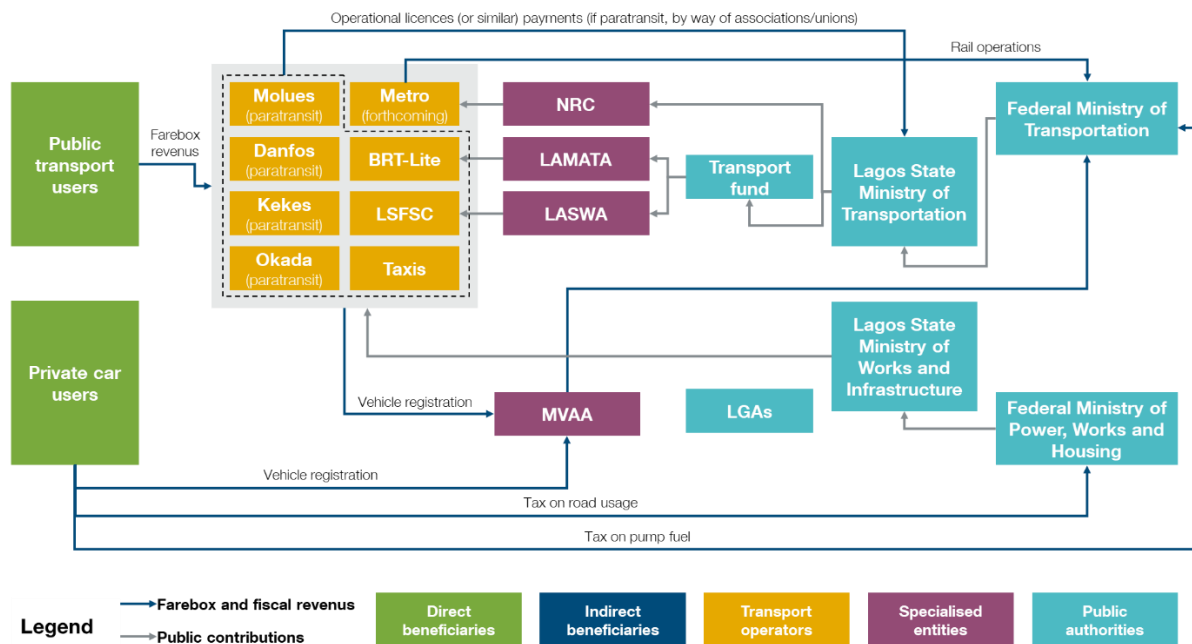


Figure 17: Financial Flows for the Transportation Sector in Lagos

While funding is the responsibility of State level authorities, LAMATA continues to actively engage with Federal level authorities to demonstrate willingness to support both levels’ objectives. While particularly adapted to the metropolitan area and institutional setup of Lagos, similar funds – under the umbrella of State level institutions – can be envisioned for Abuja or other cities to fund the implementation of transport authorities.

The implementation of this kind of funding, at the state level, will however require legal framework which is currently not stated in the National Transport Policy. Currently at national level though, a National Petroleum Trust Fund exists which accrues funds received from the sale of petroleum products less the approved production cost per liter which, is as follows-(i) cost of crude oil (ii) excise duty and VAT (iii) marketer's allowance. Such type of funding is not earmarked for urban transport at the moment.

In recent years, the government has paid serious attention to the transport sector particularly the rail sector in terms of federal budgetary allocations. From the 2017 national budgetary allocation for the rail transport sector made significant funds available for railway feasibility studies, suggesting that more railway lines will be constructed over the next few years (Table 1 and Figure 3.1). The funding priority given to the rail sector seems to suggest a commitment to delivering an intermodal transportation system across the country.

YEAR	TOTAL BUDGET (M\$)	ROAD SECTOR(M\$)	RAIL SECTOR (M\$)
2015	22,000	90.8	2.8
2016	30,000	1,300.0	749.0
2017	24,000	606.0	500.0

Table 6: National Budgetary Allocation by Sector

Strengths	Weaknesses
<ul style="list-style-type: none"> ■ Future adoption of the NTP and subsequent focus given to urban transport is an important step in the right direction ■ There is an observed willingness of Federal and State levels to fund projects that needs to be confirmed. ■ The current political stability and continuity in government encourages investment. 	<ul style="list-style-type: none"> ■ Conflicts between Federal, State and Local institutions seeking to secure funding for their initiatives and/or programs are likely to hamper programs. ■ There is an observable absence of sustainable sources of funding for Transport Authorities (in order words, no dedicated fund for urban transport exists). ■ In general, the sector relies essentially on donor funded projects for investments. ■ There is an inefficient revenue collection from transport operators; profits generated by transport operators are not reinvested in the sector, which stalls its development resulting in obstacles to, for instance, renew the existing fleet. ■ The lack of transport fund
Opportunities	Threats
<ul style="list-style-type: none"> ■ Revenue generation by way of original programs (i.e. land value capture and fuel taxing). ■ Quality of delivery of services and value addition will encourage revenue mobilization and generation 	<ul style="list-style-type: none"> ■ Private operators that function under paratransit logics might be difficult to involve in systemic reform programs. ■ Inability of government to appropriately communicate with the stakeholders ■ The important informality component in service provision cannot be overlooked.

Table 7: SWOT analysis of stakes linked to the funding mechanisms of urban transport

2.3 Civil society participation in urban transport management

Besides **private sector involvement** in the provision of services, examples of **civil society participation** that can be listed in transport management of Nigerian cities are limited; one such case is that of Lagos. A key part of LAMATA’s strategy was, and still is, to improve multimodal transport in the state by encouraging stakeholder engagement. As part of its project implementation for the BRT-Lite, various stakeholder meetings were organized to better understand the challenges and get buy-in and cooperation. The objective of the community engagement strategy launched by LAMATA at project commencement was therefore aimed at developing within the citizens of Lagos the same kind of ownership level for the BRT-Lite system found among delivery-oriented stakeholders (Mobereola 2006). The essence of this ownership scheme was to build community knowledge of the BRT-Lite system and the benefits to its users. Some of the engagements included:

- Multiple stakeholder meetings with users, media, etc. before the project commencement;
- Interactive sessions with the press;
- Inter-ministerial meetings with ministries and agencies;
- BRT Parliament and village square meeting with users, members of the private sector and the media. The parliament consists of politicians, senior LAMATA officers, the lending bank, state government officials, and user representatives (including physically challenged commuters).

Another case is the **Railway Bill**, which is designed to facilitate achievement of this by removing the present monopoly on rail operations conferred on the Nigerian Railway Corporation. Implementation of the Bill and the award of major investment contracts should be used as opportunities for facilitating the creation of a Nigerian rail industry involved in both the provision of rail infrastructure and services on it. Thus, privatization frameworks and packaging of infrastructure and service contracts should create opportunities for private sector involvement, particularly Nigerian private sector.

In most other cities, nevertheless, Federal, State and Local authorities have all limited contact with civil society groups. Partly because of the latter's lack of organization, the main obstacle is that inhabitants are not yet sufficiently educated on transport issues. Yet, examples of civil society organizations or associations dedicated to transport topics can be put forward.

Firstly, **NGOs** related to urban transport, and sometimes in transport issues in general, are starting to be recognized and their vision taken into account. Such is the case, for instance, of Trasmín⁴⁷, an organization seeking sensitization of users and operators in public transport systems across the country. The FMoT officially engages with them in discussions on transport management. However, and legitimately still embryonic (the process started recently, Trasmín was created in 2014), the process shows promise of creating improved environments for discussion between institutional and civil society stakeholders. Other active trade unions include the National Union of Road Transport Workers (NURTW) which is an independent trade union that serves the interests of transport workers in the road transport sector. The union has its leadership at both national and grassroots level seeks to promote social stability for all workers in the transport sector. The Nigerian association of road transport owners (NARTO) are major stakeholders in freighting and Commercial Transport Operations. Other NGOs, while comparatively less present, also exist and can be of interest in developing civil society participation.

Secondly, authorities at state and federal levels have created **channels of communication** to discuss operational issues pertaining to access to becoming an operator and to licensing processes with private operators. Unions thus represent the paratransit sector's interests and unofficially act as information vectors that are transmitted to the myriad of operators. These discussions are restricted to institutional authorities and paratransit representatives, with seldom involvement of other civil society stakeholders. Another key group is the formalizing and integrating of the informal public transport operators (danfo, molue, keke, okada) into the overall multimodal urban transport plan. A main objective of most governments is to reduce excess traffic thus upgrading mobility, sustainability and accessibility in their respective states or LGA. Rather than exclude them or view them as a hindrance, government must look into formally incorporating them as part of the transport plan through public transport. For better efficiency and safety, registering and incorporating the informal group within the transport sector, coupled with the use of technology will provide higher quality transport in the state. All of this involves government working with the private sector to strategically invest in the transport sector to make affordable and accessible transport services for all. This can be achieved by ensuring all areas of the transport value chain are covered. For example, **ensuring three-wheelers** more readily available to those who will like to register and own or operate them. Government-backed cooperative societies can provide some of the needed funds to finance the purchase, maintenance and operation of the three-wheeler vehicles and portions of the transport plan. This front-end investment can be paid back over a long-term period with interest. This will go a long way in linking up the remote locations to the main transport arteries. The fares charged by operators must be transparent to all and controlled to ensure that operators do not take advantage of the consumers.

The above two process are nonetheless insufficient when attempting to involve the entire civil society. For instance, neighborhood associations, commercial groups and/or academic structures are comparatively and substantially less present in the process. Not including them is likely the result of a

⁴⁷ TRASMIN is the acronym for "Travellers Sensitization and Mediation Initiative". TRASMIN's website is a platform created for all Nigerian travellers to air their views, proffer suggestions and make inputs necessary to improve the Nigerian transportation system. It is a platform for all stakeholders in the sector to take advantage of; identify the loopholes that have been impeding efficient transportation system and consequently enact and articulate the positions and actions necessary for improvement. (cited from trasmin.org, visited in August 2018).

lack of organization between two counterparts. Without effective groups and/or counterparts to include in participation efforts, authorities might not see the pertinence of one such process. As a result, authorities do not necessarily encourage participation or create the necessary channels for it to be effective in planning and management of urban transport. Any stakeholder participation is limited from planning phases to implementation phases; minimal concerting-process does not occur in current conditions.

Without well-organized counterparts, authorities are also not necessarily held **accountable** for the performance of mobility projects and services. Limited, if at all, systematic monitoring of performances is conducted by either authorities or civil society, including eventual NGOs dealing with transport issues. Moreover, communication efforts are also insufficient as the public (users and inhabitants alike) fail to fully grasp scopes of programs and the objectives they seek to accomplish. Further exacerbating the situation, the country’s cities appear to often point at recent failed attempts at participation that have created an external blockage to the process: involved stakeholders, and particularly institutional side stakeholders, are more reluctant to engage in new process where the outcome is still uncertain.

Because there is substantial and renewed interest in transport in urban areas in the country, several projects will be implemented. Each project will bring about new opportunities to start implementing participation methods. By designing said methods adequately, it is possible to utilize methods later on different projects in a quest to standardize practices at the federal level and boost willingness to encourage participation by all stakeholders.

A final threat to implementing adequate and context-conscious participation processes is the **urgency** upon which programs are put in motion; it leaves communication, education and participation campaigns as a worthy yet unrealistic process. Indeed, civil society participation is likely to take up time and, in some cases, delay implementation. When urgency is prioritized by stakeholders, participation process will tend to be overlooked in favor of rapid solutions to on-going problems.

Strengths	Weaknesses
<ul style="list-style-type: none"> ■ Transport operators’ unions are involved in planning and implementation processes. ■ NGO’s involvement is growing. 	<ul style="list-style-type: none"> ■ Performance of mobility projects and services is not systematically monitored and communicated to the public. ■ Several stakeholders, such as users and private companies, are only seldom engaged in the process of urban transport planning and implementation. ■ Government agencies responsible for urban transport are not necessarily held accountable for the efficiency of urban transport services.
Opportunities	Threats
<ul style="list-style-type: none"> ■ Projects and programs being planned or implemented can bring about methods on civil society participation that can, if adequately designed, be later used on other initiatives. 	<ul style="list-style-type: none"> ■ Adopting too many consultation and participation models (each one coming from, for instance, different international partners) might contradict one another.

Table 8: SWOT analysis of stakes linked to civil society participation in urban transport management

2.4 Multi-modal planning and operations for city centers

In the rawest terms, the lack of integration **between transport planning and land use planning** is a major obstacle in developing multimodality in Nigerian cities. As cities evolve and continue to expand

and sprawl, multimodal service provision becomes ever more urgent but, also, ever more difficult to implement. Governance and operational issues combine to create a difficult environment for implementation.

One of the main problem in creating multimodal transport services for Nigerian cities is the lack of policy at the State level, the scale where multimodal planning and operations are meant to be developed. Without the vision, it is difficult to have a strategic plan that sets out the overall approach to deliver the vision, guiding improvements needed over the long term. Improvements are meant to match the scale of challenges to support growth, regeneration, and other social improvements. While at the Federal level, general policies are being published and general consensus on the objectives can be found in most recent documents; at the State level, in most cases and with notable exceptions, there is a lack of clearly stated vision for a multimodal system. The focus on infrastructure provision, road capacity and on catering for the need of motorized users is still entrenched in planning process. The shift towards a vision where public transport and non-motorized options are the priority and governments need to prioritize institutional and manpower development.

Pertaining to the place of non-motorized modes, the general diagnostic for Nigerian cities is that, currently, they are limited infrastructure provision for these modes. Cities have seldom designed for pedestrians and for other NMT modes (particularly bicycles); the current situation is therefore one where most vulnerable users are exposed to dangers from differences in speeds with motorized modes. However, with the participation of international donors, a paradigm shift has begun as non-motorized modes are not acknowledged and are being considered in planning phases. Proof of this can be found in the recent Lagos Non-Motorized Transport Policy (published in April 2018 by LAMATA and the Lagos State Ministry of Transport), which seeks to promote walking and cycling as well as equitable allocation of public space and infrastructure by prioritizing space for pedestrians, cyclists, and public transport over space for personal motor vehicles in the use of the city's limited public space. The policy introduces the new vision of Lagos State as: follows:

Too often, transport planning has concentrated on infrastructure, traffic costs, and benefits. Going forward, mobility planning should focus on people, not vehicles. In harmony with this new focus, the Policy seeks to achieve a more equitable allocation of road space by incorporating a focus on NMT and public transport (PT) in the planning, design, managing, and budgeting stages of transport projects. In adopting an NMT-PT based approach, Lagos aims to stabilize the use of personal motor vehicles (PMVs), thereby improving health, safety, and environmental quality, and enhancing social equity and economic activity.

Source: LAMATA & Lagos State Ministry of Transport 2018.

Historically, transport has been seen more as an administrative activity rather than the technical activity that it is. This perception has unduly influenced key appointments and recruitments within the sector. This perception must change as transport is a highly technical activity that needs to be overseen by people with requisite technical qualifications and experience. This change in perception is important to achieve desired improvements in the performance of the sector. To this effect, institutional and manpower development should be predicated on the following factors among others:

- Heads of agencies to have relevant technical and managerial expertise in the business area of the agency;
- Proper agency mandate, appropriately supported by legislation, with proper delegation of authority;
- Setting of evidenced based performance targets for the agency and its key staff
- Staff appointments based on technical knowledge and merit; and
- Clearly outline career development and training plan for staff supported by adequate financial and human resources.

Lagos has, in this sense, taken several steps forward. The multi-modal planning and operations strategy is based on delivering high quality public transport system in the city to significantly improve the quality and accessibility of public transport. In this perspective, bus services (BRT-Lite) have been already implemented while rail options are under construction. Awaiting effective results of the most recent projects, the perception is that State authorities in Lagos have adopted new visions. Positive results from said projects further demonstrate willingness and that authorities have developed necessary capacities to conduct important and catalytic projects:

The BRT-Lite is the first organized mass transit in Lagos metropolis and it stands as a potential to improved bus services to address mobility problems in the metropolitan area and can be a practical alternative to highway reconstruction.

Source: Somuyiwa A. & Adebayo I.T. 2009

Starting with the creation of LAMATA, the city has indeed started to develop a multimodal vision for urban transport. LAMATA has developed the Lagos Strategic Master Plan which aims to develop a fully integrated transport system to cover activities centers in the mega city region. Components of the Master Plan include:

- Six (6) Rail Lines
- One (1) Monorail Line
- Fourteen (14) BRT Routes
- Three (3) Cable car projects
- Over twenty (20) Water Routes

By finding and/or defining a role for each mode and giving it a place in the urban territory, a fully multimodal system is likely to occur. Indeed, water, rail and road modes are possibilities and have the potential to structure multimodal public transport modes that will need to be completed by non-motorized modes policies and parking policies.

In other Nigerian cities, while efforts can be mentioned (for instance, Abuja's recent program on bus service provision), the general situation is one where traffic management options, where non-motorized modes planning and programs and where parking policies are not necessarily at the top of priorities for decision-makers. Said initiatives often take time to be put in motion and are not necessarily aligned with political terms, thus hampering their likeliness for implementation. The situation in most cities can thus be described as follows:

- Lack of interest in traffic management schemes, leaving public transport to fend for itself and unable to boost its general efficiency.
- Insufficiency in the provision of infrastructure and measures for public transport services in place.
- Lack of interest in non-motorized modes, and particularly walking, that fall off planning processes; their current place in Nigerian cities is less than appropriate. Indeed, according to a 2012 survey, even for last mile connectivity with the BRT-Lite in Lagos, users prefer motorized modes (Olawole 2012) because of sidewalks not being sufficiently adequate and, subsequently, because of the dangers that come from being the most vulnerable users in a fight for road space.
- Limited or non-existent interest in developing parking policies to boost multimodality in city centers where most activities are located, because of highly monocentric urban structures, and parking demand is highest.

Principal threats in the development of a multimodal planning and operations might center on the role of the myriad of institutional stakeholders that seek isolated implementation of their projects. By failing to follow a clear vision, with a well-defined and logically designed sequence of programs, implemented projects clash with each other. Such a situation, then, results in increased complexities

when seeking multimodal systems. As stated above, the need for urgent solutions legitimizes urgent programs implemented in isolation of a general plan; for new approaches to proposing harmonization between urgent solutions and long-term planning for all concerned decision-makers and project responsible authorities.

Strengths	Weaknesses
<ul style="list-style-type: none"> ■ The BRT-Lite experience demonstrates willingness and capacities of local stakeholders. ■ The implementation of LAMATA is a potentially ideal example of multimodal integration that can be adopted elsewhere in Nigeria. 	<ul style="list-style-type: none"> ■ The current dominant approach is focused on infrastructure provision, road capacity and serving the needs of motorized users; shifting the transport demand towards public transport and non-motorized modes is rarely considered. ■ Traffic management problems are not addressed, public transport lacks priority measures to boost its efficiency. ■ There is an insufficiency in the provision of infrastructure and measures dedicated to public transport. ■ Non-motorized modes, and particularly walking, are often neglected in planning processes; their marginal place in the cities is proof of an underdeveloped issue. ■ There is limited, maybe inexistent in secondary cities, interest in parking policies. ■ Planning in silos
Opportunities	Threats
<ul style="list-style-type: none"> ■ The myriad of public transport modes (rail, road and water) is waiting to be organized. ■ Active involvement of the private operators in transportation planning. 	<ul style="list-style-type: none"> ■ The implementation of isolated projects (from either Federal or State or Local authorities) might hamper the development of a multimodal vision. ■ Lack of support from beneficiaries. (Land use challenge).

Table 9: SWOT analysis of stakes linked multi-modal planning and operations for city centers

2.5 Public transport performance

Cities that rely on **paratransit options** for public transport services are often the norm in the region. Different combinations of minibuses, microbuses, collective taxis, motorized tricycles and moto-taxis ply the streets of African cities in quest for clients and with general disregard for the optimization of service provision. Most Nigerian cities fall within this scenario, where institutional options are seldom more than a secondary alternative, if they exist at all. Without reform, public transport services will respond to a quest for profitability instead of answering to the logics of service provision.

With the notable exception of Lagos, planning authorities tend to view paratransit as modes that **need to be eradicated** from the system. Framed within a less than welcoming environment, private service providers resort to aggressive defense of their interests (sometimes becoming relatively violent when reform programs arrive) and general refusal to part-take in any type of systemic reform processes. This situation creates a vicious cycle difficult to break: while operators refuse reform, they also obstruct paratransit – formal service complementary alternatives, authorities then view operators as elements that need to be withdrawn from the system and propose initiatives in this light, and once presented with the latter, operators refuse reform to start the cycle again. Without complementarity between paratransit and mass transport options, **disruptive competition** continues to exist and to hamper reform initiatives.

While the situation in Lagos is by no means the ideal situation for public transport, it does show promise, mainly in terms of creating adequate environments catering for paratransit-formal complementarity arrangements. At the onset of the BRT-Lite program, trunk services were implemented in large roads, leaving the central lanes to mixed traffic and including high-capacity bus services on lanes nearest to the curbside. Yet, more important in this case, the BRT program did not forcefully exclude paratransit operators. Indeed, midibuses and minibuses continued operating on **service roads adjacent to the main** corridor. Authorities first accepted this because paratransit operators' services limited the need to invest in a large fleet of buses by creating capacity in similar routes. This type of arrangement has the promise of being studied and adapted in other cities.

The Lagos cases further proves two elements worth taking into account: (i) first, that State authorities have the experience (and likely the know-how too) to negotiate with paratransit operators; and (ii) that main corridors in cities can indeed serve as pilot projects to test new arrangements to best suit the demands of users and, in general, urban dwellers. In this sense, paratransit reform can be progressive – as it has in general been in Lagos – instead of radical thus improving the chances of success because operators will have the time to adapt and buy-in the entirety of the process.

As many countries in the region, **Nigeria lacks financial resources** and, hence public transport service programs are scaled down in their scope and objectives to best adapt to available resources. The gap between the country's economic needs for functioning multi-modal transport infrastructure and what is being invested in it arouses much concern. The result is inability of the country to maintain even the existing infrastructure and services, leaving aside meeting the needs of the future growth in population, with a serious drain on the economy. A number of countries are looking at user charges and private financing as a means to supplement public financing of infrastructure.

Given the very low fuel price as compared to countries in Sub-Saharan Africa and other countries, relative absence of toll roads, and a weak relation between vehicle taxation and damage caused to the road network, a number of opportunities exist in Nigeria to supplement financing for infrastructure. One of the tasks for the government should be to review opportunities for improving transport infrastructure cost recovery and possibly create a “transport fund” at local level by evaluating options for imposing fuel levy, restructuring vehicle registration fee, and implementing road pricing schemes. The institutional arrangements for managing the transport fund should also be examined.

Difficult to overcome, this threat can be mitigated by having secured sufficient resources directly destined to transport programs (see section on funding urban transport management) and incorporating the informal transport operators into a multi-modal transport plan.

Strengths	Weaknesses
<ul style="list-style-type: none"> ■ The BRT-Lite experience proved that it is possible to give paratransit services a role in the process by not excluding them altogether from the corridor. ■ Institutional stakeholders have experience in negotiating with paratransit operators. ■ For Lagos, the existence of strong public transport corridors is key in the eventual systemic reform. 	<ul style="list-style-type: none"> ■ Paratransit operators are not sufficiently coordinated with their institutional counterparts. There is a lack of professionalism in the paratransit sector. Fare setting mechanisms are not robust enough in secondary cities. ■ There is an absence of enabling environment to involve the private sector actors in the improvement of public transport services: the role of paratransit operators is not adequately recognized and suffers from mistrust from authorities. ■ There is a lack of complementarity between paratransit services and mass transit in most of the urban territories; each mode is effectively planned and operated independently from each other.
Opportunities	Threats
<ul style="list-style-type: none"> ■ The establishment of the NTC commission should be catalyst in reform processes. ■ Establishment of truck transit parks (by NSC) can bring an opportunity to work with freight transport. 	<ul style="list-style-type: none"> ■ Because public transport is, legitimately, competing for funds with other sectors in need of projects (water distribution, waste management, amongst others), cities might suffer from reduced funding to implement public transport services.

Table 10: SWOT analysis of stakes linked to public transport performance

2.6 National government support for urban transport management in secondary cities

Urban transport in the country is characterized by a number of challenges: large and rapidly growing urban population inadequately served by the existing transport system, declining standards of public transport, overlaps and conflicts among the agencies responsible for planning and implementing transport solutions, massive growth in the use of minibus services, rapid growth in ownership and use of cars and particularly motorcycles, inadequate and deteriorating transport infrastructure, and poor facilities for non-motorized transport (walking and bicycling).

A radical strengthening is required to manage the urban transport system successfully. This is not possible within the limitations of the current institutional structure. There is a need to clearly define responsibilities between federal, state and city level. International experience suggests that the most effective public transport system have strong, integrated metropolitan transport authorities (MTA). In absence of support from the Federal Government, the States and cities are left to find their own means to meet this challenge. Some States (like Lagos) are able to address the urban transport challenge more successfully than others and there is a need to replicate successful examples in the country.

The Federal Government's approach towards creating a multimodal transport model is in the recently parliamentary approved National Transport Commission (NTC) Bill which is similar to LAMATA law (refer to section 1.4.3.3). The new National Transport Commission is to implement the National Transport Policy and provide for an efficient economic regulation of the sector. The core functions of the NTC:

- To create an economic regulatory framework for the provision of transport services and facilities;
- To facilitate effective competition, promote competitive market, conduct and ensure that the misuse of monopoly or non-transitory market power is prevented in the provision of transport services;
- To promote private sector participation in the provision of transport services;
- To ensure that operators and users have equitable access to the use of transport facilities, services, channels and routes while having regard to the level of competition and efficiency of the regulated transport industry; and
- To monitor performance of the regulated sector. The lack of National Transport policy, plan and implementation strategy has meant that states have to develop policy, plan and implement by themselves in isolation without the input or leadership from the Federal Government to address the persistent mobility problem of each city. This, sometimes, leads to conflict of policy and plan between states and Federal Government.

Often presented as an arrangement that multiplies stakeholders and that, if not dealt with correctly, will result in complex matrices of relationships between Federal, State and Local institutions, this arrangement has nonetheless the potential to encourage programs that understand each city's context and the transport needs of its inhabitants. A federal type of arrangement has the real potential to decentralize decision-making processes, awarding, at the same time, metropolitan institutions – often placed under each State's umbrella – a major role in urban transport management.

Some key points to support of the stated Policy for the NTC include:

- Formulate specific, coordinated multi-modal policy for the urban transport sub-sector aimed at improving the quality of all urban transport infrastructure and services and their financing. An important dimension of this policy should be agreed to roles and responsibilities for the federal, state and local governments and the private sector in its implementation. The 1999 Constitution devolved the urban transport function to States and the States make their own laws on traffic and transport. However, in view of the weak state capacity and financial

constraints at the state level, it is imperative on the Government to create a federal agency at the national level to assist the states with the urban transport planning process and oversee implementation of the policy in collaboration with relevant stakeholders.

- Review specific structure, mandate, financing of the agency and its reporting arrangements by the new government before adoption. There would be a need to channel federal financial assistance to the states and cities to pursue specific activities in support of national objectives through the federal urban transport agency.
- Support states and cities in setting up metropolitan transport authorities to replicate the good example from Lagos.

Explained by population numbers and administrative functions located in the city, Lagos and Abuja, respectively, are the priority in terms of urban transport management. Project implementation demonstrates it. The attention given to the two cities results in a reduction of possibilities for secondary cities. There are, then, important disparities in the possibilities and prospects of carrying out plans and projects in secondary cities because of resources available and human and technical capacities of Departments of Transport of the different states. Indeed, if problems of financial, material and, especially, human resources are acute in Lagos and Abuja, they are more so in secondary cities.

Trends in population migration within Nigeria ought to be taken into account. Currently, the percentage of urban inhabitants is still below 50%, but projections expect a rapid change in coming years. Indeed, as Africa is expected to be the continent with highest urbanization rates in years to come, inhabitants will likely migrate to urban areas, extending already sprawling urban territories. Sprawling and unplanned urban territories will create ever more acute transport problems in secondary cities. Urban territories such as Calabar, Kano or Port Harcourt need to anticipate such migratory flows and how they can impact transport demand, with a particular interest in public transport demand and non-motorized mobility.

Strengths	Weaknesses
<ul style="list-style-type: none"> ■ The Federal – State – Local arrangements can best produce context conscious plans and programs that suit the objectives of each city’s transport needs. 	<ul style="list-style-type: none"> ■ No special focus is given to secondary urban areas; existing administrative perimeters do not match actual mobility catchment areas. ■ There are important disparities in the activities carried out, in the level of resources and capacities of the different Departments of Transport across the States. ■ The insufficient budget for Departments of Transport impedes them from carrying out their mandates.
Opportunities	Threats
<ul style="list-style-type: none"> ■ Implementation of the National Transport Commission (NTC) Bill 	<ul style="list-style-type: none"> ■ Migration to secondary cities from rural areas is likely to exacerbate already stretched transport systems.

Table 11: SWOT analysis of stakes linked to national government support for urban transport in secondary cities

2.7 Cross sector issues

2.7.1 Environmental issues pertaining to urban transport

Nigeria ratified the Paris climate summit agreement in December 2015, in doing so, national authorities approved several significant key aspects of the country's NDC. Estimations suggest that, with a 5% economic per annum growth, Nigeria will go from approximately 350 million tons CO₂ equivalent per year in 2010 to more than 900 million tons CO₂ equivalent per year. This growth highlights the need for mitigation measures and programs aimed at curbing this expected growth. Of a large battery of measures, those pertaining to urban transport and/or mobility include, but are not limited to:

- Propose higher standards and specifications for transport infrastructure; and
- Strengthen existing infrastructure to best suit environmental and resilience objectives.

Pertaining to urban transport in particular, the overarching policy would focus on a generalized modal shift towards less polluting modes and modes with lower CO₂ emissions. For this to be possible, authorities stated the need to develop rail-based services (that can serve passengers and freight alike) and the importance of increasing the efficiency of vehicles. Indeed, in the current context, urban transport development is hampered by its excessive reliance on ever smaller motorized alternatives and ageing, sometimes unroadworthy, fleets of motorized vehicles that continue increasing in numbers. Hence, environmental issues –related externalities progressively worsen and further complicate implementing mitigation measures.

Three important issues ought to be part of a global strategy to reduce environmental impacts from the transport sector in Nigeria's urban areas, some of them have already been included in national level programs:

- **Projects to implement transport alternatives** that are sober in carbon emissions and that bring about improved quality of living to all urban dwellers. Not only rail-based projects are to be planned, non-motorized modes programs are often less expensive (requiring fewer capital investments in infrastructure) and can, if deployed adequately, benefit larger sections of society.
- **Fleet renewal programs** that seek reducing the average age of urban fleets and particularly of public transport vehicles (formal and paratransit modes alike). Combined with newer and more strict quality regulations, these types of programs hold substantial promise in generating more efficient urban transport systems. Furthermore, freight transport ought to be included in these programs as freight road-based transport is an element often overlooked when developing environmental policies in Nigeria. These programs are, however, expensive and they require substantial initial investment and buy-in from all stakeholders. This latter conditions can quickly become an unsurmountable obstacles in cash-strapped countries where urgencies and long-term solutions often clash between them.
- **Fuel quality improvements** are also necessary. Several African countries continue utilizing and fail to control the use of low-quality fuels that are particularly dangerous and that hold levels of sulphur above the international standards. Besides improving fossil fuels' quality, the move towards alternative fuels ought to be looked at – as stated in the country's NDC of 2015 –. The use of electric vehicles in the provision of public transport is likely a long-term objective, but other solutions such as gas and hybrid solutions are a real possibility.

All above solutions require national overarching policies that support them; in particular, they require clear and explicit decisions from the Federal Government that provide the necessary tools for implementation. Fuel taxes –an option already deployed in some Nigerian cities –, emission control and regulation during vehicles' technical visits and, amongst others, limitations on used vehicle imports should be part of the overarching strategy.

2.7.2 General road safety issues

Road safety has historically been a concern of Nigerian cities. As presented above, the African continent is one where highest numbers of fatal road crashes occur and Nigerian cities are not an exception. While there is an observable improvement in terms of data since its peak in 2008 (see image below), raw numbers of deaths on the road are still staggering.

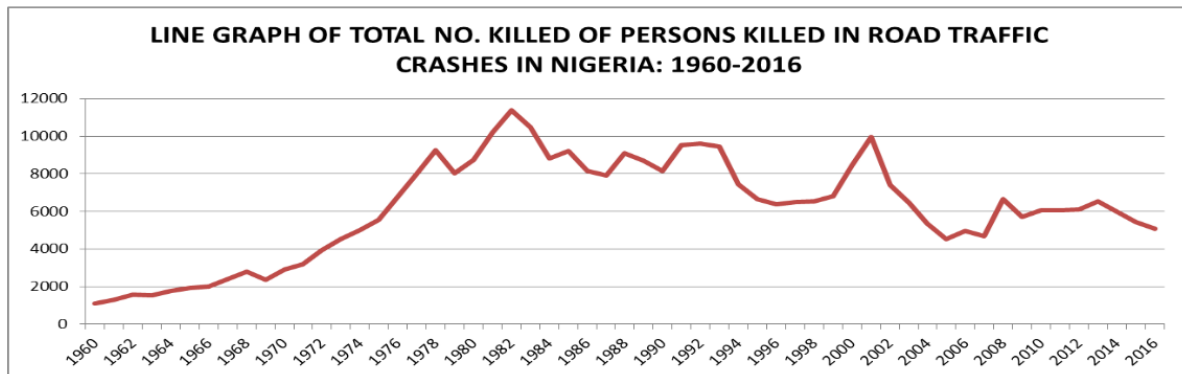


Figure 18: Evolution of fatal road crashes in Nigeria⁴⁸

Nationally, road safety issues are unevenly distributed in the territory. North and North-Western areas, followed by the Southern area – the most urbanized one –, are where highest rates of crashes occur⁴⁹. Most common causes for deadly crashes pertain to reckless driving (including (1) over speeding, (2) dangerous driving, (3) loss of control and (4) dangerous overtaking), but infrastructural inadequacies are also common.

The establishment of the FRSC in 2007 did not solve governance problems where several entities and agencies appear to fight for responsibilities pertaining to road safety:

While this is essential for achieving the goal of the safe system approach, unfortunately it has become unattainable due to its current involvement in managing road safety at operational level, a position it shares with several other agencies also duly empowered to perform similar functions. While a shared road safety responsibility provides the benefits of coverage where cross-functional gaps exit, it portends the dangers of role- submergence and conflict which may arise out of competing interests. It is disturbing to note that such conflicts currently characterize road safety activities in Nigeria.

Source: Sumaila 2013:56

Besides the FRSC, the Nigeria Police Force, the Vehicle Inspection Office, the Federal Ministry of Transportation and the Federal Ministry of Power, Works and Housing, State ministries in charge of infrastructures and transport services and unions are also taking part in different road safety responsibilities.

2.7.3 Social inclusion

Albeit being one of the richest countries in the region, Nigeria is classified as a lower income developing country. Its US\$ 2 950 per capita GNP⁵⁰ does not necessarily show inequities between different socioeconomic groups, indeed, population falling below the US\$ 1,25 daily income poverty line accounts for approximately 30% of the country's total⁵¹.

⁴⁸ Source: Oyeyemi 2017.

⁴⁹ Source: Sumaila 2013.

⁵⁰ Source: UNFCCC 2015.

⁵¹ Source: UNFCCC 2015

Data for household expenditure is difficult to come by; furthermore, data for each city is also lacking in most cases. Nonetheless, using available related data, it is safe to state that Nigerians are not necessarily those that spend more in transport. Indeed, according to 2009 data from AfDB, inhabitants from other countries in the region have substantially higher household expenditure percentages in transport. Indeed, in terms of transport expenditure, household spend most in (1) Comoros, (2) Zambia, (3) Central African Republic, (4) Democratic Republic of Congo and (5) Togo (AfDB 2009). Similarly, using and combining available data, Nigerian household expenditure hovers around 13% to 17%. However, and most importantly, this information fails to take into account inequities in the socioeconomic makeup of the country, where the Gini coefficient is 0,43, thus denoting a highly inequitable society in terms of incomes. Indeed, all empirical data points to increasing numbers of urban poor (growing faster than rural poor) that are inevitably excluded from urban opportunities⁵².

Poor urban dwellers that are not excluded still struggle to find quality transport solutions. When no mode is available considering their income and place in the urban territory, populations will resort to walking as the last viable option. With limited programs aimed at improving NMT conditions, these inhabitants become progressively more excluded from the system. Other inhabitants that manage to pay for motorized transport (and that, as a result, widen their opportunity range in the city) are likely to prefer cheaper options, often paratransit modes, when they can or they are simply captive of the sole mode operating near their residence. As formal modes focus ever more on high-demand and high-impact corridors, peripheral urban areas suffer from increasing travel times and reduced speeds. These conditions effectively hamper their inclusion in the city.

Another element requiring consideration is the opportunities the paratransit sector (or informal transport sector) provides in terms of employment. Indeed, new urban poor resort to driving motorcycles or small-sized public transport motorized vehicles:

A significant percentage of the poor are engaged in the informal sectors where productivity and income are low. One of the services rendered in this sector is informal transportation services particularly intra-urban commercial motorcycle transport services (...), which have taken advantage of the inefficient and deteriorating state of Nigeria's transport system to create an economic niche.

Source: Al-Hasan et al. 2015.

Furthermore, complementary employment opportunities, directly linked to the provision of paratransit services, quickly appear. Fuel sellers, spare parts sellers and buyers, maintenance and cleaning services are all directly linked to the development of paratransit modes.

To some extent, paratransit modes appear as a solution to urban poor dwellers inclusion. Besides supplying these sector with mobility solutions to access the city, they also create job opportunities that otherwise would not be available. Yet, these solutions and opportunities are precarious and low-quality and can likely become entrenched and hamper programs aimed at mitigating social inequities.

People with disabilities and the elderly are seldom considered in existing Nigerian plans to improve social inclusion. With limited information on their number and the conditions they endure to access the city, it is important to first develop mechanism to understand their needs and to start acknowledging them as one more stakeholder in the transport planning process.

2.7.4 Gender issues

Oftentimes, in Africa, gender issues are dealt with using generalization practices. Albeit not ideal, this is explained by a lack of data on the role of women in the transport sector, as observations suggest that women's role – be it as users or as individuals involved in transport operations – is clearly less important than in other parts of the world. Several explanations are put forward to justify this:

⁵² Source: Al-Hasan et al. 2015.

- Discrimination of women in the labor market, included in the transport sector.
- In general, women have lower education than men and they are often, because of different reasons, secluded in their homes.
- Often women are more vulnerable when aggressive behaviors are observed, and they are more likely to avoid public places if they deemed them unsafe.

The above three reasons are confirmed in Nigeria. According to a 2014 report, the average woman income that were employed in the year before the survey is lower than their husbands⁵³. Also, 38% women between ages of 15 and 49 have not received formal education, while this percentage is 21% for men in the same age range⁵⁴. And, finally, violence towards women is commonplace in Nigeria: they suffer physical or sexual violence in their homes and in public spaces.

Women and men have different mobility needs. Differences are observable in most Nigerian cities: while men make their daily trips mostly for work-related needs, women tend to combine various reasons for travel, and they do not respond to the city's pendular trips matrixes. Indeed, women have mobility needs that are more difficult to predict. While men travel mostly during peak periods, women spread their trips throughout the day:

Women in Nigeria as it is in most developing countries undertake a greater burden of domestic and commercial activities. If less time is spent on travel, more time will be available to carry out daily activities resulting in increased productivity. And as women are rarely represented in decision-making, they are unable to impress their needs on planners. Most transport infrastructure planning in Nigeria is planned without considering women's needs.

Women bear heavy responsibilities regarding transportation, although this is hardly recognized by planners. For instance, women in developing countries like Nigeria are adept load carriers. They are accustomed to transporting 25kg or more on their heads or backs daily over considerable distances. Women's greater domestic responsibilities coupled with their weaker access to household resources have significant consequences for their transport and travel status. The lower the household's income, the more probable it is that women will experience greater transport deprivation as compared to men.

Source: Oni & Okanlawon 2011.

Not only are women's urban transport behaviors seldom taken into account, available data also suggests that they are not sufficiently represented in transport planning agencies. As an example, in 2010, LGAs of Alimosho and Ikeja had no women working on these issues, yet personnel accounted for more than 130 persons. LAMATA, in this same date, employed 2 women out of 7 decision making roles⁵⁵.

2.7.5 New information technologies

Innovations in applying digital technology to urban mobility have had a dramatic impact on how cities approach mobility. The emergence of global Transport Network Companies (TNCs) has restructured the urban sedan taxi market, lowered costs and dramatically expanded demand for such services. This growth has also impacted on private car ownership trends and on public transit demand.

There has been a significant uptake of such services in Nigeria. Uber has been operating since 2014 in Lagos and Abuja. It has recently experienced strong competition from Taxify which has moved aggressively into the Nigerian market.

There is not much available data on the size and reach of the sector but, Uber claims that it carries over 130 000 people daily and has over 7 000 active drivers. A number of Nigerian ride-sharing

⁵³ Source: NPC 2014.

⁵⁴ Source: NPC 2014.

⁵⁵ Source: Oni & Okanlawon 2011.

companies have also been established such as Oga Taxi, GoMyWay and Smart Cab. Most have failed due to competitive pressures. Recently, a ride-hailing platform for auto-rickshaws called Matatu has been launched. In addition, TNCs will potentially expand in pool services in future or may even create the motorcycle options as they have pioneered in Kenya.

The impact of these ride-sharing innovations is still dynamic and uncertain. It will be important for both federal and state transportation ministries to be responsive to this sector in ensuring that regulatory needs are addressed. Other areas for potential government intervention include:

- **Development of multi-modal multi-functional transit apps.** Cities and their transit agencies across the US, Europe, Asia and in some African countries like South Africa are prioritizing the development of their own apps for multi-modal journey planning, booking and increasingly payment.
- **Paratransit improvement.** The new technologies have the potential to support major improvements in the quality and safety of paratransit services which could help them expand their market to current private car users as well as improving the service to existing users.
- **Facilitation of on-demand microtransit services.** Microtransit services (often using a transit agency app) are being piloted in a growing number of cities to support public transit and manage the competitive pressures from private TNCs. These have similarities with the “pool” services that TNCs like Uber provide.

There are many other areas of urban transport innovation using the new mobile information and communication technologies that could be deployed in Nigeria’s cities to enhance urban mobility including investment in intelligent transport systems and the use of big data (including mobile phone data) for purposes of transport planning and traffic management. It is interesting to note that the Lagos Strategic Transport Master Plan (LSSTMP) has plans for implementing an Intelligent Transport System for city traffic management and a control center for the BRT system. LAMATA has a BRT control center at LAMATA offices.

In general, however, technology adoption in the transport sector seems to have been relatively low and there has not been the level of technology innovation in transportation that has been seen in Kenya for example. It is an area of considerable leverage provided context-appropriate and affordable technology solutions are sought.

3. Recommendations

The six priority areas presented in the previous section are broadly articulated with the different areas of intervention of the EASI conceptual framework according to the table presented below (Table 12):

Table 12: The six thematic areas of the study and the EASI conceptual framework

	Enable	Avoid	Shift	Improve
Institutional Framework	Dark Yellow	Light Yellow	Light Yellow	Light Yellow
Dedicated funding sources	Dark Yellow	Light Yellow	Light Yellow	Light Yellow
Civil society participation	Dark Yellow	Light Yellow	Light Yellow	Light Yellow
Multi-modal planning and operations	Light Yellow	Dark Yellow	Dark Yellow	Light Yellow
Public transport performance	Light Yellow	Light Yellow	Dark Yellow	Dark Yellow
Support of national government for urban transport management in secondary cities	Dark Yellow	Dark Yellow	Dark Yellow	Dark Yellow

In order to best support decision-makers in improving the conditions of mobility and accessibility in Nigerian cities, this report proposes a series of recommendations aimed at accelerating the implementation of a sustainable urban mobility policy at national and local level that addresses the main challenges of the sector in Nigeria.

These recommendations were widely discussed and validated during the National Urban Mobility Forum. All the recommendations of the Interim Report were clustered under the six priority thematic areas outlined above. A workshop was held for each thematic area during the Forum where participants went through each individual interim recommendation on a systematic basis and had the opportunity to review, validate and add to each recommendation. The recommendations in the final report as were revised based on the detailed feedback from the different workshops and a number of new recommendations were added. The updated recommendations were presented to the final plenary of the Forum for confirmation and were refined by the consultant team in finalizing the report.

The improvement of urban accessibility and mobility is a complex task, and these recommendations aim at mobilizing all stakeholders around these 12 recommendations.

3.1 Recommendations under Governance Efficiency (Enable)

E1: Mandate the Department of Road Transport and Mass Transit Administration (DRT&MTA) to lead and coordinate integrated urban transport planning.

There is an immediate need to clarify and clearly define the respective roles of the Ministry of Transportation (MoT) and the Ministry of Power, Works and Housing (MPW&H) in regard to urban transport planning and implementation.

Their respective roles regarding urban transportation are not clearly defined. This results in functional overlaps, duplication and poor alignment between urban transport policy and planning on one side, and the design, construction and maintenance of urban transport infrastructure - especially roads - on the other side. An example exists between the Department of Road Transport and Mass Transit Administration (DRT&MTA) under the MoT, and the Highway Department (DoH) under the MPW&H.

A task team or commission should be established by the Federal Government to review and draft the necessary policy, legislation and regulations required to clearly define and allocate powers and functions accordingly. This may require amendments to the Federal Highways Act, which was promulgated prior to the creation of the MoT. Such a functional clarification should mandate the federal DRT&MTA to lead and coordinate integrated urban transport planning, as well as require urban transport infrastructure provision to be aligned to such plans.

The clarification of mandates and functional roles needs to be supplemented by organized efforts to foster cooperation, synergy and coordination between federal departments, particularly MoT and MPW&H. These efforts should include the two previous federal ministries and each State's ministry in charge of transportation when implementing urban transport initiatives. Such efforts should build on existing mechanisms such as the Transport Commissioner's Forum and the annual transport stakeholders' conference. A regular inter-departmental meeting between DRT&MTA and DoH be convened to develop and coordinate a common agenda for urban transport going forward. Additionally, the MoT should also work with State governments to ensure that all States have fully fledged ministries of transportation able to drive the urban transportation agenda. The majority of states currently do not have such ministries in place.

The National Transport Policy should be supplemented by a common urban public transit strategy to help align planning and implementation across relevant Federal, State and Local departments and agencies. Such a strategy should focus on the development of integrated multi-modal urban transit systems including non-motorized transport. A special focus should be high activity and high growth urban areas. It should seek to achieve a better balance between road infrastructure provision and the provision of public transport services and facilities. It should also ensure that the often neglected operational and maintenance requirements of sustainable urban transit services are adequately resourced. The on-going development of such common urban transit policies and plans should be led by DRT&MTA in close collaboration with DoH.

State and Local level agencies responsible for the detailed planning, implementation and enforcement should also be closely involved in the policy development process. This helps to ensure their buy-in, to build common understanding and to ensure that policy is rooted in practice and local reality. An immediate priority should be to put in place a mechanism to improve the quality of urban transport data collection and analysis on a sustainable on-going basis to ensure that federal, state and local transport policy and planning is based on sound information as highlighted in recommendation E10.

There is a need to address the weak links that currently exist between urban land use planning, urban infrastructure provision and urban transport planning. Stronger coordination between these activities needs to be facilitated between the MoT and the Ministry of Lands, Survey and Urban Planning (MLSUP) in order to create the necessary synergies. An inter-ministry task team should be appointed to develop a common approach, including the necessary protocols and mechanisms. The preparation of urban development master plans or urban spatial development frameworks offer strong opportunities to better integrate land use and transport plans. The MoT and MLSUP should ensure

that the specifications for such exercises require high levels of land use and transport alignment. Regulations requiring transport impact assessments before approving new high impact settlement or infrastructure development would reinforce this process of alignment.

The MoT should also build its capacity to take the lead in ensuring that the significant transport component of Nigeria’s nationally determined contributions (NDCs) in terms of the Paris Agreement is planned, aligned and implemented. This commitment should be used to leverage funding and involvement across Government. Nigeria’s NDC can also be used as a catalyst for improved transport data collection and more productive engagements with key transport actors within the country.

Improved project coordination of urban transport initiatives can generate major efficiencies and cost savings, improved quality of infrastructure and services, and minimize traffic disruptions. At a national level, DRT&MTA should champion coordination of urban transport projects. To do so, DRT&MTA should build specialist capacity and secure the necessary technology. Such project coordination would include coordinating regular meetings of affected agencies to discuss upcoming projects and lane closures, organizing project data entered by various agencies to coordinate schedules or establishing joint performance goals for a corridor and working together to monitor and meet them. DRT&MTA should identify certain priority areas as an initial focus for project coordination efforts that can serve as testing and demonstration sites for this approach.

It is proposed that the MoT take the lead in setting up a fast-track process to ensure better functional alignment between key federal ministries of urban transport as an immediate short-term priority.

It is further proposed that DRT&MTA prioritize establishing a dedicated high capacity urban transport planning and project coordination unit to facilitate policy and regulatory direction across Government, to facilitate inter-agency alignment and collaboration and to support priority urban transportation projects.

E2: Establish a clear federal policy framework to assist State governments in the establishment of urban transport authorities

The fragmentation, lack of co-ordination and duplication of institutional responsibilities among various agencies at the three levels of government responsible for transportation in Nigeria’s cities needs to be addressed by the incremental establishment of urban transport authorities. State governments should establish such transport authorities and ensure that they have the necessary functional authority, resources and capacity to plan, regulate and implement urban public transportation. The experience of LAMATA demonstrates the potential impact of consolidating appropriate planning, regulatory and implementation responsibilities in a single organization focused on developing an effective and sustainable multi-modal urban transit system.

The success of LAMATA also shows that it is possible to make such authorities perform successfully in the context of Nigeria’s governmental system and urban reality, provided certain key preconditions are met. Such preconditions include the need for strong political support for such authorities, a robust legal and regulatory framework (including an act of parliament), a financially well resourced, technically proficient and empowered transport institution, additional technical and financial support from external agencies and common commitment to a strong vision of quality public transport.

The LAMATA experience also highlights that the leadership of such a transport authority has to have both strong technical capacity and strong interface management abilities. These are required to navigate political dynamics and to facilitate cooperation across a broad range of Federal, State and Local government entities, as well as with private transport operators, other role-players and public transport users. Transport authorities usually do not have all the powers and functions they would ideally want and inevitably need to manage functional messiness.

For example, there was an initial reluctance in parts of the State Transport Ministry to relinquish control of state roads to LAMATA or to collaborate with it in certain areas. In response LAMATA initiated a forum for regular discussion and exchange of information among State agencies involved in

transport services and infrastructure provision (called inter-ministerial meetings). Further key operational departments like roads, traffic management and public transport, held regular bilateral discussion with other agencies directly involved in their activities. These discussions helped build trust and reduce duplication or overlap of responsibilities. This type of organized discussion and harmonization of actions can be adapted and introduced in other Nigerian cities.

State transport ministries remain important and will continue to be responsible for setting policy for urban transport authorities in line with national direction and for monitoring their performance. It is thus critical to build State transport ministry capacity in parallel to establishing authorities, in order to help avoid operational interference and competition.

It is crucial that the next generation of urban transport authorities are carefully identified based on whether the preconditions for success are in place and on their potential to have impact. In other words, urban transport authorities should only be implemented where there is strong commitment from State government at political and administrative levels, where sufficient resources can be generated to sustain the authority and where the urban area has the complex metropolitan characteristics that support a multi-modal transit system. To maximize the chance of success, a prioritized schedule for sequencing urban transport authority establishment should be developed in consultation with State Governments.

It is proposed that the MoT establish a task team of relevant federal and state departments and other role-players to develop the necessary federal policy and draft federal guidelines for the state legislation. It would facilitate the creation of local urban transport agencies with the necessary authority, fiscal powers and institutional capacity to provide effective urban transport planning, management and coordination at local, metropolitan and regional levels.

It is further proposed that a national urban transport authorities' support center comprising experienced national and international specialists be established to assist States to establish effective authorities on a prioritized incremental basis. This support team should draw on the experience of practitioners with a strong background in LAMATA.

Box 3 - National Urban Transport Policy (NUTP) in 2006 in India

In 2006, the Ministry of Urban Development, Government of India (MoUD) issued the National Urban Transport Policy, to bring about a paradigm shift in the urban transport sector, at the state and city levels, with a special focus on moving people rather than moving vehicles. The guiding principles of the policy were the following:

- Incorporating urban transportation as an important parameter at the urban planning stage rather than being a consequential requirement;
- Encouraging integrated land use and transport planning in all cities so that travel distances are minimized and access to livelihoods, education, and other social needs, especially for the marginal segments of the urban population, is improved;
- Improving access of business to markets and the various factors of production;
- Bringing about a more equitable allocation of road space with people, rather than vehicles, as its main focus.

In a federal country, NUTP 2006 was an opportunity to encourage strong and concrete measures from States and local governments through (i) the creation of Unified Metropolitan Transport Authority (UMTAs) in all million plus cities, to facilitate more coordinated planning and implementation of urban transport programs and projects; and (ii) the creation of city or state level Urban Transport Funds (UTF), to help cities managing a transport dedicated capital for investment and centralize revenue related to urban transport, such as fares or taxes; (iii) the use of Comprehensive Mobility Plans (CMP); and setting up (iv) high capacity public transport systems through Special Purpose Vehicles (SPV).

The Central Governments gave incentives to the States: financial support for mass transit (up to 20% of the capital cost of the project), 50% of the cost of preparing comprehensive city transport plans and detailed project reports, 50% of the cost of project development when through public-private partnerships in order to attract private partners.

This NUTP had a strong impact on Indian urban transport sector as many cities started to develop metro projects, and elaborate urban mobility strategies. Moreover, a community of practice emerged thanks to support to centers of excellence in university, and facilitation from the Institute of Urban Transport (IUT), professional body working under the MoUD.

In 2014, IUT undertook a comprehensive review of the policy in order to better include components related to Transit Oriented Development (TOD), regional connectivity, Comprehensive Mobility Plans (CMP), service level benchmarks; and insist on the importance of non-motorized transport (walking and cycling being completely neglected in the overall process of city development) and other low-carbon modes of transport in cities (Light rail, Mass Rapid Transit).

Box 4 - CETUD's technical assistance to secondary cities to modernize their transport systems

Having successfully completed the initial implementation of the fleet renewal program in Dakar, Senegal's national authorities decided to use resources from credit payments by operators to continue and expand the program. In 2015, similar fleet renewal programs were planned in the secondary cities of Kaolack, Louga, Saint-Louis, Tambacounda, Thiès and Ziguinchor.

In order to manage and coordinate needed activities, a Monitoring Committee ("Comité de Suivi") was established by the Ministry of Economy and Finance. The Monitoring Committee's main responsibility was to supervise financing of fleet renewal processes for the minibus sector. To do so, the committee approached Dakar's transport authority "Conseil Exécutif des Transports Urbains de Dakar" (CETUD) and the operators recently created association "Association de Financement des Professionnels du Transport Urban" (AFTU). It authorized CETUD, the executing agency, to sign a performance agreement with AFTU.

According to this agreement, AFTU would rely on an external consulting company to make available human, technical and organization resources required to guarantee the administrative, financial and accounting management of the leasing mechanisms to be implemented for each city. This arrangement had already been tested in Dakar.

The legal and institutional arrangement for the project was as follows:

- Creation of Economic Interest Grouping (EIG): Between one and three EIG were established in each city. EIG were to participate in inventorying vehicles assigned for renewal by providing operators willing to take part in the process with dossiers (operating license copy, registration and vehicle license);
- Establishment of Regional Project Monitoring Committees: Under the umbrella of the region's Governor, with assistance by the Regional Director of Transport Services, the committees were to supervise advancement of the program. For it, CETUD hired a regional agent and, after putting the agent through a specific training program, detached him or her to be under the orders of the Regional Director of Transport Services and to supervise daily process. The regional monitoring committee included mayors of all cities within a predefined perimeter as defined by the Governor (CETUD had previously conducted feasibility analysis suggesting appropriate perimeters). Also included in the committee were heads of decentralized technical offices and the transport operators' president of the concerned region. The committee was organized as follows:
 - A **credit committee** that is responsible for accepting and validating operator's requests, pending fulfilment of eligibility criteria. The committee included representatives from the Ministry of Economy and Finance – acting as committee presidents –, the Ministry

of Transport, operators and CETUD. An administrative, accounting and financial cabinet was also established; AFTU's representatives were its secretaries.

- A **reform and scrapping commission** was in charge of evaluating vehicles and of defining the amount to be paid to the operator. This commission was responsible for guaranteeing the effective scrapping of recapitalized vehicles: the withdrawal of older vehicles from the system following specifications. The commission consists of representatives from the Ministry of Environment – acting as commission presidents –, the Regional Director of Transport Services – acting as the commission's secretary –, the Revenue Services offices, the Ministry of Industry, Senegal's Legal Agency, the Direction of Facilities and Administrative Transit, CETUD and transport operators.

With the above arrangements, CETUD participates only when needed: during feasibility studies and in solving problems surpassing responsibilities of the regional committee. Pertaining to the latter problems, the general rule is to include external consultants. CETUD costs for the technical assistance are included in the fleet renewal program.

E3: Creation of a legislative instrument that enables state transport agencies to access dedicated sources of transport funding

In order to launch this initiative, **the Ministry of Transport needs to review transport funding mechanisms such as government grants and budgetary allocations, special petroleum trust funds or others to provide for both urban transport infrastructure and services.** The Government has just recently passed the National Road Fund (Establishment) Bill (in 2018). The bill seeks the establishment of a *“Roads Fund, which shall be a repository for revenues accruing from road user charging systems and other sources for the purpose of financing the maintenance and upkeep of national roads and promote sustainable development of the road sector”*

This Roads Fund should be augmented by the Urban Transport Fund that will be created from the National Road Transport Fund. In this regard, policy and regulations governing the allocation of current funding schemes, such as National Road Fund and their respective revenue sources, should be broadened to allow such funds to be used for the range of urban transport infrastructures and services. Sources of funding to be considered in establishing such an urban transport fund could include: Fuel levy on petrol and diesel products; Axle load control charges; Toll fees; International vehicle transit charges; Inter-state mass transit user charge of a certain percentage deductible from the fare paid by passengers; Road Fund surcharge of a certain determined percentage, chargeable on imported vehicles into Nigeria; Lease, license or other fees which shall be a certain percentage of the revenue accruing from lease or license or other fees pertaining to non-vehicular road usages along any federal road and collected by the respective State Agency.

This fund will be applied to the development, rehabilitation, reconstruction, and maintenance and funding of urban transport.

The strategy is also that the various Nigerian states should be able to mobilize significant local funds on their own and augment these funds with donor funds from international development partners.

This initiative should be championed by the Federal Ministry of Transportation through collaboration efforts with the Revenue Mobilization Allocation and Fiscal Commission and the Federal Ministry of Budgets and National Planning. This should include a review of the revenue components and allocations as well as monitoring the accruals into and disbursement of revenue from the Federal Account for urban transport funds.

The federal ministries should spearhead the creation of a legislative instrument that defines and empowers the funding mechanism and indicates the sources of revenue for State Transport Agencies in order for them to have access to a dedicated sources of funding for urban transport.

The Federal Ministry of Transportation should also engage international partnerships to facilitate policy development and related capacity building in the transport sector. With the necessary legislative backing, State Transport Agencies will have the authority to work within a given framework as required by law in order to access funds for urban transport initiatives.

Box 5 - An example of a financial incentive program targeted at local governments in Morocco

The Fund for the Support of urban and interurban road Transport Reforms (FSTR) (*Fonds d'Accompagnement des Réformes du Transport routier urbain et interurbain*) is a financial incentive mechanism created in Morocco in 2007 to encourage the development of mass transit infrastructure in Moroccan cities. The fund supports mass transit projects in cities by funding infrastructure investment. It can also finance initial operating deficit during the first three years of operations of the project.

Based on the estimated infrastructure needs of the 10 main cities of the Kingdom, FSTR targets the implementation of a total investment program of about 30 billion MAD (approximately 3.27 billion USD) until the year 2027. The fund's resources come from the State budget and a special purpose account for the Value Added Tax (VAT) managed by the Ministry of Interior.

Projects eligible for the FSTR's financial support include:

- Construction of tramway and BRT lines (including contributions to cover operating deficits up to the third year after the date of operations);
- Creation of dedicated bus lanes and/or facilities designed to improve their commercial speed (such as tricolor traffic signal systems capable of giving priority to buses and trams).

Projects are considered eligible to funding based on allocation criteria regarding notably:

- Strategical, technical, financial and socio-economic pertinence of the project;
- Coordination, planning and implementation modes and processes for the project;
- Emergence of mobility needs in the cities considered.

Box 6 - Central schemes to fund urban transport in India

Since 2005, the Government of India is encouraging cities to come up with innovative ideas to improve infrastructures and services in urban areas and enhance the quality of life, with a major focus on mobility issues to curve the growth in vehicle ownership. The two most ambitious central government schemes launched since 2005 are JNNURM (Jawaharlal Nehru National Urban Renewal Mission) and the Smart City Mission.

JNNURM was launched in 2005 and lasted nine years, with a total budget of Rs 42,900 crore (6.1 billion euros). In the public transport sector, it consisted in encouraging reforms and fast-tracking planned development in 63 identified cities, of different scales. The central assistance constituted about 35% of project cost in 4 million plus cities, and increased in smaller cities. Funds were awarded based on a City Development Plan (CDP) and a Detailed Project Report (DPR) prepared by the Urban Local Bodies (ULBs). It mainly consisted in the renewal of bus fleets in the identified cities, with around 16000 low-floor and semi low-floor buses, with air-condition for half of them, as well as the renewal of bus shelters and the provision of Intelligent Transport System (ITS).

However, the biggest shortcoming of the JNNURM was the lack of accountability of funds. The preceding "Smart City Mission" scheme introduced an interesting system of competition, inviting cities to propose comprehensive, credible and actionable plans, in a citizen centric approach to increase accountability. Each state shortlists a certain number of smart city aspirants and prepares smart city proposals. Once selected, the plans are implemented and managed by Special Purpose Vehicles (SPVs), set-up by municipalities, with control over the use of funds. 100 cities will be selected between 2016 and 2021 and will receive a central assistance of Rs 100 crore (14 million

Euros) per city and per year during five years, corresponding to 50% of project cost for cities and towns with a population of up to 1 million, and 30% for those with a population of above 1 million. In addition, private investments are mobilized by states and urban local bodies through PPP. Within “Smart City Mission”, most of the cities include transport projects and mobility strategies.

The fundamental difference between JNNURM and the Smart City Mission is that JNNURM was purely a project based scheme, whereas the Smart City Mission is adopting an integrated city development approach where the city can choose between various options: retrofitting, redevelopment or development of a previously undeveloped part of the city (greenfield).

E4: Set up local Urban Transport Funds

Apart from Lagos, cities in Nigeria do not have reliable funds that are dedicated to funding urban transport initiatives. Any available urban transport funding appears to focus on infrastructure interventions with limited focus on improving or providing “soft” interventions to transport issues. Transport funds are largely dedicated to the provision of infrastructure. This approach is ill suited to the need to make provisions for the maintenance and services of these infrastructures over their life cycle.

Urban transport authorities largely depend on the Federal and State Government for urban transport financing. Lagos provides an interesting example: Lagos State dedicates 50% of its net motor vehicle administration Agency (MVAA) revenues to a Transport Fund, which is used by LAMATA towards urban transport in Lagos. It is recommended that Lagos’s example be replicated in other cities for more sustainable urban transport funding scheme.

On the policy level, the State Transport Ministries should introduce a special transport fund that is totally dedicated to urban transport. This can happen through a state-wide enabling legal instrument. This fund should be ring fenced, and dedicated towards improving public transport. The objective would be to harness local funding sources that are dedicated to the development of urban transport infrastructure and services. Such sources should include:

- **Development levies:** These are usually levied at the time of new development of properties in the benefiting areas. Land Value-capture mechanisms should also be included, where the financial benefit gained by land developers or the communities at large are captured as revenue for funding urban transport.
- **Parking charges and fines in city centers:** Parking charges should be introduced at city centers and airports. Fines for illegal parking in city centers could serve as a source of revenue as well as traffic management measures.
- **Special local fuel tax dedicated to public transport:** This will require the introduction of a special local tax placed on fuel at the State level.
- **Part of the charges imposed on private cars that violate bus lanes:** Revenue from penalties for violating bus lanes restrictions by private vehicles.

The State ministries in charge of urban transport and State Transport Authorities, when they exist, should lead this initiative of putting together the policy document. An effective implementation of this initiative requires comprehensive consultation, education and consensus building among a wide range of stakeholders.

Box 7 - Urban transport authority and dedicated funding mechanism for urban mobility in Addis Ababa

In Addis Ababa, since 2014 (Ethiopian Law No 43 November 13/2014) the municipality has placed all the powers expected of an urban mobility authority in the Addis Ababa Road and Transport Bureau (AARTB). The AARTB is a separate municipal department placed under the authority of the

Mayor of Addis Ababa and is managed by one Director. The current annual budget is around 8 billion ETB (approximately 290 million USD). The AARTB is organized in four distinct departments:

- The Addis Ababa City Roads Authority (AACRA), in charge of maintaining and extending the road network (currently managing 6,5 billion ETB per year, the largest budget allocation with the AARTB, but also of the municipality itself);
- The Addis Ababa Transport Authority (TA), which organizes the public transport sector in Addis Ababa, regulates all public transport routes and fares, and provides facilities for freight vehicles;
- The Traffic Management Agency (TMA), in charge of reducing congestion and emission levels as well as improving road safety in Addis Ababa;
- The Driving Vehicle and Licensing Authority (DVLA), which regulates and registers all drivers' licenses in Addis Ababa including freight and public transport drivers.

On the 6th of December 2017, the AARTB enacted the creation of the Transport Fund Office (TFO) to which all transport fines and penalties, road users fees, as well as advertisement revenue from bus shelters will flow, representing an annual budget of ETB 1.2 to 1.6 billion (approximately between 43.5 and 58 million USD). TFO moneys are earmarked for use in the urban mobility sector.

E5: Encourage sustainable local private sector investment

At present, Infrastructure funding is heavily dependent on donor funding. City authorities view transportation interventions as not necessarily revenue generating, and thus prefer to finance them using donor and federal government funds. Local internally generated funds have not been fully explored. A shift is required to address transportation as a social, rather than an economic, infrastructure that needs to be financed by the public. This shift should aim at mobilizing local resources to fund transport projects, to demonstrate medium to long-term financial commitment and create a sustainable funding source for urban transportation.

In order to create an environment for harnessing local funds, the Federal and State Ministries in charge of urban transport should:

- Boost investor confidence in investing in transport.
- Make investment profitable and attractive to private investors.

Boosting confidence in investing in transportation requires putting the necessary legislatives and legal frameworks in place to protect private sector investment. The Federal Ministry of Transport should lead in providing clear policies and regulatory frameworks that ensures greater transparency, fairness in conflict resolution and contracts procurement practices. Investors need to be confident that procurement processes are fair, transparent and in conformity with international standards of best practice. In order to ensure effective implementation, stakeholders should be involved throughout the whole process of policy development. This will demonstrate accountability and commitment to stakeholders.

To leverage local funds, the potential of private sector funding through investment and partnerships needs to be tapped. The optimal entry point for the private sector is to partner with state transport ministries in fleet renewal and route concessions schemes. The private sector could also partner with state transport ministries to support the construction of depots and terminals, as well as to support operations, provide maintenance services, training and provisioning of expertise.

Transportation projects should also be packaged to make them profitable for the private sector. First, **State Transport Authorities need to minimize the risk (real or perceived) to private sector investment.** Such risk factors include changing economic or political regimes, ineffective legislative instruments, corruption, mismanagement, inefficiency, and political in-fighting and have contributed to a lack of confidence in the public sector.

In order to protect investment and boost investor confidence the Federal Ministry of Transportation in collaboration with the Federal Ministry of Power, Works and Housing should review the available legislature on procurement and make it attractive to investors.

E6: Identify civil society stakeholders and create platforms for coordination with Government agencies.

The definition of what constitutes civil society in Nigeria is still unclear, any process ought to start with defining, at the Federal level, what is included in the concept of civil society. A broad and general approach to what constitutes civil society is one that includes six main stakeholders: (1) public transport users; (2) neighborhood or zonal associations; (3) private companies not directly related to mobility planning; (4) operator's unions and associations; (5) NGOs; and (6) research or academic institutions.



At present, civil society in Nigeria's mobility planning is often limited to operator's unions and associations and, to a lesser extent, NGOs. Fostering and supporting existing civil society stakeholders is needed to create adequate working environments between institutional and civil society groups.

Existing NGOs, private operator associations and unions have progressively built their capacities with limited involvement from State-level institutions. Adequate spaces for discussion between civil society stakeholders and institutional authorities are yet to be

Figure 19: Civil society stakeholders initial list

created. At present, such spaces created by public authorities – often in an ad hoc manner – fail to encourage participation from new stakeholders.

They often only include only one civil society partner. Other civil society stakeholders – likely able to propose original visions – do not take part in discussions and are effectively left out of the planning process.

A list of proposed stakeholders should be prepared and expanded with stakeholders that have shown their involvement and interest in transport topics and might take part in the planning process. In parallel, State level authorities must continue interacting further and more efficiently with incumbent civil society groups. A first step is to produce an initial database identifying groups present in the State. Databases must be in continuous evolution, garnering, each time, more details and better understanding of each civil society group.

Civil stakeholders should be able to introduce themselves to State authorities, stating their topics of interest and initiatives already in place. With this information, authorities could analyze and best define issues where each stakeholder could part take. The initial process of building datasets will require publicity campaigns to inform civil society about the process and encourage participation. Further, database production must be consistent across States for it to be best utilized by institutional stakeholders.

Moreover, it is necessary to sensitize local and State-level authorities in civil society participation. The existing institutional setup still lacks human resources that are dedicated to improving civil society participation and that have been trained in what participation entails. Efforts to build capacity should first come from the Federal level: capacity-building sessions, with limited numbers of participants and organized periodically by the Federal Ministry of Transportation, would help improve sensitization of institutional entities. Once several sessions are completed, civil society stakeholders will have an institutional counterpart capable of leading processes and of introducing original forms of

participation that best suit each local or metropolitan context. As capacity and resources become more adapted and are best utilized, the Federal Ministry of Transportation can progressively withdraw from this process, delegating training and capacity-building sessions to State level responsible entities deemed fit to lead the process in their territory.

The following step in improving civil society participation is to identify the main objectives of existing stakeholders. All civil society groups identified are likely to have different interests and objectives, and these distinctions need to be clear from the onset. While participation is indeed key, until capacity and resources are sufficient, efforts should be put in working with few groups for each program or project while informing the rest. Initiatives that are more complex would come later in the process as each side progressively improves internal and external collaboration efforts. For this approach to be as effective as possible, State level authorities need to create spaces where it will be possible to conduct discussion and debates around projects and programs. At the start, spaces will be closely linked to project planning and implementation, but in medium- to long-term actions, those spaces can be created for continuous or periodic discussion independent from any one particular project.

The current level of civil society participation is indicative of obstacles to include to a full extent these stakeholders in the transport planning and implementation decision-making process. Foundations for productive stakeholder engagement still need to be set. Hence, authorities ought to privilege simple solutions first.

It is therefore recommended that the Federal Ministry of Transportation initiate the process while State level Ministries build their capacity. Once capacity and resources are sufficient at the State level, responsibilities ought to be transferred to State authorities that will construct, feed and maintain databases and that will be best placed to implement civil society participation programs. Pertaining to existing collaborations, State Ministries in charge of transport ought to continue fostering operator's unions and/or associations' participation.

Considering that civil society participation is a wide-ranging affair, forms of participation range from simple communication of information to civil society, to more complex concertation processes. In the current context of Nigerian urban transport planning, the more adapted solution is to first build simple and understandable processes for all stakeholders (civil society and institutional alike). Therefore, communication campaigns should be the preferred option for most cities; where processes are more advanced (typically Abuja and Lagos), other more inclusive forms of civil society participation can begin to be implemented.

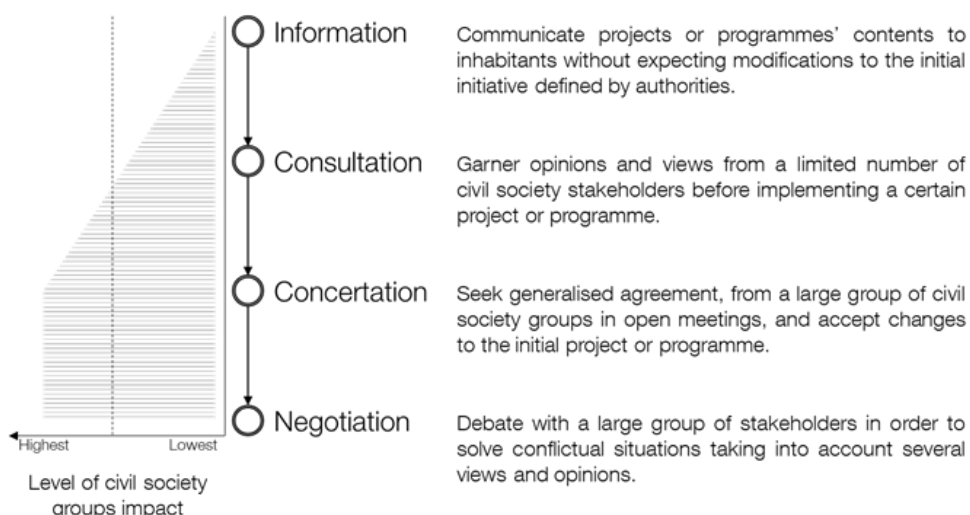


Figure 20: Interpretation of different levels of civil society implication

As capacity of all stakeholders improves, important subjects are likely to take center stage in discussions (see Box 8 on the KARA example in Nairobi). In (a short) time, discussions will center on new and important subjects such as gender-related issues and universal accessibility questions,

amongst others. Authorities need to be prepared and welcome these debates as they improve the general urban transport environment and allow all – or most – inhabitants to benefit from quality sustainable urban transport models.

Box 8 – Kenya Alliance of Resident Association (KARA) a Constructive Civil Society Engagement in the Transport Sector

Formed in 1999, the Kenya Alliance of Resident Association is an apex body representing residents. It advocates for improved and accelerated access to public service delivery and has been playing an increasing role in the transport sector given the widespread concerns of residents around congestion and road crashes. KARA is a membership organization that allows individuals and resident associations to join and also attracts some corporate sponsorship, which gives it a strong base in the society it represents. While KARA tends to represent middle and upper-class neighborhoods, the organization also makes an effort to be inclusive and include poorer neighborhoods in its fora and activities.

KARA works most directly with counties as this is the level of government closest to residents. In 2016 KARA successfully worked with the Nairobi City County to pass the Nairobi City County Community and Neighborhood Associations Engagement Act which sets out a formal framework of cooperation between resident associations and the city to deliver services. The organization also engages in policy dialogues with national government and often plays an important coordinating role by bringing them together to forums with key civil society actors to render account and engage on issues.

In this manner KARA has worked over the years to improve public transport, engaging with Nairobi County, linking the County to residents and their concerns. KARA has conducted focus groups and forums on the Thika Highway Improvement Project and lobbied for the need for more footbridges and consideration to safety⁵⁶. The association also served on the NCC Nairobi Transport and Decongestion Committee⁵⁷ which involved an inclusive, consultative process to determine a number of actions that could be done to address Nairobi's severe traffic congestion. However, to date the recommendations from the report do not appear to have been implemented.

More recently, KARA successfully lead a collaboration with the city, UNEP, University of Nairobi and other key actors to develop and pass through the county assembly a Non-Motorized Transport (NMT) policy which was adopted in 2017. This took two years of dialogue with both the Nairobi governor's office and transport committee of the city county along with public policy fora to gather views from civil society and create engagement with policymakers. The NMT policy provides a solid framework for harmonization, prioritization and coordination of NMT infrastructure and facility development and maintenance in Nairobi, and KARA is currently talking to NCC to follow up on implementation.

Overall, KARA has been helping to facilitate meaningful public participation in the transport sector in Kenya in line with article 10 of the Kenyan constitution which mandates such participation in governance. In this way, the resident associations are helping to bring the formulation of transport policy and implementation closer to the needs of pedestrians and public transport users. KARA is an exemplary case of how citizen participation in urban mobility matters can be allowed to evolve when government and civil society both value participatory decision – making.

⁵⁶ Source: Kara 2012

⁵⁷ Source: Nairobi City County 2014

E8: Extend policies to allow for engagement between major agencies in the state and private transport operators.

Strategic routes are showing signs of increasing congestion and unreliability around growing and congested urban areas, their catchment areas, key inter-urban corridors and key international gateways. State Governments should focus on these routes due to their large and growing economic importance. Within them, transport constraints pose a significant risk to economic growth. This problem is very significant in Lagos and is increasingly manifesting itself in other cities across the country. It requires collaboration from transport operators, who constitute the majority of road users in such areas.

A potential solution is developing a framework to coordinate traffic management within cities. State ministries in charge of urban transport - such as the Federal Road Safety Corps (FRSC) and the State traffic management authorities – are well suited to lead the coordination effort. Private transport operators and civil society organizations should be active participants by establishing multi-stakeholder groups/sub-committees to provide input and support for traffic management actions. Sensitization and educational programs on the implementations of traffic management interventions should be administered to drivers. Road users who do not benefit from traffic management actions, such as lane management and prioritization of other modes, are likely to resist such initiatives. Actively engaging such stakeholders minimizes possible barriers during implementation.

Road users have increasing access to accurate, real-time and intelligent traffic and travel information to manage their personal travels. Such personal traffic information is likely to make them less dependent on information from city traffic management. It is thus very important for transport authorities at the state level to engage the private sector in informing, managing and controlling traffic flows. With the growth in the use of in-vehicle technologies (e.g. navigation systems, cooperative systems) the private sector could take on more traffic management tasks than merely providing information.

In Lagos State for instance, the State Ministry of Transport can spearhead the group and embrace participants from various sectors, including the Police, LASTMA, LAMATA and LAWMA with the aim of improving overall traffic management in the state. Traffic management that encompasses daily commuters, work zone construction or road repairs, freight, waste management and other activities that affect movement. Depending on the topic of each meeting, NGO's, transport operators, Universities, Local governments, and affected private institutions can be invited to provide their respective input. These representatives could also form and participate in the various subcommittees that support the public organizations activities.

E9: Establish a cross-city platform for knowledge sharing and transfer

The Federal Government should champion cross-city platforms for regular dialogue, and information and knowledge exchange amongst agencies involved in urban transport. No such platform currently exists. The knowledge sharing expertise of key partners such as major funders of transport projects (i.e. AfDB or the World Bank), professional and research networks, and institutes focused on urban transportation in Nigeria should be leveraged.

Such knowledge sharing can build capacity, contribute to finding common solutions to common problems and enable secondary cities to accelerate their progress by learning from the successes and failures that larger cities have faced. There are many examples at the international and country level of successful city knowledge exchange networks. The box below presents the case of the Indian Institute of Urban Transport. Such organizations typically undertake the following kinds of activities:

- Commissioning comparative research regarding issues of common concern. This may involve partnerships with appropriate universities or research organizations;
- Documenting and assessing of good practice and program lessons from participating cities;

- Facilitating knowledge transfer through conferences and seminars, peer reviews, study visits and job shadowing;
- Policy advocacy for cities on issues of common concern.

It is suggested that the DRT&MTA, in conjunction with national and international partners, establish a national urban transport learning network to document and share good urban transportation practices amongst Federal, State and Local urban transport practitioners. This should include establishing partnerships with tertiary education institutions to support urban transport research and education and training.

One possible immediate task would be to collate a scientific evidence-based overview of Nigerian cities and their dynamics in conjunction with universities to better understand key urbanization, economic and mobility trends and current realities as a foundation for better transportation policy and project prioritization.

Box 9 - The role of the Institute of Urban Transport (IUT) in India

In 1997, the Indian Ministry of Urban Development (MoUD) decided to create a professional non-profit organization to promote, encourage and coordinate the state-of-the-art urban transport planning, development, operation, research and management: the Institute of Urban Transport (IUT). Today, IUT gathers around 1,500 members, including academicians, architects, economists, engineers, transport planners, town planners and professionals from various disciplines.

IUT has become a reference in the organization of lecture meetings, seminars, workshops and training programs for states and city level authorities. Moreover, IUT provides a technical support to the MoUD through (i) the review of the City Development Plans (CDP) and Detailed Project Reports (DPR) prepared by the Urban Local Bodies, (ii) the management of a Knowledge Management Center (KMC) to identify and follow-up good practices from India and abroad, (iii) the creation of databases on urban transport statistics and (iv) research, toolkits and publications.

The role of IUT was strengthened in 2006 with the National Urban Transport Policy (NUTP) which laid strong emphasis on building capabilities at the state and city levels to address problems associated with urban transport. As part of NUTP enunciations, the MoUD has taken an important step to develop capacity of the officials in the cities to improve urban mobility, through the creation of an Annual Conference-cum-Exhibition on 'Urban Mobility' every year under the brand Urban Mobility India (UMI) for dissemination of information and to facilitate exchange of ideas.

E10. Establish a national urban mobility data collection and analysis observatory.

The lack of sound and comprehensive urban mobility data needs to be progressively addressed as a priority at both national and state levels. Reliable regularly collected transport data is a foundation for sound evidence-based urban transport planning and management. It is not possible to produce reliable longitudinal and comparative analysis of urban mobility trends without such data. It is proposed that a national urban mobility data mechanism or observatory should be established to manage such data collection and analysis.

The initial task will be to establish the necessary institutional arrangements for this. It is proposed that the Federal Ministry of Transportation convene an Urban Mobility Data Forum to guide the establishment of the proposed mechanism. Key participants will include relevant federal and state ministries, the National Bureau of Statistics, appropriate universities and international partners. This Forum will need to determine the scope and mandate of the mechanism, the funding arrangements and the implementation priorities. The observatory should be located within the D or within an appropriate university.

Key tasks of the observatory would include:

1. The development and implementation of a national household urban mobility survey to be conducted on regular (possibly annual basis) with a statistical sample that is large enough to provide quality mobility data for at least all major urban centers. Such a survey would typically include data regarding household travel patterns, modal choices, transport costs and passenger concerns regarding current services delivery of these modal alternatives.
2. The enhancement and alignment of existing urban mobility data collection by national, state and city departments and agencies including rail and public bus corporations and private operators. An initial task will involve conducting an audit of all existing urban mobility data sets whether a national, state or city level.
3. An initiative to facilitate and collate the digital mapping of urban transport patterns including paratransit services using mobile phone and other data streams as an efficient real-time resource for planning and traffic management.

It is recognized that usefulness of such urban mobility data will be boosted by better data regarding demography, housing, employment, income and so on. The observatory should be positioned to support broader developments to improve urban data collection and management.

3.2 Recommendations under Land use efficiency (Avoid)

A1: Put in place a long-term integrated approach between land use and mobility planning notably to capture the value addition.

Land use planning and the development of urban mobility infrastructure should be integrated in the long-term. Value added to land due to the development of urban infrastructure could be captured by State governments, and used as a source of funding. Revenue collected from properties and businesses through taxes should go to funding mass public transport.

At present infrastructure finance is not integrated in land use planning. Rapidly developing cities are unable to raise revenue from urban growth. Authorities are very reluctant to raise property taxes, as in most cases it is met with great resistance from property owners who are not often motivated enough to pay when immediate results are not observable nor confirmed. The approach should thus be as transparent as possible to avoid such obstacles.

State Ministries in charge of urban transport can raise revenue through multiple mechanisms: business rates on commercial premises, negotiated developer and property rates, and contributions. If administered efficiently, transport investment in communities and neighborhoods could be a major source of revenue creating a long-term virtuous cycle: investments fuel value gains which in turn fuel further investments. These land value mechanisms should serve as long-term funds for capital expenditure to improve transport connectivity in urban areas. Successful administration requires the development of land use databases to avail cadastral information. Contemporary improvements in data, technology and research methods now enable cities to isolate the transport-induced value uplift in a more intelligent, targeted and potentially more proportionate manner.

Specific steps include:

- **Create a cadastral database:** This will enable the urban transport authorities to define zones of influence around new or significantly upgraded transport facilities. Urban Transport Authorities, where existent, or State ministries in charge of transport, in all other cases, should explore a framework for assigning zonal value growth into either already existing local taxes or newly specially introduced development levies.
- **Review local taxes and levies to reflect development:** This should be based on regular transparent market-based measurement of the premium freely and willingly paid by landowners, new purchasers or renters of residential property for access to transport within such zones of influence. Rates should be proportionate to the measured premium paid for access to transport in each location.

- **Implement Community Infrastructure Levy:** As a general development tax that should be dedicated to funding transport infrastructure.

The feasibility, effectiveness and acceptability of creating a new land value capture charge – such as a transport premium charge - is likely to be difficult. However, if properly implemented this would create a mechanism to capture transport-induced value uplift that cannot currently be captured within the existing property tax system, and has the potential to be very effective in funding new infrastructure. This requires wide consultation and consensus building among stakeholders and systematic implementation. A pilot corridor in high earning communities for example, could be used as a case study in order to win public confidence.

To address these issues raised here, the Federal Ministry of Transportation should collaborate with the Federal Ministry of Land, Housing and Urban Development to in order to develop a land use data base. Again to integrate land use and transport markets, the Federal Ministry of Transportation through the Federal Ministry of Land, Housing and Urban Development should propose new planning and development legislations as well as review taxation legislations in order to establish opportunities to explore for land value capture to fund transport initiatives.

State ministries in charge of urban transport, being implementing agencies of this strategy, should promote transit driven urban planning and development with the aim of improving mobility and accessibility. For this to be successful State Transport Agencies should undertake rigorous sensitization of stakeholders to win their confidence through educating them on the importance of this initiative and its contribution to their respective communities.

A2: Address the needs of low-income households in mobility planning.

Although the GDP of Nigeria increased in the last ten years, the growth has not been all-inclusive, as there has been a steady increase in the incidence of poverty. The depth and severity of poverty is higher in Lagos State when compared to the national average; in its metropolitan area there is a glaring and uneven distributions of financial capacities as richest inhabitants coexist with inhabitants failing to secure sufficient daily income to eat and move around. Poorer inhabitants experience high levels of poverty and often lack access to adequate shopping, jobs, financial, leisure, health and education facilities. They depend on an ever-expanding informal economy. They also suffer from time and income constraints to the use of transport services. Facilities and adequate urban services tend to be insufficient in their areas of residence.

Quantitative datasets that can help identifying those in need of institutional support are lacking. In order to address the needs of lower income dwellers, authorities need to first start by utilizing existing datasets – or construct them when they are not available – and adapt them to the needs of urban transport programs. As datasets progressively becomes more complete, they will be vital in specifying adequate levels of subsidy for beneficiaries of targeted programs aimed at mitigation high expenditure in transport services for lower income dwellers or households.

Examples from other cities in the Global South that explored options seeking to mitigate increased expenditure in transport would benefit Nigerian authorities to conduct in-house studies on suitable measures. Questions such as “what was their main objective?”, “which groups were targeted?”, “how were they implemented?”, and “why were they successful or unsuccessful?” are a great starting point. Such studies should be conducted by staff from the Federal Ministry of Transportation. External consultancy services could be a backup plan if capacity were deemed missing from institutional stakeholders.

Designing **fare structures** that benefit lowest income urban dwellers and vulnerable populations are the final step in this process (see Box below pertaining to the example of Bogota, in Colombia

Low income inhabitants in Nigeria tend to be located at a large distant from main activity areas (i.e. employment zones, educational centers etc.).

- **distance-based fare structures** and **time-based fare structures** tend to hurt poorer households the most and expose them to the harshest effects of fare increases.
- **flat fare structures** are likely to average short distance and long-distance trips which in turn leads to a better distribution of costs. They are the easiest form of fares in terms of implementation.
- more **context-conscious fare structures** would improve accessibility and mobility levels for lower income groups more proportionally.

Paratransit and formal public transport options operate independently from one another. There are four levels of integration in a transport system: fare integration (discussed here); physical or infrastructural integration (see recommendation S1, below), operational integration (see recommendation S2, below), and governance integration (see recommendations E1 and E2, above). Creating integrated public transport systems is directly linked to the adoption of any eventual fare structure. It is key to first introduce original approaches to reduce prices paid by lower income inhabitants. Simple to implement approaches exist: cities in the Global South have experienced with awarding lower fares to public transport users coming into the mass transit modes by way of paratransit options (this approach uses the trunk and feeder model). Hence, it avoids forcing users to pay two full fares: one for paratransit services and another for formal modes. Quite rapidly, cities using this model have adopted payment cards used by formal and paratransit modes. As capacity is built and as technology-based options begin to appear, the model evolves into more structured and complex fare setting mechanisms. Each Nigerian city will have the time to adapt its model to its actual urban context.

Once needs are compiled and understood, addressing them through transport will contribute to lowering vulnerability of low-income groups via greater ease of movement and access to opportunities, less exposure to accidents and a better quality of life. Improved quality of transport and travel time will also reduce security risks (crime, sexual harassment).

The Federal Ministry of Transportation should be responsible for carrying out the presented activities for the recommendation. Its implementation, as it is not depending on prerequisites, can be started whenever national authorities consider most pertinent.

Box 10 - Making Public Transport accessible to the urban poor

Addressing the urban mobility challenges of the poor in developing and emerging countries is a complex issue.

One set of possible options is to address the affordability challenges faced by the poor (price barrier), mainly through:

- Reduction of public transport fares;
- Allocation of targeted funds ('mobility funds', free transport tickets, etc.) to poor households.

However, in many low-income countries, public budget constraints typically make an across-the-board reduction of urban transport fares unrealistic since operators need to be compensated so that they keep operating and do not reduce supply. In countries where there exists a general income register, or a special register of the poor, implementing targeted demand-side subsidies can be a solution, but only few developing and emerging countries have such data.

Another set of solutions can be found by looking at the transport supply challenges faced by the poor (availability barrier) through for instance:

- Increasing public transport supply in urban peripheries where mostly poor people live;
- Increasing the supply of a public transport mode mostly used by the poor.

Indeed, in some situations, increasing public transport supply in zones where mostly poor people live or increasing the supply of the cheapest public mode of transport available in the city may have a higher pro-poor impact than lowering transport fares or allocating mobility funds to poor citizens. This is particularly true in low-income urban areas where the poor are compelled to walk or use expensive motorized modes such as taxis (because no public transport mode is available at a reasonable distance from their home with decent frequency).

In Bogota, authorities have used both set of solutions:

- They have introduced user subsidies targeted to the poor (addressing the affordability challenge);
- They have developed public transport services at the periphery of the city (addressing the availability challenge).

A 2016 World Bank Study⁵⁸ demonstrated that both reforms have jointly had a very high impact on the poor's capacity to access economic opportunities. Moreover, the study showed that:

- Subsidies provided to the poor have been critical to increase their mobility, more so than for other income categories:

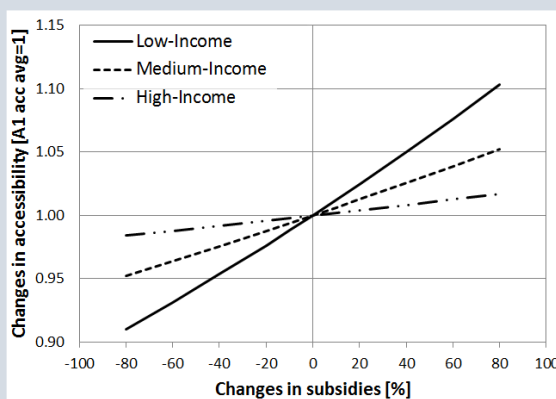


Figure 21: Work-accessibility changes with variation in subsidies in Bogota, 2015

⁵⁸ Source: Guzman L.A & Oviedo D. 2018

- Public transport supply was increased in peripheral areas, where many poor households live, thus increasing public transport supply for the poor more than for other users. As can be seen in the compared maps below, this has been critical to explaining variations in accessibility, even without the subsidy component:

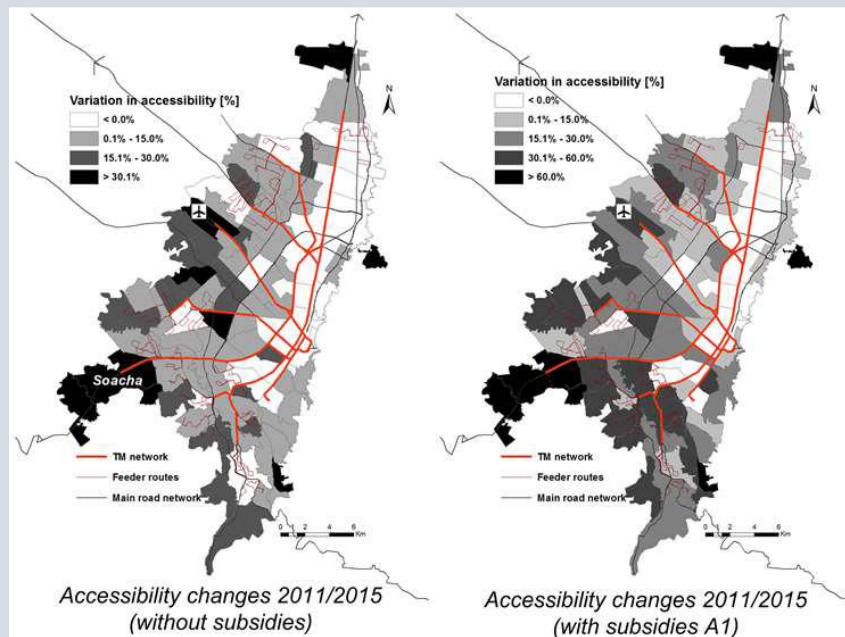


Figure 22: Accessibility changes per area with and without subsidies in Bogota, 2015

A3: Prioritize non-motorized transport in the planning and implementing of urban mobility strategies.

It is recommended that Federal Ministry of Transportation priorities non-motorized transport as an essential component of urban transport. This will involve placing importance on making infrastructure provisions for non-motorized transport, and not just motorized transport. The New National Transport Policy for Nigeria acknowledges the absence of regulations and consequently low infrastructural provision for and use of non-motorized transport (NMT).

In order to ensure more equitable allocation of road space it is important for a multi-modal approach to transportation by integrating walking, cycling, and motorized transport in the planning, design, managing and budgeting stages of urban transport projects.

Infrastructures for non-motorized transport are nearly non-existent in city centers. This has resulted in pedestrians having to compete with moving traffic for the use of roads as pedestrian facilities are not sufficient if not lacking all together. The limited available pedestrian facilities should be improved to optimize use thereof. This will include providing street lighting in order to provide safety at night for pedestrians.

In this regard Lagos has shown leadership by initiating the process of creating a Non-Motorized Transport (NMT) Policy which aims at increasing accessibility by prioritizing the use of walking, cycling, and public transport. Such a policy should provide a clear direction on non-motorized transport, and should serve as a basis to review existing master plans, where available, to make provisions for non-motorized transport in urban transportation. The policy intervention should be led by the Federal and State Ministries in charge of urban transport.

In the provision of lay-bys and terminals for bus operations it is important to make infrastructural provisions for non-motorized transport as well. To improve pedestrian safety pedestrian crossing and traffic signals should be introduced at critical crossings.

Non-motorized transport should also be harmonized with motorized transport. The Ministry of Transport should therefore work closely with the Ministry of Power, Works and Housing in the review of existing Transport Masters, where available in order to make infrastructural provisions for NMT as an important mode of transport. The Federal Road Safety Corps together with the State Ministries of transport should lead traffic safety and management initiative by enforcing pedestrian safety at crossing points and illegal non-street parking.

Box 11 - Bogota's (Colombia) less publicized but highly effective public space projects

Undoubtedly, Bogota is known in transport circles for its Transmilenio BRT system. At the same time, the city also started an aggressive campaign to reclaim public space from private users and to build a network of bicycle lanes in the city. These initiatives were based on previous efforts that resulted in strengthened institutions, sustainable financial practices, and a stronger civic culture⁵⁹.

During the 1980's, Bogota's public spaces, sidewalks and road space experienced rapid deterioration. Sidewalks became riddled with illegally parked private vehicles, street vendors, and commercial stock⁶⁰. Starting in the late 1990's, former mayors Enrique Peñalosa and, later, Antanas Mockus, made the reclamation of public spaces a priority. Though their campaigns were at first not welcomed by low-income and high-income residents alike, they were gradually accepted as inhabitants started to acknowledge the benefits of these policies. Apart from increased safety and better conditions for pedestrians, they also improved safety and travel speeds for private vehicle users.

Improving public space for pedestrians and cyclists was part of a larger plan to restructure the city's built environment and it was closely linked to the spatial framework implemented in 2000 (Salazar, 2008). The initiative was also presented as a first step to achieving an intermodal transport system that included high capacity buses, conventional buses, private cars, cycling and walking. In this sense, it paved the way for the construction of infrastructure-heavy public transport projects and also for the implementation of pedestrian-only roads in iconic zones in the city.

3.3 Recommendations under Multimodal Transport System Efficiency (Shift)

S1: Strengthen revenue mobilization mechanism through digitization and electronic payments.

Nigeria, like many African countries, is a cash-driven economy with the majority of cash held outside the banking system. Tax evasion and avoidance are among the challenges affecting tax administration in Nigeria. The introduction of an electronic payment and digitization of the revenue collection system would offer the opportunity to minimize leakages in transport revenue mobilization in Nigerian cities.

Moving towards a cashless society holds huge opportunity for optimizing revenue mobilization from road user charges and levies. To achieve this, a database of transport operators needs to be established both for the formal and the paratransit sectors. Authorities would then be able to create Information Systems to monitor their financial performance as well as make projections.

With this database established, city authorities could digitize the revenue collection system in order to optimize revenue collection. This could include, but must not be limited to, digital payments for vehicle licensing, insurance payments and other user charges. The city authorities should contract a private company to collect these revenues on their behalf. Payment of revenue should be through

⁵⁹ Source: Salazar 2008

⁶⁰ Source: Martin & Ceballos 2004

internet payments and mobile phone banking. This will reduce late payment, tax evasion and avoidance.

Lagos State Government, through LAMATA introduced an e-ticketing system that has been successful since the year 2013. The e-ticketing is being managed by the LAMATA itself. The aim of this initiative was to reduce cash handling by bus pilots, increase revenue security and protection, ensure adequate data collection and improve operations.

In order to deploy the system, city transport authorities need to (1) develop system requirements, (2) select a system service provider (3) educate stakeholders and increase awareness, and (4) pilot the system.

This initiative should be championed from both state and local level through partnership between the State Ministries in charge of urban transport and the State Board of Internal Revenue (i.e. in the case of Lagos, the Lagos State Internal Revenue Service). The initiative should be led by the State Ministries in charge of urban transport or the state Transport Authorities (i.e. LAMATA, in the case of Lagos when they exist. This will enable the state transport authorities to act in this capacity as both state and Local government.

Box 12 - Increasing revenue collection through digital ticketing solutions: the case of Amarante in Dakar, Senegal

In a bid to improve revenue collection for AFTU operators, local tech companies developed a ticketing solution based on the use of digital technologies. A Smartphone is used to edit tickets, which are printed on a portable Bluetooth printer. Data on ticket sales and collected revenue is regularly uploaded on to companies' servers using a Wi-Fi internet connection. This allows operators to know precisely how many tickets have been sold, and how much cash they are supposed to receive from the crew at the end of the day. According to one of the companies which equipped 400 bus⁶¹, operators who adopted this solution reported a 40% increase in revenue – due to a dramatic decrease in revenue evaporation, previously caused by the manual handling of cash. Vehicle owners can therefore monitor the performance of their fleet and drivers via an online platform.

Improving operators' turnover and profitability through better revenue collection opens up possibilities to reinvest a higher share of profit in their activity, and therefore to further improve the service that they offer. In addition, digitizing this process creates a wealth of secondary data that can be used to better plan, operate, and regulate transport services.

Box 13 - Implementing smartcards in Kigali's bus system

Very few African cities have implemented smart-card systems (or similar) in their public transport networks, Kigali is one of these cities. In 2010, one of the city's bus companies, Kigali Bus Services (KBS), started analyzing the prospects of introducing smart cards for their services. At the time, KBS operated medium- and large bus services that, due to an inadequate regulatory framework, were in direct competition with the paratransit sector's minibuses.

In 2010, transport tickets were paper based; fraud was then a common practice both for users (avoiding payment when boarding) and for drivers and ticket collectors. The latter had developed an illegal parallel arrangement where they handed out paper tickets printed by themselves that replaced official tickets. With this arrangement, they increased their revenue without having to distribute all gains with the bus company. This situation led to the first implementation of smart cards, as KBS decision-makers, considering lax regulatory practices, sought to reduce the likelihood of users avoiding payment and of drivers and ticket collectors developing a parallel arrangement.

⁶¹ The company Amarante equipped approximately 400 bus with this technology between 2015 and 2017.

First smart cards were limited to KBS services. This led to opposition from their rival operators (formal and paratransit alike). The latter considered that implementing smart cards was a risk in that it allowed for discount fares for some users (most notably students).

Fare setting mechanisms for smart cards did not differ from incumbent public transport fare policies established by the Rwanda Utilities Regulatory Agency (RURA). This mechanism consisted of a distance-base fare matrix, where depending on the segments travelled by a user, he or she had to pay a predetermined fare. Smart card usage was thus in line with the existing fare setting structure: users had to tap when boarding the vehicle and tap again when alighting. However, paper-based tickets had to be maintained as per RURA's request; this was meant to avoid putting at an unfair disadvantage users that did not acquire one of the 20 000 smart cards available.

Then, in 2013, RURA conducted a public transport services reorganization that created four operational areas. Three companies signed 4-year contracts with RURA; they were expected to operate well-defined public transport routes. Furthermore, companies had to adhere to fare policies and to accept improving their fleet to raise the level of service. At the end of the initial contracts, bus fleet numbers have reached 500 vehicles distributed in 78 routes.

In 2015, KBS, as the operator of one of the four zones defined by RURA, encountered some issues with its smart card system provider and was unable to maintain the system. That same year, a Rwandese company (AC Group) was created and it introduced a new smart card system. While, in the initial model, the capital investment was the operator's responsibility, AC Group was able to equip all vehicles with smart card validation terminals. In return for this investment, AC Group receives 5% of fare revenues. Fares have since been increased in order to do not directly transfer higher costs to operators.

RURA has now asked that all vehicles be equipped with necessary terminals. Smart cards are available at a price of 500 FRW; approximately 150 shops, distributed throughout the city, sell smart cards. The possibility of paying directly inside the vehicles has, nonetheless, been maintained on selected routes to avoid creating a disadvantage to certain users. In 2018, AC Group estimates that approximately 250 000 daily trips are made using a smart card, each trip costing between 200 and 300 FRW. AC Group directly receives fare income and, then, transfers it one day later to operators.

Implementing this smart card system has greatly helped in reducing fraud risks. Nevertheless, the current system does not allow users to tap when alighting. There is potential of improvement by doing so in order to really implement a distanced-based fare system. It would also pertain to creating useful data to improve bus operational models.

S2: Revitalize the inner cities with a focus on multi-modal and integrated transport planning system.

To reduce traffic congestion within city centers, it is recommended that they be rejuvenated with the focus on making room for a multi-modal and integrated transport system. In Lagos, the commercial capital, congestion in the city center could be attributed to traffic coming from outside Lagos or using Lagos as a thoroughfare. It is normal to see large haulage trucks parked on road shoulders while waiting for their turn to go to the ports. Shifting the focus towards a multi-modal and integrated approach requires rethinking how road space is allocated in inner cities.

Other transportation modes such as rail transport and water transport are being developed in cities like Abuja, Kanu and Lagos. These projects should not be developed in isolation. Rail and water transport should be inter-phased with the road-based modes (danfo and BRT-Lite), and with active modes. With the population of Nigerian cities expected to grow rapidly it is important to consider integrating active transport modes into the transport system.

Other planning interventions should include:

- The strengthening of city spatial and settlement planning instruments, including zoning schemes and Transit-Oriented Development (TOD) frameworks, that help to channel urban expansion along transit corridors rather than major roads;
- Traffic demand management mechanisms that increase average vehicle occupancy and privilege higher value trips and space-efficient modes. These mechanisms include special lanes for buses, other high occupancy vehicles and freight vehicles, parking restrictions and charges in major urban nodes and corridors, congestion pricing and so on;
- Facilitating the provision of mass transit buses to major high activity city-centers;
- Restricting transit through the city centers in order to reduce traffic that use the city center as thoroughfares.
- Making adequate provision for active modes of transport such as cycling and walking.

That way demand would be distributed onto multiple available transport modes.

This initiative should be led by the Federal Ministry of Transport and supported by the Federal Ministry of Lands, Planning and Urban Development as well as the Federal Ministry of Power, Works and Housing. The existing collaboration between these agencies needs to be strengthened in order to ensure that the relevant agencies are actively involved and actually participating in the rejuvenation process. The Federal Ministry of Transport should collaborate with the Federal Ministry of Power, Works and Housing in identifying the point of inter-phase for all the transport related projects such as the rail and water transport.

Box 14 - Urban Mobility Plans in Brazil

Brazil's federal government adopted the National Law on Urban Mobility, which required municipalities with more than 20,000 residents to adopt a plano de mobilidade urbana (or PMU, the Brazilian equivalent of the SUMP) by April 2015. The law concerned more than 3,000 municipalities. The PMU had to be aligned with their urban development master plan, and had to include motorized transport, public transport and active modes. The SUMP will be reviewed every 10 years. Access to federal funding for the construction of transport infrastructure was subject to the creation of a SUMP by the towns and cities in question. The SUMP must adhere to the following guidelines:

- Promote modal shift from private cars to public transport and active modes; towns with no public transport system must prioritize active modes;
- Reduce energy consumption by urban transport, as well as the associated emissions of GHGs and air pollutants;
- Improve road safety, particularly for the most vulnerable populations (children, the elderly, and more generally users of active modes).

The following key aspects must be considered: targets for modal split, emissions reduction, integration policy; planned improvements in public transport; collaborative planning approaches; implementation times; and monitoring and evaluation tools. Belo Horizonte is one of the rare cities that already had a SUMP, dating from 2010. The city is thus preparing to review it in order to meet federal requirements. Generally speaking, only a few Brazilian cities have the capability and expertise to submit a coherent SUMP that fully meets the federal government's expectations. An ample share of the 3,000 towns and cities concerned by the law, due to a lack of financial and/or human resources, and sometimes to a lack of political willpower to complete such a project, will submit a document which will not actually make it possible to implement sustainable urban transport planning.

S3: Extend and modernize the public transport network in major Nigerian cities.

The general purpose is to continue developing public transport systems that best adapt to current environments. For Lagos, it is necessary to complete the development and commission of the city's light rail system. With the addition of the light rail blue line, integrating with the public bus system will extend to 650km. Rail and BRT options must become the backbone of the system; road-based modes (including all paratransit modes) and future water-based services will complete the system. Incrementally, LAMATA must seek integration of all modes in order to build a far-reaching network to cater for the approximately 20 million inhabitants in the entire metropolitan area.

For other cities, including Abuja, there is an urgency to define high-capacity public transport options and their place in the network. Implementation processes are sometimes excessively long and time-consuming, State-level authorities must be aware of this. First, they must decide between (i) choosing public transport corridors where demand is highest and where negotiations – and eventual conflicts – with paratransit services are likely to delay implementation or (ii) selecting a corridor where fewer paratransit operators ply the road but where demand is likely to be insufficient to warrant heavy mass transport options. Each option comes with advantages and disadvantages. While higher-demand corridors can effectively alter existing conditions, they often result in long implementation processes that do not match political cycles. Lower demand corridors are relatively quicker and easier to implement but impacts on current operational environments can be limited. The choice is, therefore, between implementing the foundation of change in public transport and constructing pilot projects that do not necessarily tackle toughest problems. Both scenarios are possible and legitimately justifiable.

After initial corridors become operational, State-level authorities (i.e. the State Ministry of Transport or, where it exists, the metropolitan area's transport authority) must continue implementing public transport options, each time seeking improved operational integration with incumbent paratransit operators. Authorities ought to consider each new project as a new opportunity to further develop an integrated model where each mode finds its place.

Pertaining to the latter point, **the Federal Ministry of Transportation will also be a key part of this process. Using internal resources and taking advantage of this in-house example of what LAMATA has been able to achieve in Lagos, the FMoT ought to conduct detailed analysis on possible operational complementarity options between paratransit and formal modes.** The outcome of this process can be a guide for Nigerian cities presenting advantages and pitfalls of these options. Without excluding it, looking beyond trunk-formal and feeder-paratransit schemes is a necessity. Indeed, as the BRT-Lite showed, alternatives such as the one set in place between large BRT buses and parallel danfos and molues services are likely to be best adapted to the Nigerian context. The FMoT can conduct this study in parallel with the implementation of initial mass urban transport programs.

State-level authorities need to accompany paratransit operators to evolve in order to fit into the overall multimodal urban transport plan. Sometimes, this process will include encouraging paratransit services to co-exist with formal modes and, sometimes, banning the former all together if authorities see it fit to do so.

Box 15 - The AFTU, fleet renewal and the operators' professionalization in Dakar

As a key part of the 2001-2008 Urban Mobility Improvement Program ("Program d'Amélioration de la Mobilité Urbaine" – PAMU), Senegal authorities sought to recapitalize public transport vehicles operating in the Dakar metropolitan area. On top of attempting to reduce negative externalities directly linked to an ageing fleet (namely accident rates, congestion and pollution), the objective was to organize and to professionalize incumbent paratransit operators. The World Bank supported the program by contributing 8 billion FCFA for the initial renewal phase launched in 2005.

The primary principle was to include only operators already providing services in Dakar and to encourage their professionalization. Operators participating in the program accepted to

consolidate and to reduce the number of contacts in the paratransit sector. In the end, 14 EIG (economic interest group) was created grouping former "car rapides" and "ndiaga ndiaye" operators; EIG were then federated in the Urban Transport Professionals Financing Association ("Association de Financement des Professionnels du Transport Urbain" – AFTU), established in 2001. Each EIG is independently managed.

AFTU was key in the fleet renewal process. AFTU received a special exemption from the Ministry of Economy and Finance in order to be able to provide leasing, the preferred mode to finance the program. Considering the amount of public funds included in the fleet renewal process, a rigorous supervision device for AFTU was needed. Public services are presented in the directorate; representatives come from the Ministry of Economy and Finance, the Ministry of Transport and the CETUD – "Conseil Exécutif des Transports Urbains de Dakar", Dakar's transport authority –. Furthermore, a monitoring committee was also created by way of inter-ministerial order (Ministry of Economy and Finance and Ministry of Transport), its objective is to supervise the revolving fund. Besides Ministry of Transport, CETUD and Transport Direction representatives, the committee also includes the Ministry of Economy and Finance representative, AFTU's president and AFTU's officer in charge of guaranteeing administrative, financial and accounting management of the leasing process.

The above organization was key in allowing:

- Recapitalization of 2 000 ageing minibuses, often not roadworthy and not respecting minimal requirements to provide public transport services;
- Capacity building, pertaining to technical and managerial aspects, for paratransit operators by way (1) of operators training programs (management modern transport companies) and (2) of personnel, including drivers, fare collectors and route managers, amongst others;
- Initial professionalization that included: (i) operational contracts between each EIG and CETUD for public transport lines; (ii) establishment of support entities, namely a savings and credit entity (MECTRANS), a health insurance company (TRANSVIE) and a EIG assistance on managing routes (CAPTRANS); and (iii) achieving a sufficient market share of public transport services that make AFTU one of the main stakeholders in the sector, even considering public authorities vision of implementing a hierarchy network where mass transport services are the backbone of the system (BRT and suburban rail services).

The program's success, both from an operational standpoint (55 routes network, more than 750 km and 50% modal share) and from the economic and financial profitability situation (99% reimbursement rates), led to the program being extended and implemented in secondary cities. Furthermore, other transport areas such as heavy freight vehicles and refrigeration vehicles, have also implemented similar programs.

S4: Recognize the paratransit sector role in the public transport system.

The paratransit sector dominates urban transport operations and currently plays a central role in the urban mobility of most, if not all, Nigerian cities. In addition to increasing accessibility for commuters, paratransit acts as an important employment generator for drivers. Attempts to render paratransit illegitimate are likely to be counterproductive. Depending on the city, different combinations of buses (molues), minibuses (danfos), shared taxis, motorized tricycles (keke) and motorcycle taxis (okada) compose the paratransit sector. However, and acknowledging notable exceptions (i.e. the results of the BRT-Lite process), all paratransit modes coexist but do not coordinate operations with formal services. Previously viewed as a nuisance in the general urban system, paratransit modes carved their places and they are now well recognized by users and less so by authorities. This last element is starting to change in major Nigerian cities.

The lack of distinction between on-demand transport and public transport is one obstacle common to most African, and Nigerian, cities is. Four-to-five-seater taxis indiscriminately change between services

similar to that of a metered taxi (even if taxis do not carry taximeter) and services functioning according to the logic of public transport. Even though the latter dominate logic dominates service provision, there is a need to differentiate private taxi services from shared taxis. It is likely impossible to regulate either service until they are clearly differentiated, as the indiscriminate mode change will hamper any attempt to operationally integrate collective modes. Public transport collective modes should include: danfos, molues and shared taxis. On-demand services should include metered taxis, kekes and okadas (see Box below on the Kenya case). On-demand services would continue having high levels of flexibility as they do now. The definition of what constitutes each group of services must come from Federal-level authorities.

Three complementary processes aimed at professionalization are required for Nigerian cities: (i) consolidate paratransit operators into embryos of operational companies (forms may vary from interest groups to cooperatives) (see Box above on Dakar's fleet renewal program that sought operator professionalization); (ii) optimize the route network giving paratransit secondary and feeder routes; and (iii) encourage fleet renewal programs.

To develop integrated public transport systems, it is necessary to clearly delineate the role of paratransit stakeholders. In its current state, the internal organization of paratransit still lacks clarity, Unions and operational associations often overlap in responsibilities: Rather than representing, unions might function as operational authorities; rather than focusing on operations, associations might function as representatives. In an ideal situation, unions should not intervene in operational functions; a prerequisite to building the operational capacity of associations, making them evolve into full-fledged operational coordinators while slowly consolidating their role and place. State-level authorities would then be able to engage in negotiations with them and define each paratransit mode's role in their envisioned public transport model. What it then means is that a state level authority would be charged with the responsibility of public transport regulation that would be backed by law.

In the aforementioned process, State-level institutional entities in charge of the program must be identified (ideally a metropolitan transport authority) and recognized by the paratransit sector. That future, or existing, metropolitan transport authority would eventually enact regulatory frameworks that would define, at least, quantity and quality regulatory parameters. These regulatory frameworks would accompany contractual models that best fit each city's envisioned system. Lagos presents an inspiring example: LAMATA produced a Strategic Transport Master Plan (LSSTMP) and Bus Route Network (BRN) to expedite the process of bus franchising and effective route coordination. These documents spell out guidelines for the phased franchising of all the bus routes. It is important to note that while franchising routes appears to be the preferred option for LAMATA, other Nigerian cities do not need to reproduce the exact model; quantity licensing, quality licensing, concessions and, in the best scenario, net cost contracts can also be analyzed.

Incumbent paratransit operations depend on unroadworthy vehicles, which are partially responsible for several negative externalities of the system. Operators need to renew their fleets to improve service quality and to reduce maintenance costs. Authorities could use renewal programs to encourage operator consolidation and regulatory framework acceptance by the latter. Importantly, fleet renewal programs must not focus on one unique type of vehicle; the choice of vehicle must happen through careful analysis of levels of demand and quality improvements that are anticipated. In some cases, new vehicles would have higher capacities, while in others existing vehicle capacity would remain largely unchanged. To demonstrate the relevance and profitability of programs to different stakeholders, pilot programs might be warranted.

As urban transport authorities have not been implemented yet in most Nigerian cities (outside of Lagos' LAMATA) – and they will likely not be implemented in the short-term –, State ministries in charge of urban transport must take the lead in carrying out this recommendation. Once transport authorities are in place, State ministries should progressively transfer responsibilities to these transport authorities. It is also important that the recommendation be implemented in accordance with recommendation S3, as both recommendations are complementary and closely linked between them.

Box 3-1: – Regulating the participation of three-wheelers and moto-taxis in the transport system: the example of Kenya

Severe congestion in Kenya's main urban areas has given rise to the use of motorbikes (boda bodas) and three-wheelers (tuk tuks) for passenger transportation services. These light, maneuverable, and affordable vehicles are better suited to navigate congested city streets than traditional motorized modes of transport. However, their operators are often blamed for their unruly behavior and unsafe driving. Contrary to the laissez-faire situation prevailing in other countries, Kenya has adopted regulations to formalize the participation of these modes to the transport system.

In 2014, the National Transport and Safety Authority (NTSA) proposed new regulations for motorcycles, covering both boda bodas and tuk tuks. These regulations define a set of obligations for owners, drivers, and passengers in terms of safety (obligation to wear a helmet /seat belt), organization (operators are required to be part of a corporate body), and insurance – among others. One specificity of these regulations is that they make the owner of the vehicle responsible for several operational aspects, such as providing protective gear or making sure that the driver is duly licensed, which increases accountability in the industry. Similarly, it is the responsibility of the seller of a motorcycle to provide the buyer with helmets and reflective jackets.

Finally, the regulations make provisions for NTSA and county government to define areas of operation by banning boda boda and tuk tuk traffic on certain roads. While operators have so far resisted this attempt to restrict their activity, it paves the way for further, finer-grained, regulation of the sector. The authorities are also considering the adoption of higher standards through more stringent control of vehicles' roadworthiness and limiting the total number of licenses. Though nascent, the regulatory regime developed in Kenya constitutes an example of how informal transport operations can be brought into the fold and recognized as legitimate service provider.

3.4 Recommendations under Road Space Use and Vehicle Efficiency (Improve)

I1: Support cities to improve the efficiency of their road networks and traffic management measures.

Given the chronic congestion in many urban areas and the low efficiency of road networks, there is a critical need for a program to support cities to adopt traffic management instruments that enable a more efficient use of the existing transport infrastructure, and that are appropriate to their circumstances. Such support has to recognize the differential institutional and financial capacity of different cities to adopt such traffic management instruments.

There are a wide range of instruments that have emerged internationally to facilitate more efficient use of road networks. The adaptation of these instruments to the Nigerian city environment and their dissemination to relevant state and local governments and transport authorities should be driven by DRT&MTA in partnership with relevant research and professional organizations. State traffic management agencies in collaboration with state ministries of transport should lead the implementation of these initiatives at the state or city level.

Key areas for development and action include:

- The definition of an appropriate traffic strategy to support the development and assessment of urban mobility plans. This means building capacities in traffic analysis and adopting tools (including methodologies, procedures, and software packages)
- The modernization of traffic signals by replacing uncoordinated fix-timed signals, when they exist, by coordinated demand-actuated signals;

- The introduction of Intelligent Transport Systems and Traffic Control Centers in major high activity cities to manage congestion, minimize traffic accidents and enhance mobility;

There is also potential to replicate the innovation of a radio station dedicated to traffic information and other road safety issues as pioneered by the Lagos State Government to other states. Such a station enables commuters to plan more efficient journeys by giving them real time information on traffic flow across the city and can provide an invaluable avenue for social education on best traffic and road use practices and as a feedback system between the government and the populace. This can be supplemented by the incremental improvement of mobile phone-based traffic and routing apps.

The successful implementation of these traffic management interventions will require collaboration from private public transport operators. Operators will need to have sufficient confidence in the system to trust the measures and the information. DRT&MTA will need to strengthen its communication channels with the private transport operator unions in this regard.

I2: Improve inter-city connectivity by facilitating inter-city and inter-state coordination in mobility planning.

There is a need to address the poor inter-city connectivity experienced by many Nigerian cities. Such poor inter-connectivity concerns both the links between core cities and their adjacent satellite cities, towns and peri urban areas, as well as long-distance connectivity. Many major and secondary cities experience major spill-over effects of inward travel from neighboring cities. This is often exacerbated by difficulties cities face in collaborating over administrative boundaries to solve common transport challenges. Notwithstanding the impact of LAMATA, Lagos, for example, experiences challenges in engaging neighboring cities in solving the spill-over effect of urban growth due to differences in political focus and vision. By adopting a coordinated spatial approach to addressing mobility and accessibility issues, adjacent states would be able to manage unwanted thoroughfare traffic in their city centers.

Possible areas of intervention to improve the situation include:

- Proactive planning to ensure transport infrastructure responds to changing trends and demographics (in line with other state spatial plans);
- Continued harmonization of regulatory arrangements applicable to transportation across states and cities via the Transport Commissioners Forum (TCF);
- TCF should also spearhead the establishment of an inter-state collaboration platform for cross-city traffic management and planning
- National transport development planning should guide inter-city movement planning identifying and prioritizing key road and interchange infrastructure to enhance inter-city connectivity.

It is proposed that the DoH in consultation DRT&MTA, relevant State Governments and the TCF should develop a detailed inter-city transport framework that identifies and prioritizes key inter-city connectivity challenges and outlines a program of inter-city road, interchange and other infrastructure investment priorities as a key medium-term task.

Box 3-2: – Hierarchy of transport plans in South Africa

There are three spheres of government in South Africa: national, provincial and municipal. The country has nine provinces and a total of 257 municipalities. These municipalities fall into three categories. The eight largest cities are classified as metropolitan municipalities (Category A). Outside of these metropolitan municipalities there are 44 district municipalities (Category B), each of which is further divided into local municipalities (Category C). In total there are 205 of these Category C municipalities, most of which have a smaller city or a large town as their core. Local-level municipalities are unitary, which means metropolitan (Category A) and local (Category C)

municipal boundaries include the complete functional area of the main urban settlement, as well as nearby and functionally linked smaller urban, semi-rural and rural areas⁶².

The Constitution of the Republic of South Africa prescribes the roles of all three spheres of government, including the transport responsibilities of each sphere and how these responsibilities may overlap. The National Land Transport Act (NLTA, Act 5 of 2009) details the land transport responsibilities of each sphere of government, including such matters as policy, legislation, planning, and regulation and funding arrangements. Each sphere is generally empowered to attend to responsibilities at its geographical scale, though there are variations across provinces and municipalities for historical, political and other reasons. The national Minister of Transport may assign responsibilities to different spheres and municipalities as required. In addition, provinces and municipalities may request of the national Minister for land transport responsibilities to be devolved to them. Local municipalities may also create dedicated authorities to encompass all land transport responsibilities within their municipal boundaries. Existing transport authorities are the City of Cape Town’s Transport and Urban Development Authority (TDA) and the eThekweni (Durban) Transport Authority (ETA).

Across all spheres of government, the transport planning cycle spans five years. National and Provincial Land Transport Strategic Frameworks (NLTSF, PLTSFs) provide strategic direction for transport planning in the national and provincial spheres at their respective geographic scale. In the municipal sphere of government transport planning requirements depend on the respective municipality’s category (A, B or C), but in all cases takes the form of a prescribed Integrated Transport Plan (ITP). Minimum requirements for ITPs are determined by the national minister, with additional oversight from provincial ministers (officially called Members of the Executive Committee, or MECs, for each province).

Within the municipal sphere the transport planning authority would be the local transport authority or municipal department responsible for transport. Category A (metropolitan) municipalities are tasked with preparing Comprehensive ITPs (CITPs) so as to take into account the complexity of a large city’s transport system. CITPs must capture a longer-term vision for transport, quantify the existing transport system, and provide strategies for dealing with matters such as infrastructure, good movement and non-motorized transport. These plans must also include a detailed Public Transport Plan (PTP). Category B (district) and C (local) municipalities must prepare District and Local ITPs (DITPs and LITPs), respectively. DITPs are similar to CITPs, though DITPs do not have to be as detailed as the transport systems in districts or smaller cities and towns are unlikely to have the same complexity and features as that of a metropolitan areas. LITPs in turn form part of DITPs, and are again a step less detailed as they would pertain only to a town or rural area’s transport system⁶³.

⁶² Source: StatsSA and Municipal Demarcation Board 2017

⁶³ Source: National Land Transport Act: Integrated Transport Planning Regulations 2017

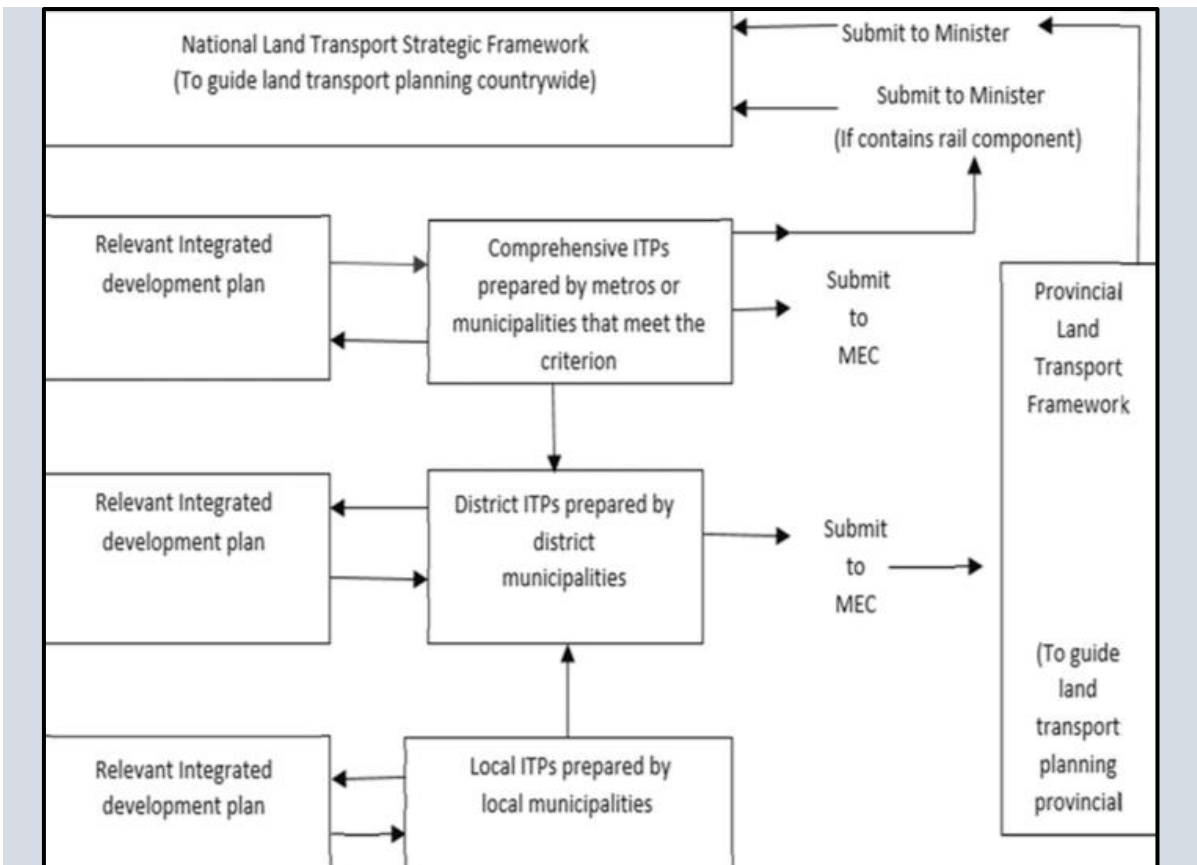


Figure 23: Interrelationship between transport planning requirements across the spheres of government⁶⁴

It should be noted that for historical, geographical and other reasons there are variations in the organizational structure and resourcing of the many provincial and municipal departments responsible for transport. For similar reasons there are also variations in the institutional capacity of each to perform all their responsibilities. As a result most municipalities across categories have continuously been struggling to complete transport plans on schedule and to the desired quality, and thus the National Department of Transport in partnership with the National Treasury is in the process of reviewing the overall planning process to make it less onerous and more challenge-oriented.

⁶⁴ National Land Transport Act: Integrated Transport Planning Regulations 2017

Summary Table of Recommendations under the EASI Framework

Recommendation	Who	How	When	
<p>E1</p> <p>Mandate the Department of Road Transport and Mass Transit Administration (DRT&MTA) to lead and coordinate integrated urban transport planning.</p>	<p>Federal Ministry of Transportation (through DRT&MTA)</p>	<p>Establish process to ensure better functional alignment between key federal ministries of urban transport.</p>	<p>Short-term</p>	<p>No prior recommendation needed</p>
		<p>Strengthen collaborative practices between federal and State transport ministries on incremental basis.</p>	<p>On-going</p>	
		<p>Establish common urban transit policy, strategy and priorities as framework for aligning implementation.</p>	<p>Short-term</p>	
		<p>Ensure regulatory mechanisms requiring alignment of urban spatial and transport plans put in place.</p>	<p>Short-term</p>	
		<p>Develop regulatory framework that ensures all major settlement and infrastructure developments address transport implications.</p>	<p>Short-term</p>	
		<p>Create federal project coordination capacity to support priority urban transportation projects.</p>	<p>Short-term</p>	
<p>E2</p> <p>Establish a clear federal policy framework to assist State governments in the establishment of urban transport authorities.</p>	<p>DRT&MTA <i>and</i> LAMATA <i>or</i> State Ministries in charge of urban transport</p>	<p>Develop national legislative, resource and institutional guidelines to assist State processes to establish urban transport authorities.</p>	<p>Short-term</p>	<p>E1</p>
		<p>Identify prioritized schedule for implementing urban transport authority establishment.</p>	<p>Short-term</p>	
		<p>Establish national support team to assist States to establish effective authorities on prioritized incremental basis.</p>	<p>Short-term</p>	
		<p>On-going rollout and consolidation of urban transport authorities.</p>	<p>On-going</p>	
<p>E3</p> <p>Creation of a legislative instrument that enables state transport agencies to access dedicated sources of transport funding</p>	<p>Revenue Mobilization Allocation and Fiscal Commission <i>and</i> Federal Ministry of Budgets and National Planning <i>and</i></p>	<p>Review current transport funding legislature on transport funding mechanisms to provide for both urban transport infrastructure and services.</p>	<p>Short-term</p>	<p>S1 In parallel with: A1 and E4</p>
		<p>Create of a legislative instrument that enables state transport agencies to access dedicated source of transport fund.</p>	<p>Medium-term</p>	

		Federal Ministry of Transportation <i>and</i> State Ministries in charge of urban transport	Create a regulatory framework for accessing transport funds.	Medium-term	
			Introduce new levies and user charges.	Medium-term	
E4	Set up local Urban Transport Funds	State Transport Ministries <i>and</i> State Transport Authorities	Educate and build consensus among stakeholders	Short-medium	E1 In parallel with E5
			Set legal instrument to introduce a special transport fund that is totally dedicated to urban transport	Medium term	
			Introduce special local levies and tax to fund urban transport initiative	Medium term	
E5	Encourage sustainable local private sector investment.	Federal Transport of Transport & State Ministries of Transports	Review available legislature on procurement to protect private sector investment to boost investor confidence.	Short-term	E1 In parallel with E4
			Empower Urban Transport Authorities to lead to local government level	Medium-term	
			Introduce special local funds at State level dedicated to urban transport.	Long-term	
E6	Identify civil society stakeholders and create platforms for coordination with Government agencies	State Ministries in charge of urban transport <i>and</i> Federal Ministry of Transportation	Define civil society in Nigeria and identify all stakeholders.	Short-term	No prior recommendation needed
			Propose sensitization workshops for State authorities.	Short-term	
			Understand objectives of each civil society group and propose interactions between them.	Short-term	
			Inform of ongoing projects.	Medium-term	
E7	Foster and support existing civil society stakeholders towards the expected standard and create a sustainable link with Government agencies	State Ministries in charge of urban transport	Continuously update existing databases on civil society stakeholders.	Medium-term	E5
			Progressively include all subjects dealt with by civil society in planning exercises.	Medium-term	
			Support creation of NGOs.	Short-term	
			Support professionalization efforts.	Medium-term	
E8			Revise traffic laws.	Short-term	

	Extend policies to allow for engagement between major agencies in the state and private transport operators	State Ministries in charge of urban transport <i>and</i> State Traffic Management Departments <i>and</i> Federal Road Safety Corps	Create awareness and educated transport operators. Establish multi-stakeholder groups/sub-committees to provide input and support for traffic management action. Enable private sector to take on more traffic management tasks than just providing information.	Short-term Medium-term Long-term	No prior recommendation needed
E9	Establish a cross-city platform for knowledge sharing and transfer	Federal Ministry of Transportation <i>and</i> State Ministries in charge of urban transport Universities <i>and (where existing)</i> Urban Transport Authorities at State level	Establish national urban transport learning network to document and share good urban transportation practices amongst Federal, State and Local urban transport practitioners. Establish partnerships with tertiary education institutions to support urban transport research and education and training.	Short-term Medium-term	No prior recommendation needed
E10	Establish a national urban mobility data collection and analysis observatory.	Federal Ministry of Transportation <i>and</i> State Ministries in charge of urban transport National Bureau of Statistics Universities <i>and (where existing)</i> Urban Transport Authorities	Establish national data forum to determine scope, funding and implementation priorities and to coordinate joint data improvement actions. Select appropriate department or organization to host observatory. Conclude partnership agreements regarding key tasks. Conduct audit of existing urban mobility data collection activities. Agree protocols to align existing activities around common data standards and common interface protocols. Initiate pilot urban household mobility survey in priority cities Incrementally expand and enhance urban household mobility survey Initiate urban transport patterns mapping projects using mobile phone data.	Short-term Short-term Short-term Short-term Medium-term Medium-term Long-term Medium-term	No prior recommendation needed
A1	Put in place a long-term integrated approach between land use and mobility planning notably to capture the value addition.	Federal Ministry of Transportation <i>and</i>	Integrate land use planning and the development of urban mobility infrastructure. Sensitize and educate society on property tax.	Long-term Short-term	In parallel with: E3 and E4

		Federal Ministry of Land, Housing and Urban Development	Set up a land use database.	Medium-term	
			Revise property tax to correspond with property value appreciation.	Long-term	
			Review tax rates and corporate tax reforms.	Long-term	
A2	Address the needs of low-income households in mobility planning	Federal Ministry of Transportation	Conduct studies on public transport expenditure.	Short-term	No prior recommendation needed
			Utilize existing database to identify user groups concerned by eventual mitigation measures.	Short-term	
			Identify mitigation measures that can be implemented when public transport fares increase.	Medium-term	
			Introduce social fares for lowest income groups.	Medium-term	
A3	Prioritize non-motorized transport in the planning and implementing of urban mobility strategies.	Federal Ministry of Transportation <i>and</i> State Transport Ministries <i>and</i> Federal Road Safety Corps	Propose a non-motorized transport policy.	On-going	No prior recommendation needed
			Revise existing Master Plan to make provision for non-motorized transport	Medium-term	
			Light up existing walkways to ensure safety at night.	Short-term	
			Protect walkways from illegal on street parking to optimize use.	Short-term	
S1	Strengthen revenue mobilization mechanism through digitization and electronic payments.	Federal Ministry of Transportation <i>and</i> State Ministries of Transport	Set up database for operators.	Short-term	E3
			Educate stakeholders on the importance of levies and how these levies will be put to use.	Medium-term	
			Digitize the payment for vehicle licensing and insurance payment.	Medium-term	
			Introduce electronic ticketing.	Medium-term	
S2	Revitalize the inner cities with a focus on multi-modal and integrated transport planning system	State Ministries in charge of urban transport <i>and</i> Federal Ministry of Transportation	Integrate existing road transport infrastructure with new water and rail transport that are being developed in cities.	Medium-term	A1
			Controlled traffic management in city centers to restrict access and reduce thoroughfare	Medium-term	

		<p><i>and</i></p> <p>Federal Ministry of Power, Works and Housing</p> <p><i>and</i></p> <p>Federal Road Safety Corps</p>	<p>Make adequate provision for active modes of transport such as cycling and walking.</p>	<p>Medium-term</p>	
S3	Extend and modernize the public transport network in major Nigerian cities.	<p>State Ministries in charge of urban transport</p>	<p>Continue development of mass transit options in cities, without limiting projects to BRT or rail options.</p>	<p>On-going</p>	<p>In parallel with:</p> <p>E1 and S2</p>
		<p><i>or (where existing)</i></p> <p>Metropolitan Transport Authorities at State level</p>	<p>Utilize each mass transit project (or other public transport projects) to promote progressively integration.</p>	<p>On-going</p>	
		<p><i>and</i></p> <p>Federal Ministry of Transportation</p>	<p>Study complementarity options between paratransit and formal modes.</p>	<p>Short-term</p>	
			<p>Analyze options to use danfos and molues in different and complementary ways to shared taxis, kekes and okadas.</p>	<p>Short-term</p>	
S4	Recognize the paratransit sector role in the public transport system	<p>State Ministries in charge of urban transport</p>	<p>Encourage separation of activities between unions and operational associations of the paratransit sector.</p>	<p>Short-term</p>	<p>In parallel with:</p> <p>E1 and S1 and E5</p>
		<p><i>or (where existing)</i></p> <p>Metropolitan Transport Authorities at State level</p>	<p>Clearly define paratransit modes and propose a separation between on-demand transport and collective transport services.</p>	<p>Short-term</p>	
			<p>Clarify levels of regulatory documents and entity (institutional or paratransit) in charge of regulatory framework.</p>	<p>Short-term</p>	
			<p>Encourage robustness of associations at metropolitan level to build their capacity to become adapted operational actors.</p>	<p>Short-term</p>	
			<p>Conduct pilot projects on fleet renewal that combine renewal with new internal organization of the paratransit sector.</p>	<p>Short-term</p>	
I1	Support cities to improve the efficiency of their road networks and traffic management measures	<p>DRT& MTA</p>	<p>Commission network efficiency toolbox of regulatory tools, ITS technologies and cost-effective public transport and paratransit promotion tools.</p>	<p>Medium-term</p>	<p>E1</p> <p>In parallel with:</p> <p>E7</p>
		<p><i>and</i></p> <p>Federal Ministry of Transportation</p>	<p>Re-program traffic signals as coordinated demand actuated signals.</p>	<p>Medium-term</p>	
		<p><i>and</i></p> <p>State Traffic Management Agencies</p>	<p>Sensitize and educate road users.</p>	<p>Short-term</p>	

		<i>and</i> Federal Road Safety Corps	Engage with private transport operators to facilitate implementation	Medium-term	
12	Improve inter-city connectivity by facilitating inter-city and inter-state coordination in mobility planning.	Transport Commissionaires	Identify and prioritize key inter-city connectivity challenges at the State level.	Short-term	In parallel with: E1 and S1
		<i>and</i> State Ministries in charge of urban transport	Identify and prioritize key inter-city connectivity challenges at the Federal level.	Medium-term	
		<i>and (where existing)</i> Urban Transport Authorities at State level	Develop program of inter-city road and interchange investment priorities to be progressively rolled out.	Medium-term	

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Appendices

Appendix 1 - Sources of statistical data for the eight pilot countries and the cities studied in Nigeria

■ Sources for transnational data in the eight pilot countries :

	SOURCES	Available at
DEMOGRAPHY		
Country population (million, 2016)	Worldbank (2016)	https://data.worldbank.org/indicator/SP.POP.TOTL
Country population projection (million, 2030)	UN Habitat (2030)	http://urbandata.unhabitat.org/explore-data/?countries=Q,ET,GH,GN,KE,NG,RW,SN&indicators=population
Country density (pop. / sq. km)	Worldbank (2016)	https://data.worldbank.org/indicator/EN.POP.DNST
URBANIZATION		
Urbanization Rate (% , 2016)	Worldbank (2016)	https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS
Urban Growth Rate (% , 2010-2015)	Worldbank (2010-2015)	https://data.worldbank.org/indicator/SP.URB.GROW?locations=Q
Urban areas with more than 300 000 inhabitants (2015)	UN Habitat (2015)	UN Habitat (https://esa.un.org/unpd/wup/CD-ROM/ , File 12)
ECONOMY		
GDP per capita (\$PPP, 2016)	Worldbank (2016)	https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD
Average economic growth rate (% / year, 2010-2015)	Worldbank (2010-2015)	https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=Q
Poverty headcount ratio w/r to the international poverty line (2011 PPP, % of pop.)	Worldbank (2005 to 2015 depending on countries)	https://data.worldbank.org/indicator/SI.POV.DDAY?locations=KE-ET-RW-GH-NG-GN-SN-Q
Human Development Index (0-1 scale, 2015) 0 - low , 1 - high human development	UNDP, Human Development Reports (2015)	http://hdr.undp.org/en/composite/HDI
BUSINESS AND GOVERNANCE		
Doing Business (Distance to Frontier, 2017) 0 - lowest, 100 - highest performance over time or "frontier"	Doing Business, Distance to Frontier (2017)	http://www.doingbusiness.org/data/distance-to-frontier
Corruption Perceptions Index (1-100, 2016) 1 - low transparency or high corruption, 100 - high transparency or low corruption	Transparency International (2016)	https://www.transparency.org/news/feature/corruption_perceptions_index_2016
MOTORIZATION		
Gazoline Price / Diesel Price (US\$ / L, 2016)	Worldbank (2016)	https://data.worldbank.org/indicator/EP.PMP.SGAS.CD/ https://data.worldbank.org/indicator/EP.PMP.DESL.CD
Private vehicles in use (2015)	OICA (2015)	OICA http://www.oica.net/category/vehicles-in-use/
Motorization Rate (private vehicles / 1 000 inhabitants, 2015)		
Road Safety Casualties (nb of casualties / 100 000 people, 2015)	Worldbank (2015)	https://data.worldbank.org/indicator/SH.STA.TRAF.P5?locations=Q&view=chart

■ Sources for statistical data in Abuja and Lagos

	Abuja	Lagos	Sources	Available at
DEMOGRAPHY				
Metropolitan population (million, 2015)	2,4	13,1	UN Habitat (2015)	https://esa.un.org/unpd/wup/CD-ROM/ , File 12
Percentage of the national population residing in the urban agglomeration (% , 2015)	1%	7%	UN Habitat (2015)	https://esa.un.org/unpd/wup/CD-ROM/ , File 16
Urban population growth rate (% / year, 2015-2020)	5,5%	4,2%	UN Habitat (2015-2020)	https://esa.un.org/unpd/wup/CD-ROM/ , File 14
QUALITY OF LIFE				
Quality of life in African cities (EPFL-AMB ranking, 2017)	44/100	43/100	EPFL-AMB (2017)	https://www.yabiladi.com/articles/details/51277/classement-epfl-amb-marrakech-meilleure-ville.html
Urban mobility Index 2.0 - UITP (grade 0-100, 2014)	N/D	N/D	UITP (2014)	http://www.uitp.org/sites/default/files/members/140124%20Arthur%20D.%20Little%20%26%20UITP_Future%20of%20Urban%20Mobility%202020-200_Full%20study.pdf
MOBILITY DEMAND				
Motorization rate (vehicles / 1'000 inhabitants)	250,0		Femi 2012	
Number of trips per day (million)	-	24 M	LAMATA 2016	
Number of motorized trips per day (million)	-	14 M	LAMATA 2016	
Number of motorized trips per day per inhabitants (million)	-	-		
Average trip distance (km)	-	-		
Modal split - Personal Vehicles (%)	-	0,1	LAMATA 2016	
Modal split - Public Transport, including paratransit (%)	-	0,5	LAMATA 2016	
Modal split - Non Motorised Transport (%)	-	0,4	LAMATA 2016	
TRANSPORT SUPPLY				
Number of public buses	392,0	-	Femi 2012	
Number of paratransit vehicles (taxis excluded)	-	-		
Length of existing urban rail road and/or reserved bus lanes (km)	23 km MRT (from July 18)	22 km BRT	Interviews	
Length of planned urban rail road and/or reserved bus lanes (km)	78 km MRT	264 km MRT	Interviews	

Appendix 2 - Interpretation grid for the governance matrix

Sector	Urban Planning	Transport public					Public spaces			
		Institutional collective transport (train, metro, bus, boats, etc)	Bus stations (or bus terminals)	Paratransit Professional (minibus, shared taxis)	Taxis (shared taxi, mototaxis and three- wheelers)	Road infrastructure and road network	Traffic management	Parking	Walking	Cycling
Strategical level What strategies? With which resources?	Policy and planning	Definition of a general Urban Development Master Plan	Corridor-based or network-based project definition	Bus station (or bus terminals) planning	Network and bus stops definition	Road network infrastructure Master Plan (or similar) definition	Traffic management strategy definition (traffic plan, traffic calming, traffic lights regulation strategy, etc.)	Parking strategy definition	Non-motorized modes policy and related infrastructure plan	
	Funding	Urban project financing	Capital investment and eventual operational deficit financing	Infrastructure financing	Recapitalization or renewal program	Infrastructure and facilities financing	Infrastructure and facilities financing			
Tactical level What services ought to be developed? How to go about it?	Regulation	Urban planning regulatory framework	Public transport services supervision and regulation					Builders' standards definition	Highway (or road) code regulatory framework definition and enforcement by responsible entity	
	Licensing, permits and contracting	Building permit	Authority - operator contracting		Operational licensing			Parking operators contracting		
Operational level How to produce services efficiently?	Infrastructure, Equipment	Urban networks' Infrastructures besides transport Infrastructures	Infrastructure project management and vehicle and facility ownership	Project management and infrastructure ownership	Infrastructure project management (bus stops, trams, etc.)	Road infrastructure general management	Project management for traffic lights facilities and infrastructures	Project management for parking infrastructure construction and/or for parking meters	Project management for sidewalks	Project management for bicycle paths
	Operations / Maintenance		Vehicle and infrastructure operations and maintenance	Bus stations (or bus terminals) management, if by a private company or a union	Vehicle operations and maintenance	Maintenance	Traffic lights and road signage maintenance	Operations and maintenance of on- the-road or off- road parking	Cleaning and maintenance of non- motorized modes infrastructures	
Problematic		Responsibilities not allocated, unexercised or conflicts between actors annihilating the action								
Insufficient		Responsibilities not sufficiently defined and latent conflicts between stakeholders								
Non applicable										