STUDIES

OF INFORMAL PASSENGER TRANSPORT REFORMS IN SUB-SAHARAN AFRICA

RWANDA

KIGALI

Regulation of buses and minibuses:
private sector participation as catalysts to reform

SSATP Africa Transport Policy Program

MOLO Mobility & Logistics

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Mobilise Your City

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ACRONYMS

ATRACO	Association des Transports en Commun
CoK	City of Kigali
FERWACOTAMO	Federation Rwandaise des Cooperatives de Taxi- Moto
KBS	Kigali Bus Services
KCC	Kigali City Council
MINNINFRA	Ministry of Infrastructures
RCA	Rwanda Cooperative Agency
RFTC	Rwanda Federation of Transport Cooperatives
RNP	Rwanda National Police
RoR	Republic of Rwanda
RTDA	Rwanda Transport Development Agency
RURA	Rwanda Utilities Regulatory Authority

DEFINITIONS

Paratransit operators:	The enterprise responsible for providing public transport services. Operators can be large companies or single person companies, the latter being more typical of paratransit services.
Owners:	Individuals owning one or more vehicles used in the public transport supply.
Drivers:	Individuals responsible for driving public transport vehicles and providing services. Drivers do not necessarily need to be formal employees of a company, as they can enter into verbal agreements with owners in some cases. In other cases, the driver of a vehicle may be also its owner.

ABSTRACT

‘The Regulation of buses and minibuses: private sector participation as catalysts to reform in Kigali, Rwanda’, is one of eight case studies part of a series titled ‘Studies of Informal Passenger Transport Reforms in Sub-Saharan Africa’. This report presents a case study of Kigali until 2022.

At the beginning of the 2000s, public transport in Kigali was dominated by paratransit services of all kinds, fragmented among numerous individual operators. The only legal and enforced requirements were to pay taxes, be covered by insurance, and to register at the Rwanda Utilities Regulatory Authority (RURA), which in return gave individual licenses to operate. The number of licenses granted had no relationship with passenger demand. There were no specific operating hours or schedules/ frequencies for services; operators used a ‘fill-and-go’ system, where they waited to fill the vehicles to capacity at end-of-route terminals, before starting their journey.

Yet improved and expanded public transport was increasingly requested by Kigali inhabitants, while the number of people using public transport steadily grew from 47% to 61% between 2005 and 2011.

It became clear to decision-makers that something had to be done to improve public transport so that overall economic development would not be hampered. Faced with continuous withdrawals by quality private bus operators, authorities were aware that they had to produce a new regulatory framework that would define a structure for improved and expanded public transport services.

Reform focused on three main elements: (i) improving the professionalization of operators; (ii) enhancing regulation of the incumbent paratransit sector; and (iii) changing the network from an unplanned, unorganized service pattern.

This report traces the reform process by which, by 2022, public transport services had effectively moved away from on-the-street, in-the-market competition. Regulatory efforts made it possible to have relatively well-planned services closely reflecting demand patterns, and corporatization initiatives have all but eliminated company informality in a move to improve management practices.

EXECUTIVE SUMMARY

At the beginning of the 2000s, public transport in Kigali was dominated by paratransit services of all kinds, fragmented among numerous individual operators. The only legal and enforced requirements were to pay taxes, be covered by insurance, and to register at the Rwanda Utilities Regulatory Authority, which in return gave individual licenses to operate. The number of licenses granted had no relationship with passenger demand. There were no specific operating hours or schedules/ frequencies for services; operators used a 'fill-and-go' system, where they waited to fill the vehicles to capacity at end-of-route terminals, before starting their journey.

In addition to Association des Transports en Commun (ATRACO) public transport service suppliers, some private companies had been engaged in urban public transport in Kigali during the 2000s. The Royal Express and Kigali Bus Services (KBS) had been established as bus-operating companies in 2009 by Rwandan business owners who had not previously been involved in the sector.

ATRACO, KBS, and Royal Express effectively competed on the street among themselves and other bus and minibus operators for riders. After the introduction of KBS standard buses in 2008 and 2009, a price war broke out. There was fierce competition between KBS and other operators, and KBS decided to pull its fleet from the city in 2012.

REFORM PROCESSES

It became clear to decision-makers that something had to be done to improve public transport so that overall economic development would not be hampered, faced with continuous withdrawals by quality private bus operators. The emergence of KBS in particular stimulated the need to improve public transport policy.

Reform thus focused on three main elements: (i) improving the professionalization of operators; (ii) enhancing regulation of the incumbent paratransit sector; and (iii) changing the network from an unplanned, unorganized service pattern. A new regulatory framework was chosen as the way to reform, with multiple specific regulations promulgated to accomplish this.

The reform was implemented in three steps. The first was the publication of the first passenger transport regulation, in August 2011. The second was the approval of the Public Transport Policy and Strategy for Rwanda in October 2012, and the third was the signing of the call for bus service

contracts in August 2013. During the same period, the Kigali Transport Master Plan was updated.

ATRACO was dissolved in 2011 and evolved into the RFTC (Rwanda Federation of Transport Cooperatives). Minibus owners under RTFC have equal shares and earn profits based on equity. To become members of RFTC, owners had to be active in the system (owner or owner-driver) and pay a membership fee.

As part of a route tender process, the City of Kigali was divided into four subsets of routes – referred to as 'zones' – that would be operated individually. In 2013, contracts to operate four zones were signed between RURA and successful bidders RFTC, KBS, and Royal Express. The public transport reform used a 'net cost' contract model.

The move effectively changed the operational environment and ensured that licensing efforts would force most informal operators out of the system.

ACHIEVEMENTS OF REFORM

The main result of these public transport contracts was the progression from an 'informal' system, characterized by low capacities and a chaotic organization, to an organized and regulated network operated by three public transport operating companies. The new organization effectively transferred operational planning responsibilities to the institutional side. Working conditions of drivers also improved significantly, and working hours were drastically reduced. The entire reform process has benefited from improved institutional frameworks, mostly the result of setting up the industry Steering Committee, although the role of the RTDA is not yet entirely clear.

The introduction of higher capacity vehicles, ranging from buses to midi-buses, effectively changed the landscape in terms of supply.

The role played by each one of the three companies is also worth noting. Two private companies, Royal Express and KBS, invested in vehicles to provide public transport services in Kigali; these are examples of the kind of private sector-led initiatives most cities seek, as they reduce the need for government to invest in vehicles that institutional counterparts already have. The private sector also played a role in building infrastructure and facilities such as terminals.

RFTC is a clear example of successful paratransit corporatization. The move away from ATRACO enabled local authorities to negotiate with one entity only, which had evolved from paratransit to cooperative-based logistics.

Another significant achievement is the move away from cash-based farebox collection to a smartcard system.

CONCLUSION

Though the reform program has been successful overall, there are remaining issues and challenges. For example, motorization levels in Rwanda have still increased rapidly. The public transport system has significantly more capacity than it did in 2010, but there is still un-served demand for public transport.

The current business model has not allowed public transport operators to purchase a large number of vehicles in response to the unmet demand, as the public transport business is not profitable enough to provide the capital needed to

increase the capacity of the system. Even though the quality of service has improved, legacy problems such as poor reliability and low commercial speeds still hinder the system.

Ultimately, the reform of the bus system of Kigali set a solid base for further improvements. Except for competition from moto-taxis, bus services have effectively moved away from on-the-street, in-the-market competition. Regulatory efforts have made it possible to have relatively well-planned services closely reflecting demand patterns. Corporatization initiatives have all but eliminated company informality in a move to improve management practises.

Areas needing improvement relate mostly to infrastructure; by increasing service speeds, the capacity would increase, and the costs of the public transport network would reduce.

1. INTRODUCTION

This Case Study report describes the recent history of public transport in Kigali, the capital city of Rwanda, and focuses on private-sector involvement as a catalyst for reform. The research was conducted in 2021 and 2022, and reflects the situation until that time.

An ambitious top-down transformation of the paratransit sector in the city was largely based on operators' corporatization and regulatory framework changes. This report describes the reform process and results in a comprehensive manner, introducing previously unpublished data and an analysis of the outcomes for the main stakeholders.

1.1. Transport context

Kigali is situated in steep, mountainous terrain that extends north-westwards across Rwanda. Constrained by geography, the built-up area and supporting transport infrastructure has historically been concentrated along the valleys between the mountains. The topography also results in high net population densities. Kigali is one of the most densely populated cities in East Africa with approximately 1,060 inhabitants per km^2; in broad terms, this is an advantage for public transport. The population has increased rapidly, from 1 million in 2008 to 1.26 million in 2012, and to more than 1.4 million today (2022).

As the financial and commercial hub as well as capital of Rwanda, most job opportunities nationally are located within this built-up area. Employment in the service sector is increasing, within banks and multinational organizations in Kigali. Nevertheless, the informal sector continues to contribute a large share of employment in Kigali – representing 60% of employment opportunities in 2011 (Niyonsenga, 2012).

2. THE **BEFORE** SITUATION

(BEFORE 2011)

Kigali's rapid development and lagging transport system (resembling other African capitals) led to the appearance of so-called informal services (paratransit services), first in the form of minibuses (i.e., 'twegerane') and, later, in the form of moto-taxis. Despite being flexible and demand-responsive, the largely unplanned and poorly regulated informal paratransit operations proved inadequate to meet transportation needs. Sector fragmentation led to redundant services and operators competing on the street for customers. Despite efforts by authorities, the system was unable to cope with rapid population growth. As population increased, so too did transport demand and, consequently, pressure on the system.

At the start of the reform process, the overall capacity of the transport system in the city had been inadequate due to the massive increase in population and, thus, the demand for mobility. By 2011-2012, during peak hours, the total capacity of all available public transport vehicles (buses, minibuses, sedan-taxis) in Kigali was only 16,800 passengers per hour, whereas the total demand for public transport was estimated at about 47,000 passengers per hour (CoK, 2012)[1]. As population increased, the supply-demand gap kept growing, and reform became urgent. The decision was to expand capacity and improve mobility by revising the sector's regulatory framework.

1. Citywide supply and demand data aims to depict maximum capacities for the totality of the public transport system against demand on all transport corridors. While the gap between both values will not necessarily be served only by public transport services, a substantial percentage of the difference depends on longer trips directly linked to availability of public transport on main corridors

2.1. Reasons for change

2.1.1. The operational context

At the beginning of the 2000s, public transport was dominated by paratransit services of all kinds, fragmented among numerous individual operators. The only legal and enforced requirements were to pay taxes, be covered by insurance, and to register at the Rwanda Utilities Regulatory Authority (RURA), which in return gave individual licenses to operate. The licenses had no time limitation or geographic/route assignment. The number of licenses granted had no relationship with passenger demand. There were no specific operating hours or schedules/ frequencies for services; operators used a 'fill-and-go' system, where they waited to fill the vehicles to capacity at end-of-route terminals, before starting their journey.

In 1996, the Association des Transports en Commun (ATRACO) had been established by individual operators, mainly of minibuses (18-seat capacity) and some buses (25-30 seat capacity). It included both drivers and owners of paratransit vehicles. In 2011, the Association had 1,684 members (owners and drivers) who elected the executive office. In theory, operators were 'managed' by ATRACO, which owned most of the terminals used by members, but in practise many did not abide by the rules. The Association earned money from the collection of terminal use fees, which it used to pay its staff and to support drivers in minibus purchase proceedings. Most operators who were not members of the Association avoided the use of terminals to avoid paying fees (which were higher compared to those paid by the Association's members). This resulted in congestion outside the terminals where non-ATRACO drivers waited for passengers.

The allocation of routes was organized by neither RURA nor ATRACO. Drivers, supported by conductors, could decide when and on which routes to operate, based on the potential for the highest patronage/revenue at any given time. During peak hours, operators made as many trips as possible, while during off-peak hours, when the number of passengers declined significantly, the operators would remain at terminals or at bus stops with passengers waiting inside the vehicle until it was full (the 'fill-and-go' system).

In addition to ATRACO members, some private companies had been engaged in urban public transport in Kigali during the 2000s. The Royal Express and Kigali Bus Services (KBS) had been established as bus-operating companies in 2009 by Rwandan business owners who had not previously been involved in the sector. The Royal Express fleet initially consisted of Toyota Coasters (25-30 seaters) and a few other types of minibuses (18 seaters). KBS, intending to modernize public transport, bought 20 Toyota Coasters and 40 standard buses[2] (80 total seated and standing

2. KBS acquired Euro II low Floor buses in China in 2010 (20 Zonda Bus financed through a loan at PTA and 2011, 20 Yutong Buses with a loan to Ecobank)

capacity) before 2012. Other companies, such as International Express and Prince Express, attempted to operate in the urban areas, but rapidly switched to inter-urban trips largely because of competition with ATRACO.

From the onset, standard bus operators faced direct competition from the smaller of the paratransit vehicles. Standard buses occupied space at designated bus stops (the length of bus stops was between 15-30m, often making it difficult to have two of them present at the same time). Due to the 'fill-and-go' system that persisted even at the bus stops, it was difficult for KBS standard buses to find a place at the stops. If boarding and alighting took place outside of designated bus stops, the bus operators were fined by the traffic police for not respecting the relevant road traffic regulations. On the other hand, once the buses managed to get to the bus stop, they were forced to leave behind waiting passengers so that other vehicles could get a space.

As the media described the situation at the time: *"[In 2006], in Kigali, it was not unusual to stand for hours at the bus stop. Public transport was scarce. Buses were few and far between. Over the last year [2009], this situation has changed. The number of buses increased, much to the delight of public commuters who now did not have to wait too long to get from one point to another within the city. Little did they know that the increase in buses would pose another problem altogether. Congestion at the terminal" (New Times, 2009).*

ATRACO, KBS, and Royal Express effectively competed on the street among themselves and other bus and minibus operators for riders. ATRACO members were seen providing as a lower-quality service at the beginning, as KBS operated newer, higher-capacity vehicles. The large fleet of minibuses (estimated at roughly 2,000 vehicles in 2005) thus competed not only amongst themselves but also against larger standard buses which had fewer than 100 vehicles plying the routes. As the press reported, *"many people are now using the bus service and most of the buses are always full" ... "You have to fight to get on the bus even when you have already bought a ticket" (New Times, 2012).*

There was no distinction in fares for different quality services. After a relatively unstructured consultation process with operators between 2008 and 2009, RURA set the fare per passenger per kilometer at about 20 RWF in the city of Kigali. There was a significant increase during the years 2008-2012 (from +25 to +60% depending on the routes), due to fuel price increases among other factors. Fare increases between 2008 and mid-2011 were on average +35% for all trips (reaching roughly 26.9 RWF as the mean per kilometer fare) (RoR, 2011). This meant the total trip cost varied between 100 RWF on the shortest routes and 300 RWF on the longest ones[3] (the maximum fare was 200 RWF before 2008). Passengers who boarded buses midway during a terminal-to-terminal trip still had to pay full cost of an entire trip.

After the introduction of KBS standard buses in 2008 and 2009, a price war broke out. There was fierce competition between KBS and other operators, and KBS decided to pull its fleet from the city in 2012. The emergence of KBS stimulated the need to improve public transport policy, and the Ministry of Infrastructures (MININFRA) rapidly issued a Public Transport Policy and

3. The individual income per annum for the poverty line was estimated at 159,375 RWF in 2017. Considering approximately 450 yearly trips, with a 100 RWF fare, expenditure in public transport would surpass what is acceptable (28% of total income). However, for mean incomes for all Kigali's population (approximately 720,000 RWF), 100 RWF and 200 RWF fares are acceptable (between 6% and 12% of yearly mean income)

Strategy for Rwanda in 2012 (MININFRA, 2012). At the same time, public transport service was also being delivered by moto-taxis (boda bodas), thus cutting into the revenue earned by every other type of public transport operator. Many, if not most moto-taxis were operating without a license. In 2008, facing a rapid increase of moto-taxis in the country, RURA issued a new regulation to reduce the number of unlicensed moto-taxis and help all other public transport operators.

In terms of this regulation, and following directives from the Rwanda Cooperative Agency (RCA) and the Ministry of Trade and the Ministry of Labour, individual moto-taxi owners and drivers were now grouped into different cooperatives depending on the terminals they used. RURAs regulations required at least 20 motorcycles for any of a cooperative's members to get an operating license. Each cooperative had to submit a request on behalf of its members. In 2009, the Motorcycle Taxi Operators' Association (ASSETAMORWA) was transformed into a Federation of Cooperatives (known by its French acronym, FERWACOTAMO – Federation Rwandaise des Cooperatives de Taxi-Moto).

Even so, the number of licensed moto-taxis in the whole country had grown dramatically from 2008 to 2012. In 2009, 2,100 moto-taxis were registered by RURA in the country. There were 4,650 registered vehicles in 2010 and 18,500 in June 2012 (RURA, 2013). It is estimated that more than 50% of them were operating in the City of Kigali.

2.1.2. The institutional context

After a government-wide reform process that began in 2005, the country was structured in accordance with six administrative levels (central government, province, and then four local levels – district, sector, cell, and village). The central government was responsible for formulating national policies as well as regulating and supporting local governments. Local government levels (especially the districts and the City of Kigali) had the role of implementing the policies and delivering services.

During this period, national government's urban public transport responsibilities were split among several powerful agencies. First, the Ministry of Infrastructure[4] (MININFRA), which was established in 2002. MININFRA is one of the largest ministries as its remit involves overseeing development and maintenance of all infrastructure including transport, energy, habitat and urbanism, meteorology, water, and sanitation. In 2010, the Rwanda Transport Development Agency (RTDA) was created as a policy body for the transport sector, but it only was given the mandate to develop public transport services in 2014.[5] The main mission of RTDA is to develop and promulgate government policy and to develop, manage and improve infrastructure on roads, railways, cable cars as well as road and waterways transport infrastructure, and to manage and control national road networks with the objectives of improving road safety and maintenance.

4. Previously Ministry of Public Service, Transport and Communication (MINITRACO)

5. by an organic Law No. 29/2014 of 14/08/2014 modifying and completing Law No. 02/2010 of 20/01/2010

Table 1: Distribution of responsibilities among public entities

	MININFRA	RTDA*	RURA	City of Kigali (CoK)	Districts	Traffic police
Road infrastructure	Policy maker	-	-	Planning and constructing municipal roads	Planning and constructing district roads	-
Traffic management		-	-	Planning and implementation in collaboration with RNP	-	Collaborating with CoK in implementation
Public transport planning		-	-	Planning and proposing future network expansion in collaboration with RURA	Planning and proposing future network expansion in collaboration with CoK	-
Public transport contracting and regulation		-	Issue licenses**	Sign the service level agreement	-	-
Fare setting		-	Set fare model, coordinate the stakeholders' consultation, and publish the fares	-	-	-
Moto-taxi regulation		-	Publish regulations and set fares	-	-	-

* RTDA was not operational before April 2014, and until 2021 served in a technical assistance role in public transport decisions;
** To implement the reform. RURA led the tender process.

The Rwanda Utilities Regulation Authority (RURA) was established in 2001[6] by the Government of Rwanda to deliver public transport and other operating licenses. From its inception, RURA was in charge of regulating (i) telecommunications networks and/or telecommunications services, (ii) electricity, (iii) water, (iv) the removal of waste from residential or business premises, (v) the extraction and distribution of gas, and (vi) persons and goods transport. Within those different sectors, RURA is responsible for:

- ensuring the transparent provision of certain utilities i.e., goods and services throughout the country, to meet reasonable demands and the needs of all natural persons and organizations;
- ensuring that all utility suppliers have adequate means to finance their activities;

6. The Rwanda Utilities Regulatory Agency was established on 13 September 2001 by Law Nº 39/2001 establishing an Agency for the Regulation of Certain Public Utilities

Table 2: Distribution of responsibilities between public and private sector before 2011: service and operations

	Public entities	Operators	Comments
Routes	CoK, RURA	-	The routes are set by the CoK in collaboration with RURA. However, an operator may inform RURA about a potential demand and/or road condition status that is affecting the service and could resolve to abandon the route.
Stops	CoK, RNP	-	CoK identifies the stop and puts up the bus stop signage in collaboration with the Road Traffic Police.
Terminals	CoK, District, RURA	-	The Districts develop terminals. Some of these terminals are managed by private stakeholders who had to pay an amount to the Districts after deduction of maintenance costs. One terminal – Nyabugogo – is managed by the District. Other terminals were developed and owned by private entities.
Time span	-	Drivers, conductors	Based on demand (business closed between 8-10pm).
Headways (peak and off peak)	-	Drivers, conductors	Operators opted for the fill-and-go system.
Fare setting	RURA	-	RURA's fare model includes consultation with different stakeholders but it is RURA's Board of Directors that takes the final decision by approving or rejecting the proposed fares.
Ticketing system	RURA	NA	The ticketing system was only introduced in CoK in 2011 as part of operators' initiative for their own internal fare collection management.
Vehicle quantity	RURA	-	RURA sets a minimum number of vehicles required in order to be granted a license as a company or cooperative.
Vehicle specifications	RURA	-	RURA has published regulations relating to seated capacity only.

- continually protecting the interests of existing and potential users of the utilities by ensuring effective competition among different utility providers. This way, monopoly over the utilities market is kept in check;
- facilitating and encouraging private sector participation in investments in public utilities;
- ensuring compliance by public utilities with the laws governing their activities.

There was no passenger transport regulation until 2011, with the publication of Regulation Nº 005/TRANS-RURA/2011 of 26 August 2011, which established a minimum number of vehicles were established for each operating entity for the purpose of issuing licenses (see 3.1.1).

The City of Kigali is one of the five provinces managed by an elected Mayor with a five-year mandate. The mayor is assisted by a network of officials across different levels. The city is made up of

three districts (Kicukiro, Nyarugenge, and Gasabo) which are further broken up into sectors, cells, and villages. The three CoK districts are managed by appointed Chief District Administrators (CDA), with no budgeting, planning, or political authority. The Mayor of CoK has two deputy mayors – one in charge of Social Affairs and Economic Development, and the other in charge of Housing and Infrastructure. The City Manager under the Mayor is the City's chief technocrat, handling all budgeting, project approvals, planning, and other city administrative responsibilities. These include developing and implementing transport plans for people and goods movement in the City of Kigali.

Table 3: Distribution of responsibilities between public and private sector before 2011: working conditions

	Public entities	Operators	Comments
Wages	-	Owners	Drivers and conductors negotiate with owners; if the driver is different from the owner, drivers agree on a target to be paid to the owner and drivers keep the remaining revenues, after covering some of operational costs.
Social safeguards	-	Owners	Drivers and conductors negotiate with owners.
Driving behaviors / road safety	RURA, RNP	Owners	Driver and conductor behavior was mainly dependent on the owners. RNP and RURA become involved only when/if road codes and/or regulations are not respected (the first code of conduct for road transport drivers was published in June 2015).

2.2. The movement toward reform

Several operational issues hindered the performance of the public transport services in Kigali while demand was increasing rapidly. Firstly, the overall bus and minibus supply was simply insufficient. The 'fill-and-go' operations strategy made the problem worse. Waiting times were unpredictable and long. Users who were left on the road had two options: seek a different mode of transportation; or take a potentially long walk to a terminal station to queue to board another vehicle before it also filled up.

Secondly, with no single entity responsible for defining routes, the network lacked readability, and competition on the street was exacerbated. As routes became non-viable (too much supply, dwindling demand, infrastructure constraints, etc.), operators abandoned them and switched to what they thought were more viable routes, often creating localized oversupply.

Besides the growing competition from moto-taxis, there was also increasing competition among bus and minibus operators. Together, these factors reduced the overall service quantity and quality that operators could provide while still remaining in business. In this complicated operating environment, low-quality

paratransit services of all kinds (including moto-taxis) began taking over, while the more structured companies providing better services were driven out of the system.

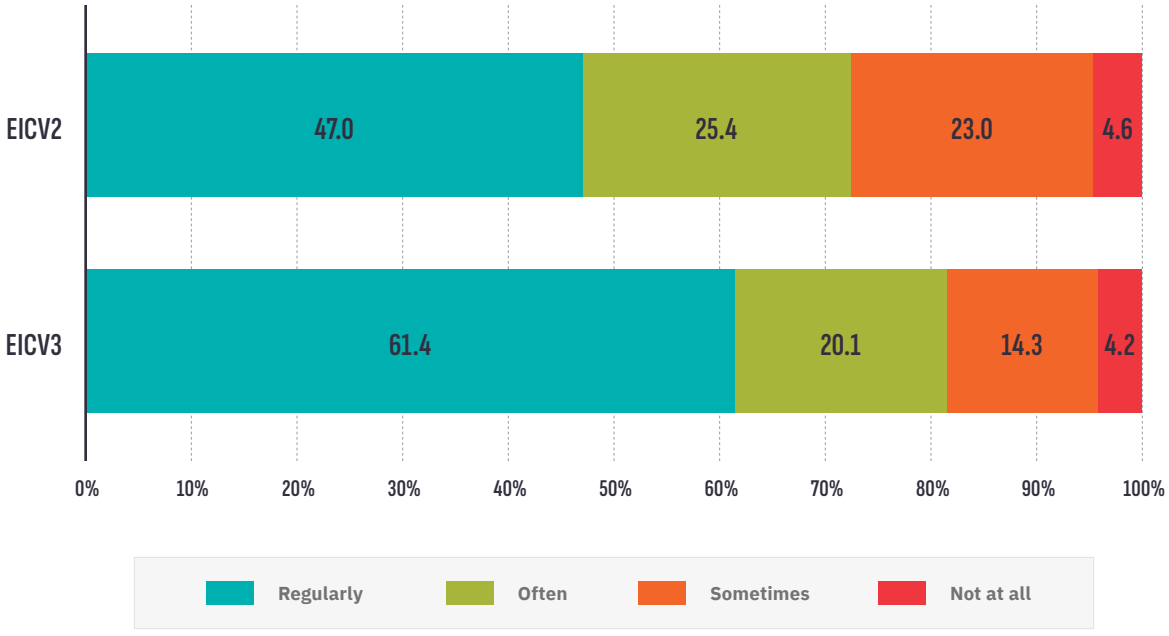
Yet improved and expanded public transport was increasingly requested by Kigali inhabitants. According to the Integrated Household Living Conditions Survey (CoK, 2011), the number of people using public transport steadily grew from 47% to 61% between 2005 and 2011.

It was clear to decision-makers that something had to be done to improve public transport so that overall economic development would not be hampered. Faced with continuous withdrawals by quality private bus operators (the most recent of which was KBS in 2012), authorities were aware that they had to produce a new regulatory framework that would define a structure for improved and expanded public transport services.

MININFRA's mandate, in collaboration with other public stakeholders, was to address the above operational issues, as well as the lack of satisfactory legislation, institutional capacity and coordination among the different policy making, regulatory, and implementing agencies with public transport responsibilities. This was to be accomplished through the first national Public Transport Policy (MININFRA, 2012) as well as 'Vision 2020', initiated by the President of the Kigali (RoR, 2020).

Authorities at all levels of government sought to accommodate the newly formed companies public transport / bus companies with a top-down approach – mostly by strengthening the requirements for public transport provision. Led by the idea that an emerging capital city must have modern public transport services, authorities decided that existing operators who were unwilling to accept the new framework would effectively be replaced by a new, formally organized system.

Figure 1: Usage rates for public transport stages (CoK, 2005, 2011, 2012)



3. REFORM: STRENGTHENING REGULATION

(2011-2018)

3.1. The early period, between 2011 and 2013

In general, reform focused on three main elements: (i) improving the professionalization of operators; (ii) enhancing regulation of the incumbent paratransit sector; and (iii) changing the network from an unplanned, unorganized service pattern. A new regulatory framework was chosen as the way to reform, with multiple specific regulations promulgated to accomplish this.

The reform was implemented in three steps. The first was the publication of the first passenger transport regulation, in August 2011 (RoR, 2011). The second was the approval of the Public Transport Policy and Strategy for Rwanda in October 2012 (MININFRA, 2012), and the third was the signing of the call for bus service contracts in August 2013. During the same period, the Kigali Transport Master Plan (CoK, 2012) was updated.

3.1.1. Passenger transport regulation

Licensing

On 26 August 2011, RURA published its first passenger transport regulation (Regulation No. 005/TRANS-RURA/2011). According to those regulations, a minimum number of vehicles were established for each operating entity for the purpose of issuing licenses.[7] Categories were defined as follows, in Table 4: Regulations pertaining to minimum fleet sizes required for licensing purposes, below.

The published regulations facilitated the acquisition of licenses by operators who operated either as members of ATRACO, as individuals, or as private companies. Every license was awarded to an operator, a cooperative, or a company with an assigned route.

Table 4: Regulations pertaining to minimum fleet sizes required for licensing purposes

License category	Validity	Minimum number of vehicles						
		Buses with seats > 24	Minibuses (18 seats)	Taxi cabs	Pick-ups	Jeeps	Mixed types	Motorcycles
Companies and cooperatives	2 years	3	6	7	7	7	7	10
Individual	1 year				1			
Temporary authorization	< 1 year (C&C)	3	6	7	7	7	7	10
	< 1 year (Indiv)				1			

7. The maximum number of vehicles was not specified

Direct impact: ATRACO's demise
Due to alleged mismanagement of ATRACO, an ad hoc committee – coordinated by MININFRA and Ministry of Local Government (MINALOC) – was set up to assess these allegations and come up with an efficient solution. The committee proposed to restructure the Association and transform it into an organized entity in line with the current national policies.

The proposed restructuring sought to transform the Association into a profit-making entity. ATRACO was dissolved in 2011 and evolved into RFTC (Rwanda Federation of Transport Cooperatives). Minibus owners under RFTC have equal shares and earn profits based on equity. To become members of RFTC, owners had to be active in the system (owner or owner-driver) and pay a membership fee.

Public Transport Policy and Strategy (2012) for Rwanda
The Public Transport Policy and Strategy (2012) for Rwanda was initiated by the Ministry of Infrastructure in 2011 and was approved by the Cabinet of Ministers in October 2012 (MININFRA, 2012). The policy pertains to intercity transport, rural transport, and the City of Kigali's urban transport services.

"Without establishing a transport policy, [challenges of the public transport sector] will not be solved. So, there is need for the government to devise such a policy to give guidelines on how transport can operate." – Charles Ngarambe, Managing Director of Kigali Bus Services (New Times, 2012).

The Policy noted that urban transport required urgent change. Three groups of issues were presented: (i) those related to growing congestion; (ii) the lack of planned, structured public transport services; and (iii) insufficient infrastructure. These three problems exposed a reliance on an inadequate institutional framework, where the lack of coordination was its most visible pitfall.

For the City of Kigali, the Policy and Strategy recommended several measures to be implemented in three phases. Among them was the:

- consolidation of incumbent minibus operations to reduce the number of operators, each with larger fleets of higher capacity vehicles;
- integration of all public transport services through common smartcard ticketing.

Transport master plan
The publication of the first Passenger Transport Regulation in August 2011 (RoR, 2011), and the approval of the Public Transport Policy and Strategy for Rwanda in October 2012 (MININFRA, 2012), laid the foundations for the implementation of the reform of the public transport system.

3.1.2. Implementation of public transport reform in Kigali

"Unless you are registered as a company, co-operative or an association, we won't give you an operating license." – François Gatarayiha, RURA director general (New Times, 2013)

Implementation of the bus route franchising system
The regulation issued in August 2011 authorized RURA to give two-year licenses to public transport operators, and following policy approval, also to private transport operators (RoR, 2011). Though the Regulation's expiry date was approaching,

Figure 2: An ATRACO vehicle

Source: lucianf on flickr.com

RURA, in collaboration with the City of Kigali and under supervision of the Ministry of Infrastructure, launched a route tender notice in 2012. The purpose of the route tendering was to:

- redesign public transport routes to reduce distances to the nearest bus stop;
- increase the reliability of public transport services through the establishment of scheduled public transport services;
- encourage the use of modern, smart, and larger buses along congested trunk roads; and
- put in place a clear and favourable regulatory framework that encouraged investment in public transport.

As part of the route tender process, the City of Kigali was divided into four subsets of routes – referred to as 'zones' – that would be operated individually. Working hours were set to start at 5:30am and end at 11 pm. These zones were subsets of bus routes that served large areas and that connect them to the two main interchanges: Nyabugogo[8] (the national and international bus station), and the Central Business District.[9] Each zone is made up of both highly viable and less viable routes.[10] For operations purposes, each zone was to be awarded to one operator who was held accountable for service delivery.

By mid 2013 the tender had received responses from 12 private companies.

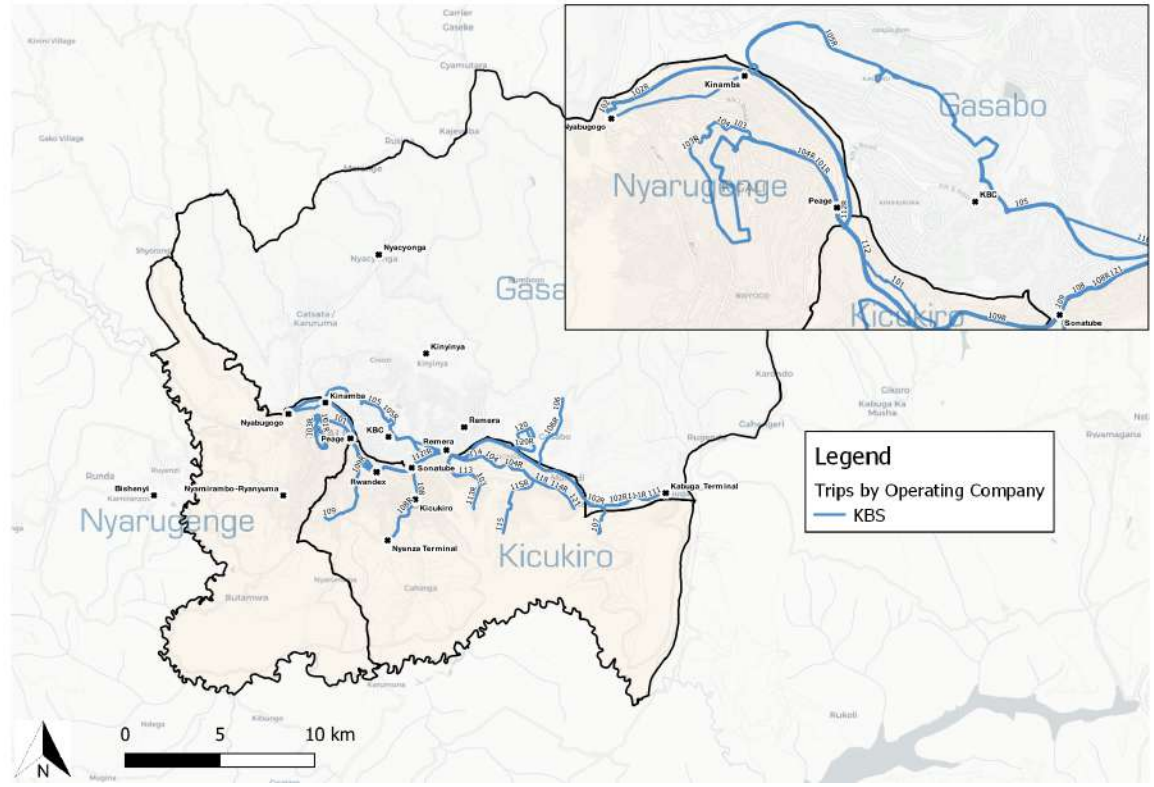
On 19 August 2013, contracts to operate four zones were signed between RURA

8. Nyabugogo terminal is owned by Nyarugenge District and Managed by RFTC and ATPR (Association des Transporteurs des Personnes au Rwanda). RFTC collects revenues, organizes operators, and pays collected money to the District, which in turn is responsible for maintenance

9. The CBD terminal station is owned and operated by private stakeholders

10. The term 'zone' will thus refer to said subsets for the remaining of the document

Figure 3: Operational zones for the franchising process (RTDA, 2019)



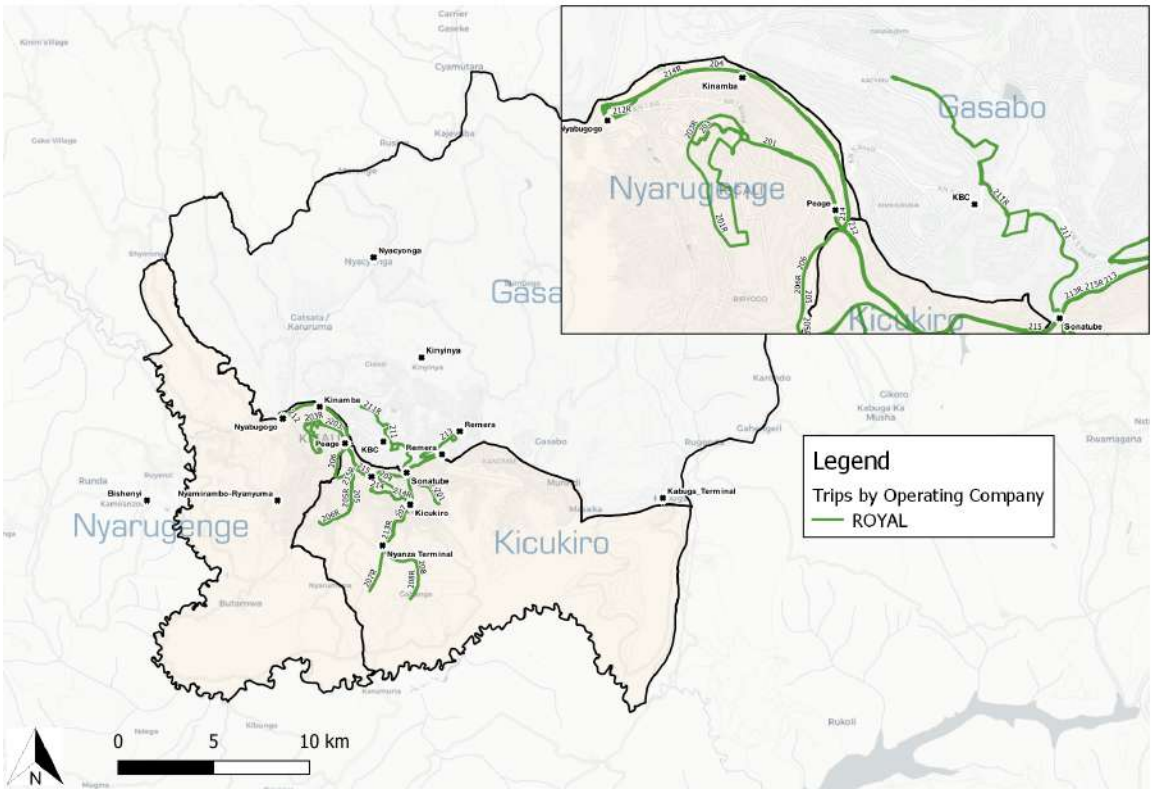
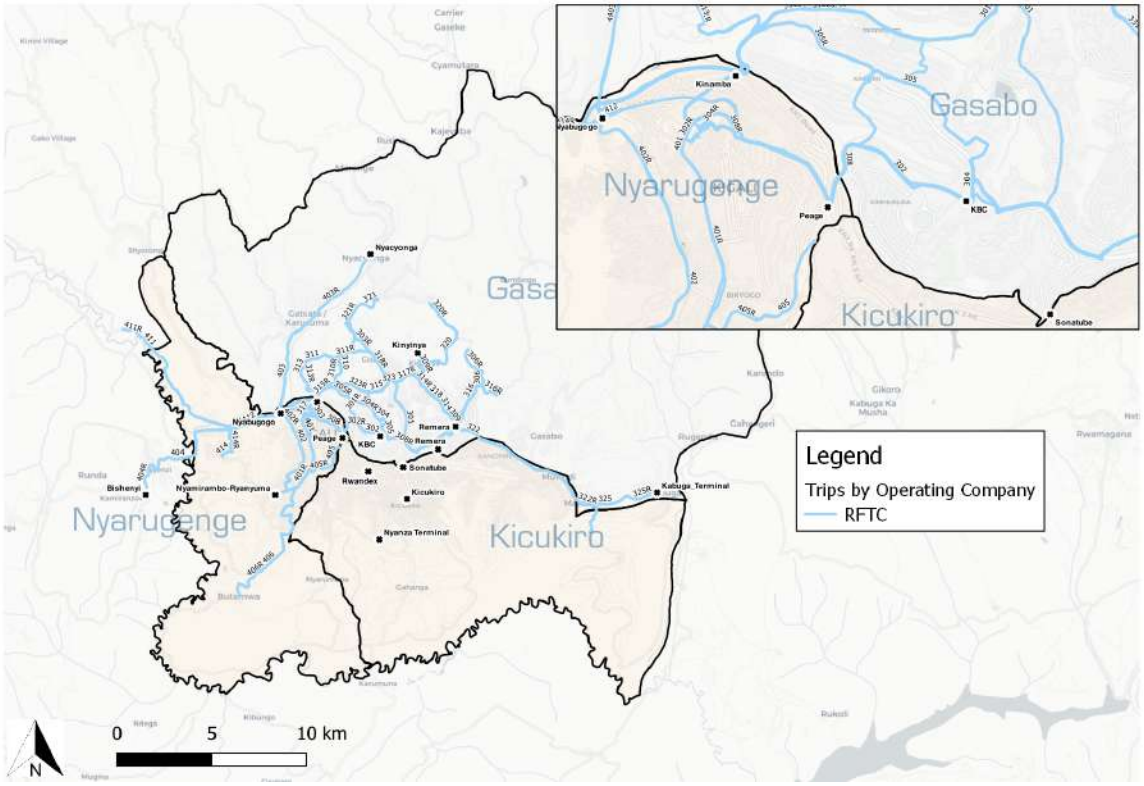


Figure 3: Operational zones for the franchising process (RTDA, 2019)



and successful bidders RFTC, KBS, and Royal Express: Kigali Bus Service for Zone 1, Royal Express for Zone 2, and Rwanda Federation of Transport Cooperatives for Zones 3 and 4. The City of Kigali was the witness to the contracts.

The move effectively changed the operational environment and ensured that licensing efforts would force most informal operators out of the system. Operators left out of these zones were reallocated routes outside the City of Kigali. Similarly, operators who did not meet vehicle standards, most notably size/capacity, were reassigned to peri-urban operations. While some jobs were lost in the process, no protests occurred.

Content of the contracts

The initial contracts provided the basis for regulating competition between public transport operators by awarding exclusive operations zones. Contractors were to comply with the following obligations:

- provide a network of public transport bus services with minimum capacity (the minimum size of the vehicles was specified for each route);
- integrate contracted-for services with those of other public passenger operators;
- support the development of a new fare-collection system;

- comply with accessibility standards for members of the public with special needs;
- comply with all applicable laws (including those in relation to pay, and terms and conditions of employment) relating to all staff employed by the operator;
- comply with performance obligations and reporting processes to RURA.

These contracts essentially put operators in charge of service supply, stipulating that they assume risks pertaining to capital and operational costs and to fluctuating demand.

Even though they were simple in form and content, the main result of these first-generation public transport contracts – as they would later be referred to – was their facilitation of the progression from an 'informal' system, characterized by low capacities and a chaotic organization, to an organized and regulated network operated by three public transport operating companies.

The new organization effectively transferred operational planning responsibilities to the institutional side, although there were some important differences between operators. For instance, KBS and Royal Express are owners of their vehicles, while RFTC's vehicles ownership stayed at the individual owners' level).

Table 5: Vehicle fleet at the time of first-generation contracts

	Buses (>60 seats)	Buses (32-60 seats)	Buses (25-32 seats)	Minibuses (18 seats)	Total number of routes
August 2013	20	5	246	575	42

3.2. Contracts management and institutional arrangements (2013-2018)

3.2.1. Labor impacts

Any initial resistance to the reforms (see Institutional structure, below) eased over time due to increased profits from the more efficient operations and from the elimination of service redundancy. Working conditions of drivers also improved significantly. Prior to the reforms, drivers did not receive a defined salary. Minibus owners set the minimum returns they expected at the end of each day. Driver income depended on the remaining balance between the revenue they took in and their total costs, including payments to the respective owner. Under the reforms, drivers were offered salaried contracts from 110,000 RWF to 180,000 RWF (€90 – €148) and universal medical insurance.[11]

Working hours were also drastically reduced. Every bus was expected to have two drivers, each working a maximum of 15 days a month. Before this, a driver typically worked for 18 hours each day, every other day. In addition to now having stable jobs, drivers and conductors also had access to bank loans from the RFTC microfinance, and additional job opportunities in the stations, bus depots, and garages owned by RFTC.

Fare structures and negotiation with operators (business models and abandoned routes)

The public transport reform used a 'net cost' contract model. In this model, operators receive all fare revenue and directly pay their own costs, including various license fees and payments to the respective vehicle/license owner. The fare system was the result of hard negotiations between RURA and operators. While before the reform, road conditions were a determinant in setting fares,[12] after the reform the fares were now /km-based; however, in order to guarantee maximum revenue, operators charged the highest fare irrespective of where on the route passengers got into the bus (i.e. the fares are not based on trip distance but on route length). This 'route-based fare' is equitable and convenient for passengers whose trips start at the terminal, but not so for those boarding mid-way, who must still pay the full amount. Moreover, the current fare system does not account for inflation.

Farebox revenues received by operators are used to cover all operations (e.g. fuel), service, and maintenance costs. Maintenance costs per kilometer are calculated or provided by vehicle suppliers in terms of maintenance contracts entered into by the supplier and the operator.

11. https://africa.itdp.org/bus-reform-in-kigali/

12. Poor roads necessitated higher fares. Roads in good condition were, in this sense, cheaper to ply. Fares would thus depend on where the vehicle operated and how much of its route included roads in poor condition

3.2.2. Institutional structure

There is strong coordination around urban mobility planning between the key central government agencies, the City of Kigali, and the various Districts. Furthermore, inter-governmental cooperation pertaining to urban, inter-city, and cross border mobility is highly structured, and underpinned by a well-established planning, programming, budgeting, implementation, and monitoring and evaluation system.

RURA is currently the government entity responsible for bus operator contracting (see Box 1: Evolution of RURA's responsibilities). There is no distinction between the contracting authority and the regulating authority's functions. There is, however, a clear distinction between public transport planning (City of Kigali), planning and implementation of public transport Infrastructure (City of Kigali in its jurisdiction and RTDA nationally), and public transport regulatory (RURA) authorities.

The Public Transport Policy (MININFRA, 2012) was developed and implemented by the City of Kigali Council and RURA. The public transport formalization process was led by the City of Kigali through the mayor's office, coordinated by MININFRA, and overseen by the Office of the Prime Minister. A Steering Committee was set up to plan and develop strategic solutions to address public transport challenges and to expedite the formalization process. Chaired by the state minister in charge of transport, this committee comprises the mayor of the City of Kigali, the director of RURA, the director of RTDA, the senior officer in charge of the Traffic Police Department, and a representative of the operators.

Under the new policy, there were directives to form new cooperatives and bus companies. This was strongly opposed by minibus owners, who did not understand the benefit of operating as part of a cooperative. An industry Steering Committee played an instrumental role in convincing them to cooperate with the new directive. Incentives were given to bus owner cooperative members in the form of bank credit and loans, which were unavailable to them before the reform.

In addition, they could also bid for government tenders for public transport operations. The Steering Committee also conducted routine inspections to ensure smooth operations in the public transport sector.

The new reforms have contributed immensely to improving the quality of public transport in Rwanda. Free internet connection on public transport buses in Kigali was introduced on buses in 2015 as part of the broad Smart Kigali Initiative launched by the City of Kigali in the partnership with RURA and the former Ministry of Youth and ICT. This facilitated the implementation of the 'Tap-and-Go' smartcard payment, which officially replaced conductors in 2015. There were no reports of protests by displaced conductors.

On 01 June 2015, RURA revised the regulation of August 2011 and published Regulation No.007/TRANS/RT/RURA/2015 (RoR, 2015) with the purpose of establishing a regulatory framework for passenger road transport activities to achieve "an efficient, effective, sustainable, and orderly development and operation of public transport services in Rwanda" (RoR, 2015, p. 5). Most remarkably, the revision allowed the defining of five-year contracts, as earlier versions established two-year licenses.

3.2.3. Development of the smartcard system

As early as 2010, one of the operators, KBS, had identified substantial levels of fraud in the ticketing system, as drivers and conductors would sell lookalike tickets to users, thus avoiding transparent counting of passengers in the system. KBS understood that a cashless system could reduce fraud and revenue shrinkage. KBS would initially be the sole operator using a system that was to be managed by the company Tap-and-Go' KBS implemented its card system in April 2011.

However, the initiative received some backlash as drivers saw their capacity for fraud reduced and thus they damaged elements of the system. What is more, other operators believed that KBS was taking advantage of the system by being able to propose reduced fares by way of monthly passes for students. Along with other issues (the need to tap in to board and to tap out to alight, for instance), the business model introduced by Tap-andGo was ultimately not up to KBS's expectations and the companies parted ways.

The AC Group then came into the picture, first with a pilot project in 2015, and then by signing a five-year concession with RURA, effectively replacing KBS' fare collection experimentation. The company would provide equipment to all bus and minibus operators free of charge. Cards were then sold to all passengers, and they were usable in any one of the formal, contracted bus services in Kigali.

At first, the initiative met some opposition from operators as they were expected to purchase and install all the in-vehicle equipment, such as card readers, themselves. In the end, it was agreed that the AC Group would provide these readers, install them, and charge a 5% fee per transaction to operators. This transaction fee was initially a burden, as it was a direct cut in their turnover. But a few years later fares were allowed to increase to reflect the 5% fee. By 2018, all 500 of the vehicles were equipped with card readers and roughly 1.3 million cards were in circulation. As the smartcards are mandatory in order to use public transport in Kigali, bus services are cashless. Public transport users have to recharge their cards at terminals, or online with mobile money. Unlike with the KBS experimentation, there is no longer a need to tap off when getting off the bus. Further, the smartcard does not use a km-based far system.

3.2.4. Development of infrastructure

According to the Kigali Conceptual Master Plan (2012), the road network in 2012 consisted of 732 km of roads, of which 14% (102 km) were paved (either surfaced with bitumen or with stone paving). The rest of the roads were gravel tracks, in a poor state due to a lack of stormwater facilities in a wet environment.

Between 2013 and 2018 the City of Kigali constructed 143 km of paved roads and rehabilitated a further 29 km of existing paved roads. The primary network was almost complete by 2018, with four-lane boulevards linking the major commercial nodes of the city. The secondary network also benefited from this investment, especially in major arterials between hills, reducing pressure on the primary network.

Public transport companies suffered during the road construction period, but later benefited from the improved road network that allowed both Coasters and standard buses to ply new areas. The public transport routes network expanded from 42 routes in 2013 to 62 routes in 2018, increasing from 541 km to 705 km. Moreover, bus stops were systematically upgraded.

Box 1: Evolution of RURA's responsibilities

Evolution of RURA's responsibilities

In 2013, RURA's missions were significantly extended thanks to the Law No.09/2013 of 01 March 2013 (RoR, 2013), which updated previous legislation. Postal services, energy (renewable and non-renewable, industrial gases, pipelines and fuel storage facilities), and sanitation were added to the list of regulated public utilities under its responsibility. Moreover, other public utilities could also be regulated by RURA if considered necessary.

The main mission of RURA was to:

- set up necessary guidelines in order to develop and enforce laws and regulations;
- ensure compliance by public utilities with the provisions of laws and regulations governing the regulated sectors in an objective, transparent and non-discriminatory manner;
- ensure the continuity of service delivery by the licensed or authorized service providers and the preservation of public interest;
- protect user and operator interests by taking measures likely to guarantee effective, sound, and fair competition in the regulated sectors within the framework of applicable laws and regulations;
- protect and promote consumer interests;
- promote the availability, accessibility, and affordability of regulated services to all consumers including low income, rural and disadvantaged consumers;
- promote efficient development of regulated sectors in accordance with the Government's economic and financial policies;
- promote and enhance general knowledge, sensitization and awareness of the regulated sectors including but not limited to:
  - the rights and obligations of consumers and service providers
  - the ways in which complaints are to be lodged and resolved
  - the missions, powers, and functions of RURA
  - issuing permits, authorizations and licenses required for regulated sectors, in accordance with the relevant governing laws and regulations.
- monitor and ensure compliance by regulated network or service providers in line with their licenses, permits and concession obligations; and
- ensure fair competition in all regulated sectors.

In 2014, the Prime Minister's Order No.89/03 of 11 September 2014 (RoR, 2014) determined modalities by which ministries in charge of regulated sectors shall coordinate their activities with RURA in the implementation of their respective mandate. It gave total authority to RURA for coordinating all activities related to the concerned utilities including public transport.

3.2.5. Bus terminal initiatives

In 2013, four major terminals (Nyabugogo, Kimironko, Remera, and Kabuga), a taxi lay-by in Kicukiro, and an on-street minibus facility in Nyarugenge, were being used. During reform all of them were rehabilitated, while new modern bus terminals were constructed downtown and in Nyanza to replace the Nyarugenge on-street facility and Kicukiro taxi lay-by.

To improve the efficiency and quality of moto-taxi transport, 11 parking lots for moto-taxis were completed in 2015. They were constructed in areas of Rwandex, Sonatube, Giporoso, Kibagabaga, Kimironko, Murindi, Nyanza, Zinia and Ndera. Moto-taxi parking lots are now identified by road markings and managed by cooperatives. These parking lots help reduce the street congestion that had been caused by inappropriate parking of moto-taxis waiting for passengers, and enable weather-protected passenger boarding and alighting.

3.2.6. Relationships with moto-taxis

Moto-taxi services have gained traction in Rwanda and are viewed as a flexible and affordable means of transport, particularly in urban centers where traffic congestion is relatively high. Moto-taxis in Kigali share some of the characteristics of moto-taxis in other African cities, but for the most part, they operate under a much stricter regulatory framework as a consequence of a bottom-up approach to reform. Although there are still some unregistered operators, moto-taxi services are required to hold operating licenses, but can only qualify for one if they own a fleet of more than 100 vehicles or belong to a cooperative with more than 100 vehicles registered to it. Once this condition is met, the whole fleet receives a license to operate in a particular area.

RURA serves as the regulator for the operation of moto-taxis and, together with other agencies, ensures that all riders belong to a moto-taxi cooperative, part of the Federation of Motorcycle Taxi Operators (FERWACOTAMO). RURA also provides regular road safety training and polices strict safety protocols and measures (including compulsory helmet wearing and trip tracking).

Moto-taxis often compete on the street with bus services and, accordingly, there are efforts to restrict the circulation of moto-taxis along major public transport corridors. Moto-taxi services are currently not authorized to enter public transport interchanges. Informal clusters of moto-taxi services are therefore formed at the entrance, waiting for potential clients, which leads to conflicts with public transport (blocking the entrances, safety issues for pedestrians, etc.).

There are also other regulations in place that make Kigali's moto-taxi sector unique. Only one passenger at a time is permitted, with both passenger and driver wearing helmets while on the move; this is strictly enforced. Cooperatives ensure that drivers have a valid permit, that vehicles are clearly identifiable (often using colours to link vehicles to a certain area and showing the cooperative to which they belong), and that drivers use bibs (chasubles) with their respective operating numbers. Roadworthiness inspections for vehicles are carried out in some cases (ideally matching existing inspections for commercial and private vehicles) and, more recently, carbon emissions standards have been put proposed in order to reduce environmental externalities directly linked to the sector.

Table 6: Distribution of responsibilities before the reform, and initial reform objectives

Analysis element	BEFORE situation	Initial reform objectives (franchising)
[1] Network elements		
Route definition	Lead by operators	Routes would be defined by institutional stakeholders and franchised to private operators.
Stop location	Non-existent	Stops were expected to be implemented along the routes; drivers had to adhere to those stops.
Terminal station management	Mostly privately managed	Institutional stakeholders would take over as the responsible party in the process, and operators would progressively withdraw.
Working hours	Undefined, dependent on daily results	Working hours, in terms hours of operation, were to be negotiated among stakeholders and accepted by private operators.
[2] Operational elements		
Frequencies	Non-existent	Headways during and after peak hours was to be negotiated between stakeholders and accepted by private operators.
Fare definition	Defined by authorities	Fares would still be set by RURA.
Common ticketing system	Non-existent	Ultimately, the ticketing system would be managed by a third entity that would collect revenue and distribute it according to the number of trips effectively made on each route. The move towards one smartcard for all the networks is a key element of the process.
Vehicle quantities	Undefined	Franchised operations explicitly included minimum fleet sizes to be able to apply for licenses.
Vehicle specifications	Undefined	Contacts promote purchase of standard vehicles. A phase-out process would be set by authorities in order to achieve a fleet with only large, standard buses.
[3] Working conditions		
Salaries	Informally managed	Salary ranges are negotiated between drivers and companies, but all drivers should have a valid signed contract.
Social safeguards	Non-existent	A large national health coverage program has been implemented at the same period. Drivers' contracts should meet Rwandan labor laws.
Driving behavior	Dangerous	All drivers follow a code of conduct of public road transport drivers set by RURA. (In 2015, RURA's regulations instructed all public transport vehicles to install speed governors which limit maximum speed at 60km/hour).

Most of these rules were first implemented in 2012 and driven by moto-taxi sector stakeholders themselves. Sector stakeholders were supported by police and, later, by institutional stakeholders, most notably KCC, in seeking control of the number of operating vehicles to promote financial sustainability. Estimates suggest that there were more than 21,500 vehicles distributed among 71 cooperatives in Kigali in 2019. The current situation is in stark contrast to that following the 2006 decision (since withdrawn) to outright ban moto-taxis, which was met with strong opposition. The 180-degree turn from authorities highlights the success of a bottom-up initiative led by a sector that is more likely to be associated with informality elsewhere.

Though currently under control, rapid fleet growth and service expansion might generate pressure on the existing framework, which maintains a tight grip on incumbent operators but also does allow for some level of informality.

4. REVIEW OF FRANCHISING APPROACH

(2018 AND BEYOND)

4.1. Remaining business model challenges

At the end of the contracting period in 2018, MININFRA launched a study (RTDA, 2019) of public transport business models to evaluate the performance of existing public transport services in the City of Kigali and the approach being taken to their regulation. It was important for the State Minister in charge of transport to have a clear understanding of the operators' situation, and to evaluate margins to improve the quality of the public transport network without requiring subsidies. The Minister wished to establish a good business environment for the next contract period, to encourage more private investment in the sector. As public transport services were highly criticized at that time, there was pressure on decision-makers to improve service quality.

Before the study, the public entities supervising public transport (e.g. RURA) believed that operators were making substantial profit while still calling for the fare-level increases or new subsidies. The study above (RTDA, 2019) revealed a situation quite different from RURA's perception, which had simply used a basic business model to calculate fares per route based on operators' cost breakdown.

Table 7: Cost breakdown of public transport operators in the City of Kigali (2018)

	KBS		Royal Express		RFTC	
Staff	138.3	14%	122.2	13%	80.1	11%
Fuel, oil, and lubricants	373.4	37%	263.6	28%	194.0	28%
Tires	34.5	3%	26.4	3%	18.0	3%
Maintenance	95.4	9%	49.1	5%	89.5	13%
Rental of vehicles	0.0	0%	131.1	14%	43.8	6%
Installments	164.1	16%	138.7	15%	153.1	22%
RURA fee (8%)	7.8	1%	7.1	1%	5.5	1%
Internet fee	38.0	4%	31.4	3%	30.6	4%
AC Group commission (5%)	46.7	5%	42.9	5%	32.7	5%
Parking fees	30.9	3%	33.9	4%	14.9	2%
Other	82.1	8%	99.3	10%	41.6	6%
Total	**1,011.1**		**945.6**		**703.6**	

Note: All amounts in RWF/km.
Source: (RTDA, 2019)

Table 8: Operational results for public transport operators in the City of Kigali (2018)

Company	Revenues per km	Costs per km	Profit (loss) per km	Result (%)
KBS (86 vehicles)	1 025 RWF	1 011 RWF	14 RWF	+ 1,4%
Royal Express (78 vehicles)	898 RWF	946 RWF	(- 43 RWF)	- 5,1%
RFTC (240 vehicles)	700 RWF	704 RWF	(- 4 RWF)	- 0,6%

Source: (RTDA, 2019)

The study findings appeared to show that all three bus operators were, at best, breaking even between costs and farebox and other revenues.

A detailed analysis of each company revealed costs per kilometre and revenues per kilometre that fail to reach a profitability of 10% on total revenue, which would be regarded as an adequate performance. Table 8: Operational results for public transport operators in the City of Kigali (2018) presents a synthesis of those findings.

The data points out that operating companies have, from the onset of the reform, carried the burden and the risk. Even in the best-case scenarios, revenue per kilometer barely covers total costs, and if it does, there is still financial stress on the system. Outside of KBS, operating companies are not making enough revenue to cover all costs. There is a risk of bankruptcy in this current scenario, as institutional stakeholders assume no risk pertaining to operations.

Looking at the cost breakdown (Table 7: Cost breakdown of public transport operators in the City of Kigali (2018)), the importance of vehicle rent for operators is evident. While KBS owns its entire fleet, Royal Express spent 14% of its expenses on vehicle rental. The cost of capital is clearly a big challenge for private operators who can buy vehicles, with about 18% annual interest for bank loans and three years to repay. KBS benefited in 2014 from the offer of a loan from China Export and Credit Insurance Corporation (SINOSURE), to purchase Yutong Buses. Even so, the company was in a difficult situation in 2018 as its creditors were not receiving loan repayments.[13]

RFTC, on the other hand, benefits from much lower staff expenses as they sub-contract some routes rather than hire staff, and also enjoys lower parking fees, as the cooperatives own their parking facilities.

13. KBS has been put under administration of RURA for 18 months in order to ensure that it honors its loans

4.2. Achievements of reform

The reform initiative for Kigali set out to improve the public transport sector overall service quantity and quality.

The first achievement was increased supply. The introduction of higher capacity vehicles, ranging from standard buses to midi-buses, effectively changed the landscape. Newer vehicles, with more capacity, have adhered to proposed frequencies, thus increasing the reliability of the system.

All three companies maintained similar or at least comparable quality standards. Restructuring the network also helped. The approach to combining more viable routes with less viable ones paid off, thus reducing/avoiding the on the street 'penny wars', so common in Sub-Saharan Africa. The newly structured, simplified network helped provide clearer information for users.

Furthermore, the open dialogue among operators and institutional stakeholders regarding the development of routes helped maintain flexibility while achieving more complete area coverage. In rigid networks, operators often find themselves too constrained compared to previously defined routes, thus leaving gaps for the paratransit sector to fill without necessarily providing quality services.

The role played by each one of the three companies is also worth noting.

Two private companies, Royal Express and KBS, invested in vehicles to provide public transport services in Kigali; these are examples of the kind of private sector-led initiatives most cities seek, as they reduce the need for government to invest in vehicles that institutional counterparts already have. The private sector also played a role in building infrastructure and facilities such as terminals.

RFTC, on the other hand, is a clear example of successful paratransit corporatization. The move away from ATRACO enabled local authorities to negotiate with one entity only, which had evolved from paratransit to cooperative-based logistics. At the same time, operators improved their own working environments; before the reform they relied on daily income. Relationships between drivers and owners were difficult, presenting a high probability of disputes. Since reform, drivers have benefitted from guaranteed monthly wages and the social benefits that come from a formal relationship with their employers. In return, they adhere to a code of conduct that improves service quality and safety.

Another significant achievement is the move away from cash-based farebox collection to a smartcard system. The AC Group has been criticized because of its 5% fee on transactions – deemed excessive in some spheres; however, its presence in the system has secured more transparent relationships among operators, owners, and drivers, and between the operators and their institutional counterparts. As fare collection no longer directly relies on drivers receiving payment from users, fraud has been reduced. The smartcard system also supports more transparent fare structures for users: fares are officially sanctioned, and real-time, on-street negotiations have been all but eliminated.

The entire reform process benefited from improved institutional frameworks, mostly the result of setting up the industry Steering Committee. In it, four entities – as opposed to one single institution – interact and plan system operations. Cooperation among stakeholders creates a new and agile institutional arrangement. The different institutions involved in the process have developed significant collective public transport regulation- and transport-planning capability. Moreover, a dialogue with operators has been established. Operators have the opportunity to express their concerns when they attend the meetings of the Steering Committee convened either by the Mayor or by the Minister of State in charge of Transport. Meeting agendas always include a discussion about the level of service and network expansion. This forum has proven to be the best way in which to resolve issues and challenges in the sector, because the discussions are carried out in the presence of all key stakeholders (operators, relevant public institutions, and law enforcement).

4.3. Issues and challenges

Though the reform program has been successful overall, there are remaining issues and challenges. For example, motorization levels in Rwanda are still increasing rapidly. The national vehicle fleet grew from 106,000 vehicles in 2011 to 184,000 in 2016, while the motorcycle fleet (both private us and moto-taxis) grew from 58,000 in 2012 to 80,000 in 2016. This constitutes an annual 8.5% motorization rate increase over the period, and has put pressure on the roadway system, leading to increased congestion. This has also slowed public transport travel times, increased costs and crashes, and reduced capacity.

4.3.1. Unmet public transport demand

The public transport system has significantly more capacity in 2020 than it did in 2010, but there is still un-served demand for public transport.[14] This demand is reflected in long waiting lines at bus stops, large numbers of travelers using moto-taxis and private cars, and large numbers of people walking long distances.

Based on population, total motorized mobility demand should approach about 1.3 million trips per day in Kigali. However, total daily public transport travel was estimated to be only about 246,500 trips in 2017, with moto-taxis serving 492,000 trips and private vehicles accounting for an additional 557,000 trips (RTDA, 2019). It would be wrong to assume that all travel on moto-taxis and in private vehicles would use public transport if there was more of it and its quality was better; however, although moto-taxis are twice as fast as public transport, a significant number of users are likely switch if more public transport was available, as moto-taxis are generally twice as expensive as public transport.

14. Latent demand manifests in the number of people who chose alternatives modes to the current public transport (bus) supply

4.3.2. Business model

The current business model has not allowed public transport operators to purchase a large number of vehicles in response to the unmet demand – as described earlier, the public transport business is not profitable enough to provide the capital needed to increase the capacity of the system. Operational issues reduce revenue and increase costs for large vehicles; minibuses are more adapted to the current operational context, as they are smaller and cheaper per unit of seated capacity. Even though the quality of service has improved, legacy problems such as poor reliability and low operating speeds still hinder the system.

Congestion has increased in the urban areas, and the standard buses and minibuses, which operate in mixed traffic, suffer the most delays. Poor traffic management during peak hours at specific junctions also results in slower operating speeds, lower frequencies, and poor reliability. Though road infrastructure has been improved to the point where it can accommodate larger, higher-capacity vehicles, some junctions – especially those close to bus terminals – still cause congestion-related losses for public transport operators.

The 'fill-and-go' system gives an advantage to nimble minibuses that take less time to reach capacity; this enables them to make more trips, meaning shorter waiting times for users. Furthermore, the model is still dependent on some level of competition between drivers, and congestion persists and has got worse – both of which reduce operating speeds. These low operating speeds then reduce the income operators are able to earn. Moreover, because it is difficult to purchase new vehicles with low incomes, the vehicles in the system gradually become unroadworthy although they still operate. This results in inefficiencies and safety issues that are an obstacle to achieving more profits in the long term.

Operators, who assume all risks in this system, are most impacted by regulatory constraints that increase costs and reduce revenue. For example, while there is some new financial support (e.g., not having to pay imported vehicle import duties, and users not having to pay VAT on ticket purchases), this support is offset by operations constraints or other impositions (e.g., VAT payment on imported vehicles).

A potential concern is the position of the RFTC, as the continuous competition between operators – one of the characteristics of the paratransit sector – remains relatively unchanged. Because RFTC is responsible for two of the four operational zones, the Cooperative is often in the position of power when negotiating with other operators and with institutional stakeholders. In addition, because RFTC is an operating company and therefore not entitled to conduct other types of activities, new entities have emerged with different names but that represent RFTC's interests; these are most notably entities managing transport terminals. Moreover, RFTC rents vehicles to individuals who give the Cooperative a key role in managing revenue. Questions have therefore been raised about these cartel-like activities, where RFTC seeks to maintain a strong grip on the public transport sector.

No business model has yet been found to build efficient bus terminals with operating profits. Although a clear improvement has been observed in some of them (for example the city centre), the bus terminals

have not yet benefited from the private investment hoped for by public authorities, which wished to develop transit-oriented development through public-private partnerships at for example Kimironko and Nyabugogo.

4.3.3. Institutional arrangements

The role of the RTDA remains unclear. While other institutional stakeholders have clear responsibilities, this is not the case with the RTDA, which often fails to counter other institutions' lack of capacity. One example of this failure is the inaction by the City of Kigali to develop traffic management solutions to facilitate bus operations during peak hours along busy bus corridors.

Although the operators submit their financial statements annually to RURA in terms of the second-generation contract reform, RURA at times doubts these declarations, and now takes a more serious approach to auditing annual accounts.

4.4. A new call for tenders in 2020

The first-generation contracts were supposed to expire in 2018, but were extended for one year while the second-generation contracts were fully developed (the COVID-19 situation also impacted the original termination dates). These second-generation contracts intend to address some of the issues described above. The main objectives are to further develop the bus fleet (with larger vehicles and a better distribution to different routes), and implement terminal departure/stop scheduling instead of the current 'fill-and-go' model.

Also notably, the newer version of the contracts seeks a more balanced distribution of risk between operators and institutional stakeholders. The contracts recognize the relative imbalance in the current system, so would give operators some breathing room and work on a renewed partnership with their institutional counterparts. These partnerships could, for example, propose that operators provide a specific number of kilometers per route per day and implement schedules to provide them; or institutional stakeholders could commit to improving the operational environment for public transport by better traffic management and enforcement that gives priority to public transport services. These partnership approaches would be continuously monitored by the requisite authorities.

The second-generation contract tenders did not effectively open the system to additional operators, however; the existing three operators were the only respondents, and they tendered only for their previously assigned respective operating zones.

5. CONCLUSION

5.1. Winners and losers from reform

In broad terms, the Kigali reform process benefited public authorities, most notably RURA, and to a lesser degree, new public transport operating companies. As presented in Table 9: Reform outcomes for different stakeholders in Kigali, below, individual owners who became stakeholders in the new companies lost the most in the reform process.

Ultimately, though, the reform of the bus system of Kigali set a solid base for further improvements. Except for competition from moto-taxis, bus services have effectively moved away from on-the-street, in-the-market competition. Regulatory efforts have made it possible to have relatively well-planned services closely reflecting demand patterns. Corporatization initiatives have all but eliminated company informality in a move to improve management practises.

Areas needing improvement relate mostly to infrastructure; by increasing service speeds, the capacity would increase, and the costs of the public transport network would reduce.

First of these areas needing improvement is traffic management. Intersections must be managed and organized to maintain adequate operating speeds and ensure the success of a bus system. As of 2018, there were fewer than 10 intersections managed by traffic lights, which is a small number for Kigali. It is common to find intersections missing signage, thus hampering bus and minibus operations. In 2018, the City of Kigali conducted a feasibility study for a BRT, following the broad direction of the Transport Master Plan – before implementing such a project there is a need to implement dedicated bus lanes on strategic sections to help the buses cross junctions more smoothly.

Secondly, terminal stations require investment. Currently managed by private stakeholders, and most of them linked to RFTC, terminal stations often lack comfortable areas, clear markings, and clear organization. Institutional stakeholders seldom invest in these terminals, so private-public partnerships could be proposed instead.

Thirdly, the second-generation contracts should move from the 'fill-and-go system' to scheduled services. By having a predefined timetable for each route, the network would be much more attractive to passengers. This would also respond to latent demand by allowing passengers to board vehicles at mid-way points.

Next, although the current kilometer-based per route fare structure is intended to reduce the risk for operators, there are still many inconsistencies. This fare structure serves the origin-destination network from starting bus station to city center, or Nyabugogo. Short-distance trips are very expensive. The fare-collection system is an asset that could be used more efficiently to implement a much more fair and clear fare structure.

The last element that requires improvement – in the short to medium term – are the working hours for drivers. Drivers still work long hours, despite the important steps forward in the formalization of drivers' relationships with owners and companies or cooperatives; these working hours sometimes surpass 10 or 11 consecutive hours behind the wheel. Such practises are a legacy of the former paratransit sector and do not reflect the principles of modern operating companies.

Table 9: Reform outcomes for different stakeholders in Kigali

	Positive outcomes	Neutral outcomes	Negative outcomes	Comments
Institutions	Implementation of an adapted regulatory framework, with limited risk Acceptance from new private operators and reformed, incumbent paratransit owners			Role of RURA was reinforced and reaffirmed. Some concerns remain, as RURA is not solely focused on public transport but encompasses a large array of regulatory functions for different domains. The role of RTDA remains unclear and should be clarified.
Public transport users	Readability of the system Reliability of service	Smartcard usage	Unsatisfied demand – the lack of capacity in the bus/minibus system leaves moto-taxis to take over in some cases.	No evidence of significant change in terms of affordability. Quality of service was, in general, improved, albeit with some minor issues remaining, mostly pertaining to availability of places when seeking public transport services outside of terminal stations. Improved multimodality for the collective public transport supply (thus, excluding moto-taxis), largely based on the ongoing implementation of a cash-less ticketing system.
Operators	Structured relations with institutional counterparts Reduced competition in the market		Stress put on farebox revenues, as operators carry the risk burden. Operational conditions that might increase efficiency – such as bus priority lanes and other interventions – have not been sufficiently improved.	Risk was mostly placed on the shoulders of newly formed urban public transport operators. Sets of routes were effectively forced operators to serve routes that are often not financially viable.
Private vehicle drivers	Improvement of relationships between owners and drivers		Loss of job/employment opportunities where directly linked to the previous operational mode.	Improved working conditions, in general, with some former operators being left out of the system. More transparent relationships between owners and drivers as contracts between them were implemented.

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