

POLICY NOTE: ADDRESSING URBAN MOBILITY CHALLENGES IN GHANIAN CITIES

Country context

Ghana's economic growth has accompanied an exponential motorization growth, built-up area growth of cities and underinvestment in transport systems. Ghana's economy expanded at the fastest rate in the five years up to 2017 as oil and gas production surged. Gross domestic product expanded 8.5 percent in 2017 compared with 3.7 percent in 2016. The burgeoning growth has simultaneously resulted in an increasing demand for infrastructure and services. Rapid in-migration, both from the peri-urban areas and also from other west African nations, has brought growth to main Ghanaian urban economies, and with them, new challenges that influence policy makers' decisions.

Ghanaian cities have experienced rapid demographic growth in the last decades, and intermediary cities such as Kumasi and Tamale are expected to grow in the coming decades, even quicker than the national capital. Ghana's urbanization since early 2000 has outpaced the west African average. Almost 60 percent of the population in Ghana is urban as compared to less than 40 percent average in sub-Saharan Africa. Both in-migration and natural increase account for this population increase. The Greater Accra Metropolitan Area (GAMA) is home to 4.6 million people, almost 16 percent of the country's 2016 population. The regional economy accounts for about 25 percent of the national gross domestic product (GDP), and dominates formal and informal urban employment (32 and 28 percent, respectively). Kumasi follows second with a population of almost 2 million, an increase from less than 1 million nearly 15 years back; Tamale comes in third, with its city population of about 400,000.

Population growth is expected to continue across all cities in the country; however, most of the urban growth will be happening outside of Accra. It is expected that by 2030 Accra will multiply its population by 1.7 times compared to its level in 2010, Kumasi by 2.3 and Tamale by 2.5.

The population growth has happened with reduction in population densities, which makes service provision more expensive and less efficient. The spatial expansion of the city more than outpaced its population growth, resulting in lower densities. For instance, in Accra between the years 2000 and 2014, population increased by four percent, while urban density decreased by 1.3 percent. This generated low density areas, not served by public transport and where the provision

of transport services is more expensive, because of the low density and distance from job locations.

Although, motorization is low compared to global level, Accra has a high motorization rate compared to other African cities while Kumasi's is relatively low against the benchmarked cities. Like most large African cities, Accra, Kumasi and Tamale, have faced a rapid increase in motorization on a road network that is inadequately meeting the demand. This reflects the general increase in the number of registered vehicles in Ghana: vehicle ownership in Accra has increased six-fold over a 25-year period—from 40 per 1,000 population in 1990 to 260 in 2015. The ownership of vehicles is generally linked to the wealth of the household, so those households with private vehicles have more options to access opportunities. Vehicle ownership in Kumasi and, even more so in Tamale, is still growing slowly giving some hope that an urgent attention can reverse the trend of an auto-dependent city with a support for non-motorized transport (NMT) and public transport.

Access to jobs and social services in Ghanaian cities

A competitive and inclusive growth in Ghanaian cities requires the ability to access jobs and social services. Being able to access higher levels of employment opportunities in a city, increases the chances of interactions between individuals and organizations to take advantage of agglomeration economies. Better accessibility for individuals results in greater opportunities to find jobs. It also increases the labor market pool for employers to find the right candidate for a job. A high percentage of people given access to many employment opportunities supports good economic performance of urban regions.

Accessibility is not equally distributed among different groups in Ghanaian cities, which is an important element of social exclusion. While high-income groups tend to have more options to access jobs because they own private vehicles to transport them to access such opportunities, people of low-income groups depend on public transport or non-motorized modes to access jobs and social services. Spatial exclusion among low-income groups limits the access, affected by the ability to afford a fare. Equity considerations toward disadvantaged groups are important in the design of inclusive urban transport systems.

Walking is the main mode to access jobs, markets and schools across all three cities. In Accra and Kumasi, the use of tro-tros is very common, while in Tamale (where tro-tros are rare), bicycle and motorcycle are noticeably more common. School buses are sometimes used for school transport in Kumasi, but are rare in Accra and non-existent in Tamale, where walking and bicycle are the dominant modes.

Access to jobs using public transport, commonly used by middle- and low-income groups, is overall poor in Ghanaian cities. Almost half of the population in Accra and two-thirds in Kumasi do not have access to half of the city jobs within an hour's reach using public transport (figures PN.1 and 2). Mobility constraints such as congestion, lack of proper transit system and limited road supply, and last-mile connectivity issues are one reason. Land use and longer commuting distance owing to urban sprawl also play a role in limited accessibility.

Figure PN.1. Accessibility to employment opportunities with public transport in 60 minutes in Accra

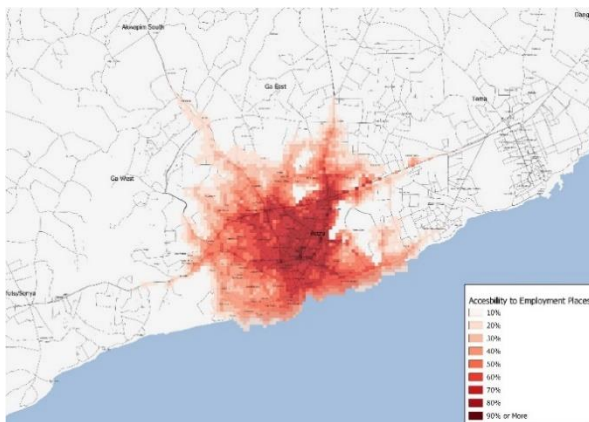
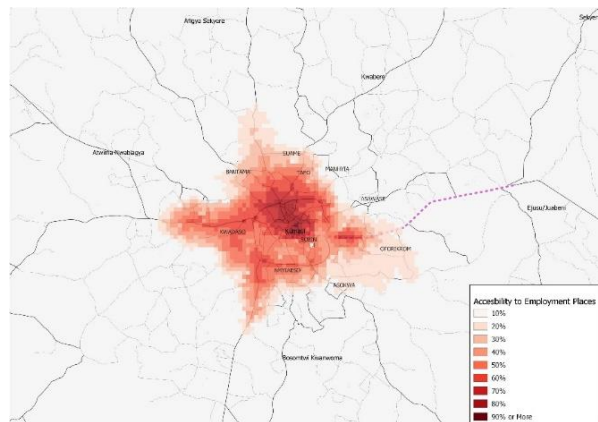


Figure PN.2. Accessibility to employment opportunities with public transport in 60 minutes in Kumasi



Outside of main arterial roads, access is limited, as most of roads are not paved in neighborhoods, restricting entry to motorized vehicles such as minibuses. Low-income areas tend to be particularly isolated to access jobs by public transport because their residents live far from jobs and because last-mile connectivity is an issue. Spatial isolation is particularly accentuated during rainy season, when unpaved roads are impassable and inaccessible.

Unpaved roads and lack of sidewalks also create difficult conditions for walking and bicycling, more so during the rainy season. They represent a significant barrier for mobility that especially affects people of low-income groups, women, and people with disabilities.

In Ghanaian cities—where large proportions of the urban population live in poverty—the affordability of transport is paramount to the mobility of the urban population. Public transport is not affordable for large portions of the population. For the bottom 20 percent, 2 daily trips represent 60 percent of daily household income in Accra, and 111 percent in Kumasi.

Women experience specific constraints to reach jobs, as they tend to travel more during off-peak hours than men, when services are less frequent, tend to pay more for travel as they often pay extra to travel and suffer more from fear-based barriers. People with disabilities face critical

barriers to physically access transport vehicles, especially tro-tros, or to navigate the existing sidewalks that impose additional challenges for this demographic to access jobs.

Institutional and sectoral organization

Several ministries (MoT, MRH, MLGRD), central government institutions (NRSA, Ghana Police Service), regional councils (GRCC) and multiple actors at local level (MMDAs, GAPTE, DoTs, URDs) play a role in the urban mobility agenda. The road and transport sectors are overseen at the national level by the Ministry of Roads and Highways (MRH) and the Ministry of Transport (MoT), respectively. MRH's responsibilities include policy formulation, coordination and oversight, infrastructure development and maintenance, and financing. Similarly, the MoT has overall responsibility for the transport sector, including planning policy making and provision of modes of transport.

Institutional set-up

The Department of Urban Roads (DUR) plays a major role in the administration, planning, control, development, and maintenance of urban roads and associated infrastructure. MMDAs share these responsibilities with DUR and are also responsible for the enforcement of road and transport regulations, alongside the Motor and Transport Traffic Unit of the Ghana Police Service (within the Ministry of the Interior). Private sector operators play a significant role in the road transport sector, as they account for nearly all bus and taxi transit options. No national body exists, mandated to develop regulations for transport operations and services.

Industry Structure

The Public transport operating industry in the three cities is dominated by informal privately-operated transport while a few formal large bus operations exist. The industry is structured as follows:

Operating unions and associations

Three main operating unions and associations function in Ghana. (i) The Ghana Private Road Transport Union (GPRTU), a national union, has the dominant share of the tro-tro and shared-taxi business. The basic units are locals, which operate the individual routes, and branches, and which are regional clusters of locals. The GPRTU represents the interests of drivers and of vehicle owners, although it is more naturally aligned with drivers. (ii) The Progressive Transport Owners Association (PROTOA) is a national association which operates both tro-tro and shared-taxi businesses, and is organized along the same lines as the GPRTU. PROTOA mainly represents the interests of owners. (iii) The Ghana Co-operative Transport Association (GCTA) is a national

association also organized along the lines of GPRTU and represents the interests of owners and drivers. Other smaller size unions are organized in cities.

Other private operators

Operators such as Agate, Kingdom Transport, Pergah Transport, GH Express, O A Transport and the VIP bus service are companies that operate several buses and offer contract service, urban services, and inter-city services, among others.

Metro Mass Transit

MMT is a quasi-private company owned by a set of government-linked financial institutions and one privately owned bank, with a substantial (45 percent) government minority shareholding. The MMT receives financial support from the government and currently operates about 500 buses, of which some 200 operate in the Greater Accra Area.

The Ghana Road Transport Coordination Council

GRTCC is an umbrella body of all transport operators in Ghana, including unions and associations, other locally based associations, and other operators of both passenger and road carriers.

Key challenges facing the sector

On the institutional side, fragmentation among national and local governments, without formal coordination mechanisms, seriously constrains development of sustainable solutions. Ambiguity characterizes the performance of the roles of multiple institutions and a lack of coordination. Different agencies perform under different incentives and without a common vision and strategy that guide decisions in urban mobility. The implementation of the GUTP for instance, included multiple ministries and MMDAs, and although the project supported the creation of coordination mechanisms such as Urban Transport Advisory Committee (UTAC) and Steering Committee for Urban Transport in Accra (SCUTA) that preceded GAPTE, these mechanisms were not effective because of the lack of ownership of the reforms that could drive or lead these coordination mechanisms. One example of functional ambiguity is the National Road Safety Authority (NRSA) that carries broad responsibilities on public transport regulation without clarity of how these functions complement the existing public transport regulatory functions under the MMDAs.

The low level of access to jobs and services in Ghanaian cities is an important element of social exclusion that defines urban poverty. In Accra only 48 percent of the total population is able to access nearly half of the employment opportunities, while in Kumasi it is only 36 percent of the

total population. According to the Transport survey 2012, 26 percent of respondents from urban areas indicated that they do not have reliable transport to health facilities and 78 percent indicated that transport was not available or easily available in the morning times to access health facilities. Spatial isolation, or last-mile connectivity is an issue. Unpaved roads in neighborhoods do not allow access to minibuses. Regular use of public transport services is unaffordable for the bottom 20 percent of the population. The significant level of unaffordability for a large section of households in Accra, Kumasi and Tamale, shapes people's mode choices—and limits mobility options to walking.

Access to jobs and services is more challenging for women than men in the cities. An absence of safe traveling conditions constitutes a major barrier for women in travel, and influences their decision on the choice of mode, time of travel, purpose of travel and decision to work. Nearly 18 percent of women have suffered sexual harassment in public transportation. This figure grows to almost 30 percent in minibuses. Provision of efficient public transport is not enough to ensure high rates of usage by the public; design consideration, social dynamics and enforcement are crucial to make an inclusive public transport. Women tend to travel at more off-peak hours than men, when services are less frequent. Actual access for women is less than that of the average commuter at peak hours—which tend to be commuting trips at peak hour, undertaken by mainly men. Even for the women who travel at peak hour, when frequency is the highest, women expressed less tolerance to overcrowded buses or less willingness to fight for a seat; so in many instances, women wait for less over-crowded buses. This translates to lower actual frequencies for women and lower access than men.

People with disability also reported, in focus groups and surveys, that they were unable to use tro-tros—all tro-tros present a significant step up, and are crowded inside—limiting their choices to taxis or three-wheelers. Even for the few vehicles accessible to the disabled passenger, the driver often discouraged them to travel if they had equipment such as crutches or a wheelchair, on account of the extra space required or because of the extra time and effort taken in boarding and alighting. Finally, all three cities were identified as extremely difficult to navigate for those with visual impairments. Cities have limited sidewalks and hawkers and traders block large portions of the pavement that make traveling without a guide almost impossible without tripping, in addition to busy roads without formal crossing points that renders their passage extremely dangerous. Such risks prompt people with visual impairments choosing to travel less overall, restricting them from activities they might otherwise engage in.

The supply of urban transport services and infrastructure in the cities is not able to match the ever-growing demand, contributing to economic stagnation. Vehicle ownership and use, while growing since 2010, is still low compared to developed countries. However, inefficient use of

street space together with design deficiencies contribute to severe and chronic congestion and road-safety challenges. Limited, poorly maintained roads, and uncontrolled expansion of private and informal public transport have resulted in high levels of congestion and high emissions in the city. At peak hours, average traffic speeds in some central areas of the city reach below ten kilometers per hour. Public-space management is as well a major challenge as vendors and parked vehicles obstruct streets and sidewalks throughout the city, particularly in the downtown. Facilities for pedestrians are singularly poor, with footpaths of inadequate width and often in poor condition, forcing pedestrians to share space with vehicles on the road and frequently having to navigate between motorized traffic, parked vehicles and traders in exceptionally chaotic and dangerous conditions.

Urban transport in Accra, Kumasi and other cities is characterized by the fundamental paradox of a market with proven excess demand and shortage of supply; and it is not attracting sufficient new investment to redress this imbalance. The excess demand is reflected in overcrowded buses and long waiting times, without even accounting for the latent demand resulting from lack of affordability and access. The supply shortage, in spite of a proliferation of taxis and tro-tros, implies constraints in the provision of large, good-quality buses. Such buses are unavailable because of the low productivity of the capital assets in highly congested traffic, and from the inability of informal operators to attract the necessary funding to operate large, good-quality buses. Exponential growth in para-transit operations had been a mixed blessing. Beyond mobility and access, perhaps one of the main advantages of the growing informal public transport sector is its ability to provide jobs in a city with growing unemployment. Also, while public finances are constrained, the informal sector is able to mobilize its own private sector financing. The lack of formal employment in the general economy is one of the biggest reasons for growth in informal, unorganized public transport. It is possible to start running a mini bus or an okada without any documentation, license or regulation, and with little or no need for any training. Enforcement is weak and the prevailing market conditions allow free entry. Driving one of these vehicles provides cash on a daily basis. Ease of entry and quick returns make such operations a popular occupation for many migrating from villages in search of jobs. Over the course of time, thousands join the ranks of drivers or support staff, making them a political force as a substantial percentage of the population depends on the informal transport sector for sustenance. It does not help when enforcement is ineffective or if traffic enforcement officers themselves actually benefit from the activity by providing cover at times in return for cash.

However, old and poorly maintained vehicles which operate in an unregulated environment are a source of environmental pollution, and worsen road safety and security for all, especially women and the more vulnerable groups. Transport services are unreliable, inefficient and unsafe,

largely because of the absence of an effective regulatory environment. Vehicles tend to be in poor condition, and are often driven compromising safety and comfort. This has resulted in a very unhealthy environment, and poor operating and cleaning practices have been underscored in the wake of the COVID-19 pandemic.

Lack of comprehensive urban development policies and inadequate implementation of programs on urban management, land use, transport, and economic development create problems and limit the growth potential of urban areas. Urban sprawl has increased travel distances and pushed up the price of public transport; and particularly affects the poor and often excludes them from work because of their dependence on the public transport system.

Congestion is a major source productivity loss in urban Ghana. In Accra, 70 percent of major roads operate at a low level of service during rush hour (<20 km/h). Congestion in the Kumasi metropolis has a negative effect on worker productivity in the informal transport sector, representing an average income loss of 21.9 percent from congestion. The same statistic applies to the formal sector. The study revealed that “the average mandated number of hours of about 9 hours a day was reduced by 0.88 of an hour (52.8 minutes) a day, which represents an average of 9% loss of productive hours a day and loss of over two working days in a month”.¹

The incentives to increase capacity in the sector, either as infrastructure or rolling stock (buses), as the solution to growing urban transport problems has not helped alleviate congestion. The Ministry of Roads and Highways, by virtue of large investments in road infrastructure, is seen as the *de facto* ministry responsible for addressing urban transport problems. Roads in Accra have been widened and expanded over the years in an attempt to handle the increasing congestion. Although these measures provided relief in the short term, they were not able to address the fundamental causes of congestion. Efforts by the Ministry of Transport to improve public transport by procuring 250 high-quality large buses has also not had the intended impact. The buses are operated on the Amasaman corridor (Aayalolo services) but are in danger of failing because of poor ridership and an unsustainable financial situation.

In Ghana, the cost of fatalities and serious injuries because of road crashes causes an annual loss of USD 4.55 billion, and represents 8.3 percent of the country’s GDP (World Bank 2020, Road Safety Country Profile). Seventy percent of the road crashes fatalities and injuries affect the economically productive groups (15–64 years).

Emissions are another important externality. The vehicle fleet constitutes the main source of air pollution in Ghana at 80 percent. The World Health Organization (WHO) estimated nearly 3,000 deaths annually attributable to outdoor air pollution related ailments in Accra alone. The annual

mean level of PM_{2.5} as of 2016 was 31.1 µg/m³, and far exceeds the WHO recommended annual guideline of 10 µg/m³, thereby posing a high risk of respiratory ailments.

The unprecedented COVID-19 pandemic has disrupted mobility in cities, with impact to the ability of citizens to reach jobs and services, and affecting the financial sustainability of the transport sector. In the short term, the reduction of mobility from the slowdown in economic activity, restrictions to vehicle occupancy restriction and threat to catch disease in public transport have had significant and adverse financial impact in the transport sector, and is likely to continue for some months.

Transport workers, drivers and conductors of tro-tros are particularly vulnerable groups in the context of COVID-19. Drivers and conductors absorb the risk of demand, that has plummeted for weeks and it is expected to be below pre-COVID-19 levels for more months. Furthermore, as these groups work under informal settings, they do not have access to social safety nets or health coverage. Bus operators running under a contractual basis have also seen their farebox collection plunge. They have higher fixed costs of labor, rent, and debt repayments with less flexibility than the informal operators in the short term to adapt to the changes in demand. In consequence, formal operators are suffering serious financial constraints.

In the medium and long term, disruptions from COVID-19 crisis will likely create permanent and structural changes in the transport system in the medium and long term. Their repercussions will likely generate permanent changes in users' behaviors, business models, and actors in the sector.

National development strategies and lessons learned

The government has made multiple efforts, including financing a number of road infrastructure projects and setting up a public bus company (MMT) to address congestion, but to no avail. More recently the Ministry of Transport has even planned and designed a bus rapid transport (BRT) project on one of the busy corridors. While the BRT project could not be implemented, a largely mixed traffic quality bus corridor was implemented in 2016, setting up a consortium of private operators and procuring new premium buses from Scania. The premium buses did not have the intended impact because of competition from other private bus operators and two- and three-wheelers. The passengers did not get access to better services and the operators were not able to make profits and had to depend on the government to bail them out.

The investments in the Ghana urban transport project (financed by the World Bank, French Development Agency and GEF) were meant to incentivize broad policy reforms and catalyze transformation of urban transport in Accra. Although much design work was done, the BRT did not advance on the ground other than the construction of the Odaw Bridge. More importantly,

the project was not able to establish a sense of common cause across the different ministries and MMDAs. The basis for institutional coordination between the ministries of transport, local government and finance, in the form of the urban transport advisory committee (UTAC), was accepted in principle but could not take hold.

Key lessons derived from past efforts in Accra and other countries worldwide:

- i. Setting up a strong institutional basis for coordinated planning and regulation is critical to the success of urban transport projects. The Bank urban transport policy paper “Cities on the Move” (2002) identifies institutional weaknesses as the source of many observed failures in urban transport in developing countries. Strengthening urban transport institutions often requires legislative, institutional, and management changes at the national, state, and municipal levels to minimize jurisdictional and functional impediments to efficient and effective service delivery. Strengthening transport also requires setting up dedicated institutional bodies for urban transport planning and regulation, with commitment from the highest levels of government and a champion to further the cause of good management.
- ii. Build political consensus among operators by transparently sharing information across multiple stakeholders. This requires engagement with existing transport operators to ensure that their livelihoods are protected and even enhanced.
- iii. Key to a successful project design is based on an approach which is **comprehensive** (covers multiple administrative boundaries, is multi-modal), **continuous** (plans, planning data and tools are updated on a regular basis), **cooperative** (all stakeholders participate, develop communications plan and stakeholder analysis), **connected** (capital projects are consistent with adopted long range plans), **championed** (support at the highest political level, ownership), and **incrementally changed** (scale-up interventions in an incremental fashion and allow flexibility in design).
- iv. Skillful management of stakeholder expectations, two-way communication, and public involvement are essential for the success of urban transport projects. Engagement with transport operators in Accra, who are a key stakeholder for the implementation of public transport reforms, took off on a wrong note, with a perception that their livelihoods were endangered by the reforms. This led to a long-drawn resistance by the operators to the project. A successful system requires ownership by existing operators, drivers, and users and incorporation of their specific concerns in the design.
- v. It is equally critical to strengthen the enforcement capacity. Reforms cannot work unless new arrangements are consistently enforced (e.g., franchise operators should be protected against illegal operators) based on formal statutes. This applies to public transport operations and traffic management. Consistent enforcement requires close coordination of all implementing agencies.

- vi. It is imperative to focus not only on the rapidly growing capital, but also on intermediary cities to use transport infrastructure to structure urban growth. As in many other countries in the region, most of the attention and funding on urban transport have been allocated to the capital city. However, intermediary cities, such as Kumasi, Tamale or Takoradi need urgent attention and funding to respond to their urbanization. These intermediary cities are growing faster than Accra—in terms of population and built-up area. However, very limited data are available on these cities, and a clear neglect of urban transport. Secondary cities in Ghana have the potential to become intermediary hubs between rural areas, and the capital and external markets, which would enhance country's economic inclusion and reduce pressure in Greater Accra.

Road map for future engagement

A programmatic, long-term plan would fundamentally support an integrated approach to address mobility and accessibility, integrated with multiple sectors (education, health, tourism, urban development, economic diversification.), while at the same time contribute to building institutions and human capacity. In response to that objective, the proposed approach focuses on developing a short-medium and long-term plan to address the growing challenges of urban mobility in the cities in Ghana.

In the immediate future

The focus needs to be on building the foundations for a larger transport program. The initial thrust will be on the capital city Accra, a mid-size city (Kumasi) and a small city (Tamale). The government needs to issue a policy directive to: (i) Identify improvements to Urban Transport as a priority for the Government;(ii) Designate a lead ministry, assigning human and financial resources;(iii) Define a need for institutional coordination. This would require setting up an urban mobility coordination body to ensure that various initiatives complement each other rather than compete;(iv) Designate GAPTE in Accra to be the bus planning and management body, per its initial mandate, rather than an operating unit; and (v) Set up similar executive bodies for other cities to regulate public transport across multiple municipalities.

Measures to support the road network development

The immediate need is to support the road network development. (i) Conduct a road network inventory survey, by road type, functional use; and (ii) Assess road conditions.

Measures to strengthen institutional capacity

The government should: (i) Designate GAPTE to be bus planning and management body for Accra;(ii) Evaluate options for setting up a regulatory body for Kumasi and Tamale;(ii) Provide options for financing investments to improve mobility –both public and private; and (iv) Identify human capacity constraints and an approach to build technical capacity

Measures to respond to post-COVID crisis

Government should: (i) Establish protocols to prevent the transmission of coronavirus in public transport. The preventive measures may include social distancing, cleanliness and information dissemination; (ii) Protect the most vulnerable under the crisis, by setting up a fund to support informal transport workers (drivers, conductors) with safety net programs; and (iii) Examine opportunities to formalize informal transit operations and cashless fare collection systems, that facilitate the implementation of hygiene protocols in public transport.

In the medium-term

Improvements in public transport will serve to: (i) Enhance value offering to the user by providing reliable, safe, affordable, quality level of service; (ii) Initiate bus renewal scheme; (iii) Implement mass transit solution and physical investments to improve flow along priority corridors; (iv) Enhance local connectivity to communities through paving of neighborhood roads and improve or create NMT facilities (sidewalks and bike paths); and (v) Implement traffic management and demand management plan in cities.

Measures to strengthen the road network

The efforts are directed to: (i) A complete-streets approach with quality sidewalks, pedestrian-centered traffic management and crossings, bike lanes, high-quality bus service including facilities where appropriate (such as bus stops and depots).; and (ii) Identify missing gaps in the road network hierarchy to provide a balance of main, secondary, tertiary and community roads.

Measures to enhance urban mobility strategic direction

The government should develop an urban mobility policy to set the goals, the framework and the high-level program for urban mobility in Ghana's urban areas. It would take a comprehensive perspective, going beyond traditional issues of transportation and infrastructure, extending to the perspectives of communities, urban society, urban economy and urban environment. This would require significant consultation and consensus-building across a wide range of stakeholders.

The following actions are recommended to enhance urban mobility institutional and operational framework: (i) Re-invigorate the institutional and operational framework—CUT, UTAC, GAPTE, MMDAs, transport departments,—so they have the obligation, direction, motivation and the

capacity to deliver; (ii) Build a formal basis to coordinate across multiple stakeholders; engage, co-ordinate and mobilize the MDAs and MMDAs to common action; (iii) Designate a ministry to lead policy reforms in urban mobility and provide overall advisory functions, training and capacity building; (iv) Build human capital in specialized skills in urban mobility within MMDAs and MDAs; and (v) Explore further sources of financing for current and capital expenditure, including opportunities for private sector participation in urban mobility.

Focus on capacity building will require strengthened partnership with the local university (KNUST) to set up a comprehensive urban mobility planning, operations, management and technology center of excellence as a regional training center.

Toward the long-term plan

The efforts will aim to strengthen institutional capacity, and develop appropriate regulatory framework to support the government's strategic plan to promote a public transport reform and operationalize the MFD agenda in the transport sector. (i) Provide formally organized and regulated public transport for all citizens; (ii) Transform the high-quality bus system into an interconnected network gradually; (iii) Finance the implementation of missing links in the network; and (iv) Develop a basis to strengthen institutional and regulatory framework to improve bus operations.

In the medium and long term, COVID-19 crisis recalls the urgency of implementing sectoral reforms and investments defined in the medium and long term. The government should scale up the transformation of public transport toward a city-wise formalized system with regulatory reforms, operator consolidation, new franchising arrangements and fleet and facility modernization. It should also launch incentives to reduce the number of trips (telecommuting).

Table PN.1. Summary of Recommendations over different time periods

		Short Term	Medium Term	Long Term	
Hierarchical transport network under a “complete street” approach	Public Transport	<ul style="list-style-type: none"> • Modernizing existing public transport • Implementing quality mass transit 	<ul style="list-style-type: none"> • Begin transformation of minibus associations into corporate companies • Set up contractual arrangements, including operational plans and fare collection system 	<ul style="list-style-type: none"> • Provide reliable, safe, affordable, quality level of service • Initiate bus renewal scheme 	<ul style="list-style-type: none"> • Provide formally organized and regulated public transport for all city residents
	Non-Motorized Transport	<ul style="list-style-type: none"> • Identify priority corridors for high quality bus services 	<ul style="list-style-type: none"> • Strengthen Non-Motorized Transport (NMT) network 	<ul style="list-style-type: none"> • Implement mass transit demonstration project and physical investments to improve flow along priority corridors 	<ul style="list-style-type: none"> • Gradually transform high quality bus network into a BRT network system
	Dev missing gaps in road network	<ul style="list-style-type: none"> • Strengthen Non-Motorized Transport (NMT) network 	<ul style="list-style-type: none"> • Develop and start implementing a complete-streets approach with quality sidewalks, pedestrian-centered traffic management and crossings, bike lanes, high-quality bus service 	<ul style="list-style-type: none"> • Enhance local connectivity to communities through paving of neighborhood roads and improving or creating NMT facilities • Identify missing gaps in the road network 	<ul style="list-style-type: none"> • Develop and start implementing a complete-streets approach with quality sidewalks, pedestrian-centered traffic management and crossings, bike lanes, high-quality bus service
	Transport Demand Management and Traffic Management	<ul style="list-style-type: none"> • Conduct a road network inventory survey, by road type and functional use • Assess road condition 	<ul style="list-style-type: none"> • Develop Traffic Demand Management (TDM) measures • Develop Traffic Management plans with focus in the most vulnerable road users 	<ul style="list-style-type: none"> • Finance construction of missing links • Create an integrated system with last-mile connectivity • Provide sidewalks, NMT network 	<ul style="list-style-type: none"> • Implement TDM plans in cities • Implement Traffic Management plans in cities
	Response to COVID-19 in urban mobility	<ul style="list-style-type: none"> • Develop Traffic Demand Management (TDM) measures • Develop Traffic Management plans with focus in the most vulnerable road users <p><i>Measures towards: (1) saving lives (2) protecting the poor & vulnerable, 3) ensuring sustainable business growth and job creation</i></p> <ul style="list-style-type: none"> • Establish hygiene measures in public transport and keep workers safe • Support the most vulnerable informal transport workers with safety net programs • Supporting initiatives to keep cities moving safely: bicycle, walking, public transport 	<ul style="list-style-type: none"> • Reinforcing measures defined for the medium term to support a resilient recovery <p><i>Measures towards: (4) strengthening policies, institutions and investments for building better</i></p>	<ul style="list-style-type: none"> • Reinforcing measures defined for the long term to develop an inclusive and competitive access to opportunities <p><i>Measures towards: (4) strengthening policies, institutions and investments for building better</i></p>	

		Short Term	Medium Term	Long Term
Enhance urban Transport institutions, Strategic planning and regulatory framework	Institutional and policy framework	<ul style="list-style-type: none"> Issue a policy directive to: <ul style="list-style-type: none"> Emphasize importance of urban transport Designate a lead ministry, with human and financial resources Develop a framework for institutional coordination 	<ul style="list-style-type: none"> Set up urban mobility coordination body Develop a national urban mobility policy 	<ul style="list-style-type: none"> Strengthen transport departments in the MMDAs
	Financing	<ul style="list-style-type: none"> Designate GAPTE to be bus planning and management body for Accra Evaluate options for setting up a regulatory body for Kumasi and Tamale: 	<ul style="list-style-type: none"> Provide human and financial resources to strengthen GAPTE, other bodies in Kumasi and Tamale 	<ul style="list-style-type: none"> Replicate reforms in more cities in Ghana
	Human capital development: government and academia	<ul style="list-style-type: none"> Identify options for financing investments to improve mobility—both public and private sectors 	<ul style="list-style-type: none"> Explore further sources of financing, including options for private sector participation, to scale up the urban mobility program 	<ul style="list-style-type: none"> Explore further sources of financing, including options for private sector participation, to scale up the urban mobility program
		<ul style="list-style-type: none"> Identify human capacity constraints and an approach to build technical capacity 	<ul style="list-style-type: none"> Provide capacity building and training Develop twinning arrangements with successful cities Develop partnership with a local university (KNUST) to set up a comprehensive urban mobility Center of Excellence as a Regional Training Center 	<ul style="list-style-type: none"> Build the partnership with a local university

Notes

1. An Assessment of Traffic Congestion and Its Effect on Productivity in Urban Ghana, International Journal of Business and Social Science; Takyi Harriet, Kofi Poku, Anin Kwabena Emmanuel