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Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 21-Mar-2023 | Report No: PIDC35028

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Kenya	P176725		Kenya Urban Mobility Improvement Project (P176725)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EASTERN AND SOUTHERN AFRICA	Jan 22, 2024	Mar 21, 2024	Transport
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	National Treasury	Ministry of Land, Housing and Urban Development, Kenya Railways, Ministry of Roads and Transport	

Proposed Development Objective(s)

To improve urban mobility services in the catchment area of commuter rail (Nairobi Central Station to Ruiru) and enhance the institutional capacity for resilient and green urban transport development in Kenya.

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	300.00
Total Financing	300.00
of which IBRD/IDA	300.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	300.00
IDA Credit	300.00

Environmental and Social Risk Classification	Concept Review Decision

High	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

A. Introduction and Context

Country Context

1. **Kenya is a country in the East African region with a population of more than 47.6 million in 2019.**[1] Kenya is the 48th largest country by area in the world, having 580,367 square kilometers of land, sharing borders with South Sudan to the northwest, Ethiopia to the north, Somalia to the east, Uganda to the west, Tanzania to the south, and the Indian Ocean to the southeast.

2. **Kenya's economy is growing towards an upper middle-income country by 2030, offering a high quality of life to all citizens.** Over the past decade, the country has attained significant economic and structural reforms and sustained its economic growth. The Kenyan economy's annual growth rate from 2015 to 2019 averaged 4.8 percent and in 2020, it became the third-largest economy in Sub-Saharan Africa after Nigeria and South Africa. Strong economic growth allowed for significant progress in poverty reduction, falling to an estimated 34.4 percent at the $1.9/day international poverty line in 2019 from 43.7 percent in 2006[2], combined with consumption growth for the bottom 40 percent.

3. **The Kenyan economy demonstrated a strong recovery in 2021 from the COVID-19 pandemic.** Real gross domestic product (GDP) increased by 7.5 percent in 2021, higher than the estimated growth in Sub-Saharan Africa of 4 percent. Kenya's real GDP is projected to grow by 5.5 percent in 2022 and 5.2 percent on average in 2023–24. Overall economic performance is expected to be robust at 4.9 percent per year in 2022-23, similar to the pre-pandemic pace.[3]

4. **Nonetheless, the country's economy remains vulnerable, facing several challenges.** The direct impact of the war in Ukraine on Kenya's economy would be moderate, considering the relatively small share of Kenya's trade with Russia and Ukraine between 2015 and 2020 in the total goods trade, accounting for only 2.1 percent. However, the commodity price shocks resulting from the war, particularly through fuel, fertilizer, wheat, and other food imports will harm the country's economy. Global financial conditions have also tightened sharply, increasing external financing costs. In addition, a further worsening of the current drought is another risk that is having a devastating effect on food security and livelihoods in affected parts of the country.

5. **Kenya's economic growth has been supported by rapid urbanization, mostly concentrated in the areas along the Northern Corridor, which connects Mombasa Port through Nairobi to Malaba, with a branch line to Kisumu in the west.** The 2019 census recorded a total urban population of 13.5 million in the country, increasing the share of the urban population from 19.9 percent in 2000 to 31.1 percent in 2019[4], at an average 4.3 percent annual urban population growth rate. In total, 76 percent and 85 percent of urban dwellers live within 15 kilometers and 35 kilometers of the Northern Corridor, respectively. The country's five main urban centers, Mombasa, Nairobi, Nakuru, Eldoret, and Kisumu, are also situated along this corridor. Between 2010 and 2019, the urban land area of the country increased by about 180 percent, from 4,120 square kilometers[5] to 7,530 square kilometers, demonstrating rapid expansion.
6. **Kenya is exposed to natural hazards like droughts and flooding, and climate change is expected to raise the risks posed by natural hazards.** Kenya is recognized as highly vulnerable to climate change impacts, ranked 147 out of 182 countries in the 2019 Notre Dame Global Adaptation Initiative (ND-GAIN) index; indicating high vulnerability and

low readiness to improve resilience.[6] Climate projections indicate continued rising temperatures with an increasing number of hot days and hot nights. Global Climate Modelling (GCM) data indicate that the mean annual temperature in the country is projected to increase by between 0.8°C and 1.5°C by the 2030s and 1.6°C to 2.7°C by the 2060s.[7] Precipitation is projected to remain highly variable and uncertain, while extreme rainfall events are expected to increase in frequency and intensity.[8] Climate change is expected to increase the risk and power of flooding events and droughts. In mountainous areas, intense rainfall and flooding may increase the likelihood of mudslides and landslides. Coastal areas are exposed to sea-level rise. Nairobi experiences medium-level exposure to water scarcity. Lower-income populations tend to reside in more hazard-prone locations with significantly higher exposure levels. [9]

7. **Despite the fact that Kenya contributes little to global greenhouse gas (GHG) emissions (less than 0.1 percent), the country's total greenhouse gas emissions increased from 56.8MtCO_2e in 1995 to 93.7 MtCO_2e in 2015 with the transport sector being a major contributor.** Kenya's total GHG emissions from six key sectors (agriculture, energy, forestry, industry, transport, and waste) are projected to grow to about 143 MtCO_2e by 2030, respectively. The 2015 emissions represented a 65.2 percent increase over the period and less than 0.1 percent of the 2015 global emissions, including Land Use Change and Forestry. Kenya aims to undertake ambitious mitigation and adaption actions towards the Paris Agreement, by reducing its GHG emissions by 32 percent by 2030 relative to the business-as-usual (BAU) scenario, in line with the sustainable low carbon development agenda, through energy efficiency, low carbon and efficient transportation systems, and sustainable waste management.

8. **Kenya is mainstreaming gender into national development.** The 2010 Constitution declared equal treatment for men and women and developed a relatively strong set of legal and policy protections for all groups. Kenya scored 80.6 out of 100 on the Women, Business, and the Law 2021 index and ranked 95 out of 156 countries in the Global Gender Gap Report 2021. Nonetheless, young women and adolescent girls are still the most vulnerable group in Kenya, particularly to poverty, especially at the household and community level, exacerbated by gender norms and violence. In 2016, Kenya's labor force participation rate was 71 percent for the core working-age population (15-64 years), compared with 77 percent for men. Female labor force participation in Kenya exceeds the average of Sub-Saharan Africa (63 percent) but is lower than in peer countries such as Ethiopia (77 percent) and Tanzania (80 percent).[10]

Sectoral and Institutional Context

B1. Urban Development and Mobility Context

9. **The country's rapid urbanization accompanied by its spatial development pattern has made urban access an overwhelming challenge in the large cities of Kenya to be able to advance economic and social development.** Evidence shows that national economic growth and urbanization have been closely linked over the last few decades.[11] Nonetheless, the absence of planning and enforcement capacity coupled with insufficient urban services and infrastructure investment to support its urban growth has created hurdles to providing urban populations with good access to economic opportunities. For example, the data in 2006 and 2013 show that the population in the Nairobi Metropolitan Area has experienced longer average travel distances and times with higher mode shares for cars.[12][13] As the lower-income population and women in Kenya are relying more on walking with limited options for mobility[14], the current development pattern disproportionally affects vulnerable groups.

10. **Urban mobility remains one of the biggest challenges that require urgent attention for Kenya to achieve sustainable urbanization[15] for advancing overall social and economic development.** Urban transport has received minimal attention for almost four decades, resulting in public transport and non-motorized transport (NMT), including pedestrian and cyclist facilities, in all cities in Kenya being underfunded and unregulated. Although para-transit[16] (minibusses and buses) has a relatively high reach across the major urban areas, this reach lags behind growing demand, and historic underinvestment into public transport has led to increased private motorization. The daily time

spent traveling in major urban areas such as Nairobi and Mombasa has increased with frequent traffic congestion, high levels of road traffic crashes, and high levels of air pollution.[17] It is estimated that Kenya's annual cost of road traffic accidents (an estimated 13,463 lives per year that cost 9.1% of GDP[18]), in which most victims are pedestrians in urban areas, is equivalent to about US$3 million[19], traffic congestions in the Nairobi Metropolitan Area alone cost the economy about US$1 billion a year[20], and approximately 19,000 people die each year in Kenya due to air pollution, of which vehicle emissions are the main source of pollution in urban areas.[21]

11. **Addressing urban mobility challenges in Kenyan cities requires major transformation.** The approach adopted to address urban transport challenges in the country over the past twenty years has been predominantly by expanding and upgrading roads with a focus on moving vehicles, despite the comparatively lower motorization in major cities by world standards and low modal share of private vehicles[22]. Investments in the expansion of the road network in urban areas have not been accompanied by the 'complete street' concept[23] with considerations for all road users, improvements in traffic management, and the development of public transport services, although mobility for the poor is affected primarily through walking and by using *matatus* (privately owned minivans used for paratransit) or buses. Many roads and streets in urban areas are without a sidewalk or safe crossing. A previous iRAP assessment showed 64 percent of roads are unsafe for pedestrians whereas, in the case of bicyclists, it's 99 percent[24]. Where they exist, sidewalks are often narrow, unpaved, inaccessible, cut off, and occupied by transporters, street vendors, and other facilities. While matatus, buses, commuter rail (only operational in Nairobi Metropolitan Area), *boda-bodas* (motorbikes), and *tuk-tuks* (three-wheelers) are the available public transport/paratransit modes in most urban areas these modes are often self-regulated, with national and county governments not actively supervising these. The existing railway infrastructure network in some of the cities, such as the commuter rail in Nairobi, remains underutilized and poorly connected with other modes of transport.

12. **Pedestrians and public transport users remain the most poorly served of travelers with an overwhelming challenge of accessibility in the major cities.** The inadequate transport system, particularly public transport, and non-motorized transport facilities, disproportionally affect all aspects of the life of the bottom 40 percent. For instance, above 80 percent of all trips in Nairobi includes walking as the primary or secondary mode of travel. Among low-income urban dwellers, 41 percent of all trips are walking only.[25] Thus, the deficient infrastructure including inadequate sidewalks and lack of affordable and reliable public transportation, and concentration of jobs in a few places disconnect people from job opportunities. Job accessibility in Nairobi is lower than in other cities in Africa and other regions[26]: by walking and using matatus, people can access less than 8 percent of jobs within 60 minutes. Moreso, compared to men, more women are living in slum conditions in Kenya (an additional 13 percent), women's access to motorized transport is limited compared to men's, and women's travel time and travel distance is shorter[27] in Nairobi. In addition, high rates of sexual harassment and personal safety issues while traveling remain serious concerns, particularly for women. These facts indicate that women are not equally benefiting from the opportunities that transportation can provide within a city and metropolitan area, with low-income women being the most negatively impacted.

13. **The urban transport sector is vulnerable to natural and man-made hazards as well as climate change impacts.** Due to rapid urbanization, key urban areas such as Nairobi, Mombasa, and Kisumu are reducing green spaces significantly. As more surfaces get paved, there is less rainwater percolation. In addition, the likelihood of floods in urban areas is changing with the climate. In Mombasa, Kenya's second-largest city and the largest seaport in East Africa, coastal flooding from sea-level rise is projected to affect 10,000–86,000 people a year and lead to coastal erosion and wetland loss. increasing the risk of flooding and decreasing the groundwater table. In 2018, urban floods affected 800,000 individuals and disrupted urban mobility in Kenya and the road damage costs from the 2018 floods are estimated at US$187 million. A rise in temperatures and reduced green spaces also contributes to the 'heat island effect[28]' in cities,

resulting in increased energy use in the transport sector. Transport infrastructure and services are easily impacted by flooding and high temperatures.

14. **The Government of Kenya (GoK) sets national and sectoral policies to address urban mobility challenges.** Kenya's Vision 2030, a long-term development strategy, highlights rapid urbanization as one of four key challenges the country faces and aims at the development of urban mass transport infrastructure in cities and urban centers as part of sustainable urban mobility solutions to accelerate the country's efforts for equity and poverty elimination, complementing affordable housing projects. The Integrated National Transport Policy (INTP), themed "Transport for Prosperity" aims to facilitate mobility in rural and urban areas, national and regional integration and trade promotions, and improve the overall welfare of the people and Kenya's competitiveness, through integrating transport infrastructure and operations, improving quality of services, provision of NMT facilities, consolidating of urban public transport, among others. To guide the comprehensive and holistic planning approach in urban mobility, which is multidimensional, the development of a National Urban Transport Policy is currently under discussion. Nairobi county also adopted a NMT policy in 2017 that has a dedicated focus on vulnerable road users (VRUs)[29].

15. **Kenya aims to achieve a low-carbon, climate-resilient development pathway, and transportation is one of the pillars of the mitigation plan toward the goals.** The transport sector produced 15 percent of national GHG emissions in 2015. The growing motorization is expected to push this to 17 percent by 2030.[30] In 2014, total CO_2 emission, the vast majority of GHG, in Kenya was measured at 0.306 metric tons per capita, 39 percent of which was estimated to be from the transport sector. The GoK is a signatory to the Paris Agreement on Climate Change and has committed to a 32-percent GHG emissions reduction by 2030. Kenya's National Adaptation Plan (2015 - 30) and Nationally Determined Contribution under the United Nations Convention on Climate Change include the climate-proofing of infrastructure, namely in the transport sector, as a priority. The transport sector will contribute to this objective by cutting emissions by at least 8 percent (minimum target). The National Climate Change Action Plan has included the adoption of low-carbon efficient transport as one of the actions. The National Energy Efficiency and Conservation Strategy set the following objectives and targets in the transport sector: improve fuel economy performance and reduce CO_2 emissions; increase the adoption of eMobility (5 percent of total vehicles imported into Kenya be electric by 2025); enhance public modes of transport, including modernization of commuter rail system and a Bus Rapid Transit (BRT)System in Nairobi; and improve urban vehicular management through the development and deployment of a parking strategy and an intelligent transportation system.

16. **A shift towards integration of land use planning and transport planning is needed for improved urban mobility and to create livable and competitive cities.** The National Spatial Plan was prepared in 2015, and since 2017 county governments have started formulating integrated development plans that include land use plans and urban infrastructure investment plans.[31] However, most cities do not have a transport plan, and the linkage between land use plans and planned activities in the transport sector in the counties' integrated development plans is limited. Housing and land-use decisions are often taken based on the location of available land, with almost no assessment of transport impacts, while road transport investment decisions are made based on criteria often unrelated to land-use patterns. For example, affordable housing projects are underway in major cities, with no coordination with transport services, rendering them largely inaccessible not only to employment opportunities but also to social services and interaction. Urban mobility planning should adopt a holistic approach, with cross-sector, harmonized mobility, and land use planning, as well as priorities for public transport and non-motorized transport to create more environmentally, economically, and socially sustainable cities.

17. **A holistic approach needs to be adopted to address the gender gap in the urban transport sector for inclusive urban mobility and equitable urban transport sector for all.** In Kenya, gender discussions in transport have increased since

the formulation of the INTP (2009), which acknowledged gender inequality in mobility. Data from a WB-led study[32] reveals gender gaps in mobility, including differences in the mobility patterns and risks between women and men in Nairobi. These differences are particularly salient when examining the activities associated with the "mobility of care". Women in Kenya travel shorter distances for household-related activities and walk more. Given the gender wage gap, women are more affected by their mobility. Women are also sexually harassed in public transport. 82.9 percent of women surveyed for a UN Women-led study declared witnessing different forms of verbal and emotional abuse, and 38 percent of women reported facing sexual harassment in the minibus matatus,[33] hinting that they are captive users. There is an absence of gender perspective in urban transport planning, which is the result, among other factors, a lack of women in the sector: at managerial levels (29.7 percent less) and at the operational level (94.3 percent less for matatu drivers).

18. **While the GoK has made numerous efforts to study and prepare mass rapid transit over the last decade, particularly in the Nairobi Metropolitan area, there has been little action taken to implement any of these.** A 2014 Mass Rapid Transit Harmonization Study and Nairobi Integrated Urban Development Plan (NIUPLAN) confirmed that the mass rapid transit network in the Nairobi Metropolitan Area would be composed of commuter rail and BRT to form the backbone of the public transport network for sustainable urbanization. Kenya Railway Corporation (KRC) prepared a Commuter Rail Master Plan in 2018 and implemented some key immediate actions[34], while the Nairobi Metropolitan Area Transport Authority (NaMATA, established in 2017) gazetted five BRT corridors in 2019 with some feasibility studies and detailed designs. However, not much has happened beyond these first steps toward rehabilitating the commuter rail or implementing the BRT corridors.

19. **Commuter rail is the only formal public transport in Kenya. Commuter rail has an extensive network (total length of 132km) in the Nairobi Metropolitan Area, traversing poor neighborhoods, but is severely underused (figure 1).** The Commuter Rail Services were introduced in Nairobi in May 1992 on the existing meter gauge railway track which was built in 1896 as a result of a series of matatu strikes that crippled commuter services in the city. There are five commuter routes (Nairobi-Limuru 46.1 km; Nairobi-Thika 57 km; Nairobi-Embakasi Village 13 km; Nairobi-Syokimau 15.3 km; and Nairobi-Lukenya 42.2 km) with 16 stations and some 20 halts - locations without facilities where the train stops to allow passengers to board and alight. Despite its potential, due to track sharing with cargo, lack of safety and comfort, a limited number of routes and services, inadequate inter-modal transfer facilities, and long walks between the station and workplaces, its modal share is currently 1 percent, carrying about 14,000 people per day.

20. **The World Bank's active engagement in the transport and urban sectors over the last two decades underpins the proposed urban mobility project**. The Kenya Transport Sector Support Project (KTSSP, P124109) and National Urban Transport Improvement Project (NIUTRIP, P126321) supported the establishment of the Nairobi Metropolitan Area Transport Authority (NaMATA), development of the Commuter Rail Master Plan for Nairobi, the Intelligent Transportation System (ITS) Master Plan for Nairobi, and the pre-feasibility study of BRT line 1 with the specification of buses. The Nairobi Metropolitan Services Improvement Project (NaMSIP, P107314) supported the concept of land use plans around commuter stations and financed 10 commuter rail stations with the installation of a fare collection system. Kenya Informal Settlements Improvement Project (P113542) and NaMSIPs provided non-motorized transport infrastructure across the country to improve the living conditions of urban residents. The Kenya Urban Transport Policy Dialogue (P172218) developed a strategy for short to long-term urban mobility engagements in the country through intensive consultation with the GoK, which is the foundation of this proposed project. Additional analytical work on Gender in Urban Transport (P167893) complemented the proposed project to pursue inclusive mobility, providing baseline data for such an endeavor.

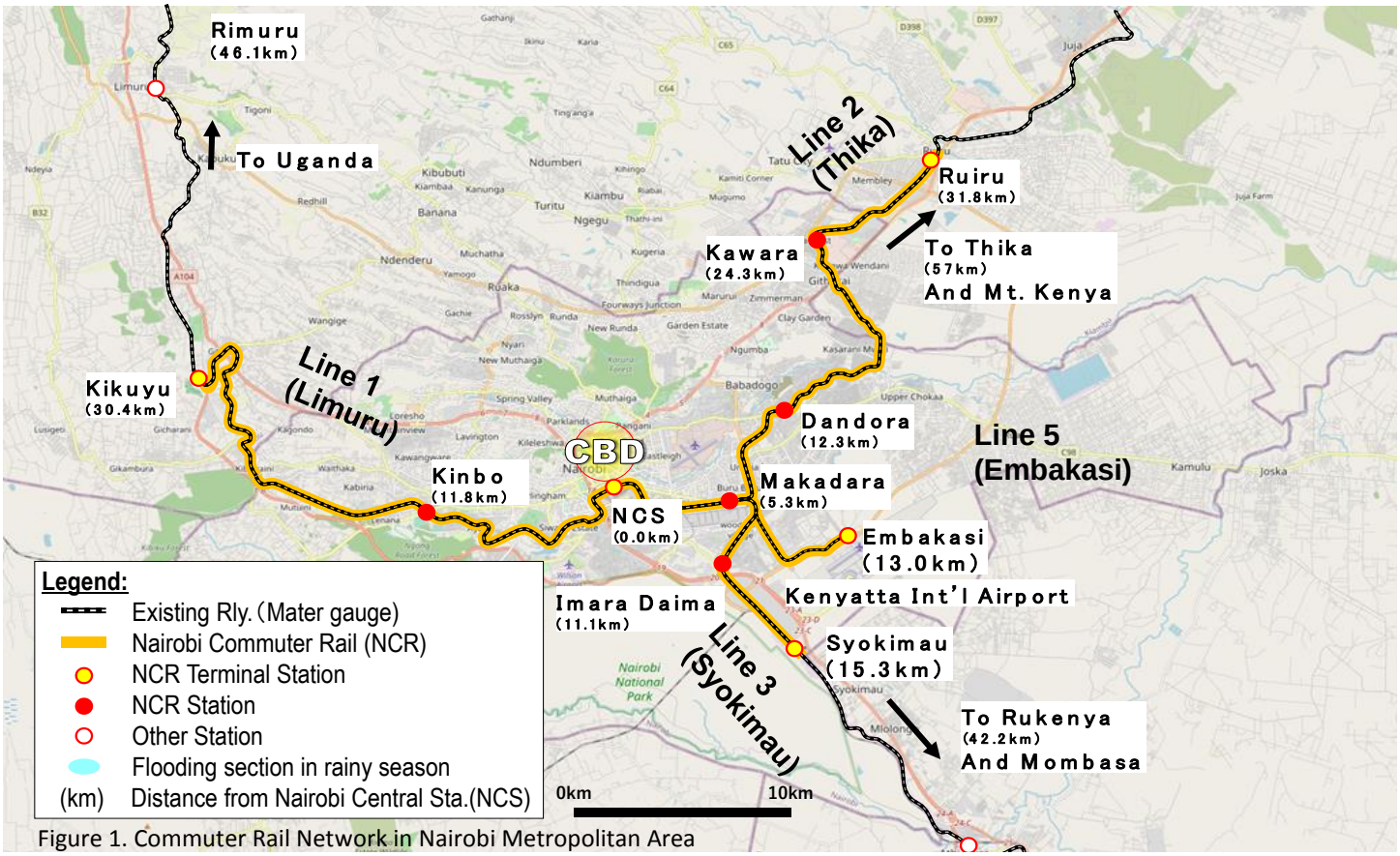

Figure 1. Commuter Rail Network in Nairobi Metropolitan Area

B2. Institutional Context in Urban Mobility

21. **Kenya has two main levels of government, national and county governments, to manage urban transport.** According to the 2010 Constitution, in the transport sector, the national government is responsible for road traffic; the construction and operation of national trunk roads; standards for the construction and maintenance of other roads by counties; railways; pipelines; marine navigation; civil aviation; and space travel. On the other hand, county governments are responsible for county transport, including county roads, street lighting, traffic and parking, public road transport, and ferries and harbors, excluding the regulation of international and national shipping and matters related thereto.

22. **National and county government agencies are involved in the provision of urban infrastructure and services and there are challenges in the coordination, planning, and execution of programs.** There are as many as 15 organizations involved in urban transport, with overlapping and contradictory mandates and responsibilities. The ineffective institutional structures and weak legal and regulatory framework diminish the quality, reliability, and safety of public transport users, particularly in urban areas. While reforms have been implemented, institutional arrangements in the urban transport sector in Kenya are still complex, with overlapping and contradictory mandates and responsibilities particularly in public transport, traffic management, and non-motorized transport.

23. **There is a disconnect between the national government and county governments, and among departments within county governments regarding the development and implementation of urban mobility activities.** Many

infrastructure plans and decisions, such as those relating to BRT, commuter rail, and highways, are made at the national level, and involvement of county governments, including alignment with urban planning instruments, is currently limited. Road interventions and railway projects in urban areas need to be well coordinated with a county's transport and land use plans, and consideration should be made for all road users, including non-motorists, motorists, and vulnerable persons in society. Counties require both coordination and support from the KeNHA and KURA to ensure that counties can implement their land use and transport plans.

24. **Executive order No. 1 of 2022 puts the Ministry of Road and Transport (MoRT) in charge of the overall urban mobility agenda in the country.** The previously existing Ministry of Transport, infrastructure, Housing, and Urban Development and Public Works (MoTIHUD&PW) was recently split into two ministries, MoRT and the Ministry of Land, Public Works, Housing, and Urban Development (MoLPWHUD). Under the new arrangement, the State Depart of Transport (SDoT) under MoRT is responsible for transport policy, rail transport, road safety, motor vehicle inspections, and sustainable urban public transport system within the Nairobi Metropolitan Area with the institutions for its implementation. The State Department of Land (SDoL) will anchor the physical planning for land use policies and the State Department of Housing and Urban Development (SDoHUD) will be responsible for urban planning policy as well as townships, municipalities, and cities policy. KRC, NaMATA, and NTSA are mapped under SDoT.

Relationship to CPF

B. Relationship to CPF

25. **The proposed project supports the new Country Partnership Framework (FY 22-27),** achieving *Objective 5: Extend sustainable infrastructure services to the last mile* through urban mobility improvement with greener and more resilient transport infrastructure and solutions, connecting targeted underserved communities and improving urban infrastructure in station areas. It will also contribute to high-level outcomes of *(A) faster and more equitable labor productivity and income growth, and (B) greater equity in service delivery outcomes*.

26. **The proposed project will also contribute to the development of the Country Climate and Development Report (CCDR) under preparation and align with Paris Agreement on Mitigation and Adaptation.** The development of Kenya's CCDR encompasses the preparation of three deep dives. The proposed project directly supports the CCDR deep dive 3, "Enabling Socio-economic Mobility in a Greener and Climate Resilient Kenya", providing the analysis that focuses on how the mobility of passengers – particularly in urban settings — combined with transit-oriented development, can become a vector for improving access to jobs and services, reduce informality, and provide opportunities for innovation and increased efficiency by adopting greener transport technologies. As a first step, the team has assessed that the proposed project would be Paris-aligned. The proposed project followes the Avoid-Shift-Improve+Resilience approach, being composed of activities that are potentially in the "Universally Aligned" mitigation list or that are low risk with the respect to Kenya's carbon development pathway, namely: the improvement of public transport, a modal shift towards more public transport, and traffic management, and promoting electric mobility, NMT, and the 'complete streets' concept. No specific risks concerning the mitigation and adaptation aspects of the Paris Alignment Assessment are flagged at this stage. The proposed project is aligned with the country´s National Adaptation Plan[35] and Nationally Determined Contribution (NDC). The project has been screened for climate change and natural hazards risks and resilience-enhancing measures have been identified and will be reflected in the project documents before the appraisal.

27. **The project is aligned with the critical and overarching national policies and strategies for climate challenges.** Kenya's Climate Change Act and the National Climate Change Policy Framework of 2016, The National Climate Change Action Plan (2018-2022), Kenya's Second National Communication to the UNFCCC, submitted in 2015, and its

Nationally Determined Contribution (NDC) to the UNFCCC submitted in 2016. A mitigation priority in Kenya's NDC is to deploy low-carbon and efficient transport systems. Adaptation priorities include enhancing adaptive capacity and climate resilience across all sectors of the economy. The transport sector is one of the strategic sectors under the National Climate Change Action Plan, which includes the objective of climate-proofing transport infrastructure and deploying sustainable transport systems for low-carbon development; in particular, the development of a mass rapid transit system in Nairobi, including BRTs and upgrading of the commuter rail, complemented by NMT. The Nationally Appropriate Mitigation Action and the National Energy Efficiency and Conservation Strategy (2021) prioritize the development of mass rapid transit systems as well.

28. **The project also supports key national and sector policies and strategies for urban mobility.** Vision 2030 and the Nairobi Metro 2030 aim to transform the Nairobi Metropolitan Region into a world-class region that supports a robust, internationally competitive, dynamic, and inclusive economy, with the enhancement of linkages and accessibility being core. The National Urban Development Policy (approved in 2016), and the Urban Areas and Cities Act (enacted in 2010) encourage sustainable urbanization.

29. **Furthermore, the project is aligned with the WBG's new Global Crisis Response Framework (GCRF)** to support the Government of Kenya in the context of overlapping global crises. Components 1 and 2 are aligned with pillar (iii) *Strengthening Resilience* to be better prepared for any future crisis and challenges, enhancing the resilience of urban mobility, and promoting greener transport solutions. Component 3 is aligned with pillar iv) *Strengthening Policies, Institutions, and Investments for Rebuilding Better.*

C. Proposed Development Objective(s)

To improve urban mobility services in the catchment area of commuter rail (Nairobi Central Station to Ruiru) and enhance the institutional capacity for resilient and green urban transport development in Kenya.

Key Results (From PCN)

30. The key results of the proposed project are**:**
    a. Improved accessibility and service of public transport through revamping commuter rail services and station area development for the selected railway line
    b. Modal shift to higher capacity public transport system (commuter rail) along the selected railway line, disaggregated by gender
    c. Reduced Greenhouse Gas Emissions along the selected corridor in Nairobi Metropolitan Area through a modal shift to commuter rail
    d. Improvements in the provision of transport infrastructure that addresses women's and men's differentiated travel priorities, including the persons with disabilities
    e. Enhanced VRUs safety across the commuter rail catchment area
    f. Enhanced institutional capacity and arrangement in urban mobility management in Kenya
    g. Urban mobility strategy developed for selected secondary cities with the identification of flagship urban mobility activities

D. Concept Description

31. The proposed project has the following three components and activities:

32. **Component 1. Urban Mobility Improvement in Nairobi Metropolitan Area**
    a. *Subcomponent 1.1 Revamping Commuter Rail Service in Nairobi Metropolitan Area* will aim to improve

urban mobility by establishing the backbone of the public transport network. While the designs and studies of each element of railway services will cover the entire commuter rail network, the investment will focus on a substantial section of Line 2 (Nairobi Central Station to Ruiru on the Thika Line, ie 32 km out of the 57 km line) which has been selected based on discussions with stakeholders during the identification stage and the Commuter Rail Master Plan which suggest that Line 2-Thika Line would have the highest socio-economic and accessibility impacts, considering the demand forecast, population and socio-economic character of neighborhoods along the line.

b. *Subcomponent 1.2 Integrated Land use Planning and Commuter Rail Station Area Development* will promote the application of Transit Oriented Development (TOD) strategies[36] around the selected commuter rail stations.
c. *Subcomponent 1.3 Green Mobility Solutions* will assist a) implementation and institutionalization of an e-mobility policy, focusing on the immediate areas and actions related to public transport system/urban transport to support low carbon development, and b)Enhancement of emission monitoring and inspection system at vehicle inspection centers.
d. *Subcomponent 1.4 Traffic Management Improvement* will support a)implementation of an ITS master plan, focusing on the junctions where direct linkages to the commuter rail stations are considered, ii)development of a city-wide parking strategy and implementation of a targeted paid on-street and off-street parking program.

33. The proposed project will adopt an integrated approach to urban mobility which aims not only to improve urban mobility services (commuter rail operations and stations), but also to integrate land use and transport planning by developing and implementing land use plans with TOD concept for surrounding stations, with a particular focus on the safer walking/cycling environment surrounding stations and access to stations (NMT facilities), and connecting feeder services to commuter rail services.

34. **Component 2. Institutional Strengthening and Capacity Building in Urban Mobility.** This component will support institutional strengthening in urban mobility, providing technical assistance to MoRT, MoLHUDPW, KRC and KRI, and NaMATA. As the beneficial entities, NTSA, Council of Governors, Traffic Police, National Land Commission, and county governments in the Nairobi Metropolitan Area are anticipated. Envisioned activities include, a) operationalization and institutional strengthening of NaMATA; b) development of National Urban Transport Policy that mainstreams gender, safe, green, resilient and inclusive transport, integrated transport and land use; c) support in planning and establishing an integrated public transport system in Nairobi Metropolitan area including public transport reform through development of urban mobility policy, d) development of transit-oriented development strategies; d) dissemination of the urban road design manual, which has adopted a disaster risk management lens and the complete street design principle (currently under final consultations) including NMT strategy for urban roads, e) implementation of gender action plan in green, resilient and inclusive transport (under preparation), f) enhancement of curriculum in KRI to support upgrading of commuter rail, g) implementation of streamlined institutional arrangement to manage the ITS/advanced application of traffic management, r, h) continuous training on incorporating gender into urban transport and land use planning, i) development and implementation of an internship program for female graduates in STEM within all relevant institutions, j) support Kenya road safety action plan including development of Motorcycle and Boda Boda safety strategy, National safer speed limit strategy and action plan, and k)h preparatory work for future urban mobility projects, focusing on public transport and integrated transport and land use for Nairobi Metropolitan Area. Details and finalization of capacity-building activities under this component will be determined during the project preparation.

35. **Component 3. Preparation of Urban Mobility Improvement for Secondary Cities.** This component will support key secondary cities (selected from Mombasa, Kisumu, Nakuru, and Eldoret) to prepare necessary strategies, plans, and studies for low-carbon, gender-sensitive, safe, and climate-resilient urban mobility improvement which will be financed in the phase II project or by future projects. Proposed activities will include the development of a) an integrated urban mobility plan to enhance public transport and/or the modernization of the para-transit system with NMT facilities, b) traffic management and parking strategies, and c) the design of a bus rapid transit system. Also, this component will support county governments to enhance county development plans, integrate transport and land use planning, and operationalize County Transport Safety Committees to manage better public transport. Details and finalization of activities, as well as the number of cities under this component, will be determined during the project preparation.

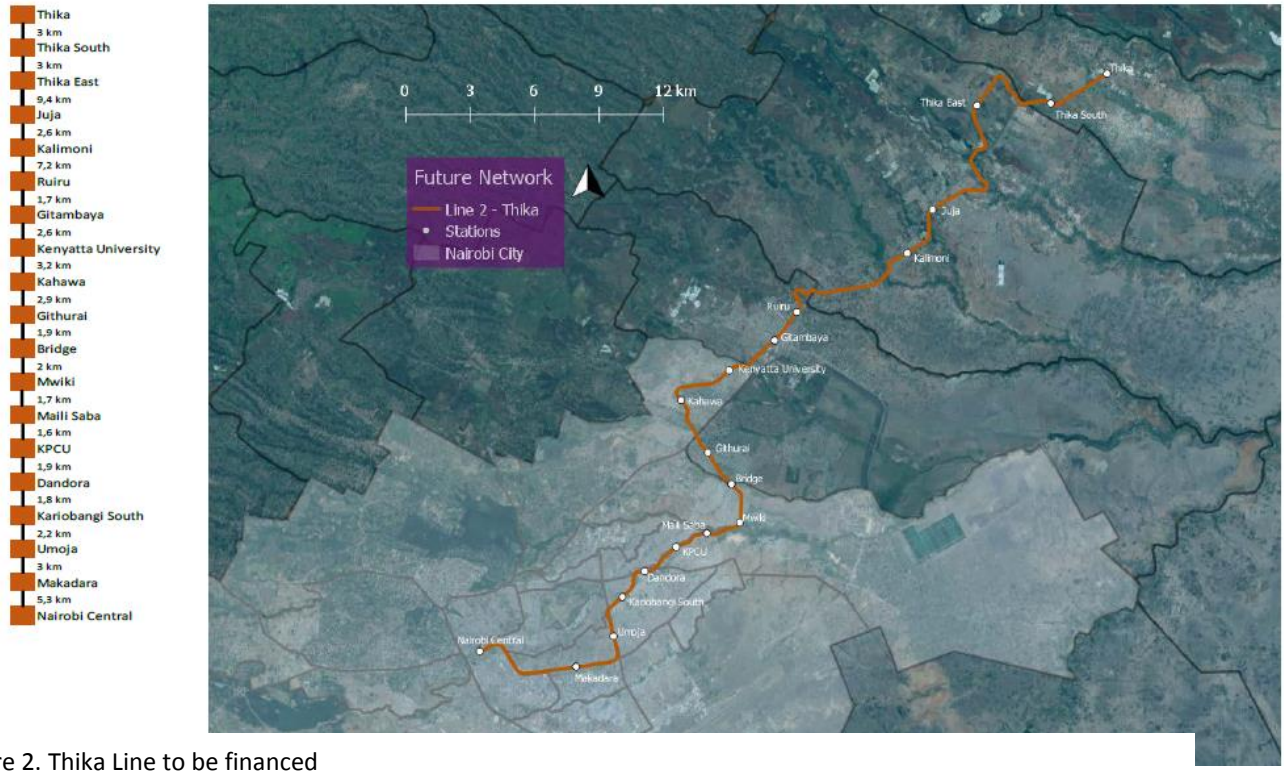

Figure 2. Thika Line to be financed

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

Note to Task Teams: This summary section is downloaded from the PCN data sheet and is editable. It should match the text provided by E&S specialist. If it is revised after the initial download the task team must manually update the summary in this section. ***Please delete this note when finalizing the document.***

Note: To view the Environmental and Social Risks and Impacts, please refer to the Concept Stage ESRS Document**.**
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Note to Task Teams: End of system generated content, document is editable from here. ***Please delete this note when finalizing the document.***

[1] Kenya National Bureau of Statistics, 2019 Kenya Population and Housing Census Results
[2] World Bank, *Kenya Economic Update,* April 2018
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[5] https://data.worldbank.org/indicator/AG.LND.TOTL.UR.K2?locations=KE
[6] ND-GAIN consulted on 7th June 2022. URL: https://gain.nd.edu/our-work/country-index/rankings/
[7] Kenya National Adaptation Plan 2015-2030: Enhanced Climate Resilience Towards the Attainment of Vision 2030 and Beyond; Ministry of Environment and Natural Resources; Republic of Kenya; July 2016. URL: https://www4.unfccc.int/sites/NAPC/Documents%20NAP/Kenya_NAP_Final.pdf
[8] Kenya Climate Risk Country Profile, World Bank Group, 2021. URL: https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf
[9] Think Hazard, Consulted on 7th June 2022. URL: https://thinkhazard.org/en/report/51328-kenya-nairobi
[10] World Bank. (2020). Systematic Country Diagnostic: https://openknowledge.worldbank.org/bitstream/handle/10986/34465/Kenya-Systematic-Country-Diagnostic.pdf?sequence=5&isAllowed=y
[11] Urbanization review, World Bank, Feb, 2016
[12] Japan International Cooperation Agency, Nairobi: Integrated Urban Development Plan. In 2013, the total number of trips coming to/from the outside of Nairobi City occupied 1.4% of total trips, compared with 1.2% in 2004.
[13] Gender in Urban Transport in Nairobi, 2020: The average travel time in Nairobi was 47.7 min in 2013 (JICA study) and 67.6 min in 2016 (from data collected for BRT feasibility study line 1).
[14] Gender in Urban Transport in Nairobi, 2020: Women rely on walking more than men (45 percent vs 31 percent), but only 8.9 percent of women's trips use a car, which is less than 55 percent of men's (16.3 percent).
[15] The GoK identifies urbanization among the six sectors to drive socio-economic development and has demonstrated in its commitment in the National Urban Development Policy (approved in 2016), the Urban Areas and Cities Act (enacted in 2010), and the third Medium Term Plan (2018 – 2022) of the Kenya Vision 2030.
[16] Paratransit is a transportation service that supplements larger public transit systems by providing individualized rides without fixed routes or

timetables
[17] Nairobi Air Quality Monitoring Sensor Network Report - April 2017, United Nations Environment Program: average PM2.5 and PM10 concentrations in several places in Nairobi in 2016 were higher than WHO guidelines (2005) for PM2.5 and PM10 (annual mean)
[18] https://www.roadsafetyfacility.org/country/kenya
[19] National Transport and Safety Authority Road Safety Status Report 2015
[20] https://www.bloomberg.com/news/articles/2019-09-24/traffic-jams-in-kenya-s-capital-bleed-1-billion-from-economy#xj4y7vzkg
[21] the World Health Organization (WHO) estimates
[22] https://www.unep.org/news-and-stories/blogpost/kenya-prioritizes-non-motorized-transport-enhance-road-safety#:~:text=2018%20Blogpost%20Transport-,Kenya%20prioritizes%20non-motorized%20transport%20to%20enhance%20road%20safety,the%20needs%20of%20the%20majority.
[23] The 'Complete street' concept refers to streets designed and operated to enable safe use and support mobility for all users, including people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders.
[24] https://irap.org/2009/12/kenya/
[25] Gender in Urban Transport in Nairobi, 2020
[26] Accessibility to jobs by public transport in other African cities: 52 percent in Dakar, 39 percent in Duala, and 34 percent in Lusaka
[27] Average travel time for men and women are 50.3 min and 44.8 min based on JICA 2013 data.
[28] Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas.
[29] http://www.kara.or.ke/Nairobi%20NMT%20Policy%20Popular%20Version.pdf
[30] Government of Kenya, 2017
[31] Through the Kenya Urban Support Program, 59 municipalities have been supported in the preparation of Integrated Development Plans (IDePS), with some counties utilizing the urban institutional grants in developing county and urban land use plans. Further, under the Nairobi Metropolitan Service Improvement project, over 20 integrated strategic urban plans were developed for selected urban areas within the Nairobi Metropolitan area and are at different stages of approval and implementation.
[32] A. Kishiue and K. D. Gonzalez. (2020). How Women can benefit from a Mass Rapid Transit System in Nairobi.
[33] UNWomen. (2021). Women and Public Transport East Africa: Expanding available data and knowledge base about women and public transport in Nairobi and Kampala—Nairobi Report: https://africa.unwomen.org/sites/default/files/2022-01/Statistical%20evidence%20of%20women%E2%80%99s%20use%20and%20experience%20of%20public%20transport%20in%20Nairobi%2015.12.2021%20cleared%20%281%29.pdf
[34] Immediate actions include track rehabilitation, station development, acquisition and operationalization of diesel multiple units, ICT infrastructure (CCTV, fare collection system).
[35] Kenya National Adaptation Plan 2015-2030: Enhanced Climate Resilience Towards the Attainment of Vision 2030 and Beyond; Ministry of Environment and Natural Resources; Republic of Kenya; July 2016. URL: https://www4.unfccc.int/sites/NAPC/Documents%20NAP/Kenya_NAP_Final.pdf
[36] Transit-Oriented Development (TOD) is an urban development strategy that aims to develop compact, walkable, mixed -use communities, by concentrating jobs, housing and services around public transport stations, pedestrian and cycle friendly development. This approach will support NIUPLAN's objective of creating new vibrant sub-centers in Nairobi.