REPUBLIC OF KENYA

MINISTRY OF ROADS AND TRANSPORT

UPDATED INTEGRATED NATIONAL TRANSPORT POLICY

MARCH, 2024

Table of Contents

Contents

List of Acronyms

ATMP	Air Transport Master Plan
AU	African Union
AFCAC	African Civil Aviation Commission
AFI	African and Indian Ocean Region Air Navigation Plan
AFRAA	African Airlines Association
BASA(s)	Bilateral Air Services Agreement(s)
ASAL(s)	Arid and Semi-Arid Land(s)
BOO	Build Own and Operate
BOOT	Build Own Operate and Transfer
BOT	Build Operate Transfer
BRT	Bus Rapid Transit
CBD	Central Business District
CIF	Cost of Insurance, and Freight
CFS	Container Freight Station
CNS/ATM	Communication, Navigation Surveillance/Air Traffic Management
COMESA	Common Market for Eastern and Southern Africa
CRS	Computer Reservation System
DCA	Directorate of Civil Aviation
DOT	Department of Transportation (United States)
DRC	Democratic Republic of Congo
DWT	Dead Weight Tonnage
EAC	East African Community
EACSO	East African Common Services Organization
EARC	East African Railways Corporation
ECA	Economic Commission for Africa
EPZ	Export Processing Zone
ERC	Energy Regulatory Commission
FAA	Federal Aviation Administration
FO	Fuel Oil
FOB	Free on Board
FTZ	Free Trade Zone
GBHL	Grain Bulk Handlers Ltd
GATT	General Agreement in Trade and Tariffs
GDP	Gross Domestic Product
GHGs	Greenhouse Gas emissions
Government	Government of Kenya
HDI	Human Development Index
HGV(s)	Heavy Goods Vehicle(s)
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IAPH	International Association of Ports & Harbours
IASA	International Aviation Safety Assessment
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICC	International Chamber of Commerce
ICD(s)	Inland Container Depot(s)
ICT(s)	Information and Communication Technologies
IDO	Industrial Diesel Oil
IGAD	Inter-Governmental Authority for Development

IPCC	Intergovernmental Panel on Climate Change
ILO	International Labour Organization
IMO	International Maritime Organization
IMT	Intermediate Means of Transport
INCOTERMS	International Commercial Terms
ISC	Information Sharing Centre
ISUDP	Integrated Sustainable Urban Development Plan
ISPS	International Ship and Port Security Code
ITMP	Integrated Transport Master Plan
IWTMP	Inland Water Transport Master Plan
JIT	Just In Time
JKIA	Jomo Kenyatta International Airport
KAA	Kenya Airports Authority
KAAO	Kenya Association of Air Operators
KAPU	Kenya Airports Police Unit
KATO	Kenya Association of Tour Operators
KCAA	Kenya Civil Aviation Authority
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KFSL	Kenya Ferry Services Limited
KICD	Kenya Institute of Curriculum Development
KMA	Kenya Maritime Authority
KNSL	Kenya National Shipping Line
KOSF	Kipevu Oil Storage Facility
KOT	Kipevu Oil Terminal
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Company
KRA	Kenya Revenue Authority
KRB	Kenya Roads Board
KRC	Kenya Railways Corporation
KSh	Kenyan Shillings
KURA	Kenya Urban Roads Authority
KWS	Kenya Wildlife Services
LATF	Local Authority Transfer Fund
LAPSSET	Lamu Port, South Sudan and Ethiopia
LPG	Liquid Petroleum Gases fuel oils (FO) (IDO).
LV	Lake Victoria
MTA	Metropolitan Transport Authority
MDGs	Millennium Development Goals
MEPC	Marine Environment and Climate Change Protection Committee
MGR	Metre Gauge Railway
MoE	Ministry of Energy
MoF	Ministry of Finance
MoLG	Ministry of Local Government
MoR	Ministry of Roads
MoR&T	Ministry of Roads and Transport
MoT	Ministry of Transport
MoTIHUD&PW	Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works
MPDP	Mombasa Port Development Project

MRT	Mass Rapid Transit
MTL	Maritime Transport Logistics
NACC	National Aids Control Council
NATRI	National Transport Research Institute
NAVAIDS	Navigational Aids
NCTTA	Northern Corridor Transit Transport Authority
NEMA	National Environment and Climate Changeal Management Authority
NEPAD	New Partnership for African Development
NMIMTs	Non-Motorized and Intermediate Means of Transport
NMTs	Non-Motorized Means of Transport
OB	Occurrence Book
OSHA	Occupational Safety, Health Administration
OSMAG	Oil Spill Mutual Aid Group
PPM	Parts Per Million
PPP	Public Private Partnership
PRSP	Poverty Reduction Strategy Paper
PSC	Port State Control
PSO(s)	Public Service Obligation(s)
PTP	Passenger Transport Plan
RARP	Rural Access Roads Programme
RaTMP	Rail Transport Master Plan
RICS	Road Condition and Inventory survey
RMRCC	Regional Maritime Rescue Co-ordination Centre
RSS	Road Side Station
RTMP	Road Transport Master Plan
RVR	Rift Valley Railway
SACCO	Savings and Credit Cooperative
SADC	Southern Africa Development Community
SAP	System Application Products
SAR	Search and Rescue
SARP(s)	Standards and Recommended Practices
SCADA	Supervisory Control and Data Acquisition
SDoT	State Department for Transport
SEZs	Special Economic Zones
SGR	Standard Gauge Railway
SIDS	Small Island Developing State
SMME(s)	Small, Medium and Micro Enterprises
SOLAS	Safety of Life at Sea
SOT	Shimanzi Oil Terminal
STCW	Standards of Training, Certification, and Watch Keeping for Seafarers
TEU	Twenty Foot Equivalent Unit
TIMS	Traffic Integrated Management System
TOD	Transit Orientated Development
TVET	Technical and Vocational Education and Training
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VOCs	Vehicle Operating Costs

WHO	World Health Organization
WPCI	World Ports Climate Initiative
WTO	World Trade Organization
YD	Yamoussoukro Decision/Declaration

List of Tables and figures

EXECUTIVE SUMMARY

An efficient transport system is an important prerequisite for facilitating national and regional integration; promoting trade and economic development; supporting other sectors of the economy; contributing to poverty reduction; minimizing effects to climate change; and, wealth creation. For Kenya, the transport sector should contribute to the achievement of the objectives of Vision 2030 and beyond.

This Integrated Transport Policy Document covers the entire transport sector in Kenya, which consists of five (5) sub-sectors: Road transport; Rail transport; Maritime; Air transport; and Pipeline transport. These sub-sectors have their specific contributions to the overall transport system in both urban and rural areas in Kenya.

This policy document covers key transport sector challenges and policy recommendations related to transport infrastructure planning, development and management, legal, institutional and regulatory framework for the sector, safety and security, financing, gender mainstreaming, utilization of Information and Communication Technology (ICT), Climate Change, Environment and social considerations. It also contains sector opportunities such as technological development, which Kenya should exploit.

This document aims to provide a policy that is conducive to the stimulation of rapid development and efficient management of a safe, widely accessible transport system that responds to modern technological advancement in a rapidly changing and globalized environment and has been subjected to Strategic Environmental and Social Assessment in line with National Environment Management Authority (NEMA) Guidelines.

Structure of the Policy Document

Chapter 1 gives an overview of the transport sector in Kenya on: how it contributes to the national economy; how it is organized and managed; its performance; and a summary the challenges and opportunities.

Chapter 2 presents the strategic directions for the sector that the policies in the document should help in achieving. It gives the Vision and Mission of the sector; the strategic policy objectives at impact and outcome levels; and, overarching policy objectives.

Chapter 3 summarizes the critical issues at the sector level and policies to address them.

Chapters 4 to 8 presents sub-sector issues and policies, starting with Roads; Rail; Maritime; Air; and Pipeline.

1.0. OVERVIEW OF THE TRANSPORT SECTOR

This chapter presents an overview of the mandate of the Transport Sector. It also gives a summary of the sub-sector mandates, major challenges faced, the institutional framework and current conditions of the urban and rural transport.

1.1. TRANSPORT SECTOR AND THE NATIONAL ECONOMY

1.1.1. Kenya's Macro-Economic Setting

The economy has been on a growth path since 2003 giving rise to annual growth rates of about 4.3% against a population growth rate of about 2.8% per annum. By 2018, the GDP of Kenya had reached $80 billion, giving rise to a GDP per capita of around $1,600, almost double the $900 recorded in 2009 when the first INTP was drafted. GDP in 2021 was USD 100 billion at a growth rate of 5.6%.

Among the key factors contributing to the recent economic growth are investments in infrastructure, particularly in transport, energy, water, and improved performance of key economic sectors namely: agriculture and manufacturing. The proportion of Kenyans living on less than the international poverty line (US$ $2.15 per day in 2022 – World Bank) has declined from 46.8% in 2005/06 to 36.1% in 2015/16 and 33.4% in 2022[1] The agricultural sector was a key driver of poverty reduction in the past decade.

The analysis of the macro-economic environment concludes that Agriculture plays a major role and considering that the majority of the population lives in rural areas, this transport policy emphasizes the development of efficient transport systems in rural areas. In addition, considering the GDP is expected to grow at 5.3% in 2023 (IMF) based on the existing macro-economic environment, this transport policy envisages a 10% or more growth rate targeted in Vision 2030.

1.1.2. Transport Sector and the National Economy

An efficient transport system is an important prerequisite for facilitating national, regional and international integration; promoting trade and economic development; supporting other sectors of the economy; and, contributing to poverty reduction and wealth creation.

The transport sector should contribute to the achievement of the three Pillars of the Vision 2030 and beyond. Under the economic pillar, transport sector should contribute to the improvement of prosperity of all Kenyans and the GDP growth, through support to tourism, agriculture and livestock, wholesale and retail trade, manufacturing, Business Process Outsourcing and Financial Services. Under the social and political pillars, transport sector should contribute to having social equity, a cohesive society and a clean Environment. In addition, the transport sector should contribute to creation of employment opportunities, and human resource development.

Over the period 2002-2022, the transport sector grew at an average annual rate of 13.3% compared to 11.8 % for the overall economy. The growth was mainly due to substantial increase in investments in transport infrastructure and services. Table 1 gives the transport and storage outputs from 2018 to 2022.

[1] 17th edition of the Kenya Economic Update, World Bank, April 2018

Table 1: Transport and Storage – Value of Output, KShs. Million, 2018 – 2022

	2018	2019	2020	2021	2022
Road Transport	1,377,138	1,531990	1,537,403	1,789,928	2,226,222
Railway Transport	11,497	14,828	12,553	15,731	16,695
Water Transport[2]	52,750	54,868	54,649	55,915	54,792
Air Transport	202,000	216,376	111,010	144,524	225,569
Storage and Other Services Incidental to Transport[3]	186,211	211,248	204,133	254,125	300,000
Pipeline Transport	30,019	31,879	26,667	28,007	29,809

Source Economic Survey (KNBS) 2023

The value of the roads sub-sector contribution was 78% of the total sector contribution in 2022, followed by air transport at 8%, and rail, water and pipeline combined at a paltry 4% contribution. This shows the imbalanced contribution and over-reliance on road transport to meet the national transport demand. The sector's contribution to GDP for the year 2021-2022 was 11.4%.

1.1.3. Population

In the early years of independence, Kenya had one of the highest population growth rates in the world at 4.7% p.a. Through population management strategies such as family planning, the intercensal population growth rate has declined to about 2.2% in 2019, from 2.9% in 2009. The total population was 47.6 million in 2019 (KNBS, 2019), and it is estimated that by 2050, Kenya's urban population will reach 41.6 million persons, accounting for 42% of the total population. The growth rate is expected to decline to 1.5% between 2020 and 2030, to 1.5% between 2030 and 2040, and to 1.3% between 2040 and 2050, leading to a total population of 85 million by 2050.

In terms of transport, this means that Kenya has to start providing the required transport facilities and services to meet the expected future demand in line with the projected population growth.

1.1.4. International Trade and Development

Increased domestic and international trade places a considerable demand on the transport system. The total value of exports to other African countries rose by 25.6% from KSh. 246.1 billion in 2020 to KSh. 309.3 in 2021[4]. The East African Community (EAC) accounted for 62.2% of the total value of exports to the Africa continent, growing from KSh. 158.3 billion in 2020 to KSh. 192.4 billion in 2021. This growth was largely attributed to increase in exports to Uganda (26.9%) and Tanzania (43.1%). Despite the overall increase in exports to the EAC, exports to South Sudan declined by 26.0% over the same period. Export earnings from the Common Market for Eastern and Southern Africa (COMESA) region amounted to KSh. 124.8 billion in 2021, representing an increase of 23.2% from 2020. The growth was partly contributed by increased exports to the Democratic Republic of Congo which exhibited an increase of KSh. 10.2 billion from the previous year. However, export earnings from Sudan declined from KSh. 8.3 billion in 2020 to KSh. 7.2 billion in the period under review, largely on account of reduced exports of manufactured tobacco.

The EAC seeks to progressively transform into a single market that allows for free movement of goods, persons, services, labour and capital while guaranteeing rights to residence and establishment. Reviews

[2] Water transport refers to the data from the Mombasa Port throughput.

[3] Storage and Other Services Incidental to Transport include: grain storage capacity, container freight traffic and shipping and maritime

[4] Economic Survey 2022

of the relevant laws to ensure the smooth operation of the EAC Common Market are ongoing in all the Partner States.

To improve trade with the EAC states, Kenya will prioritize the development of efficient transport systems in line with existing master plans such as East African Railway Master Plan, Regional Trunk Road Network, Agenda 2063 of the African Union among others to serve the entire region to meet the future needs for regional trade development.

1.2. TRANSPORT SECTOR AND THE ENVIRONMENT, HEALTH, SAFETY AND SECURITY

1.2.1. Environment and Climate Change

Transport sector is one of the largest emitters of GHGs as well as other pollutants. Parties to the Paris Agreement commit to the achievement of global net zero emissions to control global warming and to keeping emissions below 2^0C. The COP 26 in 2021 agreed on the following commitments that relate to transport: move away from coal power, halt and reverse deforestation, reduce transport GHGs emissions through Sustainable Aviation Fuels in aviation and maritime and speed up the switch to electric vehicles. Consequently, this policy addresses environmental degradation, climate change and gaseous pollution from transport. It will ensure compliance with national, regional and global laws as well as undertake annual environment audits.

1.2.2. Health, Safety and Security

The COVID-19 Pandemic brought about many transportation challenges, including travel restrictions, observation of social distance, and restrictions of on-board services in air transport. As a result, new efficiencies were realized such as contactless innovations through the use of ICT and communication applications.

Safety and security of a transportation system or mode are important factors in modal choice, trip-making behaviour, and related costs. Safety and security of the transport system in Kenya is ensured through enforcement of relevant national, regional and international laws.

There is a legal and institutional framework in Kenya to deal with health, safety and security related matters in the transport sector. However, there are capacity, coordination and collaboration challenges among the responsible agencies this policy addresses.

1.3. TRANSPORT SECTOR LEGAL, INSTITUTIONAL AND REGULATORY FRAMEWORK

1.3.1. Legal Framework

Transport sector is governed by numerous statutes that fall under two broad categories, namely statutes affecting all sectors of the economy and sector-specific legislation. At the national level, the Constitution of Kenya 2010 has laid a strong emphasis on fair equitable, transparent and cost-effective use of public resources. The following legislations directly affect the transport sector:

A. Environmental LIRF

i. Wildlife Policy of 2011
ii. The National Biodiversity Strategy of 2000

iii. The Kenya National Climate Change Response Strategy of 2010
iv. The Wildlife Management and Conservation Act 2013
v. Water Act 2016
vi. The Environment and Land Court Act, 2011
vii. National sand harvesting guidelines, 2007
viii. The Environment Management and Coordination Act CAP 387 and Its Tools
ix. The Environmental Management and Coordination Act of 2015 (CAP 387) and its Amendment
x. Sustainable Waste Management Act, 2022.
xi. The Environment and Land Court Act, 2011
xii. Climate Change Act, 2016
xiii. Consumer Protection Act, 2012
xiv. The Standards Act Cap 496 (KEBS)
xv. The International Convention for the Prevention of Pollution from Ships (MARPOL) and its Annexes e.g. the Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk (entered into force 2 October 1983)
xvi. Annex III Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form (entered into force 1 July 1992)

B. Occupational Health, safety and security LIRF

i. Occupational Health and Safety Policy of 2012
ii. HIV/AIDS Policy of 2009
iii. Occupational Safety and Health Act
iv. The Penal Code (Cap. 63)
v. Work Injury Compensation Benefit Act (WIBA) 2007
vi. The Traffic Act Cap 403
vii. Public Health Policy of 2014
viii. The Public Health Act (CAP. 242)
ix. The HIV and AIDS Prevention and Control Act
x. National Gender and Development Policy
xi. The Sexual Offences Act, 2006
xii. Security Laws (Amendment) Act, 2014

C. Socio-economic LIRF

i. Land Act No. 27 of 2016
ii. Land Adjudication Act 35 of 1968
iii. Land Consolidation Act,
iv. Land Control Act 34 of 1967
v. Land Laws (Amendment) Act No 28 of 2016,
vi. Land Registration Act 3 of 2012, Land Act 6 of 2012
vii. National Land Commission 5 of 2012
viii. Physical and Land Use Planning Act 13 of 2019
ix. Physical Planners Registration Act 3 of 1996
x. Urban Areas and Cities Act 13 of 2011
xi. Trusts of Land Act 30 of 1941
xii. Public Service Commission Regulations, 2020

D. Others

i. Public Private Partnerships Act, No. 14 of 2021
ii. State Corporations Act, No. 11 of 1986

iii. Insurance Act
iv. Ratified Regional and International laws (Conventions), Treaties, Protocols and Codes
v. National Construction Act, No. 41 of 2011
vi. Physical Land Use Planning Act No. 13 of 2019
vii. Any other applicable laws

In the aviation and maritime sub-sectors, there are numerous general international rules that govern regulation and standards including ICAO and IMO among others that are to be adhered to. The specific sub-sector laws are discussed in details in Chapters 4 to 8 under each of the respective transport sub-sectors. Some of the sector-specific laws require review to facilitate the effective operations of the entities they govern and to enhance harmony within transport and other sectors.

1.3.2. Regulatory Framework

The various transport sub-sectors are regulated by the following agencies:

1. National Transport and Safety Authority (NTSA) for road transport services;
2. Kenya Civil Aviation Authority (KCAA) for the aviation sub-sector;
3. Kenya Maritime Authority (KMA) for the maritime transport services;
4. Energy Petroleum Regulatory Authority (EPRA) for pipeline transport; and,
5. Kenya Railways Corporation (KRC) for rail sub-sector.

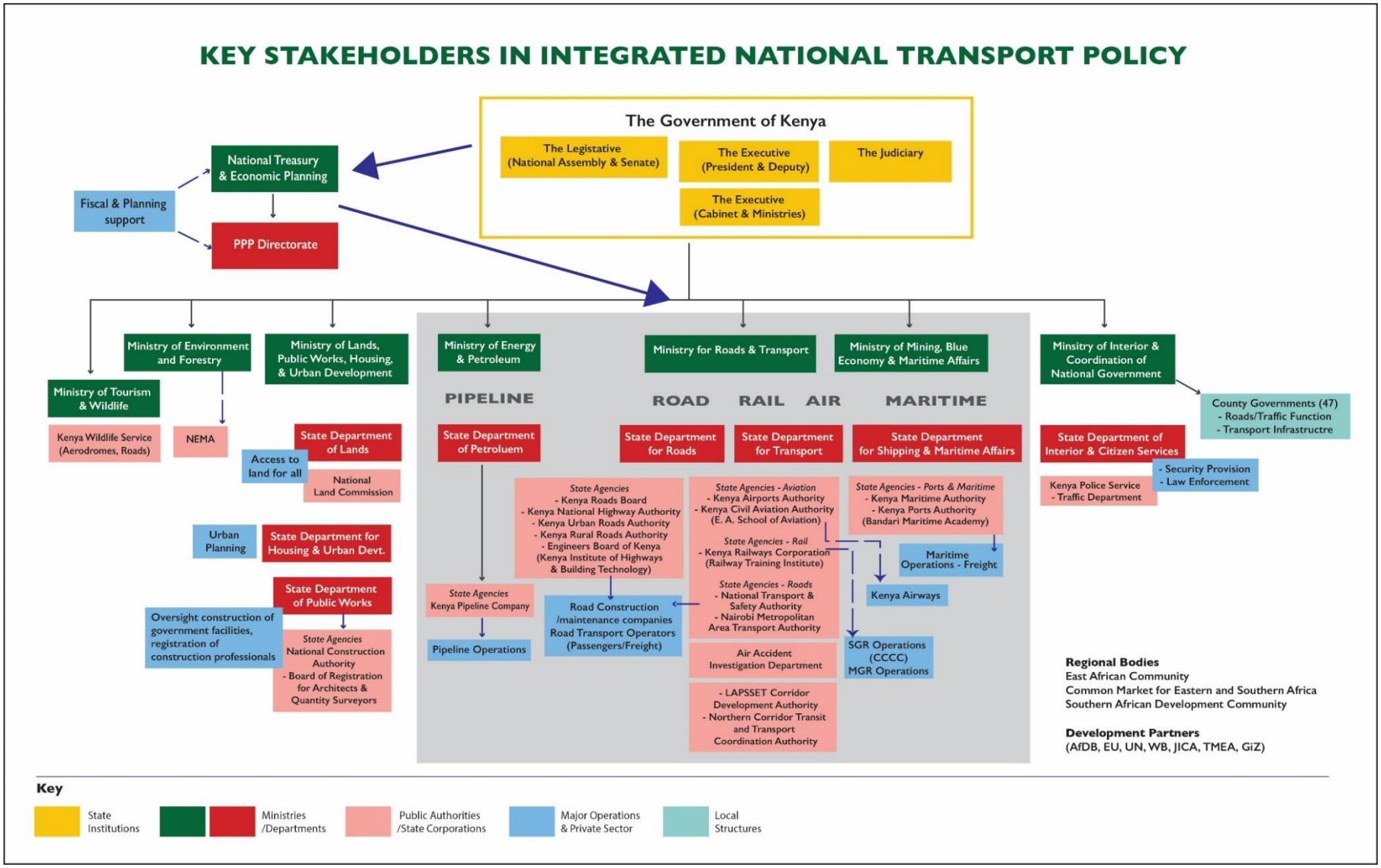
The Cabinet Secretary responsible for Roads and Transport formulates regulations and sets standards for transport services and infrastructure development. The regulatory function has not been effectively performed mainly due to the lack of well-established regulatory agencies under the respective State Departments to carry out their functions.

1.3.3. Institutional Framework

Overall, the transport sector's institutional framework is logically structured, with clear mechanism for transport policy formulation, regulation infrastructure development, transport service provision, financing, coordination and collaboration.

Figure 1 below illustrates the interactions of the various stakeholders within the transport sector.

Figure 1: Transport Sector Institutional Structure



As part of the mechanism to enhance provision of policy direction and oversight, the Ministry is represented on the Boards of each transport-related agency. However, there are concerns over frequent changes of the transport sector institutional arrangements which has contributed to inadequate coordination of the sector, which lead to poor integration and disjointed solutions. In addition, some of the regulatory arrangements would benefit from international best practices.

The roles of the various institutions are discussed in detail in Chapters 4 to 8.

1.4. TRANSPORT SUB-SECTORS

The transport sector in Kenya consists of five (5) sub-sectors: roads; rail, maritime, air and pipeline. Road, rail, air, maritime and pipeline transport networks are mainly along the Northern Corridor (NC) from Mombasa Port to the various exit points along the Kenyan-Uganda-South Sudan-Ethiopia borders. The backbone of Kenya's transport network therefore is the NC, five (5) major airports, the SGR and MGR railway and 1,342 km of pipeline.

The infrastructure and services provided by the five sub-sectors are as presented below.

1.3.1. Road Transport

Road transport infrastructure represents a significant portion of the government's total financial investment in fixed assets. The Government expenditure on roads increased by 6.1% from KSh. 195.3 billion in 2020/21 to KSh. 207.2 billion in 2021/22, and the total length of bituminous surfaced roads rose by 2.3% from 21,100 km in June 2020 to 21,800 km in June 2021,

The significance of road transport in the national economy is illustrated by the fact that for the period 2018 to 2022, total value of output of road passenger and freight traffic grew by KSh. 849 billion to KSh. 2,226 billion in 2022. The road transport mode accounts for over 90% of the total internal freight and passenger traffic in the country.

Kenya has about 162,600 km of roads of which 45,532 km is managed by the National Government, and 117,068 is managed by the County Governments. National trunk roads are under four institutions: Kenya National Highways Authority (KeNHA); Kenya Urban Roads Authority (KURA); Kenya Rural Roads Authority (KeRRA). The Kenya Wildlife Services (KWS) manages all National Trunk Roads and County Roads within the national parks and game reserves. These institutions are responsible for the planning, development, and maintenance of roads for motorized, intermediate and non-motorized transport under their jurisdictions.

The road lengths per agency and road class are given in Table 2.

Table 2: Kenya Road Lengths by Road Class, Surface Type and Surface Condition

Category	Road Agency	Road Class	Length Km (2016)	Length Km (2023)
National Trunk Roads (NTR)	KeNHA	A	7,751	8,108
		B	10,802	13,783
		S	81	357
	KeNHA Total		**18,634**	**22,248**
	KeRRA	C	21,585	18,711

Category	Road Agency	Road Class	Length Km (2016)	Length Km (2023)
	KeRRA Total		**21,585**	**18,711**
	KURA	Au	130	120
		Bu	315	2,067
		Cu	1,945	2,386
	KURA Total		**2,390**	**4,574**
NTR Total			**42,609**	**45,532**
County Roads	County	D	11,162	10,702
		E	13,858	11,483
		F	9,611	9,027
		G	86,601	85,855
	County Total		**121,232**	**117,068**
Grand Total			**163,841**	**162,600**

Source: Draft Road Register Review Report (KRB 2023)

The four main roads forming the East African Community (EAC) Regional Trunk Road Network (RTRN) in Kenya are: (i) the Northern Corridor from Mombasa port through Nairobi to Malaba, with a branch line to Kisumu; (ii) the Great North Road Corridor from Namanga (Tanzania) through Nairobi to Thika, Isiolo, and Moyale (Ethiopia); (iii) the Northern Tanzania – Southern Sudan Corridor from Isebania through Kisumu to Kakamega, Kitale, Lodwar and Nandapal/Nakodok (South Sudan), and, (iv) Lunga Lunga (Tanzania) to Garissa through Mombasa, Malindi and Lamu.

The other important national roads are: (i) Isiolo to Mandera through Wajir; (ii) Mai Mahiu to Isebania through Narok and Kisii; and, (iii) Voi – Taveta. These road links are part of the Primary Road network in Kenya, and important for international transport and trade facilitation.

Although Non-Motorized Transport (NMT) has been recognized as an important means of transport in Kenya, to date 1,070 km footpaths, 110 km cycle lanes, 97 km footbridges have been constructed.

This policy requires that the planning, development, and maintenance of roads by the various institutions must embrace inter-modal transport including infrastructure for motorized, intermediate and non-motorized transport as well as lay emphasis on the regulation and monitoring of the road sub-sector to ensure harmony in the planning, development and management of the road infrastructure.

1.3.2. Rail Transport

The Kenya Railways Corporation (KRC) is mandated to develop, maintain and manage railway infrastructure in Kenya. Railway transport involves mixed traffic i.e. freight and passengers. The freight traffic comprises of containerized and conventional cargo, whereas passenger services comprise of long-distance transport and urban commuter.

The total railway network currently consists of 592 km of Standard Gauge Railway (SGR) and 2,778 km of Metre Gauge Railway (MGR) line, comprising 1,083 km of mainline, 346 km of principal lines, 490 km of minor and branch lines and 859 km of private lines and sidings. The SGR rail network

is envisaged to be extended by 369 km from Naivasha through Kisumu to Malaba (Kenya/Uganda border). This will stimulate regional trade, tourism and transport between Kenya and Uganda, Rwanda, Burundi and the Democratic Republic of Congo via the Northern Corridor. Additionally, this expansion will improve balance of trade by enhancing exports, inland waterway transport and supporting manufacturing sector.

The value of total output of rail transport, freight volumes and passenger moved, rose from KSh. 15 billion in 2021 to KSh. 16.6 billion in 2022 while that of passenger traffic went up by 6.7 per cent to KSh. 990.9 billion in 2021. The volume of cargo transported through MGR and SGR increased by 13.6 per cent from 6051 thousand tonnes in 2021 to 6877 thousand tonnes in 2022. MGR had an increase of 22.2% while SGR recorded an increase of 12.6 %. As a result, revenue generated from freight haulage increased by 4.4 per cent from KSh. 13.296 billion in 2021 to KSh. 13.877 billion in 2022. The number of rail passengers moved declined by 10.3 per cent from 6.491 million in 2021 to 5.822 million in 2022. The decrease in passenger numbers was mainly attributed to a decline in the number of passengers using Nairobi Commuter Railway (NCR). However, passenger average revenue increased by 15.7 per cent from KSh. 2,435 million in 2021 to KSh. 2,818 million in 2022.

The rail subsector key stakeholders, apart from the line Ministry of Roads and Transport, include Ministry of East African Community, Ministry of Lands, Housing and Urban Development, Kenya Ports Authority (KPA), Kenya Airports Authority (KAA), Kenya Power and Lighting Company PLC (Kenya Power), Kenya Revenue Authority (KRA), Kenya Pipeline Company (KPC), Lamu Port-South Sudan- Ethiopia Transport (LAPSSET), the Northern Corridor Transit and Transport Coordinating Authority (NCTTCA), Shippers Council of Eastern Africa and Kenya Association of Manufacturers (KAM).

Over the last few decades, there has been low investment in rail transport infrastructure expansion and maintenance, capacity building and modernisation of the rolling stock. The development of rail infrastructure, service provision and regulation are under one entity, the KRC, which is not a good practice that requires infrastructure development and service provision to be separated from regulations. In addition, rail planning, development and management should be integrated with other modes of transport.

This policy will focus on the development, rehabilitation and expansion of the railway network, and integration with other modes of transport and associated commercial and logistics hubs, including Transit Oriented Development (TOD) within the operational railway land. Further, the policy will focus on improvement of freight and passenger services, and development of a framework for the economic and safety regulation, open access system and business spin-off in the rail sub-sector.

In order to sustainably support the provision of passenger services provided as part of the public social obligation, the policy will promote cross-subsidization across the rail business units. In addition, the policy will encourage private sector participation.

1.3.3. Maritime Transport

Kenya's maritime transport sector activities include coastal and inland water transportation, logistics and supply chain, ship building and associated supply sector industries, ports and marinas, and maritime training. The maritime transport also contributes to manufacturing through building and repair of ships and boats but has not exploited the potential to manufacture and repair containers and other related equipment.

Kenya's ocean space consists of its sea area and inland waters with a coastline of about 640 km long with a sea area comprising a territorial sea of about 9700 km^2 and an Exclusive Economic Zone (EEZ) of about 230,000 km^2. Kenya also claims an Outer Continental Shelf of 350 km encompassing approximately 103,320 km^2. Similarly, Kenya's inland water bodies support transport activities and comprise approximately 10,700 km^2 which include Lakes Victoria (4,128 km^2), Turkana (6,405 km^2), Naivasha (210 km^2), and Baringo (129 km^2). In total, Kenya's total maritime space is approximately 255,420 km^2, equivalent to half of her landmass area of 580,000 km^2.

Approximately 90% by volume of Kenya's international trade is seaborne and amounts to more than US$ 3 billion annually. Maritime transport sub-sector contributed KSh. 54.8 billion in 2022[5]. The sub-sector is key for the country's economic development, investment, wealth creation, and employment.

The key Government MDAs under the maritime transport sector includes State Department for Transport, State Department for Shipping and Maritime Affairs, State Department for Environment and Climate Change and Climate Change, Kenya Maritime Authority, Kenya Ports Authority, Kenya Navy, Kenya Coast Guard, Kenya National Shipping Line, Kenya Shipyard Ltd, Kenya Revenue Authority, Kenya Plant Health Inspectorate Service, Bandari Maritime A and other METs. The sub-sector collaborates and works closely with regional and international bodies.

In spite of this potential, the sector faces various critical issues, such as: slow enactment of national laws and domestication of international instruments; lack of a comprehensive strategy to promote maritime trade, development and facilitation; low number of vessels in the Kenyan Registry; lack of incentives to attract and retain investments in the maritime transport; insufficient institutional capacities and competences for implementation and enforcement of policies and laws; inadequate number of maritime communication facilities; inadequate human resource capacity; inadequate infrastructure and/or facilities for effective and efficient surveillance of the Kenyan maritime zones and inland waterways; lack of maritime research, innovation and development; inadequate investment in maritime transport infrastructure; lack of integration with road, rail and pipeline infrastructure; and, inadequate capacity for search and rescue services.

The key policy directions will include ensuring safe, affordable, effective, and efficient port services; encouraging competitive sub-sector; improving infrastructure; encouraging private sector participation; and promoting maritime trade and industrial development.

1.3.4. Air Transport

Kenya is a Contracting State of the International Civil Aviation Organization (ICAO), which is a United Nations Agency responsible for civil aviation planning, development, management, legal and institutional frameworks of the civil aviation industry. The Ministry for Roads and Transport is responsible for policy formulation, negotiation of Bilateral Air Service Agreements (BASAs) and provision of overall strategic direction. The Aircraft Accident Investigation Department (AAID) under the Ministry, is responsible for the investigation of air accidents and incidents. Kenya Civil Aviation Authority (KCAA) undertakes safety, security and economic regulation of the civil aviation industry to ensure that ICAO Standards and Recommended Practices (SARPs) are implemented by all stakeholders in the aviation sector. KCAA also provides Air Navigation Services (ANS), coordinates aircraft Search and Rescue (SAR) operations and aviation training through the East African School of Aviation (EASA).

[5] Economic Survey 2023, KNBS, GoK.

Kenya Airports Authority (KAA) is responsible for the development, operation and management of economically viable aerodromes and the maintenance of facilities necessary for the efficient operations of aircraft. There is also Kenya Airways and its subsidiary Jambo jet which are strategic national assets. Air Transport is also supported by the Kenya Meteorologicall Department which provides aviation weather forecasts/climate prediction information.

Kenya has an extensive network of 446 aerodromes of which 230 are public while 216 are privately owned and managed. Of the public aerodromes, 22 are managed by Kenya Airports Authority (KAA), 145 by the State Department for Interior and Citizen Services, 9 by the Kenya Defence Forces (KDF) and 53 by the Kenya Wildlife Services (KWS). The annual network passenger terminal effective capacity for Kenya airports is 10.82 million passengers and 1.955 metric tonnes of cargo. The major airports are Jomo Kenyatta International Airport (JKIA), Moi International Airport (MIA), Kisumu International Airport (KIA), Eldoret International Airport (EIA) and Wilson Airport. As at 30th June 2022, there were 1,624 aircrafts with valid licenses and 90 air operators registered in Kenya.

Air transport is critical to Kenya's economy as well as a key enabler to the achievement of development aspirations as per Kenya Vision 2030. Airports play a critical role in promoting tourism and connecting the country to the rest of the world thereby strengthening trading ties and generating new business opportunities. The aviation sector contributes US$ 1.5 billion to the GDP comprising US$ 740 million from aviation itself, US$ 515 million through indirect activities down the supply chain and US$ 294 million from employee's and stakeholders spending. It generates 26,000 jobs directly, a further 104,000 indirectly and 59,000 more induced. The aviation impact on Kenya's tourism industry accounts for an extra US$ 1.6 billion contribution to GDP and 336,000 jobs[6]. The attendant gross value-added contribution by the Air Transport Sub-Sector to the GDP is US$ 3.2 billion equivalent to 3.2% of the GDP.

Kenya had recorded a consistent year-on-year growth of passenger numbers from 2007 to 2019 but this performance was adversely affected by the impacts of the Covid-19 pandemic. In 2019, Kenya registered the highest number of air traffic passengers ever, surpassing 12 million annual passengers; of which 7 million came from outside the country. The number declined to 4.4 million passengers in 2020 as a result of the measures put in place to reduce the spread of the Covid-19 virus. The industry has shown signs of recovery with 6.5 million passengers recorded in 2021 and 10.2 million passengers recorded in 2022. Of the passengers recorded in 2022, JKIA handled over 6.5 million passengers which were over 64% of the total passenger traffic. Kenya's second busiest airport, Moi, handled 1.3 million passengers equivalent to 13%, Wilson handled 0.8 million passengers equivalent to 8%, Kisumu handled 0.5 million passengers equivalent to 5%, and Eldoret handled 0.3 million passengers equivalent to 3%. All the other airports handled 0.7 million passengers equivalent to 7%.

Kenya has recorded a steady increase in the volume of cargo handled. In 2019, some 350,684 tonnes of cargo were moved through Kenya's airports, while in 2020, some 357,180 tonnes of cargo were recorded. During the pandemic, the volume of cargo handled showed a steady increase as 380,156 tonnes were recorded in 2021 and 376,553 tonnes were recorded in 2022. The majority of the cargo recorded in 2022 was moved through JKIA (364,235 tonnes equivalent to 96.7%) while 2.6% was moved through Eldoret. The volume of cargo moved in all the other airports accounted for less than 1%. There have been fluctuations in the volume of air cargo carried in and out of Kenya as a result of strong competition from other regional carriers, notably Ethiopian Airlines and the fact that Kenya Airways has been using smaller aircraft to transport cargo which limits capacity.

[6] Aviation Benefits Beyond Borders, September 2020

This policy will focus on the rehabilitation, upgrading, expansion and development of the aerodromes and aviation navigation and communication systems through both government and private sector financing. The policy also encourages improved management and cross-subsidization to ensure sustainability of all aerodromes.

1.3.5. Pipeline Transport

The pipeline system consists of a network of 1,342 km of pipeline running from Mombasa through Nairobi to the Western Kenya towns of Nakuru, Eldoret and Kisumu. The Kenya Pipeline Company (KPC) has petroleum products storage facilities at its depots located in Nairobi, Nakuru, Eldoret and Kisumu with a total capacity of 884,000 m^3, and manages and operates the 326,000 m^3 Kipevu Oil Storage Facility (KOSF) and another 140,000 m^3 under a lease arrangement with Kenya Petroleum Refineries Limited (KPRL).

The table below highlights the storage of the various products at KPC installations:

Table 3: Storage of the various products at KPC installations (m^3)

Station	Motor Spirit Premium (MSP)	Automotive Gas Oil	Illuminating Kerosene	Jet A-1	Total
Moi Airport	-	-	-	7,000	7,000
Nairobi Terminal	71,926	66,651	57,287	37,136	233,000
Jomo Kenyatta Airport	-	-	-	54,000	54,000
Nakuru Depot	12,630	15,702	2,668	-	31,000
Kisumu Depot	14,171	19,300	5,013	6,516	45,000
Eldoret Depot	15,471	21,833	4,413	6,283	48,000
Sub-Total	113,731	123,563	69,281	111,405	417,980
KOSF	108,577	92,683	124,973		326,000
KPRL (in use)	59,269	80,731	-	-	143,000
Grand Total	395,775	420,463	263,635	222,340	884,000

The first 450 km, 14-inch diameter pipeline was completed in 1978 from Mombasa to Nairobi. Additionally, 325 km of pipeline (8-inch and 6-inch diameter) was constructed from Nairobi to Eldoret, and a further 121 km of pipeline (6-inch diameter) up to Kisumu was completed in 1994.

To further enhance product availability in the Western Region and satisfy the transit market, a 14-inch parallel pipeline from Nairobi to Eldoret (Line-4) was constructed and completed in November 2011. Line 4 increased the previous Western Kenyan Petroleum Extension (WKPE) capacity from 220m^3/hr to 311m^3/hr. An additional 10-inch diameter pipeline from Sinendet to Kisumu (Line-6) and a tee-off from Line 4 with a flow rate of 350m^3/hr was constructed and completed in 2016.

The new Mombasa - Nairobi 20-inch diameter pipeline (Line-5) was completed and commissioned in 2018 with an initial flow rate of 1,000 m^3/hr, replacing the old Line 1 pipeline which had outlived its economic lifespan. In addition, during the same year, KPC commissioned an additional storage tank in Nairobi and the Kisumu Oil Jetty.

The details of the pipeline network is shown in the table below:

Table 4: Pipeline Overview

Pipeline Segments	Year completed	Distance (km)	Diameter (Inches)	Installed Flow Rate (m^3/hr.)	No. of pump stations
Mombasa - Nairobi (Line 5)	2018	450	20	1,000	8
Nairobi -Eldoret (Line 2)	1994	325	8 & 6	220	4
Sinendet - Kisumu (Line 3)	1994	121	6	110	0
Nairobi - Eldoret (Line 4)	2011	325	14	311	2
Sinendet-Kisumu (Line 6)	2016	121	10	290	0

The above pipeline segments are all operational. Pipeline is connected to the Kipevu oil terminal and Kisumu oil jetty in addition to oil depots along the network. However, the new Line 5 (Mombasa-Nairobi) is yet to be connected to the new Kipevu Oil terminal for optimization of oil transportation services to meet the expected demand.

KPC has enhanced its systems to cater for various stakeholder needs including the multi-agency initiative comprising of KPC, Kenya Railway Corporation and Kenya Ports Authority. KPC has also put in place a modern bottom loading facility in Western Kenya depots. It has also partnered with Kenya Railways, Kenya Defence Forces and National Youth Service to rehabilitate and operationalize the Nairobi-Nanyuki Railway line that will serve Mt Kenya and Northern Kenya Region. KPC has also revamped its facilities in Western Kenya that has made it possible for Rail loading in both Eldoret and Kisumu Depots where rail wagons are loaded with product and ferried on the refurbished railway line from KPC depot to KPA Kisumu depot for onward supply to Uganda.

For pipeline capacity to be optimized and meet the growing regional market demand, the existing infrastructure requires rehabilitation and construction of additional facilities (pipelines, pumping stations, storage facilities, etc). In addition, the pipeline's interface with other transport modes such as roads, rail and marine transport needs to be improved. This integration will enhance cargo security and safety, support local distribution from the established depots, and minimize incidents of revenue loss through cargo diversion.

This policy addresses the renewal and expansion of the existing network requirements, augmentation of oil receiving facilities from the jetties, and collaboration and partnerships with neighbouring countries.

1.5. URBAN TRANSPORT

Urbanization in Kenya has been increasing rapidly since independence. Based on the Kenya National Population and Housing census 2019, some 14.8 million persons lived in the urban areas, representing 31 percent of the total population. The urban population generates over 65% of the national GDP[7]. Nairobi alone contributes 60% of the GDP to the national economy. Urban economies rely on good transport links to foster efficiency, and limit productivity losses. However, Nairobi and other major towns face chronic traffic congestion which is estimated to cost the economy $780 million per year, equivalent to 2.2% of the GDP[8].

With the increase in population in urban areas, investment in urban transport is expected to grow in line with rapid growth in land development to support the population, social and economic needs.

This growth has however not been met with commensurate growth of urban transport infrastructure expansion and services, such as Mass Rapid Transit Systems (MRTS). In cities and urban areas, urban transport is majorly road based and to some extent supported by rail and water. However, airport exits in some urban areas but do not provide intracity transport.

Road transport in urban areas is characterized by low capacity and unreliable public transport services (mostly buses and matatus) contributing to traffic congestion during peak hours, and inappropriate competition for limited road space among motorists, pedestrians and cyclists. Urban transport passenger services are dominated by the private sector, which is poorly organized. In addition, there is weak enforcement leading to non-compliance with regulations leading to poor service delivery and high transport costs. Infrastructure for Non-Motorised Transport (NMT) uses is generally lacking and is a contributory factor to high crash rates for the users.

Urban commuter rail services are a viable alternative, but the services operated in Nairobi suffers from lack of dedicated infrastructure, inadequate rolling stock and is not financially sustainable as the demand is too low due to competition from the road-based services, and suffers from operational inefficiencies.

Poor physical planning has led to dispersed land uses that promotes urban sprawl, long trips, use of private passenger cars, and generally leads to an expensive urban transport system, especially in Nairobi. Some land uses along the transport corridors conflict with transport functions and negatively affect safety and security.

Motorized traffic congestion in urban areas have contributed significantly to emission of Green House Gases (GHGs) as several trips are made in private cars as opposed to public transport, walking and cycling. The general poor maintenance condition of the many small capacity buses and mini-buses, and growing prevalence of motor-cycles for public transport, make the air pollution situation worse.

Motor-cycle taxis are becoming increasingly prevalent in Nairobi, and other urban centres, but there has been a concern on their safety records as they are involved in many serious crashes. There is lack of paved road infrastructure, other facilities like footpaths for pedestrians, inadequate dedicated lanes for cyclists or Non-Motorized and Intermediate Means of Transport (NMIMTs).

[7] Civil Society Urban Development Programme, Kenya Urban Areas – A Brief, Undated

[8] Atkins, 2019

Transport policies have so far largely supported motorized transport at the expense of non-motorized transport and have denied users benefits inherent in NMIMTs leading to marginalization of NMIMT users in both urban and rural areas.

The inefficiency of urban transport is due to inadequate infrastructure, lack of integration of roads transport with other modes of transport and weak traffic demand management. As a result, the majority of low-income urban workers find public transport costly hence meet most of their transport needs by walking and cycling.

This policy will address the issue of urban transport policy, integration, coordination, planning for NMT, MRTS, urban land use and institutional arrangement within urban transport sector.

1.6. RURAL TRANSPORT

Rural areas contained 69% of Kenya's population based on the 2019 Population and Housing census. The socio-economic activities within the rural setting are especially based in agriculture, horticulture, livestock farming and fishing.

It is estimated that 85% of the movements in the rural areas usually take place off the major roads (using tracks and paths) to support rural mobility needs between homes and farms, markets, rivers, meeting grounds, schools, health centres, churches, local administrative offices and rural homes. Most trips are made using Non-Motorized and Intermediate Means of Transport (NMIMTs) which include walking and head loading, on bicycles, and animal transport. Motorcycles and three wheelers are also used in large scale. These journeys facilitate the production of goods and their movement to markets and their supply to urban areas. The government through implementation of the low volume seal roads, has provided 10,000 kms in the last ten years.

The government has stated its commitment to the promotion of Intermediate Means of Transport (IMTs) as a strategy for poverty alleviation. Considering the critical role NMIMTs could play in the development of rural and urban transport for both passengers and goods, there is a need to actively support this mode and provide guidelines for promoting its development along with other transport means

The policy direction is to integrate rural transport with the national transport networks through integrated planning with the County Governments and elimination of transport challenges such as long detours, poor infrastructure conditions and transport barriers like bridges over rivers.

2.0. STRATEGIC DIRECTIONS FOR THE TRANSPORT SECTOR

2.1. VISION, MISSION AND GOAL OF THE POLICY

This Chapter presents the Vision, Mission, Goal, Policy Objectives and Policy Principles, and sets the strategic direction for a transport system that addresses the challenges and issues arising out of the current system in Kenya.

This policy has at its core the following vision and mission.

VISION STATEMENT

"*A world class integrated transport system that is responsive to the needs of the people*".

MISSION STATEMENT

"*To develop, operate and maintain an integrated transport system that is efficient, reliable, safe and secure to achieve sustainable development*".

THE GOAL OF THE TRANSPORT SECTOR

"To increase the transport sector contribution to the sustainable socio-economic development of Kenya".

2.2. POLICY OBJECTIVES

2.2.1. Impact Level Strategic Policy Objectives:

1. Meet overall Government policy objectives, as contained in Vision 2030, its development plans, regional and international development goals;
2. Promote national, regional and international integration for increased trade and exploitation of the socio-economic potentials;
3. Reduce disruptive effects of disasters and climate change.

The key Performance Indicators (KPIs) and targets for the impact level objectives are:

1. Population living within 2-km of a transport mode reduces significantly with 2023 as baseline through to 2030; social and inclusivity targets etc;
2. Trade between Kenya and the neighbouring countries increased from KSh. 1,915,602 in 2013 to KSh. 3, 363, 919 in 2022; and,
3. Disasters on transport related to climate change decrease with 2023 as baseline.

2.2.2. Outcome Level Strategic Policy Objectives:

1. Establish and support transport institutions for efficient and effective performance of their mandates (KPIs: all sub-sectors are regulated; safety and economic regulations of services; updates laws and regulations for all institutions; clear mandates without overlaps and grey-areas; compliance levels with sector laws, regulations, and guidelines);
2. Plan and develop the sector in a coordinated manner based on transport needs of the economy (KPIs: coordination framework in place; integrated development plans and programme/project designs; integrated financing and implementation of

programmes/projects; M&E framework developed and being implemented; no. of intermodal facilities constructed);

3. Establish and support an economically, Environmentally and socially sustainable transport system that is safe and secure (KPIs: increase financial support to the more sustainable means of transport based on their capabilities, limitations, Environmental and social impacts, and safety; improve safety; improve security; number of passengers using the means of transport (walking, cycling, Non-Motorised and Intermediate Means of Transport -NMIMTs, Mass Rapid Transit Systems - MRTS; and, tonnes of freight on roads and rail; air transport passenger growth);
4. Attract private sector financing for transport infrastructure development and service provision (KPIs: increased investment in the transport sector, by subsector;
5. Plan and develop Multimodal Economic Transport Corridors (METC) with integrated land use and transportation planning and management (KPIs; no. of METC planned/secured/developed; approved land use plans along the METCs);
6. Enhance use of new technology in the transport sector (KPIs: no. of new and innovative technologies adopted/implemented by sub-sector; their measures of efficiency and effectiveness); and,
7. Support human resource capacity development for specialised professional required by the transport sector (KPIs: no. of specialist professionals trained and engaged, by sub-sector).

The institutional reforms required to achieve the above Policy Objectives are summarised in Table 5.

Table 5: Institutional reform roles to achieve strategic policy objectives.

Policy Objectives	**Institutional reforms**
Meet overall Government policy objectives, as contained in Vision 2030, National Climate Change Action Plan, its development plans, regional and international development goals	• Stronger regulation, monitoring for transparency and accountability and introducing further safety related legislation, will directly support stated policy objectives in Vision 2030, such as continuity in governance reforms, and enhanced safety and security; • Enhancement of critical skills, improving succession management and other 'softer' proposals such as culture change, will lead to improvements in Kenya's human resources capability and the development of an efficient, motivated and collaborative public service; and, • Institutionalization of sectoral climate change action planning to support the policy objectives in the National Climate Change Action Plan and facilitate its implementation.
Promote national, regional and international integration for increased trade and exploitation of the socio-economic potentials	• Enhancements in the efficiency of the transport network arising from institutional improvements will encourage trade. For example, better surface access arising from more integrated multi-modal planning will improve inter-modal transfer and freight delivery times; improved port / customs clearance operations due to more collaborative working will reduce barriers to trade and a range of economic and commercial relationships. • Institutions to leverage the key productive sectors of oil and gas, agriculture, manufacturing and tourism through enhanced access to production sites, efficient transportation of produce, better multi-sectoral coordination.

Policy Objectives	Institutional reforms
Reduce disruptive effects of environment and climate change	• Establish institutions with enhanced mandates and resources to focus on Environmental protection and enhancement. For example, a strengthened NTSA will be able to test for and monitor vehicle emissions more thoroughly than at present. • A well-resourced Climate Change Coordination Unit will be able to coordinate adaptation and mitigation activities in the sector and ensure annual reporting on performance of climate actions. • Strengthening the ability of Counties to facilitate public transport and non-motorized transport infrastructure provision would help move people away from using private vehicles to public transport. • Improve the climate resilience of transport infrastructure and services by introducing regulations for climate risk assessment as a mandatory part of Environmental impact assessments or strategic Environmental assessments; improving awareness and capacities amongst transport and urban planners; and creating awareness among transport operators of climate change effects.
Establish and support transport institutions for efficient and effective performance of their mandates	• Effective institutions will lead to enhanced transport provision, widening the horizons of both the urban and rural populations by bringing a wider range of employment, education and health provision into range, thereby enhancing inclusivity. They will enhance social mobility, poverty reduction, and greater involvement of marginalized groups in decision-making.
Plan and develop the sector in a coordinated manner based on transport needs of the economy	Improved institutional coordination between transport and disaster response agencies
Establish and support an economically, Environmentally and socially sustainable transport system that is safe and secure	• Improved procurement processes, better contract management, greater integrity and accountability of project-related decision-making and more effective harnessing of the private sector. These outcomes will help ensure transport projects and programmes that are properly and consistently developed, prioritized and delivered. To deliver these improvements typically requires institutional interventions such as strengthening critical staff skill-sets and revision of key processes and systems. • Increased regulatory capacity of various agencies and Counties, and greater emphasis on their cooperation with the police, will contribute to improved security, ranging from protecting passengers from theft on public transport, to acts of terrorism. • Establishing Transport Safety Committees; enhancing safety expertise and skills in all transport sub-sectors; establishing a rail safety regulator would greatly improve safety. In addition, improved institutional cooperation is required to ensure safety.
Attract private sector financing for transport infrastructure development and service provision	• Enhanced transparency, customer focus, monitoring and regulation of a range of agencies will bring independent scrutiny on financial, Environmental and social outcomes, and thereby drive sustainability.
Ensure enforcement and compliance with sector laws and regulations	• Greater cooperation and coordination with compliance and enforcement agencies is required in addition to increased consultation on proposed legal and regulatory reforms.

Policy Objectives	Institutional reforms
Contribute to gender equity(mainstreaming) in transport	• Enhanced awareness and capacity of various agencies and integrating gender concerns in planning and design of transport infrastructure and services; as well as cooperation with civil society organizations with a gender focus, will contribute to reduce gender inequalities in the sector.
Vulnerable groups and Indigenous people	• Inclusiveness to reduce inequalities and promote project ownership
Integrate transport in land use planning and management	• Increased institutional coordination between land use planning authorities and MoRT. • Promotion of coordinated land use/transport plans at County level.

2.2.3. Strategic Initiatives

The Policy objectives will be achieved through the adoption of the following broad strategic initiatives, individually or in appropriate combinations:

1. Establish the right legal and institutional frameworks for transport sector management, coordination and regulation;
2. Develop appropriate transport sector financing and funding mechanisms, including leveraging on private sector financing;
3. Mainstream physical land use planning along transport corridors: along roads and pipelines; near airports and seaports, and landing bays;
4. Develop an Integrated National Transport Information Management System (INTIMS) for decision-making for effective and integrated transport planning, development and management;
5. Enhance investment in the transport sector, especially in sustainable urban transportation systems and climate-proof infrastructure;
6. Enhance the application of ICT in transport planning, operations and management to enhance sector efficiency;
7. Protect and conserve the Environment in transportation planning, infrastructure design, implementation and provision of transport services;
8. Promote public awareness using right media to inculcate positive attitude and behaviour change;
9. Develop and promote appropriate human resource capacities and good governance in the sector; and,
10. Create a conducive Environment for research, innovation, knowledge transfer and technological development in the transport sector.

2.3. OVERARCHING POLICY PRINCIPLES

To meet these policy objectives, the Government will be guided by the following broad principles.

2.3.1. Institutional Principles

Public policy making will be undertaken at various levels of government. As such, transport institutional policy needs to address arrangements for relationships at various levels of government, and among various statutory bodies and the private sector.

The Government will play a more facilitative role and provide an enabling Environment for the development of the transport sector. In this regard, the primary role of the Government will be:

1. Policy formulation, implementation and review;
2. Regulation to ensure safe, secure and sustainable transport infrastructure and services;
3. Facilitation of competition and private sector participation;
4. Protecting and conserving the Environment;
5. Ensuring that there is social equity and gender balance in the transport sector;
6. Intervening in cases of market failure;
7. Availing resources for the development and management of the transport sector, including for: enforcement of laws and regulations, human resource development, public education, and, transport research and development; and,
8. Ensuring that all key transport sector stakeholders are engaged and collaborate in the implementation of this transport policy, including the development of local transport plans.

2.3.2. Public and Private Sector Participation

The Government recognizes that the private sector provides the basis for long-term sustainable economic growth. The private sector will be encouraged to participate in the provision and financing of transport infrastructure and services.
Various non-governmental bodies play key roles in the Kenyan transport system. These organizations will be encouraged to participate in, and lead efforts aimed at, creating public awareness on relevant transport issues, consumer protection, transport research and lobbying.

2.3.3. Pricing, Investment and Funding Principles

In order to avoid distortions in pricing and users' choice of transport mode and to promote economic efficiency, pricing of transport services in Kenya will remain liberalized along with other prices in the economy. However, pricing should reflect the cost of services rendered or facilities provided (in the case of infrastructure investment) and that pricing will be undertaken on a cost recovery basis, taking into account externalities such as pollution and traffic congestion. Thus, investment and pricing are expected to be undertaken in a manner that promotes sustainable and socially equitable development.

In view of the above, user charges or cost recovery will be charged for the use of "economic" infrastructure (i.e. roads, railways, ports, airports and pipelines). For roads, the government will continue to use the fuel levy and where viable or appropriate, tolls will be applied as a direct user charge, to finance infrastructure. Thus, all passenger and freight transport services will be operated on commercial principles except where public transport services are provided as a social obligation. The Government will encourage stakeholder consultations in pricing and investment decision making.

Funding approaches will vary across the whole spectrum of infrastructure and operations. Distinction will be made between infrastructure with tangible economic or financial returns and those that provide social or strategic benefits which the Government will play a leading role in their provision. This will be done through appropriations, grants or subsidies to achieve an equitable distribution of resources.

2.3.4. Management, Regulation and Control of operations

Certain aspects of management, regulation or control of the transport system usually result in financial income (e.g. charges for vehicle inspections and fines) or in non-monetary benefits (such as reduction of casualties or preventing abuse of monopoly power through licensing). It is proposed that a more direct linkage be established between the tangible and intangible benefits of these activities and the defraying of costs of management, regulation or control. The Government will ensure that revenues generated from the transport sector are ploughed back into the sector.

The Government will ensure that the goal of the transport sector is realized and desired services are provided to consumers through appropriate forms of regulation. The form of regulation will differ according to circumstances as follows:

1. **Regulation by contract:** This is the highest form of regulation, in which the Government will specify in detail the service to be provided and can impose a variety of sanctions if the specifications or standards are not met. This category may include commuter rail services, and tendered public transport services.
2. **Regulation of natural monopolies:** The Government has a role in controlling tariffs, and in setting service and safety standards for the transport industry.
3. **Regulation of operations of competing operators:** The Government will ensure level playing fields and regulations for safety, giving service operators as much freedom as possible to provide customer service as demanded in a competitive Environment. In the case of freight transport, quality of the service (including safety) will be the guiding principle. For road-based public passenger transport, the Government will require that operators function in a competitive Environment, in a manner that complies with the government development objectives.
4. **Regulation by establishment of Codes of Conduct**: The Government will formulate and enforce codes of conduct supportive and complementary to legislation to enhance self-regulation and discipline in the transport sector.
5. **Regulation by establishment of Client Service Charters:** The Government will institute client service charters, specifying the Key Performance Indicators (KPIs), including consumer complaints redress mechanisms.

3.0. TRANSPORT SECTOR CRITICAL ISSUES AND POLICIES

3.1. INTRODUCTION

Despite the growing demand for transport services, Kenya's transport sector is currently facing many critical issues and deficiencies, which should be addressed within the context of Vision 2030 and beyond.

This section presents the critical issues in the transport sector and outlines the policies that the Government will implement to address the issues. It is from these sector level policies that the sub-sector policies/strategies are formulated in Sections 4 to 8.

3.2. LEGAL, INSTITUTIONAL AND REGULATORY FRAMEWORKS

3.2.1. Critical Issues

1. Public and private transport sector institutions do not have an effective collaboration framework for the development of the sector in a coordinated manner. Placing transport agencies under different institutional arrangements contributes to disjointed planning and development of the sector policies and interventions. In addition, there is absence of an effective institutional coordination framework between National Government and County Governments for development and management of the transport sector;
2. Existing regulatory framework does not effectively address all the dynamics in the transport sector leaving some sub-sectors unregulated, like the road and rail sub-sectors. In some cases, there is lack of policy to support the regulatory framework and development of emerging means of transport such as boda-boda, unmanned aircraft (drones), Roadside Stations (RSS), floating bridge and cable cars. In addition, there is weak regulation of road infrastructure development, rail development and services, and road and rail accident investigation;
3. Infrastructure and institutional arrangements that support efficient and less costly modes of urban transport such as Mass Rapid Transit Systems (MRTS), commuter rail services, walking and cycling are lacking, resulting into an imbalanced, costly and environmentally unsustainable urban transport system. There is a need, therefore, to integrate and coordinate activities and responsibilities of actors in different transport modes in urban areas to harness the various synergies of each mode of transport; and
4. The existing legal and institutional framework places a major burden on the government, which has resulted in under investment in the transport sector. For example, in the rail sub-sector, this has resulted into a dilapidated Metre Gauge Railway (MGR) infrastructure and rolling stock, which now require heavy capital investment.

3.2.2. Policy

The Government will:

1. Review the legal framework to allow for the participation of both government and private sector in the development of transport infrastructure and subsequent management and operation of the services;
2. Establish a national coordination framework for the development of the transport sector, with representation from all the relevant institutions and private sector, at national and county levels, for the planning and development of the transport sector;

3. Review and amend transport sector legislations to create independent regulatory institutions for port, road and rail sub-sectors, urban transport services; emerging means of transport; and
4. Develop an Urban Transport Policy to promote the development of sustainable transport systems in urban areas, including the creation of a national institution for coordination of urban transport development.

3.3. LAND USE AND TRANSPORTATION PLANNING

3.3.1. Critical Issues

Land use planning plays a vital role in reconciling conflicts in land use development from various competing interests ranging from transport, utilities, housing, commercial, and agriculture uses amongst others.

1. Uncontrolled and uncoordinated development especially in major urban centres has led to high urban densities, urban sprawl, inadequate access to transport, long travel times and high transport and infrastructure provision costs;
2. Many urban areas like Nairobi, Mombasa, Lamu, Kisumu, Nakuru, Nyeri, Embu, among others lack strategic structure plans to cope with long-term transport infrastructure needs and consequently cannot reserve land for future transport development;
3. Within urban and rural areas, poor land administration and governance challenges have led to encroachment of land reserved for transport infrastructure development; and
4. There is general absence of long-term transport and land use plans that consider future transport needs in all the sub-sectors.

3.3.2. Policy

The Government will:

1. Ensure harmonization and integration of land use policies with transportation policies, including establishment of appropriate land use planning mechanisms that protect long term transport infrastructure and service needs;
2. Ensure development and implementation of local transport plans that are fully integrated with urban and regional land use plans, land use compatibility and secure and/or acquire land for future development. In urban areas this will follow principles of Transit Oriented Development (TOD) to promote MRTS;
3. Promote the Multimodal Economic Corridor Concept that takes into account all future possible modes of transport, and future land use development along the Corridor; and
4. Develop specific physical planning policy in an integrated manner as provided for in the Physical and Land Use Planning Act No. 13 of 2019.

3.4. TRANSPORT INFRASTRUCTURE PLANNING AND DEVELOPMENT

3.4.1. Critical Issues

1. Transport infrastructure planning and development comprising roads, railways, the pipeline, ports and aerodromes, is fragmented and inadequate in terms of connectivity and inter-modality. Although there has been increased efforts to enhance logistic linkages between origin and destination involving different transport modes, each mode of transport still largely operates on its own;
2. In its current form, the transport system connectivity is a bottleneck to socio-economic development of the country since its linkages with centres of production, markets and key

economic sectors such as agriculture, tourism, industry and mining are weak and inadequate. Socially, it does not facilitate adequate services to: health, education, governance (including access to government services), security, recreation, among others.

3.4.2. Policy

Development of integrated transport systems involves a fundamental change in the traditional way of looking at transport of passengers and freight: a mode is increasingly considered only as a link in the chain from the origin to ultimate destination. Thus, an integrated system providing a seamless transport service is important in facilitating an efficient transportation. Planning and development of transport programmes and projects should therefore be mutually harmonized and synchronized to strengthens the integration between the sector and the national economy. Closer inter-modal consultation, coordination and harmony will ensure optimal use of resources, reduce or eliminate duplication, and inefficiencies.

The Government will:

1. Establish an institutional framework for the planning and development of the transport sector in an integrated manner;
2. Develop an Integrated National Transport Master Plan (INTMP) encompassing all transport modes the goal to improve and extend transport infrastructure, reduce transport costs and open-up new frontiers for economic development;
3. Ensure that the following sub-sectoral Master plans are developed and aligned with the INTMP:
    a) Road Transport Master Plan (RTMP);
    b) Rail Transport Master Plan (RaTMP);
    c) Maritime Transport Master Plan (MTMP);
    d) Air Transport Master Plan (ATMP); and
    e) Pipeline Transport Master Plan (PTMP).
4. Develop the missing links between the various modes along the international transport corridors linking Kenya to the neighbouring countries, including rail connection to Lamu; extension of the SGR to Kisumu and Malaba; urban commuter rail networks; rail-road-pipeline linkages; revitalising inland ports; crude oil pipeline from Turkana to Mombasa; and development of the LAPSSET corridor.

3.5. INTERCITY TRANSPORT SERVICES

3.5.1. Critical Issues

1. Road transport continues to be the predominant mode of transport for both passengers and freight in Kenya, due to its comparative advantage in terms of being accessible as the basic mode of travel. The road network currently carries more than its fair share of traffic, compared to the other land-based modes, railway and pipeline, despite the superior carrying capacity of railway and pipeline transport for both passengers and goods;
2. Over-reliance on road transport not only results into high road maintenance costs and high transport costs, but also exposes the country to high risks of sabotage due to vulnerability to acts of terrorism. It also contributes high GHG emissions to the Environment and Climate Change. Freight transport by road is expensive, exposed to insecurity, and slow due to congestion within urban areas and other operational factors; and,
3. Air, maritime and pipeline transport networks are skeleton in nature and serves a very small intercity transport demand.

3.5.2. Policy

The Government will:

1. Ensure that transport sector development is in accordance with the INTP, and its sub-sector plans, and undertaken in a coordinated manner;
2. Prioritise the development of all modes of transport and their integration with each other for enhanced inter-city and intra-city transport services;
3. Adopt the Multimodal Economic Transport Corridor planning and development approach to ensure modal integration; and,
4. Promote the use of Intelligent Transport Systems (ITS) for improved logistics, traffic management and enforcement to enhance transport service efficiencies.

3.6. URBAN TRANSPORT SERVICES

3.6.1. Critical Issues

1. Urban transport development is not well-guided by policy. It is no clear what path the development should take as more investment is being made to support motorised transport services and un-constrained land use development; and,
2. Large urban areas like Nairobi, Mombasa and Kisumu have comprehensive land use and transport development plans. However, the lack of strict implementation of the plans has frustrated the planning and provision of integrated public transport infrastructure and services, resulting in traffic congestion which imposes massive economic losses in productive time, additional fuel consumption and increased GHG emissions.

3.6.2. Policy

The Government will:

1. Establish an institutional framework for the development of urban transport systems that promote sustainable transport modes such as MRTS, walking, cycling, and commuter rail through allocation of more resources for infrastructure development in urban areas; and,
2. Ensure that land use planning and implementation is integrated with transport development at all levels in the management of urban areas; and,
3. Promote the use of Intelligent (Smart) Transport Systems for traffic management and enforcement of laws and regulations in urban areas.

3.7. TRANSPORT LOGISTICS

Transport logistics covers the planning, implementation, and control for the efficient and effective flow and storage of goods and services, and related information. The process starts from point of origin of goods to the point of consumption and should conform to the requirements of the customer. It involves information flow, materials flow, financial flows and people.

3.7.1. Critical Issues

1. Despite being important to the Kenyan economy, logistics suffers from weak regulation, which hampers the growth of the sector;
2. Lack of a coordination framework for transport logistics, particularly at the Mombasa port where the main actors (KRA, KEBS, KRC and KPA) and organized transport service providers

including shipping lines, airlines, road hauliers and railways operate on different platforms, have resulted into high transport costs; and,
3. There is no infrastructure and automation to support transport logistics.

3.7.2. Policy

The Government will:
1. Formulate a regulatory framework for transport logistics;
2. Facilitate integration of all transport infrastructure and services, especially between road, rail and maritime transport modes at the ports, planning and development that supports inter-modality for freight transport; and,
3. Develop ICT, and other necessary support systems, to encourage seamless transport from one mode to another.

3.8. TRANSPORT HEALTH, SAFETY AND SECURITY

3.8.1. Critical Issues

1. Transport offers avenues for transmission of diseases. Transport workers are the major potential transmitters and victims of various communicable diseases;
2. Transport related crashes and incidents are major cause of health complications.
    - Land use and traffic conflicts due to incompatibility;
    - Poor access control;
    - Speeding;
    - Inadequate regulation;
    - Weak traffic law enforcement;
    - Road design and maintenance deficiencies;
    - Driver and operator errors;
    - Poorly maintained and uncomfortable public transport vehicles; and,
    - Weak and compromised law enforcement officers to violate traffic laws and regulations;
3. High levels of environmental pollution leading to respiratory diseases;
4. Poor safety and security of passengers on board public service transport;
5. Diversion and theft of freight along the international road transport corridors, especially on the Northern Corridor, is quite common, and sometimes police escort is required;
6. In rail transport, Kenya Railways Corporation (KRC) is both the operator and the regulator, which is not a good practice as far as safety and security is concerned.

3.8.2. Policy

1. The Government will establish a framework for the development of interventions to reduce the potential and actual negative effects of transport on health, including implementation of mitigation measures and emergency services;
2. Develop a framework for capacity building for institutions responsible for oversight on transport safety, security, public health and enforcement;
3. Develop a national railway safety and security strategy including an appropriate safety and security management system for the critical infrastructure;

4. Develop a collaboration framework for joint resource mobilization and development of maritime communications services, navigation safety, hydrographic and bathymetric surveys and charts to support inter-county transport and inland water transport services; and,
5. Develop and implement a Maritime Transport Security Strategy and the Risk Management Framework (MTSS&RMF);
6. Strengthen cyber security defense systems and adopt appropriate technologies;
7. Policy interventions will be aligned with international agendas such as Sustainable Development Goals (SDGs) that cover environmental degradation, climate change resolutions among others; and,
8. The Government will enhance health, security, and safety for all transport modes through a combination of measures that will include:
    - Improved surveillance by application of ICT and automation;
    - Improved regulation of road and maritime transport vehicle standards and conditions, user education and use of ITS in the enforcement of road traffic and maritime laws and regulations;
    - Improved logistics and traceability of freight and passenger movements;
    - Enhanced investigation of incidents, crashes, and accidents for all transport modes, particularly road and maritime;
    - Enhanced enforcement of labour laws and regulations as far as they relate to drivers and boat operators;
    - Provision of Roadside Stations (RSS) and markets along the major transport corridors for improved access control, safety and security of passengers, freight and the local communities;
    - Independent auditing of health, safety and security provisions in transport infrastructure and services will be undertaken throughout the project cycle from planning through construction to operation; and,
    - Health, safety and security will be undertaken throughout the transport project cycle from planning through construction and operation.

3.9. ENVIRONMENT AND CLIMATE CHANGE IN TRANSPORT

3.9.1. Critical Issues

1. Whilst Environmental policies are incorporated in transport infrastructure development, management and operations, the construction of infrastructure and maintenance of transport systems still affect the environment through destruction of flora and fauna, displacement of human settlements and animal habitats, separation of animal herds and negative changes in environment conditions;
2. At the same time Greenhouse Gas (GHG) emissions from the transport sector have been increasing rapidly due to economic and population growth. The NCCAP identifies operational inefficiencies, inadequate and not integrated infrastructure, heavy traffic congestion and high fossil fuel consumption as the main contributory factors to GHG emissions;
3. Water pollution from oil spills from ships and pipeline operations;
4. Currently there are no publicized effective control measures in the transportation of hazardous materials and substances, which can result into an environment disaster should a road crash or acts of terrorism happen.

3.9.2. Policy

The Government will:

1. Climate proof transport infrastructure and pursue development of low-carbon sustainable transport systems;
2. Enforce the Climate Change Act, Number 11 of 2016, revised 2023, on Climate Change safeguards such as control of gaseous emissions, noise pollution, oil spills, construction activities, among others;
3. Develop standards for climate proofing of transport infrastructure and long-term strategies for the development of climate-resilient transport sector;
4. Provide the regulatory framework and appropriate fiscal policies to promote energy-efficient and low-emission freight transport, including shifting passenger and freight from road to rail;
5. Ensure strict enforcement of regulations governing the transportation of hazardous materials and substances to minimize chances of occurrence of disasters, such as fires arising from spills of petroleum products through road crashes;
6. Establish effective disaster management measures, along the major transport corridors;
7. Put in place and enforce necessary regulations to prevent and address fuel spills and consider diverting such dangerous freight to the rail, pipeline, and inland waterway systems where population exposure is significantly lower;
8. Put in place a sectoral consensus on climate change, monitor and review mitigation and adaptation actions on a regular basis in the transport sector;
9. Promote the adoption of e-mobility for transport services including supporting investments in modern vehicle, aircrafts technologies to reduce GHG emissions and noise;
10. Prioritize implementation of Mass Rapid Transit Systems (MRTS) and Non-Motorized Transport facilities in urban areas, and dis-incentives for the use of private motor vehicles;
11. Promote the use of renewable fuels including promotion of green mobility;
12. Set an enabling policy framework to incentivize efficiency improvements in freight transport in conjunction with private sector;
13. Forge closer cooperation with scientists and engineers, industry, and international organizations to ensure that up-to-date information on climate change impacts is available, widely disseminated and taken into account by policy makers, transportation planners and development strategists;
14. Explore ways in which further financial resources may be generated as part of mitigation efforts in the transport sector, such as congestion fees, parking charges, carbon trading etc;
15. Ratify, domesticate and implement all relevant international/regional conventions and protocols and agreements relating to environmental conservation and climate change;
16. Create regulatory/ institutional structure to ensure that all agencies comply with all the Environment laws and regulations throughout the project cycle. The planning and development standards should meet climate change considerations, including incorporation of costs of CO_2 emissions and road crashes in assessment of economic viability of transport projects;
17. Pursue innovative technologies in the field of Environmental conservation and use of alternative materials with less carbon footprints in transport infrastructure construction;
18. Ensure closer co-operation between relevant government agencies in the implementation of international Environmental legislation/agreements such as the Paris Agreement and the Clean Air Initiative (CAI) resolutions;
19. Develop and progressively introduce and enforce vehicle emission limits;
20. Develop a legal and regulatory framework to operationalise the domesticated IMO conventions, including enactment of legislation for the protection of coastal Environment and neighbouring cities and towns;

21. Build capacity and a coordination framework for joint resource mobilisation and management of pollution incidents among government agencies, private sector and partner states to promote sustainable transport;
22. Develop and implement Green Port and Green Aerodrome Strategies;
23. Develop a framework for aviation Environment protection including the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and support coordination between the aviation stakeholders and Environment experts to enhance expertise and promote knowledge sharing and harmonization of positions on issues of Environment protection;
24. Develop capacity in terms of personnel and technology and encourage production and deployment of alternative sources of fuels including Sustainable Aviation Fuels (Biofuels and electricity) and use of more energy-efficient infrastructure including electric vehicles at aerodromes; and
25. Develop and enforce regulations for the disposal of abandoned and written-off aircrafts and related aircraft waste such as aircraft parts and fluids within aerodromes.

3.10. TRANSPORT AND SOCIAL EXCLUSION

Whilst transport is not entirely responsible for social exclusion, it can help in reducing both social and economic exclusion through provision of affordable options such as: universally accessible infrastructure; appropriate and affordable transport services to all users; and, connectivity to markets, schools, health centres, and so on.

3.10.1. Critical Issues

1. There is widespread social exclusion, particularly in rural areas, as investment prioritization in the transport sector is based on engineering and economic criteria. For example, highly trafficked intra- and inter-city road networks are often favoured for development and maintenance; and,
2. Vulnerable persons, such as PWDs, the aged, and the poor have limited access to transport facilities and services.
3. By examining the links between social exclusion, transport and the location of services, the Government can give particular focus to access to those opportunities that have the most impact on life-chances, such as work, learning and healthcare.

3.10.2. Policy

The Government will:

1. Incorporate social exclusion vulnerability assessments into the planning and implementation phases of transport projects.
2. Promote free, prior and informed consent (FPIC), participation and protection of vulnerable groups and indigenous people.
3. Develop a framework to actively identify, through an audit process, and eliminate social and economic exclusion in the transport sector, particularly road development programmes and projects in rural areas and informal settlements in urban areas.
4. Develop a Muli-Criteria methodology for prioritisation of transport programmes and projects that takes into account engineering, economics, social, environmental, and other relevant national criteria.

3.11. TRANSPORT RESEARCH AND KNOWLEDGE BASE

3.11.1. Critical Issues

1. Although a lot of transport research is undertaken in Kenya, the findings often do not inform policy formulation, as there is no focal point to coordinate, consolidate and disseminate the findings;
2. Programme and project planning, design, and implementation do not incorporate key performance indicators (KPIs) and targets that can be used for monitoring and evaluation of what is achieved at completion, and documentation of lessons learnt to form a national knowledge base; and,
3. Lack of research stifles policy formulation and innovation in the transport sector.

3.11.2. Policy

The Government will:

1. Establish a Transport Research Centre (TRC) to undertake research and be the custodian of all transport research work in Kenya where all transport sector related issues, trends, resilience infrastructure, and dynamics are covered. The centre to collaborate with universities for research;
2. Provide appropriate incentives to the private sector to invest in transport research and development;
3. Ensure that all programmes and projects have a Results-Based Logical Framework (RBLF), with measurable KPIs and targets, and that all programmes and projects are monitored and evaluated during implementation and at completion, and lessons learnt documented and used to design future programmes and projects; and,
4. Application of available channels of communication and management of information including an integrated and shared data management system (ISDMS).

3.12. TRANSPORT SECTOR INSTITUTIONAL CAPACITY

This Policy will require a well-remunerated and multi-disciplinary human resource, materials, equipment, motivation and incentives to implement and sustain it. The staff will be required to: manage the sector institutions; develop and maintain infrastructure and service standards; undertake research; and, monitoring and evaluation of the systems, amongst others.

3.12.1. Critical Issues

1. Transport sector interventions are poorly implemented due to lack of specialised technical professionals, especially in planning and management of integrated transport systems, flight safety inspections, incidents and accident investigations, and maritime operations; among others; and,
2. Inadequate technical capacity in various critical areas such as transport policy formulation and analysis, policy coordination, planning, development and management of infrastructure, operations and services.

3.12.2. Policy

The Government, in partnership with the private sector, will:

1. Promote education in specialised transport sector disciplines at Kenyan universities, TVET institutions, including collaboration with relevant institutions in the

development and regulation of the necessary curricula for all levels of the education system;
2. Establish a Transport Industry Training Fund to support training of transport industry professionals; and
3. Develop and support "Centres of Excellence" for each transport sub-sectors. For example, transformation of the Railway Training Institute (RTI) to a "*Centre of Excellence*" for rail transport.

3.13. TRANSPORT SECTOR OPPORTUNITIES

3.13.1.Critical Issues

Technological developments and innovation present the transport sector with many opportunities that Kenya should exploit. Some of these opportunities include electric vehicles and alternative fuels; autonomous/driverless vehicles; ride-hailing apps; cable cars; non-piloted aircrafts (drones); and commercial ferry services, cruise services, coastal shipping and blue economy.

3.13.2. Policy

The Government will:
1. Encourage uptake of new and emerging technologies, including: electric locomotives, motor vehicles, motorcycles and bicycles to reduce GHG emissions; and,
2. Develop regulations, standards and specifications for autonomous vehicles, cable cars, ride-hailing application taxis, to ensure safety benefits are realised, while also supporting research in this area.

3.14. TRANSPORT SECTOR FINANCING

The current sources for financing transport infrastructure development are mainly from the central government through tax revenues, borrowing from bilateral and multilateral lenders, and user charges. In general, current financing levels are inadequate to maintain and rehabilitate existing infrastructure and implement new infrastructure. This is particularly the case for transport sector institutions that depend on limited direct financing from the Exchequer.

Further, the existing infrastructure ownership, management, and control status is predominantly vested in the Government and its agencies. Previous Government policies considered transport infrastructure as strategic and thus emphasized Government ownership. Over time, this has occasioned an imbalance in the supply of infrastructure and services, and limited modal choice to the users.

As a result of over-dependence on traditional financing mechanisms, the transport sector is faced with the challenge of inadequate and aging transport infrastructure and systems, in addition to low operational efficiency.

This policy focuses on consolidating resources and the optimal use of traditional finances in addition to innovative financing.

3.14.1. Critical Issues

1. About 90% of the travel demand in Kenya is met by road transport, which has network of about 162,600 km as at 2023 (Road register 2023). The 2022 road inventory and condition surveys[9]

[9] Kenya Roads Boards RICS, 2022.

data indicate that only 22% of the network was in good condition, while the remainder was in fair and poor condition. The result is that the transport cost in Kenya is quite high due to high vehicle operating costs, longer travel times, and road crashes due to a large road network being in fair and poor condition. These losses are due to inadequate investment and over-reliance on the road sub-sector;

2. There is chronic traffic congestion in major urban areas and on international transport corridors due to over-reliance on an inefficient road transport system, under-investment in rail transport and poor traffic management, using outdated technologies, and lack of NMT facilities. All these contribute to high crash rates and economic losses;
3. The Metre- Gauge Railway (MGR) infrastructure is over 120 years old, is dilapidated, unreliable and the rolling stock is generally unserviceable. The SGR network is new but incomplete and therefore should be extended to the Kenya – Uganda border and integrated with the other modes of transport. In addition, Kenya needs to develop its part of the EAC railway network;
4. There are inadequate resources to expand the civil aviation infrastructure such as expansion of the JKIA runway and terminals, upgrading of the other aerodromes, and upgrading of air navigation infrastructure;
5. The pipeline network is skeleton and not integrated with road and maritime modes of transport, has inadequate storage capacity, and lack financing for infrastructure expansion and maintenance;
6. Maritime transport is not well-developed. The port of Mombasa infrastructure is not integrated with road and rail infrastructure, cannot accommodate very large vessels, the container terminals are old; ferry services are limited and operated using old, unserviceable and unsafe equipment; and, inland water transport is un-developed;
7. The effects of climate change have caused flooding and global warming that have contributed to premature infrastructure failures and high maintenance and rehabilitation costs;
8. Research, lack of specialist human resources and adoption of ICT in transport due to financial resources has stagnated transport sector development in Kenya;
9. Transport sector institutions do not generate enough funds to finance the infrastructure and services they manage; and,
10. Lack of dedicated funding to address Health, Safety and Security concerns relating to sustainable environmental management.

3.14.2. Policy

The Government will:

1. Develop a medium (10-year) and long-term (20-year) integrated and prioritised Transport Sector Investment Plan (TSIP) for the whole sector, based on social, economic and strategic national/regional/international importance, to guide the optimal allocation of resources for capital and maintenance programmes and projects; and, develop a Resource Mobilisation Strategy for the TSIP;
2. Promote Transport Infrastructure Investment Banking by establishing a National Transport Infrastructure Investment Bank to facilitate sourcing of financing from local and global markets, and transport sector-related fees, levies and taxes to support development, management, and operation of transport systems;
3. Operationalize the National Road Transport and Safety Fund to ensure financial sustainability for lead agencies on road safety to comply with legal and international safety conventions, and

provide an opportunity for development partners and other stakeholders in the sub-sector to channel resources;

4. Establish a Casualty Investment Fund (CIF) to fund health, safety and security relating to sustainable environmental management including regulations;
5. Adopt the user-pays principle or growth pays-its-own-way principle, marginal cost pricing and use of Government grants based on degree of public or private purposes or cross-border transport facilities for promotion of inter-county, regional and international integration. Application of Pricing, Investment, and Funding Principles in the Transport Sector Financing mechanism will avoid distortions in pricing and users' choice of transport mode and promote economic efficiency;
6. Review the legal, regulatory, and institutional framework for transport sector financing to include appropriate incentives to facilitate private sector participation in the development and management of transport infrastructure and services, through innovative financing and Public Private Partnerships (PPPs). Options can include:
    i. Public ownership and operation by State Agencies;
    ii. Public ownership and private operation;
    iii. Private ownership and private operation;
    iv. Joint ventures between the public and private sectors; and
    v. Issuance of infrastructure bonds to raise private finance to expand the revenue base.
7. Develop and promote transport sector inter-agency cross-subsidization among the agencies in charge of managing transport infrastructure to create financing synergies across the sector;
8. Develop a green financing framework, including a carbon tax to discourage excessive Greenhouse Gas (GHG) emissions in the transport sector and encourage transport sector agencies to devise systems to tap into the carbon credit or green financing; and
9. Leverage on land assets within transport corridors to make the corridors economically and financially self-sufficient through integration of transport infrastructure with associated commercial and logistics hub facilities. In particular, commercial transport sector agencies will focus on leveraging revenues from land assets through Transit-Oriented Developments (TODs), commercial and logistics facilities within their corridors.

4. ROAD TRANSPORT SUB-SECTOR

4.1 BACKGROUND

The government's socio-economic development strategy is to provide integrated, efficient, safe, reliable, and sustainable road transport infrastructure. The infrastructure should meet national and regional passenger and freight transportation goals and promote seamless connectivity and accessibility to services.

The roads transport sub sector objectives will aim at:

1. Developing and maintaining optimal road infrastructure capable of meeting aspirations of Vision 2030 and beyond;
2. Developing road transport as an enabler for sustainable socio - economic development and provide the catalyst role for private sector investment;
3. Promoting efficient Mass Rapid Transit Systems (MRTS)over the use of private passenger road transport and non-motorized transport (NMT);
4. Providing seamless inter-modal connectivity and flexibility;
5. Promoting use of green mobility, Environmental sustainability and climate resilience;
6. Promoting private sector financing and user charges for road infrastructure development and maintenance;
7. Providing universal access to road infrastructure development and services; and
8. Incorporating technological advances for cost effectiveness in road infrastructure and services.

4.2. LEGAL, INSTITUTIONAL AND REGULATORY FRAMEWORK

4.2.1. Critical Issues

There are many institutions involved in road development and management at the national and the county government levels that should work in harmony. The critical issues include:

1. Uncoordinated road transport planning, development and management of the road network by the County governments and National Government Road Agencies;
2. Implementation of development and maintenance of the road network without reference to medium- and long-term plans in the Road Sector Investment Plan (RSIP); and
3. Application of different standards for construction and maintenance of similar road classes;

4.2.2. Policy

The Government will:

1. Establish a framework for coordinated planning and development of the road network at both levels;
2. Establish a road sub - sector regulator whose mandate will include developing and reviewing standards for coordinated planning, economic, technical regulation and enforcement of adopted national standards for public roads at both National and County levels.

4.3. DEVELOPMENT AND MAINTENANCE OF ROAD INFRASTRUCTURE

4.3.1. Critical Issues

1. Planning and development of road infrastructure is mostly not aligned to Road Subsector Investment Plan (RSIP), and uncoordinated;
2. Road transport infrastructure development is not fully aligned to any plan, with some areas under-served resulting in skewed development;
3. The development and management of road infrastructure has not fully adopted modern technology;
4. Current road infrastructure planning, design and construction do not adequately address the impacts of climate change, which leads to disruption of services due to destruction of infrastructure and higher costs of emergency maintenance;
5. The continued use of traditional methods for contracting roadworks do not ensure efficient delivery of outputs in terms of time delivery, costs and value for money;
6. Current axle load control measures have not exhaustively addressed axle overloading which causes premature road damage;
7. Road infrastructure maintenance financing is inadequate, and a large road network is in poor condition;
8. Resettlement and compensation of affected persons within the road reserves increases rod development costs;
9. Road furniture vandalism; and
10. Lack of coordinated planning and development of rail and road infrastructure at crossing points compromising safety

4.3.2. Policy

The Government will:

1. Regularly monitor and evaluate compliance with RSIP to ensure alignment of road sector investment with other national developments plans and Medium-Term Expenditure Framework (MTEF) and have the RSIP approved before the start of the plan period;
2. Make strategic road infrastructure implementation decisions based on data such as traffic demand forecasts, security status, accessibility needs, untapped economic potential and levels of access;
3. Invest in new road transport technology, research and innovation;
4. Ensure that road planning, design and construction standards and manuals adequately address the effects of climate change. In addition, an appropriate framework will be developed to promote and facilitate climate-risk management in the road sub-sector;
5. Embrace the concept of multimodal corridor development in order to make the best use of resources for maximum benefits;
6. Undertake an upgrading programme to address deficiencies on existing urban roads with the objective of appropriate allocation of space to public transport, NMT, and public spaces. NMT Swill be incorporated as part of the road transport infrastructure planning, design and development in both rural and urban areas;
7. Introduce city/area-wide traffic control and information systems, including real-time traffic management and enforcement of traffic laws and regulations;
8. Adopt Output Based Contracting (milestones-based) for development projects and Performance Based Contracting method for road maintenance;
9. Ensure all roads approved have a maintenance plan

10. Expand axle load control interventions to cover all road network and operationalize and enhance existing laws (Traffic Act, EAVLC Act, Evidence Act, Data Act, Roads Act) with a view of aligning with modern technology on incident reporting and prompt payment of fines;
11. Develop innovative ways of raising road financing including tolling and weight-distance user charges, as appropriate; and
12. Develop a collaborative framework for joint planning, design and development of road and rail infrastructure at crossing points.

4.4. LAND USE PLANNING FOR ROAD TRANSPORT

4.4.1. Critical Issues

1. Inadequate coordination between land use planning and road transport planning, designs and development resulting in unintegrated land use development and road transport development, which often leads to incompatible land uses;
2. Inadequate provision for road reserves, corridors and storm water drainage during land subdivision resulting in high construction costs due to land acquisition to accommodate the road and related infrastructure; and,
3. Encroachment and use of land reserved for roads.

4.4.2. Policy

The Government will:

1. Establish a coordination framework between institutions responsible for land use planning and road infrastructure planning and development. Road transport planning shall be undertaken in an integrated and complimentary approach so as to link with other modes;
2. Develop and implement a Roads Transport Masterplan (RTMP) that is fully integrated with urban and regional land use plans;
3. Secure and/or acquire land for future development; and
4. Establish road corridor management framework for mapping out of road reserves and ensuring they are free of encumbrances.

4.5. URBAN ROAD TRANSPORT

4.5.1. Critical Issues

1. Urban traffic congestion and lack of multimodal transport system;
2. Urban transport passenger services are dominated by the private sector, which is poorly organized. In addition, there is weak enforcement leading to non-compliance with regulations leading to poor service delivery and high transport costs;
3. Inadequate information on transport systems and services including public transport routes, service schedules, terminal locations, fares;
4. Relatively unsafe and insecure urban transport system;
5. Public service vehicles are not accessible to PLWDs, and vulnerable groups without assistance;
6. Urban transport infrastructure is inadequate and lacks appropriate basic facilities such as bus stops, shelters and terminals;
7. Weak institutional framework for enforcement of road transport laws and regulations; and
8. Lack of urban transport strategy and coordination framework.

4.5.2. Policy

The Government will:

1. Develop urban transport policy, strategy and coordination framework;
2. Undertake institutional reform to enhance planning and development of mass rapid transit systems (MRTS), or appropriate public transport in urban areas;
3. Promote development of urban public transport under public obligation strategy to support socio-economic development;
4. Undertake integrated development of urban transport infrastructure and associated facilities including special facilities for use by people living with disabilities (PLWD) and vulnerable groups. This will include the development of an integrated NMT, bus and commuter rail route network plans including stops, terminals, information systems, ticketing, park-and-ride; etc.) for major urban areas and progressively introduce bus lanes and efficient MRTS as demand increases;
5. Develop a well-coordinated institutional framework for enforcement of road transport laws and regulations; and,
6. Adopt smart transport systems (use of ITS or Information Technology) to promote optimal use of urban infrastructure/ facilities, traffic management including enforcement of traffic laws and regulations. The system will also include the integrated communication and information management channels and shared data management system

4.5.3. Urban Parking

4.5.4.1. Critical Issues

1. Poor planning and alignment of urban development and urban parking; and,
2. Inadequate spaces for public transport and NMT, and general inefficient allocation and utilization of urban transport spaces.

4.5.4.2. Policy

The Government will:

1. Encourage use of public transport to reduce need for private transport through provision of park and ride services in the outskirts of cities;
2. Integrate parking planning and development with construction of buildings;
3. Encourage public and private investment in central parking silos for private vehicles and termini for public service vehicles in line with the planned urban transport, green areas, and for NMT users; and,
4. Adopt flexible use of parking spaces for traffic movement during the peak hours.

4.5.4. Non-Motorised Transport

4.5.4.1. Critical Issues

1. Inadequate provision of NMT infrastructure, including pedestrian walkways, footbridges, underpasses, cycle lanes and bicycle parking lots, in urban areas. Where they are provided, they are in poor condition, insecure, and often obstructed by informal traders, motor-cycles and parked vehicles; and,

2. The planning, design and development of NMT network is not comprehensive as it is generally aligned with motorised road network and does not adequately address users' needs, especially for PWDs and vulnerable groups.

4.5.4.2. Policy

The Government will:

1. Enhance investment in NMT facilities in urban road transport planning, design and development and maintenance. Where the urban road network is in existence modifications will be made to accommodate NMTs;
2. Develop and review the legal and regulatory framework to promote use and protect the rights of NMT users and ensure that existing NMT facilities are safe, user-friendly, universally accessible and secure; and,
3. Develop and implement revenue generating traffic demand measures that actively promote NMT (such as bike sharing programs) and public transport, and use revenues generated to improve facilities for public use.

4.6. RURAL TRANSPORT AND LOW-INCOME SETTLEMENTS IN URBAN AREAS

4.6.1 Background

Despite the country's elaborate road network, the transport scene in rural and low-income neighbourhoods is still characterized by walking, head or back loading and use of Non-Motorised and Intermediate Modes of Transport (NMIMT). Public transport is unaffordable to many households, leading to low productivity and economic exclusion. In both rural and informal settlements in urban areas, access to NMIMTs is still hampered by many constraints, including lack of appropriate infrastructure and bias against NMIMTs.

The long-term goal of the Government is to reduce transport burden and travel times with a view to increasing economic efficiency through widespread use of NMIMTs in Kenya. The Government's efforts will be directed towards:

1. Complementing and enhancing the last mile connectivity through integration of the rural road and informal settlement road networks to the national road network; and,
2. Increasing accessibility and mobility, especially among people in the lower income groups in both rural and urban areas, through elimination of detours, missing-links, and so on.

4.6.2 NMIMT Infrastructure

4.6.2.1 Critical Issues

1. NMIMTs infrastructure is unplanned, underdeveloped, and not incorporated into the National Transport system;
2. Lack of gender and PWDs friendly NMIMTs facilities adversely affects the performance of individual and household-based social and economic activities;
3. There are no routes for NMIMTs-only and therefore trips are made unnecessarily long because of significant detours created by barriers like rivers, buildings, and high-speed highways. Foot bridges, access culverts, etc have been inadequately provided and/or poorly maintained; and,

4. The existing NMIMTs facilities have over time experienced vandalism which significantly impact accessibility, safety and security.

4.6.2.2 . Policy

The Government will:

1. Plan, finance and develop all forms of NMIMTs infrastructure and services and incorporate them into the national transport system to enhance connectivity, national cohesion and security;
2. Promote development and use of NMIMTs across the country to enhance gender, vulnerable groups and indigenous people's inclusion in the performance of socio-economic household tasks and to increase time spent on economic and commercial activities;
3. Eliminate transport bottlenecks by opening up rural access roads to key strategic community installations i.e hospitals, schools, marketplaces, water points, places of worship, and for improved security; and,
4. Promote community sense of ownership of NMIMT facilities by involving them (mainly women, PWDs and Indigenous people) in planning, design and maintenance of the infrastructure.

4.7 ROAD PASSENGER TRANSPORT SERVICES

4.7.1 Background

Urban and rural public transport services are mainly road-based, predominantly served by buses, matatus, taxis, motorcycles, three-wheelers (*tuk-tuks*) and private cars. Inter-city passenger transport services are mainly provided by buses, matatus, private vehicles and to a lesser extent by air and rail transport.

The long-term goal of the Government is to promote an efficient, coordinated, integrated, affordable, safe, reliable and environmentally friendly road passenger transport services in Kenya. The objective is to enhance passenger mobility, connectivity and accessibility.

4.7.2 Legal and Institutional Framework for Passenger Transport Operations

4.7.2.1 Critical Issues

1. Lack of spatial integration of motorized and non-motorized road passenger transport needs in urban and rural areas;
2. Inadequate coordination framework and capacity to comprehensively manage optimal operations of passenger transport;
3. Lack of professionalism in provision of road passenger transport operations;
4. Inadequate integration of road transport services planning and other modes of transport in urban areas;
5. Dominance of urban public transport services by low-capacity public transport vehicles;
6. Weak enforcement of existing laws and regulations on passenger transport operations; and,
7. Lack of a traffic demand-driven licencing of public service vehicles.

4.7.2.2 Policy

The Government will:

1. Enhance the mandate of NaMATA to plan and develop mass rapid transport systems (MRTS) in all urban areas;
2. Establish of a coordination framework for planning and development of road passenger transport system with other modes and land use;
3. Promote Transit Oriented Development (TOD) along major urban transport corridors to enhance demand for public transport services;
4. Promote planning, development and use of MRTS and NMT with a view to enhancing efficient and effective mobility and accessibility in urban areas;
5. Establish a PSV licencing framework based on route traffic demand;
6. Enhance institutional capacity of training institutions to offer specialised driving lessons to PSV drivers and crew; and,
7. Acquire and secure land earmarked for public transport services;

4.7.3 Boda – Boda Transport services

4.7.3.1 Background

The two-wheeler and three-wheeler motorcycle taxi services commonly known as *boda-boda* and *tuk-tuk*, respectively, play a key role in Kenya's social – economic development. According to the Motorcycle Assemblers Association of Kenya, there are over 1,000,000 people earning more than Ksh. 600 million per day, generating more than Ksh. 219 billion annually. Their services have reduced the number of unemployed youth in both urban and rural areas, hence increased per capita income and improved quality of life.

Boda-bodas are often the preferred mode of transport due to their flexibility, ability to navigate poor roads and rough terrains in rural areas, faster in congested roads in urban areas, and offer faster door-to-door transport services. They are also able to transport odd-sized luggage.

However, most operators are responsible for increased number of crashes leading to loss of lives and injuries. In 2005 for instance *boda boda* service was only responsible for 1.4 % of all road traffic crashes and deaths while in 2018, they were responsible 23% of all crashes and fatalities.

4.7.3.2 Critical Issues

1. Non-compliance with traffic laws by *boda-boda* riders;
2. Boda boda operations account for majority of road crashes;
3. Air and noise pollution from motorcycles.

4.7.3.3 Policy

The Government will:

1. Legislate necessary laws and regulations for the management of two and three-wheeler public transport services;
2. Promote the adoption of e-mobility for the two and three-wheeler transport services to reduce GHG emissions and noise they generated; and,
3. Enhance training of two and three wheelers' riders.

4.8 ROAD FREIGHT TRANSPORT SERVICES

4.8.1 Background

Road freight transport services embraces domestic and international conveyance of goods by heavy commercial vehicles (HGVs) mainly comprising of trucks and vans. The common goods transported are gas, fuel, crude oil, and containerised cargo.

According to the Economic Survey 2022, the value of total output of road freight traffic rose by 30.5 per cent to KShs. 794.5 billion in 2021. The basic requirements for road freight transport include high quality service to customers with regard to: cost, reliability and timeliness of delivery; seamless inter-modal operations; optimized use of capacity and management of operations; protection of infrastructure; and, minimal Environmental and social impacts.

The long-term goal of the Government is to facilitate provision of an efficient, safe, reliable, flexible, cost-effective, environmentally friendly and fully integrated land freight transport system that adequately meets the needs of all stakeholders in a sustainable manner and supports socio-economic development. The pursuit of this long-term goal is grounded on the fact that besides her own domestic requirements for goods, Kenya is also an important transit country for hinterland neighbouring countries, namely, Uganda, Rwanda, Burundi, eastern parts of the Democratic Republic of Congo (DRC), South Sudan, Southern Ethiopia, and Northern Tanzania.

4.8.2 Intermodal Freight Transport

4.8.2.1 Critical Issues

1. There is lack of a seamless inter-modal transportation system, which is a system of transporting goods from origin to final destination, including information exchange, using multiple modes of transportation (e.g., rail, ship, and truck), without the customer handling the freight itself when changing modes; and,
2. An effective freight transport system also requires the harmonization of technical standards and an interface with all concerned stakeholders.

4.8.2.2 Policy

The Government will:

1. Undertake integrated road transport planning and development that supports inter-modality for freight transport; and,
2. Develop ICT, and other necessary support systems, to encourage seamless transport of freight from one mode to another, but particularly between road, rail, maritime and inland waterways.

4.8.3 Non-Tariff Barriers

4.8.3.1 Critical Issues

Non-Tariff Barriers (NTBs) to trade inhibit the movement of freight traffic along the international transport corridors and thus raising transport costs. Multiple customs procedures have hampered efficient flow of freight leading to costly delays at the port of Mombasa, and at various international border points, that are reflected in the prices of imported and exported goods. Such delays are largely caused by physical verification of transit cargo by various governments due to slow adoption and application of modern information and communication technology (ICT) at the port and border points. Other causes of delay include long waiting times at customs, police roadside checks, incident management, police escorts and incidences of bribery.

4.8.3.2 Policy

The Government will:

1. Harmonize and comply with regional transit cargo instruments through bilateral and multilateral engagements with partner states and international conventions for seamless flow of freight; and,
2. Promote the adoption and application of modern information technology in freight transport backed by strong linkages with other transport modes.

4.8.4 Development of Roadside Service Stations

4.8.4.1. Critical Issues

The national trunk roads in Kenya do not have planned and developed Roadside Service Stations (RSS) and lacks government regulations and oversight. Some of the roads traverse very remote areas prone to insecurity. In addition, long distance freight drivers ride for very long distances before they can rest in the urban areas with limited infrastructure to support their needs. This results in increased exposure of road users to danger and premature damages to the road infrastructure.

4.8.4.2. Policy

The Government will:

1. Develop RSS guided by Regulations for Development and Management of Roadside Service Stations in the country;
2. Promote development of Roadside Service Stations (RSS) along major highways in the country to contribute towards making the highways smart Transport and Economic Corridors, starting with the Northern Corridor; and,
3. Partner with private investors for the development of the RSS.

4.8.5. Road Freight Operators

4.8.5.1. Critical Issues

Liberalization and weak regulation of the road freight industry has resulted into an increase in the number of operators who are generally inexperienced and lack relevant transport fleet and freight managerial skills. This has contributed to unroadworthy freight vehicles, poor operating standards and services. The consequence of this is road transport services that are expensive, poor vehicle utilization and low returns on investment for the operators.

4.8.5.2. Policy

The Government will:

1. Work with the logistics sub-sector to set high standards and discipline for the entry of goods vehicle drivers and vehicle maintenance; and,
2. Promote self-regulation of the logistics sub-sector to enhance professionalism and improve workers' health, safety, security, gender equity and environment.

4.8.6. Road Freight Transport and the Environment

4.8.6.1. Critical Issues

Freight transport contributes significantly to generation of GHG emissions, noise and water pollution. Currently there are no publicized effective control measures in transportation of hazardous materials and substances, which can result into environmental disasters should a road crash or acts of terrorism happen.

4.8.6.2. Policy

The Government will:

1. Provide the regulatory framework and appropriate fiscal policies to promote energy-efficient and low-emission freight transport, including shifting long-distance freight from road to rail;
2. Ensure strict enforcement of regulations governing the transportation of hazardous materials and substances to minimize chances of occurrence of disasters, such as fires arising from spills of petroleum products through road crashes;
3. Establish effective disaster management measures, along the major highway corridors; and,
4. Put in place and enforce necessary regulations to prevent and address fuel spills and consider diverting such dangerous freight to the rail, pipeline, and inland waterway systems where population exposure is significantly lower.

4.8.7. Road Freight Transport and Health

4.8.7.1. Critical Issues

Road freight transport in the country has been identified as one of the major contributors to road crashes due to lack of intermediate RSS establishments, which result into high health care bill as well as emotional suffering, occasioned to family members and friends. The role of freight transportation, and the workers in the sector, in transmittal of diseases is also an issue.

4.8.7.2. Policy

The Government will:

1. Develop a framework to address the potential and actual negative effects of freight transport health related issues;
2. Integrate health related issues in road transport planning, design, development and operations, including the development of Roadside Service Stations (RSS) at strategic locations within the road network. The RSS will be equipped with health facilities, as well as serve as centres for sensitization on HIV/AIDS and human trafficking.

4.9. ROAD TRANSPORT SAFETY

4.9.1. Background

Road transport has also become a source of danger, a threat to private property, Environment, health and life. Road transport has contributed to high number of traffic crashes leading to fatalities and huge socio-economic costs.

The long-term strategic objective for road transport safety is to promote and implement efficient, integrated, and coordinated road traffic management systems in the country, involving role-players in all functional areas of road transport management.

4.9.2. Road Safety and Traffic Management

4.9.2.1. Critical Issues

1. Low capacity of NTSA to enforce road safety regulations;
2. Ineffectiveness of the traffic control function;
3. Inadequate resources for Road Safety and Traffic management; and,
4. Lack of a sustainable road safety investment programme.

4.9.2.2. Policy

The Government will:

1. Adopt the "Safe Systems Approach" road safety in Kenya, which advocates for "Safe Road users", "Safe road environment" and "Safe vehicles";
2. Domesticate and enforce legal and international road safety conventions;
3. Strengthen the capacity of NTSA for better coordination and management of road traffic safety, particularly on: driver training and testing; vehicle inspections; crash data collection and analysis; and, using technology to pro-actively prevent road crashes from happening;
4. Strengthen all road agencies involved in planning and developing road transport infrastructure, and regulating transport services, to have the necessary skills and adequate funding to deal with road traffic crashes through collaborative and proactive planning and implementation;
5. Enhance the level of professionalism of the Traffic Police in traffic control, modern methods of enforcement focused on the psychology of the road user and unpredictability, prosecution, and post-crash emergency response; and,
6. Enhance traffic control, safety management and enforcement through the use of ICT (e.g. Intelligent Transport Systems (ITS), cameras, CCTVs, etc.), emergency response vehicles and equipment.

4.9.3. Administration and Adjudication of Traffic Regulations

4.9.3.1. Critical Issues

1. Delay in adjudication of traffic offences in law courts due to poor coordination between enforcement of the traffic law and its regulations, and the adjudication function;
2. Deficiencies in existing traffic regulations; and,
3. Non-compliance with traffic regulations and vehicle standards by users.

4.9.3.2. Policy

The Government will:

1. Review the Traffic Act (Cap 403) to seal existing deficiencies that are currently being exploited, and enhance management of fines;
2. Adopt the use of ICT in the automation of administration of fines; and,
3. Operationalize the points demerits system for driving licenses.

4.9.4. Road User Knowledge, Skills, and Attitudes

4.9.4.1. Critical Issues

1. Low level of safety awareness amongst road users;
2. Limited driver/rider skills and poor attitude; and,
3. Low level of research in Road Safety management.

4.9.4.2. Policy

The Government will:

1. Allocate adequate resources for sensitization and enhancement of road user safety knowledge, skills, attitudes, and traffic law enforcement while enhancing collaboration on best practices on transport safety;
2. Enhance driver/rider training standards, testing, re-testing, licensing and implementing physical check-up in collaboration with relevant government and vetted private institutions in accordance with approved curriculum; and,
3. Implement traffic management controls and law enforcement programmes through research and adoption of modern traffic management systems.

4.9.5. Post-Crash Management

4.9.5.1. Critical Issue

Uncoordinated and inadequate post-crash care including relaying of information, coordination of rescue services, and trauma care.

4.9.5.2. Policy

The Government will:

1. Establish coordination mechanisms for development and implementation of effective post-crash incident management;
2. Build capacity for incident management and establishment of trauma centres; and,
3. Facilitate and enhance detailed crash investigations to build knowledge on road crash preventive measures.

4.9.6. Planning, Engineering, and Vehicle Inspection for Road Safety

4.9.6.1. Critical Issues

1. Lack of integrated land use and transport plans that address incompatible road uses and access control;
2. Inadequate framework for the development and review of road design manuals and road safety audit manuals;
3. Low compliance to the requirements of the road design manuals; and,
4. Use of unroadworthy vehicles leading to increased crashes and pollution.

4.9.6.2. Policy

The Government will:

1. Establish a coordination framework between institutions responsible for land use planning and road infrastructure planning and development;
2. Develop a framework for regular review of road design manuals to international best practices in road safety. The manuals shall have guidelines for traffic engineering control devices such as traffic signals; road signs and road markings; protection measures; off-carriageway (roadside) safety measures; monitoring and evaluation;
3. Enhance the framework for instigation of road safety audits during planning, development and operation of roads; and,
4. Undertake continuous review of vehicle quality standards (including GHG emissions) and enforce compliance through random and periodic vehicle inspections.

4.9.7. ROAD TRANSPORT DATA AND ICT

4.9.7.1. Critical Issues

1. Inadequate utilisation of automation in the roads sub-sector for real time data management. Several software applications have been developed to solve some of the major transport problems, including Regulation of traffic, by traffic signals; Monitoring of road traffic offenders and accidents, Web-based information on the condition of roads, and global positioning systems for road transport; and,
2. Poor coordination of stakeholders involved in road information administration has contributed to lack of, and segregated road transport data.

4.9.7.2. Policy

The Government will:

1. Establish a comprehensive and coordinated data and information management system, based on models that enable for the provision of an integrated demand and supply driven road transport infrastructure and services;
2. Develop a data management framework that accommodates modern data collection technologies such as GIS, HSWIMS, CCTVs and Virtual Stations, to continuously collect traffic data;
3. Standardize, upgrade and integrate existing databases for road traffic aspects not covered by TIMS and make this available to the relevant authorities; and,
4. Invest in ICT infrastructure, capacity building, and integrate national and regional ICT systems.

5. RAIL TRANSPORT SUB-SECTOR

5.1 BACKGROUND

This policy will focus on the development, rehabilitation and expansion of the railway network which is integrated with other modes of transport. It will also embrace integrated development of rail network and associated commercial and logistics hubs including Transit Oriented Development within the operational railway land while also promoting commercialization of landed assets within non-operational areas. Further, the policy will focus on improvement and financial sustainability of freight and passenger services and development of framework for the economic and safety regulation, open access system, and business spin-off in the railway sector.

In order to avoid reliance on exchequer and sustainably support the provision of passenger services which are provided as part of the public social obligation, the policy will promote cross-subsidization across the rail business units. In addition, the policy encourages private sector participation.

5.2. LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORK

5.2.1. Critical Issues

1. KRC is currently the developer and owner of railway infrastructure, provider of rail services and regulator of the sub-sector in terms of economic and safety regulation. The existing arrangement is inconsistent with best practices because delivery of services (development and operations) and regulatory (Economic and safety) roles are bundled together;
2. The existing legal and institutional framework places the whole burden of railway development on the Government, which has resulted in under-investment in the sub-sector. The result is a dilapidated MGR infrastructure and rolling stock, which now require heavy capital investment;
3. The existing institutional and operational framework does not provide for dedicated freight and passenger services as both services share the same railway tracks and rolling stock. For example, on MGR, long distance passenger and commuter operations share rolling stock and railway track with freight; and
4. The existing legal framework does not have adequate provision to address encroachment and grabbing of land reserved for railway use and vandalism of railway infrastructure.
5. Lack of harmonized railway development, operation, laws and regulations within East Africa Community and Africa Network.

5.2.2. Policy

The Government will:

1. Review the legal framework to allow for the participation of both Government and private sector in the rail infrastructure development and operations including provision of business spin-off and protection of railway land and landed assets against encroachment and grabbing;
2. Establish an appropriate legal and regulatory framework for economic and safety regulation; and open-access system that allows for the adoption of the following three options:
    (i). Public rail infrastructure development, ownership and operations;
    (ii). Public rail infrastructure development and ownership with operations contracted out; and

(iii). Private rail infrastructure development, ownership and operations.

3. Develop a collaborative framework to review and harmonize railway development standards and operational regulations within the EAC region

5.3. RAIL TRANSPORT NETWORK PLANNING, DEVELOPMENT AND MANAGEMENT

5.3.1 Critical Issues

1. The Metre Gauge Railway (MGR) which has a total track of 2,778 km and is 120 years old is constrained by low design capacity and limited coverage. In addition, Standard Gauge Railway (SGR) has high design capacity but limited coverage of a total track of 721km (including loop/yard lines) which is under-utilized;
2. Freight and passenger services share a single track, which does not provide for exclusive railway corridor network for urban commuter transport designed for Mass Rapid Transport (MRT) and optimization of railway operation services;
3. Inadequate inland waterway rail link infrastructure connecting Kenya and other countries;
4. The railway network planning and development is not integrated with associated commercial and logistics hubs as well as multimodal and intermodal transport which inhibits seamless connectivity between different modes of transport and affects last mile connectivity and utilization of its capacity; and,
5. Lack of coordinated planning and development of rail and road infrastructure at crossing points compromising safety.

5.3.2 Policy

Government will:

1. Integrate railway development with associated commercial and logistic hubs and other modes of transport;
2. Develop National Rail Transport Masterplan (NRTMP) based on the concept of the e Integrated National Transport Masterplan (INTMP);
3. Develop long term capital investment plan for improvement, maintenance, expansion and development of railway network;
4. Develop an exclusive commuter rail network and a dedicated commuter rail management as part of Mass Rapid Transit System (MRTS) and
5. Develop a collaborative framework for joint planning, design and development of road and rail infrastructure at crossing points.

5.4 LAND USE PLANNING AND RAIL TRANSPORT

5.4.1 Critical Issues

1. Non-alignment of County land use plan with railway network development affecting accessibility to the railway facilities, optimal utilization and discouraging investment supporting rail operations e.g. Commercial and logistics hubs, parking and marshalling yards etc. which results in inadequate reserve for rail and high land acquisition costs;

2. Encroachment and grabbing of railway land adversely impacting on railway safety operations and future expansion of the railway network ultimately necessitating resettlement;
3. Railways has land spread across the country most of which is not demarcated and titled and whose development and utilization is not integrated with railway network planning; and,
4. Lack of development plan and commercialization strategy for the operational (rail infrastructure and associated commercial and logistics facilities) railway land and landed assets.

5.4.2 Policy

1. Develop a collaborative and coordination framework between the County Governments and railways to facilitate regular realignment and integration of the railway master plan with National and County Spatial Plans;
2. Develop a National Railway Transport Masterplan (NRTMP) that is integrated with National and County Spatial Plans and cross border transport plans and strategy. The NRTMP will align with existing national and county land use plans and cross border plans and strategy to guide reservation and acquisition of land for future rail development;
3. Develop commercialization plan for landed assets; and an integrated development plan for railway infrastructure and associated commercial and logistics hubs within operational land facilities including land value capture; and,
4. Develop a plan for securing railway land reserved for railway development and landed assets.

5.5 RAIL OPERATIONS

5.5.1 Critical Issues

1. Commuter rail operations are not supported by transit-oriented development (TOD) resulting in limited operation during peak hours only;
2. Rail operation is not aligned to the socio-economic development in the country due to inappropriate stocking and sharing of locomotives and rolling stock between freight and passenger services resulting in distortion in allocation of assets;
3. Lack of seamless operations across railway networks and cross borders;
4. Low market share of only 22.2% in 2022 of the port throughput of 34 million tonnes, resulting in under-utilization of design capacity of the railway network;
5. Inadequate leverage on technology for railway operations;
6. Reliance on exchequer and unsustainable provision of passenger services as part of the public social obligation; and,
7. Inadequate commercialization of operational railway land and landed assets.

5.5.2 Policy

The Government will:

1. Address network deficiencies and operational inefficiencies, and allow for adequate pricing of railway services based on demand and supply;
2. Promote Modal shift from road to rail for transportation of bulk cargo over long distances, and support social economic development within various parts of the country;
3. Support exploitation of cross border rail freight markets/destinations to address lack of a bilateral agreement for cross boarder movement;
4. Promote digital transformation and automation of rail operations, and progressively integrate ICT solutions in rail transport;

5. In order to avoid reliance on exchequer and sustainably support the provision of passenger services, which are provided as part of the public social obligation, the policy will promote business spin-off and cross-subsidization across the rail business units and encourage private sector participation;
6. Ensure progressive digitization of railway records and information; and
7. The system will also include the integrated communication and information management channels and shared data management system.

4.6. INTEGRATION OF RAILWAY WITH OTHER MODES OF TRANSPORT

4.6.1. Critical Issues

1. The railway network is not well-linked to other modes of transport for seamless connectivity. This adversely affects exploitation of their comparative advantages in terms of costs and transit times; and,
2. There is no national rail transport development plan to guide rail network development and integration with other modes.

4.6.2. Policy

Government will

1. Promote integrated inter and multi-modal transport planning and development particularly to link railway transport systems with other transport modes for both freight and passenger transport;
2. Develop National Rail Transport Masterplan (NRTMP), as part of the Integrated National Transport Masterplan (INTMP); and,
3. Develop a long-term rail capital investment plan to guide prioritization of resource mobilization for the sub-sector.

4.7. URBAN COMMUTER RAILWAY TRANSPORT

4.7.1. Critical Issues

1. Lack of exclusive railway corridor for urban commuter transport;
2. The existing commuter railway system is not designed for mass rapid transit;
3. The urban commuter railway transport is not run separately from long-distance passengers and freight thereby creating operational inefficiencies and accounting; and,
4. Commuter rail services is not financially viable.

4.7.2. Policy

The Government will:

1. Develop exclusive commuter railway transport corridors, ensure that commuter rail system is designed as part of the Mass Rapid Transit System (MRTS) and establish a commuter railway unit within KRC;
2. Provide and set out arrangements for Public Service Obligation (PSO) payments to passenger railway services;
3. Develop Transit-Oriented Development (TOD) along commuter railway networks to increase passenger transport demand as part of the MRTS development strategy;
4. Develop Transit-Oriented Development (TOD) along commuter railway networks to increase passenger transport demand as part of the MRTS development strategy;
5. Provide a subsidy programme for commuter services; and

6. Modernize commuter service rolling stock.

4.8. REGIONAL INTEGRATION

Kenya is geographically located between the Indian Ocean and land-locked countries of Uganda, Ethiopia and South Sudan. In addition, the colonial government strategically constructed an integrated railway network between Kenya, Uganda and Tanzania. Therefore, Kenya stands to gain economically by promoting further development and integration of the railway network with other East African Countries.

4.8.1. Critical Issues

1. Delay in implementation of EAC regional railway projects due to lack of investment; and,
2. Lack of harmonized railway development, operation, laws and regulations within East Africa Community and Africa Network.

4.8.2. Policy

The Government will:

1. Facilitate investment for the EAC regional railway projects;
2. Develop special economic zones along the railway corridor to encourage local and foreign investments; and,
3. Advocate for harmonization and implementation of UN Regional Integration Standards on railway development and operational regulations within the EAC region.

5. MARITIME TRANSPORT

6.1. BACKGROUND

The Government is cognisant of the strategic importance of the maritime industry and the impact it bestows on the wider economy. An efficient and affordable maritime transport will support increased economic activities as envisaged in Kenya's Vision 2030.

The maritime industry operates in an international competitive Environment where quality of service and efficiency are paramount. The activities of the Kenyan maritime industry heavily depend on international shipping service providers. Therefore, the non-optimal performance of the maritime sub-sector is a major impediment to the competitiveness of the country's exports and of its products in the liberalized domestic market, especially in the East African region.

This policy addresses maritime transport issues relating to economic principles, trade and cargo, financing, ship registration, ports administration and operations, safety, health and Environment, human resources and capacity building, ferry and inland waterways among others.

6.2. LEGAL, REGULATORY, AND INSTITUTIONAL FRAMEWORK

6.2.1. Critical Issues

1. The existing legal and regulatory frameworks, namely Merchant Shipping Act 2009, Kenya Maritime Authority Act 2006 and Kenya Ports Authority Act, CAP 391 do not adequately address institutional setup and emerging issues/trends in the maritime industry (e.g modern ports operations model), and are not alignment with the Constitution 2010 and;
2. Delay in operationalization of the Merchant Shipping Act 2009 and domestication of conventions/protocols/treaties including the IMO convention on maritime transport facilitation to promote efficient delivery of maritime services.

6.2.2. Policy

The Government will review the legal and regulatory frameworks and operationalization of the Merchant Shipping Act and domestication of conventions/protocols/treaties including the IMO convention on maritime transport facilitation to promote maritime service delivery efficiency.

6.3. PLANNING, DEVELOPMENT AND MANAGEMENT OF PORT INFRASTRUCTURE

6.3.1. Critical Issues

1. Planning and development of port infrastructure is not integrated with evacuation systems for cargo and passengers, and other auxiliary port infrastructure such as storage and logistics, amongst others;
2. Inadequate port infrastructure and natural configuration restricting navigability and manoeuvrability of larger vessels at the Port of Mombasa and inland water ports;

3. Lack of a long-term maritime sub-sector investment plan for development, maintenance and operationalization of port infrastructure and facilities;
4. Lack of a strategy to guide development of container and general cargo terminals based on industry needs and trends;
5. Lack of integrated development of port infrastructure and associated commercial and logistics hubs such as special economic zones and industrial parks; and,
6. Encroachment of port land resulting in unwarranted compensations and overall delays in port infrastructure development.

6.3.2. Policy

The Government will:

1. Integrate planning and development of Port infrastructure with multi-modal cargo and passenger evacuation system and commercial logistics and hubs;
2. Develop Maritime Transport Master Plan (MTMP), including a National Port Masterplan for the development and management of deep seaports along the coast line and inland ports, in line with the concept of the Integrated National Multimodal Transport Master Plan (INTMP);
3. Develop a strategy to guide development of container terminals and general cargo terminals based on industry needs and trends;
4. Develop a long-term Maritime Sub-Sector Investment Plan (MSIP), including resource mobilisation strategies to attract investments in the Port sector; and,
5. Secure the existing land for future maritime development and undertake review of the land use plans.

6.4. PORT OPERATIONS AND ADMINISTRATION

6.4.1 Critical Issues

Kenya's current model which combines port planning, development, management, operation and economic regulation under KPA impacts negatively on port efficiency, regional competitiveness and participation of the private sector.

6.4.2 Policy

The Government will develop a legal and institutional framework that separates the port planning and management and economic regulation from port development and operations.

6.5. FERRY AND CRUISE TRANSPORTATION

6.5.1. Critical Issues

1. Ferry services have not been fully developed and exploited for freight and passenger transportation along the coastline and inland waterways;

2. Lack of a legal and regulatory framework to support development and management of ferry transport; and,
3. Inadequate and aging ferry infrastructure and equipment that is unable to cope with increasing passenger travel demands.

6.5.2. Policy

The Government will:

1. Develop a legal and regulatory framework, and strategies to support development and management of ferry transport along the coastline and inland waterways; and,
2. Develop a medium and long-term capital investment plan, as part of the MSIP, and strategy to attract invest for ferry transport.

6.6 INLAND WATERWAY TRANSPORT

6.6.1. Critical issues

1. Underdeveloped inland port infrastructure and unavailability of adequate vessels for cargo and passengers;
2. Uncoordinated development of inland port infrastructure at the EAC regional level inhibiting inter-operability;
3. Outdated hydrographic surveys and charts leading to safety of navigation concerns;
4. Inadequate intermodal transport linkages; and,
5. Lack of a legal and regulatory framework to support maritime cabotage.

6.6.2. Policy

The Government will

1. Develop a strategy and masterplan, as part of the MTMP, for development and management inland waterways infrastructure;
2. Develop a medium and long-term capital investment plan and strategy, as part of MSIP) to attract investment for inland water transport;
3. Develop and align inland water port development plans and hydrographic surveys with EAC partner states; and,
4. Develop a cabotage regulatory framework to support private investments.

6.7. SHIP REGISTRATION

6.7.1. Critical Issues

Kenya has a closed ships register that restricts registration of vessels from other countries, which impact negatively on development of Kenya as a maritime hub.

6.7.2. Policy

The Government will:

1. Develop the legal and regulatory framework for an open ship register (KenShip) to promote development of Kenya as a maritime hub; and,
2. Revive and strengthen the Kenya National Shipping Line (KNSL) to compete with international shipping, promote cabotage and support exploitation of the Blue Economy.

6.7. MARITIME TRANSPORT SERVICES

6.7.1 Critical Issues

1. Low investment in maritime transport services such as international sea transport, shipping agency, coastal shipping, security services, ship handling, ship repairs, marine insurance, seafarers' recruitment agencies, and bunkering;
2. Inadequate legal framework to regulate maritime transport services; and,
3. Low optimisation of port and inland waterways' capacity due to over-dependence on imports, insignificant export volumes and inadequate investment and development of maritime transport related economic activities.

6.7.2. Policy

The Government will:

1. Domesticate international treaties/conventions and develop requisite legal and regulatory frameworks to promote domestic private sector investment in maritime transport services and supporting infrastructure (local ship building, repair, inspection and bunkering facilities); and,
2. Review and develop a coordination and collaboration framework/strategy for provision of inland waterways and inter-county maritime transport services with County governments and EAC partner states, respectively.

6.8 HUMAN CAPITAL DEVELOPMENT AND TRAINING FACILITIES

6.8.1. Critical Issues

Low investment in local human capital and development of training facilities resulting in high cost of training and shortage of skilled maritime transport workforce.

6.8.2. Policy

The Government will formulate and implement a national strategy for the development of human capital and training facilities for the maritime sub-sector.

6.9. TECHNOLOGY AND INNOVATION

6.9.1 Critical Issues

1. Inadequate application and integration of technology in planning, development and management of the maritime sector including low end-to-end automation of Port processes and disjointed systems leading to inefficiencies; and,
2. Inadequate systems for Rapid Data Management and Recovery.

6.9.2. Policy

The Government will develop and implement a Maritime Transport Information Management System (MTIMS), including a Rapid Data Management and Recovery, as part of the NTIMS.

6.10 MARITIME ACCIDENTS INVESTIGATION

6.10.1. Critical Issue

Lack of institutional setup for independent maritime accidents investigation as per the requirement of the IMO.

6.10.2. Policy

The Government will develop a legal and institutional framework for maritime transport accidents investigation in line with IMO requirements.

7. AIR TRANSPORT SUB-SECTOR

7.1. BACKGROUND

There is a need for improvement and modernization of critical infrastructure and facilities as well as air navigation equipment and utilities in all aerodromes for the country to establish itself as a regional aviation hub of choice and remain competitive.

The policy objective is to create an enabling framework that will nurture the development of a safe, secure, efficient, accessible and affordable air transport system, whilst keeping at the leading edge of technological advancement within the globalized Environment.

7.2. LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORK

7.2.1. Critical Issues

1. Delays in domestication of changes in international conventions and global aviation standards into national laws and legislations related to the air transport sub-sector to ensure compliance;
2. The existing institutional set-up for Air Accidents Investigation function does not provide financial and operational autonomy required as per the international aviation standards;
3. Lack of a framework for the proper planning, development and maintenance of public and private airstrips in accordance with the set aviation safety standards;
4. Weak institutional framework for airspace operations and management;
5. Lack of a regulatory framework to implement ICAO Annex 9 on air transport facilitation by government agencies, provision of efficient air transport services, and enhance synergy between the relevant government agencies; and,
6. Inadequate economic regulatory framework to inform setting of tariffs, aeronautical charges and fees, investments and service quality standards.

7.2.2. Policy

Government will:

1. Review the primary legislations and regulations governing the operations and management of air transport (Civil Aviation Act) and align them to relevant international conventions, global aviation standards and national requirements;
2. Review KAA Act, Cap 395, to incorporate modern airport management practices and business trends and develop requisite regulations;
3. Develop an institutional framework that provide financial and operational autonomy for the air accident investigation function as per international aviation standards;
4. Develop and implement a framework for planning, development and maintenance of public and private airstrips in order to meet the required aviation safety standards;
5. Develop and strengthen legal and institutional frameworks respectively for airspace operations and management;
6. Establish regulatory framework to facilitate compliance with SARPs pertaining to Annex 9 of ICAO; and,
7. Review and strengthen the economic regulatory function within the existing regulatory framework for sustainable civil aviation.

7.3. AVIATION SAFETY AND SECURITY

7.3.1. Critical Issues

1. Inadequate Aviation Safety and Security Oversight capacity to ensure enforcement and compliance with ICAO Safety and Security Standards and Recommended Practices within the entire aviation sector; and,

2. Cyber security threats.

7.3.2. Policy

Government will:

1. Develop a strategy to build and strengthen the Aviation Safety and Security Oversight capacity; and,
2. Strengthen cyber security defence systems.

7.4. AERODROMES PLANNING, DEVELOPMENT AND MANAGEMENT

7.4.1. Critical Issues

1. Limited capacity of aerodromes contributing to congestion and poor services;
2. Lack of aerodrome master planning to inform intermodal planning and operations, and alignment to adjacent land use, which compromise aviation safety and security;
3. Lack of integrated development of aerodrome infrastructure and associated commercial and logistics hubs e.g. Special Economic Zones, (SEZs);
4. Lack of a national strategy to promote air transport market access within the Yamoussoukro Decision framework as envisaged in the Single African Air Transport Market (SAATM); and,
5. Inadequate application and integration of ICT in aviation planning, development, management and service provision, including data management.

7.4.2. Policy

Government will:

1. Develop a prioritized a medium- and long-term Air Sub-Sector Investment Plan (ASIP) for aerodromes and associated facilities to improve their operational and financial sustainability;
2. Develop a Air Transport Master Plan (ATMP), based on Integrated National Multimodal Transport Plan (INTMP), and aligned with land use planning around aerodromes;
3. Develop a strategy for integrated development of aerodrome infrastructure and associated commercial and logistics hubs e.g. Special Economic Zones, (SEZs);
4. Develop a national strategy to promote air transport market access within the Yamoussoukro Decision framework as envisaged in the Single African Air Transport Market (SAATM); and,
5. Adopt smart transport systems, such as Integrated National Transport Information Management System (INTIMS), for planning and management of the aviation industry including data management.

7.5. AIRSPACE MANAGEMENT

7.5.1. Critical Issues

1. Large portions of the airspace are prohibited, restricted or declared dangerous areas for civilian use which limits the optimal utilization of the Kenyan airspace; and,
2. Inadequate capacity and lack of application of ICT in air space planning and design.

7.5.2. Policy

Government will;

1. Develop a national strategy for optimal allocation and utilisation of Kenyan airspace between civil and military operations and for scientific purposes; and,
2. Develop a strategy to build and strengthen capacity in airspace planning and design.

7.6. SEARCH AND RESCUE

7.6.1. Critical Issues

1. Lack of a coordination framework between aeronautical and maritime search and rescue operations, including joint resource mobilisation and sharing of information.
2. Delayed action on emergency beacon alerts due to over-dependence on the mission control centre in Italy.

7.6.2. Policy

Government will:

1. Develop a National Search and Rescue coordination and response framework for joint operations, resource mobilisation and sharing of information between Aeronautical and Maritime agencies; and,
2. Establish a Mission Control Centre to receive and distribute emergency beacon alerts for Kenya and the region for swift action.

8.0. PIPELINE TRANSPORT SUB-SECTOR

8.1. BACKGROUND

During the last five years, the Government has accelerated investments and activities to ensure the swift and effective commercialisation of Kenya's oil reserves. One major activity was the Early Oil Pilot Scheme (EOPS). KPC was at the heart of EOPS and refurbished three tanks at KPRL, with a capacity of 429,000 m^3 litres, to receive and store crude oil from Turkana for export. These are specialised heated tanks to cater for the viscous nature of Turkana oil. KPC also modified Kipevu Jetty, and installed a steam boiler, all in readiness for Kenya's emergence as an oil exporter.

The forecast demand for the Mombasa-Nairobi pipeline is 14.9 million m^3 by 2030 (with 75% modal split using pipeline from 2030) and 22.47 million m^3 by 2040 against a current existing capacity of 10.8 million m3. To meet the various demand and boost the capacity, KPC is currently undertaking various initiatives, including upgrading of pipelines, construction of jetties, construction and rehabilitation of storage tanks and pump stations.

The Government's long-term plan is to ensure that pipeline transport capacity and network is adequate, safe and integrated with other modes through the formulation and implementation of appropriate policies and strategies.

8.2. PIPELINE INFRASTRUCTURE PLANNING, DEVELOPMENT AND MANAGEMENT

8.2.1. Critical Issues

1. Inadequate infrastructure for the supply of petroleum products for all sectors of the economy;
2. Inadequate intermodal system (change over system from pipeline to other modes) for efficiency, safety and to prevent diversion of petroleum before it reaches the destination;
3. Incompatibility of common user facilities at KPC terminals with rail and road transport, which results in inefficiencies in loading of petroleum products; and,
4. Use of outdated ICT systems that do not guarantee integrity of the pipeline system and operations.

8.2.2. Policy

The Government will:

1. Develop a Pipeline Transport Masterplan (PTMP) in line with the Integrated National Transport Master Plan (INTMP);
2. Develop a medium and long-term Pipeline Sub-Sector Investment Plan (PSIP) and strategy to attract investment in pipeline transport;
3. Develop a framework for intermodal system for transportation of petroleum products; and,
4. Strengthen and upgrade existing ICT system in line with the concept of Smart Transport System/ Integrated National Transport Information System to support pipeline operations.

8.3. LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORK

8.3.1. Critical issues

The mandatory requirement to new oil companies to maintain minimum stock levels equivalent to 2,400 m³ limits the pipeline's access to many small oil companies, which has made these companies transport their fuels by road increasing the risks associated with spillages and fires and the consequences thereof.

8.3.2. Policy

The Government will review current regulations to promote accessibility of pipeline transport by large and small companies at all levels to reduce the risks associated with long distance transport of petroleum products.

8.4. SAFETY AND SECURITY

8.4.1 Critical Issues

1. Vandalism of oil and gas facilities and infrastructure, which results into product theft and spillage;
2. Inability of inter-agency team to adequately address petroleum product-related emergencies within the country, lack of contingency plans and emergency responsiveness;
3. Mushrooming of informal settlements along the pipeline way-leave poses a danger to the pipeline, inhabitants, and the Environment and Climate Change; and,
4. ICT system vulnerability to terrorism and cyber-attacks can result in significant damage to critical pipeline infrastructure and operations.

8.4.2 Policy

The Government will:

1. Develop a robust cybersecurity/ terrorism and disaster management systems for the pipeline transport sub-sector;
2. Develop a coordination and response framework for joint mobilisation of resources and operations among inter-agencies involved in emergency response relating to petroleum products; and,
3. Adopt IT intelligent-based system for prevention and detection of vandalism of pipeline infrastructure.

8.5. HEALTH, SAFETY AND ENVIRONMENT AND CLIMATE CHANGE

8.5.1. Critical Issues

1. Spillage of petroleum products at the depots and service points negatively impacts human health and Environment (flora and fauna); and,
2. Large carbon footprint due to use of outdated technologies (e.g. pipeline pumps) that require high fossil fuel energy.

8.5.2. Policy

The Government will:

1. Enforce the Occupational Safety and Health Act (OSHA), 2007 to ensure the safety and health for all persons and property within oil and gas facilities;
2. Enforce the Environment Management and Coordination Act (EMCA), 1999 to ensure Environment protection; and,
3. Develop and introduce energy saving measures and technologies that will reduce carbon footprint.

GLOSSARY OF TERMS

Concession: Is the authority and contract to operate a road, rail line, or network at an agreed price. It could be awarded to either the public or private sector.

Contract: Is an agreement between an authority and an operator regarding the delivery of a service at an agreed price.

Critical Issue: An issue arises in a national, district or local community when there are conflicting goals and objectives (desires or perceptions) within the community.

Framework: Is an outline or skeleton which provided the structure and form around which a plan or policy or strategy is constructed.

Integrated Plans: Plans which encompass a system which includes land use, spatial development, infrastructure, services and the finance thereof.

Intermodal Transportation: Is the concept of transporting freight in such a way that all the parts and facets of the transportation process, including information exchange, are efficiently linked and coordinated, offering flexibility, irrespective of the particular transport mode or modes used. It is not just the infrastructure, vehicles, rolling stock or equipment involved, but the management and operation processes. The true advantage of inter-modalism is the ability to logistically and effectively link two or more modes of transportation for the benefit of customers and users.

Land Passenger Transport Planning: Is a comprehensive and integrated process for generating a plan relating to the regulation and management of transport infrastructure (roads, rail, stations, terminals and public transport facilities) and for regulating public transport operations/services and the use of infrastructure by both operators of public transport and private travellers. Because of the spatial relationship between human and economic activities, resulting in the demand for travel, it is essential that an integrated passenger transport plan should be developed in the context of a land use plan which is supportive of efficient land passenger transport.

Land Passenger Transport: Is a generic term which describes the movement of people by land-based travel modes, including movement by Motorized and non-motorized modes, and on foot. It encompasses both urban and rural passenger travel, for any purpose, by both private and public travel modes.

Logistics: Is the process of planning, implementing, and controlling the efficient, cost- effective flow and storage of raw materials, in-process inventory, finished goods, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements.

Passenger Transport: Is a generic term which describes the movement of people by any travel mode, including movement by motorized and non-motorized modes, and on foot. It encompasses inter-city, urban and rural passenger travel, for any purpose, by air, sea and over land and by both private and public travel modes.

Permission: The authority to operate a public transport route or network without subsidy.

Plans and Planning: A plan is a product of the process of planning which is an organized method by which things are to be done. In the transport context, a plan is a vision of the desired future condition, a set of objectives to achieve the vision, policies to regulate the transport system, strategies, actions and projects to implement the plan and a financial statement and budget.

Policy Goal: A goal is an idealized end-state of the system or a desired direction of the evolution of the system.

Policy Objective: An objective is a target, the attainment of which will help towards reaching a stated goal.

Policy Recommendation: Is an adopted framework or basis for the action needed to overcome identified problems and achieve stated goals and objectives.

Public Transport: Is the conveyance of people or freight for reward by any travel mode whether car, metered taxi, minibus-taxi, bus, tram and light and heavy rail.

Seamless Transport Services: A user-friendly service from origin to destination which is not

disrupted by time-consuming or costly transfers between uncoordinated modes or carriers, or by compliance with non-integrated formalities at border crossings.

Strategy: A strategy is a plan or programme of action to be taken in terms of a policy. Such action may often take the form of a series of projects.

Vision: A vision is a commonly-shared foresight of future conditions.

Airport Operator: Generally, refers to the entity responsible for provision and maintenance of airport infrastructure and the provision of essential services including passenger search and perimeter security, firefighting and cleaning and maintenance of passenger terminal areas. They also allocate space and resources to airlines and commercial concessionaire

Spin-off: is a form of divestiture; a new and separate company created by a parent company