

COVER PAGE

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This document has been elaborated and printed with support from the European Union's Institutional Support to Kenya's Transport Sector programme funded under the 11th European Development Fund.



Funded by the European Union

FOREWORD

The current Medium -Term Plan (MTP III) is the third phase of the five-year cycle of programming for the implementation of Vision 2030 which is Kenya's long-term development blue print adopted for the period 2008-2030.

In addition to the objectives of Vision 2030, the MTP III also incorporates the Big Four Agenda in which the four priority areas are; affordable housing, food security, universal healthcare and enhanced manufacturing. Under Vision 2030, infrastructure in Transport, Urban Development and Public Works provides one of the nine foundations and enablers for national transformation while Housing is a key component of the Big Four Agenda.

The provision of adequate physical infrastructure and services in transport, housing, urban development and public works is deemed crucial for the country's economic transformation in order to attain the status of a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 within a clean and secure environment. In this respect, the MTP III Infrastructure Sector Plan contains key programmes and projects to be implemented in the five-year period (2018-2022) to support all other sectors' development agenda in line with the Vision 2030.

This Strategic Plan 2018-2022 is prepared in line with the implementation of the MTP III and provides a Situational Analysis, the Strategic Objectives, identifies the priority projects and sets out an Implementation Framework which contains both human and financial requirements to facilitate effective implementation. The Strategic Plan is structured in line with the MTP III focus on development of policy, regulatory and institutional frameworks; investment in physical infrastructure; optimisation on accessibility, quality and functionality; disaster preparedness; protection of the environment; and mitigation of climate change. Emphasis has also been given to development of human capital to provide the skills necessary to meet the requirements of a growing economy. At the ministerial level, the Strategic Plan seeks to optimise coordination among the five state departments in the Ministry in order to enhance synergies, synchronise planning and implementation of programmes/projects and to avoid duplication of efforts and in the use of resources.

This Strategic Plan has been developed through the standard process involving key stakeholder participation including the State Departments, state agencies, the private sector, development partners, and other stakeholders. Its implementation including monitoring and evaluation will be coordinated by the respective state departments/ agencies (MDAs) and disseminated to all stakeholders.

I wish to invite all our citizens, the private sector, and our development partners to join hands with the Government in order to ensure successful implementation of this Strategic Plan.



*James Macharia, EGH
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PREFACE AND ACKNOWLEDGEMENTS

This Strategic Plan has been prepared in order to implement the Third Medium Term Plan (MTP III) for the period 2018-2022. It covers the entire ministry comprising five State Departments namely, Transport, Infrastructure; Shipping and Maritime; Housing and Urban Development, and Public Works. Preparation of the Strategic Plan was undertaken through a consultative process comprising both internal and external stakeholders.

The primary goal of planning and execution is to develop policies, regulatory and institutional frameworks, provide physical infrastructure facilities and build capacity in the country so as to reduce the cost of doing business. Reduction of the cost of business promotes our capacity to increase our production for both domestic and foreign markets which ultimately improves the socio-economic status of the citizens.

The Strategic Plan has been developed largely using the Official Guidelines provided by the National Treasury and Planning. This entailed a stakeholder consultative and participatory process covering various State Departments, their respective state agencies (SAGAs), key industry practitioners in the private sector, academic and research institutions and development partners. The five state departments and their respective state agencies provided their inputs for a first Draft which was then reviewed by the all stakeholders who provided their inputs through comments and suggestions. The stakeholder comments and suggestions were valuable inputs to into the Strategic Plan.

The policies, programmes and projects for implementation under the Strategic Plan were identified largely from the MTP III and the associated Sector Plans that were developed prior to the compilation of the MTP III. There are five Key Result Areas from where Strategic Objectives are developed. Against each strategic objective, the necessary programmes and projects for implementation are identified in order to realise the Strategic Objective.

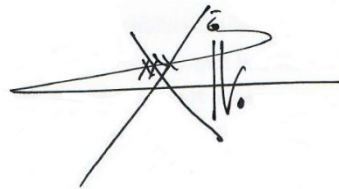
At the ministerial level, efforts will be put to ensure that there is effective coordination among state departments in programming and project implementation to ensure that at the time of projects there are synergies to ensure that at project commissioning, all the necessary interfaces in physical infrastructure, regulation and capacity building are synchronized. Synchronisation will mitigate the effects of any bottlenecks due to the lack of interfaces to efficiently complete the logistical chains.

The preparation of the Strategic Plan was coordinated by a Taskforce comprising the Heads of the Central Planning and Project Monitoring Units in the five State Departments chaired by Mr. John M. Kimani. We take this opportunity to express our appreciation to the Taskforce and to other members of staff from the State Departments and the respective state agencies for the effort they put in developing the initial drafts and for reviewing them after inputs from both the internal and external stakeholders.

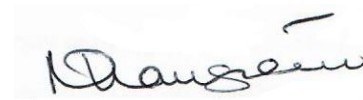
We would like to call upon all the stakeholders to provide their support and fully participate in the implementation of the Strategic Plan and to provide the Ministry with the necessary information that will be required to monitor and evaluate the implementation of the Plan through quarterly, annual and Mid Term reviews as provided in the Implementation Matrix. The active stakeholder involvement will greatly assist in informing the Ministry to determine the most appropriate interventions towards the achievements of the goals set under MTP III and the wider Kenya Vision 2030.

We commit ourselves to leverage on the human and financial resources available and the synergies at our disposal to coordinate the implementation of this Strategic Plan and attain the national targets and expectations contained therein.

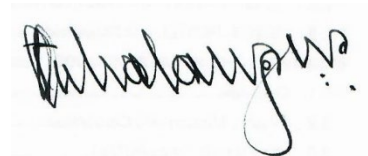
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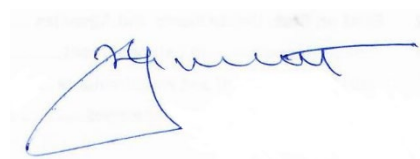


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ACRONYMS AND ABBREVIATIONS

ABMT	Appropriate Building Material Technology
ACFTA	African Continental Free Trade Area
ADA	Alcohol and Drug abuse
AfDB	African Development Bank
AIA	Appropriations in Aid
ANS	Air Navigation System
AU	African Union
AUC	African Union Commission
BASAs	Bilateral Air Service Agreements
BRT	Bus rapid Transit
CEO	Chief Executive Officer
CG	County Government
COMESA	Common Market for Eastern and Southern Africa
CPPMU	Central Planning and Projects Monitoring Unit
CS	Cabinet Secretary
DME	Distance measuring equipment
DPs	Development Partners
DRR	Disaster Risk Reduction
DWT	Deadweight Tonnage
EAC	East African Community
EARNP	East Africa Road Network Project
EEZ	Exclusive Economic Zone
EIB	European Investment Bank
ESIA	Environmental and Social Impact Assessment
ESP	Economic Stimulus Project
EU	European Union
EXIM	Export Import Bank
FAA /IASA	Federal Aviation Administration/ International Aviation Safety Assessment
FEED	Front End Engineering Design
GOK	Government of Kenya
HRM	Human Resources Management
ICAO	International Civil Aviation Organization
ICD	Inland Container Depot
ICT	Information Communication Technology
IDA	International Development Association
ILS	Instrument Landing System

IMO	International Maritime Organisation
IRU	International Union of Railways
JDA	Joint Development Agreement
JICA	Japan International Cooperation Agency
JKIA	Jomo Kenyatta International Airport
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KIBT	Kenya Institute of Business Training
KITI	Kenya Industrial Training Institute
KMA	Kenya Maritime Authority
KNSL	Kenya National Shipping Line
KPA	Kenya Ports Authority
KRA	Key Result Area
KRB	Kenya Roads Board
KURA	Kenya Urban Roads Authority
LAPSSET	Lamu Port South Sudan Ethiopia Transport Corridor
LCDA	LAPSSET Corridor Development Authority
LMCP	Last Mile Connectivity Project
LVSR	Low Volume Seal Roads
MCDAs	Ministries Counties Departments and Agencies
MDAs	Ministries Departments and Agencies
MET	Maritime Education and Training
MOTIHU DPW	Ministry of Transport Infrastructure Housing and Urban Development and Public Works
MSC	Mediterranean Shipping Company
MSD	Material Safety Datasheet
MT	Metric Tonne
MTEF	Medium Term Expenditure Framework
MTP	Medium Term Plan
NACOSTI	National Commission for Science, Technology and Innovation
NaCRA	National Construction Research Agenda
NaMATA	Nairobi Metropolitan Area Transport Authority
NCA	National Construction Authority
NCTIP	Northern Corridor Transport Improvement Project
NEMA	National Environment Management Authority
NIMES	National Integrated Monitoring and Evaluation System
NMT	Non-Motorised Transport

NTSA	National Transport and Safety Authority
PBC	Performance Based Road Maintenance Contract
PESTEL	Political, Economic, Social, Technological, Environmental and Legal
PPP	Public Private Partnerships
PS	Principal Secretary
PSV	Public Service Vehicle
PW	Public Works
R&D	Research and Development
RAP	Resettlement Action Plan
RMGs	Rail Mounted Gantry Crane
RTGs	Rubber Tyres Gantry Crane
SAATM	Single African Air Transport Market
SAGA	Semi-Autonomous Government Agency
SDGs	Sustainable Development Goals
SDOHUD	State Department for Housing and Urban Development
SDOI	State Department for Infrastructure
SDOPW	State Department for Public Works
SDOSM	State Department for Shipping and Maritime
SDOT	State Department for Transport
SDPW	State Department for Public Works
SEA	Strategic Environmental Assessment
SFA	Strategic Focus Area
SGR	Standard Railway Gauge
STCW	Standards on Training, Certification and Watchkeeping
SWOT	Strengths, Weaknesses, Opportunities and Threats
TEU	Twenty Foot Equivalent Units
TIMS	Transportation Information Management System
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIMAR	Universal Maritime Services
UNO	United Nations Organisation
VAT	Value Added Tax
VHF	Very High Frequency
VOR/DME	VHF Omnidirectional Range/Distance Measuring Equipment
VSAT	Very Small Aperture Terminal
WB	World Bank
YD	Yamoussoukro Decision

EXECUTIVE SUMMARY

This Strategic Plan for the Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works covers the period 2018 to 2022. It is prepared for the implementation of the Third Medium Term Plan (MTP III), which constitutes the third phase in the implementation of Kenya Vision 2030, the current national economic development blueprint.

Under Vision 2030, Transport, Urban Development and Public Works provide an enabling environment for the economic pillars and the “Big Four Agenda” initiatives. In addition, the Blue Economy and Housing are key components of Vision 2030 and the Big Four Agenda as well. The Strategic Plan follows the guidelines developed by the National Treasury and Planning that lay emphasis on a consultative approach involving both internal and external stakeholders who are deemed key to its successful implementation.

The Strategic Plan identifies Strategic Objectives against five Key Result Areas. The five Key Result Areas and their accompanying Strategic Objectives are provided below:

Key Result Area 1: Policy, Legal, Regulatory and Institutional Framework

- (i) To formulate and/or review and co-ordinate implementation of requisite policies, legal, regulatory and institutional framework*
- (ii) To enhance compliance to national policies on Gender, Disability, HIV/AIDS and access to Government Procurement Opportunity*

Key Result Area 2: Development of Physical Infrastructure and Facilities

- (i) To expand, modernize and maintain integrated, efficient and sustainable transport systems*
- (ii) To increase access to decent, safe and affordable housing, public buildings and ensure sustainable urban development*
- (iii) To promote the Blue Economy*

Key Result Area 3: Service Quality, Safety/Security and Environmental Sustainability

- (i) *To improve quality of service, safety and security of transport systems, built environment and urban development*
- (ii) *To promote environmental sustainability*

Key Result Area 4: Research and Innovation

- (i) *To enhance research and innovation in transport systems and the built environment*

Key Result Area 5: Capacity Building

- (i) *To enhance capacity and capabilities in human capital, institutions and technology.*

The strategic initiatives comprising key programmes, projects and activities are expected to lead to the realization of the strategic objectives. Cognizance is taken of the fact that development of sustainable infrastructure is highly dependent on appropriate policy, legal and regulatory environment as they provide for predictability and confidence by stakeholders including both domestic and foreign investors. Under physical infrastructure in transport, the need for coordination of the development of the various transport modes is paramount in order to enhance synergies in projects development, modal integration as well as the provision of seamless transport services.

The Ministry will play a key role in the coordination of the development of transport infrastructure in aviation, railways, road and maritime from planning, synchronization in construction and, where necessary, the provision of services through the various modes of transport. On the same score, the development of infrastructure in housing, urban development and public works will need to be coordinated to ensure optimal provision of housing, urban transport, access to urban markets, sanitation and other public utilities.

On the transport component covering civil aviation, railways, road and maritime transport key developments are envisaged under MTP III. On the civil aviation subsector, the strategies include expansion of the handling capacity of Jomo Kenyatta

International Airport from 7.5 Million passengers to 9 Million during MTP III. Rehabilitation of Mombasa Airport is planned while Isiolo Airport runway will be extended by 2.5 kilometers. In the railway subsector, the target for the Mombasa / Nairobi SGR link is to increase the share of freight traffic to 50%, complete the Nairobi-Naivasha SGR segment. There are also plans to rehabilitate the Meter Gauge so as to interface with the SGR at Naivasha in order to facilitate onward traffic cargo services to western Kenya and Uganda.

In the road subsector, the targets include the expansion of the road network by construction/rehabilitation of 10,000 kilometers of roads comprising of 2,500 kilometers of conventional roads and 7,500 kilometers Low Volume Sealed Roads. In addition, decongestion in key urban areas will be undertaken in order to reduce travel time and costs, and enhance connectivity in cities, towns and other urban areas. This will be undertaken through construction of bypasses and missing links and improvement of roads in cities and urban areas. In order to deal with decongestion, there will be the development of Non-motorized transport infrastructure in cities and other urban areas.

In the maritime subsector, Mombasa port capacity is planned for expansion from the current 30 to 40 million Deadweight Tonnes (DWT) while container handling capacity will double from the current 1.5 to 3 million TEUS by 2022. Further, focused facilitation will be employed to support the Blue Economy. Other projects in the maritime transport subsector include the construction of two berths in Dongo Kundu area in Mombasa to serve the designated Dongo Kundu Special Economic Zone (SEZ) and completion of the three berths in Lamu port.

Steady growth in the Blue Economy is also expected following the adoption of a conducive policy, regulatory environment and transformation of Bandari College into a Maritime Academy that will provide more elaborate training to build appropriate competencies for both seagoing and shore-based personnel that Kenya experiences a clear shortage.

In the Housing and Urban Development, the Ministry will fast track the relevant initiatives under the Big Four Agenda, the Constitution of Kenya and the SDGs to

deliver key outputs. These will include the delivery of 400,000 affordable housing units and 100,000 social houses by 2022. Further, the Ministry has prepared programmes to upgrade slum areas, construct sewer lines, sanitation facilities to serve schools, health centres and markets in informal settlements in the urban areas across the country. In collaboration with the road and rail sub-sectors, urban transport will be provided through the development of Mass rapid transport systems comprising dedicated bus transit routes and commuter rail facilities in Nairobi and Mombasa.

Under Public Works, targets are in the improvement of living and working conditions of people in Government buildings. This will include completion of 14 stalled public buildings and the design, documentation and supervision to completion of 300 new government building projects as requested by Government Ministries, Departments Agencies. Housing will also be provided for Kenya's diplomatic missions abroad. Capacity building for specialized expertise has also been emphasized in order to enable the country recover from what it has lost owing to declining sectors especially railways and marine based services, such as shipping and shipbuilding. The Plan further lays emphasis on building national capacity both at the level of the state Departments and the implementing agencies to be able to structure, procure, negotiate and effectively manage Public Private Partnerships (PPPs).

The total estimated resource requirements for both the development and recurrent budget for the five -year Plan period amount to Kshs 2,398,493 million while total allocations amount to Kshs 1,564,802 million and hence a gap of Kshs 833,691 million. The development budget amounts to Kshs 1,977,650 million while current allocations amount to Kshs 1,159,980 million giving a gap of Kshs 817,670 million. The recurrent budget amounts to Kshs 420,843 million with Kshs 404,822 million allocated and hence a gap of Kshs 16,021 million. In order to close the gaps, a strategy for resource mobilisation by the ministry and its agencies has been incorporated in the Strategic Plan. It specifically targets the promotion of PPPs, private investors and development partners as well as other innovative ways of resource mobilisation.

Finally, a Monitoring and Evaluation Framework has been developed to track the progress in the implementation of the Strategic Plan and to provide for a mid-term and final evaluation.

CHAPTER ONE - INTRODUCTION

1.1 Overview

Kenya's current long-term national planning strategy is enunciated in Kenya Vision 2030 which covers the period 2008-2030. Under Vision 2030, the economy is expected to grow steadily and propel the transformation of Kenya into a newly industrialising, "middle-income country providing a high-quality life to all its citizens by the year 2030".

The Vision is based on three "pillars" which consist of the economic, the social and the political dimensions. The summary of the three pillars is as provided below:

- (i) The economic pillar aims to improve the prosperity of all Kenyans through an economic development programme, covering all the regions of Kenya, and aiming to achieve an average Gross Domestic Product (GDP) growth rate of 10% per annum beginning in 2012;
- (ii) The social pillar seeks to build a just and cohesive society with social equity in a clean and secure environment; and
- (iii) The political pillar aims to realise a democratic political system founded on issue-based politics that respects the rule of law, and protects the rights and freedoms of every individual in Kenyan society.

Kenya Vision 2030 is being implemented through a series of five-year Medium -Term Plans (MTPs). In this respect, two Medium Term Plans, namely; MTP I (2008 -2012) and MTP II (2013 -2017) have already been implemented and the current five-year economic development MTP III, covering the period 2018-2022, was launched in December, 2018.

The MTP III prioritizes the implementation of the "Big Four Agenda" initiatives, which are expected to contribute to broad based inclusive sustainable economic growth, faster job creation and reduction of poverty and inequality.

The Big Four Agenda initiatives address Food Security, Manufacturing, Affordable Universal Health Care and Affordable Housing. These include:

- (i) Increasing the manufacturing share of GDP from 9.2 per cent to 15 per cent and agro-processing to at least 50 per cent of total agricultural output;
- (ii) Providing affordable housing by building 500,000 affordable houses across the country;
- (iii) Enhancing Food and Nutrition Security (FNS) through construction of large-scale multi-purpose and smaller dams for irrigation projects, construction of food storage facilities and implementation of high impact nutritional interventions and other FNS initiatives; and
- (iv) Achieving 100 per cent Universal Health Coverage to improve the health outcome of all Kenyans.

The MTP III further outlines the main policies, legal and institutional reforms as well as programmes and projects that the Government plans to implement in the medium-term period. On economic growth and macro targets, the MTP III targets to increase real GDP annual growth from an average of 5.5 per cent achieved over the 2013-2017 period to 5.9 per cent in Financial Year 2018/19 and 7 per cent by the end of the Plan period.

In order to support higher economic growth and development and create over 6.5 million jobs, savings and investments as a percentage of GDP are targeted to increase from 18.8% to 23.2% and 24.4% to 27.2% respectively during the period of implementation of MTP III. On national transformation, the Plan focuses on the following nine key foundations and enablers:

- (i) Infrastructure Development;
- (ii) Information and Communication Technology (ICT);
- (iii) Science Technology and Innovation (STI);
- (iv) Land reforms;
- (v) Public sector reforms;
- (vi) Labour and employment;

- (vii) National values and ethics;
- (viii) Ending drought emergencies; and
- (ix) Security, peace building and conflict resolution.

The Ministry plays a key and strategic role within the structure of government and as such, its development of appropriate policy, provision of adequate infrastructure, services and regulatory oversight in transport, housing, urban development and public works are important ingredients in the provision of some of the requisite foundations; as well as contribution to the fostering of overall economic growth, raising the standard of living of the citizenry and enhancement of national development.

1.2 Background of the Ministry

The Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works is one of the State Ministries under the National Government. Following the reorganisation of government under Executive Order No 1 of June, 2018, the Ministry has five State Departments.

While the core transport functions covering aviation, roads, railways and maritime have largely remained under one Ministry, the departments of Housing, Urban Development and Public Works have previously existed either as independent ministries or in combination with other departments in other ministries. Prior to the earlier reorganization of Government in 2016, the Departments of Housing, Urban Development and Public Works were domiciled in the Ministry of Lands, Housing and Public Works.

1.3 Mandate and Functions of the Ministry

The mandate and functions of the Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works are stipulated in Executive Order No 1 of June, 2018. The Executive Order assigns functions and institutions among Ministries and State Departments. In summary, the Ministry is responsible for the development of policy; exercise of regulation/oversight; provision of infrastructure and services; and capacity building in the transport, housing, urban development and public works sectors.

The Ministry is headed by the Cabinet Secretary and has five State Departments. Each State Department is headed by a Principal Secretary, who serves as the Accounting

Officer. The five State Departments are: Transport; Infrastructure; Shipping and Maritime; Housing and Urban Development; and Public Works. The Ministry has various state agencies that have responsibilities to provide infrastructural and other services including regulatory oversight and capacity building. Each of the state agencies falls under a specific State Department. The detailed functions of the Ministry will be discussed in the Chapter on Implementation and Coordination Framework.

Prior to the re-organization of government ministries in June, 2018, the departments of Transport; Infrastructure; and Shipping and Maritime were in one ministry while Housing and Urban Development; and Public Works were in the Ministry of Lands, Housing and Public Works. The Ministry, therefore, had its functions increased under MTP III compared to those under MTP II as its mandates were expanded following the reorganization of ministries.

As per Executive Order No 1 of 2018, the functions of the Ministry through its five State Departments are shown in Table 1 below:

Table 1: Functions of the Ministry and its State Departments

Department	Functions
Transport	<ul style="list-style-type: none"> (i) Transport policy management (ii) Rail transport and infrastructure management (iii) Civil Aviation Management and Training (iv) Maritime transport management (v) Registration and Insurance of Motor Vehicles (vi) Oversight on LAPSET (vii) National roads development policy management (viii) Enforcement of Axle Load Control (ix) Development and maintenance of Air Strips

Department	Functions
Infrastructure	<ul style="list-style-type: none"> (i) National roads development policy (ii) Development, standardization and maintenance of roads (iii) Mechanical and Transport Services (iv) Materials testing and advice on usage (v) Protection of road reserves (vi) Maintenance of security roads (vii) Registration of Engineers (viii) Registration of road contractors
Shipping and Maritime	<ul style="list-style-type: none"> (i) Promotion of maritime and shipping industry (ii) Ship registration in Kenya (iii) Marine cargo insurance (iv) Establishment of effective Admiralty Jurisdiction (v) Development of a Central Data and Information Center (vi) Human Resource Development, Management and Research in support of Kenya's Shipping Industry (vii) Monitoring and advising on Usage of Kenya's Exclusive Economic Zone in collaboration with other actors
Housing and Urban Development	<ul style="list-style-type: none"> (i) Housing policy management (ii) Management of Civil Servants Housing Scheme (iii) Development and management of affordable housing (iv) Coordination and delivery of the Big Four Agenda 500,000 new homes Housing Plan (v) Oversee the establishment of an Integrated efficient, effective and sustainable Urban Public Transport System within the Nairobi Metropolitan Area (vi) National secretariat for human settlement (vii) Development and management of government housing (viii) Shelter and slum upgrading (ix) Urban planning and development

Department	Functions
Public Works	<ul style="list-style-type: none"> (i) Public Works Policy and Planning; (ii) National Building Inspection Services; (iii) Registration and Regulation of Contractors, Team for Building, Civil Works and material Suppliers; (iv) Registration of Civil, Building and Electromechanical Contractors; (v) Standardization and Maintenance of Plant and Equipment and Vehicles; (vi) Maintenance of Inventory of Government Property; (vii) Registration of Engineers, Architects and Quantity Surveyors; (viii) Setting and Management of Building and Construction Standards and Codes; (ix) Provision of Mechanical and Electrical Building Services; (x) Supply Branch; (xi) Coordination of Procurement of Common User Items by Government Ministries; (xii) Registrations and Regulation of Civil Building and Electro-mechanical Contractors; (xiii) Development and Management of Public Building; (xiv) Building Research and Services; and (xv) Other Public Works

Source: Executive Order No 1 June, 2018

1.4 Global, Regional and National Development Challenges

1.4.1 Global and Regional Challenges

The ministry provides strategic services that are important at international, continental and regional level. In doing this, it coordinates with other State ministries, international organisations and relevant public and private sector actors. In collaboration with other

states and relevant international organisations, the Ministry has also to ensure that there is harmonisation of policies, legal and regulatory frameworks, physical infrastructure and the development of capacities in institutions and human capital to meet the regional and global standards necessary to facilitate the provision of globally competitive products and services.

In the process of dealing with different parties across the globe, there are inevitable challenges that arise. The following are some of main challenges that need to be addressed in order to realise success in performance of the Ministerial roles. Some of the major challenges include:

- (i) International disputes hindering the development of national and cross-border projects;
- (ii) Disputes over international boundaries delimiting national rights over exploitation of natural resources (fisheries, oil and other seabed resources);
- (iii) Insecurity from terrorism, piracy and criminal gangs in the transport systems;
- (iv) Inadequate regional institutional framework for collaboration in some of the trans-boundary water bodies;
- (v) Impact of aggressive agitation especially by external environmental interest groups on implementation of programmes / projects advocating environmental conservation and Climate Change adaptation /mitigation;
- (i) Inadequate capacity to implement international commitments such as SDGs, AU AGENDA 2030 and 2063, and the Paris Agreement, among others;
- (ii) Inadequate sharing of Maritime information at the international and regional levels; and
- (iii) Adverse conditionalities in foreign borrowing and grant funds.

1.4.2 Challenges at National Level

At the national level, there are challenges that tend to inhibit efficient and effective development and operation of infrastructure and also service delivery. Most of these cut across all the sectors in the Ministerial mandate and include the following:

- (i) High costs of land acquisition and compensation for resettlement due to inflated land and property prices raising projects costs;
- (ii) Poor enforcement of traffic regulations;
- (iii) Land acquisition for development of infrastructure in roads, railways, port facilities, airports, housing and other public infrastructure;
- (iv) Inadequate skilled manpower in transport planning and management;
- (v) Vandalism of public infrastructure facilities;
- (vi) Lengthy procurement procedures;
- (vii) Encroachment of land earmarked for roads, railways and other public infrastructure development;
- (viii) Lack of effective intermodal coordination and synchronization in the planning, construction and commissioning of transport infrastructure (rail and road);
- (ix) Lack of effective coordination in implementation of projects that cut across different state agencies to optimise on resources; and
- (x) Inadequate consideration of climate change in the development of transport systems and built environment

At the specific sub-sector levels, challenges are summarised below:

- (i) In the Air Transport subsector, there is inadequacy of skilled aviation safety inspectors due to high personnel turnover because of high demand and pay offers by foreign airlines and civil aviation authorities;
- (ii) In railway subsector, there is shortage of engineers, technicians for track and rolling stock maintenance and in operations and safety oversight personnel;

- (iii) In the Blue Economy, gaps in policy integration and legislative framework to enhance its development; serious gaps in qualified national experts in the areas of navigation, marine engineers and ratings; lack of training facilities including vessels to provide sea time to trainees. Lack of qualified personnel limits capacity to conduct oversight in port and flag state control, providing competitive shipping services.
- (iv) In roads, there are gaps in policy and regulatory instruments to protect and secure infrastructure through deterrence of road furniture vandalization, encroachment on road reserves, adherence to road specifications and standards and enforcement of rules and regulations. There is poor control of vehicle overloading leading to premature pavement degradation.
- (v) In housing and urban development, there is growth of slum areas, traffic congestion, lack of MRTS, inadequate pathways for Non-Motorized Transport (NMT) systems and lack of suitable public markets. In addition, there is lack of access to affordable mortgage facilities for the middle and lower-income groups; and
- (vi) Under the public works, there are shortages in skilled technical personnel to manage the projects, poor performance by contractors and legal and contractual issues that impact adversely on project implementation.

1.5 The Role of Ministry in the National Development Agenda

The role of the Ministry is to develop policy, coordinate and exercise overall leadership and oversight on the implementation of programmes and projects under its mandate to achieve Kenya Vision 2030, the “Big Four” Agenda, Africa’s Agenda 2063 and the global Sustainable Development Goals (SDGs), among other national and international obligations through MTP III.

Through its five State Departments, the Ministry coordinates the implementation of programmes and projects undertaken by the various state agencies responsible for development of infrastructure, provision of services, regulatory oversight and capacity building.

The Ministry further forges linkages with other government ministries and institutions to enhance synergies to deliver the national development agenda, and with international organisations to create the environment required for global level service delivery.

In order to facilitate and enhance Infrastructural development and provision of services, the Ministry also works with County governments. In this respect, the Ministry has a decentralized structure to deal with regional and county-specific needs.

CHAPTER TWO: SITUATIONAL ANALYSIS

2.1 Overview

Strategic Plans were prepared for the implementation of the Second Medium Term Plan (MTP II), by the ministries in which the current State Departments in the Ministry of Transport, Infrastructure, Urban Development and Public Works were domiciled. These Strategic Plans had set out the targets to achieve in identified Key Result Areas under transport, housing, urban development and public works.

In preparing this Strategic Plan for the implementation of MTP III, it is important to review the performance of the previous ones that covered the work of the departments in the Ministry. This chapter provides a review of achievements, challenges and key lessons experienced in the implementation of the previous Strategic Plans which are important in informing the formulation of this Strategic Plan.

2.2 Review of the Previous Strategic Plan Implementation (2012 - 2017)

2.2.1 Key Achievements

It is noted that during Second Medium Term Plan (MTP II 2013-2017), the transport sector covering civil aviation, surface transport (rail and road), maritime transport and the Blue Economy were under the then Ministry of Transport and Infrastructure while the Housing, Urban Development and the Public Works functions were under the then Ministry of Lands, Physical Planning and Housing. In this regard, each of the two ministries had its own strategic plan which covered its respective functions.

Under the respective strategic plans, the key sectoral targets aimed at expansion and maintenance of physical infrastructure facilities, reliability and strengthening institutional and capacities. Under MTP II there was a significant increase in investments in infrastructure development, rehabilitation, maintenance and operations. The programmes and projects implemented over the Plan period were identified not only on the basis of their development impact, as flagship projects, but also their supporting role in ensuring the full implementation of the “Big Four” initiatives.

In addition, the programmes and projects were also geared towards realization of the Sustainable Development Goals (SDGs) and the Africa's Agenda 2030 and 2063. In the transport sector, there was significant progress in the development, expansion and improvement of infrastructure in civil aviation (airports, aerodromes and air navigation facilities), surface transport (road and rail) maritime transport (ports, and ferries) and in the facilitation of the Blue Economy.

In the case of housing, urban development and public works, construction of housing units for purchase and for housing of government staff together with the construction and rehabilitation of government offices was undertaken. Construction and rehabilitation of public facilities such as sea walls, jetties and footbridges located around the entire nation was also undertaken. A summary of the notable achievements by Key Result Areas is provided below.

Result Area 1: Policy, Legal, Regulatory and Institutional Reforms

During the previous Strategic Plan, a good number of achievements were made on area of Policy, Legal and Institutional Reforms. A summary of these achievements is summarised below on the basis of the respective subsectors:

Under aviation, the Civil Aviation (Amendment) Act 2002 was replaced by the Civil Aviation Act 2013 passed by Parliament in December 2012 and gazetted in January 2013. The accompanying regulations were amended and approved in 2013. Further amendments were undertaken through the Civil Aviation (Amendment) Act 2016.

In the railway subsector, Kenya Railways legal and regulatory framework was established to pave way for the review of the Kenya Railways Act. In addition, the Railway Development Levy Fund was established to finance the development of the subsector.

Under roads, the following achievements were realized:

- (i) Operationalization of National Transport Safety Authority;
- (ii) Development of Draft Nairobi Metropolitan Transport Authority Bill, 2017;

- (iii) Establishment of the Road Annuity Fund for financing Annuity roads under the Roads 10,000 programme;
- (iv) Preparation of the Roads Sector Policy 2016 on alignment of the roads sub-sector with the Constitution and the Kenya Roads Bill 2016 which is awaiting enactment;
- (v) Vesting of road related assets to the Counties for the County roads;
- (vi) Devolving the mandate and functions to County governments for “Other Roads” as per the Fourth Schedule of the Constitution;
- (vii) Enforcement of specifications and standards for construction, development and maintenance of National trunk road, County roads; and
- (viii) Policy formulation, reclassification and redefining of national trunk roads and county roads

In the Shipping and Maritime subsector, the following achievements were realised:

- (i) Enactment of the Kenya Coast Guard Service Act, 2018;
- (ii) Localization of the Marine Cargo Insurance in accordance with the Insurance Act, 1984;
- (iii) Government decision to revitalise of Kenya National Shipping Line and relaunch its services;
- (iv) Increased institutional capacity achieved to enhance safety and security in maritime transport including compliance with international obligations; and
- (v) Establishment of a Maritime Technical Cooperation Centre for Africa (MTCC Africa) aimed at Capacity Building for mitigation of effects of climate change as a result of emissions from ships.

In the Housing and Urban Development sector, the following achievements were realized with respect to policy and legal instruments:

- (i) National Housing Policy approved and adopted;
- (ii) Housing Bill finalized and presented to Attorney General’s Office;
- (iii) Built Environment Bill prepared and awaiting Cabinet approval;
- (iv) National Urban Development Policy (NUDP) approved;

(v) The Draft Metropolitan Policy and Bill prepared; and

(vi) Nairobi Metropolitan Area Transport Authority (NAMATA) established.

Under Public Works, the National Construction Authority (NCA) was operationalized and the draft Works Policy finalized. The overall goal of the policy will be to facilitate sustainable development of public buildings by establishing guidelines designed to contribute to a cost effective, world class- built environment and other facilities in support of Vision 2030.

Result Area 2: Development of Physical Infrastructure

In terms of the development of physical infrastructure through new construction, rehabilitation and maintenance, the main achievements are summarized below under each sector.

Under transport, the achievements are summarized under its five subsectors namely; Civil Aviation, Railways, Maritime and Roads.

I. Civil Aviation

In the civil aviation subsector, modernization, expansion, rehabilitation and maintenance of airports and airstrips infrastructure are as provided below.

(a) Modernization/Expansion of Jomo Kenyatta International Airport (JKIA)

The modernisation and expansion of JKIA covered the improvement of terminal and airside capacity together with enhancement of safety and security. The terminal capacity was expanded to accommodate 7.5 Million per annum from 2.5 Million through construction of arrival and departure terminals.

Under airside capacity, the existing runway was rehabilitated to enhance serviceability and the number of aircraft parking bays expanded from 21 to 37. The primary screening yard was established and completed in 2015 to sterilize airport users and vehicles for purpose of improving airport security.

(b) Other Key Airports Projects

Improvement of security and pavement rehabilitation was undertaken in Moi International Airport while construction of terminal building and extension of the runway was completed at Kisumu International Airport.

During the period under review, security and boundary fencing was also completed in both Moi and Kisumu International Airports.

At Isiolo airport, a new terminal for passenger processing was completed and is operational. Expansion work for apron handling capacity and construction of new access road was also completed.

(c) Modernization and Expansion of Airstrips

The objective of the programme was to provide air connectivity across the country and to support air domestic travel.

In regard to implementation of this programme, implementations were at different stages of completion. Construction of air strips were initiated in Homa Bay, Suneka, Nanyuki, Voi, Ikanaga and Tseikuru Airstrips.

(d) Modernization of Air Navigation Equipment and Services

During the MTP II investments were made in modern equipment to improve air navigation to ensure safe operation of aircraft and seamless flow of traffic across countries.

In Communication Systems, Very High Frequency (VHF) equipment for local stations was installed for JKIA, Mombasa, Eldoret, and Wilson airports; VHF Equipment for Area Cover was installed for Mombasa, Poror, Ngong, Wajir and Malindi; Voice Recorder Systems were installed for JKIA and Eldoret; and Voice Communication Control System was installed for Eldoret.

Under Navigation Aids the ILS/DME was installed for JKIA, Mombasa and Eldoret while VOR/DME was installed at JKIA, Nakuru, Wajir and Malindi. Other systems installed are the ANS Message Handling System (AMHS) and Flight Procedure Design Software. In addition, there was also a replacement of the VSAT equipment.

II. Railways

In the railway subsector, the Government initiated a railway transport expansion programme through the construction of the Standard Gauge Rail (SGR). This was intended to increase the railway's capacity from 5% to 50% of the freight from the port of Mombasa to the hinterland.

In addition, investment was made in developing the commuter rail services in order to interface with the SGR and the other modes of transport. The key developments in the rail subsector included the following:

(a) Standard Gauge Rail (SGR)

In order to decongest Mombasa port; reduce cost of doing business in the region and hence provide Kenya with an advantage to handle transit traffic, the Standard Gauge Rail (SGR) link between Mombasa and Nairobi was constructed and commissioned in 2017. The Mombasa/Nairobi link is 472 kilometers long and is the first segment of a planned cross-border rail link.

The main freight and passenger exchange stations are at Mombasa and Nairobi while intermediate passenger stations were constructed at Mariakani, Miaseny, Voi, Mtito Andei, Kibwezi, Emali and Athi River together with 33 passing stations. Construction of Phase 2A (Nairobi-Naivasha) of the SGR project was launched in October 2016 and is scheduled for commissioning by the end of 2019. Regarding rolling stock, 56 diesel electric locomotives, 40 passenger coaches and 1,620 freight wagons were also included.

On the railway to serve the LAPSSSET Corridor that is planned to link Kenya to Ethiopia and South Sudan, Kenya has signed a bilateral agreement with Ethiopia to coordinate the construction and operation of an SGR standard.

Feasibility studies and preliminary designs for line for Lamu-Garissa-Isiolo, Isiolo-Nginyang-Nakodok and Isiolo-Moyale were undertaken.

(b) Commuter Rail Services

For Nairobi metropolitan transport, the construction of commuter railway stations at Makadara and Imara Daima were completed. Other stations that were at different stages of completion included Ruiru at 55%, Kikuyu (65%), Kahawa (60%), Dandora (48%), Githurai (52%) and Embakasi Village (12%).

In Mombasa, where the plans are to provide rail transportation for passengers and to facilitate intermodal interchange at important nodal points, the Requests for Proposals (RFPs) for the procurement of consultancy services for construction were prepared.

III. Roads

During the MTP II the development of the road subsector was undertaken through specific road network clusters based on national trunk roads and county roads. The national trunk roads network primarily on the main transport corridors. Each cluster had its own segments that were upgraded, rehabilitated or had capacity expansion. The road expansion programme had targeted the construction/rehabilitation of 5,500 kilometers comprising 3,825 kilometers of national trunk roads and 1,675 kilometers of county roads.

Under the road expansion programme, about 4,326 kilometers were constructed/rehabilitated. These consisted of, 3,855 kilometers under the National Government and 471 kilometers under County Governments. The road projects were clustered first on the basis of primary corridors and then close to the urban areas, on whether they were providing for missing links or bypasses to facilitate traffic decongestion.

The achievements in the roads sector are summarized for projects implemented under the main road programmes below.

(i) The Northern Corridor Transport Improvement Project (NCTIP)

Under the programme, 158km of roads were targeted for construction/rehabilitation. The following projects were fully completed; reconstruction works for Timboroa-Eldoret (73km), rehabilitation of Kericho - Nyamasaria (76 km), Mau Summit - Kericho

(57km), Nyamasaria - Kisian (87), and Kisumu Bypass (24km), rehabilitation of Eldoret - Webuye (60km) and Webuye - Malaba (62km) road sections.

(ii) East Africa Road Network Project (EARNP)

During the MTP II, 328km of road was targeted for improvement. A total of 137 km was achieved through construction of Modika-Nuno (23km) and, upgrading of Voi-Mwatate-Taveta (114km) roads. Construction is on – going for Nuno-Modogashe (135km)-10% complete and upgrading of Isebania–Kisii-Kisumu (198km) roads.

In addition, designs for rehabilitation/expansion of Malindi – Mombasa – Lungalunga (238km) and upgrading of Kitale–Endebess – Suam road (C45)-50km are ongoing. In order to enhance trade, the existing border crossings were upgraded into One Stop Border Posts (OSBPs). They include; construction of Lunga lunga, Busia, Malaba, Taveta, Isebania and Moyale one stop border posts.

(iii) Kenya Transport Sector Support Project

During the MTP II period, 222 kilometers of roads were targeted for construction/rehabilitation out of which 132kms (59%) were completed. They include; construction of Fly-overs/Interchanges at Nakuru/Nyahururu turnoff, Njoro turnoff at 54% complete, rehabilitation of Kisumu-Kakamega (47km) at 77% complete, Kakamega-Webuye (40km) at 5% complete, Webuye– Kitale (58km) at 89% complete.

The dualling of Athi River – Machakos Turnoff (24km) at 2% complete and Bachuma Gate-Maji ya Chumvi (53km) at 82% complete. Construction of interchanges at Ahero and Kericho were also commenced.

(iv) Upgrading and Rehabilitation of Eldoret-Kitale-Lodwar-Nadapal

During the period under review, 303km of roads were targeted. Design studies for the rehabilitation/construction of Lesseru to Kitale and Marich via Lodwar to Nadapal road were completed. Construction works for upgrading of Lokitaung Junction to Kalobeiyei River (80 km), Kalobeiyei River to Nadapal (88 km), Lokitaung junction to Lodwar (80 km), Lodwar-Loichangamatak (50 km) road sections and Kainuk Bridge are ongoing.

(v) The LAPSSET Transport Corridor

The Second Transport Corridor which incorporates the LAPSSET Corridor targeted the construction of 640km of roads to open up Northern Kenya and provide reliable transport links for Ethiopia and South Sudan. The main achievement under MTP II include completion of the Isiolo/Moyale road (506 kms) comprising; Isiolo -Merile (136km), Marsabit -Turbi (121 km) Merile River to Marsabit (143 km); and Turbi to Moyale (127km).

The construction of Loruk-Barpelo (62km) is ongoing while for Garsen-Lamu- Witu Road (175 km) civil works were awarded. In addition, final design reports were completed for Lamu- Garissa Road (250km), Garissa – Isiolo Road (280km) while preliminary designs were completed for Isiolo-Nginyang Road (200km).

(a) Decongestion of Cities and Urban Areas

Regarding the decongestion of cities and urban areas in various parts of the country, the following projects had been or were being implemented:

(i) Construction of By-passes

Whereas the construction of 77kms of roads was prioritized, the achievements include completion of Nairobi Southern Bypass (30km), construction of Meru By-pass (20km) that was 50% complete while construction of Phase I of Dongo Kundu Bypass (26km) has been completed. In addition, works for Phase 2 and Phase 3 of the Dongo Kundu bypass was under procurement.

Furthermore, the designs for development of Greater Nairobi Eastern Bypass (79km), the Greater Nairobi Southern Bypass (60km), Mombasa Western/Northern Bypass- Likoni-Mtwapa, Nakuru Bypass (20km), Embu Bypass (20km), Murang'a Bypass (20km) and Eldoret Bypass (15km) were ongoing.

(ii) Construction of Missing Links

On the missing links, the status of projects implementation in Nairobi were as provided below:

- (a) Missing Link No.3 – Kileleshwa Police Station to Westlands Roundabout (1.76kms) completed;
- (b) Missing link No.6 – Oloitokitok Road and Kileleshwa Police Station (2.85km) completed;
- (c) Missing link No. 7 – James Gichuru Road to Ngong Road (3.75km) ongoing;
- (d) Construction of Ngong road –Kibera-Kungu Karumba -Langata Road (Missing link No.12) - 25% complete;
- (e) Improvement of Nairobi Link road, Waiyaki Way-Redhill Road -34% complete; and,
- (f) Dualling of Lusaka Road, Likoni Road and Enterprise Road - 57% complete.

(iii) Improvement of Roads in Nairobi, Other Cities and Urban Centers

Under the Improvement of roads in cities and urban centers, the following projects were completed:

- (a) Dualling of Langata Road-KWS Gate-Bomas of Kenya (2.9km);
- (b) Improvement of Eastleigh Estate Roads Phase I (7.0km Dual Carriageway);
- (c) Improvement of Upper Hill Roads Phase I (5.5km Dual Carriageway);
- (d) Construction of South C roads; and
- (e) Construction of Kapsoya Roads in Eldoret.

The following road construction projects were ongoing;

- (a) Dualling of Outer Ring Road (12.0km) (74% complete);
- (b) The feasibility study and detailed designs for capacity enhancement of JKIA-Rironi road junction (60km);
- (c) Dualling of Ngong road (All Saints Cathedral – Adams Arcade) (53% complete);
- (d) Dualling of Ngong Road (Adams Arcade- Ngong Town–Karen–Bomas of Kenya (49.7km);
- (e) Reconstruction of Port Reitz/Mombasa Airport Road (95% complete); and

- (f) Construction of Miritini - Mwache Kipevu Link Road (75% complete).

(b) Low Volume Sealed Roads (LVSR)-Roads 10,000 Programme

The Roads 10,000 Low Volume Sealed Roads Programme is aimed at delivering the pledged 10,000kms to open up rural areas and promote domestic and regional connectivity. The programme provides for issuance of the Construction Works Contracts and the Performance Based Routine Maintenance.

Under Phase I of the programme, 4,993kms kms of roads were awarded in 122 work contracts and at the end of MIP II, 19 construction and civil works were ongoing. As at 30th June, 2018, a total of 868 kms of roads had been upgraded to bitumen standards while additional tenders for the construction of over 4,166 kms of roads were at various stages of procurement covering 46 counties. Out of the 4,993kms awarded projects, 2,953kms were officially launched.

(c) Maintenance of Roads

(i) Periodic and Routine Maintenance of Road

During the period under review 4,257km of national trunk Roads and county roads respectively were targeted for periodic maintenance while approximately 200,000km were to be routinely maintained. A total of 6,571kms of roads (154%) were put under periodic maintenance while 225,693 kms of roads (113%) were put under routine maintenance.

As at 31st December, 2017 a total of 5,298.55kms of roads (124%) were put under periodic maintenance while 208,088.91 kms of roads (104%) were put under routine maintenance.

(ii) Roads 2000 Programme

The strategy of the **Roads 2000 Programme** was designed to facilitate rural accessibility and mobility with an objective of spurring rural productivity thus creating wealth and reducing poverty through promotion of employment and income earnings.

The implementation of the Roads 2000 strategy targeted maintenance of 4,700kms of roads during MTP II period. Under the implementation of this programme, a total of 792kms (17%) of roads were maintained.

(c) Development of Roads through Public Private Partnerships (PPPs)

In August 2014, the Government created a Road Annuity Fund which is a dedicated fund for financing Annuity roads under the Roads Annuity programme. About 345 kms were earmarked for upgrading and rehabilitation/reconstruction. The projects include the following:

- Ngong – Kiserian – Isinya and Kajiado – Imaroro (66.7Km);
- Taveta – Illasit – Njukini (97 kms);
- Wajir – Samatar and Rhamu – Mandera (143km); and,
- Kwale - Kinango – Mariakani (66 km).

Financial close was completed for Ngong – Kiserian – Isinya and Kajiado – Imaroro road project and commercial negotiations with preferred bidders were completed for Wajir – Samatar – Rhamu – Mandera awaiting financial close while commercial and technical negotiations for Taveta – Illasit – Njukini and Kwale - Kinango - Mariakani road projects were ongoing.

IV. Maritime Transport Facilities

In the shipping and maritime sector, the infrastructure projects completed/initiated were intended to cater for growing demand in the maritime transport.

Projects implemented were primarily at Mombasa Port and the Port of Lamu. A summary of the projects implemented under each port is provided below:

(a) Mombasa Port

In order to provide for capacity to handle increasing traffic, the following projects were undertaken in Mombasa Port during the MTP II period:

- (i) Construction of Berth No.19 with the quay length extended from 600 Meters to 840 Metres with capacity of accommodating three post Panamax vessels completed;

- (ii) Phase I of the Mombasa Port Development Program (MPDP) covering an area of 100 hectares was completed in 2016 with a capacity to handle 1.5 Million TEUs completed;
- (iii) Phase I of the Second Container Terminal which comprises development of three berths able to handle post Panamax container vessels with capacity of up to 60,000 DWT was completed.
- (iv) Improvements on gates and yards capacity which entailed expansion of Gate 18/20 adding two additional lanes and canopy, widening of the Gate 10 road by one meter in each direction and improvement of yard facilities and stacking areas at Berths 1-14 were completed.
- (v) Port Equipment to enhance efficiency, the port acquired Rail Mounted Gantry cranes (RMGs) to operationalize the SGR; and
- (vi) Two ferries of 1,500 sided passengers to enhance efficiency and to ease congestion at the Likoni Ferry crossing point were procured.

(b) Lamu Port

The primary objective for the development of the Lamu Port together with road and rail infrastructure is to open up the LAPSSSET Corridor to provide shorter direct links with both Ethiopia and South Sudan. In addition, the development of Lamu port will increase the number of national deep sea ports, increasing the national ports portfolio in terms of numbers and location.

During the MTP II, construction of the first three berths at Lamu port commenced and by the end of the period, progress made towards completion of the three berths was 27%. The three berths are expected to be completed by the year 2022. The construction of offices for the Port headquarters together with offices for police and other regulatory agencies were completed.

V. Housing and Urban Developments

Under Housing and Urban Development, achievements were made in construction of additional housing units, upgrading of settlements, provision of water, construction and upgrading of sewerage and improvement in urban transport.

The achievements are outlined below.

(a) Housing

Under Housing, 6,667 housing units were developed directly by national Government, comprising 822 units in Kibera/Soweto, 1,050 units for National Police and Prisons Services, 933 units through Civil Servants Housing Scheme, 3,000 units through Interlocking Stabilized Soil Blocks (ISSBs) Technology, and 862 units developed by National Housing Corporation (NHC).

In addition, infrastructure improvement works were undertaken in 15 settlements in towns of Mombasa, Machakos, Nairobi, Nakuru and Eldoret. Further, support was extended to counties where in Kiambu, the Ruiru Sewerage treatment plant and 56 kilometres of Trunk sewer together with the drainage infrastructure were completed in Manyani Estate.

(b) Sanitation

During the MTP II, sewer lines, sanitation facilities were provided in schools, health centres and markets in informal settlements of Mombasa, Nairobi, Kisumu, Eldoret, Nakuru, Naivasha, Kericho, Kakamega, Bungoma and Isiolo.

(c) Mass Transit Systems (MRTS)

Under Urban development, projects were implemented in the development of Mass Rapid Transit Systems, Non-motorized Transport, and in safety and security facilities.

In the development of Mass Rapid Transit Systems, the following were achieved:

- (i) Harmonization of the MRTS network to include both the Bus Rapid Transport (BRT) and the commuter rail;

- (iii) Establishment of NaMATA in 2017 mandated to oversee development of an integrated, safe and efficient public transport system with particular focus on mass rapid transit system;
- (iv) Completed detailed designs for BRT line 4 East along Jogoo road;
- (v) Feasibility study including service plan for BRT line 1(Uhuru highway) are ongoing;
- (vi) Feasibility study and service plan for BRT Line 3 and Line 4 West completed;
- (vii) Detailed design for BRT Line 3 ongoing; and
- (viii) Construction of access roads, pedestrian bridges in informal settlements in Mombasa, Nairobi, Kisumu, Eldoret, Nakuru, Naivasha, Kericho, Kakamega, Bungoma and Isiolo benefiting over 1 million people.

Under Safety and Security Facilities, the following were achieved;

- (i) Procurement of 63 fire engines distributed to the Nairobi Metropolitan Region counties and rehabilitation of 2 fire stations in Nairobi County;
- (ii) Procurement and installation of 42 CCTV cameras within Nairobi CBD to provide security surveillance;
- (iii) Installation of security/street lights in informal settlements in Mombasa, Nairobi, Kisumu, Eldoret, Nakuru, Naivasha, Kericho, Kakamega, Bungoma and Isiolo benefiting over 1 million people; and
- (iv) Construction of sewer lines in informal settlements in Mombasa, Nairobi, Kisumu, Eldoret, Nakuru, Naivasha, Kericho, Kakamega, Bungoma and Isiolo benefiting over 1 million people.

VI. Public Works

The functions of Public Works under the Ministry primarily cover government buildings both in the country and diplomatic missions. The Ministry through the State Department for Public Works is responsible for construction and maintenance. A summary of achievements during the MTP II is provided in sections below:

(a) Improvement of Living/Working Conditions in Government Buildings

It was reported that the MTP II, had targeted 35 stalled public buildings. Out of these, 6 projects were completed. These included: Mitihani House Phase V, West Park Police Housing project comprising 595 Housing Units, Kitui Primary Teachers Training College, Voi Primary Teachers Training College, Nyamira Divisional Police Headquarters Phase II and Kibish Police project.

Work was ongoing on other 8 stalled projects in Migori District Headquarters at 86%, Kabarnet Medical Training Centre at 68%, Kenya Industrial Training Institute (KITI) in Nakuru at 60%, Mathare Nyayo Hospital at 45%, Voi Pool Housing project at 40%, Kenya Institute of Business Training (KIBT) at 85%, Kericho Ardhi House Phase II at 92% and Kapsabet Pool Housing project at 15%. During MTP II, a total of 451 new Government building projects were designed, documented and supervised to completion as requested by other Government Ministries, agencies, departments and County Governments. This was against a target of 300 projects.

Finally, a total of 299 Government building projects were rehabilitated /maintained as requested by other Government Ministries, Agencies, Departments and County Governments against a target of 250 projects. Further, a total of 9 Economic Stimulus Projects District Headquarters and 14 Regional Works Offices were partially completed and put to use while 90% of works were completed at Ministry of Works Sports Club Gym to complement the Club Guest House services. In addition to buildings, there were improvements under transport in Human Settlements where 37 footbridges spread across the country were constructed against the MTP target of 250.

(b) Coastline and Inland Waters Infrastructure Projects

The following are the projects under the coastline and inland waters that were implemented during the MTP II period:

- (i) Three jetties were constructed/ rehabilitated to 100% completion and include the Matondoni Jetty, Lamu Customs Jetty and Shimoni Fisheries Jetty; and

- (ii) Seawalls of about 2,100 metres of length were constructed against a target of 7,500 metres of seawall (These included 1,900 meters on Ndaou seawall in Lamu County and 200 meters on Shimoni project in Kwale County).

(c) Diplomatic Properties

It is noted that the benefits of owning diplomatic property include; reduced expenditure on rent; savings on foreign exchange; and enhanced image of Kenya in foreign countries among others. For the diplomatic properties, under the MTP II, the following were achieved:

- (i) Purchase of a Chancery in New York, (USA) and Kampala (Uganda);
- (iii) Construction of Ambassador's residence, staff houses and renovation of Chancery in Pretoria that was ongoing;
- (iv) Construction of Embassy properties in Mogadishu that was ongoing;
- (v) Construction of chancery and Ambassador's residence in Islamabad were completed;
- (vi) Refurbishment Works on the Ambassador's residence in Stockholm, Sweden completed; and
- (vii) Refurbishment Works on the Ambassador's residence in Rome, Italy was ongoing.

Result Area 3: Enhancement of Safety and Security

The MPT II had in place programmes and projects to enhance safety and security especially in civil aviation, rail, road and maritime transport subsectors. Improved levels of safety and security enabled Kenya to be granted Federal Aviation Administration International Aviation Safety Assessment (FAA/IASA) category I by the United States of America which allows direct flight between the two countries.

In addition, the East African School of Aviation (EASA) was approved as one of the 5 ICAO Regional Training Centers of Excellence in Africa and one among the 19 in the world. Further, EASA was accredited as center by ICAO for Aviation Security (AVSEC) courses and as a Full TRAINAIR PLUS member which enables it to develop and offer

aviation courses for ICAO member states. EASA was also accredited by International Air Transport Association (IATA) to offer courses in aviation. In the civil aviation, the following was achieved:

- (i) Improvements in oversight services and infrastructure facilities to enhance the levels of safety and security and maintain a globally competitive environment;
- (ii) Inspection capacity in the critical areas of airworthiness and flight operations increased from 19 in 2013 to 45 in 2016; and
- (iii) Compliance with ICAO standards where Kenya's compliance level continued to improve rising from 66% in 2003, 78.4% in 2008 and reaching 88.9% in 2015.

The Road Safety programme is aimed at enhancing safety on roads covering passengers, road users and the means of transport among others. During the MTP II period, the following achievements were made:

- (i) PSV regulations were developed and implemented leading to a significant reduction in road fatalities involving PSVs;
- (ii) A standard curriculum was developed for driver training, testing and licensing to provide a standardized method of instruction by all driving schools in the country;
- (iii) There was increased surveillance on all major highways monitoring speed and drunk driving;
- (iv) Adoption of the provision of road side truck holding areas to provide rest time to long distance drivers;
- (v) Foot-bridges erected along Mombasa Road and on Thika Super Highway marking of bumps and improved signage; and
- (vi) Implemented TIMs project which provides automated services to Kenyans hence making it easy for PSV operators to renew their driving licenses online without visiting NTSA offices.

2.2.2 Challenges During Implementation of the Previous Strategic Plans

During implantation of the previous Strategic Plan, it is noted that a number of challenges were in place. The major challenges faced in the implementation of the previous Strategic Plan include the following:

- (i) Inadequate financing especially for high capital investment projects;
- (ii) High construction and maintenance costs;
- (iii) Lack of intermodal coordination in development of transport infrastructure (rail and road);
- (iv) Expensive, tedious and slow land acquisition processes;
- (v) Vandalism of infrastructure facilities;
- (vi) Lengthy procurement procedures, including litigation challenges;
- (vii) Encroachment of land earmarked for infrastructure development; and
- (viii) Wayleaves/right of way acquisition for infrastructure projects.

2.2.3 Lessons Learnt in the Implementation of the Previous Strategic Plan

Some of the key lessons learnt under MTI II include the following:

- (i) Infrastructure development resulting in positive effects such as stimulating growth, opening-up markets and spurring investments across the country;
- (ii) Funding, especially for large scale infrastructure projects, faced challenges due to national debt management requirements hence needing innovative methods for raising required funds such as PPP and use of long-term infrastructure bonds;
- (iii) Existence of a well-defined institutional framework is key to successful implementation of programmes and projects;
- (iv) Effective coordination in the planning and construction of infrastructure in rail and road is necessary to ensure that on completion, rail

terminals/stations have adequate access roads to provide for delivery and evacuation of traffic to avoid congestion at the rail terminals;

- (v) Political good will be critical for effective implementation of the Strategic Plan;
- (vi) Timely stakeholder involvement contributes positively to the implementation of a Strategic Plan;
- (vii) Enforcement of rules, regulations and standards require concerted and joint efforts with other stakeholders; and
- (viii) Frequent changes in Government structures pose challenges to the successful implementation of the Strategic Plan as staff usually take time to adapt to the new structures.

2.3 Environmental Scan - The Positive and Negative Factors

The most important positive and negative factors considered in the formulation of this Strategy are discussed in summary below.

The following is the list of the main factors:

- (i) Demands of Kenya Vision 2030 and the Big 4 Agenda;
- (ii) Requirements of the Kenya Constitution 2010;
- (iii) Infrastructure Gaps;
- (iv) Inadequate Housing for Citizens;
- (v) The Blue Economy as the New Frontier of Economic Growth;
- (vi) International and Regional Commitments;
- (vii) High Capital Requirements and Limited Resources;
- (viii) Realignments and Regional Competition;
- (ix) Land for Infrastructure;
- (x) Capacity / Skilled Manpower and Project Management;
- (xi) Challenges in Policy Implementation; and
- (xii) Climate Change and Security Issues.

A summary on each of the above factors is provided below:

(i) Demands of Kenya Vision 2030 and the Big Four Agenda

The theme of infrastructure in the Second MTP was “Deploying World Class Infrastructure Facilities and Services”. According to the Third MTP, infrastructure plays a critical role in facilitating and accelerating socio-economic development in the country and is a key enabler for other sectors as envisaged in Kenya Vision 2030.

Investing in infrastructural development will support achievement of the “Big Four Agenda” initiatives by building on the on-going infrastructural development in road, rail, maritime, air, energy, and ICT. The sector has significant political support which is a major positive factor.

(ii) Requirements of the Kenya Constitution 2010

The development of infrastructure is an enabler for the achievement of the rights under the Constitution 2010 and in particular those spelt out under the Chapter 4 – Bill of Rights. Specifically, it provides for adequate housing as a basic right.

Article 43 provides that every person has the right to accessible and adequate housing.

(iii) Infrastructure Gaps

Though the country has made significant progress in the last 15 years, it continues to grapple with an infrastructure gap in national and regional connectivity. There is also increasing demand for infrastructure, increased traffic congestion, overreliance on one transport corridor, inadequately integrated transport infrastructure and inappropriate modal split.

In addition, there is increased traffic congestion and inadequate facilities especially for Non-Motorized Transport (NMT) system. The country is also experiencing a huge maintenance backlog.

(iv) Inadequate Housing for Citizens

A significant proportion of Kenyans lack access to affordable housing. This is exacerbated by rapid urbanization and growth of urban slums.

(v) Blue Economy as the New Frontier of Economic Growth

The Blue Economy has been identified as an important new frontier for economic development and is included as one of the sectors in the Economic Pillar of the MTP III. There is need to develop infrastructure to exploit this Blue Economy.

(vi) International and Regional Commitments

Kenya is a strong regional and global player and respects commitments under regional economic communities (EAC, COMESA), continental principally under AU Agenda 2063 and international especially under the Global Agenda 2030 (SDGs).

COMESA and EAC call for a Seamless regional airspace employing modern technology in air traffic control and airports, implementation of a Railway Master based on the SGR Standards, enhancing regional road connectivity and mainstreaming of intermodal transport services especially along the designated transnational corridors. The RECs also call for the establishment of regional centres of Excellence in capacity building, research and technology. Aspirations 1 and 2 of AU Agenda 2063 is on infrastructure integration and facilitation of trade related services. On Aviation, the aim is for a Unified African continental airspace employing modern technology in air traffic control and airports.

On railways, the aim is for a reliable, sustainable, high-performance, environmentally friendly, affordable rail system by 2040 to promote the socio-economic development and regional integration. On roads, the aim is to enhance regional connectivity especially along the designated transnational corridors while for maritime transport is to strengthen cooperation in maritime transport, inland waterways navigation and ports among African states.

The global aim for civil aviation is for a Unified airspace employing modern technology under ICAO Global Air Navigation Plan (GANP). For railways, there are global initiatives to provide interoperable rail networks that deliver safe, adequate transport spearheaded by the International Union of Railways (UIC). For roads, there are global initiatives in road transport and road safety (IRU) while global maritime focus is to facilitate the orderly expansion of world sea-borne trade through safe shipping on clean Oceans as espoused by the International Maritime Organisation (IMO).

The development of infrastructure is an enabler for the achievement of the targets under Global Agenda 2030 (SDG targets). However, goals 9, 11 and 14 have targets that directly articulate the expectations relevant to the Ministry. Target 9.1 calls for the development of quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

Target 11.2 calls for countries to provide by 2030, access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

Target 11.1 under the SDGs calls for countries to ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums by 2030 while Goal 14 addresses the use of the seas, oceans and marine resources.

(vii) High Capital Requirements and Limited Resources

The development of all the subsectors under the jurisdiction of the Ministry require high capital investment requirements. This is against perennial challenges of inadequate funding and budget provision.

There is also high dependence on external borrowing for infrastructure development which has direct impact on national debt levels.

At the same time, project preparation for development partner funded projects take long to financial closure and low absorption of partner funds leading to slow project implementation. Public Private Partnerships (PPP) have not so far yielded the expected results as a funding source for infrastructure development and challenges include slow approvals and inadequate capacity for negotiating and managing PPP projects.

There is need for not only going forward to increase capacity to exploit existing funding mechanisms but also to explore innovative approaches that have worked elsewhere.

(viii) Realignments and Regional Competition

Regional competition for trade and investments is a factor in accessing funding for infrastructure, so is the realignment of international and regional partners affecting projects leading to delays in implementation.

(ix) Land for Infrastructure

A major challenge is land for the development of infrastructure. First, there is the tedious land acquisition processes, high compensation and resettlement costs, and difficulties in obtaining wayleaves infrastructural expansion.

Secondly, there is encroachment of land earmarked for infrastructure development and finally, there are inadequate policy guidelines on land compensation.

(x) Capacity / Skilled Manpower and Project Management

A number of key areas have inadequate skilled manpower. These include transport planning and management; aviation and maritime safety inspectors; railway engineers and technicians; competent seafarers; training vessels for seafarers; and project development and management. There is also high turnover by aviation and maritime safety inspectors to airlines and shipping lines due to high global market demand.

Other challenges that affect implementation of infrastructure projects include lengthy procurement procedures; inadequate capacity and poor performance by contractors;

and legal challenges arising from contractual issues.

There are also challenges resulting from complexity of some projects that cut across Government agencies coupled with weak coordination between subsectors leading to gaps and duplication of efforts.

(xi) Challenges in Policy Implementation

The Ministry suffers from uncoordinated policy, legal and institutional framework and weak policy implementation. In particular, there is poor enforcement of traffic regulations resulting in axle overloading and poor road safety record with high number of traffic accidents.

(xii) Climate Change and Security Issues

There is growing concern over the adverse impact of climate change on infrastructure. There is therefore need for adaptation and mitigation measures which includes building climate resilient infrastructure and minimizing the effects of infrastructure development on the environment.

Vandalism of infrastructure facilities; and insecurity from terrorism and criminal gangs in the transport systems are also of major concern.

2.3 SWOT, PESTEL and Stakeholder Analysis

The outcomes of the SWOT Analysis undertaken at the stakeholder workshop are provided in Table 2 below.

Table 2: SWOT Analysis Outcomes

Strengths	Weaknesses
(i) The agencies in the Ministry have well defined mandates	(i) Inadequate policy guidelines in the development of infrastructure.

<ul style="list-style-type: none"> (ii) There is an existing legal and institutional framework (iii) The agencies have adequate professional and skilled staff except for the Maritime subsector (iv) Membership and active participation in the international and regional intergovernmental organizations (v) Existence, of training institutions in all modes of transport except in the case for seagoing personnel 	<ul style="list-style-type: none"> (ii) Inadequate synchronization among relevant MDAs in the development of projects particularly in the Transport Sector (iii) Governance issues (iv) Slow uptake of technological developments (v) Inadequate technical and professional staff and capacity in key areas such a PPP structuring, procurement and management (vi) Poor enforcement of rules and regulations and in particular inadequate enforcement of axle load limits on the roads and road safety (vii) Inadequate plant and equipment under the Mechanical and Transport fund to meet the ever-increasing demand. (viii) Inadequate research and development (ix) Slow growth of the Maritime and Shipping sector (Maritime) (x) Lack of centralized data on maritime and shipping industry (xi) Fragmented knowledge base on Blue Economy as it is domiciled in different institutions at various levels of processing and competencies (xii) Inefficient internal processes. This includes manual records management, bureaucratic red tape and non-value adding work processes; (xiii) Inadequate financing / budgetary provisions (xiv) Inadequate physical facilities and equipment (xv) Low absorption of development partner funds (xvi) Inadequate road data for planning (Infrastructure)
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Opportunities	Threats
<ul style="list-style-type: none"> (i) Kenya’s strategic geographical location ideal for as hubs for both trans-shipment and logistics (ii) Kenya’s coastline which stretches for about 650Km with a corresponding Exclusive Economic Zone (EEZ) (iii) Political goodwill and visionary leadership from the highest levels of government (iv) Current political stability (v) The provisions of Vision 2030 and the Big 4 Agenda that identifies the work of the Ministry as a key enabler. (vi) Large youthful and (to some extent) skilled population and skilled human resources within the skills in various sectors (vii) Existence and growth of training institutions (viii) Existence of natural harbours and the developed port facilities with the potential serve shipping and increase investment (ix) Existence and access to modern and advanced technologies (x) Member of regional and continental integration blocks such as COMESA, EAC, and the 	<ul style="list-style-type: none"> (i) Rapidly increasing traffic congestion and high accident rates (Infrastructure) (ii) High cost of investment for infrastructure projects (iii) Slow uptake and approval for PPP Projects (PPP is not achieving the intended impact as an alternate source for infrastructure projects) (iv) High fares and charges for transport services (Transport) (v) Huge maintenance backlog of the road network (Infrastructure) (vi) Inadequate admiralty courts in Kenya (Maritime) (vii) High cost of acquisition of land and compensation for infrastructure projects (viii) Encroachment of land earmarked for infrastructure development and transport corridor reserves (ix) Dominance of foreign seagoing vessels in maritime subsector (x) Safety and security of infrastructure including vandalism of infrastructure and facilities, and terrorism. (xi) Insecurity at sea leading to increased shipping costs due to high insurance premiums and operating costs (xii) Weak linkages and coordination between national and county governments (xiii) Civil litigation especially related to development of transport projects (xiv) Environmental pollution by transport operations (xv) High cost/delays in relocation of utilities and services along and across the road reserves. (xvi) Insufficient training facilities denying nationals the opportunity to obtain the competencies required for

<p>African Continental Free Trade Area (ACFTA)</p> <p>(xi) Discovery and exploration of oil and other minerals</p> <p>(xii) Existence of inland water bodies</p> <p>(xiii) Global shortage of seafarers which Kenya can tap into</p> <p>(xiv) Global recognition and focus on the Blue Economy as the next frontier for economic growth</p> <p>(xv) Availability of infrastructure to support ship construction and repair</p> <p>(xvi) Global, continental and regional commitments including the SDGs, AU's Agenda 2063, Africa Integrated Maritime Strategy (AIMS) 2050</p> <p>(xvii) Enhanced spatial information sharing and collaboration in the East African region</p> <p>(xviii) Kenya hosts international and regional institutions such as the UN Office in Nairobi (UNON), UN-HABITAT, UNEP, Shelter-Afrique, Africa-Re and Regional Centre for Mapping of Resources for Development (RCMRD);</p> <p>(xix) Significant financial remittances from Kenyans in the Diaspora</p> <p>(xx) Improved ease of doing business and enhanced investor</p>	<p>qualification and certification under the STCW Convention and lack of mandatory shipboard training opportunities. Lack of vessels for training personnel on merchant and fishing vessels; dynamic positioning ships and mobile offshore drilling, anchor handling and offshore supply vessels.</p> <p>(xvii) Loss of resources to nations with developed capacity for research and information sharing that enable exploitation of the resources such as fisheries, Long Distant Fishing Nations (LDFNs), exploiting, extractives and international shipping.</p> <p>(xviii) Repatriation of foreign exchange through shipping with foreign lines</p> <p>(xix) Maritime boundary and territorial conflicts (e.g. dispute with Somalia on water boundary in the Indian Ocean) (Maritime)</p> <p>(xx) Rapid population growth in relation to the available resources and high rural-urban migration coupled with inadequate decent and affordable housing.</p> <p>(xxi) Increasing numbers of the elderly and other vulnerable groups including street families coupled with inadequate social support systems</p> <p>(xxii) Unabated urban sprawl has made development of critical infrastructure more expensive</p> <p>(xxiii) Inadequate information on market trends, best practices, optimal areas and risk assessment on real estate investment</p> <p>(xxiv) Inaccessibility and rising cost of housing finance and building materials</p> <p>(xxv) The adverse impacts of climate change (need for mitigation and adaptation)</p> <p>(xxvi) Inadequate (and in some cases uncoordinated and conflicting) policy, legal and institutional framework.</p>
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confidence (xxi) Availability of several studies/data on transport, Infrastructure, Housing and Urban Development	
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The outcomes of the PESTEL Analysis are provided in Table 3 below.

Table 3: Outcomes of the PESTEL Analysis

Category	Issue
Political	<ul style="list-style-type: none"> (i) There is political goodwill and visionary leadership from the highest levels of government (ii) Current political stability (iii) The provisions of Vision 2030 and the Big 4 Agenda that identifies the work of the Ministry as a key enabler. (iv) Regional and continental integration including the EAC, COMESA, and the emergence of the African Continental Free Trade Area (ACFTA) (v) Global, continental and regional commitments including the SDGs, AU's Agenda 2063, Africa Integrated Maritime Strategy (AIMS) 2050 (vi) Maritime boundary and territorial conflicts (e.g. dispute with Somalia on water boundary in the Indian Ocean) (Maritime) (vii) Lack of regional institutional framework for collaboration in the trans-boundary water bodies (Maritime). (viii) Weak linkages and coordination between national and county governments
Economic	<ul style="list-style-type: none"> (i) Existence of natural harbours and developed port facilities with the potential to promote commercial shipping and investments (ii) Discovery and exploration of oil and other minerals (iii) Availability of inland water bodies (iv) Global shortage of seafarers which Kenya can tap into (Maritime)

Category	Issue
	<p>(v) Global focus on the Blue Economy as the next frontier for economic growth</p> <p>(vi) Availability of infrastructure to support ship construction and repair (Maritime)</p> <p>(vii) Significant financial remittances from Kenyans in the Diaspora</p> <p>(viii) Improved ease of doing business and enhanced investor confidence</p> <p>(ix) Loss of resources to nations with developed capacity for research and information sharing that enable exploitation of resources such as fisheries, Long Distance Fishing Nations (LDFNs), exploiting extractives and international shipping.</p> <p>(x) Repatriation of foreign exchange through shipping with foreign lines</p> <p>(xi) Inadequate information on market trends, best practices, optimal areas and risk assessment on real estate investment</p> <p>(xii) Inaccessibility and rising cost of housing finance and building materials</p> <p>(xiii) Huge infrastructure gap. This includes weak integration and inadequacy of transport infrastructure and systems; inappropriate modal split; overreliance on one transport corridor; and limited provision for Non Motorised Transport</p> <p>(xiv) High cost of investment for infrastructure projects</p> <p>(xv) Potential adverse impact of borrowing for infrastructure projects on the economy</p> <p>(xvi) Slow uptake and approval for PPP Projects (PPP is not achieving the intended impact as an alternate source for infrastructure projects)</p> <p>(xvii) Huge maintenance backlog of the road network (Infrastructure)</p> <p>(xviii) Difficulties in obtaining wayleaves/right of way and high cost of acquisition of land and compensation for infrastructure projects</p> <p>(xix) Lack of national sea-going vessels</p> <p>(xx) Strategic geographical location ideal for its establishment as logistical hubs</p> <p>(xxi) Kenya's vast coastline which stretches for about 650Km and a corresponding EEZ</p>

Category	Issue
Social	<ul style="list-style-type: none"> (i) Large youthful and (to some extent) skilled population and skilled human resources within the respective sectors (except in the Maritime subsector) (ii) Inadequate population data on some population subsets. (iii) Rapid population growth in relation to the available resources and high rural-urban migration coupled with inadequate decent and affordable housing. (iv) Increasing numbers of the elderly and other vulnerable groups including street families coupled with inadequate social support systems (v) Unabated urban sprawl has made development of critical infrastructure more expensive (vi) High fares and charges in both intercity and urban transport services (vii) Rapidly increasing traffic congestion and high accident rates (Infrastructure) (viii) Encroachment of land earmarked for infrastructure development and transport corridor reserves (ix) Safety and security of infrastructure including vandalism of infrastructure and facilities, and terrorism. This includes insecurity at sea leading to increased shipping costs (Insurance, operating costs etc.)
Technological	<ul style="list-style-type: none"> (i) Existence and access to modern and advanced technologies (ii) Enhanced spatial information sharing and collaboration in the East African region (iii) Inadequate local construction capacity due to lack of skills and capital for road contractors; (iv) Inadequate admiralty courts in Kenya (Maritime) (v) Availability of several studies/data on transport, Infrastructure, Housing and Urban Development (vi) Enhanced spatial information sharing and collaboration in the East African region (vii) Inadequate training facilities especially for the Maritime sub-sector

Category	Issue
Environmental	(i) Environmental pollution by transport operations (ii) Adverse impacts of climate change (need for mitigation and adaptation)
Legal	(i) Civil litigation especially related to development of transport projects (ii) Inadequate (and in some cases uncoordinated and conflicting) policy, legal and institutional framework. (iii) The completion and operationalization of Integrated National Transport Policy

The outcome of the Stakeholder Analysis is provided in Table 4 below:

Table 4: Stakeholder Analysis

Stakeholder	Expectation from Ministry	Ministry Expectation from Stakeholder
Suppliers/contractors	(i) Prompt payments (ii) Impartiality, and transparency (iii) Feedback	Quality and timely delivery of works, goods and services
State Law office	Operate within legal requirements	Timely legal guidance
Judiciary	(i) Development of infrastructure (ii) Effective representation in courts	(i) Interpretation of the laws, resolution of conflicts and justice (ii) Establish an effective Kenyan Admiralty court (iii) Establish a maritime arbitration centre.
National Treasury	(i) Budget preparation (ii) Timely financial reports (iii) Compliance with public financial regulations	(i) Mobilization and allocation of Financial resources (ii) National economic policy management

Stakeholder	Expectation from Ministry	Ministry Expectation from Stakeholder
	(iv) Prudent financial management	(iii) Timely release of funds; (iv) Advice on financial matters (v) Provide fiscal incentives for growth of marine economy
Interior and coordination of National Government	Develop enabling infrastructure	Provide national security, maintenance of law and order
Other Ministries, Departments and Agencies	Information sharing and provision of services	Provide inputs such as energy, other inputs and feedback and creation of a conducive environment for operations
Transport operators	Creation of an enabling environment	Compliance with transport rules, regulations, and standards
General public	Efficient and effective transport infrastructure and services	Comply with rules & regulations in transport and provide feedback on services
Development partners	Timely and efficient implementation of projects & programmes	Timely approval and disbursement of funds
Cabinet		(i) Timely approval of transport sector bills (ii) Political good will
Parliament	Timely implementation of sectoral legislation, projects and programmes	Timely enactment of legislation, budget approvals, oversight and feedback

Stakeholder	Expectation from Ministry	Ministry Expectation from Stakeholder
County governments	Provision of County Policies/standards to guide transport and infrastructure sector	(i) Compliance with policies and feedback (ii) Cooperation and collaboration in programmes/projects implementation
State Corporations within the Ministry	(i) Timely gazettelement of rules and regulations (ii) Timely approvals and transfer of funds (iii) Prompt response to correspondence	Effective and efficient service delivery
Internal Stakeholders (Staff)	Leadership, enabling work environment and motivation	Effective and efficient service delivery
Financial Institutions	Compliance with banking requirements	Cooperation and support
Universities/ other institutions of higher learning	Collaboration and networking	(i) Provision of qualified manpower, (ii) Undertake research and development, and knowledge sharing
Development partners	Accountability for partner funds, timely reporting	Partnership in funding and implementation of programmes and projects
Professional bodies	Respect for and adherence to professional standards	Regulate the conduct of the respective professions
International / regional organizations	Implement country commitments	Collaboration in implementation of international and regional policies and programmes
Oversight institutions	Compliance with guidelines and regulations	Collaboration in addressing issues affecting the sector

CHAPTER 3: THE STRATEGIC MODEL

3.1 Overview

This chapter presents the Strategic Model detailing the strategic issues that the Ministry has identified, and which need to be addressed in order to effectively achieve the Ministerial mission of accelerating the implementation of the Third Medium Term Plan (MTP III) of Kenya Vision 2030. It also provides the Ministerial flagship projects that will facilitate the aspirations of the Country within mandate of the Ministry.

The Chapter presents the Vision, Mission, and Core Values and identifies the Key Result Areas, Strategic Objectives that the Ministry will pursue during the plan period.

3.2 Vision, Mission and Core Values

Vision

The adopted Vision is: “Become a global leader in the provision of transport infrastructure, services, maritime economy, built environment and urban development for socio-economic development.”

Mission

The adopted Mission is: “To provide efficient, safe and integrated transport systems, robust maritime economy, built environment and urban development for sustainable development.”

Core Values

The adopted core values are ***Integrity; Team Work; Innovation; Customer Focus and Inclusiveness and Equity.***

The above Core Values, summarised below will guide behaviour, decisions, actions and relationships in the Ministry:

- (i) ***Integrity:*** *All staff shall uphold the highest standards of professional competence and integrity*

- (ii) **Team Work:** The Ministry is dedicated to teamwork and effective collaboration to achieve results*
- (iii) **Innovation:** The Ministry is committed to innovation and creativity in its leadership in the development of the infrastructure and in the delivery of services*
- (iv) **Customer Focus:** The Ministry is committed to uphold customer driven and customer focused service delivery*
- (v) **Inclusiveness and Equity:** The Ministry is committed to consultative and participatory development process to ensure inclusiveness and equity in its service delivery*

3.3 Key Result Areas (KRAs)

The following are the five (5) Key Result Areas (KRAs) that the Ministry will focus on during this Strategic Plan period (2018 – 2022):

- (i) Policy, Legal, Regulatory and Institutional Framework;
- (ii) Development of Physical Infrastructure and Facilities;
- (iii) Quality of Service, Safety and Security and Environmental Sustainability;
- (iv) Research and Innovation; and
- (v) Capacity Building in Institutional, Human, Technological and Financial.

(i) Policy, Legal, Regulatory and Institutional Framework

While enabling policy, legal and institutional frameworks exists, these will be reviewed, updated and further improved to provide an enhanced enabling environment for the achievement of the results targeted under this Strategic Plan.

The Ministry will also focus on enhancing compliance with national policies related to cross cutting issues in gender, disability, HIV/Aids and youth.

(ii) Development of Physical Infrastructure and Facilities

The Ministry will continue to bridge the huge gap in infrastructure, transport systems, built environment and facilities to further promote seamless flow of goods and movement of people while enabling the development of the Blue Economy.

In addition, infrastructure in built up environment will increase access to affordable housing, and improve ease of doing business.

(iii) Quality of Service, Safety, Security and Environmental Sustainability

The Ministry will focus on improving the quality of service, and address safety and security concerns on infrastructure and transport systems while actively promoting environmental sustainability in line with international and national obligations.

(iv) Research and Innovation

In order to increase its capacity to deliver on infrastructure, transport systems, the built environment and the Blue Economy, the Ministry will enhance its research and innovation in new technologies, approaches and practices.

(v) Capacity Building (Institutional, Human, Technological and Financial)

During the planning period, the Ministry will further strengthen its institutions, enhance technical and professional capacities; capacities in transport systems; infrastructure; built environment; housing; and in the maritime sub-sectors to effectively deliver on its mandate and meet stakeholder expectations.

In order to bridge the large financing gap to its programmes and projects, the Ministry will strengthen its capacity to effectively promote, attract and manage innovative financing mechanisms including PPPs.

3.4 Strategic Objectives, Strategies and Key Targets

The Ministry commits to achieve the following ten Strategic objectives with the five KRAs discussed above. Table 5 below presents the Strategic Objectives against the KRAs.

Table 5: Strategic Objectives against Key Result Areas

Key Results Area	Strategic Objectives
I. Policy, Legal, Regulatory and Institutional Framework	a) <i>To formulate and/or review and co-ordinate implementation of requisite policies, legal, regulatory and institutional framework</i> b) <i>To enhance compliance to national policies on Gender, Disability, HIV/AIDS, ADA and access to Government Procurement Opportunity</i>
II. Development of Physical Infrastructure and Facilities	a) <i>To expand, modernize and maintain integrated, efficient and sustainable transport systems</i> b) <i>To increase access to decent, safe and affordable housing, public buildings and ensure sustainable urban development</i> c) <i>To promote the Blue Economy</i>
III. Quality of Service, Safety and Security and Environmental Sustainability	a) <i>To improve quality of service, safety and security of transport systems, built environment and urban development</i> b) <i>To promote environmental sustainability</i>
IV. Research and Innovation	<i>To enhance research and innovation in transport systems and the built environment</i>
V. Capacity Building (Institutional, Human, Technological and Financial)	a) <i>To enhance capacity and capabilities in human capital, institutions and technology</i> b) <i>To mobilize financial resources</i>

The following sections present the Strategic Objectives, key strategies to be pursued to achieve them and key targets to be achieved during the planning period to 2022.

I. Policy, Legal, Regulatory and Institutional Framework

a) Formulate and/or review and co-ordinate implementation of requisite policies, legal, regulatory and institutional framework

Strategies

In order to provide for enabling environment, the Ministry will undertake the following across the sectors:

- (i) Formulation or review of policy as necessary in the various subsectors;
- (ii) Development and review legal and regulatory instruments; and
- (iii) Establishment of institutional structures to facilitate implementation of programmes and projects.

Key Targets

The following are some of the key targets in policy to be achieved by the Ministry during the Plan period:

- (a) A Revised Integrated National Transport Policy (INTP);
- (b) Review of 12 urban policy and legislative instruments;
- (c) A Blue Economy Master Plan;
- (d) Construction Industry Policy;
- (e) Public Works Policy; and
- (f) Land Acquisition Policy.

The main targets under the legal and regulatory components include the following:

- (a) Legal framework to protect and manage critical infrastructure developed;
- (a) Regulations developed to operationalise Nairobi Metropolitan Area Transport Authority (NAMATA) Act;
- (b) Kenya Roads Bill enacted;
- (c) The KAA Act and Regulations reviewed;
- (d) Repeal the Architects and Quantity Surveyors Act Cap 525; and

- (e) Legal and regulatory framework established on railway sector in Kenya with regard to construction, maintenance, commercial operations and regulation.

Under the establishment and strengthening institutional structures to facilitate the implementation, the following will be undertaken:

- (a) Establishment of Land bank;
- (b) Development of an Infrastructure Development Fund to support development of the local construction industry;
- (c) Establishment of Kenya Building Research Center;
- (d) Toll Fund for construction of toll roads; and
- (e) Development of training facilities covering all modes of transport and the built-up environment.

b) Enhance compliance with national policies on Gender, Disability, HIV/AIDS, and access to Government Procurement Opportunities

Strategies

The Ministry will ensure full compliance, as far as practicable, with relevant national policies on gender, disability, HIV/Aids and Access to Government Procurement Opportunities.

Specifically, under cross-cutting issues, the Ministry will continue to mainstream environment and climate change; Disaster Risk Reduction (DRR); HIV/AIDS, youth and gender issues, disability vulnerable/marginalized groups. The following strategies will be adopted:

- (i) Implementation of climate resilient, safe, accessible, inclusive and affordable infrastructure policies and systems;
- (ii) Conduct Strategic Environmental Assessment/Environmental Impact and Social Assessment on all infrastructure projects;
- (iii) Adoption of designs, and building materials appropriate to climate proof roads, rail, buildings energy and oil, marine and aviation infrastructure;

- (iv) Undertake training, sensitization and creation of awareness for sector employees, construction workers and clients on HIV/AIDs;
- (v) Mainstream gender, youth and disability policies in the sector.
- (vi) Employ available anti vandalism technology to protect public infrastructure;
- (vii) Develop punitive legislations to guard against vandalism; and
- (viii) Develop the infrastructure with special attention on remote areas, disadvantaged regions and transmigration areas.

Key Targets

- (a) Minimum 30% of either gender in employment and representation in the infrastructure projects; and
- (b) Legislation passed to deal with vandalism of public infrastructure.

II. Development of Physical Infrastructure and Facilities

a) Expand, modernize and maintain integrated, efficient and sustainable transport systems

Strategies

This Ministry will implement programmes that aggressively narrow the current infrastructure gaps in the various modes of transport and to ensure that maintenance for infrastructure is well scheduled and implemented. The following are the key strategies on the basis of the various subsectors:

- (i) Expansion and modernization of Aviation Facilities
- (ii) Improvement of shipping and Maritime Facilities
- (iii) Improvement of Railway Transport
- (iv) Development of Nairobi Commuter Rail Master plan and the Improvement of Commuter Facilities and Services
- (v) Mombasa Commuter Rail Improvement
- (vi) Road Expansion Programme (4 clusters covering key Corridors)

- (vii) Improvement of national Urban Transport facilities
- (viii) Decongestion of Cities, Urban Areas and Municipalities through construction of bypasses and missing links
- (ix) Improvement of roads in Cities and Municipalities
- (x) Improvement of Mass Rapid Transit in large cities
- (xi) Comprehensive Road Maintenance
- (xii) Enhancement of Road Safety

Key Targets

The following are the key targets under each transport subsector:

(i) Civil Aviation

- (a) Increase passenger handling capacity at JKIA from the current 7.5 million to 9 million by 2022;
- (b) Improve other airports capacity and aerodromes in the country; and
- (c) Improve the capacity of air navigation services by implementing the Aviation Systems Block Upgrade (ASBU) programme

(ii) Railways

- (a) Complete Phase 2A of the SGR (Nairobi to Naivasha) by 2020 and make the necessary preparations to construct the remaining segments to reach Kisumu and Malaba;
- (b) Increase the railway's share from the current 5% to 50% for cargo passing through Port of Mombasa by 2022; and
- (c) Reduce the average transit time through Kenya from the Port of Mombasa to Malaba to less than 24 hours by 2022.

(iii) Roads

- (a) Expansion of the road network by construction/rehabilitation of 10,000 kilometers of roads comprising of 2,500 km of Conventional Roads and 7,500 km Low Volume Sealed Roads;
- (b) Construction of 54 km of missing links in Nairobi;
- (c) Construction of 308 km of bypass roads nationwide
- (d) Maintenance of 161,456 km of roads under periodic and routine maintenance comprising of 39,995 km for National trunk roads and 121,456 km for County roads

(iv) Maritime Transport

- (a) Increase cargo handling capacity from the current 30 to 40 million Metric Tons by 2022; and
- (b) Increase containerized cargo handling capacity from the current 1.5 to 3 million TEUS by 2022.

b) Promotion of the Blue Economy

Strategies

The following strategies will be adopted in order to stimulate growth of the Blue Economy:

- (i) Provide an enabling environment for its development as a new frontier for economic development;
- (ii) Promote the development of infrastructure including fishing ports along the Indian Ocean and inland waters; and
- (iii) Develop Bandari Maritime Academy to provide training for seafarers and fisheries experts.

Key Targets

The following are the key targets under the Blue Economy:

- (a) Blue Economy Master Plan developed;
 - (b) Establish a Blue economy database; and
 - (c) Training provided for 14,000 Blue Economy skills including seagoing and fisheries
-
- c) ***Increase access to decent, safe and affordable housing, public buildings and ensure sustainable urban development***

Strategies

The Big Four Agenda has provided clear deliverables in terms of housing for the plan period. The strategies to be applied to deliver the housing together with other components under components in urban development and public works are:

- (i) Development of an affordable Housing Programme;
- (ii) Expansion of Government Building facilities;
- (iii) Provision of headquarters office building for country governments;
- (iv) Upgrading of slum areas through construction of public facilities in sewerage, health centres;
- (v) Construction of markets in informal settlements in the urban areas across the country;
- (vi) Increasing mobility and accessibility in urban areas; and
- (vii) Protection of coastal and river ecosystems.

Key Targets

The following are some of the key targets in the plan period:

- (a) Deliver 400,000 affordable housing units and 100,000 social housing units;
- (b) 10,400 units for Civil Servants Housing Scheme constructed;
- (c) 14,272 Government housing units refurbished;

- (d) Development of 10 rail commuter stations in Nairobi;
- (e) BRT covering 15 Kms constructed;
- (f) Construction of 32 markets across the country; and
- (g) Water connection to 8,500 households in informal settlements

Under public buildings and other infrastructure, targets are as follows:

- (a) Completion of 14 government stalled building projects;
- (b) Construction of 5 County Government headquarters;
- (c) Construction/rehabilitation of 5,300 meters of seawalls; and
- (d) Construction 6,250 meters of river protection facilities at Kongelai and Budalangi.

III. Quality of Service, Safety, Security and Environmental Sustainability

a) Improve quality of service, safety and security of transport systems, built environment and urban development

Strategies

The focus will be on continuous improvement in the quality of services and effective management of safety and security risks to secure the investments in infrastructure and facilities. The following are the strategies:

- (i) Development of manpower and provision of equipment for compliance with international Aviation Safety Standards;
- (ii) Development of a Maritime Security Strategy;
- (iii) Enhancement of urban disaster management; and
- (iv) Enhance safety in buildings and construction sites

Key Targets

The following are some of the key targets intended to be achieved:

- (a) Establishment of 15 Search and Rescue Centres for coastal and inland waters;

- (b) A Maritime Security Strategy developed;
- (c) Establishment of 10 National Disaster Centres;
- (d) Enactment of a National Disaster Management Act; and
- (e) Inspection, auditing and testing of buildings 7,000 buildings conducted.

b) *Promote environmental sustainability*

In line with Kenya's national and international commitments, the Ministry will mainstream and promote environmental sustainability in all its programs, projects, and activities.

(IV) Research and Innovation

a) *Enhance research and innovation in transport systems and built environment*

Strategies

Delivering the infrastructure, facilities and housing require the use of up to date, innovative and cost-effective technologies. The Ministry through its departments and agencies will strengthen its research capabilities.

Research may be conducted through new institutions or existing ones which may include capacity building institutions such as the Bandari Maritime Academy, the Railway Training Institute and through research networks comprising higher institutions of learning. The following strategies will be adopted:

- (i) Establishment of relevant R&D institutions and networks to provide integrated and shared knowledge;
- (ii) Facilitation of existing institutions to undertake research relevant to their sub-sectors; and
- (iii) Promotion research in the use of sustainable low-cost housing building materials and technologies

Key Targets

The following are the key targets for achievement during the plan period:

- (a) Development of a Transport Research and Development Policy;
- (b) Establishment of a Maritime Research and Development Centre;
- (c) Transformation of Kenya Building Research Centre into an institute; and
- (d) Establishment of 20 ABMT centres

(V) Capacity Building (Institutional, Human, Technological and Financial)

a) Enhance capacity and capabilities in human capital, institutions and technology

Strategies

The intention is to have the requisite number of skilled professionals necessary to effectively deliver the Ministry's mandate in 2022 and beyond. The following strategies will be employed:

- (i) Providing training through existing institutions for skills development for the Ministry and wider national economy;
- (ii) Establishment of new institutions or upgrading existing ones to provide the required training where necessary;
- (iii) Cooperation with other institutions such as universities and research institutions to provide specialized or more advanced skills;
- (iv) Procurement of necessary technologies to build capacities in training institutions;
- (v) Establishment of a transport institute with the existing universities for transport planning and management; and
- (vi) Acquisition of modern and reliable equipment in order to empower local contractors and provide opportunity to those leaving training institutions with practical experience in operation and repair.

Key Targets

The following are the targets for capacity building under the various subsectors:

- (a) Transforming of Bandari College into a Maritime Academy;

- (b) Training for 6,250 personnel with skills for the Blue Economy. The expertise to be provided will include marine operations including seagoing and fisheries;
- (c) Development of National Construction Institute;
- (d) Training of 5,000 officers in the construction industry;
- (e) Training of technical personnel in the Ministry and state agencies on structuring, procurement and management of PPPs;
- (f) Strengthening the Mechanical and Transport Department (MTD) through Mechanical and Transport Fund into a strong self-sustaining equipment hire pool by equipping it with 150 equipment of various types; and
- (g) Raise the revenues earned by MTD to K Shs. 1.5 billion per annum.

b) Mobilization of Financial Resources

Strategies

Infrastructure projects require large capital outlays. As the requirements are in most cases higher than the available financial resources, there are gaps that need to be closed in order to fund the planned projects and programmes. In order to bridge the financing gaps, the Ministry will apply innovative and proven financing mechanisms to mobilise resources.

Such mechanisms include the mobilization of resources through Infrastructure Bonds, application of PPPs and mobilizing private investment. The following are some of the key strategies that the Ministry and its state agencies will adopt to mobilise additional funds to implement the projects:

- (i) Mobilisation of investment through PPPs;
- (ii) Infrastructure Bonds mobilisation;
- (iii) Direct interactions with development banks; and
- (iv) Sector investment conferences.

The successful realization of the full benefits of PPPs will require capacity building both at departmental and state agency levels to provide national expertise to procure and effectively manage them.

Key Targets

The main target will be to reduce the funding gap by at least 50 per cent through innovative financing initiatives.

CHAPTER FOUR: IMPLEMENTATION AND CO-ORDINATION FRAMEWORK

4.1 General Overview

The implementation of this Strategic Plan will be spearheaded by the Ministry's leadership in various departments, agencies and all the stakeholders. This Chapter, therefore, details the organizational structure that will deliver the implementation of the plan, staff and capacity building requirements as well as the requisite mobilization efforts required to achieve the objectives of the Strategic Plan.

The Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works (MOTIHUD) is responsible for developing policy, regulations and undertaking coordination and administrative oversight in its areas of mandate under the Government of Kenya (GOK). The Ministry exercises its mandate directly through its five State Departments.

The development of physical infrastructure, service provision and regulatory oversight are undertaken primarily through its various state agencies in the transport, housing, urban development and public works. This Strategic Plan will be implemented either directly by five state departments in the ministry, through its various state agencies or in collaboration with the private sector and partners under its leadership.

The implementation of the Strategic Plan, therefore, requires coordinated efforts by all the state departments and state corporations together with County Governments. As set out in the Fourth Schedule of the Constitution, the functions of National Government include; use of international waters for international and national shipping; road traffic management; railway development; marine navigation; air travel; capacity building; and technical assistance to the Counties.

4.2 The Structure of the Ministry

The Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works (MOTIHUD) under Executive Order No 1 of June, 2018 has a wide mandate covering transport, housing, urban development and public works. These mandates

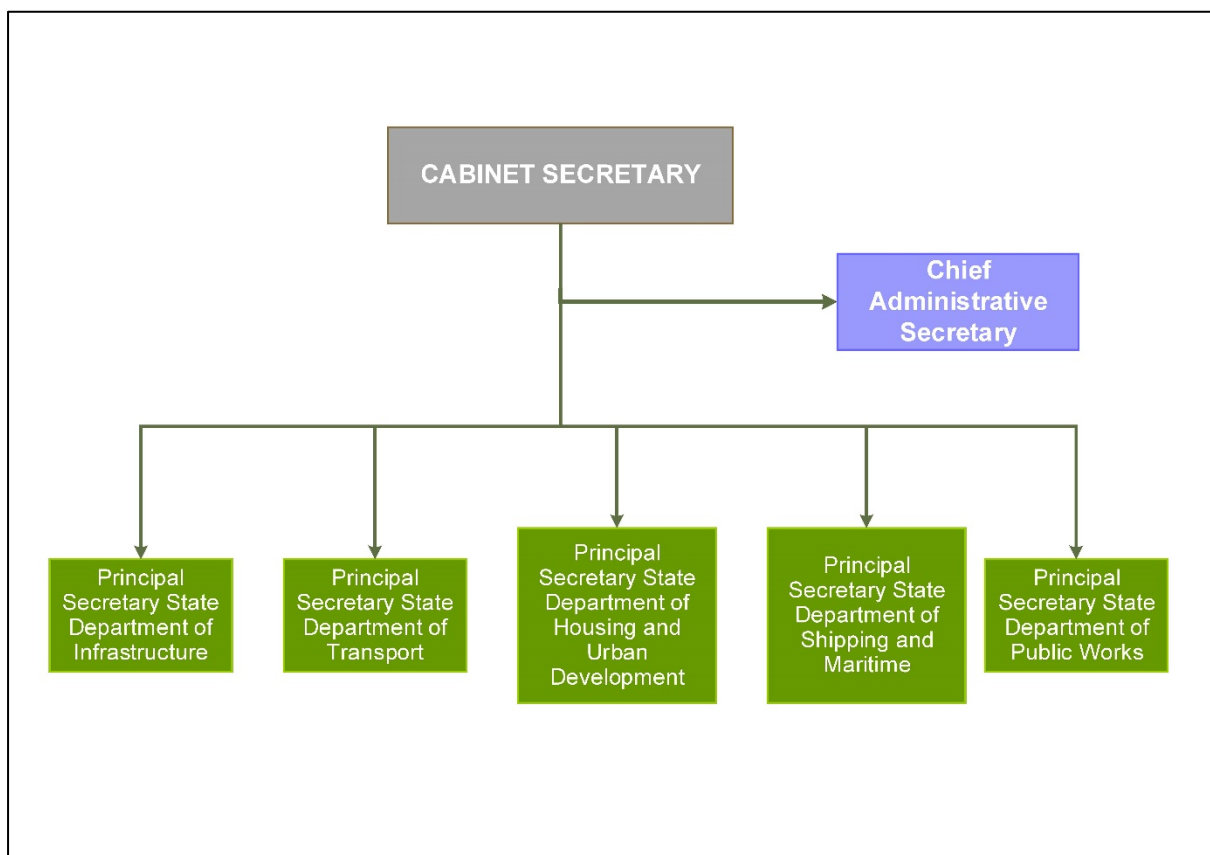
are exercised through five state departments and a large number of state agencies each falling under a specific state department. The five State Departments exercise oversight over various state agencies which have their own corporate structures established either under acts of parliament or through subsidiary legislation.

These state agencies undertake functions that cover the development of infrastructure, provision of services, regulation and capacity building. Some of the state agencies have multiple mandates that may include two or more of the above functions.

The detailed functions of the Ministry through its five State Departments are provided in Table 1 in Chapter One.

The current ministerial organogram is shown in Figure 1 below.

Figure 1: Organigram of MOTIHU DPW showing the State Departments



The Ministry's State Departments, each headed by a Principal Secretary as the accounting officer, are answerable to the Cabinet Secretary. Each of the five State Departments has its own establishment consisting of both technical and administrative divisions headed by Directors.

The State agencies which fall under each of the five State Departments are established to undertake specific functions which include infrastructure development, provision of services, regulation/oversight and resource mobilization or a combination of both Infrastructural development and provision of services. Table 6 below shows the list of state agencies against the State Departments they are answerable to.

Table 6: State Departments and their State Agencies

Department	State Agencies	Functions
Transport	Kenya Airports Authority (KAA)	KAA manages the major airports and aerodromes in the country to facilitate air transport services. It maintains, rehabilitates and constructs airstrips on an agency basis.
	Kenya Civil Aviation Authority	Responsible for regulation aviation industry in order to ensure safe, efficient and effective civil aviation systems in Kenya and management of the East African School of Aviation. Also is responsible for the provision of air navigation services country
	East African School of Aviation	Training in civil aviation including flight operations, air traffic control and ground operations
	Kenya Railways Corporation	Development of railway infrastructure, monitoring and regulation of the performance of the SGR concessionaire. In addition, KRC manages Railway Training school
	Kenya Railways Training Institute	Provides training in rail construction, maintenance, operations and commercial services
	Kenya Ports Authority	KPA manages the national ports along the coastline that serve Kenya, Rwanda, Burundi, Sudan and Uganda with sea links to the outside world.

Department	State Agencies	Functions
	Kenya Ferry Services	KFS provides ferry services to vehicles and pedestrians across the Likoni and Mtongwe channels on the Indian Ocean
	LAPSSET Authority	Coordination of the implementation of the LAPSSET Corridor and its respective components
	Transport Licensing Board	Licensing of commercial road transporters
	Transport Licensing Appeals Board	Adjudicates on disputes between the Transport Licensing Board and transport service providers
Infrastructure	Kenya Roads Board	Administers the Road Maintenance Levy Fund advises the Minister on matters relating to road maintenance, rehabilitation and development.
	Kenya National Highways Authority (KeNHA)	Responsible for construction and maintenance of national road network
	Kenya Urban Roads Authority (KURA)	Responsible for construction and maintenance of urban road network
	Kenya Rural Roads Authority (KERRA)	Responsible for construction and maintenance of rural road network
	Kenya Institute of Technology	
	Kenya Institute of Highways and Building Technology	Training in construction of road and other civil works
	Engineers Registration Board of Kenya	Setting standards, regulations and registration of engineers
Shipping and Maritime	Kenya Maritime Authority	Regulation and oversight on Maritime transport sector and discharging the role of flag state and port state control
	Kenya National Shipping Line	KNSL operates as the national carrier in the maritime industry.
	Bandari Maritime Academy	Training for the maritime sector (ports and shipping)

Department	State Agencies	Functions
Housing and Urban Development	National Housing Corporation	Construction of residential housing for rental and purchase by tenants. Also, NHC provides loans for construction of houses by individuals who pay back through a mortgage system
	NaMATA	Formulation of a sustainable, integrated public transport strategy based on development of a sustainable mobility plan in the Nairobi Metropolitan Area Mass Transport System.
	Rent Restriction Tribunal	Adjudicates on disputes between landlords and tenants with respect to rentals and tenancy rights and obligations
	Civil Servants Housing Scheme Fund	Administers the civil service housing programme and the Scheme Fund.
Public Works	National Construction Authority	Mandated to oversee the construction industry and coordinate its development.
	Building Inspectorate	Oversight on safety in construction of commercial and residential buildings
	Board of Registration of Architects and Quantity Surveyors (BORAQS)	Setting standards, regulations and registration of architects and quantity surveyors
	Kenya Building Research Center	Conducting research for the construction sector including designs and building materials

4.2.1 Brief on State Departments and Agencies

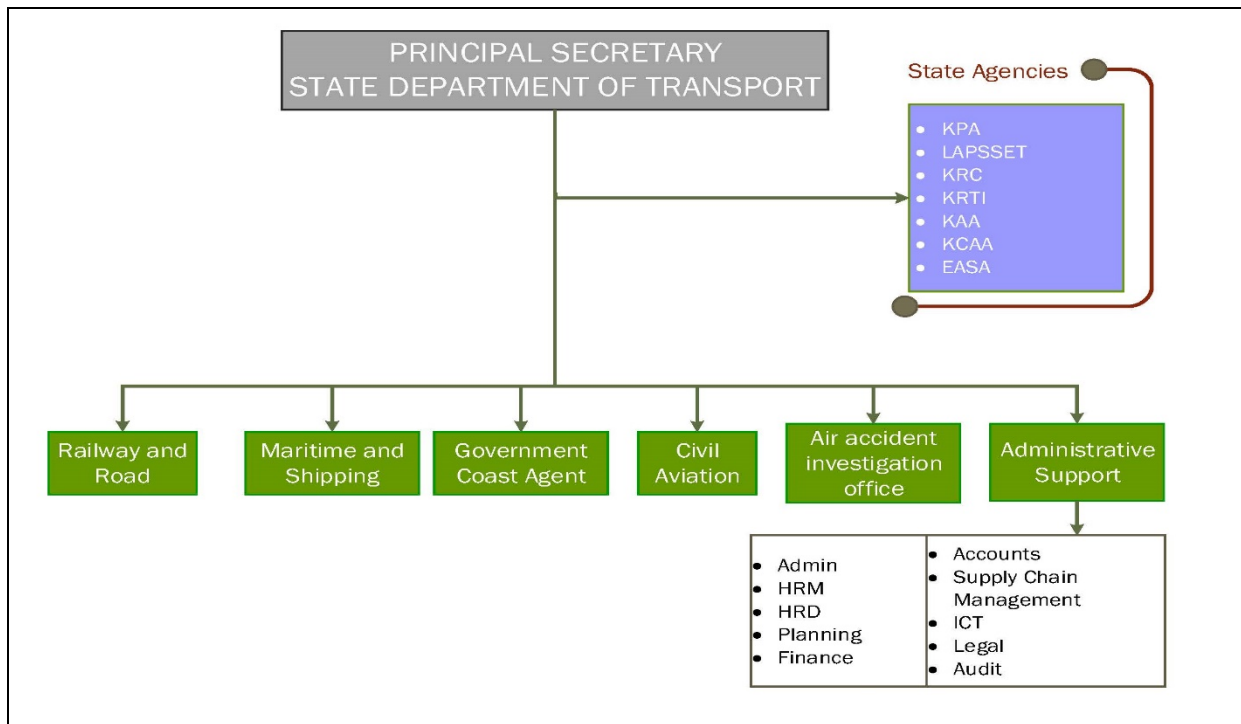
The Ministry has five State Departments each with its own internal Divisions sections and Units. In addition, each State Department exercises oversight over State Agencies that fall under the mandate of the department. The state agencies operate as autonomous entities under their own Boards of Directors that are responsible for the agencies' operations, financial and administrative matters. Their state agencies have mandates covering development of infrastructure, provision of services, regulatory oversight and capacity building. A summary of the State Departments and their associated state agencies outlining their mandates and background is provided below.

(i) The State Department for Transport

The State Department for Transport (SDOT) under Executive Order No.1 of 2018 on Organization of the Government has the mandate on following functions: Transport policy management; Civil Aviation Management and Training; Development and Maintenance of Airstrips; Rail transport and infrastructure management; National Roads Development Policy Management; Fast tracking of implementation of Northern Corridor integration projects; Coordination and oversight of LAPSSSET Programmes; Maritime Transport Management; and Mechanical and transport services. The Department also has the Government Coast Agency, which undertakes clearing and forwarding services for the government and state agencies.

The organisational chart for the State Department for Transport is shown in Figure 2 below.

Figure 2: State Department for Transport Organisation Chart



The Department also has policy responsibilities over the registration and insurance of motor vehicles, motor vehicles inspection; national transport and safety and national road safety management even though the regulatory enforcement is under the National Transport and Safety (NTSA) which administratively is under the Ministry of Interior and Coordination of National Government.

The State Department for Transport has eight state agencies responsible for the development of infrastructure, service delivery, regulatory/oversight and capacity building. A summary on the background and functions of each of these eight state agencies is provided below.

(a) Kenya Civil Aviation Authority - KCAA

The Kenya Civil Aviation Authority was established under the Civil Aviation Act, 2013 and is responsible for the technical and economic regulation of the civil aviation sector to ensure safe, efficient and effective civil aviation system in Kenya. KCAA is also responsible for the provision of air navigation services.

(b) Kenya Airports Authority - KAA

The Kenya Airports Authority (KAA) was established under the Kenya Airports Authority Act, Cap. 395 and is mandated to construct, maintain and operate airports, aerodromes and facilities necessary for efficient operations of aircrafts in the country to facilitate air transport services.

(c) Kenya Ports Authority (KPA)

The Kenya Ports Authority (KPA) was established in 1978 under the Kenya Ports Authority Act, Cap. 391 following the demise of the East African Harbours Corporation which managed the maritime ports in the then East African Community.

KPA is a common user port and is mandated to construct, improve, maintain and operate all sea and inland ports in Kenya.

Mombasa port is the only one that is currently well developed with modern port facilities and equipment hence making it the principal port in the region. KPA is also responsible for managing the other scheduled small seaports which include Lamu, Malindi, Kilifi, Mtwapa, Kiunga, Shimoni, Funzi and Vanga. Furthermore, KPA oversees inland waterways on Lake Victoria and for the dry ports in Nairobi, Kisumu and Eldoret depots.

(d) Kenya Ferry Services - KFS

Kenya Ferry Services (KFS) was established under the Companies Act, Cap 486 and it is mandated to operate, acquire and manage ferries, boats and other vessels for transporting of passengers, petroleum products and other cargoes.

(e) Kenya Railways Corporation- KRC

The Kenya Railways Corporation (KRC) was established in 1978 under the Kenya Railways Corporation Act, Cap. 397 following the demise of the East African Railways Corporation which managed the meter gauge railway network in the then East African Community. KRC is mandated to establish and operate rail, road and inland waterways transport services and facilities.

Through its mandate KRC is expected to develop the necessary skills and employ technology for the railway sector in order to provide efficient and effective railway services, for both national and metropolitan railway networks.

(f) LAPSSET Corridor Development Authority- LCDA

The Authority was formed under Cap 446, Gazette Notice-2013 with a mandate of policy implementation, operational coordination and technical oversight organ for the LAPSSET Corridor Project.

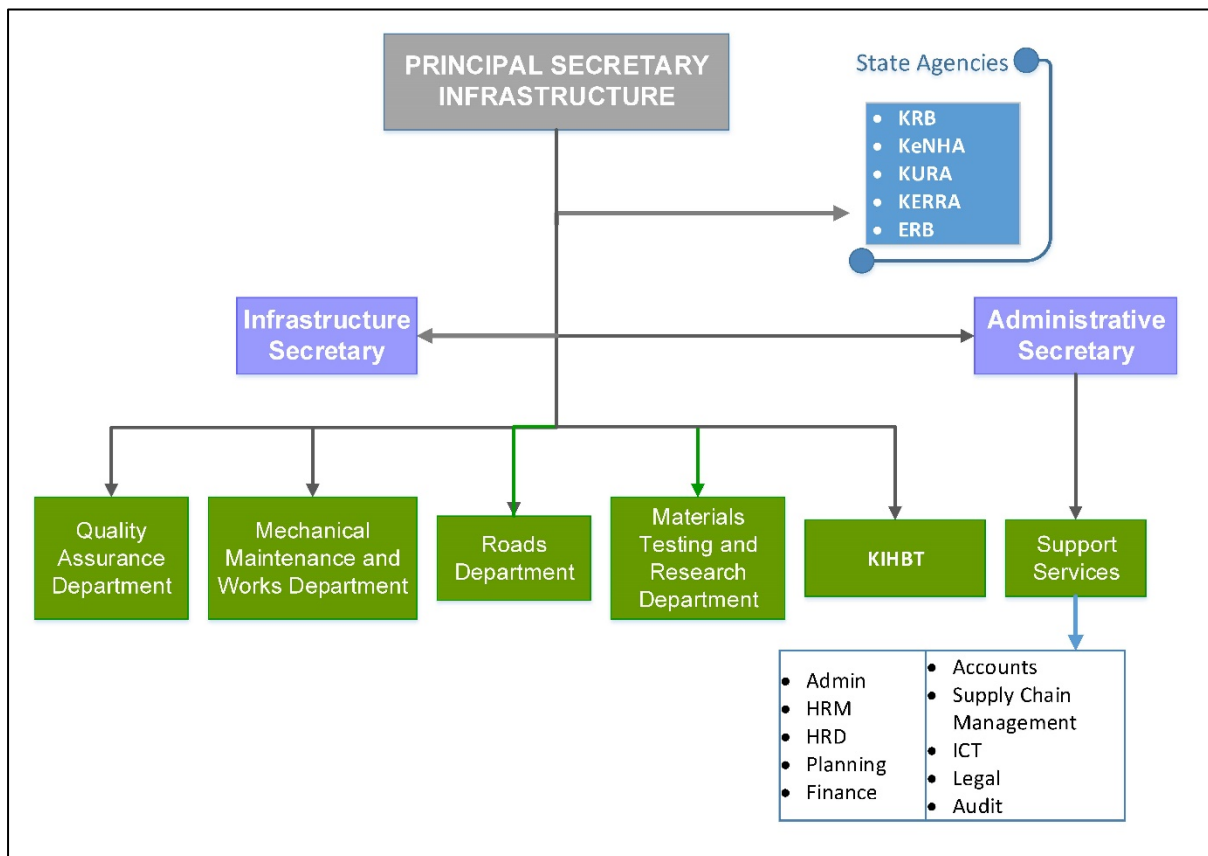
The LAPSSET Corridor Development Authority is tasked with establishing an integrated implementation plan and oversee the implementation of projects.

(ii) The State Department for Infrastructure

The State Department for Infrastructure is mandated to undertake the following functions: National Roads Development Policy Management; Development, Standardization and Maintenance of Roads; Mechanical and Transport Services; Enforcement of Axle Load Control; Materials Testing and Advice on Usage; Standardization of Vehicles, Plant and Equipment; Registration of Engineers; Protection of Road Reserves; and Maintenance of Security Roads.

It also undertakes coordination and oversight of the road authorities and other state agencies falling under its supervision. The State Department has five technical departments and units. There are also the usual support departments and units. The organisational chart for the State Department for Infrastructure is shown in Figure 3 below.

Figure 3: State Department for Infrastructure Organisational Chart



The five technical directorates are: Roads; Quality Assurance; Materials; Mechanical and Transport; and the Kenya Institute of Highways and Buildings Technology (KIHBT). The Mechanical and Transport Department is responsible for provision of equipment for development and maintenance of infrastructure and retains a pool of equipment and operators for hire to counties, state agencies and private contractors

The State Department for Infrastructure is charged with the responsibility of development of policy and regulations, roads standards, monitoring and evaluation, and oversight role over KeNHA, KeRRA, KURA, KRB and Engineers Board of Kenya (EBK). It has five state agencies responsible for: development of infrastructure, service delivery, regulatory / oversight, and capacity building. They serve as the main implementing organs for delivery of the strategic goals of the Ministry. A summary on the background and functions of each of these five state agencies is provided below:

(a) Kenya Roads Board (KRB)

The Board was established by Kenya Roads Board Act No. 7 of 1999 as the principal advisor to the Minister on all matters relating to road maintenance, rehabilitation and development funded through the Road Maintenance Levy Fund.

(b) Kenya National Highways Authority (KeNHA)

The Kenya National Highways Authority (KeNHA) was established vide CAP 408 of 2007 and is responsible for management, development, rehabilitation and maintenance of National Trunk Roads classified as A, B and C.

In addition, the Authority advises the road sub-sector on technical issues such as standards, axle load, research and development.

(c) Kenya Rural Roads Authority (KeRRA)

The Kenya Rural Roads Authority (KeRRA) is responsible for the management, development, rehabilitation and maintenance of all rural roads classified as D, E and unclassified roads as per the first schedule of the Kenya Roads Act, 2007.

(d) Kenya Urban Roads Authority (KURA)

The Kenya Urban Roads Authority (KURA) was established by CAP 408 of 2007 and is responsible for the development, management and maintenance of all urban roads within cities and municipalities in the republic.

(e) Engineers Board of Kenya (EBK)

The Engineers Board of Kenya (EBK) was established through the enactment of the Engineers' Act of 2011. The Board is mandated to develop and regulate engineering practices in Kenya. It regulates standards in the engineering profession and building capacity for individual engineers and engineering firms.

The Board also registers engineers and engineering firms and regulates their conduct for improved performance of the engineering profession.

(f) Kenya Institute of Highway and Building Technology (KIHBT)

The Kenya Institute of Highway and Building Technology (KIHBT) is a specialised unit of the State Department for Infrastructure charged with the responsibility of providing capacity building in various disciplines in the roads sector such as plant operators, road overseers, contractors and refresher driving.

The Institute currently operates as a specialised unit under the State Department for Infrastructure but the intention of the government is to transform it into an autonomous agency.

(g) Mechanical and Transport Division

The Mechanical and Transport Division (MTD) is a specialised unit of the State Department for Infrastructure charged with the responsibility of Standardization of Vehicles, Plant and Equipment; Provision of plant for development and maintenance of physical infrastructure including roads, on hire basis.

It also provides professional and technical consultancy services to the Central Government, public institutions, County Governments and State Corporations on procurement, repair, maintenance and disposal of vehicles, plant and equipment. It is further responsible for the provision of all kinds of mechanical, plant, equipment and motor vehicle inspections as well as providing internship to various students to gain practical experience.

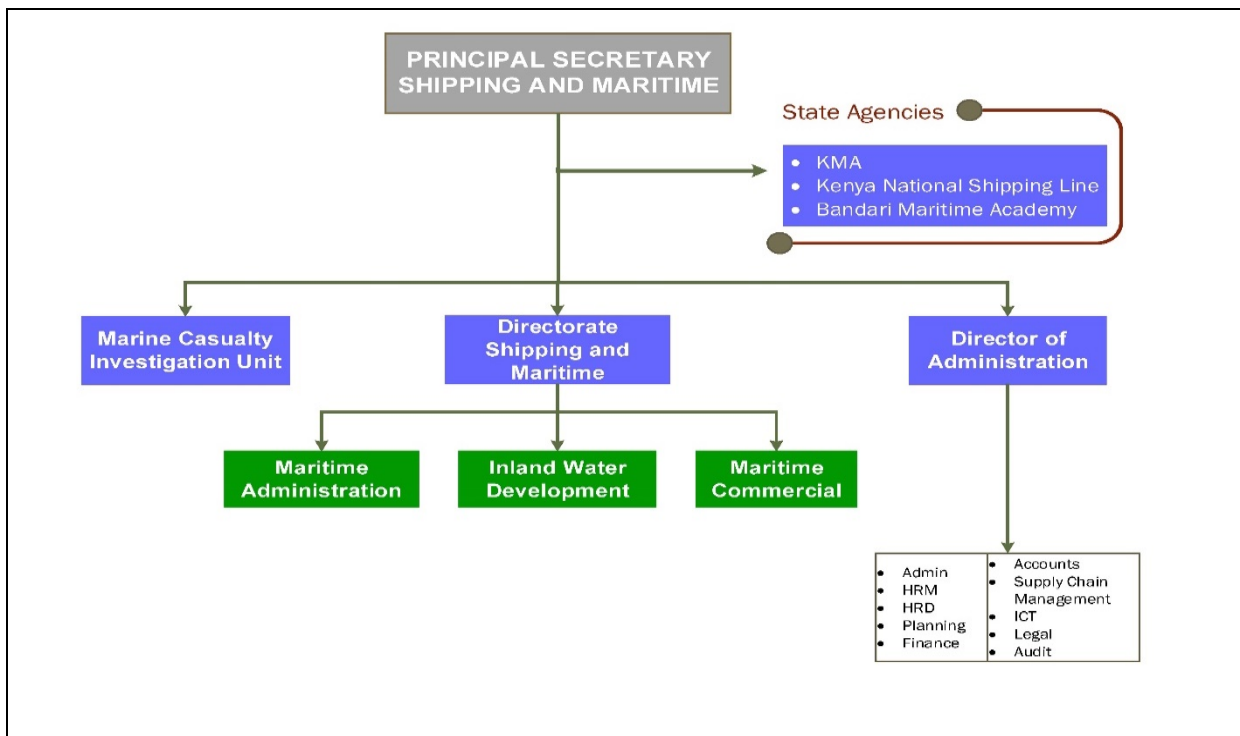
(iii) The State Department for Shipping and Maritime

The State Department for Shipping and Maritime is responsible for the: Promotion of Maritime and Shipping Industry; Ship Registration in Kenya; Marine Cargo Insurance; Establishment of Effective and Admiralty Jurisdiction; Development of a Central Maritime Data and Information Center; Human Resource Development for Maritime professionals; Management and Research in support of Kenya's Shipping Industry and monitoring and advising on usage of Kenya's Exclusive Economic Zone.

The Department has an important role in the Blue Economy. In this respect, it is entrusted with the role of developing linkages with State departments in other Government Ministries and various partners in the development of the Blue Economy.

The Department consists of following four technical directorates: Maritime Commercial Services; Maritime Administration; Inland Waters Development; and Marine Casualty Investigations. These technical directorates are supported by a directorate dealing with Administration, finance and legal matters among others. The organisational chart for the State Department for Shipping and Maritime is shown in Figure 4 below.

Figure 4: State Department for Shipping and Maritime Organisational Chart



The State Department for Shipping and Maritime has three state agencies responsible for regulatory/oversight, service delivery and capacity building. The three state agencies are: Kenya Maritime Authority (KMA) that undertakes regulatory oversight, the Kenya National Shipping Line (KNSL), which provides both liner and non-liner sea transport and Bandari Maritime Academy which conducts capacity building in maritime affairs. A summary on the background and functions of each of these two state agencies is provided below.

(a) Kenya Maritime Authority (KMA)

The Authority was established vide a Presidential Order in 2004 to oversee the transfer of responsibilities in shipping matters from the Kenya Ports Authority to an autonomous State Corporation. In 2006, it was constituted under the Kenya Maritime Act, No. 5 with its mandate being to regulate, coordinate and oversee maritime affairs in the country. In 2009, an amended new version of the Merchant Shipping Act (Merchant Shipping Act 2009) was enacted, thereby creating a comprehensive and modern legal regime for merchant shipping in Kenya.

The Act provides the basis for addressing maritime safety, security and training as well as opening opportunities for investment in water transport and related industries.

(b) Kenya National Shipping Line ((KNSL)

The Kenya National Shipping Line (KNSL) was incorporated in 1987 under the Companies Act CAP 486 with the objective of owning ships flying the Kenyan flag for transportation of containerised, conventional and bulk cargoes.

While KNSL currently has no vessels and operates on slot charter arrangements with shipping lines, the Government intends to restructure and recapitalise it to acquire its own vessels.

(c) Bandari Maritime Academy (BMA)

The Bandari Maritime Academy is the successor to the Bandari College which was established in 1978 as a staff training college for Kenya Ports Authority a state agency established under CAP 391 of 1979. The college over the years expanded its scope of training programmes and currently offers courses in marine engineering, navigation, shore-based operations and surface transport logistics services including freight forwarding, trucking and warehousing.

In view of its location and existing capacity, the Kenya Government decided to expand and upgrade the college into a Centre of Excellence for training in maritime affairs in order to build capacity for the planned expansion of Kenya's Blue Economy. In this regard, the college was renamed Bandari Maritime Academy (BMA) under the State Corporation Act, vide Gazette Notice No.233 of 28th November 2018.

The Academy is mandated to develop academic and vocational skills, and provide the maritime labour needed for sustainable growth of the Blue Economy. Its functions are specified in the enabling Notice.

(iv) The State Department for Housing and Urban Development

The State Department for Housing and Urban Development is mandated to provide policy direction on matters related to housing and urban development through: Housing Policy Management; Management of Civil Servants Housing Scheme and for the Disciplined Forces; Development and Management of affordable housing.

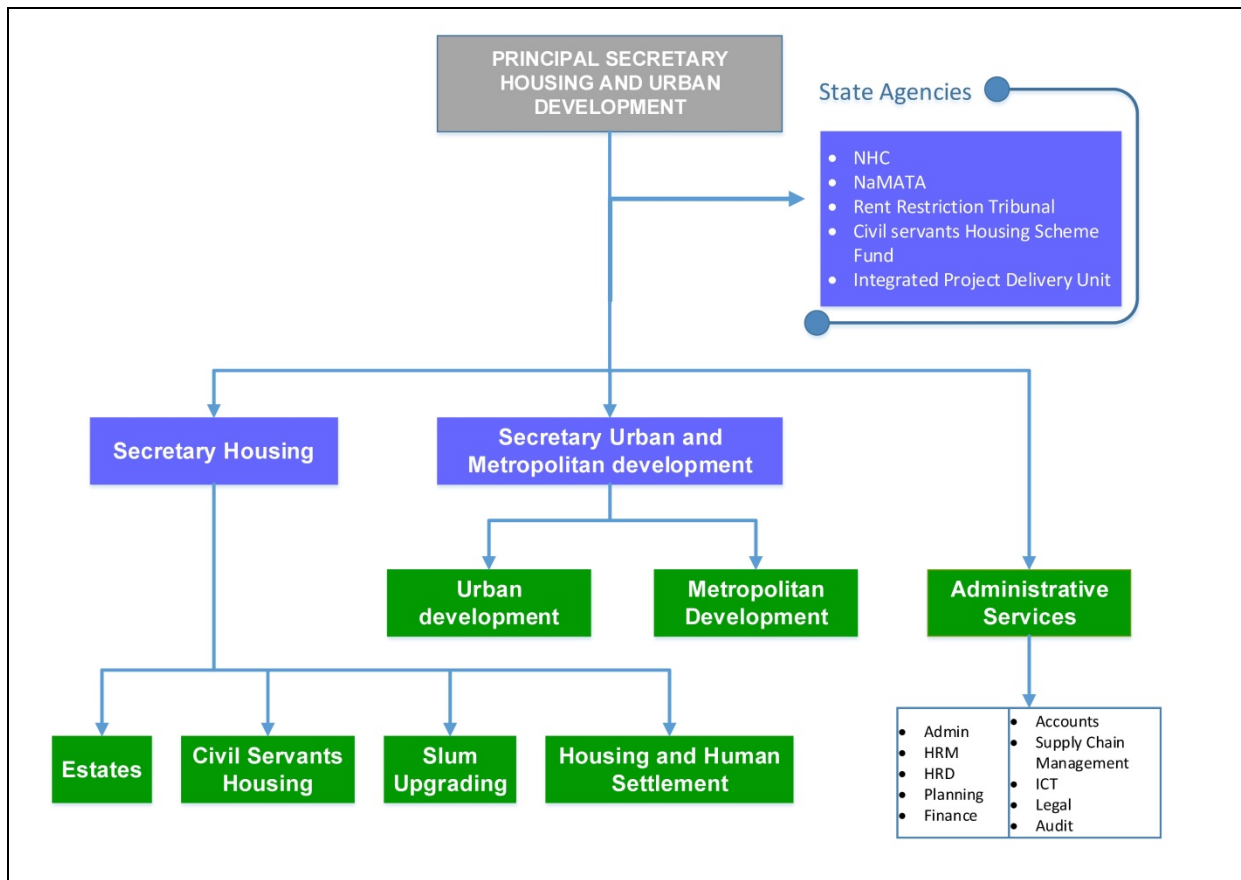
It oversees the development of Appropriate Low- Cost Housing Building and Construction Technologies, the Development and Management of Government Pool Housing; Shelter and Slum Upgrading; and Urban Planning and Development. The Department is also responsible for coordination and delivery of the Big Four Agenda's new Homes Housing Plan.

The Department further oversees the establishment of an integrated, efficient, effective and sustainable Urban Public Transport system within the Nairobi Metropolitan Area.

The Department has six technical directorates and a support directorate. The technical directorates are; Housing Directorate, Estate Directorate, Slum Upgrading Directorate, Civil Servants Housing Scheme Directorate, Urban Development Directorate, Urban Planning Directorate, Policy and Research, Urban Infrastructure & Services, Urban Management Division, Metropolitan Development, Investment and Environment, Metropolitan Infrastructure; Transport & Utilities, Metropolitan Social Infrastructure, and the Public Office Accommodation Lease and Management Department.

The organisational chart for the State Department for Housing and Urban Development is shown in Figure 5 below.

Figure 5: State Department for Housing and Urban Development Organisational Chart



The State Department for Housing and Urban Development has five state agencies responsible for the development of infrastructure, service delivery and regulatory / oversight functions.

These are: National Housing Corporation (NHC), Nairobi Metropolitan Area Transport Authority (NaMATA), Rent Restriction Tribunal, Civil Servants Housing Scheme Fund and Integrated Projects Delivery Unit.

A summary on the background and functions of each of these five state agencies is provided below.

(a) National Housing Corporation (NHC)

The National Housing Corporation (NHC) was incorporated as a state agency through the Housing Act Cap 117 (Revised 2015) to develop and facilitate development of decent and affordable housing. The NHC constructs residential houses for rental and

for tenant purchase. The NHC also provides loans for construction of housing by individuals who pay back through a mortgage system.

(b) Nairobi Metropolitan Area Transport Authority (NaMATA)

The Nairobi Metropolitan Area Transport Authority (NaMATA) was established under Legal Notice No. 18 of February 2017. It is mandated to formulate a sustainable, integrated public transport strategy based on the development of a sustainable mobility plan.

NaMATA is intended to facilitate orderly and structured development of the proposed Metropolitan Area Mass Transport System. The NaMATA urban transport system incorporates both rapid transport and commuter rail in Nairobi City, Kiambu, Kajjado, Machakos and Muranga.

(c) Rent Restriction Tribunal

The Rent Restriction Tribunal offers arbitration services relating to disputes in these tenants and landlords in those residential buildings that have been put under the Rent Restriction Act, Chapter 296 of the Laws of Kenya. The Rent Restriction Act is meant to protect tenants from exploitation by landlords while guaranteeing the landlords reasonable profits from their investment in housing.

The Tribunals facilitate stability of rents especially for low-income groups and also ensure that capital invested in housing yields reasonable returns. The Department coordinates the functions of the Rent Tribunals established for the purpose of administering the Rent Restriction Act.

The tribunals also determine applications for assessment and review of standard rent brought before them by the aggrieved parties that arise from the disputes between landlords and the tenants. These disputes include among others; unlawful evictions, unlawful rent increases and rent defaults. Rent tribunals have so far been established for Nairobi, Mombasa, Kisumu, Nakuru, Nyeri, Kakamega, Eldoret, Embu, Garissa and Lamu. These tribunals also serve their adjacent zones.

(d) The Civil Servants Housing Scheme Fund

The Civil Servants Housing Scheme Fund (CSHSF) was established in 2004 in line with the National Housing Policy for Kenya 2004 (Sessional Paper No. 3). The policy among other things called for employers to facilitate their employees to acquire housing. The policy enables the government to divest from direct housing of its employees, except those involved in essential services and encourages them to own their own houses.

The implementation of the policy applies to the tenant purchase scheme which provides housing loan facilities to civil servants for the purpose of either purchasing or constructing a residential house; and developing housing units for sale or rental by civil servants as well as raising resources for continued development of housing through a revolving fund. In order to grant housing loans to civil servants, the Scheme has partnered with two mortgage finance institutions, Home and Loan of KCB and Housing Finance, with nationwide coverage. The Department currently coordinates the Fund.

(v) The State Department for Public Works

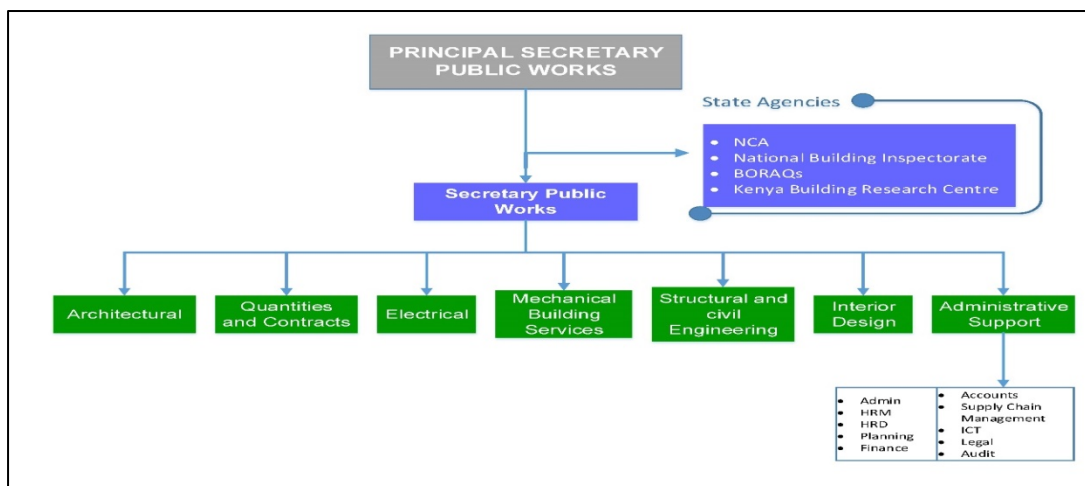
The State Department for Public Works is mandated to provide policy direction and coordinate all matters related to buildings and other public works. These include: Public Works Policy and Planning; National Building Inspection Services; Registration and Regulation of Contractors, Consultants for Buildings, Civil Works and Material Suppliers; Standardization and Maintenance of Plant and Equipment and Vehicles; Maintenance of inventory of government Housing and property; Registration of Engineers, Architects and Quantity Surveyors; Setting and management of Building and Construction Standards and Codes. The Department also provides Mechanical and Electrical Building Services; Coordination of Procurement of common User Items by Government Ministries; and Registration and Regulation of Civil, Building and Electro-mechanical services.

The Department further provides other Ministries, and State Departments and Agencies with consultancy services for building works and Other Public Works. Specifically, the major function of the Department will be to co-ordinate the

development and maintenance of cost-effective public buildings, coastline infrastructure, and procurement of common user items for the Government institutions, and efficient public office, and lease management.

The Department has five technical directorates and a support directorate. The technical directorates are Architectural Directorate, Structural and Civil Engineering Directorate, Quantities and Contracts Directorate, Electrical Engineering Services Directorate, Mechanical and Building Services Directorate, Design Directorate and Public Office Accommodation and Leasing Directorate. The organisational chart for the State Department for Public Works is shown in Figure 4.6 below.

Figure 6: State Department for Public Works Organisational Chart



The State Department for Public Works has four state agencies responsible for development of infrastructure, service delivery and regulatory /oversight functions. These include: National Construction Authority (NCA), Board of Registration of Architects and Quantity Surveyors (BORAQS) : National Building Inspectorate, and Kenya Building Research Centre.

(a) National Construction Authority (NCA)

National Construction Authority (NCA) was established under the National Construction Authority Act, No.41 of 2011 and is mandated to oversee the construction industry and coordinate its development.

(b) The Board of Registration of Architects and Quantity Surveyors (BORAQS)

The Board of Registration of Architects and Quantity Surveyors (BORAQS) was established vide Cap 525 Laws of Kenya with mandate of registration and regulation of Architects and Quantity Surveyors through training, registration and enhancement of ethical practices.

(c) National Building Inspectorate

National Buildings Inspectorate (NBI) is a specialised unit in the Department for Public Works which is mandated to ensure compliance with the laid down legal, regulatory requirements together with standards in the building and construction sector in the country. It therefore undertakes to audit buildings for conformity with land registration, planning, zoning, building standards and structural soundness.

(d) Kenya Building Research Centre

The Kenya Building Research Centre (KBRC) is specialised unit under the Department that is tasked with spearheading the Building Research Services in Kenya. The Centre was established in 1957.

The Centre undertakes research for the construction sector which include, building design, materials and technology as well as sensitising the public on appropriate building practices.

It disseminates its finding through reference libraries containing manufacturer's trade catalogues and literature; samples of building materials; and important technical reference materials.

4.2.2 Human Resources and Establishment

As of mid - March, 2019, the Ministry's approved establishment had 8,629 posts at different grades and skills. The total number of employees in post stands at 3,946 or slightly under half the establishment.

A summary of the status for the five State Departments is as shown in the Table 4.2 below.

Table 4.2: Establishment and Manning Levels in Ministry by Departments

Table 7: Repartition of posts among State Departments

State Department	Authorized Establishment	In-Post	Variance	% Variance
Transport	482	335	-147	30.5
Infrastructure	4,351	2,276	-2,075	47.7
Shipping and Maritime	198	56	-142	71.7
Housing and Urban Development	1,931	747	-1,184	61.3
Public Works	1,674	560	-1,114	67.8
Total	8,636	3,974	-4,662	54.0

Source: State Departments Returns

The State Department for Transport has an authorised establishment of 482 posts with an in-post size of 335 representing about 70.0 per cent of the required capacity. The State Department for Infrastructure has the highest number of established posts numbering 4,351 with 2,276 in post.

This translates to a manning level of 52.3 per cent of the required capacity. The State Department for Shipping and Maritime has the lowest number posts with an establishment of 198. The State Department for Housing and Urban Development has an authorised establishment of 1,931 but with only 747 in post hence a manning level of 37.4 per cent.

The State Department for Public Works has an authorised establishment of 1,674 with only 560 in post hence a manning level of 33.5 per cent. The in-post positions constitute about 45.7 per cent of approved establishment hence indicating substantial deficits in manning levels especially in the State Departments of Infrastructure, Housing and Urban Development and in Public Works. The total variance in the establishment of the Ministry is of 4,683 which represents a shortfall of 54.3 per cent. Overall, the ministry is understaffed in many key areas and may experience critical challenges in implementing its programmes. This shows that there is an urgent need

to fill vacant positions especially in the technical functions which are critical in programmes/projects implementation.

The required numbers in the critical areas in departments will need to be established through a detailed needs assessment which will correctly identify the skills requirements for both technical and support personnel.

4.3 Human Resource Requirements

4.3.1 Staff Establishment and Requirements

In preparing this Strategic Plan, the current establishment of the Ministry was reviewed examining the established posts and the numbers of posts filled or vacant. Depending on the skills needed, the gaps arising from the vacant positions may be critical in determining the ability of the Ministry to effectively provide the capacities required to implement the Strategic Plan.

A review of the establishment was undertaken in 2014 to develop an appropriate organization and functional structure and to establish staffing levels for technical administrative and support functions. One key observation made from the review was that in the former Ministry of Transport and Infrastructure, the ratio of administrative support staff to technical personnel was overwhelmingly high. The review recommended that a workload analysis be undertaken in order to rectify the anomaly.

The three State Departments in Transport sector have provided some staff numbers based on proposed establishments that have yet to be approved. Information has not been provided by the other two State Departments as preparation is ongoing. The status of the current and the proposed staff levels is shown in Table 8 below.

Table 8: Current and Proposed Establishment in Ministry Departments

State Department	Authorized Establishment	In -Post	Vacancies/New Requirements	Proposed Establishment
Transport	482	335	147	565
Infrastructure	4,351	2,276	2,075	4,876
Shipping and Maritime	198	56	142	195

Housing and Urban Dev	1,931	747	1,184	2,695
Public Works	1,674	560	1,114	-
Total	8,629	3,946	4,683	8,331

Source: State Departments Returns

4.4 Human Resource Development Strategies

4.4.1 Priority Capacity Building Areas

Capacity building is important for existing personnel for both the Ministry and State Agencies. The priority areas for capacity building in the Ministry are recorded in its personnel planning. At the level of technical staff, the capacity building priorities are determined by the Ministry on an annual basis.

The capacity requirements for the financial and administrative staff are also identified and plans for their training/capacity building. The traditional areas of training for civil servants to enhance their administrative and management is through the Kenya School of Government based in Nairobi while training for middle level civil servants may be conducted at the various government training institutes based in Baringo, Embu, Matuga and Mombasa.

Specialized training covering engineering in construction and maintenance in civil infrastructure, plant and machinery may be conducted at tertiary institutions including technical institutes and universities and can be undertaken either in the country or overseas.

During the development of the Strategic Plan, it was established that there is need to build the capacity of existing personnel in areas such as the structuring and management of PPPs, issuing of Infrastructure Bonds, and other financing instruments. The case of successful PPPs is critical for Ministry staff and for the state agencies as the later are the designated contracting authorities for the PPPs.

4.4.2 Existing Capacity Building Programs

Many of the capacity building programs relevant to meet the needs of the various stakeholders required for the implementation of the Strategic Plan are available either at national institutions or overseas. These are usually provided through dedicated long or short courses which may be residential or on a day release basis.

However, training for specialist areas such as the structuring and management of PPPs, raising of Infrastructure Bonds and other financing instruments can be undertaken more cost effectively through in-house seminars for serving staff where experts can learn together and establish working networks that continue to work together on common projects. The networks established through the in-house training can also continue to share knowledge and experience through repeat seminars and by online communication and interactions.

4.4.3 Capacity Building Institutions

The Ministry and its various state agencies have capacity building institutions that provide training for specialist skills in the aviation, railways, maritime transport and the construction and mechanical engineering disciplines.

The specific ministry training institutions include Kenya Institute of Highways and Building Technology (KIHBIT), Kenya Institute of Technology. The East African School of Aviation (EASA) belongs to the Kenya Civil Aviation Authority and is a recognized Regional Training Centre of Excellence (RTCE) by the International Civil Aviation Organization (ICAO). The Railway Training Institute (RTI) belongs to Kenya Railways and the Bandari College belongs to KPA.

The Ministry plans to expand Bandari College into a Center of Excellence in Maritime training that will provide a wider range of courses to cover ports, sea faring and naval architecture. The training institutions are expected to train manpower to work in both the public and private sectors.

4.4.4 Other Capacity Building Institutions

In order to take advantage of capacity existing in other institutions in Kenya, the Ministry will collaborate with Universities and other institutions providing tertiary education to undertake training for higher qualifications in engineering and other higher-level management responsibilities.

Such collaborations have already been established with Jomo Kenyatta University of Agriculture and Technology (JKUAT) in training of navigation officers and marine engineers.

In addition to national training institutions, the Ministry and its agencies have endeavored to establish collaborations and partnerships with regional and international institutions providing advanced training in civil aviation, railways and maritime affairs.

4.5 Financial Resources Requirements

4.5.1 Current Budgetary Resources

The Ministry receives its budgetary resources from various sources. The primary sources are: National Treasury through MTEF budgeting process; Loans, Development Partners; Public-Private Partnerships (PPPs); User Fees and Charges; and Long-term Bonds through the Bond Market.

The state agencies obtain their budgetary resources from various sources depending on their functions. The state agencies that provide infrastructure and services obtain their revenues primarily from the charges they levy to users, loans and grants and where necessary from state subsidies.

The regulatory authorities obtain their budgetary resources from fees they levy to users, grants and government allocations.

Other agencies such as the road development authorities receive allocations for their recurrent budgets from the State Treasury while their capital budgets are from the

national development budgets, fuel levies, loans underwritten by the state and grants from development partners extended through the state.

Other regulatory agencies receive their budgets from annual state allocations and grants while training institutions receive allocations from their parent state agencies and fees charged to course participants.

Although loans and Treasury allocations have been the primary sources of financing the development of physical infrastructure and major, rehabilitation, accounting for over 80% of funds, both AIAs and grants have made their contributions.

Other funding initiatives have been adopted to mobilise resources and in this respect, capacity building for attracting, managing and regulating alternative methods of infrastructure development such as PPPs have been embraced by the Ministry during Medium Term Plan.

4.5.2 Financial Resources Requirements

In order to implement the Strategic Plan, the Ministry has taken cognizance of the necessary budgetary resources to deliver the strategy. The recurrent budget for the Ministry as allocated by the Treasury runs the basic operations which include salaries, allowances and the procurement of goods and services.

The development of infrastructure entailing construction, rehabilitation and maintenance is provided through the development budget. The development budget includes funds by the Treasury, (GOK), loans, Appropriations in Aid (AIA) and grants extended from external sources.

Table 9 below shows the budgetary requirements and allocations for the MTP III planning period.

The detailed Development and Recurrent budgetary components for the five State Departments under the current Medium -Term Expenditure Framework (MTEF) are provided as Annexes III and IV where requirements and allocations are broken down along the sources of funding.

Table 9: Budget Estimates and Gaps

Sector	Requirements (Kshs. Million)			Allocations (Kshs. Million)			Deficit/Surplus (Kshs. Million)		
	Development	Recurrent	Total	Development	Recurrent	Total	Development	Recurrent	Total
Transport	756,254	64,536	758,493	442,729	60,836	503,565	313,525	3,700	317,225
Infrastructure	905,660	318,333	1,223,993	580,040	316,093	896,133	325,620	2,240	327,860
Shipping and Maritime	2,846	11,182	14,028	743	10,395	11,138	2,103	787	2,890
Housing and Urban Development	277,209	8,295	285,504	124,609	5,219	129,828	152,600	3,076	155,676
Public Works	35,681	18,497	54,178	11,860	12,278	24,138	23,821	6,219	30,040
Total	1,977,650	420,843	2,398,493	1,159,980	404,822	1,564,802	817,670	16,021	833,691

Source: MTEF Nov, 2018

On the basis of the current MTEF released in November, 2018, the estimated financial resource requirements for the development budget for the five -year Plan period amounts to Kshs 1,977,650 million while the allocations amount to Kshs 1,159,980 million resulting in a gap of Kshs 817,670 million. The recurrent budget amounts to Kshs 420,843 million with allocations amounting to Kshs 404,822 million and hence a gap of Kshs 16,021 million.

The total budgetary requirements for the five MTP III period amount to Kshs 2,398,493 million against Kshs 1,564,802 allocation and hence resulting in a combined gap of Kshs 833,691 million.

The development component of the financial resources is usually provided through national Treasury allocations, loans, AIA and grants. The recurrent budgetary resources fall under the three vote headings which the moneys fall. The four -vote heading are AIA, Employees Compensation, transfers and Other Recurrent.

These additional resources to close the financing gap will need to be mobilised through other options available. In this respect, a strategy for Resource Mobilisation by the Ministry and its respective state agencies has been incorporated in the Strategic Plan. It will specifically include targeted PPPs, private investor and development partners' involvement as well as other innovative ways of raising funds.

4.6 Resource Mobilization Strategies

The primary sources for the development budget are government votes, loans grants and Appropriations in Aid (AIA). In terms of the amounts of funding generated for project implementation, the order in the last three years is loans (50.0 %), GOK, about 35.0% AIA (11.3 %) and grants coming last.

Due to the gaps realized from the resource requirements and the allocations from the MTEF, the Strategic Plan includes Resource Mobilization as a key strategy. While the Treasury will as is the practice continue to play its role in resource mobilization, other smart methods such as the PPPs will need to be employed in order to increase the funds available and bridge the funding gaps in implementing the planned programmes and projects.

4.7 Coordination for Delivery Optimisation

In order to optimise on the delivery of the outputs expected through the Strategic Plan, it is important that effective coordination is exercised within each of the five state departments and among the departments. On the same breath, the state departments will need to coordinate with the state agencies.

Within the state departments, there will be need for clear coordination between the technical directorates and the various support units in the Administrative directorate in areas such as procurement, provision of ICT services, budgets preparation and execution, automation of services and the observance of appropriate governance framework.

Among five departments, there will be need for coordination in programming and project implementation in order to enhance synergies through project synchronisation to provide for seamless provision of infrastructure and services. Effective interdepartmental coordination will also minimise duplication of effort and in use of financial resources.

Coordination among departments and with the state agencies will also ensure that all the necessary resources and capacities are leveraged and synergies are achieved to deliver the planned outputs with optimal use of available resources.

4.8 Risks and Risk Mitigation

During the preparation of the Strategic Plan, there were a number of risks that were considered and classified according to their probability of occurrence. Four risk areas were identified and the mitigation measures developed. A summary of key risk the Ministry anticipates during the implementation of the Plan and their mitigation measures is provided in Table 10 below:

Table 10: Anticipated Risks and Mitigation Measures

No	Risk Description	Risk Level	Mitigation
1	Inadequate Levels of Funding, staffing and infrastructure in all departments	High	Continuous Identification and utilization of partnership and Networks/Resource Mobilization/Funding of key Priorities
2	Heightened Expectation of Ministry to solve transport challenges due to its Extended mandate	High	Continuous information dissemination and Communication/Adequate funding of Flagship Projects
3	Environmental of Risk of Oil-spills due to Surface transportation of Crude oil from oilfields and storage in Mombasa	Medium	Develop and implement oil spill contingency plan within one year
4	Structural changes and Staff preparedness	Low	Sensitize Ministry staff on change management and service delivery issues to embrace reforms
5	Inadequate and high turnover of technical staff	High	Recruitment of technical staff, better remuneration
6	Political interference	High	Continuous revision of policies, relevant laws and dissemination of information
7	Insecurity at Sea	High	Establishment of a multi-agency surveillance unit to control piracy in the Indian Ocean and capacity building for Kenya Coast Guard Services

No	Risk Description	Risk Level	Mitigation
8	Divergent stakeholder interests in slum upgrading and prevention initiatives	High	Effective participation and involvement of stakeholders in the housing initiatives
9	Potential land use conflicts and unavailability of land on which public projects are to be implemented	High	Development of alternative dispute resolution mechanism in settlement of land disputes

4.9 Implementation of the Strategic Plan

The Strategic Plan will be implemented as shown in the Implementation Matrix in Annex 2. It will involve cascading the plan to the Departments and the State agencies through performance contracts, annual work plans and liaison with other government agencies/stakeholders in case of cross cutting issues.

The status of implementation of Strategic Plan will be assessed through performance monitoring, evaluation and reporting. Performance monitoring will be undertaken on a quarterly basis while evaluation will be conducted in midterm and at the end of its implementation.

CHAPTER FIVE: MONITORING, EVALUATION AND REPORTING

5.1 Overview of Monitoring and Evaluation

Monitoring and Evaluation (M&E) is critical for providing information to all levels of management on the progress in the achievement of results (planned outputs and desired outcomes), understanding the factors at play in the success or less than optimal performance of policies, programmes and projects and in generating the knowledge necessary for improvements in ongoing policy and programmes.

The M&E will, therefore, be an important and integral part of the management of Ministry's performance in the implementation of this Strategic Plan. The ultimate responsibility for M&E rests with the Cabinet Secretary. The overall function will be performed by the Ministry's M&E Task Force composed of the heads of Central Planning and Projects Monitoring Units (CPPMUs) of the five State Departments.

5.2 Monitoring and Evaluation Framework

The Monitoring and Evaluation (M&E) Framework for the Ministry includes the expected outcomes (against each strategic objective and KRA), key performance indicators for measuring progress on these outcomes, the baselines and targets for the midterm and end of plan period.

The M&E Framework obligates the Ministry and its agencies to go beyond activities and outputs and articulate the progress in the achievement of higher-level results. The M&E Framework Matrix is provided in Annex 1.

5.3 Monitoring

Monitoring is an ongoing function that entails systematic collection of data on specified indicators to provide management and the main stakeholders on the extent of progress in in implementation of policies, projects and programmes and the achievement of objectives. This is the responsibility of the Ministry's agencies responsible for the various programmes and projects to be monitored. Monitoring data is then aggregated

by the CPPMUs under the five State Departments, and further consolidated for reporting to the Ministry's senior officials by the M&E Task Force.

5.4 Evaluations

Evaluation is the systematic and objective assessment of an ongoing or completed policy, programme or project, including its design, implementation, and results. The primary aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact, and sustainability¹. In addition, quality assurance will need to be undertaken by conducting technical audits to cover technical aspects of the projects being implemented.

Programmes and projects will be reviewed at midterm to determine the extent to which their implementation is progressing according to plan, and any areas that require management attention. The reviews may be internal or external. This will be the responsibility of the respective agencies and the State Departments.

An end of period external (independent) evaluation will be conducted to assess the extent the Ministry-wide objectives and targets have been achieved and will provide critical input for the formulation of the sector plan and the next Medium-term Plan. This will be the responsibility of the Ministry.

5.5 Data Collection

In the M&E monitoring, data collection is an ongoing function of the five State Departments and the various state agencies under them. Such data may be readily available from regular reports produced by the Ministry or the agencies or from other parties such as Corridor authorities and regional economic communities.

The production of some indicators may require sample surveys which would then need to be designed and conducted at appropriate times in order to capture representative data. It is the responsibility of the CPPMUs under the five State Departments to ensure that the data being collected is relevant, complete and of good quality.

¹ OECD

5.6 Reporting

The M&E reporting will be performed at all levels of management, from the State Departments and their agencies. The levels of details of information provided will vary with managers undertaking operational and routine functions requiring more detailed information and the higher levels of the Ministry's management requiring much more aggregated information.

While the reporting may be more frequent according to the needs of the different managers, standard quarterly reporting in line with government policy will be done.

Each State Department and agency will produce its own quarterly reports, which will be submitted to the respective CPPMU for consolidation for use by the State Department. The reports from the five State Departments will be further consolidated and summarized for the Ministry's senior managers by the M&E Task Force.

Annexes

Annex I: Monitoring and Evaluation Framework

Key Results Area	Strategic Objectives	Outcome	Key Performance Indicator	Baseline	Target		Output Targets
					Mid-Term Period Target	End of Plan Period Target (2022)	Examples
Policy, Legal, Regulatory and Institutional Framework	<i>To Formulate and / or review and co-ordinate implementation of requisite policies, legal, regulatory and institutional framework</i>						50-Year Transport Master Plan
							20-Year Roads Master Plan
	<i>To Enhance compliance with national policies on Gender, Disability, etc</i>						
Development of Physical Infrastructure and Facilities	<i>To expand, modernize and maintain integrated, efficient and sustainable transport systems</i>	Increased cargo uptake from the Port by rail	% volume of cargo by rail from Mombasa port	20.0	30.0	40.0	
		Increased passenger and freight traffic	Number of passengers and Tonnage in freight	7.5 million	9.0 million	10.5 million	JKIA passenger capacity increased from 7.5 million to 9 million
		Reduced traffic congestion Reduced transport costs Reduced transit times along key corridors	Average transit time Msa Port to Malaba in hours	81	72	72	Construction / rehabilitation of 10,000 km of roads (2,500 km of conventional roads and 7,500 km of LVSRs) 161,456 km of roads maintained 308 km of bypasses
		Increased cargo throughput	TEUs	1.2 million	1.4 million	1.7 million	Increase handling capacity from 1.5 M to 3M TEUS

Key Results Area	Strategic Objectives	Outcome	Key Performance Indicator	Baseline	Target		Output Targets
					Mid-Term Period Target	End of Plan Period Target (2022)	Examples
	<i>Increase access to decent, safe and affordable housing, public buildings and ensure sustainable urban development</i>	Improved access to decent housing	% population with access to decent housing (from KIBHS, Census)				500,000 affordable houses constructed by 2022
	<i>Promote the Blue Economy</i>	Increased employment Increased contribution GDP	No of jobs created Additional contribution to GDP			12,000 jobs	
Quality of Service, Safety and Security and Environmental Sustainability	<i>To improve quality of service, safety and security of transport systems, built environment and urban development</i>	Reduced transit transit time Mombasa to Malaba	Average transit time Mombasa Port to Malaba	48	36	24	
		Improved road safety	% annual reduction in road fatalities				
	<i>Promote environmental sustainability</i>	Reduced pollution	IMO indicators on greening ports ICAO indicators	IMO baseline ICAO baseline			
Research and Innovation	<i>To enhance research and innovation in transport systems and the built environment</i>	Improved products, services and methods					

Key Results Area	Strategic Objectives	Outcome	Key Performance Indicator	Baseline	Target		Output Targets
					Mid-Term Period Target	End of Plan Period Target (2022)	Examples
Capacity Building (Institutional, Human, Technological and Financial)	<i>To enhance capacity and capabilities in human capital, institutions and technology</i>	Improved productivity					
	<i>To mobilize financial resources</i>	Increased funding for infrastructure development	Amount of funding available for infrastructure development				

Annex II: Implementation Matrix

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Key Result Area 1: Policy, Legal, Regulatory and Institutional Framework																		
Strategic Objective 1.1: To Formulate and/or Review and Co-ordinate Implementation of Requisite Policies, Legal, Regulatory and Institutional Framework																		
TRANSPORT (INTEGRATED)																		
Development of an Integrated National Transport Policy (INTP)	Review of the Integrated National Transport Policy (INTP)	Reviewed INTP	% completion	Approved Sessional Paper on INTP, 2012	Annually	Review ed INTP		Draft re vie wed INTP	Appr oved INTP			-	60	40			SDOT	GOK/DPS
Preparation of Strategic Framework and Action Plans on Implementation of National Transport system	Development of the 50 Year Transport Master Plan	Transport Master Plan developed	% Completion Masterplan development	0	Quarterly			60	100					100	200		SDOT	GOK/DPS
Development or review of international conventions, national laws and regulations	Development and Review Primary Acts	Developed and reviewed primary acts	No of Acts Developed or Reviewed Acts	7	Annually		-	1	2		-		10	20	-	-	SDOT	GOK/DPS
	Review of rules and regulations	Reviewed rules and regulations	No of rules and regulations		Annually	14	2	2	2	2	2	10	10	10	10	10	SDOT	GOK/DPS
Civil Aviation																		
Reforms in Airport Subsector	Review of the KAA Act and regulation	Reviewed Act & Regulations	Milestones	KAA Review Bill	Quarterly				Act	Regs								GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Railways																		
Reforms in sub Sector Rail Sector	Enactment of new Rail Act	Revised Kenya Rails act	Milestones	Rails Act Review Bill					Act	Regs								GOK
INFRASTRUCTURE/ROADS																		
Regulation of the Roads Sector	Enactment of the roads Bill	Enacted bill	Milestones in legislation	Draft Bill	Quarterly	Act and Regs			Act	Regs							SDI	GOK
	Development of standards on road construction technologies	Standards road construction technology	No of standards		Quarterly													GOK/DPS
	Review of standards for pavement design and specifications for roads and bridge construction	Reviewed Standards	No. of standards	TORs	Quarterly													GOK
	Performance of technical audits	Audit Reports	No. of Projects audited	20	Annually	150	20	25	30	35	40	10	25	30	40	50	SDOI	GOK
Development of Short and Medium- Term Roads Master Plan	Development of 20 Year Roads Master Plan	Roads ITS and BRT for Nairobi, Mombasa, Nakuru Kisumu and Eldoret	% completion	TORs	Quarterly				50	100				50	50		SDOI KURA KERRA	GOK/DPS

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Preparation of the Five-Year Road Investment Plan (ROADSIP)	Five Year Road Investment Plan	% completion		Quarterly				50	100					25	25		GOK
Promotion of sustainable urban growth	Develop Transit Oriented Development Policy	Transit Oriented Policy	% completion	0	Annually	100	-		50	100				25	25			GOK/DPS
Establishment of Alternative financing mechanism for infrastructure development	Development of the Toll funding Policy	Toll Fund Policy	% completion	0	Annually	100			50	100				25	25			GOK
	Establishment of a dedicated Road Toll Fund to finance road expansion	Road Toll Fund	% completion							100								GOK
	Review of the Road Annuity programme	Reviewed annuity programme	% completion						50	100				25	25			GOK
Transformation of existing state units into SAGAs	Transformation of KIHBT, Materials and MTD into SAGAs	SAGAs	No. of sagas	5	Annually	2	-		1	1				10	10			GOK
SHIPPING AND MARITIME																		
Formulation of enabling Maritime Policy	Formulation of policies	Policies formulated	No. of Policies formulated	0	Annually	10						-	100	90	90	90	SDMS	
Alignment of national laws with international treaties	Formulation and review of national laws aligned to international conventions	Regulations formulated or reviewed	No. of regulations formulated or reviewed	33	Annually	48		10	10	20	8	-	100	90	90	90	SDMS, KMA	GOK/DPS

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Enhancing international cooperation in Maritime sector	Enhancement of international Cooperation in Implementation of regional/ International Frameworks and Standards	Kenya's international obligations/ commitments complied with and enforced	Number of regional and international forums participated		Annually							400	400	400	400	400	SDMS KMA	GOK
Promotion of the Blue Economy in Kenya	Development of a Blue Economy Master Plan	Blue Economy Master Plan developed and disseminated.	% completion of the Blue Economy Master Plan	None	Annually	1			60	100		-	-	400	300	-	SDSM	GOK/DPS
	Development and management of Blue Economy database	Blue economy database established	% completion	0	Annually	1			20	80	100	1,000	2,000	3,000	4,000	4,000	SDSM	GOK/K MA
Increased Participation in Seaborne Transport	Restructuring of Kenya National shipping Line (KNSL)	KNSL restructured	New Structure	Existing KNSL	Annual	Reformed KNSL	Process	Approved structure	-	-	-	10	15	-	=	=		GOK
		1	No. of Ships owned by KNSL	0	Annually	1	Concept	Specs developed	Procurement	Commissioning	-	1	1	2000	2000	1	SDOT/ KNSL	GOK
		500	No. of containers owned by KNSL	0	Annually	500	Concept	Specs developed	Procurement	commissioning	=	1	1	100	150	1	SDOT/ KNSL	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Development of incentives for vessel registration in Kenya	Attractive National Ship register	No. of vessels registered	3	Annually	80				40	40				10	10	SDSM	GOK
	Development of Coastal Shipping and Cabotage Policy	Cabotage Policy	Policy Document	0	Annually	Policy in place	TOR	Award	Final policy	Implement		1	1	30	10	10	SDSM	GOK
Increasing the participation of the youth and women in maritime affairs through cluster enterprises development	Development of a Maritime cluster enterprise	Seafarer's Fund, Women in Maritime Fund, and Shipping and Training Maritime Fund established	No. of funds established	0	Annually	3			1	1	1	-	-	1,800	600	600	SDSM	GOK/DPS
HOUSING AND URBAN DEVELOPMENT																		
Creation of a conducive policy and legal framework for implementation of programmes and projects	Preparation of Integrated Urban Development Plans for selected towns border towns, NMR and along the SGR line	Strategic Development Plans prepared	No. of plans developed	12	Annually	24	4	5	5	5	5	-	1,000	1,000	1,000	1,000	SDHUD/CGs	GOK/DPS
		Land bank established	Land bank in place	0	Annually	1		1										SDHUD
	Preparation of Integrated Urban Public Transport Master Plan for NMA	Integrated Master Plan prepared	Plan developed	-	Annually	100% complete	-	50%	100%	-	-	-	150	100	-	-		SDHUD/CG

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Review of urban policies and legislation	Policies, legislations and regulations	No. of policies and legislation formulated	1	Annually	13	1	1	1	5	5	-	100	100	50	50	SDHUD/C Gs/AG office/MD As	GOK
	Operationalization of Nairobi Metropolitan Area Transport Authority (NaMATA)	NaMATA Act and regulations	NaMATA Act and Regulations in place	-	Annually	100% complete	-	50%	100%	-	-	-	500	400	450	450	SDHUD	GOK
Setting up a conducive environment for development of Construction Industry	Finalization of Construction Industry Policy	Construction Industry Policy developed	Construction Industry Policy document		Quarterly	1	1	-	-	-	-	14	-	-	-	-	SDOPW	GOK
	Development of Regulations for the Construction Industry	Regulations for the construction industry developed	Regulations developed construction industry		Quarterly	20	4	4	4	4	4	1,250	1,850	1,850	1,850	1,850	SDOPW	GOK
PUBLIC WORKS																		
Development of Public Works Policy	Finalization of Public Works Policy	Public Works Policy	Public Works Policy Document		Quarterly	1	1	-	-	-	-	15	-	-	-	-	SDOPW	GOK
Revamping/ Restructuring of Supplies Branch	Refurbishment of Supplies Branch facilities	Supplies Branch facilities refurbished	Refurbished Supplies Branch facilities		Quarterly	100%	30	60	90	100	-	90	90	90	50	-	SDIPW	GOK
	Preparation of Cabinet memo to transform Supplies Branch into a SAGA	Cabinet memo	Cabinet memo		Quarterly	1	1	-	-	-	-	20	-	-	-	-	SDOPW	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Transformation of KBRC into a Research Institute	Preparation of KBRC Bill	KBRC Bill enacted	KBRC Bill		Quarterly	1	1	-	-	-	-	10	-	-	-	-	SDOPW	GOK/DPS
Regulation and Development of Construction Industry	Regulation and Development of Construction Industry	Construction industry regulated	Construction industry regulated	Construction industry regulated	Quarterly	All Construction industry	All Construction industry	All Construction industry	All Construction industry	All Construction industry	All Construction industry	2,000	2,000	2,000	2,000	2,000	SDPW	GOK
Audit, inspection and testing of buildings	Building Standards and safety	Buildings audited, inspected and tested	Number of buildings audited/ Inspected	9500	Quarterly	15,000	3,000	3,000	3,000	3,000	3,000	400	400	400	400	400	SDPW	GOK
Subtotal KR 1												5,231	8,813	14,185	13,850	11,027		

Result Area 2: Development of Physical Infrastructure and Facilities

Strategic Objective 2.1: To Expand, Modernize and Maintain Integrated, Efficient and Sustainable Transport Systems

TRANSPORT

Civil Aviation

Development of an airports system plan for prudent facility development	Preparation of an Airport Development Plan	Airports System Plan	% completion	Current airport development plan	Bi annual				50	100				20	20		SDOT KAA	GOK
Increasing the handling capacity at JKIA and enhancing passenger processing efficiency	Re-modelling of Terminal1 B, C, & D at JKIA	Increased capacity from the currently 7.5 million to 10. - million	% completion		Quarterly		35	65	85	100		250	200	100	200		SDOT KAA	GOK/DPS

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Upgrade and improvement of airside capacity	Rehabilitation of Mombasa International Airport	Upgraded pavement, Ground Lighting (AGL) and eliminated sinkholes on the air side	% completion		Quarterly		50	100				660	276		-		SDOT KAA	KAA
Extension of runway to handle Code D aircrafts	Expansion of Malindi Airport	Extension of runway by 1.05km and additional parking for 400 vehicles	% completion		Quarterly			60	100			300	80		-		SDOT KAA	KAA
Extension of the runway to handle larger aircrafts	Isiolo Airport – Runway Extension	Extension of runway by 1.4Km	% completion		Quarterly			60	100				261				SDOT KAA	GOK/DPs
Rehabilitation of deteriorated airstrip pavements	Kitale Airstrip rehabilitation works	Rehabilitate d runway, apron & TB Installed Generator	% completion		Quarterly			60	100			261	-	-	-		SDOT KAA	GOK
Extension of the runway in order to handle Code D aircrafts, carpark, access roads, apron & Terminal Building	Lokichoggio Airport Phase II	Extended Runway, Terminal building, apron and car park, access road constructed	% completion		Quarterly				60	100			550	-	-		SDOT KAA	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Rehabilitation of deteriorated runway	Rehabilitation of Moyale airport	Rehabilitate d runway and fencing	% completion		Quarterly					60	100	-	-	-	250		SDOT KAA	GOK/DPs
Increase the capacity to EAC Western tourist circuit and enhance AVSEC	Rehabilitation of Migori airport	Rehabilitate d runway, terminal building and fenced airstrip	% completion		Quarterly					60	100	100	250				SDOT KAA KCAA	GOK/DPs
Expansion of airport capacity	Rehabilitation of Lodwar airport	Car park, access road & fencing constructed	% completion		Quarterly					60	100			250	300		SDOT KAA KCAA	GOK
	Construction of Musiara airport Narok	Runway, carpark and fencing constructed	% completion		Quarterly					60	100			50	200		SDOT KAA KCAA	GOK
	Construction of a new airport at Kurrow in site in Mandera	1.5km long runway with other airport facilities	% completion		Quarterly					60	100			150	150		SDOT KAA KCAA	GOK
Provision of aviation medicine oversight services in the EAC region	Construction of the Centre for Aviation Medicine	Completed Centre for Aviation Medicine	% completion		Quarterly		60	100				150	100	100			SDOT KAA	GOK
Provision of safe and expeditious flow of aircraft traffic	Modernization of Air Navigation Services	Air Navigation Services infrastructure installed	% completion of Air Navigation infrastructure		Quarterly		20	40	60	80	100	1000	800	600	600		SDOT KAA KCAA	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Development of EASA a Center of Excellence	Improvements of the Civil Aviation Training at the East African School of Aviation	Completed Training Infrastructu re	% completion		Quarterly			20	40	60	80	100	400	400	400		SDOT KAA KCAA	GOK
		Completed Training equipment	Inventory of Training Equipment		Quarterly		20	40	60	80	100	200	200	200	200		SDOT KAA KCAA	GOK/DPs
Effective management of disaster related to the aviation sector	Construction and equipage of a Disaster Recovery Centre at Central Transmitting station	Disaster Recovery Center in place	% completion		Quarterly		20	40	60	80		358	800	200			SDOT KCAA KAA	GOK/DPs
Improvement on services delivery in the aviation industry	Modernization of aviation facilities	Capacity building to modernize aviation industry	Inventory of equipment procured and commission ed		Quarterly		20	40	60	80		1,300	1,850	1,600	1,400		SDOT KAA KCAA	GOK/DPs
MARITIME																		
Expansion of Mombasa Port Container handling capacity	Development of the Second Container Terminal Phase II & III	Berth and yards capacities expanded	% completion		Quarterly	20	40	60	80	100		5,000	8,000	8000	6000	-	SDOT KPA	GOK/DPs
	Upgrading of Berths 11-14 to handle containers	Increased container handling capacity	% completion		Quarterly		20	40	60	80	100	2,000	3,500	4,000	2,500	6,500	SDOT KPA	GOK/DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds		
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5				
Increasing the Mombasa port Draft to serve larger vessels	Phase II Dredging of Mombasa Port	Draft increased accommodating post Panamax vessels	% completion		Quarterly				60	100				-	-	10,000	-	-	SDOT KPA	GOK/DPs
Provision of modern container/other cargo handling equipment	Procurement of Equipment	Modern equipment in place	% of Inventory of equipment procured		Quarterly		60	100						2,500	2,000	-	-	-	SDOT KPA	GOK/DPs
Construction of 2 berths to serve Dongo Kundu SEZ	Construction of 2 berths at Dongo Kundu	Two Berths completed	% completion		Quarterly														SDOT KPA	GOK/DPs
Provision of a modern and safe petroleum oil handling facility	Relocation of Kipevu Oil Terminal (KOT)	New Petroleum Oil Handling Terminal built	% completion		Quarterly									4,760	7,500	-	-	-	SDOT KPA	GOK/DPs
Development of a second deep sea port / additional national gateway	Construction of Lamu Port	First three Berths completed	% completion of the first three Berth		Quarterly		30	30	40					12,150	12,150	13,000	-	-	SDOT KPA	GOK
Development of Shimoni port facilities and related investments	Undertake Feasibility study and procure transaction advisory services for Shimoni port	Feasibility study and development of the Port	Feasibility Study document		Quarterly		80	100						80	20	-	-	-	SDOT KPA	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Shimoni Port Construction	Shimoni Fish Port, Marina, and Cruise	% completion		Quarterly							TBD	-	-	-	-	SDOT KPA	GOK
Improvement of management of information	Modernization of ports ICT systems	Efficient Terminal Operating system	Operating information system		Quarterly		30	60	100			1,000	1,000	1,000	-	-	SDOT KPA	GOK/DPs
Revitalization of Kisumu Port to serve the lake region area	Rehabilitation of Kisumu Port	Revamped Port with better handling facilities	% completion		Quarterly				50	100				176			SDOT KPA	GOK/DPs
Provision of enabling infrastructure for the Blue Economy	Development of fisheries and maritime Infrastructure	Infrastructu re of fisheries and maritime developed	Inventory of infrastructu re provided		Quarterly		10	20	40	70	100	1,973	2,043	3,100	4,156	4,171	SDMS KMA	GOK/DPs
Increased efficiency of inland water transport	Development of Inland water transport infrastructure on lakes	Inland water transport infrastructure developed	Level of development of inland water transport infrastructure		Quarterly	10	10	30	60	80	100	300	800	800	800	800	SDOT SDMS KPA KMA	GOK/DPs
Increased capacity in coastal shipping	Coastal shipping development	4 coastal ports developed	% of completion		Quarterly	4	20	40	60	80	100	4,000	4,000	4,000	4,000	4,080	SDMS KMA	GOK/DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds	
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5			
Increased job opportunities for youth and reduce cost of doing business with Kenya	Development of Ship building/ repairs, container manufacturing and repair facilities	Facilities developed	No of ship building, ship repairs and container repair facilities established		Quarterly													SDMS KMA	GOK/DPs
Enhanced surveillance along the coast to reduce water incidents	Development of an integrated coastal security surveillance system	Surveillance system developed	% of Surveillance system operational		Quarterly					50	100				500	500		SDMS KMA	GOK/DPs
RAILWAYS																			
Development of additional SGR rail links	Construction of Standard Gauge railway (Nairobi-Naivasha)	Nairobi-Naivasha standard gauge line constructed	No of Km constructed		Quarterly	74	33	33										SDOT KRC	GOK/DPs
	Construction of Naivasha/Kisumu link	Naivasha/Kisumu link completed	% completion	0	Quarterly	100			30	70	100			100,000	100,000	166,000		SDOT	GOK/ LOANS
	Construction of Kisumu link/Malaba link	Naivasha/Kisumu link constructed	% completion	0	Quarterly	100			30	70	100			45,000	45,000	48,000		KRC	GOK/ LOANS
Enhancing capacity of the existing Meter Gauge Rail	Rehabilitation of Main Line Meter Gauge Railway line	Capacity of existing segments of MGR enhanced	No of Km constructed			25			25	25	25	25	25	25	25	25	25	SDOT KRC	GOK/DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Enhancing Transshipment between SGR and MGR	Rehabilitation of the Mahi Mahiu/Nakuru/ /Malaba Meter Gauge railway	MGR Link rehabilitated	No of Km rehabilitated		Quarterly												SDOT KRC	Figures from Transport
Increase in the capacity utilization for commuter services	Repairs, refurbishment and maintenance of 20 passenger coaches	Passenger coaches refurbished or repaired	Number of passenger coaches refurbished or repaired		Quarterly	20	20	20	20	20	20						SDHUD KRC	
Development of Commuter Rail Transport in Mombasa	Detailed designs for Mombasa Commuter Railway Services	Detailed project report	% completion		Quarterly		40	100				150	200				SDOT KRC	GOK/CG / DPs
ROADS																		
Enhancing of cross-border and regional connectivity	Development of road infrastructure the East Africa Road Network Project (EARNP)	190km of road constructed	Ks of roads constructed	137	Quarterly	190	25	30	45	50	40	10,000	3,950	4,800	6,000	7,200	SDOI KENHA	GOK/DPs
	Development of road infrastructure on the LAPSSET Corridor	185 km	Km of roads constructed	-	Quarterly	185	17	34	38	46	50	1,400	2,400	3,600	5,850	12,600	SDOI KENHA	GOK/DPs
	Expansion of roads along the Northern Corridor	450km of road from Mombasa to Nairobi	Km of roads constructed	438	Quarterly	450	Des igns	50	45	50	40	-	5,000	4,500	5,000	4,000	SDOI KENHA	GOK/DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Road Development under (EARTTDFP) ²	350km	Km of roads constructed	0	Quarterly	350	70	78	78	66	58	7,000	7,800	7,800	6,600	5,800	SDOI KeNHA	GOK/DPs
Provision of roads in Northern Kenya	Construction of roads under Transport Improvement Project (NETIP)	344Km constructed	Km of roads constructed	-	Quarterly	344	60	70	74	80	60	6,000	7,000	8,000	8,000	6,000	SDOI KENHA	GOK/DPs
Provision of non-motorized transport	Construction of NMT facilities	40km of NMT constructed	Km of road constructed		Quarterly	40	8	8	8	8	8	-	1,000	1,000	1,000	1,000	SDOI	GOK/DPs
Provision of road links for LAPSSET Project	Construction of road links to Lamu port		Km of roads constructed	0	Quarterly		88	88	88	88	88	8,830	8,830	8,830	8,830	8,830	SDOI KENHA	GOK/DPs
Increasing efficiency in road transport	Development of road infrastructure under (KTSSP) ³	53 km	Km of roads constructed	132	Quarterly	53	38	15				6,800	2,600	-	-	-	SDOI KENHA	GOK/DPs
Increasing capacity and efficiency in urban transport	National Urban Transport Improvement Project (NUTRIP)	47 km	Km of roads constructed		Quarterly	47	11	22	8	3	3	15,225	30,270	11,000	4,000	2,000	SDOI KURA	GOK/DPs
Increasing connectivity in high productivity areas	Roads 10,000 (Low Volume Sealed Roads)	7,500km	Km of roads constructed	450	Quarterly	7,500	1,400	1,400	1,400	1,650	1,650	60,000	60,000	60,000	80,000	80,000	SDOI KERRA	GOK/DPs
	Roads 2000 (Low Volume Sealed Roads)	177km	Km of roads constructed	766	Quarterly	177	50	40	40	25	22	1,268	1,000	1,000	650	500	SDOI KERRA	GOK/DPs

² EARTTDFP – East African Regional Trade and Transport Development Facilitation Project

³ KTSSP - Kenya Transport Sector Support Project

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Improvement of mobility in cities and urban areas	Construction of Bypasses	308km constructed	Km of bypasses constructed	-	Quarterly	308	80	105	60	48	15	7,555	10,275	5,685	4,345	1,540	SDOI KURA	GOK/DPs
	Construction of Missing links	33 km constructed	Km of links roads constructed	-	Quarterly	33	25	8				4,668	1736	-	-	-	SDOI KURA	GOK/DPs
	Improvement of roads in Cities/ Urban Centers	499km constructed	Km of roads constructed	-	Quarterly	499	78	161	91	67	102	14,684	24,612	14,056	9,928	15,735	SDOI KURA	GOK/DPs
	Construction of the JKIA/James Gichuru Expressway	18.6 Km constructed	% completion	-	Quarterly	18.6		10	60	100			3,000	3,500			SDOI KeNHA	PPP
Increasing road connectivity	Reconstruction /Rehabilitation of Roads	628 km rehabilitated	Km of roads rehabilitated		Quarterly	628	123	125	126	127	128	6,590	6,590	6,590	6,590	6,590	SDOI KURA KERRA	GOK/DPs
	Development of Nairobi Metro Line 1	Pre- and Feasibility for Nairobi Metro Line 1	% completion		Quarterly				30	60	100			2,000	2,000	2,000	SDOI KURA	
	Mass rapid transport improvement programme	Nairobi BRT facilities and viaduct, urbans	Km of BRT constructed	-	Quarterly	13	2	5	3	2	1	7,000	10,500	8,750	5,250	3,500	SDOI KURA	GOK/CG / DPs
	Mombasa Mass rapid transport improvement programme	Mombasa Mass Transit Masterplan developed	% completion		Quarterly			50	100					20	20		SDOI	GOK/CG / DPs
	Improvement of mobility in selected urban centres and	Missing link roads developed	No. of Km of missing link roads developed	20	Annually	100	20	20	20	20	20	1,200	1,200	1,200	1,200	1,200	SDOICGs KURA	GOK/CG / DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
		Non - Motorized Transport (NMT)	Km of Non - Motorized Transport (NMT)	10	Annually	200	40	40	40	40	40	200	200	200	200	200	SDOICGs	GOK/CG / DPs
Effective Road maintenance and reduction of vehicle operating costs	Periodic Maintenance	6,400 km maintained	Km of roads completed	5,298	Quarterly	6,400	1,280	1,280	1,280	1,280	1,280	7,680	7,680	7,680	7,680	7,680	SDOI KURA KERRA	GOK/DPs
	Routine Maintenance	145,310 km maintained	Km of roads completed	208,088	Quarterly	145,310	29,062	29,062	29,062	29,062	29,062	86,500	86,500	88,800	88,500	85,630	SDOI KURA KERRA	GOK/DPs
	Roads 2000 Programme (Gravel)	299km	Km of roads completed	-	Quarterly	299	61	58	60	59	61	303	275	300	295	320	SDOI KURA KERRA	GOK/DPs
	Performance Based Contracts	14,593 km maintained	Km of roads completed	-	Quarterly	14,593	6,375	2,700	2,850	2,950	3,021	9,350	11,050	12,750	14,450	16,150	SDOI KURA KERRA	GOK/DPs
Transformation of MTRD into a Regional Resource Centre for Technical Knowledge	Upgrade Physical Facilities, Install Pavement Management System and Digital Data Bank	Regional Resource Centre for Technical Knowledge	Centre of Excellence Established														SDOI	GOK
	Establishment of New Modern County Testing Laboratories	County Laboratories	5 No. Laboratories	16	N/A	21											SDOI	GOK/DPs
Enhancing Capacity for MTD	Procurement of equipment	Increased equipment inventory	No. of equipment	400	Annually	150	0	0	0	75	75	0	0	0	1500	1500	SDI	GOK/US ER FEE
HOUSING AND URBAN DEVELOPMENT																		
Facilitation of access to	Development of an affordable	400,000 affordable	No. of housing	0	Annually	400,000	80,000	80,000	80,000	80,000	80,000	25,200	25,200	25,200	25,200	25,200	SDHUD/ CGs/ DPs	GOK/DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
decent and affordable housing	Housing Programme	housing units constructed	units constructed															
		100,000 social housing units constructed	No. of housing units constructed	0	Annually	100,000	11,000	22,000	22,000	22,000	23,000	8,000	8,000	8,000	8,000	8,000	SDHUD/ CGs/DPs	GOK/DPs
		462 housing units finalized	No. of units constructed	822	Annually	462	462	-	-	-	-	-	1,546	-	-	-	SDHUD/ CGs/DPs	GOK/DPs
Improvement of living standards of security personnel	National Police and Prisons Services Housing Programme	5,144 Police/ Prisons Services housing units	No of housing units constructed	1,050	Annually	5,144	1,544	800	800	1,000	1,000	1,510	817	820	1,100	1,100	SDHUD/ CGs/DPs	GOK
Facilitation of civil servants' access affordable and adequate housing	Civil Servants Housing Scheme Fund	10,400 units for Civil Servants Housing Scheme constructed	No. of housing units constructed	1,383	Annually	10,400	250	620	1,460	4,380	3,690	920	3,430	3,430	3,430	3,430	SDHUD	GOK/CG/ DPs
		1,220 Civil Servants Mortgage beneficiaries	No. of Civil Servants beneficiaries	1,081	Annually	1,220	180	200	220	240	380	357	1,036	1,036	1,036	1,036	SDHUD	GOK/CG/ DPs
Provision of healthy buildings under government housing stock	Refurbishment and security of government housing stock	14,272 Government housing units refurbished	No. of Government housing units refurbished	1,005	Quarterly	1,005	14,272	2,950	3,272	2,250	3,400	250	1,450	1,347	2,114	2,600	SDHUD	GOK/CG/ DPs
Facilitation of access to affordable housing finance	Provision of housing finance facility	National Housing Development Fund established	Fund in place	-	Annually	1	-	1	-	-	-	1500	2000	500	500	-	SDHUD TNT	GOK/CG/ DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Strengthening urban Services infrastructure and services in 13 Urban Centres of the Nairobi Metropolitan Region (NMR)	Nairobi Metropolitan Services Improvement Project (NaMSIP)	Integrated Urban Development Plans	No. of Plans prepared	20	Quarterly	10	2	2	2	2	2	200	200	200	200	200	SDHUD CGs	GOK/CG / DPs
		Fire stations constructed	No. of fire stations constructed	4	Quarterly	10	2	2	2	2	2	400	400	400	400	400	SDHUD CGs	GOK/CG / DPs
		Fire engines procured	No. of fire engines procured;		Annually	20	4	4	4	4	4	960	960	960	960	960	SDHUD CGs	GOK/CG / DPs
		Km of trunk sewer and treatment plants constructed	Km of trunk sewer and treatment plants constructed	50	Annually	200	50	50	50	50	50	2,000	2	0	2	0	SDHUD CGs	GOK/CG / DPs
		Integrated Urban Development Plans	No. of Integrated Plans prepared	20	Quarterly	10	2	2	2	2	2	200	200	200	200	200	SDHUD CGs	GOK/CG / DPs
Facilitation of food security Initiative	Completion of Flagship and ESP markets (Chuka, Karatina, Westlands, Kerugoya, Daraja Mbili, Oyugis, Kibun 'a and Kongowea and other selected urban area)	Markets constructed	No. of flagship markets constructed	16	Annually	32	8	8	8	8	8	731.9	427	-	-	-	SDHUD CGs	GOK
		ESP markets constructed	No. of ESP markets constructed	10	Annually	64	10	12	13	14	15							GOK
		Markets constructed	No. of Markets constructed	0	Annually	15	5	5	5	0	0							GOK
Establishment/ Strengthening of urban institutions in	Kenya Urban Support Programme (KUSP)	Urban Institutions established	No. of Urban Institutions established	0	Annually	59	9	10	10	15	15	5,088	5,198	7,658	5,608	6,448	SDHUD CGs, KURA	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
participating counties																		
Increasing mobility and accessibility in urban areas	Preparation of the Nairobi Commuter Rail Services Master Plan	Nairobi Master plan in place	% completion		Quarterly			20	60	80	100	50	1,000	200			SDHUD KRC	GOK
	Development of Nairobi commuter rail	Constructed commuter rail	% completion		Quarterly		20	40	60	80	100	5,154	5,200	5,000	5,000	5,000	SDHUD KRC	GOK/CG / DPs
	Development of 10 rail commuter stations in Nairobi	Commuter railway service stations	No of stations in service		Quarterly	10		2	4	2	2		120	40	40	40	SDHUD KRC	GOK/CG / DPs
	Construction of commuter rail facilities	Commuter rail facilities developed/ rehabilitate	No. of commuter rail facilities	10	Annually	10	2	2	2	2	2	800	800	800	800	800	SDHUD CGs	GOK/CG / DPs
Improvement of living environment and health of the citizens	Provision of Solid waste management Infrastructure in selected urban centres and (NMR)	Solid waste treatment facilities constructed	No. of solid waste treatment facilities constructed		Annually	5	1	1	1	1	1	2,000	2	0	2	0	SDHUD/C Gs	GOK/CG / DPs
Promotion of separation of solid waste at source, reuse and recycling	Solid waste management programmes in selected urban centers	150 separation- at-source programme s done	No. of separation at source programme s done		Annually	150	30	30	30	30	30	-	100	100	100	100	SDHUD/C Gs	GOK/CG / DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
		Recycling programmes conducted	No. of recycling programme s conducted		Annually												SDHUD/C Gs	GOK/CG / DPs
		150 reuse programme s done	No. of reuse programme s done		Annually												SDHUD/ CGs	
Protection of lives and property by reducing flooding	Installation of storm water drainage facilities in selected urban centres and within NMR	Storm water programme s developed	No. of Km of storm water drainage developed	13	Annually	50	10	10	10	10	10	300	300	300	300	300	SDHUD/ CGs	GOK
Improvement of infrastructure services in small towns	Small Towns Development program (Non- County Capitals	Database of Small Towns in Kenya	No of Urban areas profiled	5	Annually	57	10	12	15	10	10	-	5,000	5,000	5,000	5,000	SDHUD/ CGs	GOK
		Planned urban areas	No of towns mapped and planned	-	Annually	40	8	8	8	8	8						SDHUD/ CGs	GOK/DPs
		Improveme nt of urban infrastructu re and services	No of people benefiting from improved services	240,000	Annually	1,200,000	240,000	240,000	240,000	240,000	240,000	240,000						SDHUD/ CGs
Improvement and enhancement of new business frontage	Urban Renewal Programmes for selected towns	Gikomba and other market hubs constructed	No of market hubs constructed	5	Annually	16	4	4	3	3	2	1,600	1,600	1,200	1,200	800	SDHUD/ CGs	GOK/CGs
Securing of riparian reserves and re-	Redevelopment of reclaimed urban space in	Reclaimed sites	No. of reclaimed sites	-	Annually	4	1	1	1	1	-	-	4,500	5,500	6,000	7,000	SDHUD/ CGs	GOK/CGs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
development for recreation	selected urban centres	Reclaimed spaces redeveloped	No. of reclaimed sites redeveloped	-	Annually	10	2	2	2	2	2						SDHUD/ CGs	GOK/CGs
	Nairobi Four River Fronts Redevelopment	Road linkage constructed	Km of road linkage constructed	4	Annually	4	-	1	1	1	1	-	2,000	2,000	2,000	2,000	SDHUD/ CGs	GOK/CGs
		Sanitation facilities developed	No. of sanitation facilities developed		Annually												SDHUD/ CGs	GOK/CGs
		NMT constructed	Km of NMT constructed		Annually												SDHUD/ CGs	GOK/CGs
		Recreation spaces developed	No. of spaces developed		Annually												SDHUD/ CGs	GOK/CGs
Improvement of planning in informal settlements	Provision of physical and Social Infrastructure in Slums and Informal Settlements in Selected Urban Areas	Physical and Social infrastructure developed	Kms of water pipeline constructed	109.9	Annually	2.6	1	1.6	-	-	-	2,200	2,060				SDHUD/ CGs	GOK/CGs /DPs
			No. of households connected to water	7,306	Annually	1,364	600	764	-	-	-						SDHUD/ CGs	GOK/CGs /DPs
			Kms of sewer line constructed	59.2	Annually	3.9	1.5	2.4	-	-	-						SDHUD/ CGs	GOK/CGs /DPs
			No. of sewer connections	4,730	Annually	58	20	38	-	-	-						SDHUD/ CGs	GOK/CGs /DPs
			Km of roads upgraded to	90.2	Annually	8	5	3	-	-	-						SDHUD/ CGs	GOK/CGs /DPs

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
			bitumen standards															
			No. of high mast security lighting installed	134	Annually	110	20	20	20	30	30						SDHUD/ CGs	GOK/CGs /DPs
			Kms of footpaths and drainage canals constructed	158.8	Annually	55	15	40	-	-	-						SDHUD/ CGs	GOK/CGs
Informal Settlements Improvement	(KISIP II) Project	Approval and implementation	% implementation	-	Annually	60	5	10	20	40	60	2,000	2,000	3,000	3,000	5,000	SDHUD/ CGs	GOK/CGs
PUBLIC WORKS																		
Expansion of Government Building facilities	Completion of government stalled building projects	Stalled government building projects completed	No. of stalled government building projects completed	6	Quarterly	14	3	3	3	3	2	1,416	1,416	1,416	1,416	1,416	SDPW	GOK
	Construction of new government buildings	New (GOK) building projects designed, documented and supervised	No. of new (GOK) buildings designed, documented and supervised	60	Quarterly	300	60	60	60	60	60	50	50	50	50	50	SDPW	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Rehabilitation of government buildings	Government buildings rehabilitated /maintained	No. of buildings rehabilitate /maintained	50	Quarterly	250	50	50	50	50	50	50	50	50	50	.	SDPW	GOK
Provision of headquarters office building for country governments	Construction of County Government Headquarters	County Government Headquarters constructed	% of works undertaken	-	Quarterly	5	20	20	30	30	-	605	605	605	485	-	SDPW	GOK
Protection of coastal ecosystems	Construction/ rehabilitation of Seawalls	Meters of Seawall constructed / rehabilitated	No. of meters of Seawall constructed /rehabilitated		Quarterly	5300	900	110 0	170 0	160 0	-	177	450	450	450	450	SDPW	GOK
Provision of landing facilities at sea and inland waters	Construction/ rehabilitation of jetties	Jetties constructed /rehabilitated	No. of Jetties constructed /rehabilitated		Quarterly	16	2	2	4	4	4	60	300	1,200	1,200	1,200	SDPW	GOK
Provision of river protection	Construction of protection facilities at Kongelai -Phase II and Budalangi and Tana River Basin	River protection works done	Meters of River protection works done		Quarterly	6,250	-	-	2500	2250	2000	-	-	500	500	500	SDPW	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Provision of pedestrian access areas in difficult terrain	Construction of footbridges	Footbridges	Number of footbridges constructed	55	200	-	50	50	50	50		600	600	600	600	600	SDPW	GOK
Subtotal KR 2												363,024	409,146	533,583	515,547	408,902		
Key Result Area 3: Quality of Service, Safety and Security																		
Strategic Objective 3.1: To Improve Quality of Service, Safety and Security																		
TRANSPORT AND INFRASTRUCTURE																		
Attainment of global compliance with Aviation Safety	Development of manpower and provision of equipment for compliance with international Aviation Safety Standards	Sustenance of IASA Category I Status	% increase from the ICAO Audit				25	25	25	25		20	20	20	20		SDOT KCAA KAA	GOK
Improvement of service delivery at the Motor Vehicle Inspection and regional driving test centers.	Upgrading of Motor Vehicle Inspection and Driving Test Centers.	18 Vehicle inspection centers and 17 driving test centers refurbished	No of upgraded centers				30	30	30			320	320	320			NTSA SDOT	GOK
Mordenisation of Road Traffic Systems	Implementation of the 2 nd Generation number plates and the 3 rd Identifier.	All registered motor vehicles issued with third license plate.	% of implementation				40	80	100			1,000	1,000	151			NTSA SDOT	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Implementation of the Second Generation Smart-Card Driving License.	All licensed drivers issued with smart generation DL.	% of replacements			100	25	50	70	90	100	200	300	300	100	100	NTSA SDOT	GOK
Improvement of efficiency in service delivery	Implementation of Licensing of private Motor Vehicle Inspection Centers.	Licensed private Motor Vehicle Inspection Centers	Number of private motor vehicles inspection centers licensed			0			5	10	15	200	300	300	100	100	NTSA SDOT	GOK
Improvement of standards on driver and instructors training.	Establishment of a Center of Excellence on instructors/driver training and road safety	Fully operational Center of Excellence.	% completion of the Centre of Excellence						40	60	100	250	500	250			SDOT NTSA	GOK
Improvement of Road Safety Countrywide	Establishment and operationalization on County Transport and Safety Committees in all counties	Fully operational CTSCs	Number of working CTSCs						20	40	47						NTSA SDOT	GOK
	Development and Implementation of the National Road Safety Action Plan	Approved National road Safety Action Plan 2017-2021 in place.	% Completion						40	100		200	100	100	100	100	NTSA SDOT	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Improvement and implementation of National Roads Safety Data Systems.	National Road Safety Data Systems established	% Completion					40	60	75	100	250	500	250			SDOT NTSA	GOK
Strengthening of capacity for implementation of road safety programme	Capacity building for road safety programmes	Public awareness campaigns/ capacity of NTSA staff undertaken	No. of staff trained									300	300	300	300	300	SDOT NTSA	GOK
MARITIME																		
Developing an M&E Framework for maritime logistical services	Establishment of standards for maritime logistical services	Standards for maritime logistical services developed	No. of maritime standards developed	0.35	Annually												SDMS, KMA	
Promotion of Maritime Safety	Establishment of search and rescue centres for coastal and inland waters	Search and Rescue Centres established	No. of Search and Rescue centres	1	Annually	15			5	5	5						SDSM, KMA	GOK
	Development of standards for construction of maritime infrastructure and facilities	Standards developed	No. of Standards developed	None	Annually												SDMS, KMA	GOK
	Enforcement of standards to promote safety of navigation	Reduced no. of maritime accidents/ incidents	No. of Standards being enforced			Annually	Safety index of 0.4											SDMS, KMA

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Promotion of Maritime Security	Coordination on development of a Maritime Security Strategy	Maritime Security Strategy developed	Strategy Document	ISPS Code in force in Msa port	Annually	1											SDMS, KMA	GOK
Mitigation of Marine Pollution and Disasters	Development of capacity to prevent and combat Marine Pollution and Disasters	Experts trained on Marine pollution control	No of experts trained	NA	Quarterly							169	72	72	72	72	SDMS, KMA	GOK
		Equipment and systems procured		NA	Quarterly													
HOUSING AND URBAN DEVELOPMENT																		
Minimization of crime levels in cities and urban centres	Installation of infrastructure to support a 24-hour Economy Initiative in NMR and 11 other urban centres	Street lighting installed	No. of street lights installed	489	Quarterly	2,000	500	500	500	500	0	400	400	400	400	400	SDHUD/CGs	GOK
		Security lighting installed	No. of security lights installed		Quarterly													
Enhancement of urban disaster management and safety (life and property)	Establishment of National Disaster Training centres	National urban disaster centres developed and equipped.	No. of National urban disaster centres		Annually	5	1	1	1	1	1	-	1,000	1,000	1,000	1,000	SDHUD/CGs	GOK
Creation of employment and enhancement of incomes	Establishment of market hubs and other markets in NMR and selected urban centres	Market hubs constructed	No. of markets hubs constructed	7	Annually	10	2	2	2	2	2	600	600	600	600	600	SDHUD/CGs	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Enhance safety in buildings and construction sites	Enhancement of the system of inspection, audit and testing of buildings	Safe, secure and habitable buildings	No. of buildings inspected, audited and tested	7,000	Quarterly	15,000	3,000	3,000	3,000	3,000	3,000	106	550	450	450	450	SDPW	GOK
Provision of an efficient Supplies system	Preparation of framework contracts/term supply contracts	Efficiency in procurement of common user items	No. of framework contracts prepared	67	Annually	72	72	-	72	-	72	20	-	20	-	20	SDPW	GOK
Subtotal KR 3												4,035	5,962	4,533	3,142	3,142		
Key Result Area 4: Research and Innovation																		
Strategic Objective 4.1: To Enhance Research and Development																		
TRANSPORT AND INFRASTRUCTURE																		
Creation of capacity to conduct research and at the Ministry	Development of a Transport Research and Development Policy	Approved policy	% completion	None	Annually	100% Completed			50	100			20	20			SDOT SDOI SDMS	GOK
	Establishment of a funded R&D Unit	R& D Unit established	Inventory of tasks completed	None	Annually	100% implementation								100			SDOTS DOI SDMS	GOK
	Establishment of an Integrated knowledge management system	Knowledge Management system in place	Knowledge Management system Document	None	Annually	Completed											SDOT SDOI SDMS	GOK
	Establishment of a Maritime Research and Development	Maritime Data Bank	Inventory of tasks completed	None	Annually	Completed						15	110	110	110	205	SDSM	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	Centre/ Repository																	
Data Maps for Natural Road Pavement Construction Materials	Prospecting and mapping Natural Construction Material Sources	Gravel and Hardstone Sources Mapped	41 No. County Gravel and Hardstone Materials Maps	6 No.		41 No.												
Characterization of Road pavement Construction Materials	Characterization of Subgrade, Capping, Graded Crushed Stone, Cement Gravel and bituminous pavements	Study Carried	1 No. Study Report															
Geotechnical Investigations & Mapping of fissures along major highways/ network	Study for mapping of fissures along Maai Mahiu - Narok Road (B3) and Maai Mahiu - Naivasha Road (C88)	Study Carried out	1 No. Study Report															
Performance monitoring and Evaluation of Trial sections/ Design and Construction Methods review	Monitoring and Evaluation Carried out	Report	No of reports															
HOUSING AND URBAN DEVELOPMENT																		
Promotion of use of sustainable low-cost housing	Development (ABMT) centres	20 ABMT centres established	No. of ABMT centres established	92	Annually	20	4	4	4	4	4	100	100	100	100	100	SDHUD	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
building materials and technologies	Training of personnel in (ABMT) centres	20,000 trainees on ABMT	No. of new trainees	3,000	Annually	20,000	4,000	4,000	4,000	4,000	4,000	50	50	50	50	50	SDHUD	GOK
	Research on low cost alternative construction materials	Low cost alternative constructio n materials	Low cost alternative constructio n materials	-	Quarterly	10	2	2	2	2	2	155	155	155	100	100	SDPW	GOK
	Mapping of local building materials	Local building materials mapped	No of counties	-	Quarterly	47 counti es	10	10	10	10	7	190	190	190	127	100	SDPW	GOK
PUBLIC WORKS																		
Research on cost effective building materials and technologies	Building materials survey and research	Researches carried out	Number of Researches carried out	3	Quarterly	10	2	2	2	2	2	100	100	100	100	100	SDPW	GOK
Subtotal KR 4												610	705	705	587	655		
Key Result Area 5: Capacity Building (Human, Institutional and Technological)																		
Strategic Objective 5.1: To Enhance Capacity																		
TRANSPORT AND INFRASTRUCTURE																		
Attraction and retention of competent staff	Development and review Terms and Conditions of Service	Reviewed schemes and Terms of Service	% work done on the review of the Terms/ Conditions of Service	Existing terms and condition of services and the schemes of services	Annually	100% compl eted	0	20	100			0.2	0.2	0.2	0.2	0.2	SDOT	GOK
Building of human capital through basic training and	Restructuring of Bandari College to become a Maritime	Bandari Maritime Academy with Board,	Annual Student capacity	Inadequ ate capacity	Annually	2,000	200	300	500	500	500	20	300	200	223	27	SDSM	GOK

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
skills improvement in the Maritime sector	Centre of Excellence	staff and curriculum																
	Approved institutions offering maritime training	Approved maritime institutions	No. of approved maritime institutions	3	Annually	6		1	1	2	2		10	10	20	20		GOK
Enhancement of human resource capacity to manage the Blue Economy	Awareness creation and development of competencies for in the Maritime sector	Diverse skills and competencies developed	No. of skilled persons	Not Available	Annually	7,500	1,500	1,500	1,500	1,500	1,500	410	495	505	510	518	SDSM	GOK
	Training under "Vijana Baharia" Programme	Skilled youth workforce created	No. of seafarers employed	17	Annually	6,250	1,250	1,250	1,250	1,250	1,250	226	226	226	226	226	SDSM	GOK
HOUSUNG, URBAN DEVELOPMENT AND PUBLIC WORKS																		
Development of Human Capital in the construction industry	Development of National Construction Institute	National Construction Institute developed	National Construction Institute	-	Quarterly	100%	30	30	40	-	-	160	800	785	-	-	SDOPW	GOK
			No. of construction workers trained	-	Quarterly	40,000	8,000	8,000	8,000	8,000	8,000	100	100	100	100	100	SDOPW	GOK
	Recruitment of technical staff	Recruited technical staff	No. of technical staff recruited	-	Annually	500	100	100	100	100	100	90	90	90	90	90	SDPW	GOK
	Capacity Building	5,000 officers trained	Number of trained officers		Quarterly	1,000	1,000	1,000	1,000	1,000	1,000	1,250	1,250	1,250	1,250	1,250	SDPW	GOK
ALL STATE DEPARTMENTS AND SAGAs																		

Strategy	Programme/ Project/ Activity	Expected Output	Output Indicators	Baseline (2017/18)	Reporting schedule	Target for 5 years	Target					Budget (KShs. Million)					Responsible /Lead SD	Sources of Funds
							Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
Capacity Building for Serving Officers in State Departments and Agencies	Training on PPPs for policy makers, planners, legal officers and operations officials		No of staff trained		Quarterly	150			50	50	50			5	5	5		GOK
Resource Mobilisation	Mobilisation of funding from the private sector and through PPPs	Increased number of investors in infrastructure projects	No of PPP schemes Private investors		Quarterly	30			5	10	15			25	50	75	All State Departments	GOK
	Infrastructure Bonds mobilisation	Increased funds	Number of infrastructure bonds	1	Annually	2			1		1		100		100		All State Departments	GOK
	Sector Investment Conferences	Loans and equity	Amount of loans/ equity raised	0	Annually	8	-	2	2	2	2		200	200	200	200	All State Departments	GOK
Mainstreaming of cross cutting issues in programmes and projects	Preparation of reports on implementation of Cross cutting issues	Reports	Number of reports	5	Annually		1	1	1	1	1	1,000	1,000	1,000	1,000	1,000	All State Departments	GOK
Appraisal of implementation of programmes and projects in the Strategic Plan	Monitoring and Evaluation on Strategic Plan implementation	Reports	Number of reports		Quarterly		4	4	5	4	4	30	30	60	30	30	All State Departments	GOK
Subtotal KR 5												3,286	4,601	4,431	3,754	3,466		
Grand Total												376,186	429,227	557,437	536,880	427,192		

Annex III: Development Budget Estimates

Sector	Funding Source	Baseline	Requirement (Kshs Million)						Allocation (Kshs Million)						Financing Gaps (Kshs Million)						
			2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2022	2018/ 2023	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2022	2018/ 2023	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2023	
						<i>Estim</i> ⁴	<i>Estim</i>	<i>Estim</i>					<i>Estim</i>	<i>Estim</i>	<i>Estim</i>					<i>Estim.</i>	<i>Estim</i>
Transport	GOK	11,220	34,616	27,547	17,760	22,786	91,143	113,929	13,480	13,766	13,897	13,091	52,363	65,454	0	21,136	13,781	3,863	9,695	48,475	
	Loans	54,486	143,095	148,456	76,587	105,656	422,624	528,280	49,486	49,486	49,486	50,736	202,944	253,680	0	93,609	98,970	27,101	54,920	274,600	
	Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	AIA	24,719	27,833	11,045	27,639	22,809	91,236	114,045	24,719	24,719	24,719	24,719	98,876	123,595	0	3,114	-13,674	2,920	-1,910	-9,550	
	Gross	90,425	205,544	187,048	121,986	151,251	605,003	756,254	87,685	87,971	88,102	88,546	354,183	442,729	0	117,859	99,077	33,884	62,705	313,525	
Infrastructure	GOK	65,516	200,608	123,938	102,598	123,165	492,660	615,825	63,544	70,860	74,237		274,157	342,696	0	137,064	53,078	28,361	123,165	273,129	
	Loans	31,178	40,238	43,666	46,373	40,364	161,455	201,819	31,179	31,179	31,179		124,715	155,894	0	9,059	12,487	15,194	40,364	45,925	
	Grants	3,010	3,885	4,216	4,477	3,897	15,588	19,485	3,010	3,010	3,010	3,010	12,040	15,050	0	875	1,206	1,467	887	4,435	
	AIA	13,280	13,280	13,839	14,426	13,706	54,825	68,531	13,280	13,280	13,280	13,280	53,120	66,400	0	0	559	1,146	426	2,131	
	Gross	112,984	258,011	185,659	167,874	181,132	724,528	905,660	111,013	118,329	121,706	116,008	464,032	580,040	0	146,998	67,330	46,168	65,124	325,620	
Shipping and Maritime	GOK	0	516	615	518	412	1,649	2,061	0	0	0	0	0	0	0	516	615	518	412	2,061	
	Loans	0	335	39	16	98	390	488	335	39	16	98	390	488	0	0	0	0	0	0	
	Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	AIA	0	193	30	15	60	238	298	159	30	15	51	204	255	0	34	0	0	9	43	
	Gross	0	1044	684	549	569	2,277	2,846	494	69	31	149	594	743	0	550	615	518	421	2,104	
Housing and Urban Development	GOK	8,514	50,502	40,348	30,395	32,440	129,759	162,199	12,679	12,932	12,954	11,770	47,079	58,849	0	37,823	27,416	17,441	20,670	103,350	
	Loans	18,043	32,430	20,480	17,374	22,082	88,327	110,409	17,490	6,590	6,804	12,232	48,927	61,159	0	14,940	13,890	10,570	9,850	49,250	
	Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	AIA	450	1,000	1,055	1,176	920	3,681	4,601	1,000	1,055	1,176	920	3,681	4,601	0	0	0	0	0	0	
	Gross	27,007	83,932	61,883	48,945	55,442	221,767	277,209	31,169	20,577	20,934	24,922	99,687	124,609	0	52,763	41,306	28,011	30,520	152,600	
Public Works	GOK	2,095	10,173	9,334	6,439	7,010	28,041	35,051	1,880	2,481	2,528	2,246	8,984	11,230	0	8,293	6,853	3,911	4,764	23,821	

⁴ Estimated

Sector	Funding Source	Baseline	Requirement (Kshs Million)						Allocation (Kshs Million)						Financing Gaps (Kshs Million)					
			2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2018/2022	2018/2023	2019/2020	2020/2021	2021/2022	2022/2023	2018/2022	2018/2023	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
	Loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AIA	0	168	168	168	126	504	630	168	168	168	126	504	630	0	0	0	0	0	0
	Gross	2,095	10,341	9,502	6,607	7,136	28,545	35,681	2,048	2,649	2,696	2,372	9,488	11,860	0	8,293	6,853	3,911	4,764	23,821
Total	GOK	87,345	296,415	201,782	157,710	185,813	743,252	929,065	91,583	100,039	103,616	95,646	382,583	478,229	0	204,832	101,743	54,094	90,167	450,836
	Loans	103,707	216,098	212,641	140,350	168,199	672,796	840,995	98,490	87,294	87,485	94,244	376,976	471,220	0	117,608	125,347	52,865	73,955	369,775
	Grants	3,010	3,885	4,216	4,477	3,897	15,588	19,485	3,010	3,010	3,010	3,010	12,040	15,050	0	875	1,206	1,467	887	4,435
	AIA	38,449	42,474	26,137	43,424	37,621	150,484	188,105	39,326	39,252	39,358	39,096	156,385	195,481	0	3,148	-13,115	4,066	-1,475	-7,376
	Gross	232,511	558,872	444,776	345,961	395,530	1,582,120	1,977,650	232,409	229,595	233,469	231,996	927,984	1,159,980	0	326,463	215,181	112,492	163,534	817,670

Source: Estimates from MTEF Dec, 2018

Annex VI: Recurrent Budget Estimates

Vote	Description	Baseline	Requirement (Kshs Million)					Allocation (Kshs Million)				Gap (Kshs Million)					
		2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2019/2020	2020/2021	2021/2022	2022/2023	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2018/2023	
Transport	AIA	9,210	10,316	10,840	11,235	11,797	10,316	10,840	11,235	11,797	0	0	0	0	0	0	
	NET	1,094	2,352	2,387	2,588	2,717	1,519	1,539	1,603	1,683	0	833	848	985	1,034	3,700	
	Employees Compensation	202	219	226	233	245	220	227	233	245	0	-1	-1	0	0	-2	
	Transfers	9,930	12,131	12,728	13,288	13,952	11,414	11,943	12,387	13,006	0	717	785	901	946	3,349	
	Other Recurrent	172	318	273	302	317	201	209	218	229	0	117	64	84	88	353	
	Gross	10,304	12,668	13,227	13,823	14,514	11,835	12,379	12,838	13,480	0	833	848	985	1,034	3,700	
Infrastructure	AIA	56,496	59,837	62,854	62,872	66,016	59,619	62,666	62,686	65,820	0	218	188	186	195	787	
	NET	1,868	1,970	2,072	2,121	2,227	1,832	1,658	1,682	1,766	0	138	414	439	461	1,452	
	Employees Compensation	1,386	1,328	1,398	1,440	1,512	1,376	1,417	1,460	1,533	0	-48	-19	-20	-21	-108	
	Transfers	56,654	60,029	63,064	63,082	66,236	59,777	62,594	62,578	65,707	0	252	470	504	529	1,755	
	Other Recurrent	324	450	464	471	495	298	313	330	347	0	152	151	141	148	592	

Vote	Description	Baseline	Requirement (Kshs Million)				Allocation (Kshs Million)				Gap (Kshs Million)					
		2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2023
	Gross	58,364	61,807	64,926	64,993	68,243	61,451	64,324	64,368	67,586	0	356	602	625	656	2,239
Shipping and Maritime	AIA	1,400	1,574	1,356	1,481	1,555	1,741	1,962	1,985	2,084	0	-167	-606	-504	-529	-1,806
	NET	269	681	1,011	905	950	232	234	238	250	0	449	777	667	700	2,593
	Employees Compensation	79	85	90	92	97	85	88	90	95	0	0	2	2	2	6
	Transfers	1,446	1,900	2,000	2,000	2,100	1,741	1,962	1,985	2,084	0	159	38	15	16	228
	Other Recurrent	144	270	277	294	309	147	146	148	155	0	123	131	146	153	553
	Gross	1,669	2,255	2,367	2,386	2,505	1,973	2,196	2,223	2,334	0	282	171	163	171	787
Housing and Urban Dev	AIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NET	950	1,674	1,801	1,888	1,982	1,006	1,043	1,083	1,137	0	668	758	805	845	3,076
	Employees Compensation	600	751	784	816	857	646	665	686	720	0	105	119	130	137	491
	Transfers	20	169	212	214	225	21	22	23	24	0	148	190	191	201	730
	Other Recurrent	330	754	806	859	902	339	356	374	393	0	415	450	485	509	1,859
	Gross	950	1,674	1,801	1,888	1,982	1,006	1,043	1,083	1,137	0	668	758	805	845	3,076
Public Works	AIA	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0
	NET	2,247	3,517	3,871	4,313	4,529	2,355	2,443	2,543	2,670	0	1,162	1,428	1,770	1,859	6,219
	Employees Compensation	658	920	940	984	1,033	779	801	826	867	0	141	139	158	166	604
	Transfers	1,245	2,158	2,451	2,803	2,943	1,356	1,409	1,473	1,547	0	802	1,042	1,330	1,397	4,571
	Other Recurrent	348	443	484	530	557	224	238	248	260	0	219	246	282	296	1,043
	Gross	2,251	3,521	3,875	4,317	4,533	2,359	2,447	2,547	2,674	0	1,162	1,428	1,770	1,859	6,219
Total	AIA	67,110	71,731	75,054	75,592	79,372	71,680	75,472	75,910	79,706	0	51	-418	-318	-334	-1,019
	NET	6,428	10,194	11,142	11,815	12,406	6,944	6,917	7,149	7,506	0	3,250	4,225	4,666	4,899	17,040
	Employees Compensation	2,925	3,303	3,438	3,565	3,743	3,106	3,198	3,295	3,460	0	197	240	270	284	991
	Transfers	69,295	76,387	80,455	81,387	85,456	74,309	77,930	78,446	82,368	0	2,078	2,525	2,941	3,088	10,632
	Other Recurrent	1,318	2,235	2,304	2,456	2,579	1,209	1,262	1,318	1,384	0	1,026	1,042	1,138	1,195	4,401

Vote	Description	Baseline	Requirement (Kshs Million)				Allocation (Kshs Million)				Gap (Kshs Million)					
		2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2018/ 2023
	Gross	73,538	81,925	86,196	87,407	91,777	78,624	82,389	83,059	87,212	0	3,301	3,807	4,348	4,565	16,021

Source: Estimates from MTEF Dec, 2018

Annex V: Staff Disposition State Departments, Divisions and Units

State Department	Division/Unit	Established Positions	Number In- Post	Variance
Transport	Principal Secretary	1	1	0
	Air Transport Department	34	12	- 22
	Air Accident Investigation Department	19	6	-13
	Shipping and Maritime Department	18	4	-14
	Administration	235	201	-34
	Government Clearing and Forwarding Agency	100	46	-54
	Records Management	15	11	-4
	Human Resource Management	15	11	-4
	Human Resource Development	2	1	-1
	Finance	3	5	+2
	Accounts	15	17	+2
	Planning	5	10	+5
	Information Communication Technology	6	5	-1
	Supply Chain Management	16	9	-7
	Public Communications	2	1	-1
	Subtotal		486	340
Infrastructure	Principal Secretary	1	1	0
	Administration Hqs.	14	8	-6
	Administrative Support Services	134	84	-50
	Legal Office	3	2	-1
	Human Resource Management	108	48	-60
	Accounts	43	48	+5
	Central Planning Unit	7	3	-4
	Supply Chain Management	14	16	+2
	Finance	6	4	-2
	Public Communication	2	1	-
	Information Communications Technology	11	4	-7
	Records Management	21	14	-7
	Quality Assurance Division (QAD)	52	14	-38
	Roads Division (Headquarters)	69	133	+64

State Department	Division/Unit	Established Positions	Number In- Post	Variance
	Mechanical and Transport Division			
	Mechanical and Transport (Headquarters)	472	157	-315
	Counties Mechanical	2,273	1,281	-992
	KIHBT-National			
	KIHBT-Nairobi	232	137	-95
	KIHBT -Kisii	109	49	-60
	KIHBT -Ngong	122	41	-81
	Materials and Testing and Regional Labs			
	Materials and Testing Division -Nairobi	397	156	-241
	Regional Laboratory - Mombasa	27	6	-21
	Regional Laboratory -Nyeri	27	6	-21
	Counties _Materials Testing	410	48	-362
	Sector Total _Infrastructure	4,554	2,261	-2,293
	Shipping and Maritime	Principal Secretary	1	1
Administration		5	9	+4
Legal Officers		5	0	-5
Marine Casualty Investigation Division		6	0	-6
Maritime Administration and Training		20	0	-20
Marine Pollution Control, Safety and Security		19	0	-19
Inland Waters Development Division		21	0	-21
Maritime Commercial Services		24	0	-24
Records Management		4	5	+1
Human Resource Management & Dev.		7	20	+13
Supply Chain Management		8	20	+12
Finance and Budget/Accounts		3	13	+10
Accounts		7	10	+3
Central Planning Unit		3	8	+5
Information Communication Technology		3	5	+2
Office Administrative Services		56	46	-10
Internal Audit Unit		3	5	+2
Public Communication		2	4	+2

State Department	Division/Unit	Established Positions	Number In- Post	Variance
	Subtotal	197	146	-51
Housing and Urban Development	Principal Secretary	1	1	0
	Principal Secretary's Office	15	14	-1
	HRM/D Unit	14	12	-2
	Records Management Unit	10	4	-6
	Accounts	38	18	-20
	Planning Unit	12	8	-4
	Supply Chain Management Unit	27	26	-1
	Internal Audit	5	0	-5
	ICT	10	5	-5
	Administration Support Services	514	305	-209
	Legal Unit	4	1	-3
	Public Communication Unit	4	1	-3
	Internal Audit	5	0	-5
	ICT	10	5	-5
	Housing Department	199	57	-142
	Estate Department	414	147	-267
	Rent Restriction Tribunal	151	20	-131
	Kenya Slum Upgrading Dept	86	19	-67
	Civil Servants Housing Scheme Dept	68	9	-59
	Urban Development	1	1	0
	Urban Planning, Policy & Research	39	21	-18
	Urban Infrastructure & Services	19	8	-11
	Urban Management Division	39	8	-31
	Metropolitan Development	2	2	0
	Metropolitan Planning, Investment & Environment	26	6	-20
	Metropolitan Infrastructure, Transport & Utilities	26	7	-19
	Metropolitan Social Infrastructure	21	3	-18
Public Accommodation/ Lease /Management	173	11	-162	

State Department	Division/Unit	Established Positions	Number In- Post	Variance
	Subtotal	1,933	719	-1,214
Public Works	Principal Secretary	1	1	0
	Principal Secretary's Office	11	6	-5
	Legal Unit	2	1	-1
	Architectural Department	326	92	-234
	Electrical Engineering Department	253	85	-168
	Mechanical Engineering Department	189	76	-113
	Structural Engineering Department	171	70	-101
	Fire Unit	51	10	-41
	Quantities & Contracts Department	128	38	-90
	Graphic Design Department	76	6	-70
	Supplies Branch	45	17	-28
	Accounts Department	9	13	+4
	Finance Department	7	6	-1
	Human Resource Management & Dev	24	6	-18
	Central Planning and Monitoring Unit	4	2	-2
	Supply Chain Management Department	15	21	-6
	Records Management	51	4	-47
	ICT Department	7	4	-3
	Public Communication Department	2	1	-1
	Administrative Support Services	175	94	-81
	Kenya Building Research Centre	88	5	-83
National Buildings Inspectorate	60	2	-58	
	Subtotal	1,695	560	-1,135
	Grand Total	8,662	4,026	-4,839

Annex VI: Technical Staff Disposition Gaps

State Department	Division/Unit	Established Positions	Number In -Post	Variance
Transport	Air Transport Department	34	12	-22
	Air Accident Investigation Department	19	6	-13
	Shipping and Maritime Department	18	4	-14
	Central Planning Unit	5	10	+5
	Information Communication Technology	6	5	-1
	Subtotal	82	37	-45
Infrastructure	Quality Assurance Division (QAD)	52	14	-38
	Roads Division (Headquarters)	69	133	-64
	Mechanical and Transport Division	2,745	1,438	-1,307
	KIHBT-National	463	227	-236
	Materials Testing	861	168	-693
	Central Planning Unit	7	3	-4
	Subtotal	4,197	1,983	-2,214
Shipping and Maritime	Marine Casualty Investigation Division	6	0	-6
	Maritime Administration and Training	20	0	-20
	Marine Pollution Control, Safety and Security	19	0	-19
	Inland Waters Development Division	21	0	-21
	Maritime Commercial Services	24	0	-24
	Central Planning Unit	3	8	-5
	Subtotal	93	8	-85
Housing and Urban Dev	Housing Department	199	57	-142
	Estate Department	414	147	-267
	Rent Restriction Tribunal	151	20	-131
	Kenya Slum Upgrading Dept	86	19	-67
	Civil Servants Housing Scheme Dept	68	9	-59
	Urban Development	1	1	0
	Urban Planning, Policy & Research	39	21	-18
	Urban Infrastructure & Services	19	8	-11
	Urban Management Division	39	8	-31
	Metropolitan Development	2	2	0
	Metropolitan Planning, Investment & Environment	26	6	-20
	Metropolitan Infrastructure, Transport & Utilities	26	7	-19
	Metropolitan Social Infrastructure	21	3	-18
	Public Accommodation/ Lease /Management	173	11	-162
	Central Planning Unit	12	8	-4
Subtotal	1,276	327	-949	
Public Works	Architectural Department	326	92	
	Electrical Engineering Department	253	85	-168
	Mechanical Engineering Department	189	76	-113
	Structural Engineering Department	171	70	-101

State Department	Division/Unit	Established Positions	Number In -Post	Variance
	Fire Unit	51	10	-41
	Quantities & Contracts Department	128	38	-90
	Graphic Design Department	76	6	-70
	Supplies Branch	45	17	-28
	Accounts Department	9	13	+4
	Kenya Building Research Centre	88	5	-83
	National Buildings Inspectorate	60	2	-58
	Central Planning and Monitoring Unit	4	2	-2
	Subtotal	1,400	416	-750
	Grand Total	7,049	2,772	-4,043