



REPUBLIC OF KENYA

**OFFICE OF THE PRIME CABINET SECRETARY
AND MINISTRY OF FOREIGN AND
DIASPORA AFFAIRS**

STATE DEPARTMENT FOR SCIENCE,
RESEARCH, AND INNOVATION

**KENYA RESEARCH FINANCING
AND CAPACITY STRENGTHENING
MASTERPLAN
(2026 - 2036)**

MAY 2026

**KENYA RESEARCH FINANCING
AND CAPACITY STRENGTHENING
MASTERPLAN
(2026 - 2036)**





FOREWORD



Research, Science, Technology, and Innovation (RSTI) are essential drivers of Kenya's economic transformation and inclusive growth. The Constitution of Kenya, the Kenya Vision 2030, and its Fourth Medium-Term Plan (2023-2027), as well as the Bottom-Up Economic Transformation Agenda (BETA) 2022-2027, place emphasis on science, technology, and innovation. At the continental and global levels, the East African Community Vision 2050, African Union Agenda 2063, and United Nations 2030 Agenda for Sustainable Development all emphasize the importance of knowledge generation in promoting equitable and sustainable development. In this context, the Kenya Research Financing and Capacity Strengthening Masterplan (2026-2036) has been developed as a national blueprint to improve resource mobilization, institutional capacity, and innovation.

The Masterplan establishes predictable and sustainable research financing in accordance with the Science, Technology, and Innovation (STI) Act, Cap. 511, while diversifying support from public, private, charitable, and diaspora sources. It underscores the ongoing issues of underfunding, fragmented programmes, and limited commercialization by aligning resources with national priorities and strengthening governance structures. In incorporating accountability, inclusion, and equity into research financing, the masterplan will ensure that research actively contributes to Kenya's socio-economic shifts.

The successful implementation of this Masterplan is dependent on strong collaboration among Ministries, Departments, Agencies, and Counties (MDACs); constitutional commissions; independent offices, academia, research institutions, the private sector, civil society, development partners, and local communities. This 'whole of government' and 'whole of society' approach will strengthen the links between research and policy, research and industry, and research and society, establishing Kenya as a regional and global powerhouse for innovation and competitiveness.

The Government of Kenya reaffirms its commitment to ensure that this Masterplan is executed in a transparent, inclusive, and sustainable manner. Kenya's research and development ecosystem will be reinforced through broad-based partnerships, diversified financing, and effective coordination, resulting in more inventions, job creation, and improved livelihoods. I encourage all stakeholders to collaborate in realizing the goal of a knowledge-driven economy that would revolutionize Kenya's development trajectory.

H.E. Dr. Musalia Mudavadi, EGH.,
Prime Cabinet Secretary
Office of the Prime Cabinet Secretary and
Ministry of Foreign and Diaspora Affairs



PREFACE AND ACKNOWLEDGEMENT



Kenya has over the years made notable progress in advancing Research, Science, Technology, and Innovation (RSTI) as key drivers of national development. However, investment in research remains below both regional and global benchmarks. As at 2023, Gross Expenditure on Research and Development (GERD) is estimated at 0.8 percent of Gross Domestic Product (GDP), which falls short of Kenya's statutory aspiration of 2 percent under the Science, Technology and Innovation Act, Cap. 511. The Government recognizes the contribution of development partners which finances nearly 51 percent of the total research expenditure, underscoring the country's reliance on external sources. While this support is valuable, it has often resulted in fragmented funding,

research not being aligned to the national development priorities and weak commercialization of research outputs. This Masterplan provides a coherent, predictable, and sustainable framework for mobilizing and managing research financing while strengthening institutional and human capacity across the research and development ecosystem.

The Masterplan was prepared through a participatory and inclusive process involving both state and non-state actors. It combined a comprehensive desk review of national, continental, and global best practices with structured consultations involving Ministries, Departments, Agencies and County Governments (MDACs), academia, research institutions, private sector, civil society, development partners, and special interest groups. These consultations provided diverse perspectives and technical inputs that shaped the priorities and interventions of the Masterplan. A national validation forum was subsequently held to consolidate stakeholder views, while an inclusive Technical Advisory Committee guided the process, provided oversight, and ensured quality assurance at every stage.

The Masterplan, which serves as a national blueprint, is meant to guide policymakers, researchers, funders, and other stakeholders in the development of sustainable research and innovation ecosystem. It gives policymakers a framework for aligning funding decisions with national development priorities, provides researchers with predictable and transparent financing, and establishes pathways for funders, the private sector, and development partners to complement government efforts in a coordinated manner. The Masterplan guarantees that research results contribute directly to Kenya's socioeconomic transformation and global knowledge economy by strengthening institutional capacity, mobilizing funding from diverse sources, and ensuring accountability in its implementation.

The Government of Kenya appreciates the UK government's financial support through the Research and Innovation Systems for Africa (RISA) Fund, as well as International Service for the Acquisition of Agri-biotech Applications (ISAAA) AfriCenter's facilitative role in the development of the masterplan and all other players. In addition, I would like to acknowledge Prof. Dickson Andala, Chief Executive Officer of the National Research Fund, for his leadership in guiding the process. With the groundwork firmly in place, implementing this Masterplan is critical to Kenya's positioning as a research-driven, knowledge-based economy where innovation drives inclusive and sustainable growth.

Prof. Shaukat Abdulrazak, EBS

Principal Secretary

State Department for Science, Research and Innovation



TABLE OF CONTENTS

Foreword.....	iii
Preface and Acknowledgement.....	v
Table of Contents.....	vii
Abbreviations and Acronyms.....	ix
Definition of Key Terms and Concepts.....	x
Executive Summary.....	xi
CHAPTER 1: INTRODUCTION	1
1.1 Background.....	1
1.2 Rationale	2
1.3 Alignment with Legal and Policy Frameworks.....	3
1.4 Goal and Objectives	4
1.5 Scope	5
1.6 Structure of the Master Plan.....	5
CHAPTER 2: SITUATION ANALYSIS.....	6
2.1 Global Perspective	6
2.2 Regional Perspective	6
2.3 National Context.....	7
2.4 Institutional and Human Capital Landscape.....	8
2.5 Key Achievements in Research Financing and Capacity Strengthening	8
2.6 Gaps, Challenges, and Lessons Learned	8
2.7 Stakeholder Perspectives	9
2.8 Kenya Research Development Outlook 2026-2036.....	9
CHAPTER 3: CONCEPTUAL MODEL.....	11
3.1 Vision	12
3.2 Mission	12
3.3 Guiding Principles	12
3.4 Strategic Approach	12
3.5 Cross-Cutting themes.....	13
CHAPTER 4: KEY Pillars.....	15
4.1 Pillar 1: Sustainable Research Financing	15
4.2 Pillar 2: Research Infrastructure and Digital Systems	17
4.3 Pillar 3: Human Capital and Institutional Capacity	17

4.4 Pillar 4: Industry Linkages and Societal Impact.....	19
4.5 Pillar 5: Policy, legal and regulatory frameworks	20
4.6 Cross-Cutting Themes	21
CHAPTER 5: IMPLEMENTATION AND COORDINATION FRAMEWORK.....	26
5.1 Coordination Framework	26
5.2 Financing Framework	31
5.3 Risk Management Framework.....	31
5.4 Monitoring, Evaluation, Reporting and Learning.....	34
5.5 Review of the Masterplan	35
REFERENCES	36
ANNEXES.....	37
Annex I: Implementation Matrix	37
Annex II: Monitoring and Evaluation Matrix	47
Annex III: Stakeholder and Institutional Coordination Framework.....	57
Annex IV: List of Flagship projects	59

List of Tables

Table 4.1: Outcomes, Objectives, Strategies and Key Projects for Sustainable Research Financing Pillar	16
Table 4.2: Outcomes, Objectives, Strategies, and Key Projects for Research Infrastructure and Digital Systems Pillar.....	17
Table 4.3: Outcomes, Objectives, Strategies and Key Projects for Human Capital and Institutional Capacity Pillar	18
Table 4.4: Outcome, Objectives, Strategies and Key Projects for Industry Linkages and Societal Impact Pillar	20
Table 4.5: Outcomes, Objectives, Strategies and Key Projects for Policy, legal and regulatory frameworks Pillar	21
Table 4.6: Cross-cutting Themes , Objectives, Strategies and Key Projects	24
Table 5.1: Resource Requirements.....	31
Table 5.2: Risk Management Framework.....	32

List of Figures

Figure 5.1: Governance and Coordination Framework.....	29
Figure 5.2: Kenya Research Financing and Capacity Strengthening Model	30

ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
AU	African Union
BETA	Bottom-Up Economic Transformation Agenda
CEO	Chief Executive Officer
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
GDP	Gross Domestic Product
GERD	Gross Expenditure on Research and Development
IP	Intellectual Property
KENIA	Kenya National Innovation Agency
MDACs	Ministries, Departments, Agencies and Counties
MTP IV	Fourth Medium-Term Plan (2023–2027)
MSMEs	Micro, Small and Medium Enterprises
NACOSTI	National Commission for Science, Technology and Innovation
NRF	National Research Fund (Kenya)
R&D	Research and Development
RFOs	Research Funding Organization
RSTI	Research, Science, Technology and Innovation
RPOs	Research Performing Organizations
SDGs	Sustainable Development Goals
SDSRI	State Department for Science Research and Innovation
STI	Science, Technology and Innovation
SMART	Specific Measurable, Attainable, Realistic, Time-Bound
STISA-2034	Science, Technology and Innovation Strategy for Africa 2034
TTOs	Technology Transfer Offices
TVETs	Technical and Vocational Education and Training institutions
UHC	Universal Health Coverage
UKRI	United Kingdom Research and Innovation

DEFINITION OF KEY TERMS AND CONCEPTS

Capacity Strengthening: The process of improving human resources, institutional structures, and infrastructure to support the efficient delivery of research, innovation, and knowledge translation.

Emerging Technologies: Are new or rapidly evolving innovations with major and long-term social, economic, and political implications. Examples include artificial intelligence, edge and quantum computing, neuromorphic chips, gene editing (CRISP), fusion energy, green hydrogen, robotics and automation, 6G networks, blockchain, 3D printing, and nanotechnology, among others.

Emeritus: An honorary title conferred on a retired academic or researcher who has rendered distinguished service and made significant contributions to research, teaching, innovation, or institutional development.

Equity and Inclusion in Research: A principle ensuring that youth, women, persons with disabilities, marginalized regions, and communities equitably participate in and benefit from research financing and implementation.

Multi-User Laboratories: Specialized research facilities designed for shared use by multiple institutions and researchers to optimize resources and promote collaboration.

National Research Agenda: A national framework that defines priority areas of research and development to align financing and capacity building with Kenya's development aspirations.

Research Financing: The process of mobilizing, allocating, and accountably managing resources from Government, private sector, philanthropy, diaspora, and development partners to support research, science, technology, and innovation.

Research Funding Organization: Is an entity, such as a government agency, non-profit, or private corporation, that provides financial support for scientific and academic research.

Research Performing Organizations: Universities, research institutes, TVETs, and other accredited bodies mandated to conduct research, train human capital, and generate innovations.

Research: A systematic process of generating, advancing, and applying knowledge through scientific inquiry, experimentation, and analysis aimed at solving problems, informing policy, fostering innovation, and contributing to Kenya's social, economic, and environmental transformation.

Research-to-Policy and Research-to-Market Platforms: Mechanisms established to translate research outputs into evidence for policymaking, commercial products, and community-based solutions.

Scholarship: A structured financial award provided to support individuals undertaking formal education or research training at postgraduate or postdoctoral levels, covering tuition, stipends, research-related costs, and/or other approved academic expenses.

Science Diplomacy: The application of research and innovation as tools for strengthening Kenya's international partnerships, resource mobilization, and global competitiveness.

EXECUTIVE SUMMARY

The Kenya Research Financing and Capacity Strengthening Masterplan (2026-2036) outlines a ten-year strategy for transforming Kenya into a knowledge-driven economy by tackling recurring obstacles including underfunding, fragmented programmes, insufficient infrastructure, and weak commercialization channels. The Masterplan is based on the Constitution of Kenya, the Science, Technology, and Innovation Act, Cap. 511, the Kenya Vision 2030 and its Fourth Medium Term Plan (MTP IV) 2023 - 2027, and the Bottom-Up Economic Transformation Agenda (BETA) 2022 - 2027, all while aligning with regional, continental, and global commitments.

The Masterplan is based on five (5) strategic pillars: Sustainable research financing, research infrastructure and digital systems, human capital and institutional capacity, industrial linkages and societal impact, and policy, legal, and regulatory frameworks. Cross-cutting issues include open science, inclusivity, county integration, sustainability, emerging technologies, and science diplomacy. The pillars provide a consistent framework for mobilizing and managing resources, developing institutional processes, and ensuring that research output aligns with national development priorities.

The financing framework aims at progressively growing research and development investment to meet the statutory 2 percent of GDP target set by the ST&I Act, Cap. 511, diversifies funding sources through government, private sector, philanthropy, diaspora, and innovative instruments, and incorporates accountability into resource allocation. Capacity development is to create a critical mass of skilled researchers, strengthen institutional governance and management, modernize laboratories and digital platforms, and encourage innovation and commercialization. Youth, women, persons with disabilities, and marginalized communities will be given special attention when it comes to research funding and involvement.

The Masterplan will be implemented through a multi-agency coordination framework led by the State Department responsible for Science, Research, and Innovation, with defined roles for the National Research Fund (NRF), National Commission for Science, Technology, and Innovation (NACOSTI), Kenya National Innovation Agency (KeNIA), academia, research institutions, county governments, the private sector, civil society, and development partners. Monitoring, assessment, risk management, and learning processes will guarantee responsibility, adaptation, and impact. The Masterplan, via predictable financing, excellent coordination, and broad-based alliances, will strengthen Kenya's research and development ecosystem and speed its socio-economic transformation.

CHAPTER 1

INTRODUCTION

Chapter One sets the context of the Masterplan by providing the background and rationale for strengthening research financing and capacity in Kenya. It highlights alignment with the Constitution, Kenya Vision 2030, MTP IV, BETA, and other regional, continental, and global commitments and priorities. The chapter further outlines the goal, objectives, scope, and structure of the Masterplan.

1.1 Background

The foundation of national transformation is research, which propels innovation, informs evidence-based policy, and offers solutions to urgent societal problems in all spheres. There is a clear link between research funding, competitiveness, and sustainable development among nations that have continuously made R&D investments. A balance between institutional and competitive funding mechanisms, distinct roles for Research Funding Organizations (RFOs) and Research Performing Organizations (RPOs), a variety of funding purposes ranging from basic research to applied innovation and international collaboration, and robust governance frameworks that keep policymaking, financing, and implementation apart are the four (4) essential components of predictable financing systems in advanced economies. These systems have strong processes for grant management, peer review, and effect evaluation, and they are based on the values of transparency, accountability, inclusivity, and integrity. The United Kingdom Research and Innovation (UKRI), the National Science Foundation (NSF) in the United States, the Deutsche Forschungsgemeinschaft (DFG) in Germany, the Research, Innovation and Enterprise (RIE) Programme in Singapore, and the state-sponsored R&D ecosystem in China are among the organizations that exemplify the best practices, according to the Global Innovation Index 2025. These experiences show that consistent funding, institutional clarity, and a purposeful connection between research and national development objectives are necessary for sustainable research financing.

Despite the African Union's pledge to devote at least 1 percent of GDP to R&D, research systems in Africa are still underfunded and dispersed. Only a few countries - South Africa (0.76%), Egypt (0.72%), Morocco (0.73%), and Tanzania (0.51%) - have come close to this goal. Due to severe financing and capacity shortages, Africa provides about 1 percent to 2 percent of the world's research output despite making up almost 18 percent of the world's population. The continent still faces structural obstacles that make it difficult for it to use research for inclusive growth and sustainable development, including an excessive reliance on donor funding, little involvement from the private sector, weak institutional frameworks, duplication of effort, and brain drain.

Kenya's Science and Technology Act, Cap 250, established the framework for organized scientific research and policy consultation. The National Council for Science and Technology (NCST), a semi-autonomous advisory body, specialized Advisory Research Committees, and a number of research institutions, including the Kenya Agricultural Research Institute (KARI), Kenya Forest Research Institute (KEFRI), Kenya Medical Research Institute (KEMRI), and Kenya Industrial Development Institute (KIRDI), were all established by the government through this Act.

Additionally, the Act established research registration, coordinated national scientific endeavors, and provided guidance for the development of Sessional Paper No. 5 of 1982, which underscored the Government's commitment to the utilization of science and technology for national development. Despite these benefits, the Act had significant drawbacks. The NCST could only offer policy recommendations in the absence of specific funding sources, and the framework did not adequately take into consideration industrialization, value addition, or the commercialization of research outputs in response to advances in science and technology.

The Science, Technology, and Innovation (STI) Act, Cap. 511, enacted in 2013, was designed to strengthen local research and innovation systems to drive socio-economic development and address existing gaps. It created three (3) agencies; Kenya National Innovation Agency (KeNIA), National Research Fund (NRF), and National Commission for Science, Technology and Innovation (NACOSTI), each tasked with overseeing different facets of innovation, science, technology, and research. In order to promote industrialization, the Act provided important enablers such as sustainable finance, commercialization of research outputs, quality assurance, and continual improvement. Significant outcomes have been realized from its implementation, including granting of about Ksh. 7 billion to researchers and innovators, the development of the larger innovation ecosystem through institutional support and capacity building, the mainstreaming of STI across government institutions through performance contracts, and the formalization of researcher registration through accreditation and licensing.

In this regard, the State Department for Science, Research and Innovation (SDSRI) developed a 10-year masterplan to guide realization of sustainable research financing and capacity strengthening in Kenya. The development of the Masterplan followed a consultative and participatory process including structured consultations with Ministries, Departments, Agencies and Counties (MDACs), academia and research institutions, the private sector, civil society, development partners, and special interest groups. The stakeholders' perspectives were enriched through desk review of national, continental, and international research financing frameworks and best practices, and a national validation forum that ensured concurrence and ownership of the Plan. An inclusive Technical Advisory Committee (TAC) oversaw the process and offered strategic direction, and ensured the Masterplan represented Kenya's development goals, policy priorities, and stakeholder viewpoints.

1.2 Rationale

Through a variety of national policies, sectoral efforts, and collaborations with the private sector and development partners, Kenya has continued to advance Research, Science, Technology, and Innovation (RSTI) throughout the past 10 years. These initiatives have frequently been carried out under various development frameworks, including sector-specific roadmaps, donor-supported programmes, and the Kenya Vision 2030 and its Medium-Term Plans. However, it has been difficult to optimize synergies, guarantee consistent funding, and consolidate achievements throughout the ecosystem due to the lack of a single national framework for research finance and capacity building. Kenya's current investment in R&D remains below both the African Union's target of 1 percent and the national aspiration of 2 percent of GDP set by the STI Act, Cap. 511.

According to the Kenya Vision 2030's Fourth Medium Term Plan (2023-2027), Kenya's Gross Expenditure on R&D is at 0.8 percent of GDP. Exchequer contributions to R&D have decreased, with development partners providing for roughly 51 percent of total research expenditure. This over-reliance on donor funding has frequently shifted national research priorities towards foreign agendas, restricting attention to locally generated demands. These patterns highlight the critical need for Kenya to construct a long-term, reliable, and diverse finance environment that can support priority-driven research and capacity building. As a result, this Masterplan serves as a crucial framework for guiding the mobilization of resources, coordination, and long-term management of research and capacity development resources. It aims to consolidate existing activities into a cohesive national strategy that is well linked with Kenya's development aspirations, while also improving transparency, inclusion, and learning throughout the R&D ecosystem.

1.3 Alignment with Legal and Policy Frameworks

The Masterplan is firmly grounded in national, continental, and global legal and policy instruments that guide its vision and implementation through: promotion, co-ordination and regulation of the progress of STI of the country; to assign priority to the development of STI; to entrench STI into the national production system and for connected purposes.

1.3.1 Constitution of Kenya

The Constitution provides the supreme legal foundation for RSTI. It enshrines principles such as preserving culture through indigenous knowledge and intellectual property rights (Article 11(2) and 40(5)), freedom of scientific research (Article 33(1)), and as an enabler of socio-economic rights (Article 43), which underpin research financing and capacity strengthening.

1.3.2 Science, Technology and Innovation Act, Cap. 511

The Masterplan aligns with the STI Act, Cap. 511 by contributing to the implementation of Section 12, which provides for the allocation of at least 2 percent of the country's GDP to RSTI; Section 32, which establishes the NRF to mobilize and disburse resources; Section 6, which mandates the NACOSTI to regulate, ensure quality, and accredit research; and Section 29, which establishes the KeNIA to develop and manage the Kenya National Innovation System. The Masterplan provides a framework for advancing the Act provisions by ensuring predictable finance, increasing institutional capacity, and promoting research-industry links.

1.3.3 Kenya Vision 2030 and its Fourth Medium-Term Plan (2023-2027)

The Kenya Vision 2030 recognizes STI as a vital enabler of economic, social, and political development, with a focus on innovation-driven growth, industrialization, and value addition to achieve middle-income status. The Vision places STI at the heart of the country's transformation programme, with clear goals to increase research funding, enhance human resources, and foster innovation. The Masterplan supports these goals by establishing a coordinated framework for mobilizing resources for R&D, consolidating financing methods, and developing institutional capacity at both the national and county levels. This method helps to enhance MTP IV implementation by ensuring that research results lead to socioeconomic transformation and the development of a globally competitive and knowledge-based economy.

1.3.4 Bottom-Up Economic Transformation Agenda (2022 - 2027)

The Bottom-Up Economic Transformation Agenda (BETA) 2022 - 2027 stresses inclusive growth by investing in agriculture, MSMEs, housing, healthcare, the digital superhighway, and the creative industry. The Masterplan will increase research funding and capability, resulting in breakthroughs that directly support BETA's pillars, such as climate-smart agriculture, affordable healthcare solutions, digital platforms, and skill development. The Masterplan guarantees that R&D contributes to job development, poverty reduction, and equitable socioeconomic transformation as envisioned in the BETA by mobilizing resources, encouraging public-private collaborations, and improving research-to-policy and research-to-market channels.

1.3.5 East African Community Vision 2050

The East African Community (EAC) Vision 2050 underscores STI as key drivers of regional integration, competitiveness, and sustainable development. The Masterplan will strengthen research financing, human capital, and innovation ecosystems that foster cross-border collaboration, knowledge sharing, and commercialization of research across the region. Through predictable resource mobilization, harmonization of standards, and promotion of regional partnerships, the

Masterplan contributes to the EAC's goal of transforming the region into a prosperous, globally competitive, and innovation-driven economy by 2050.

1.3.6 African Union Agenda 2063, and Science, Technology and Innovation Strategy for Africa 2034

The Science, Technology and Innovation Strategy for Africa (STISA) 2034 provides a continental framework that emphasizes sustainable industrialization, human capital development, frontier and emerging technologies, science diplomacy, private sector engagement, and youth and gender inclusion as cross-cutting drivers of transformation. In promoting diversified financing for R&D, strengthening institutional capacity, embedding accountability, and fostering partnerships that cut across national, regional, and continental priorities contribute to the aspirations of STISA 2034. In particular, the Masterplan's focus on resource mobilization, capacity strengthening, digitalization, and science diplomacy mirrors STISA's strategic priorities and contributes directly to the African Union Agenda 2063 aspirations of a knowledge-based, innovation-driven, and prosperous continent.

1.3.7 United Nations 2030 Agenda for Sustainable Development

The 2030 Agenda for Sustainable Development underscores the central role of STI in accelerating progress across all the 17 Sustainable Development Goals (SDGs). The Masterplan focuses on strengthening research financing and capacity to generate evidence, innovations, and solutions that directly advance implementation of SDGs commitments. In fostering partnerships, promoting inclusivity, and mobilizing predictable resources, the Masterplan positions Kenya's R&D ecosystem as a driver of sustainable and transformative development.

1.4 Goal and Objectives

The overall goal of the Masterplan is to establish a predictable, sustainable, and well-coordinated national research financing and capacity development system that increases Kenya's gross expenditure on R&D to at least 2 percent of GDP, strengthens innovation outputs, and positions Kenya as a globally competitive, knowledge-driven economy by 2036. The Masterplan's specific objectives are to:

- i) Mobilize and diversify research financing by increasing public, private, and development partners contributions to achieve at least 2 percent of GDP investment in R&D by 2036, through structured funding mechanisms and blended financing models.
- ii) Upgrade and expand national research infrastructure and digital platforms by 2036, including establishment of centers of excellence, shared laboratories, and interoperable digital research systems, to enhance efficiency, collaboration, and open science.
- iii) Continuously develop a skilled and inclusive R&D workforce, by increasing the number of researchers per million population annually, strengthening training, mentorship, and career pathways, and ensuring at least 40 percent participation of women, youth, and marginalized groups.
- iv) Strengthen research–industry collaboration and innovation uptake by the year 2036, by increasing technology transfer, patenting, and commercialization rates, and ensuring that at least 30 percent of publicly funded research outputs translate into socio-economic applications.
- v) Continuously enhance and harmonize STI policy, legal, and regulatory frameworks, to improve coordination, enforce standards, protect intellectual property, ensure ethical compliance, and create an enabling environment for research, innovation, and investment.

1.5 Scope

The Masterplan offers a national framework to guide resource mobilization, coordination, and sustainable management for R&D. It encompasses all participants in the R&D ecosystem, including MDACs, CCIOs, academia and research institutions, development partners, private sector, civil society, and the diaspora. The Masterplan ensures that research results actively contribute to socio-economic transformation in accordance with the Government development priorities by strengthening funding, human and institutional capability, and partnerships across important sectors for national development.

1.6 Structure of the Master Plan

The context, strategic direction, and execution arrangements of this Masterplan are presented in five (5) chapters. The Masterplan's background, rationale, compliance with legal and policy frameworks, and scope are all covered in Chapter One. The situational analysis is described in Chapter Two, emphasizing advancements, difficulties, and lessons learnt. The conceptual model, which includes vision, mission, guiding principles, and overarching themes, is presented in Chapter Three. The strategic pillars are covered in Chapter Four, while the framework for execution and coordination, resource mobilization, risk management, monitoring and evaluation, and review procedures are covered in Chapter Five. For policy documents, this format guarantees consistency, clarity, and conformity to Government of Kenya standards.

CHAPTER 2

SITUATION ANALYSIS

An examination of Kenya's research funding and capacity building environment is given in this chapter. It contextualizes Kenya's performance, accomplishments, gaps, and the country's Research Development Outlook 2026–2030 by synthesizing national, regional, and global trends impacting research and innovation systems. The analysis, which is based on the goals of the Kenya Vision 2030, the MTP IV, and the BETA, positions research and innovation as crucial facilitators of equitable and sustainable economic growth. It assesses the efficiency of current inputs, including funding sources, infrastructure, and human resources, as well as institutional and regulatory procedures that affect the results and outputs of research. It incorporates important findings from national reports, UNESCO and OECD statistics, the education sector plans and the NRF Strategic Plan (2023–2027).

2.1 Global Perspective

Globally, R&D is regarded as the foundation of technical advancement, competitiveness, and economic development. Developed countries, such as the United States of America, Germany, and South Korea, invest between 2 and 3.5 percent of their GDP in R&D, well beyond the UNESCO recommendation of 1 percent. This ongoing commitment supports global leadership in innovation, patents, and industrial productivity. For example, the National Science Foundation (NSF) in the United States allocates approximately 3.45 percent of its GDP to frontier research and innovation, whereas Germany channels 3.14 percent through the German Research Foundation (DFG), which supports both basic and applied research through its Excellence Strategy Programme.

Emerging economies including Malaysia and Brazil demonstrate that well-structured governance and diversified funding methods have a significant influence even with limited budgets. Malaysia, which invests 1.04 percent of GDP in R&D, has seen increased industry participation through tax breaks and PPPs, but Brazil's National Council for Scientific and Technological Development (CNPq) has excelled in graduate research assistance and industry ties. Singapore's strategy is instructive: the Agency for Science, Technology, and Research (A*STAR) uses sovereign innovation funds to support long-term R&D, resulting in sectoral clusters like Biopolis and Fusionopolis. These platforms positioned Singapore as a regional innovation hub, with strong ties between research, industry, and government policy. In contrast, many developing economies continue to lag the global R&D investment average due to a inadequate domestic finance, reliance on foreign support and insufficient institutional capacities, all of which impede their transformation to knowledge-based and innovation-driven economies.

2.2 Regional Perspective

Across Africa, R&D investment remains below the world average, at around 0.5 percent of GDP. This reflects persistent underinvestment, despite progressive continental policy frameworks such as the STISA-2034 and AU Agenda 2063, which highlight science, innovation, and knowledge-driven growth as critical levers for Africa's transformation. Several countries, however, show promising forms of commitment and institutional coherence. South Africa, for example, devotes

around 0.76 percent of its GDP to R&D through a well-established governance and financial framework anchored on the National Research Foundation. The South African model exemplifies the advantages of consistent multi-year funding, competitive funding schemes, and strong institutional relationships between institutions, government, and business. This has enabled the country maintain its scientific excellence and innovative leadership on the continent.

According to the OECD's international migration outlook study for 2024, researcher attrition is mostly caused by post-doctoral movements, which account for 39 percent of migrants and are influenced by institutional quality, income differentials, and the research environment. The brain drain affects GDP growth by 0.5 to 1 percent. However, return expertise and collaborations return 50 to 100 billion dollars to the economy of origin. Rwanda, with 0.66 percent, is another regional paragon of efficiency. The National Council for Science and Technology (NCST) has established a framework that closely links research requests and funding allocations to national priority sectors, assuring policy relevance and developmental impact. Egypt and Tunisia have also achieved significant strides by incorporating innovation into their industrial policies and leveraging international collaborations to boost applied research and technology transfer.

Kenya is a regional research and innovation powerhouse in East Africa, hosting some of the region's most advanced academic and research institutions while also making substantial contributions to scientific publications and regional knowledge networks. Kenya's potential, however, remains hindered by unpredictable financial flows, weak institutional coordination, and minimal private sector involvement in research. To consolidate and expand its regional leadership, Kenya can learn from South Africa's research budgeting stability, Rwanda's R&D alignment with national development planning, and Malaysia's hybrid funding model, which combines public investment, private sector co-financing, and international collaboration. Strengthening these characteristics will be critical in establishing Kenya as the continental leader in research funding, innovation, and capacity development.

2.3 National Context

The Kenyan research environment depends on an evolving policy ecosystem guided by the Constitution, Kenya Vision 2030, the MTP IV, and BETA. These frameworks highlight STI as key drivers of inclusive growth and long-term industrialization. The STI Act, Cap. 511 created three (3) main institutions: NACOSTI, NRF, and KeNIA. They work together to coordinate, finance, and commercialize research outputs.

Kenya spends about 0.8 percent of GDP on R&D - higher than most African peers but below its 2 percent national target, 1 percent regional target and global averages. Nearly 51 percent of research funding originates from development partners, signaling overreliance on foreign sources and vulnerability to shifting priorities. In contrast, South Africa and Malaysia mobilize significant domestic and private co-funding, while Singapore benefits from long-term innovation reserves. Kenya's single-source funding from the exchequer limits fiscal flexibility and responsiveness to emerging national priorities.

Kenya has made strong institutional progress. The establishment of research Centres of Excellence in agriculture, health, renewable energy, ICT, and the blue economy has promoted interdisciplinary collaboration and innovation. Government investments through the NRF - amounting to Ksh. 7 billion since inception - have supported over 200 multidisciplinary projects and 700 postgraduate researchers. Kenya's research productivity is among the highest in East Africa, with 80 percent of publications produced through international collaboration. However, persistent challenges remain: Underfunded infrastructure, limited postgraduate supervision, and weak commercialization of research outputs continue to constrain realization of Kenya's research potential.

Moving forward, Kenya should adopt a multi-source financing model incorporating private sector incentives, diaspora bonds, and blended funding approaches similar to Malaysia and Singapore. Strengthening governance and ensuring stable multi-year funding through legislation - similar to South Africa's NRF - would provide predictability and enhance the impact of research investments.

2.4 Institutional and Human Capital Landscape

Kenya has developed institutional framework for research management, though capacity and coordination challenges persist. NACOSTI regulates and accredits research, NRF mobilizes and allocates funds, and KeNIA drives innovation and intellectual property management. However, limited resources constrain their effectiveness. National research bodies remain under-staffed, and implementation of policies is weakened by insufficient monitoring and resource flows. Human capital development is another constraint: According to UNESCO report 2022, Kenya has approximately 225 researchers per million inhabitants, which, although higher than most Sub-Saharan African countries, is significantly lower than South Africa's 493 per million. Only 6.1 percent of R&D personnel hold PhDs, and female researchers account for 20 percent, below the African average of 31.6 percent. Strengthening postgraduate training, mentorship programmes, and gender equity in research is critical to improving overall research productivity.

2.5 Key Achievements in Research Financing and Capacity Strengthening

Kenya has made strides in strengthening its ecosystem for research and innovation since enactment of the STI Act, Cap. 511. By creating important institutions, most notably NRF, tasked with mobilizing and allocating funds for research and capacity building, the Act established the legal basis for a coordinated national research system. The upcoming National ST&I Policy and the National R& Policy are anticipated to offer a framework for strategic alignment, resource mobilization, and accountability throughout the research landscape in order to improve the operationalization of the Act.

Building on this foundation, Kenya has invested in digital governance tools such as the Research Management Information System (RMIS) and the Online Grants Management System (OGMS) to improve transparency, efficiency, and monitoring of research funding and performance. Through these systems, the NRF has enhanced its efficiency in resource mobilization and granting processes.

Kenya's involvement in significant international initiatives, such as the Newton-Utafiti Partnership, LEAP-AGRI, Food Systems and Climate (FOSC), Africa-Japan Collaborative Research (AJCORE), and the EUREKA and DAAD partnerships, demonstrates its dedication to cooperative and competitive research. These initiatives have created opportunities for knowledge sharing, co-financing, and increased visibility of Kenyan research worldwide. Additionally, the NRF has provided funding for 19 infrastructure projects worth approximately Ksh. 1 billion, greatly improving research infrastructure, data centers, and laboratory facilities at universities and research institutions. The ability for domestic experimentation, data analysis, and innovation has increased as a result of these initiatives.

The socio-economic effects of these initiatives are becoming more noticeable. Innovations in agriculture, such as value addition for regional goods and better animal breeding; health, such as cancer research, vaccine development, and pandemic preparedness; ICT, such as studies on artificial intelligence and digital governance; and environmental conservation, such as programmes fusing traditional knowledge with contemporary science, have all benefited from research funding. In addition to bolstering Kenya's research base, these accomplishments have improved its standing in regional science diplomacy and brought national initiatives into line with the SDGs, AU Agenda 2063, and international research networks.

2.6 Gaps, Challenges, and Lessons Learned

In spite of these advancements, Kenya's research environment is confronted with a number of enduring gaps. Funding is still below the regional target of 1 percent of GDP and the national target of 2 percent, with more than half of all spending coming from development partner sources. Inadequate institutional coordination within the Government results in inefficiencies and redundancy. Universities and research centers continue to have infrastructure deficiencies,

especially in digital systems, labs, and public spaces. Inadequate commercialization frameworks impede the conversion of research into commercially viable products, and limited career trajectories and inadequate compensation lead to brain drain. Predictable multi-source funding, better governance, increased institutional cooperation, and closer ties between academics, business, and policy are all necessary to address these issues.

2.7 Stakeholder Perspectives

Consultations with stakeholders showed widespread agreement on the need for better coordination, increased inclusion, and sustainable domestic financing. Clear funding pipelines and efficient award procedures were stressed by academic institutions and research centers. More integration of research into CIDs and ADPs was identified by county governments. While development partners emphasized alignment with national development aspirations, the private sector proposed incentives to boost R&D investment. Gaps in inclusivity that impact women, youth, and PWDs were brought to light by civil society. Additionally, stakeholders stressed the necessity of robust monitoring and evaluation systems, open research data platforms, and investments in climate-responsive research.

2.8 Kenya Research Development Outlook 2026-2036

The implementation of this masterplan for the period 2026-2036 marks a pivotal phase for Kenya's research and innovation landscape, with a focus on enhancing investment, strengthening institutional capacity, and fostering inclusive participation. Through these projections, the country envisions a robust and well-funded research ecosystem that drives knowledge generation, technological advancement, and sustainable national development.

Through targeted investments, institutional changes, and inclusive capacity building, Kenya aspires to improve its national ecosystem for research and innovation. In order to maintain fiscal sustainability and policy alignment, the country intends to gradually boost its R&D intensity from the present 0.8 percent to 2 percent of GDP by the year 2036.

Stabilizing and broadening research funding will be a major priority. By 2036, the percentage of donor-dependent funding, which is presently estimated to be 51 percent, is predicted to drop to 30 percent. Increased government funding, greater business sector involvement, and creative blended finance methods, such as diaspora and public-private contributions, will accomplish this. Kenya aims to increase the number of researchers in order to boost its human capital. With organized postgraduate training and mentorship programmes, it is anticipated that the number of researchers per million people will increase from 225 to 380.

Additionally, the Masterplan places a strong emphasis on diversity and gender equity in research. Gender-responsive scholarships, tailored fellowships, and supportive policies including mentorship incentives are intended to raise the percentage of female researchers from 20 percent to 35 percent. Building on the 19 facilities currently funded, the masterplan proposes modernizing or creating 25 new research infrastructure projects, including labs, data centers, and digital systems, to improve institutional efficiency. It is anticipated that all national research institutions will be linked to an interoperable digital infrastructure for shared use facilities, transparency, and coordination by 2036.

Further goals is to build up industrial ties and commercialization. It is anticipated that academia-industry co-funded projects will account for 25 percent of competitive awards by 2030. Furthermore, by 2029, at least county-level innovation hubs or incubators (in biotechnology, ICT, renewable energy, agriculture, and the blue economy) will be developed with private co-investments. By utilizing science diplomacy and emerging technologies, especially in national priority areas, Kenya aims to improve its research visibility and global competitiveness through open science and data deposits into the Kenya National Research Repository.

Kenya's dedication to promoting research and innovation is supported by legislative measures that create Special Economic Zones (SEZs) with financial incentives and administrative advantages in order to draw in and keep these efforts. For imported items and local supplies (zero-rated VAT), SEZs offer exemptions from import duties, VAT, excise duties, and stamp duties. In addition to 100 percent investment deduction allowances for buildings and machines, corporate income tax is typically capped at 10 percent for the first 10 years and increased to 15 percent for the subsequent 10 years. On certain payments, withholding taxes on dividends, royalties, and interest from non-residents are either lowered or eliminated. With on-site customs, no exchange controls for foreign currency accounts, and approvals within 30 days, operations only need one (1) license from the SEZ administration.

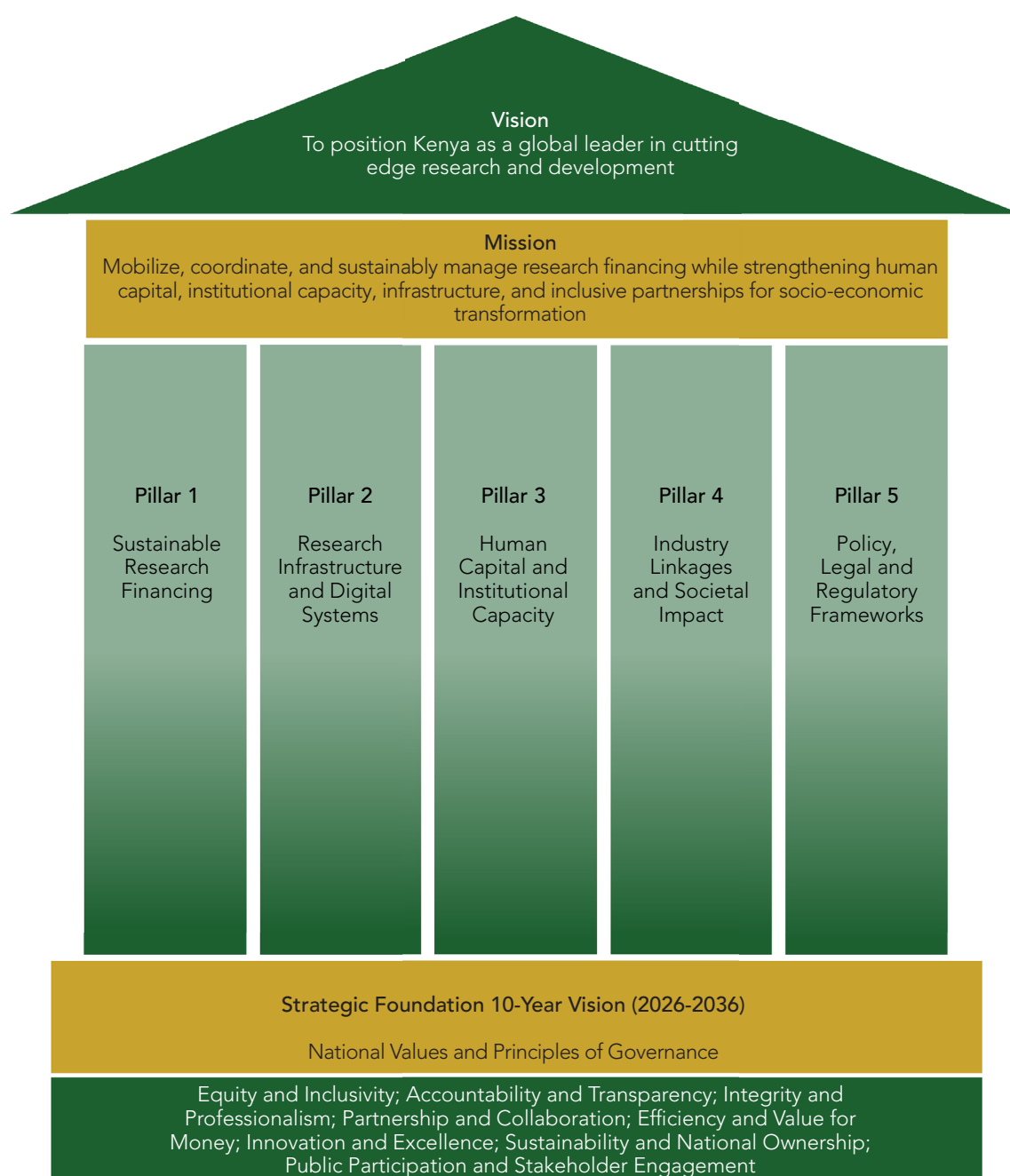
Kenya's research and innovation ecosystem has advanced significantly since enactment of the STI Act, Cap. 511. Three (3) important agencies - KeNIA, NRF, and NACOSTI - were operationalized by the Act, and they have worked together to promote its implementation with quantifiable results on several fronts. The following are the major accomplishments to date:

- i) Funded researchers and innovators to the tune of Ksh. 7 billion to date;
- ii) Developed the innovation ecosystem through institutional innovation support, capacity building, promotion of local solutions and awards to innovators;
- iii) Mainstream STI in all government institutions implemented under the performance contracts; and
- iv) Implemented registration of researchers through accreditation and licensing.

CHAPTER 3

CONCEPTUAL MODEL

This chapter provides the vision, mission, guiding principles and cross-cutting themes for the Masterplan. It outlines the logic of change in ensuring financing and capacity development interventions are coherent, inclusive, and transformative in strengthening Kenya's R&D ecosystem.



3.1 Vision

To position Kenya as a global leader in cutting edge research and development.

3.2 Mission

To mobilize, coordinate, and sustainably manage research financing while strengthening human capital, institutional capacity, infrastructure, and inclusive partnerships for socio-economic transformation.

3.3 Guiding Principles

Implementation of the Masterplan will be anchored on the national values and principles of governance as provided under Articles 10 and 232 of the Constitution of Kenya. These following guiding principles will provide the ethical and operational foundation for transparent, inclusive, accountable, and transformative delivery of the Masterplan's objectives.

- i) **Equity and Inclusivity:** Research financing and capacity strengthening opportunities shall be accessible and responsive to the needs of all Kenyans, ensuring fair participation of youth, women, persons with disabilities, and marginalized regions in line with the national commitment of leaving no one behind.
- ii) **Accountability and Transparency:** All processes of resource mobilization, allocation, and utilization shall be undertaken in an open and transparent manner, with clear mechanisms for monitoring, reporting, and public scrutiny to safeguard public resources.
- iii) **Integrity and Professionalism:** Implementation of the Masterplan shall be guided by the highest standards of ethics, honesty, and professionalism to uphold the credibility, legitimacy and reputation of Kenya's research and innovation system.
- iv) **Partnership and Collaboration:** The Masterplan shall foster strategic partnerships among government, academia, private sector, development partners, and civil society to leverage resources, knowledge, and expertise for collective impact.
- v) **Efficiency and Value for Money:** Research funds shall be managed prudently to maximize impact, ensure timely disbursement, cost-effectiveness, and measurable returns on investment in line with public finance management principles.
- vi) **Innovation and Excellence:** The Masterplan shall promote creativity, continuous learning, and adherence to international standards of excellence to ensure Kenya's research ecosystem remains competitive and responsive to emerging challenges.
- vii) **Sustainability and National Ownership:** Financing and capacity-building interventions shall be designed to guarantee long-term viability, environmental and social responsibility, and alignment with Kenya's national development priorities.
- viii) **Public Participation and Stakeholder Engagement:** The design, implementation, and monitoring of research financing shall embrace broad-based consultations, inclusivity, and dialogue to ensure legitimacy and ownership across society.

3.4 Strategic Approach

Implementation of this Masterplan will be guided by five (5) mutually reinforcing pillars which collectively provide the framework for strengthening Kenya's research financing and capacity. These pillars have been designed to address current systemic gaps while creating sustainable pathways for mobilizing resources, enhancing human and institutional capacity, modernizing infrastructure, fostering stronger linkages with industry and society, and ensuring a coherent policy and regulatory environment.

- i) **Pillar 1. Sustainable Research Financing:** This pillar seeks to progressively enhance national investment in R&D through predictable, diversified, and sustainable financing mechanisms that reduce overreliance on fragmented and external sources.
- ii) **Pillar 2. Research Infrastructure and Digital Systems:** This pillar focuses on the establishment and modernization of physical and digital infrastructure to support open science, equitable access, and the production of high-quality research outputs across the Country.
- iii) **Pillar 3. Human Capital and Institutional Capacity:** This pillar is aimed at developing a critical mass of skilled researchers, strengthening institutional systems, and building resilient governance structures to effectively mobilize, manage, and utilize research resources.
- iv) **Pillar 4. Industry Linkages and Societal Impact:** This pillar promotes structured partnerships between government, research institutions, academia, industry, and communities to ensure that research outputs are translated into innovations, policies, and solutions that contribute to socio-economic transformation.
- v) **Pillar 5. Policy, Legal, and Regulatory Frameworks:** This pillar seeks to harmonize, adopt and institutionalize national R&D by reviewing the existing policy and legal environment so as to provide clarity, predictability, and accountability in research governance, while safeguarding intellectual property, ethics, and public trust.

3.5 Cross-Cutting themes

Realization of the vision of this Masterplan will be anchored not only on the strategic pillars but also on cross-cutting themes that provide the enabling environment and foundational principles for effective implementation. These themes will mainstream inclusivity, sustainability, accountability, and global competitiveness across all interventions, ensuring that the Masterplan delivers broad-based and equitable benefits for all. They represent the essential drivers that cut across all pillars to guide the transformation of Kenya's research and innovation ecosystem.

- i) **Equity and Inclusivity in Research:** Equity and inclusivity will emphasize fair participation and benefit for youth, women, persons with disabilities, indigenous communities, and marginalized regions. This will ensure balanced allocation of resources, deliberate representation, and targeted interventions to close structural gaps, thereby strengthening cohesion and leaving no one behind in the research ecosystem.
- ii) **Open Science, Ethics and Data Governance:** The Masterplan will be anchored on open science practices, research integrity, secure data governance, and fair benefit-sharing, supported by strong intellectual property frameworks. This emphasis will promote transparency, enhance innovation, and ensure that knowledge generated through research is accessible, credible, and ethically managed across all sectors.
- iii) **Devolution and County Integration:** Research and innovation will be integrated into ADPs, CIDPs, and sector plans with the establishment of county-level research hubs and applied research programmes. This approach will guarantee equitable access to resources, promote localized innovation, and ensure that counties contribute actively to advancing national research priorities.
- iv) **Environmental, Social, and Governance (ESG):** The Masterplan will prioritize climate-smart and green innovations, socially inclusive practices, and robust governance standards across all research initiatives. Embedding ESG principles will foster resilience, accountability, and equitable socio-economic transformation, ensuring long-term sustainability of the research ecosystem.
- v) **International Partnerships:** Kenya will focus on expanding participation in continental and global research initiatives, leveraging South-South, North-South, and triangular cooperation for financing and capacity development. Such partnerships will facilitate technology transfer, attract resources, and position Kenya as a competitive player in the global research and innovation landscape.

- vi) **Science Communication, Public Engagement and Uptake:** The Masterplan will emphasize enhanced visibility, awareness, and uptake of research outputs through deliberate communication, stakeholder engagement, and evidence-informed policy dialogue. Effective science communication will bridge the gap between research, policy, and society, thereby stimulating demand for locally driven innovations.
- vii) **Digitalization in Research:** Kenya's research ecosystem will focus on digitalization, automation, and robust cybersecurity measures to strengthen ICT platforms, safeguard knowledge assets, and enhance digital literacy among researchers and institutions. This will improve efficiency, foster collaboration, and protect the integrity of Kenya's research and innovation system.
- viii) **Science diplomacy:** The Master plan will enhance science diplomacy in securing diverse and sustainable international research financing, moving Kenya from aid recipient to strategic global partner by establishing mechanisms which will attract both public and private investment, building a robust funding ecosystem for critical national priorities. This will ensure science diplomacy is systematically strengthened for impactful, and sustainable local research capacity through knowledge exchange, mentorship, and institutional partnerships; and creates a virtuous cycle where funding will attract further investment and directly powering Kenya's development goals.
- ix) **Emerging Technologies:** Kenya's R&D ecosystem will harness frontier technologies such as artificial intelligence, biotechnology, quantum computing, advanced materials, neurotechnology, sustainable energy solutions, aerospace innovations, robotics, and cognitive enhancement tools to drive scientific discovery and innovation. This will position the country at the forefront of transformative research, strengthen industrial competitiveness, and generate solutions to national and global challenges.

CHAPTER 4

KEY PillARS

This chapter presents the areas of focus through which the Government will mobilize resources, strengthen institutional and human capacity, modernize infrastructure, foster collaboration with industry and society, and strengthen accountability in research governance. The chapter is divided into pillars which provide the strategic direction towards transforming Kenya into a globally competitive R&D hub.

4.1 Pillar 1: Sustainable Research Financing

Kenya's research system continues to face persistent underfunding, with national investment averaging 0.8 percent of GDP against the 2 percent target provided in the STI Act, Cap. 511. The current financing landscape is heavily donor-dependent, fragmented, and characterized by low private sector and philanthropic participation, limiting predictability and long-term sustainability. However, there are significant opportunities to leverage innovative financing mechanisms such as emerging funds, research and innovation bonds, diaspora investment platforms, and public-private co-financing arrangements. Through the concourse of this pillar, the Masterplan can eventually close the deficit in national funding for research, diversify sources of funding, improve resource management accountability, and establish Kenya as a robust and internationally competitive center for R&D. Building a predictable, diverse, and performance-oriented funding architecture that integrates R&D into CIDPs and the Medium-Term Expenditure Framework (MTEF) is the main goal of the sustainable research financing pillar. It will bolster fiduciary requirements to boost public and investor confidence. The pillars aims at achieving the following outcomes.

- i) **Enhanced national investment in R&D:** In accordance with the STI Act, Cap. 511 aim of 2 percent of GDP, this outcome focuses on gradually increasing public sector allocations to R&D and guaranteeing steady and sustainable funding through the MTEF. This includes annual reporting of R&D expenditures as part of national accountability frameworks, ring-fenced national budget lines, and the incorporation of research financing into sector agendas.
- ii) **Diversified and innovative financing instruments established and operationalized:** By implementing new mechanisms including Research and Innovation Bonds, PPPs, diaspora investment platforms, sectoral taxes, and philanthropic donations, this outcome aims to lessen an excessive dependence on external sources. It makes recommendations for the creation, enactment, and implementation of financial services and products that mobilize resources for research from both domestic and foreign sources.
- iii) **Strengthened transparency and accountability in R&D financing:** This outcome highlights the development of robust frameworks for the mobilization, distribution, and use of resources. This entails adhering to the PFM Act, CAP 412A, transparent reporting procedures, and boosting stakeholder and research funding confidence. The Masterplan acknowledges the necessity of creating systems that free research funding from traditional financing processes.
- iv) **Equitable and efficient allocation of research resources:** With an emphasis on inclusivity, balanced thematic coverage, and regional equity, this outcome guarantees that funding decisions are guided by the National Research Agenda and Priority Frameworks. It covers transparent calls for proposals, allocation to underfunded areas and ensuring that

marginalized groups - youth, women, PWDs, and indigenous communities - have fair access to research financing.

Table 4.1 presents strategic objectives, strategies, and key projects that will guide achievement of the outcomes.

Table 4.1: Outcomes, Objectives, Strategies and Key Projects for Sustainable Research Financing Pillar

Outcomes	Objectives	Strategies	Key Projects
Enhanced national investment in R&D	Increase government allocation to R&D in line with the STI Act, Cap. 511 target of 2 percent of GDP.	i) Ring-fence budget allocations for R&D at national and county levels. ii) Mainstream research financing in Sector plans, ADPs and CIDPs. iii) Establish mandatory reporting on R&D expenditure at national and county government.	i) Establishment of National Research Budget Lines in MDACs and CCIOs. ii) Adopting Research financing in all Sector plans, ADPs and CIDPs. iii) Development of a National R&D Expenditure Tracking and Reporting System.
Diversified and innovative financing instruments established and operationalized	Establish new financing mechanisms to supplement exchequer funding.	i) Design and implement innovative financing models. ii) Develop a mechanism for enhanced diaspora investment and philanthropic engagement in research and development.	i) Developed PPP framework for commercializable research. ii) Issuance of Kenya Research and Innovation Bonds. iii) Establishment of a subsidized loan scheme for researchers and innovators. iv) Establish a project on joint financing of research initiatives. v) Introduction of Industry-specific Research Levies. vi) Establishment of a National Philanthropy and CSR Research Fund.
Strengthened transparency and accountability, in R&D financing	Establish transparent and accountable mechanisms for mobilization, allocation, and utilization of research resources.	i) Develop a centralized digital platform for grant management and reporting. ii) Institutionalize adoption of Good Financial Grant Practice (GFGP) and independent auditing.	i) Roll-out of a National Digital Grants Management and Performance Portal. ii) Regular Independent Audits and Public Accountability Forums for research funding.
Equitable and efficient allocation of research resources	Ensure equity and inclusivity in allocation of research funds	i) Develop a National Research Priority Agenda to guide research funding. ii) Prioritize indigenous knowledge, underfunded and emerging issues.	i) Development two five-year National Research Agenda and Priority Framework. ii) Establishment of a marginalized regions and emerging research areas Fund.

4.2 Pillar 2: Research Infrastructure and Digital Systems

The fragmentation, obsolescence, and uneven availability of key research facilities, labs, and data systems at the national and local levels limit Kenya's R&D ecosystem. Inadequate shared instrumentation, restricted digital platform interoperability, poor standards and quality processes, and inadequate operations and maintenance are critical gaps that cause low utilization and quick asset deterioration. The main of the pillar is establishing a cutting-edge, networked, and standards-driven physical and digital infrastructure that promotes cooperation, safe data management, open science, and excellent research outputs across industries and geographical areas. This will focus on: Interoperable digital platforms for research; inclusive design to guarantee spatial equality and sustainability; and national core research centers and county hubs with explicit access policies.

- i) **Modernized and Equitably Accessible Research Infrastructure:** This outcome seeks to upgrade and expand laboratories, specialized research facilities, and county research hubs to ensure equitable access to modern research infrastructure across the country. Its scope includes the establishment of national and regional core research facilities, refurbishment of existing laboratories, and development of county R&D hubs with clear shared-use frameworks.
- ii) **Integrated and interoperable digital research ecosystem:** This outcome focuses on deploying secure, scalable, and interoperable digital platforms to enable data sharing, open science, and collaboration across institutions. The scope covers the development of High-Performance Computing (HPC) and cloud facilities, national research repositories, and federated identity systems that support seamless access and integration of research tools.

Table 4.2 presents the objectives, strategies and key projects to guide realization of the outcomes of this pillar.

Table 4.2: Outcomes, Objectives, Strategies, and Key Projects for Research Infrastructure and Digital Systems Pillar

Outcome	Objectives	Strategies	Key Projects
Modernized and Equitably Accessible Research Infrastructure	i) Develop national access and shared-use research facilities ii) Map and prioritize upgrading of labs and hubs aligned to the national research agenda	i) Develop national access and shared-use policies for research facilities ii) Map and prioritize upgrading of labs and hubs aligned to the national research agenda	i) Multi-user labs in priority sectors ii) Economic block/zone R&D Hubs Programme iii) Research centers of excellence programme
Integrated and interoperable digital research platforms	i) Implement national research repositories aligned to open science standards ii) Roll out federated identity and access management systems	i) Implement national research repositories aligned to open science standards ii) Roll out nation-wide identity and access management systems	i) National Research Data Centre (NRDC) with HPC/ Cloud capacity ii) Kenya National Research Repository (KNRR) iii) National Identity and Research Collaboration Platform

4.3 Pillar 3: Human Capital and Institutional Capacity

The Country's R&D ecosystem is constrained by an insufficient pipeline of skilled researchers; weak institutional governance structures; and inadequate organizational systems to support competitive research. The number of PhD-trained researchers remains below the UNESCO threshold of 1,000 researchers per million inhabitants, with attrition and brain drain exacerbating the gap. Many universities and research institutions lack effective Research Management Offices (RMOs), structured career development pathways, and capacity for compliance, ethics oversight,

and commercialization. Institutional governance is often characterized by duplication of mandates, weak coordination, and low capacity to absorb research funds.

This pillar will strengthen the human capital base and institutional systems that underpin Kenya's R&D ecosystem. The strategic focus is on: Expanding the pool of skilled researchers and technical experts through postgraduate training, mentorship, and diaspora engagement; professionalizing research support through RMOs, grant management systems, and compliance units; and enhancing global competitiveness in development within research through promotion of open science, research sharing frameworks, and deliberate science diplomacy initiatives.

- i) **Expanded and Skilled Research Workforce:** This outcome addresses the shortage of trained researchers and technical professionals by increasing the number of PhD-level researchers, postdoctoral fellows, and technical specialists. It incorporates postgraduate scholarships, structured fellowships, diaspora engagement, and specialized training in national research priorities and frontier areas such as biotechnology, nanotechnology, artificial intelligence, and climate sciences. In expanding this pool, Kenya will progressively build a critical mass of experts, supported by structured mentorship including emeritus-early career professionals mentorship program and career development pathways, to meet national development needs and align with global benchmarks.
- ii) **Strengthened Institutional Governance, and Professional Development:** This outcome seeks to enhance the organizational capacity and governance of research institutions by establishing RMOs, ethics and compliance units, and commercialization support structures. It further addresses governance inefficiencies, duplication of mandates, and weak alignment with national priorities through improved leadership capacity, streamlined institutional roles, and performance benchmarking. At the same time, it embeds continuous professional development and performance-based systems across institutions to ensure lifelong learning, recognition, and retention of excellence. This includes building capacities in grantsmanship, financial reporting, intellectual property management, contract negotiation, and technology transfer. These interventions will enable institutions to effectively mobilize, manage, and utilize resources while ensuring accountability and productivity.

Table 4.3 presents the objectives, strategies and key projects to guide realization of the outcomes of this pillar.

Table 4.3: Outcomes, Objectives, Strategies and Key Projects for Human Capital and Institutional Capacity Pillar

Outcome	Objectives	Strategies	Key Projects
Expanded and Skilled Research Workforce	i) Increase the number of postgraduate and postdoctoral researchers across priority disciplines ii) Strengthen mentorship and career pathways for young and emerging researchers	i) Establish national postgraduate scholarships and postdoctoral fellowship schemes ii) Institutionalize mentorship and exchange programmes linking senior and junior researchers, including diaspora engagement	i) National Postgraduate Research Scholarship Programme ii) National Postdoctoral and Fellowship Scheme iii) Diaspora Researcher Engagement Programme iv) Emerging Scholars Mentorship Network

Outcome	Objectives	Strategies	Key Projects
Strengthened Institutional Systems, Governance, and Professional Development	Increase the number of postgraduate and postdoctoral researchers across priority disciplines	i) Develop national standards and frameworks for RMOs ii) Build institutional units for compliance, ethics, and technology transfer iii) Link performance to career progression, retention, and recognition	i) Establishment of RMOs in HEIs and research institutes ii) National Grantsmanship and Research Compliance Training Programme iii) Institutional IP and Commercialization Support Facility iv) Governance and Leadership Capacity-Building Programme for Research Institutions v) National Institutional Alignment Framework (NIAF) vi) Annual Institutional Research Performance Review and Benchmarking Reports vii) Performance-Based Recognition and Retention Programme

4.4 Pillar 4: Industry Linkages and Societal Impact

Kenya's R&D ecosystem has historically struggled with limited translation of research outputs into commercial products, policies, and societal solutions. Weak collaboration between academia, industry, and government has contributed to the underutilization of innovations, duplication of efforts, and low competitiveness of local industries. Many private sector actors perceive research as disconnected from market realities, while research institutions often lack the structures and incentives to commercialize research outputs. Communities, especially at the grassroots, remain marginal beneficiaries of research despite being central sources of knowledge and innovation.

Kenya has significant opportunities to harness industry-academia partnerships, innovation-driven enterprises, community knowledge systems, and policy uptake mechanisms to ensure research contributes directly to livelihoods, industrial growth, and socio-economic transformation. In embedding structured linkages, strengthening technology transfer pathways, and institutionalizing co-creation with industry and society, this pillar will position research as a driver of Kenya's industrialization, job creation, poverty reduction, and global competitiveness. The strategic focus of this pillar is to: Promote structured academia-industry partnerships that align research outputs with national industrial and development priorities; strengthen technology transfer and commercialization pathways, including intellectual property utilization and start-up incubation; enhance community engagement and indigenous knowledge integration to ensure inclusivity and relevance of research outcomes; institutionalize research-to-policy translation to strengthen evidence-informed decision-making in government and society; and accelerate societal impact of research through demonstration projects, local innovation scaling, and partnerships with civil society. The pillar aims at realizing the following outcomes.

- i) **Structured and sustainable academia-industry partnerships:** This outcome seeks to institutionalize long-term collaboration between academia, research institutions, and industries to align research with market needs and national industrial priorities. It emphasizes co-design of research agendas, joint investments in innovation, and frameworks that foster sustainable, and mutually beneficial partnerships between academia and industry.
- ii) **Strengthened technology transfer, commercialization, and innovation ecosystems:** This outcome focuses on building systems, capacities, and incentives for translating research into commercial and societal value. It covers the establishment of Technology Transfer Offices (TTOs), incubation hubs, and intellectual property utilization frameworks that support entrepreneurship, enterprise growth, and innovation-driven development.

- iii) **Enhanced societal engagement and evidence-based policymaking:** This outcome highlights the integration of community knowledge, indigenous innovations, and societal priorities into mainstream research while institutionalizing systematic use of research evidence in policymaking and governance. It emphasizes grassroots participation, co-creation of solutions, dialogue between researchers and policymakers, and embedding evidence use in national and county governance frameworks.

Table 4.4 presents the objectives, strategies and key projects to guide achievement of the outcomes under the industry linkages and societal impact pillar.

Table 4.4: Outcome, Objectives, Strategies and Key Projects for Industry Linkages and Societal Impact Pillar

Outcome	Objective	Strategies	Key Projects
Structured and sustainable academia-industry partnerships	Strengthen partnerships between academia and industry	i) Establish national guidelines for academia-industry collaboration and joint IP ownership ii) Create sector-specific consortia to co-design research agendas with industry	i) National Academia-Industry Partnership Framework ii) Sectoral Research-Industry Consortia iii) Joint Research and Innovation Challenge Project
Strengthened technology transfer, commercialization, and innovation ecosystems	Promote commercialization of research outputs	i) Provide financial and technical support for establishment of TTOs and incubators ii) Strengthen IP frameworks, licensing policies, and commercialization pathways	i) TTOs in academia and Research Institutes ii) National Incubation and Accelerator Programme for research-based start-ups iii) Kenya Research Commercialization Programme to support IPR Licensing and spin-offs
Enhanced societal engagement and evidence-based policymaking	Document and mainstream community innovations and indigenous knowledge systems	i) Promote participatory research that reflects societal needs and priorities i) Strengthen science communication skills among researchers ii) Foster partnerships with civil society and the private sector for outreach and adoption	i) National research symposium programme ii) Science, Research and development accelerator programme

4.5 Pillar 5: Policy, legal and regulatory frameworks

This Pillar focuses on establishing a coherent, predictable, rights-respecting regulatory architecture that clarifies mandates, streamlines approvals, strengthens compliance and redress mechanisms, and embeds evidence use and transparency across the national research system. The Pillar emphasizes harmonization and modernization of research-relevant laws and subsidiary regulations; coordination among national agencies and inter-governmental actors; robust ethics and accountability, data protection and IP regimes adapted to emerging technologies. The pillar aims at achieving the following outcomes.

- i) **Harmonized policy, legal, and institutional frameworks:** This outcome seeks to modernize, harmonize, and align Kenya's research-related laws, policies, and regulations with emerging

technologies and international standards, while streamlining coordination among MDACs and CCIOs. Its scope includes comprehensive legal and policy audits, development of subsidiary legislation, issuance of consolidated guidelines, establishment of formal coordination frameworks, and creation of a single-window system for research approvals and permits. These interventions are aimed at providing coherence, predictability, and efficiency in the research governance environment.

- ii) **Strengthened Compliance, Ethics, and Governance:** This outcome emphasizes robust oversight and accountability mechanisms to safeguard ethics, biosafety, biosecurity, data governance, intellectual property, and overall integrity in the research system. Its scope includes updating national codes and standards, accrediting compliance bodies, enforcing benefit-sharing frameworks, strengthening inspection and certification systems, and institutionalizing transparency and grievance redress through public reporting, integrity codes, whistle-blower protection, and appeals mechanisms. These measures will ensure public trust, accountability, and credibility in research governance.

Table 4.5 presents objectives, strategies and key projects to guide development, review and harmonization of inclusive policy, legal and regulatory frameworks for R&D.

Table 4.5: Outcomes, Objectives, Strategies and Key Projects for Policy, legal and regulatory frameworks Pillar

Outcome	Objectives	Strategies	Key Projects
Harmonized policy, legal, and institutional frameworks	Undertake a comprehensive audit and update of research-relevant laws and policies	Harmonize legal and policy frameworks for R&D.	i) Consolidated Research Policy and Legal Reform Programme ii) Research permits and licensing portal
Strengthened compliance, ethics, and governance integrity	Structured and harmonized governance and administrative processes for	i) Establish time-bound, risk-tiered approval pathways and mutual recognition of clearances ii) Develop and operationalize a national STI observatory	i) National Research Coordination Regulations ii) Single-Window Research Permit System (legal basis for one-stop approvals) iii) National Ethics and Compliance Strengthening Programme iv) Biosafety/Biosecurity and Laboratory Oversight Regulations (update) v) Research Data Protection Code of Practice and Secure Data Environment Certification vi) Publicly Funded Research IP and Benefit-Sharing Rules and Model Collaboration/License Templates vii) Public Research Transparency and Integrity Regulations viii) Independent Research Funding and Permitting Appeals Board ix) Annual State of Research and Integrity Report to Parliament and County Assemblies

4.6 Cross-Cutting Themes

In addition to the strategic pillars, realization of the Masterplan objectives will be facilitated by cross-cutting themes that provide an enabling environment for its effective implementation. These themes ensure that Kenya's research financing and capacity strengthening initiatives are inclusive, sustainable, transparent, and competitive globally. They integrate equity, accountability, innovation, and resilience values into all programmes and projects, ensuring that research outputs

deliver maximum impact for national development and society. The cross-cutting themes are as follows:

- i) **Equity and Inclusivity in Research:** Equity and inclusivity underscores Kenya's commitment to ensuring that the national R&D system is accessible, representative, and responsive to the needs of all citizens. It seeks to eradicate structural barriers that limit the participation of youth, women, PWDs, indigenous communities, and marginalized regions in R&D. It covers the design of inclusive research funding mechanisms, targeted scholarships and capacity-building programmes, equitable distribution of infrastructure, and development of policy frameworks that guarantee fair participation and benefit-sharing. It also extends to recognizing and integrating indigenous knowledge systems and institutionalizing equity audits and monitoring mechanisms to track participation and outcomes across demographics.
- ii) **Open Science, Ethics and Data Governance:** This theme seeks to institutionalize transparency, accountability, and integrity in Kenya's R&D ecosystem. It emphasizes adopting open access frameworks that make research outputs freely available, strengthening ethical standards to guide research practices, and establishing robust systems for secure data governance and fair benefit-sharing. This includes the development of national guidelines for open science, harmonizing research ethics standards, building capacity for institutional review boards, implementing strong intellectual property management frameworks, and establishing secure data repositories and governance protocols in line with international best practices. This will ensure reliable research practices, data management, secure sharing mechanisms, and that the knowledge generated is accessible and beneficial to all stakeholders.
- iii) **Devolution and County Integration:** This theme is central in ensuring R&D is embedded into Kenya's devolved governance structures to achieve equitable development and localized impact. It emphasizes the integration of research priorities into CIDPs, establishing and strengthening county-level research hubs, and promoting applied research that responds directly to county-specific development challenges. It includes developing frameworks for county academia partnerships, building local research capacity, and ensuring counties have access to resources, infrastructure, and expertise to design and implement evidence-based interventions. This approach addresses regional disparities and ensures that grassroots knowledge and local innovations are recognized and scaled as part of the national research ecosystem.
- iv) **Environmental, Social, and Governance:** Environmental, Social, and Governance (ESG) will embed responsible, accountable, and forward-looking practices into developing, financing, and implementing R&D in Kenya. It emphasizes climate-smart and environmentally friendly infrastructure, socially inclusive research practices, and robust governance standards that ensure transparency and accountability across the R&D system. This includes integrating ESG criteria into research funding decisions; promoting the establishment of green laboratories and sustainable procurement systems; enhancing inclusion of vulnerable groups in research processes; and strengthening governance frameworks to uphold ethical conduct, accountability, and social responsibility. In mainstreaming ESG, the Masterplan will ensure that research contributes to knowledge generation and environmental stewardship, social cohesion, and strong governance practices.
- v) **International Partnerships:** Partnerships will be critical in positioning Kenya as an active and competitive player in the global R&D ecosystem. It will enable the country to access resources, technologies, and knowledge networks beyond its borders. This theme emphasizes strengthening South-South, North-South, and triangular cooperation and expanding Kenya's participation in continental initiatives such as the African Union Agenda 2063 forums, the African Continental Free Trade Area (AfCFTA), and regional research consortia. This includes building strategic alliances with bilateral and multilateral development partners, international research organizations, universities, and the diaspora, while leveraging global funding mechanisms and technology transfer opportunities to accelerate national research priorities.

- vi) **Science Communication, Public Engagement and Uptake:** This theme seeks to strengthen the visibility, accessibility, and practical application of research outputs for societal benefit. It emphasizes deliberate communication of scientific knowledge in formats understandable to policymakers, industry actors, civil society, and the public, while fostering dialogue that builds trust between researchers and society. This includes developing national science communication frameworks, institutionalizing research-to-policy dialogues, supporting media engagement, and establishing platforms for dissemination, such as exhibitions, innovation fairs, and digital portals.
- vii) **Digitalization in Research:** This theme underscores the importance of embedding ICT, digital skills, and secure platforms across Kenya's R&D ecosystem. It seeks to strengthen the use of advanced digital tools for data collection, storage, analysis, collaboration, and dissemination of research outputs, while ensuring that these systems are safeguarded against cyber threats. This includes establishing interoperable digital platforms, deploying high-performance computing systems, promoting e-research services, building researcher digital literacy, and institutionalizing secure data management and protection protocols in line with the Data Protection Act, Cap. 411C. In advancing digitalization, the Masterplan will accelerate efficiency, collaboration, and transparency in research processes, making Kenya's R&D ecosystem globally competitive and future-responsive.
- viii) **Science Diplomacy:** This theme emphasizes the integration of science, technology, and innovation into Kenya's foreign policy and international cooperation agenda. It seeks to position Kenya as a regional and global leader in science diplomacy by leveraging R&D to strengthen bilateral, continental, and multilateral partnerships. This includes embedding STI attachés in key embassies and foreign missions, negotiating reciprocal funding agreements, enhancing participation in global research consortia, and advancing Kenya's voice in international standard-setting bodies. In institutionalizing science diplomacy, the Masterplan will expand research financing opportunities, attract strategic investments, and promote the translation of research outputs into solutions that address both national priorities and global challenges.
- ix) **Emerging Technologies:** This theme underscores the importance of harnessing frontier technologies to accelerate Kenya's transition into a knowledge-driven economy. It seeks to strengthen the generation and application of advanced technologies such as artificial intelligence, biotechnology, quantum computing, advanced materials, neurotechnology, sustainable energy innovations, aerospace, robotics, and cognitive enhancement tools. This includes establishing national research programmes in frontier areas, creating technology foresight and horizon-scanning platforms, fostering industry-academia collaborations for commercialization, and aligning emerging technologies with ethical, regulatory, and safety frameworks. In integrating emerging technologies across the R&D ecosystem, the Masterplan will enhance competitiveness, stimulate new industries, and generate transformative solutions that contribute to the realization of the pillars and Kenya's long-term development goals.

Table 4.6 presents the outcomes, objectives, strategies and key projects which will accelerate realization of the five (5) strategic pillars of the Masterplan.

Table 4.6: Cross-cutting Themes , Objectives, Strategies and Key Projects

S/No	Themes	Objectives	Strategies	Key Projects
1	Inclusive participation of women, youth, PWDs, indigenous people, and marginalized regions in all national research programmes and projects	Ensure at least 40 percent of national research funding and capacity strengthening opportunities benefit underrepresented groups and regions	i) Establish inclusion quotas in national calls ii) Mainstream inclusivity in funding guidelines and reporting iii) Provide targeted scholarships and mentorship	i) National Inclusive Research Grants Scheme ii) Women and Youth in Science Fellowship Programme iii) County-Based Marginalized Groups Research Fund
2	A transparent open science ecosystem that guarantees ethical research, secure data, and fair benefit-sharing	Institutionalize open science standards and ethical compliance in all MDACs and RPOs	i) Develop and implement national open access policy and repositories ii) Establish ethics and data governance units in research institutions iii) Enforce national benefit-sharing frameworks.	i) Kenya Open Science and Data Repository ii) National Research Ethics and Integrity Council iii) Secure Data Governance and Benefit-Sharing Programme.
3	Integrated and county-strengthened national research ecosystem	Institutionalize RD&I within governance by integrating R&D into CIDPs, ADPs and County budgets	i) Operationalize county co-financing and PPP models ii) Build technical capacity for county officers and researchers iii) Create inter-county research networks	i) County Co-Financing Facility for Research ii) County research capacity and mentorship Programme iii) Inter-County Applied Research Networks
4	R&D ecosystem aligned with climate resilience, social inclusion, and governance integrity standards	Embed ESG criteria in design, financing, and monitoring of all research projects	i) Develop ESG compliance guidelines for R&D ii) Promote green and socially inclusive labs and facilities	i) Kenya Green and Inclusive Research Facilities Initiative ii) ESG Compliance and Certification Programme iii) Climate-Smart Research Accelerator
5	Kenya positioned as a preferred continental and global partner in research financing and innovation.	Increase Kenya's participation in continental/global R&D programmes and projects	i) Forge South–South and North–South strategic alliances ii) Negotiate reciprocal funding and exchange agreements iii) Institutionalize joint research calls with regional/global partners	i) AUC/EAC - Kenya Joint Research Fund ii) Global Research Exchange and Mobility Programme

S/No	Themes	Objectives	Strategies	Key Projects
6	Well-informed public that values and applies research	Strengthen national and county-level mechanisms for disseminating and applying research outputs to inform policy, industry and community development	i) Institutionalize research communication units in RPOs and MDAs ii) Strengthen partnerships with media and digital platforms for science dissemination iii) Build communication and outreach capacity among researchers and policy makers iv) Establish evidence-to-policy dialogues at all levels	i) Annual Kenya RD&I innovation Expo ii) Science communication Capacity enhancement Programme iii) Annual Kenya R&D Expo iv) County Evidence Uptake Forums
7	Secure, digitally enabled and networked R&D ecosystem across all institutions	Build secure digital platforms and strengthen researcher digital literacy	i) Roll out interoperable research management platforms ii) Embed cybersecurity protocols in all R&D systems iii) Provide national training in digital literacy and cyber hygiene	i) National Research Digital Backbone (NRDB) ii) Cybersecurity in Research Programme iii) Digital Literacy and E-Research Training Programme
8	Strengthened science diplomacy and strategic research partnerships	Institutionalize science diplomacy in foreign policy and international cooperation	i) Embed STI attachés in embassies and foreign missions ii) Develop a national Research, Science and Innovation diplomacy strategy iii) Create structured bilateral/multilateral R&D partnerships	i) National Science Diplomacy Strategy. ii) STI Attachés Programme in Key foreign Missions
9	Strengthened National capacity in Emerging Frontier Technologies	Enhance national capability to generate, apply and govern emerging technologies for economic transformation, competitiveness and sustainable development.	i) Create national technology foresight and horizon scanning platforms to guide policy and investment ii) Foster academia-industry collaborations to promote technology transfer and commercialization iii) Develop ethical regulatory and safety frameworks for responsible deployment of emerging technologies	i) Technology foresight and horizon scanning platform ii) Industry-academia commercialization accelerator iii) Ethical and regulatory framework for emerging technologies initiative

CHAPTER 5

IMPLEMENTATION AND COORDINATION FRAMEWORK

This chapter provides the implementation and coordination arrangements for the Masterplan. It defines the institutional framework, financing mechanisms, risk management, and monitoring and evaluation systems that will guide delivery of the Masterplan. These provisions will ensure coherence, accountability, and adaptability in achieving the Masterplan's strategic pillars.

5.1 Coordination Framework

Implementation of the Masterplan will follow a multi-agency approach with a well-defined coordination framework to ensure coherence, avoid duplication, and strengthen accountability. The framework provides a hierarchy of institutions, their membership composition, and functions, while also clarifying coordination mechanisms across national, county, and stakeholder levels. It embeds inclusivity, transparency, and collaboration to ensure that all actors contribute effectively towards realization of the Masterplan's pillars.

The Ministry in charge of RSTI, shall serve as the parent ministry, providing strategic leadership, oversight, and overall accountability for the Masterplan. The Ministry shall chair the National Steering Committee (NSC), ensuring alignment with the existing policies and legal frameworks. It will also spearhead inter-ministerial coordination, resource mobilization, and reporting to the Cabinet and Parliament. The Ministry will be supported by the following multi-agency committees.

a) National Steering Committee

The National Steering Committee (NSC) will be chaired by the Cabinet Secretary in charge of RSTI and will comprise Cabinet Secretaries responsible for Education, Finance, Economic Planning, Industrialization, Trade and Enterprise Development, ICT, Agriculture, Health, Environment, Foreign and Diaspora Affairs, alongside representatives from the Council of Governors, academia, private sector, civil society, and development partners. Its functions will be to provide overarching policy direction for the Masterplan; ensure alignment with national development frameworks; approve national research priorities annual implementation plans, and financing frameworks; oversee progress reporting and resource mobilization; and facilitate inter-ministerial, county, and international coordination to strengthen research financing and capacity development.

b) National Research Coordination Committee

The National Research Coordination Committee (NRCC) will be chaired by the Principal Secretary responsible for RSTI and will comprise the Principal Secretaries of ministries implementing the Masterplan together with representatives of Council of Governors, private sector, civil society and development partners. The functions of the Committee will be to coordinate the planning, financing, regulation, and monitoring of the Masterplan interventions; ensure complementarity of mandates and avoid duplication among implementing agencies; provide a platform for joint programming and resolution of institutional overlaps; align institutional research strategies with the National Research Agenda; and oversee the development of guidelines, standards, and tools for effective implementation.

c) Technical Working Groups

The Technical Working Groups (TWGs) will be constituted as thematic expert bodies under the NRCC and will comprise specialists drawn from MDACs, CCIOs, diaspora, academia, research institutions, private sector, civil society, and development partners with expertise in research financing, infrastructure, human capital, policy, innovation, and cross-cutting themes. Their functions will be to provide technical advice on the design and implementation of the Masterplan programmes; develop guidelines, tools, and standards to support research financing and capacity strengthening; undertake foresight and horizon-scanning exercises to guide priority setting; facilitate knowledge sharing across institutions and sectors; and prepare technical reports and recommendations to inform decision-making by the NRCC.

d) County Research and Development Committees

The County Executive Committee Member (CEC) in charge of Education, Research, or related functions will chair the County Research and Development Committees (CRDCs), which will be established in each county. Members will be drawn from local universities, TVET institutions, research institutions, private sector representatives, civil society, community leaders, and development partners operating within the county. The functions of the Committees will include identifying and aligning county research priorities with the National Research Agenda, coordinating and supervising the execution of county-level R&D programs, organizing and managing co-financing agreements with county governments and partners, encouraging grassroots innovations and integrating indigenous knowledge systems, enhancing capacity for evidence-based decision-making at the county level, and preparing regular progress reports for submission to the NRCC and the Council of Governors.

e) Key Implementation Actors

In addition to the multi-agency committees, implementation of the Masterplan will rely on the coordinated efforts of core implementing agencies, each mandated under the STI Act, Cap. 511, and related legal and policy frameworks to deliver specific functions.

- i) **State Department responsible for RSTI:** The State Department will provide overall policy leadership, coordination, and oversight for the implementation of the Masterplan. It will steer inter-agency coordination, ensure alignment with the STI Act, Cap. 511, and coordinate mainstreaming of research financing and capacity strengthening into national and sector research frameworks to ensure coherent and effective delivery of the National Research Agenda.
- ii) **The National Treasury:** The National Treasury will provide overall leadership in resource mobilization, budgeting, and financial oversight for the Masterplan implementation. It will integrate research financing into the national budget framework, align funding with the PFM Act, Cap. 412C, and strengthen domestic and external resource mobilization to ensure sustainable financing of the R&D ecosystem.
- iii) **State Department responsible for Economic Planning:** The State Department will guide the alignment of the Masterplan with national and sectoral development frameworks; coordinate integration of research priorities into the Medium-Term Plans (MTPs), strategic plans, CIDPs and ADPs guidelines; and oversee performance monitoring and evaluation of the Masterplan interventions within the national planning and results frameworks.
- iv) **State Department responsible for Foreign and Diaspora Affairs:** The State Department will drive international partnerships and collaboration, and diaspora engagement to support implementation of the Masterplan, while enhancing Kenya's global visibility and ensuring alignment with global, continental and regional frameworks and commitments.
- v) **National Research Fund (NRF):** NRF will take the lead in mobilizing, managing, and disbursing financial resources for R&D in line with the National Research Agenda. It will operationalize diverse funding instruments, strengthen fiduciary systems, and ensure that resources are

allocated equitably and accountably across disciplines, institutions, and counties.

- vi) **National Commission for Science, Technology and Innovation (NACOSTI):** NACOSTI will regulate the conduct of research by issuing permits, enforcing ethical and safety standards, and accrediting institutions and facilities. It will also monitor compliance with national research policies and safeguard integrity and public trust in Kenya's research system.
- vii) **Kenya National Innovation Agency (KeNIA):** KeNIA will promote innovation and commercialization of research outputs by linking academia with industry, supporting TTOs, fostering spin-offs and start-ups, and strengthening national innovation ecosystems for socio-economic transformation.
- viii) **County Governments:** County governments will integrate research into CIDPs, establish county R&D hubs, mobilize co-financing, and promote local innovations that address grassroots development priorities in line with the National Research Agenda.
- ix) **Oversight Bodies:** The Oversight Bodies will provide oversight, assurance, and accountability for the implementation of the Masterplan. They will monitor compliance with legal, policy, and governance frameworks, review performance and use of public resources, and ensure transparency, integrity, and value for money in the delivery of the Masterplan's objectives.
- x) **Academia and Research Institutions:** Universities, research institutes, and TVET institutions will serve as the primary generators of knowledge and innovation, undertaking research, training human capital, incubating innovations, and ensuring translation of research outputs into practical solutions.
- xi) **Private Sector:** The private sector will drive industry-led research, provide co-financing for priority programmes, uptake and scale innovations, and foster PPP that expand the reach and impact of R&D.
- xii) **Development Partners and Philanthropic Organizations:** Development partners and philanthropic organizations will complement national efforts by providing funding, technical assistance, and opportunities for international collaboration, while aligning support with national development priorities to ensure coherence and sustainability.

Implementation of the Masterplan shall be anchored in a coordinated multi-actor framework as presented in Annex II.

f) Coordination Mechanisms

The Masterplan will be implemented through harmonized coordination mechanisms to ensure coherence, inclusivity, and accountability across all levels. The following mechanisms will guide collaboration among institutions, avoid duplication of mandates, and facilitate integration of stakeholders in line with national development priorities.

- i) **Policy alignment:** All implementing institutions should align their annual work plans, budgets, and programmes with the Masterplan's strategic pillars and the National Research Agenda to ensure coherence and eliminate overlaps.
- ii) **Joint programming and financing:** Multi-agency and cross-sectoral programmes will be developed through co-financing agreements between MDACs, CCIOs private sector, and development partners to strengthen sustainability and inclusivity.
- iii) **Information sharing and transparency:** A National Digital Grants and Research Management Portal, hosted by NRF, will be established as the central platform for information sharing, financial tracking, and performance reporting across all implementing agencies.
- iv) **Conflict resolution and harmonization:** The NRCC will provide a structured platform for resolving institutional overlaps, mandate conflicts, and duplication, thereby promoting synergy and complementarity.
- v) **Stakeholder integration:** CSOs, academia, professional associations, diaspora networks,

and development partners will be integrated into the Masterplan implementation through annual research forums, thematic platforms, and advisory committees.

- vi) **Monitoring, evaluation and reporting:** A standardized reporting and results framework will be applied across MDACs, CCIOs and research institutions. This will include performance contracts, periodic reviews, and independent evaluations to ensure accountability and progress tracking.
- vii) **Capacity building and technical support:** Continuous capacity building will be undertaken for national and county actors, research institutions, and innovation hubs to strengthen their ability to deliver on the Masterplan's objectives.
- viii) **International and regional collaboration:** Structured partnerships will be established with regional and international organizations to mobilize additional resources, benchmark best practices, and ensure that Kenya's R&D ecosystem is aligned with continental and global development priorities.

The governance and coordination framework is presented in Figure 5.1 below.

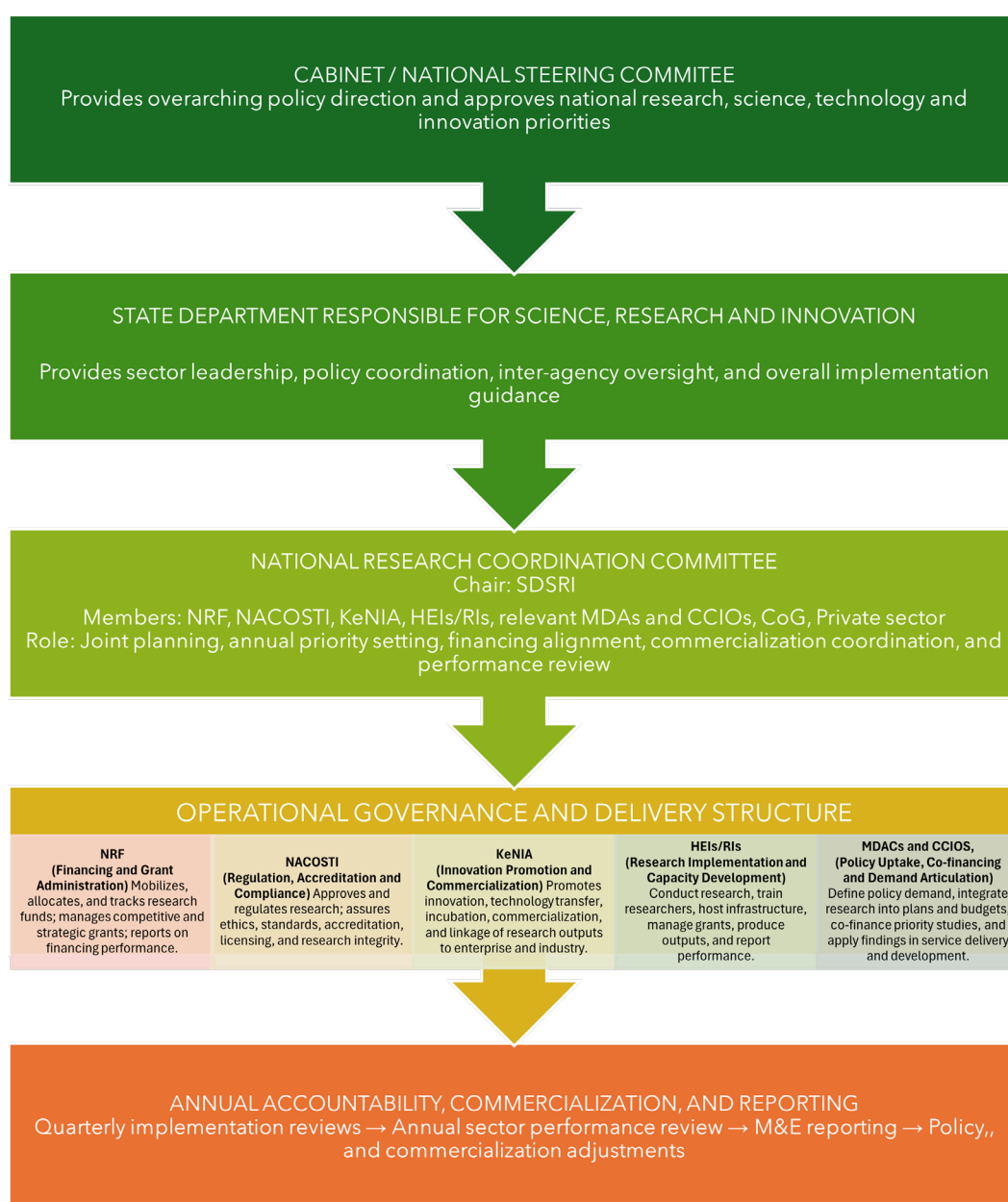


Figure 5.1: Governance and Coordination Framework

g) Kenya's Research Financing and Capacity Strengthening Model

Kenya's Research Financing and Capacity Strengthening Model is depicted in Figure 5.2, which shows how funds will go into MDACs, CCIOs, sector-based research, and the NRF from a variety of sources, including the government, private sector, civil society, philanthropies, and development partners. Funds will be mobilized and managed by the NRF and awarded to academia and research institutions through block grants or competitive financing based on requests, peer review, and merit-based awards. Infrastructure, human capital, conferences, and project management are all supported by the allocated resources. The State Department responsible for RSTI will provide oversight, guaranteeing accountability and monitoring. Investments will support Kenya's development objective of turning research into concrete development outcomes by producing research outputs like publications, patents, technology transfer, spin-offs, and socioeconomic benefits.

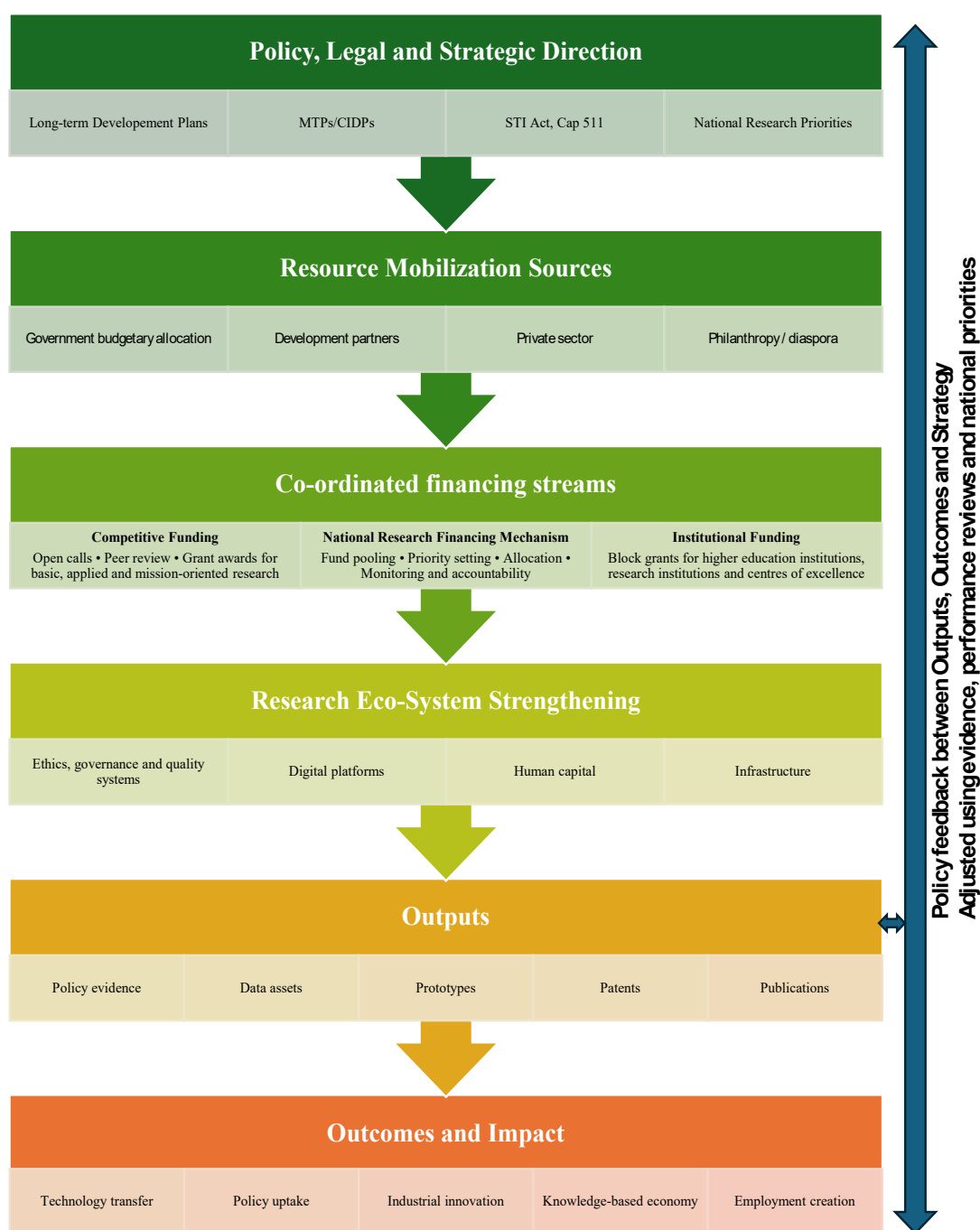


Figure 5.2: Kenya Research Financing and Capacity Strengthening Model

5.2 Financing Framework

A stable, diverse, and long-term funding structure will be necessary for the Masterplan's implementation. In addition to utilizing the AU Agenda 2063 commitment of 1 percent of GDP for R&D, this framework will be based on the STI Act, Cap. 511, which targets an allocation of 2 percent of GDP to R&D. The financing framework will follow a multi-source strategy, utilizing funds from the exchequer, the private sector, philanthropy, the diaspora, and development partners. As the primary funding and coordinating organization, the NRF will guarantee accountability, openness, and resource distribution based on outcomes. To promote local ownership and lessen dependency on development partner support, resource mobilization will also incorporate cutting-edge financing tools like research and innovation bonds, levies, philanthropy, and PPP co-funding agreements. Table 5.1 lists the necessary resources along with possible funding sources. The estimated cost of implementing the Masterplan is Ksh. 87.1 billion. The funding plan should incorporate accountability and value-for-money principles, as well as guarantee a fair allocation of resources among the five (5) strategic pillars.

Table 5.1: Resource Requirements

S/No	Pillar	Resource Requirement (Ksh Million)	Justification of allocation	Potential Sources of Funding
1	Sustainable research financing	10,450	Establishment and operationalization of diversified financing instruments to enhance resource mobilization efficiency, and ensure predictable and sustainable research financing.	GoK, PPPs, Philanthropic Foundations, Diaspora Bonds, and Development Partners
2	Research infrastructure and digital systems	36,550	Finance development and modernization of multi-user laboratories, national research data centres, and interoperable digital platforms to enhance research productivity, data-driven decision-making, and equitable access to research infrastructure.	GoK, Development Partners, and PPPs
3	Human capital and institutional capacity	18,850	Training, postgraduate scholarships, institutional strengthening, and establishment of research management systems to enhance technical capacity, and build a critical mass of skilled human resources necessary for a knowledge-driven economy.	GoK, African Centres of Excellence, and Development Partners
4	Industry linkages and societal impact	15,650	Facilitate development of academia-industry partnerships, technology transfer offices, innovation hubs, and research commercialization programmes to drive industrialization, job creation, and socio-economic transformation.	GoK, PPPs, and Development Partners
5	Policy, legal and regulatory frameworks	5600	Review, harmonization, and operationalization of STI policies, laws, and regulatory systems to enhance coordination, accountability, and an enabling environment for research and innovation.	GoK and Development Partners
	Total	87,100		

5.3 Risk Management Framework

Political, financial, institutional, technological, and socioeconomic concerns pose risks to the Masterplan's execution. A proactive risk management strategy will be used to protect delivery.

Throughout the Masterplan cycle, this will need methodical discovery, evaluation, mitigation, and monitoring of possible risks. With a defined distribution of mitigation responsibilities across the parent ministry, NRF, MDACs, CCIOs, private sector, development partners, and civil society, this strategy will prioritize shared responsibility. Table 5.2 presents the risk management framework.

Table 5.2: Risk Management Framework

Risk	Trigger Events / Indicators	Likelihood	Severity	Risk Owner(s)	Mitigation Measures	Timelines
1. Inadequate public financing for R&D	Budget ceilings below target, fiscal consolidation, and low exchequer releases	High	High	TNT, SDSRI - NRF	Ring-fence R&D budget lines in MTEF, phase financing targets, adopt blended finance and co-financing windows, and issue annual expenditure tracker	Immediate and annual budget cycle
2. Over-reliance on donor financing	Donor reprioritization, delayed partner disbursement, and project fragmentation	Medium	Medium	TNT, SDSRI - NRF	Diversify sources through philanthropy, diaspora and PPP instruments; align partner support to national research agenda; and enhance pooled-fund modalities where feasible	Short term (0–24 months)
3. Weak coordination among STI institutions	Overlapping mandates, duplicated calls, and inconsistent reporting	Medium	Medium	SDSRI and its SAGAs	Establish inter-agency coordination protocols; define RACI matrix; harmonize calendars, approvals, and reporting templates; and quarterly coordination review	Immediate to medium term
4. Delayed enactment or amendment of policy and legal instruments	Slow approvals, legal drafting backlog, and competing policy priorities	Medium	High	SDSRI, Office of the Attorney-General, and Parliamentary liaison offices	Prepare legislative action plan; fast-track priority subsidiary regulations; maintain issue log for policy bottlenecks; and escalate through Cabinet memo where necessary	Short term (0–18 months)
5. Low county uptake and weak linkages with devolved units	Research initiatives not included in CIDPs/ADPs and absence of county co-financing	High	High	County Governments, Council of Governors, County Assemblies Forum, and SDSRI	Issue county research integration guidelines; pilot county research hubs; provide co-financing framework and model clauses for CIDPs/ADPs; and build technical capacity of county officers	Short to medium term
6. Insufficient research infrastructure and maintenance capacity	Aging laboratories, inadequate O&M budgets, and poor equipment uptime	High	High	Research Institutions, Academia, and SDSRI	Prioritize shared multi-user laboratories; provide lifecycle maintenance plans; earmark O&M resources; institute asset management and utilization reporting	Medium term

Risk	Trigger Events / Indicators	Likelihood	Severity	Risk Owner(s)	Mitigation Measures	Timelines
7. Digital systems fragmentation and cyber security risk	Non-interoperable platforms, data loss, cyber security incidents, and weak access control	Medium	High	SDSRI – NACOSTI, and ICT Authority	Adopt interoperable architecture; implement secure research data standards; strengthen cyber controls, backup, disaster recovery, and federated identity management	Immediate to medium term
8. Low private sector participation in R&D	Limited co-funding, low demand for industry partnerships, and lack of incentives	Medium	High	SDSRI – KeNIA, TNT, and Business Associations	Introduce tax and matching-fund incentives; create sectoral consortia; support challenge funds and commercialization grants; and strengthen industry-academia engagement platforms	Medium term
9. Weak commercialization and technology transfer	Low patenting, licensing, spin-offs, or uptake of research outputs	High	High	Kenya Industrial Property Institute, SDSRI – KeNIA, Research Institutions, Academia and TTOs	Establish or strengthen TTOs; standardize IP and licensing templates; and create incubator/accelerator support	Short to medium term
10. Human capital shortages and brain drain	Low researcher density, and poor retention	High	High	Public Service Commission, SDSRI – NRF, Universities, and Research Institutions	Expand scholarships schemes, postdoctoral fellowships and mentorship, strengthen career paths/progression guidelines and retention incentives; and strengthen diaspora engagement programmes	Medium term (1–5 years)
11. Social inclusion gaps in research participation	Low participation of women, youth, PWDs, and marginalized regions	Low	High	SDSRI - NRF; Universities, Research Institutions and County Governments	Adopt inclusion quotas and targeted grant windows; track beneficiary disaggregation; and provide mentorship and support measures for underrepresented groups	Immediate and ongoing
12. Poor research-to-policy uptake	Limited use of evidence in planning and budgeting, and weak engagement with policy actors	Medium	High	SDSRI and other MDACs, and Research Institutions	Institutionalize policy briefs and evidence dissemination dialogues; create research-to-policy platforms; and embed knowledge translation requirements in grants	Short term (0–24 months)
13. Public trust, ethics, and compliance failures	Ethics breaches, biosafety incidents, data misuse, and reputational damage	Medium	High	SDSRI -NACOSTI, and Ethics Review Bodies	Update ethics and compliance standards; strengthen review boards; require annual compliance reporting; and institute grievance and appeals mechanisms	Immediate and ongoing

Risk	Trigger Events / Indicators	Likelihood	Severity	Risk Owner(s)	Mitigation Measures	Timelines
14. Macroeconomic and external shocks	Exchange rate volatility, inflation, global supply disruptions, and geopolitical tensions	Medium	High	TNT, SDSRI, and Procuring Entities	Use phased procurement; prioritize local sourcing where feasible; maintain contingency provision for critical inputs; and annual review of budget assumptions	Annual review and contingency response

5.4 Monitoring, Evaluation, Reporting and Learning

a) Monitoring

Monitoring of the Masterplan will be anchored in a coherent results framework that ensures systematic data collection, analysis, storage, and use of data at national and county levels. Mechanisms will be established for real-time and periodic data collection through administrative records, standardized templates, and digital platforms linked to NIMES and CIMES dashboards. These mechanisms will track inputs, activities, outputs, and immediate outcomes, providing timely feedback for adaptive management. Baseline values will be established at the inception of the Masterplan to provide a benchmark for progress measurement. SMART indicators, disaggregated by gender, age, county, and disability, have been developed for each pillar. Clear mid-term and end-term targets have been set, and progress will be assessed against these targets to ensure that implementation of the Masterplan remains on track. The monitoring framework will also assess whether initiatives are being delivered within specified timeframes, budget ceilings, and agreed quality standards, with corrective measures applied promptly where deviations occur.

Responsibilities for monitoring will be shared across implementing agencies, coordinated through the State Department responsible for RSTI. MDACs, CCIOs, academia and research institutions will generate regular progress data, while the Secretariat consolidates, validates, and submits reports to the NSC and NRCC. This will guarantee accountability, transparency, and national coherence in tracking implementation of the Masterplan.

b) Evaluation

Evaluation will provide objective evidence of whether the desired outcomes and objectives of the Masterplan are being achieved. It will assess the effectiveness, coherence, impact, and sustainability of the interventions, guided by indicators linked to national, regional, and global frameworks such as the Kenya Vision 2030 and its MTP IV, BETA, EAC Vision 2050, AU Agenda 2063, and the SDGs. Evidence will be gathered using a mix of quantitative impact assessments, cost-effectiveness analysis, qualitative case studies, beneficiary feedback, and stakeholder consultations to capture both intended and unintended consequences, whether positive or negative.

A mid-term evaluation will be conducted in FY 2030/31 to assess progress, effectiveness, and emerging lessons, with corrective adjustments made for the remaining implementation period. An end-term evaluation will be undertaken in FY 2036/37 to assess overall achievements, sustainability, and impact, generating recommendations for the next Masterplan cycle. In addition, ad-hoc thematic and programme evaluations will be conducted on priority issues such as equity, digitalization, and ESG, using rapid assessment methodologies and participatory approaches. Independent evaluators, working under the oversight of the NRCC will ensure credibility, objectivity, and comparability with global best practices.

c) Reporting and Learning

Reporting will ensure that all stakeholders receive transparent communication about progress,

problems, and lessons learned. Implementing institutions will produce quarterly progress reports, while the State Department responsible for RSTI will integrate these into national performance reports. Annual reports will provide a thorough overview of progress across all pillars, whereas topical briefings and dashboards will address specific information requirements. Reporting shall be consistent with the Government's accountability cycles and distributed in ways that are understandable to Parliament, Cabinet, MDACs, CCIOs, development partners, and the general public.

To support decision-making, learning will be institutionalized as a continuous process, with lessons recorded, examined, and shared. Reforms, increased productivity, and the replication of effective interventions across institutions and counties will all be shaped by the lessons learned from the Masterplan's implementation. In order to prevent the recurrence of inefficient practices, failures and difficulties will also be evaluated, promoting a culture of adaptive management and ongoing development.

Structured knowledge management systems, such as digital platforms, repositories, and yearly knowledge-sharing events, will serve as the foundation for the learning function. These systems will promote partner participation, improve monitoring and evaluation procedures, and manage initiatives more effectively. The Masterplan will guarantee that results stay pertinent, evidence-based, and sensitive to Kenya's changing R&D environment by establishing a robust learning culture.

5.5 Review of the Masterplan

The Masterplan shall be reviewed when need arises, this can be informed by evaluation results, policy change and any form of emerging issues. This will be done through performance review, content analysis and assessment on the administrative use of the Masterplan. The review process shall be initiated and coordinated by the State Department responsible for RSTI to ensure realization of the Masterplan objectives.

REFERENCES

- African Union Commission. (2014). *Science, technology and innovation strategy for Africa 2034 (STISA-2034)*. African Union.
- African Union Development Agency (AUDA-NEPAD). (2020). *African research and innovation ecosystem strengthening framework*. AUDA-NEPAD.
- Government of Kenya. (2010). *The Constitution of Kenya 2010*. Government Printer.
- Government of Kenya. (2012). *Science, Technology and Innovation Act, No. 28 of 2013*. Government Printer.
- Government of Kenya. (2013). *National science, technology and innovation policy*. Ministry of Education, Science and Technology.
- Government of Kenya. (2018). *Kenya National Research Priorities 2018–2022*. National Commission for Science, Technology and Innovation (NACOSTI).
- Government of Kenya. (2023). *Bottom-Up Economic Transformation Agenda (BETA) 2022–2027*. Executive Office of the President.
- Government of Kenya. (2023). *Fourth medium-term plan (MTP IV) 2023–2027*. State Department for Economic Planning.
- Kenya National Bureau of Statistics (KNBS). (2024). *Economic survey 2024*. KNBS.
- Kenya National Commission for Science, Technology and Innovation (NACOSTI). (2021). *National research funding and coordination framework*. NACOSTI.
- Ministry of Education. (2020). *Kenya national research and innovation policy framework*. Government Printer.
- Office of the Prime Cabinet Secretary. (2024). *Public Policy Handbook for Kenya*. Office of the Prime Cabinet Secretary.
- Organization for Economic Co-operation and Development (OECD). (2015). *Frascati manual 2015: Guidelines for collecting and reporting data on research and experimental development*. OECD Publishing.
- Organization for Economic Co-operation and Development (OECD). (2018). *Mission-oriented innovation policies: Challenges and opportunities*. OECD Publishing.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2015). *UNESCO science report: Towards 2030*. UNESCO Publishing.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2021). *UNESCO science report: The race against time for smarter development*. UNESCO Publishing.
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations.
- World Bank. (2020). *Enhancing research and innovation systems in developing economies*. World Bank.
- World Bank. (2023). *Kenya economic update: Leveraging innovation and human capital for economic transformation*. World Bank.

ANNEXES

Annex I: Implementation Matrix

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Support		
Pillar 1: Sustainable Research Financing	Outcome 1: Enhanced national investment in R&D	Increase government allocation to R&D in line with the STI Act target of 2% of GDP	Ring-fence budget allocations for R&D at national and county levels	Dedicated R&D budget lines established within MDACs and CCIOs	National R&D expenditure as a proportion of GDP	2026–2036	200	GoK and Development Partners	SRI-NRF and TNT	MDACs and CCIOs		
			Mainstream research financing in sector plans, ADPs and CIDPs	Research financing mainstreamed in sector plans, ADPs and CIDPs	Proportion of MDACs with a dedicated R&D budget line	2026–2031	100	GoK	SRI - TNT			
					Proportion of counties with a dedicated R&D budget line	2026–2031	150					
					Average county expenditure on R&D as a proportion of total county budget (national aggregate)	2026–2036	50					
	Outcome 2: Diversified and innovative financing instruments established and operationalized	Establish new financing mechanisms to supplement exchequer funding	Establish mandatory reporting on R&D expenditure at national and county levels	Integrated digital system for tracking and reporting R&D expenditure operationalized	Operational national R&D expenditure tracking and reporting system	2026–2036	200	GoK and Development Partners	SRI-NRF and TNT	MDACs and CCIOs		
			Design and implement innovative financing models	PPP framework for commercializable research developed	Total value of R&D funds mobilized from non-exchequer sources annually (Ksh)	2026–2036	400	GoK	SRI-NRF and KeNIA, and TNT			
					Number of bankable PPP research-related projects approved and implemented nationally	2026–2036	400					
			Institutionalize joint financing of research initiatives	Mechanism for co-financing research initiatives operationalized	Number of co-financing and matching-fund agreements signed	2026–2031	200	GoK, Private Sector and Development Partners	SRI-NRF and KeNIA		MDACs and CCIOs	
			Establish an accessible loan scheme for researchers and innovators	Loan scheme established and accessible	National research and innovation loan / credit facility established and operational	2026–2036	200	GoK and Private Sector	SRI-NRF and TNT			
					Number of beneficiaries accessing research and innovation credit support	2026–2036	100					2000

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Responsibility Support
Pillar 1: Sustainable Research Financing	Outcome 3: Strengthened transparency and accountability in R&D financing	Establish transparent and accountable mechanisms for mobilization, allocation, and utilization of research resources	Develop and implement a research levy framework work	Research levy framework developed and operationalized	Proportion of eligible entities remitting the National Research Levy	2026–2036	150	GoK and Private Sector	SRI-NRF, KRA and TNT	MDACs and CCIOs
					Annual revenue mobilized from research levies (Ksh)	2026–2036	500			
			Enhance diaspora investment and philanthropic engagement in research and development	Structured platform for mobilizing diaspora and philanthropy contributions established	Value of verified diaspora investment in national research and innovation (Ksh)	2026–2036	1000	GoK, Private Sector and Diaspora	SRI-NRF, KRA and TNT	Ministry of Foreign and Diaspora Affairs, Foreign Missions, Diaspora Alliance, MDACs, CCIOs, and Development Partners
					Value of philanthropic contributions and endowments to R&D mobilized annually (Ksh)	2026–2036	850	GoK and Philanthropies		
			Develop a centralized digital grant management and reporting platform	Integrated e-portal for grant management operational	Integrated e-portal for R&D grant management developed and operationalized	2026–2036	100	GoK and Development Partners	SRI-NRF and ICTA	MDACs and CCIOs
					Proportion of R&D grants managed through the national e-portal	2026–2036	100			
			Institutionalize Good Financial Grant Practice (GFGP) and independent auditing	Public reporting and accountability mechanisms institutionalized	Number of independent R&D audit reports published	Annual / 2026–2036	150	GoK	SRI-NRF and OAG	MDACs, CCIOs, HEIs and Research Institutions
					Proportion of organizations adopting Good Financial Grant Practice (GFGP)	Annual / 2026–2036	100			
					Number of public accountability forums on R&D financing held	Annual / 2026–2036	500			

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Support
Pillar 1: Sustainable Research Financing	Outcome 4: Equitable and efficient allocation of research resources	Promote equity and inclusivity in allocation of research funds	Develop a National Research Priority Agenda to guide research funding	Five-year National Research Agenda developed and implemented	Proportion of funded R&D programmes aligned to national STI priority areas	2026–2036	100	GoK, Development Partners and Private Sector	SRI-NRF and NA-COSTI	MDACs and CCIOs
					% increase in annual national R&D budgetary allocations	2026–2036	500			
					Dedicated funding quota for marginalized regions and emerging research areas	2026–2036	500			
					Proportion of national R&D funding allocated to marginalized regions and emerging thematic areas	2026–2036	500			
					Compliance rate with approved funding quotas for women, youth, and PWDs in R&D funding	2026–2036	200			
					Proportion of national R&D funding allocated to projects led by women, youth, PWDs, and marginalized groups	2026–2036	500			
					Number of indigenous knowledge and underfunded thematic areas supported annually	2026–2036	200			
					Proportion of nationally funded R&D projects resulting in commercialized outputs	2026–2036	500			
					Total for Pillar 1					

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Responsibility Support
Pillar 2: Research Infrastructure and Digital Systems	Outcome 1: Modernized and accessible research infrastructure	Establish and upgrade national, regional, and county research facilities	Develop shared-use national and county research facilities	State-of-the-art multi-disciplinary national laboratories, county-based centres of excellence, and county-HEI collaborative programmes operational	Number of operational state-of-the-art national research laboratories	2026–2036	23050	GoK and Development Partners	SRI	MDACs, CCIOs, Academia and Research Institutions
					Proportion of counties hosting research centres of excellence	2026–2036	500		SRI and County Governments	
					Average number of research-related programmes hosted per county	2026–2036	500			
					Proportion of counties participating in joint / collaborative R&D programmes	2026–2036	200			
			Map and prioritize upgrading of labs and hubs aligned to the national research agenda	National Research Infrastructure Atlas developed and research labs upgraded	Number of institutions with a formal research hub sharing policy operationalized	2026–2036	100		SRI-NRF and NACOSTI	MDACs and CCIOs
	Outcome 2: Integrated and interoperable digital research ecosystem	Establish national digital infrastructure for research collaboration	Operationalize national research repositories aligned to open science standards	Operational HPC infrastructure accessible to researchers	Number of operational HPC infrastructure facilities supported	2026–2036	5000	SRI-NRF and ICTA		
					Proportion of research programmes / projects utilizing HPC facilities annually	2026–2036	300			
					Number of research laboratories upgraded	2026–2036	5000	SRI-NRF		
					High-speed connectivity and secure digital systems operational across research and academic institutions	Proportion of research and academic institutions with high-speed internet connectivity	2026–2036	650		
			Roll out federated identity, connectivity, and access management systems	Proportion of research institutions with secure research-related digital systems	2026–2036	750		SRI-NRF and ICTA		
				Percentage reduction in research-related cybersecurity breaches	2026–2036	500				
Total for Pillar 2							36550			

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Lead	Responsibility Support
Pillar 3: Human Capital and Institutional Capacity	Outcome 1: Expanded and skilled research workforce	Increase the number of postgraduate and postdoctoral researchers across priority disciplines	Establish national postgraduate scholarships and postdoctoral fellowship schemes	Funded postgraduate and postdoctoral researchers conducting quality research in priority areas	Number of postgraduate students funded through scholarships or fellowships in prioritized research fields	2026–2036	1000	GoK and Development Partners	SRI-NRF	MoE - HEIs, Research Institutions, other MDACs and CCIOs
					Percentage increase in post-graduate research-related outputs	2026–2036	200			
					Retention rate of postdoctoral researchers in research institutions and academia	2026–2036	500			
	Outcome 2: Strengthen mentorship and career pathways for young and emerging researchers		Institutionalize mentorship and exchange programmes linking senior and junior researchers, including diaspora engagement	Structured support for early-career researchers and functional mentorship networks operationalized	Number of early-career researchers funded	2026–2036	1000			
					Number of publications / grants secured by beneficiaries	2026–2036	800			
			Institutionalize research training and certification	Researchers trained and certified annually	Number of mentorship networks established	2026–2036	500			
					Number of mentees benefiting annually	2026–2036	800			
	Outcome 3: Integrate research and innovation into curricula at all education levels			Research and innovation embedded in curricula	Number of researchers trained and certified annually	2026–2036	500	GoK	MoE - KICD, CUE, CDACC and TVETA	HEIs, Research Institutions, SRI-NRF and KeNIA
					Success rate in grant applications by trained beneficiaries	2026–2036	500			
					Number of curricula revised to include research and innovation components	2026–2036	1000			
					Number of students exposed to research and innovation at early stages	2026–2036	750			

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Support
Pillar 3: Human Capital and Institutional Capacity			Institutionalize mentorship and exchange programmes linking senior and junior researchers, including diaspora engagement	Structured support for early-career researchers and functional mentorship networks operational	Proportion of publicly funded research outputs accessible through open-access repositories	2026–2036	1000	GoK	SRI-NRF	HEIs and Research Institutions
					Number of international research and innovation cooperation agreements signed and operationalized	2026–2036	800		SRI-NRF	MFA, TNT, HEIs and Research Institutions
					Value of international research and innovation funding mobilized (Ksh)	2026–2036	1000		SRI-NRF	HEIs and Research Institutions
					Number of Kenyan research institutions / scientists participating in international consortia or global networks	2026–2036	800		SRI-NRF	HEIs, Research Institutions, TNT and MFA
					Number of STI attachés or science envoys deployed in Kenyan foreign missions and multilateral organizations	2026–2036	1000		MFA	HEIs, Research Institutions, and SRI-NRF
	Outcome 2: Strengthened institutional governance and professional development	Establish and operationalize RMOs in HEIs and research institutions	Develop national standards for RMOs	Functional RMOs operational across HEIs and research institutions	Number of HEIs / RIs with functional Research Management Offices	2026–2028	200	GoK and Development Partners	SRI	MoE - HEIs, and Research Institutions
			Build institutional units for compliance, ethics, and technology transfer	Institutional IP portfolios and commercializable research outputs strengthened	Number of intellectual property rights registered annually	2026–2036	2000		SRI-NA-COSTI	KIPI, KECOBO, KEPHIS, other MDACs, and CCIOs
					Number of spin-offs / start-ups created from research	2026–2036	2000		SRI-NRF and KeNIA	TNT, KIP, KECOBO, KEPHIS, other MDACs and CCIOs
					Number of governance / leadership programmes delivered	2026–2036	1000		SRI-NRF	HEIs, Research Institutions, MDACs and CCIOs
			Number of research leaders / managers trained on governance and leadership	2026–2036	1000					
			Link performance to career progression, retention, and recognition	2026–2036	500					
Total for Pillar 3							18850			

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Lead	Responsibility Support
Pillar 4: Industry Linkages and Societal Impact	Outcome 1: Structured and sustainable academia-industry partnerships	Strengthen academia-industry collaboration	Establish national guidelines and platforms for academia-industry collaboration and joint IP ownership	Operational guidelines and national platforms for academia-industry collaboration established	Academia-industry collaboration guidelines developed and operational	2026–2036	50	GoK	SRI-NRF and KeNIA	HEIs, Research Institutions, MDACs and CCIOs
					Number of academia-industry research collaboration agreements	2026–2036	500			
					National platform for structured academia-industry collaboration established	2026–2036	400			
					Number of joint research projects initiated annually	2026–2036	500			
	Outcome 2: Strengthened technology transfer, commercialization, and innovation ecosystems	Promote commercialization of research outputs	Establish sector-specific consortia to co-design research programmes with industry	Commercialization support programmes and technology and innovation parks operational	Number of innovations / products commercialized	2026–2036	1500	GoK and Development Partners	SRI-NRF and KeNIA	HEIs, Research Institutions, MDACs, and CCIOs
					Number of technology and innovation parks supported	2026–2036	2000			
					Number of spin-off entities hosted	2026–2036	1000			
					Number of commercialization grants awarded annually	2026–2031	500			
					Proportion of TTCs / incubation centres generating new research-based enterprises	2026–2031	1000			
					Number of patents, licenses, or technologies transferred	2026–2031	300			
					Functional TTOs supporting IP protection and commercialization					
					Strengthen IP management and commercialization pathways					

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Support
Pillar 4: Industry Linkages and Societal Impact	Outcome 3: Enhanced societal engagement and evidence-based policy making	Document and mainstream community innovations and indigenous knowledge systems	Foster public-private-civil society partnerships in research outreach	Public-private-civil society outreach partnerships enhanced	Number of TTCs established	2026–2031	1000		SRI-NRF and KeNIA	MDACs, CCIOs, HEIs, Development Partners, Private Sector, and Civil Society
					Percentage increase in research outputs commercialized	2026–2031	500	GoK, Private Sector, and Development Partners		
			Promote participatory research that reflects societal needs and priorities	Annual exhibitions and competitions showcasing innovations and research outputs	Number of national competitions / exhibitions held	2026–2036	500		SRI-NRF and KeNIA	HEIs, Research Institutions, MDACs and CCIOs
					Number / proportion of community innovations showcased and adopted	2026–2036	500	GoK		
			Establish frameworks for translating research into policy and practice	Operational frameworks for policy translation and uptake	Framework for documenting and mainstreaming community innovations established and operationalized	2026–2036	100	GoK	SRI-NRF, KeNIA, and NACOSTI	HEIs, Research Institutions, Development Partners, Private Sector, Civil Society, MDACs and CCIOs
					Number of policy briefs backed by research published or adopted annually	2026–2036	500	GoK		
			Strengthen science communication	Increased public awareness on the value of research	Number of science communication trainings conducted	2026–2036	2000		SRI-NRF	HEIs, Research Institutions, MDACs and CCIOs
					Number of HEIs and research institutions mainstreaming science communication	2026–2036	2000	GoK and Development Partners		
			Foster public-private-civil society partnerships in research outreach	Public-private-civil society outreach partnerships enhanced	Number of partnerships established for science communication and public uptake	2026–2031	500		SRI-NRF; KeNIA	HEIs, Development Partners, Private Sector, Civil Society, MDACs, and CCIOs
					Number of public-private-civil society collaborative outreach events held	2026–2031	300	GoK, Private Sector and Development Partners		
Total for Pillar 4							15650			

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	Support
Pillar 5: Policy, Legal and Regulatory Frameworks	Outcome 1: Harmonized R&D-related policy, legal, and regulatory frameworks	Undertake a comprehensive audit and update of research-related laws and policies	Harmonize legal and policy frameworks for R&D	Updated and harmonized R&D-related legal and regulatory frameworks	Number of research-relevant policies reviewed and harmonized	2026–2028	100	GoK	SRI	Parliament, CoG, HEIs, Research Institutions, MDACs and CCIOs
					Number of research-relevant laws and regulations reviewed, harmonized, or enacted	2026–2028	200			
		Develop a research permits and licenses portal		Operational online research permits and licensing portal	Average time reduction in multi-agency research approval processes	2026–2036	500			MDACs and CCIOs
					Existence of an inter-governmental research coordination framework (national-county)	2026–2036	500			
	Outcome 2: Strengthened compliance, ethics, and governance	Structure and harmonize governance and administrative processes for research	Strengthen ethics, biosafety, grievance redress, and public research integrity systems	National compliance, ethics, appeals, and disclosure systems strengthened and regularly reported	Proportion of research-performing institutions compliant with national ethics and biosafety standards	2026–2036	300	GoK and Development Partners	SRI - NACOSTI	MoE - HEIs and Research Institutions
					Number of accredited ethics and biosafety oversight bodies (IRBs / IACUCs)	2026–2036	300			
					Annual State of Research Integrity Report published and tabled	2026–2036	300			
					Existence and utilization rate of a national research appeals and grievance redress mechanism	2026–2036	500			
			Establish time-bound, risk-tiered approval pathways and mutual recognition of clearances	Transparent single-window research authorization and information-sharing system across agencies established	Single-window research permitting system established and operational	2026–2031	500		SRI-NRF, NACOSTI and KeNIA	ICTA, HEIs, Research Institutions, other MDACs and CCIOs
					National STI observatory established and operational	2026–2031	500			
			Develop and operationalize a national STI observatory	Enhanced evidence-based decision-making on research approvals and policies	Number of user interactions with the national STI observatory	2026–2031	100			
			Strengthen ethics, biosafety, grievance redress, and public research integrity systems	National compliance, ethics, appeals, and disclosure systems strengthened and regularly reported	Proportion of publicly funded research projects disclosing funding, IP ownership, and conflicts of interest	2026–2036	300			HEIs, Research Institutions, MDACs and CCIOs

Pillar	Outcome	Objective	Strategy	Expected Output	Key Performance Indicator	Timeframe	Estimated Cost (Ksh Million)	Funding Source(s)	Responsibility Lead	
		Strengthen systematic use of research and RIA in policy and legislative processes	Institutionalize evidence use, regulatory impact assessment, and policy reporting mechanisms	National evidence-use guidelines, RIA practice, and public policy evidence reporting institutionalized	Proportion of new national policies and regulations accompanied by RIA and evidence citation	2026–2036	200	GoK	Parliament, MDACs and CCIOs	
					Number of MDACs and CCIOs trained on evidence synthesis, appraisal, and RIA	2026–2036	500	GoK and Development Partners	HEIs, Research Institutions, MDACs and CCIOs	
					National guidelines on evidence use in policy and legislation established and operationalized	2026–2036	200	GoK	SRI	Parliament, MDACs and CCIOs
					Number of parliamentary committees and Cabinet sub-sectors citing research evidence in deliberations	2026–2036	200			
					Annual State of Evidence in Public Policy Report published	2026–2036	200			
					Proportion of publicly funded R&D projects implementing approved ESG and sustainability standards	2026–2036	200	HEIs, Research Institutions, MDACs and CCIOs		
					Total for Pillar 5					

Annex II: Monitoring and Evaluation Matrix

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 1: Sustainable Research Financing	Outcome 1: Enhanced national investment in R&D	Objective 1: Increase government allocation to R&D in line with the STI Act, Cap. 511 target of 2% of GDP	National R&D expenditure as a proportion of GDP	0.8%	1.4%	2.0%	KNBS and SDSRI - NRF	KNBS national accounts and NRF consolidated reporting	Annual
			% increase in annual national R&D budgetary allocations	To be established from Treasury baseline	50% (increase over baseline)	150% (increase over baseline)	The National Treasury and SDSRI - NRF	National Treasury budget estimates, Controller of Budget and NRF finance reports	Annual
			Proportion of MDACs and CCIOs with a dedicated R&D budget line	25%	50%	100%	National Treasury and SDSRI-NRF	National Treasury budget estimates, NACOSTI mapping reports and MDACs and CCIOs budget implementation reports	Annual
			Proportion of county governments with a dedicated R&D budget line	10% (to verify through county budget review)	50%	100%	County Governments - County Treasuries and SDSRI	County budget estimates, Controller of Budget county reports, and Council of Governors	Annual
			Average county expenditure on R&D as a proportion of total county budget (national aggregate)	<0.8%	1.0%	2.0%	County Governments - County Treasuries, and SDSRI	County financial statements, Controller of Budget reports, KNBS, and National Treasury	Annual
			Operational national R&D expenditure tracking and reporting system	0 (not operational)	System established and annual reporting operationalized	Integrated tracker with public dashboard	National Treasury and SDSRI -NRF	NRF, NACOSTI, National Treasury, and ICT Authority	Annual / real-time portal
			Total value of R&D funds mobilized from non-exchequer sources annually (Ksh)	Baseline to be consolidated by NRF and National Treasury	Ksh. 10 billion per year	Ksh. 30 billion per year	National Treasury and SDSRI - NRF	NRF annual reports, and National Treasury records	Annual
			Number of bankable PPP research-related projects approved and implemented nationally	Baseline to be mapped by PPP Directorate	10	25	SDSRI - NRF;	PPP Directorate and NRF	Annual
			Number of co-financing and matching-fund agreements signed	Baseline to be established by NRF	15	40	SDSRI - NRF	NRF annual reports - partnership registry	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 1: Sustainable Research Financing	Outcome 2: Diversified and innova- tive financing instruments established and opera- tionalized	Objective 1: Establish new financing mechanisms to supplement exchequer funding	National research and innovation loan / credit facility established and operational	0	Facility established and a cumulative Ksh. 5 billion disbursed	Facility operational and a cumulative Ksh. 20 billion disbursed	National Treasury and SDSRI - NRF	NRF, National Treasury and implementing finance partner	Annual
			Number of beneficiaries accessing research and innovation credit support	0	500 cumulative	2,000 cumulative	National Treasury and SDSRI - NRF	Facility records, and implementing finance partner reports	Annual
			Value of research and innovation loans disbursed through the facility (Ksh)	0	A cumulative Ksh. 5 billion	A cumulative Ksh. 20 billion	National Treasury and SDSRI - NRF	Facility records, National Treasury, and partner bank reports	Annual
			Proportion of eligible entities remitting the National Research Levy	Baseline to be established by NRF/NACOSTI/KRA	70%	100%	National Treasury and SDSRI - NRF	KRA, National Treasury, and SDSRI - NRF and NACOSTI	Annual
			Annual revenue mobilized from research levies (Ksh)	Provisional baseline Ksh. 265 million (to verify)	Ksh. 5 billion	Ksh. 15 billion	National Treasury and SDSRI - NRF	National Treasury, KRA and NRF	Annual
			Value of verified diaspora investment in national research and innovation (Ksh)	Baseline to be established by MFA/Treasury/NRF	A cumulative Ksh. 5 billion	A cumulative Ksh. 15 billion	National Treasury and SDSRI - NRF	Ministry of Foreign and Diaspora Affairs and National Treasury and NRF	Annual
			Value of philanthropic contributions and endowments to R&D mobilized annually (Ksh)	Provisional baseline Ksh. 265 million (to verify)	Ksh. 1.5 billion	Ksh. 3 billion	SDSRI - NRF	NRF annual reports, and foundation reports,	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 1: Sustainable Research Financing	Outcome 3: Strengthened transparency and account- ability in R&D financing	Objective 1: Establish transparent and account- able mech- anisms for mobilization, allocation, and utilization of research resources	Integrated e-portal for R&D grant management operation- alized	Partial digital systems exist and no fully inte- grated national portal	Portal opera- tional and 80% of public grants processed through the portal	100% of public grants pro- cessed through the portal	SDSRI – NRF and NACOSTI;	SDSRI – NRF and NACOSTI, and ICT Authority	Annual / real-time portal
			Proportion of R&D grants managed through the national e-portal	20%	80%	100%	SDSRI - NRF and NACOSTI	NRF / NACOSTI grant manage- ment system	Annual
			Number of independent R&D audit reports published	0	1 annual report	1 annual report sustained	SDSRI - NRF	NRF, and Office of the Auditor-Gen- eral / independent auditors	Annual
			Proportion of organizations adopting Good Financial Grant Practice (GFGP)	To be estab- lished	50%	90%	SDSRI - NRF and NACOSTI	NRF accreditation / assessment and NACOSTI institutional audits	Annual
			Number of public accountability forums on R&D financing held	Low / ad hoc	4	4	SDSRI - NRF	SDSRI - NRF event reports	Annual
	Outcome 4: Equitable and efficient allocation of research resources	Objective 1: Promote equity and inclusivity in allocation of research funds	Proportion of funded R&D pro- grammes aligned to national STI priority areas	To be estab- lished	50%	80%	SDSRI – NRF and NACOSTI	NRF and NACOSTI	Annual
			Dedicated funding quota for marginalized regions and emerg- ing research areas	Not formalized	5% of total national R&D financing enve- lope	10% of total national R&D financing envelope	SDSRI - NRF	NRF policy instruments and budget circulars	Annual
			Proportion of national R&D fund- ing allocated to marginalized regions and emerging thematic areas	To be estab- lished	5%	10%	SDSRI - NRF	NRF grant portfolio analysis	Annual
			Compliance rate with approved funding quotas for women, youth, and PWDs in R&D funding	To be estab- lished	80%	100%	SDSRI - NRF	NRF grant management reports	Annual
			Proportion of national R&D funding allocated to projects led by women, youth, PWDs, and marginalized groups	To be estab- lished	5% of total budget	7% of total budget	SDSRI - NRF	NRF portfolio reports	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 2: Research Infrastructure and Digital Systems			Number of indigenous knowledge and underfunded thematic areas supported annually	To be established	5	10	SDSRI - NRF	SDSRI - NRF programme records	Annual
			Proportion of nationally funded R&D projects resulting in commercialized outputs	To be established	10%	20%	SDSRI - NRF	NRF, KeNIA and universities / RPOs	Annual
			Number of operational state-of-the-art national research laboratories	To be established	5	6	SDSRI - NACOSTI	SDSRI - NACOSTI	Annual
			Proportion of counties hosting research centres of excellence	6.3%	40%	70%	SDSRI - NACOSTI and county governments	NACOSTI and county governments' reports	Annual
	Outcome 1: Modernized and accessible research infrastructure	Objective 1: Establish and upgrade national, regional, and county research facilities	Average number of research-related programmes hosted per county	To be established	4	5	SDSRI - NACOSTI and Universities/RPOs	County government reports and SDSRI county coordination records	Annual
			Proportion of county governments participating in joint / collaborative R&D programmes	To be established	10%	20%	SDSRI - NACOSTI and Universities/RPOs	SDSRI, Council of Governors and county governments' reports	Annual
			Number of research laboratories upgraded	19	30	45	SDSRI - NRF and NACOSTI	NRF, NACOSTI, and institutional reports	Annual
			Number of institutions with a formal research hub sharing policy operationalized	To be established	30	45	SDSRI - NACOSTI	Universities / RPOs and NACOSTI	Annual
	Outcome 2: Integrated and interoperable digital research ecosystem	Objective 1: Establish national digital infrastructure for research collaboration	Number of operational HPC infrastructure facilities supported	0	2	5	SDSRI - NRF	ICT Authority and SDSRI - NRF	Annual
			Proportion of research programmes / projects utilizing HPC facilities annually	0	30%	80%	ICT Authority, SDSRI and Universities/RPOs	ICT Authority and institutional surveys	Annual
			Proportion of research and academic institutions with high-speed internet connectivity	To be established	60%	100%	ICT Authority, SDSRI and Universities/RPOs	ICT Authority and universities / RPOs	Annual
			Proportion of research institutions with secure research-related digital systems	To be established	30%	75%	ICT Authority, SDSRI, and Universities/RPOs	ICT Authority, and institutional ICT audits	Annual
			Percentage reduction in research-related cybersecurity breaches	To be established	50%	80%	ICT Authority, SDSRI, and Universities/RPOs	ICT Authority, and institutional cyber incident logs	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 3: Human Capital and Institutional Capacity		Objective 1: Increase the number of postgraduate and postdoctoral researchers across priority disciplines	Number of postgraduate students funded through scholarships or fellowships in prioritized research fields	To be established	200	400	SDSRI - NRF	NRF, universities, and scholarship reports	Annual
			Percentage increase in scalable postgraduate research-related outputs	To be established	30%	50%	SDSRI - NRF	Universities, institutional surveys, and NRF reports	Annual
			Retention rate of postdoctoral researchers in research institutions and academia	To be established	50%	70%	Universities/ RPOs and SDSRI	Universities / RPOs and tracer studies	Annual
			Number of early-career researchers funded	To be established	30	50	SDSRI - NRF	NRF and institutional programme reports	Annual
	Outcome 1: Expanded and skilled research workforce	Objective 2: Strengthen mentorship and career pathways for young and emerging researchers	Number of publications / grants secured by beneficiaries	To be established	20	40	Universities/ RPOs and SDSRI	Beneficiary tracer reports, and institutional records	Annual
			Number of mentorship networks established	To be established	30	100	Universities/ RPOs and SDSRI	Programme reports and institutional records	Annual
			Number of mentees benefiting annually	To be established	30	70	Universities/ RPOs and SDSRI	Programme reports and institutional records	Annual
			Number of researchers trained and certified annually	To be established	200	500	SDSRI -NRF and Universities/ RPOs	Training reports	Annual
			Success rate in grant applications by trained beneficiaries	To be established	20%	30%	SDSRI - NRF	NRF, and institutional grant records	Annual
			Number of curricula revised to include research and innovation components	To be established	20	50	Universities/ RPOs and SDSRI	Curriculum review reports, universities, and TVET authorities	Annual
			Number of students exposed to research and innovation at early stages	To be established	200	500	Universities/ RPOs and SDSRI	Institutional reports and programme records	Annual
			Proportion of publicly funded research outputs accessible through open-access repositories	To be established	20%	30%	Universities/ RPOs and SDSRI	Institutional repository data and universities / RPOs	Annual
			Number of international research and innovation cooperation agreements signed and operationalized	To be established	2	4	Ministry of Foreign and Diaspora Affairs and SDSRI	Ministry of Foreign and Diaspora Affairs and SDSRI annual reports	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 3: Human Capital and Institutional Capacity			Value of international research and innovation funding mobilized (Ksh)	To be established	Ksh. 50 million	Ksh. 70 million	SDSRI - NRF and NACOSTI;	NACOSTI STI reports, NRF and development partner records	Annual
			Number of Kenyan research institutions / scientists participating in international consortia or global networks	To be established	10	20	Universities/ RPOs and SDSRI	Institutional reports and SDSRI	Annual
			Number of STI attachés or science envoys deployed in Kenyan foreign missions and multilateral organizations	To be established	10	20	Ministry of Foreign and Diaspora Affairs and SDSRI	Ministry of Foreign and Diaspora Affairs	Annual
	Outcome 2: Strengthened institutional governance and professional development	Objective 1: Establish and operationalize RMOs in HEIs and research institutions	Number of HEIs / RIs with functional Research Management Offices	To be established	45	50	Universities/ RPOs and SDSRI	SDSRI, universities and research institutions	Annual
			Number of intellectual property rights registered annually	To be established through KIPI baseline	50	75	KeNIA; KIPI; Universities/ RPOs	KIPI; KeNIA; institutions	Annual
			Number of spin-offs / start-ups created from research	To be established	10	15	KeNIA, KIPI, and Universities/ RPOs	KeNIA, universities / RPOs and tracer surveys	Annual
			Number of governance / leadership programmes delivered	To be established	1	2	KeNIA, KIPI, and Universities/ RPOs	SDSRI - KeNIA; and programme reports	Annual
			Number of research leaders / managers trained on governance and leadership	To be established	100	200	SDSRI - NRF and Universities/ RPOs	Training reports	Annual
			Number of awards issued annually for research and innovation excellence	To be established	20	30	SDSRI - NRF	NRF, KeNIA and award reports	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 4: Industry Linkages and Societal Impact	Outcome 1: Structured and sustainable academia-industry partnerships	Objective 1: Strengthen academia-industry collaboration	Academia-industry collaboration guidelines developed and operational	0	1	1 sustained	KeNIA, KIPI and Universities/RPOs	SDSRI - KeNIA and annual reports	Annual
			Number of academia-industry research collaboration agreements	To be established	5	10	KeNIA, Universities/RPOs and MDACs	HEIs, Ris and annual reports	Annual
			Percentage increase in research outputs commercialized	To be established	10%	15%	KeNIA, Universities/RPOs and MDACs	HEIs, Ris, and commercialization surveys	Annual
			National platform for structured academia-industry collaboration established	0	1	1 sustained	KeNIA, KIPI and Universities/RPOs	SDSRI -; KeNIA and annual reports	Annual
			Number of joint research projects initiated annually	To be established	10	12	KeNIA, Universities/RPOs and MDACs	HEIs, Ris and surveys	Annual
			Number of innovations / products commercialized	To be established	5	10	KeNIA, KIPI and Universities/RPOs	KeNIA, institutions and annual reports	Annual
			Number of technology and innovation parks supported	To be established	10	20	KeNIA, KIPI, and Universities/RPOs	SDSRI- KeNIA, and county / institutional reports	Annual
			Number of spin-off entities hosted	To be established	2	4	KeNIA, Universities/RPOs and MDACs	Innovation park / incubator reports	Annual
			Number of commercialization grants awarded annually	To be established	5	15	SDSRI - NRF	NRF, and KeNIA annual reports	Annual
			Proportion of TTCs / incubation centres generating new research-based enterprises	To be established	20%	25%	KeNIA, Universities/RPOs and MDACs	TTC / incubation centre reports	Annual
	Outcome 2: Strengthened technology transfer, commercialization, and innovation ecosystems	Objective 1: Promote commercialization of research outputs	Number of TTCs established	To be established	10	20	KeNIA, KIPI, and Universities/RPOs	SDSRI - KeNIA and institutional reports	Annual
			Number of patents, licenses, or technologies transferred	To be established	20	30	KeNIA, KIPI and Universities/RPOs	KIPI, and KeNIA annual reports	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 4: Industry Linkages and Societal Impact	Outcome 3: Enhanced societal engagement and evi- dence-based policymaking	Objective 1: Document and mainstream community in- novations and indigenous knowledge systems	Number of national competitions / exhibitions held	2 national events	3	3 sustained	KeNI, Universities/RPOs and MDACs	Annual reports	Annual
			Number / proportion of community innovations showcased and adopted	To be established	10% of exhibitors adopted	15% of exhibitors adopted	KeNIA, Universities/RPOs and MDACs	Annual reports and exhibition tracking	Annual
			Framework for documenting and mainstreaming community innovations established and operational	0	1	1 sustained	KeNIA, Universities/RPOs and MDACs	SDSRI annual reports	Annual
			Number of policy briefs backed by research published or adopted annually	To be established	3	3 sustained	KeNIA, Universities/RPOs and MDACs	SDSRI and MDAC reports	Annual
			Number of science communication trainings conducted	1	2	2 sustained	SDSRI - NRF and Universities/RPOs	Training reports	Annual
			Number of HEIs and research institutions mainstreaming science communication	To be established	250	450	SDSRI - NA-COSTI	SDSRI - NACOSTI	Annual
			Number of partnerships established for science communication and public uptake	To be established	3	3 sustained	KeNIA, Universities/RPOs, and MDACs	SDSRI	Annual
			Number of public-private-civil society collaborative outreach events held	To be established	4	4 sustained	KeNIA, Universities/RPOs and MDACs	SDSRI	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 5: Policy, Legal and Regulatory Frameworks	Outcome 1: Harmonized R&D-related policy, legal, and regulatory frameworks	Objective 1: Undertake a comprehensive audit and update of research-related laws and policies	Number of research-relevant policies reviewed and harmonized	To be established	5	8	SDSRI - NACOSTI and MDACs	Policy repository and SDSRI	Annual
			Number of research-relevant laws and regulations reviewed, harmonized, or enacted	To be established	2	4	SDSRI, Parliament MDACs, and CCIOs	SDSRI, Kenya Laws and Parliament records	Annual
			Average time reduction in multi-agency research approval processes	To be established	21 days	14 days	SDSRI - NACOSTI, MDACs and CCIOs	Service delivery reports and permitting system logs	Annual
			Existence of an inter-governmental research coordination framework (national-county)	0	1 established	1 operationalized	SDSRI - NACOSTI, MDACs and CCIOs	SDSRI	One-off with annual status review
	Outcome 2: Strengthened compliance, ethics, and governance integrity	Objective 1: Structure and harmonize governance and administrative processes for research	Proportion of research-performing institutions compliant with national ethics and biosafety standards	To be established	80%	100%	SDSRI - NACOSTI	SDSRI - NACOSTI	Annual
			Number of accredited ethics and biosafety oversight bodies (IRBs / IACUCs)	48	80	200	SDSRI - NACOSTI	SDSRI - NACOSTI	Bi-annual
			Annual State of Research Integrity Report published and tabled	0	1	1 sustained	SDSRI - NACOSTI, MDACs and CCIOs	SDSRI	Annual
			Existence and utilization rate of a national research appeals and grievance redress mechanism	To be verified	20% utilization	50% utilization	SDSRI - NACOSTI, MDACs and CCIOs	SDSRI	Annual
			Proportion of publicly funded research projects disclosing funding, IP ownership, and conflicts of interest	To be established	30%	50%	SDSRI - NRF	SDSRI - NRF and institutional records	Annual
			Proportion of publicly funded R&D projects implementing approved ESG and sustainability standards	To be established	2%	5%	SDSRI - NACOSTI, MDACs and CCIOs	SDSRI annual reports	Annual
			Single-window research permitting system established and operational	0	1 established	1 operationalized	SDSRI - NACOSTI, MDACs and CCIOs	SDSRI annual reports	Annual

Pillar	Outcome	Objective	Indicator	Baseline (2023/24)	Mid-Term Target (2030/31)	End-Term Target (2036/37)	Responsibility	Source of Data / Verification	Frequency
Pillar 5: Policy, Legal and Regulatory Frameworks			National STI observatory established and operational	0	1 established	1 operationalized	SDSRI -NACOS-TI, MDACs and CCIOs	SDSRI annual reports	Annual
			Number of user interactions with the national STI observatory	0	~10	~12	SDSRI - NRF	SDSRI - NRF	Annual
	Objective 2: Strengthen systematic use of research and RIA in policy and legislative processes		Proportion of new national policies and regulations accompanied by RIA and evidence citation	To be established	30%	60%	SDSRI -NACOS-TI, MDACs and CCIOs	SDSRI, Cabinet Office / policy quality reviews	Annual
			Number of MDACs and CCIOs trained on evidence synthesis, appraisal, and RIA	0	30	58	SDSRI - NACOS-TI, MDACs and CCIOs	SDSRI	Annual
			National guidelines on evidence use in policy and legislation established and operationalized	0	1 established	1 operationalized	SDSRI - NACOS-TI, MDACs and CCIOs	SDSRI	Annual
			Number of parliamentary committees and Cabinet sub-sectors citing research evidence in deliberations	0	5	10	SDSRI, Parliament, MDACs and CCIOs	SDSRI, and Parliament liaison reports	Annual
			Annual State of Evidence in Public Policy Report published	0	1	1 sustained	SDSRI - NACOS-TI, MDACs and CCIOs	SDSRI	Annual

Annex III: Stakeholder and Institutional Coordination Framework

Key Stakeholder / Actor	Core Role	Financing Role	Capacity Strengthening Role	Coordination / Accountability Role
National Government	Provides policy leadership, legal oversight, national priority setting, standards, and strategic direction for research, science, technology and innovation.	Budgetary allocation , establish national budget lines, provide fiscal incentives, and mobilize domestic public resources for R&D.	Develop national frameworks for researcher development, institutional strengthening, digital systems, and infrastructure modernization; and support strategic training and system-wide capability development.	Provide whole-of-government oversight through the State Department responsible for RSTI and relevant agencies; set reporting standards and monitor overall implementation.
County Governments	Integrate research and innovation into devolved planning and service delivery; identify local priorities and facilitate applied research uptake.	Provide co-financing through county budgets, CIDPs, ADPs, and local innovation support windows.	Build county-level technical capacity for research planning, budgeting, implementation, data use, and innovation management; support county research hubs and local mentorship systems.	Coordinate local implementation, align county priorities with national frameworks, and report on devolved uptake and outcomes.
Academia and Research Institutions	Conduct research, generate evidence, train postgraduate researchers, host laboratories, and produce publications, prototypes, and innovations.	Access and manage grants, provide institutional co-investment where feasible, and manage research infrastructure and programmes.	Strengthen human capital through teaching, supervision, mentorship, grants management, ethics systems, laboratory management, and institutional governance improvement.	Ensure quality assurance, ethical compliance, performance reporting, and translation of research into policy, technology, and skills.
Industry and Private Sector	Define market-driven research challenges, absorb innovations, support commercialization, and strengthen enterprise uptake.	Provide co-funding, venture support, PPP participation, CSR contributions, incubation support, and in-kind technical resources.	Support industrial attachments, enterprise-based learning, commercialization readiness, product development skills, and incubation for innovation uptake.	Participate in agenda setting, co-design of research calls, commercialization pathways, and accountability for uptake of applied research outputs.
Civil Society	Represent citizen interests, advocate for inclusion, ethics, transparency, and social accountability in research and innovation.	Shall provide catalytic support, community-level co-financing, advocacy resources, and implementation support for inclusive initiatives.	Strengthen community awareness, participatory research capacity, citizen engagement, and inclusion of marginalized groups in research processes.	Provide social accountability, support public participation, and monitor whether research addresses community needs and equity concerns.
Development Partners	Provide catalytic finance, technical support, international partnerships, and knowledge exchange aligned with national research priorities.	Support grants, blended finance, infrastructure, institutional reform, and strategic system strengthening investments.	Provide technical assistance, training, institutional development, digital systems support, infrastructure upgrading, and international research collaboration opportunities.	Align external support with national frameworks, reduce fragmentation, and participate in joint review, reporting, and learning mechanisms.

Key Stakeholder / Actor	Core Role	Financing Role	Capacity Strengthening Role	Coordination / Accountability Role
Diaspora	Contribute expertise, mentorship, international linkages, collaborative research, and science diplomacy support.	Support philanthropy, co-investment, visiting fellowships, diaspora financing instruments, and collaborative research funding.	Provide mentorship, joint supervision, skills transfer, visiting scholar programmes, and exposure to global research and innovation practice.	Strengthen Kenya's international research linkages, support knowledge transfer, and contribute to accountability through global partnerships and networks.
Media	Disseminate research findings, shape public understanding, and support visibility of research, innovation, and policy issues.	Provide indirect support through visibility, advocacy, and public communication partnerships.	Strengthen science communication, public literacy on research, and uptake of evidence by translating technical findings into accessible formats.	Enhance transparency through public reporting, facilitate public scrutiny, and support dissemination of performance and impact information.
General Public	Beneficiaries, knowledge users, and contributors to public participation, citizen science, and societal validation of research priorities.	Contribute indirectly through taxes, civic oversight, and participation in locally driven innovation ecosystems.	Benefit from awareness programmes, citizen engagement, local innovation learning, and participatory knowledge exchange.	Provide public legitimacy, participate in consultation and validation processes, and hold institutions accountable for relevance, inclusion, and impact.

Annex IV: List of Flagship projects

Pillars	Flagship Programmes/Projects	Actors
Pillar 1: Sustainable research financing	An integrated digital system for tracking and reporting R&D expenditure	TNT, SDSRI -NRF and Development Partners
	Loan scheme for researchers and innovators	TNT, SDSRI – NRF and KeNIA, MoE, Financial Institutions, and Line Ministries
Pillar 2: Research infrastructure and digital systems	Develop and equip state-of-the-art research laboratories for shared use	SDSRI – NRF and NACOSTI, MoE, Research Institutions, Line Ministries, and Development Partners
	Upgrading of labs and hubs aligned to the national research agenda	SDSRI – NRF and NACOSTI, MoE, Research Institutions, county governments and Line Ministries
	National digital infrastructure for research collaboration	SDSRI, MoE, MICDE - ICT Authority, and Development Partners
	Provision of high-speed internet connectivity	MICDE - ICT Authority, SDSRI, Line Ministries and Development Partners
Pillar 3: Human capital and institutional capacity	National postgraduate scholarships and postdoctoral fellowship schemes	MoE, SDSRI – NRF, Research Institutions and Development Partners
	RMOs in HEIs and research institutions across the country	MoE – CUE and HEIs, SDSRI - NRF, KeNIA, and NACOSTI, and KIPi
Pillar 4: Industry linkages and societal impact	National platform for structured collaboration between research and industry	SDSRI – NACOSTI and NRF, MoE and Line Ministries
	Technology and innovation parks across priority sectors	SDSRI – NRF and KeNIA, MoE, MICDE, Line Ministries and Development Partners
	TTOs to support IP protection and commercialization	SDSRI – KeNIA and NRF, MITI – KIPi, MoE – HEIs, Research Institutions and Development Partners
	National science communication programme	SDSRI, MoE, MICDE, Research Institutions, Media, and Line Ministries
Pillar 5: Policy, legal and regulatory frameworks	National single window Research permitting system	SDSRI - NACOSTI, MOE – HEIs, Research Institutions and Line Ministries
	National STI Observatory	SDSRI, MICDE, MoE – HEIs, and Line Ministries



THE NATIONAL RESEARCH FUND
NACOSTI Plaza, 3rd Floor, Upper Kabete
P.O. Box 26036 - 00100, Nairobi, Kenya
Tel: +254 20-4403386
Email: info@nrf.go.ke
www.nrf.go.ke