REPUBLIC OF KENYA

KENYA INDUSTRIAL RESEARCH AND DEVELOPMENT INSTITUTE

STRATEGIC PLAN
2023-2027

Research | Innovate | Commercialize

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STRATEGIC PLAN 2023-2027

Research | Innovate | Commercialize

Vision

Quality industrial research for competitive and sustainable industries

Mission

Provide innovative technologies for industry through research and dissemination of findings

Core Values

Integrity | Sustainability | Team work | Creativity | Customer focus

Motto

Research | Innovate | Commercialize

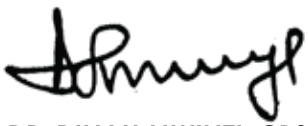
FOREWORD

The world is witnessing unprecedented changes in its socio-economic fortunes driven by rapid developments in frontier technologies, encompassed by the 4th and 5th Industrial Revolution (IR). Nonetheless, the manufacturing agenda of several sub-Saharan Africa countries, including Kenya, is still largely focused on low technology industries. In order for the manufacturing sector to effectively contribute to the national Gross Domestic Product (GDP) and socio-economic development, there is need to intensify technical support in medium and high technology industries while maintaining the productivity and competitiveness of low technology industries. It is thus the responsibility of national industrial research organizations, such as KIRDI, to provide industry with appropriate innovative solutions that will support long term growth.

The country's manufacturing sector is recognized as a key driver for economic growth due to its ability to create direct and indirect jobs; and backward and forward linkages with other sectors, such as agriculture. However, performance of the manufacturing sector has declined over the last five years, with contribution to GDP decreasing from 8.4 percent in 2017 to 7.2 percent in 2022. The low level of manufacturing value added per capita is partly due to low rate of conversion of Science Technology and Innovation (STI) outputs into new or improved products and processes. In addition, external and internal shocks including, high cost of production inputs, inadequate infrastructure, dominance of low technology manufacturing activities, weak innovation ecosystem, skills deficits and limited access to affordable credit also hamper industrial growth.

Raising the manufacturing's sector share of GDP is hinged on increasing productivity and competitiveness of local industries. Industrial productivity and competitiveness can only be guaranteed by mainstreaming STI in industrial processes and structures. STI is important in supporting the manufacturing sector through knowledge transfer to create new and improved products and processes. This has been recognized in several national, regional and industrial policy agendas. Countries that have effectively translated STI outputs into improved products and processes are able to achieve faster economic growth and improve their global competitiveness. In addition, countries with strong manufacturing capabilities and diversified industrial sectors are better able to weather economic downturns.

The government aims to increase manufacturing contribution to GDP from 7.2 percent in 2022 to 15 percent in 2027 and 20 percent in 2030 by enhancing resource allocation to medium and high technology industries in five priority sectors: agro-processing, MSME economy, housing and settlement, healthcare and digital superhighway. This Strategic Plan seeks to entrench KIRDI's STI programmes within the national industrial agenda in order to contribute to socio-economic development. This document emphasizes on innovation, sustainability, skills development and adoption of fit-for purpose technologies for sustainable development. This will be achieved by investing in infrastructure, human capacity development, knowledge management and strategic partnerships.



DR. DINAH MWINZI, CBS
CHAIRPERSON, KIRDI BOARD OF DIRECTORS

PREFACE AND ACKNOWLEDGEMENTS

The Constitution of Kenya (2010) recognizes the importance of investing and integrating STI into social, economic and governance policies and strategies to improve the socio-economic fabric of the country. Chapter 2, Article 11(2)(b) states that the State shall recognize the role of science and indigenous technology in the development of the nation. In addition, Chapter 2, Article 11(2)(c) states that the State shall promote the intellectual property rights of the people of Kenya. Consequently, I acknowledge the primacy of this document in the development of this Strategic Plan. KIRDI shall utilize STI to support industrial development by providing insights on specific industrial research questions, and development of fit-for-purpose technologies, products and processes.

This Strategic Plan is the first strategy document for KIRDI since enactment of KIRDI Act (2022), which reaffirms our mandate as the only public institution with exclusive mandate to undertake research, development and innovation in industrial and allied technologies, and disseminate research to support industrial development. In developing this Strategic Plan, we made reference to national, regional and international policy documents and agendas on industrial research. The main reference materials that have been used to identify strategic issues and define the goals, KRAs and strategic objectives for the Institute are Kenya Vision 2030, MTP IV, BETA, EAC Vision 2050, AU Agenda 2063 and UN 2030 Agenda for SDG. We are also cognizant of rapid STI developments, encompassed by frontier technologies (also referred to as 4IR), and will strategically position ourselves to acquire and disseminate knowledge in these technologies to local industries.

Despite the detailed exposition of industrial issues in the documents referred to above, we also consulted extensively with diverse internal and external stakeholders to develop this Strategic Plan. In particular, I appreciate the role of the Board of Directors, who set the vision, mission, purpose and core values of this Strategic Plan, and provided leadership and guidance in its development. In addition, I acknowledge the guiding goal set by the State Department for Industry in the Ministry of Investments, Trade and Industry, which seeks to increase the contribution of manufacturing to GDP from 7.2 percent in 2022 to 15 percent by 2027 and 20 percent by 2030. I acknowledge the contributions of our local industry partners, donors and collaborators in identifying, refining and classifying the strategic issues. Finally, I applaud KIRDI management who developed the strategic goals, KRAs, strategic objectives and strategies that would guide this institution in the next four years.

DR.-ING.CALVIN ONYANGO
DIRECTOR - GENERAL

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DEFINITIONS OF CONCEPTS AND TERMINOLOGIES

Common Manufacturing Facility	An industrial support programme in KIRDI that is designed for start-up industrial entrepreneurs that have business ideas but lack complete set of production equipment for commercial operations. The entrepreneurs are allowed to access KIRDI's equipment, facilities (water, space, electricity), technical expertise and technologies on pre-arranged schedules for periods ranging from 3 to 18 months.
Frontier Technologies	Technologies at the intersection of radical scientific breakthroughs and real-world implementation, such as artificial intelligence, big data, quantum computing and cloud computing.
Fourth Industrial Revolution	The latest wave of technological breakthroughs, which comes after the 1st (1760-1840, triggered by steam engine together with the mechanization of simple tasks and the construction of railroads), 2nd (late 19th century-early 20th century, rose with the advent of electricity, the assembly line and mass production), and 3rd (since the 1960s, whose main engines were the development of semiconductors and mainframe computing together with the introduction of personal computers and the internet) industrial revolutions.
Incubation	An industrial support programme in KIRDI that is designed to support entrepreneurs with industrial ideas that can be nurtured into viable commercial enterprises. During incubation, KIRDI personnel help clients optimize production processes and develop new products. Entrepreneurs are also assisted to improve product quality and acquire certification for their products in order to access local and international markets. Through this programme, start-up enterprises are provided with workspace, equipment and technical assistance in KIRDI for periods ranging from 3 to 18 months, depending on the nature of the product or technology involved. The incubation

	programme can also be through outreach support at the entrepreneur's premise (i.e. virtual incubation). Incubatees provide their own raw materials and are charged competitive fees for operations and maintenance of the processing facilities.
Smart Technologies	Refers to digitalization of technologies that did not previously have such capabilities. A technology is considered smart when it is able to communicate with other networked technologies and thereby allow automated or adaptive functionality and remote accessibility.

ACRONYMS AND ABBREVIATIONS

4IR	Fourth Industrial Revolution
ACA	Anti-Counterfeit Authority
AfCFTA	African Continental Free Trade Area
AIA	Appropriation in Aid
AU	Africa Union
BETA	Bottom-up Economic Transformation Agenda
CAIP	County Aggregation and Industrial Park
CAS	Central Analytical Services
CMF	Common Manufacturing Facilities
D-CS	Director, Corporate Services
DG	Director General
D-IATR	Director, Industrial and Allied Technology Research
D-RMP	Director, Resource Mobilization and Partnerships
D-SPC	Director, Strategy, Planning and Compliance
D-TTES	Director, Technology Transfer and Extension Services
EAC	East African Community
EAIRO	East African Industrial Research Organization
EICT-RC	Engineering and Information Communication &Technology Research Centre
EREE-RC	Energy Resources and Energy Efficiency Research Centre
ESCC-RC	Environmental Sustainability and Climate Change Research Centre
FT-RC	Food Technology Research Centre
GDP	Gross Domestic Product
IATR	Industrial and Allied Technologies Research
ICT	Information & Communication Technology
ILPIP-RC	Industrial Linkages, Policy and Intellectual Property Research Centre
IM-RC	Industrial Materials Research Centre
IMB-RC	Industrial Microbiology Research Centre
IP	Intellectual Property
IRC	Industrial Resource Centre
ISO	International Organization for Standardization

ITTO	Industrial Technology Transfer Office
KeBS	Kenya Bureau of Standards
KEPROBA	Kenya Export Promotion and Branding Agency
KES	Kenya Shilling
KIE	Kenya Industrial Estates
KIMBO	Kenya Industrial Management Board
KIPI	Kenya Industrial Property Institute
KIRDI	Kenya Industrial Research and Development Institute
KRA	Key Result Areas
KWRC	KIRDI Western Region Centre
M&E	Monitoring and Evaluation
MDA	Ministry, Department and Agency
MERL	Monitoring, Evaluation, Reporting and Learning
MSEA	Micro and Small Enterprise Authority
MSMEs	Micro, Small and Medium Enterprises
MTP	Medium Term Plan
NACOSTI	National Commission for Science Technology and Innovation
NRF	National Research Foundation
R&D	Research and Development
RECP	Resource Efficient Cleaner Production
RTI	Research, Technology and Innovation
SDG	Sustainable Development Goals
SO	Strategic Objective
STI	Science, Technology and Innovation
STISA	Science, Technology and Innovation Strategy for Africa
TTES	Technology Transfer and Extension Services
UN	United Nations

EXECUTIVE SUMMARY

The 2023-2027 Strategic Plan has been developed to replace the partially implemented 2021-2026 Strategic Plan. The 2023-2027 Strategic Plan which has been redrafted to align to the re-organization of national development priorities as outlined in MTP IV (2023-2028) and BETA.

A participatory approach was adopted in developing the 2023 -2027 Strategic Plan. This entailed holding workshops and receiving memoranda from internal and external stakeholders. Analysis of the Institute's performance during the previous implementation period was undertaken and lessons learnt documented. Evaluation of the Institute's operating environment undertaken focusing both on internal and external environment was carried out. An extensive stakeholder analysis was carried out to map out key stakeholders and their likely influence to the institutional performance.

The Institute has identified four KRAs and five strategic objectives in response to the strategic issues identified in the situational analysis. The KRAs and strategic objectives will guide implementation of the strategic plan in order to support the local manufacturing sector.

KRA 1: Manufacturing Value Addition

SO1.1: Enhance value addition to agricultural, natural and blue economy resources

KRA 2: Engineering and Frontier Technologies

SO2.1: Adopt smart technologies for production of industrial materials and machines

SO2.2: Promote adoption of green manufacturing technologies

KRA 3: Industrial Technology Transfer

SO3.1 Enhance dissemination and adoption of industrial technologies

KRA 4: Institutional Capacity

S04.1: Strengthen institutional capacity to deliver mandate

Interventions to be pursued under each of the strategic objectives were formulated and an implementation plan developed. The Institute requires approximately KES 9.5 billion to achieve the identified goals during the implementation period. The principal source of funds to actualize the activities set in this Strategic Plan will be the Government of Kenya. However, a robust resource mobilization plan has also been developed to ensure consistent and diverse funding streams. Finally, a MERL framework for tracking the implementation of the Strategic Plan was established.

CHAPTER ONE

INTRODUCTION

This chapter highlights the rationale for strategic planning in achieving organisational success. It reviews national, regional and international industrial policies and strategies that are relevant to the mandate of KIRDI. The chapter also provides a brief history of the organisation and the methodology adopted in developing the strategic plan.

1.1 STRATEGY AS AN IMPERATIVE FOR ORGANIZATIONAL SUCCESS

A strategic plan helps to define the long-term direction of an organization in the form of the vision and mission and in establishing realistic goals and objectives within the context of the prevailing business environment. A strategic plan also ensures that the organizational activities are aligned and geared towards achievement of the set goals and objectives in an effective and efficient manner. In addition, the strategic planning process instills a shared sense of responsibility and commitment by employees thereby bringing together all members of an organization and its stakeholders to contribute towards the success of the organization.

This Strategic Plan is the first strategy document for KIRDI since enactment of KIRDI Act (2022), which reaffirms our mandate to undertake research, development and innovation in industrial and allied technologies, and disseminate research to support industrial development. Achievement of this mandate can only be tied to a strategic planning process that identifies organizational goals and establishes a measurement framework on realization of milestones and key actions to address deviations from the pre-determined course. The KIRDI Strategy 2023 -2027 outlines our key focus areas for the planned period which are to: promote innovation in bio-industries; enhance industrial manufacturing capabilities; advance sustainable industrial production and processes; and enhance organizational capacity. The focus areas address strategic issues on value addition, productivity, competitiveness, sustainability and efficiency in service delivery.

Through the KIRDI Strategy 2023-2027, the top management seeks to entrench KIRDI's STI programmes within the national industrial agenda thus contributing to national socio-economic development. To ensure organizational success, management will put emphasis on innovation, sustainability, skills development and adoption of fit-for purpose technologies. This will be achieved by investing in infrastructure, human capacity development, knowledge management and strategic partnerships.

1.2 THE CONTEXT OF STRATEGIC PLANNING

The development of this strategic plan has taken into consideration national, regional and international development priorities, frameworks and policies. The major ones that are relevant to KIRDI's mandate are outlined below.

1.2.1 United Nations 2030 Agenda for Sustainable Development Goals

The UN 2030 Agenda for Sustainable Development Goals, adopted by all UN Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet. It comprises 17 SDGs. The Institute will position itself to contribute to SDG 9 which aims to *build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*. Specific targets of SDG 9 that relate to industrialization include:

a. SDG 9.2 Promote inclusive and sustainable industrialization, and by 2030 raise significantly industry's share of employment and GDP in line with national circumstances, and double its share in least developed countries.
b. SDG 9.3 Increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services including affordable credit and their integration into value chains and markets.
c. SDG 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally-sound technologies and industrial processes, all countries taking action in accordance with their respective capabilities.
d. SDG 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, particularly developing countries, including by 2030 encouraging innovation and increasing the number of R&D workers per one million people and public and private R&D spending.
e. SDG 9.b Support domestic technology development, research and innovation in developing countries including by ensuring a conducive policy environment for *inter alia* industrial diversification and value addition to commodities.

1.2.2 African Union Agenda 2063

The AU Agenda 2063 is a fifty year (2013-2063) shared framework for inclusive growth and sustainable development for Africa. The AU Agenda 2063 has set seven aspirations to be pursued and achieved namely:

Aspiration 1: A prosperous Africa based on inclusive growth and sustainable development.
Aspiration 2: An integrated continent, politically united.
Aspiration 3: Good governance, democracy, human rights, justice and rule of law.
Aspiration 4: A peaceful and secure Africa.
Aspiration 5: Strong cultural identity, values and ethics.
Aspiration 6: People driven development.
Aspiration 7: A strong and influential global player and partner.

KIRDI will contribute in the actualization of *Aspiration 1*, which seeks to create shared prosperity through social and economic transformation, sustainable resource management, and human capital development. Aspiration 1 seeks to create a knowledge-based society that is underpinned by STI, increase industrial productivity and competitiveness, and promote sustainable production systems. To realize these aspirations African countries are expected to prioritize STI driven-

manufacturing and economic diversification. The flagship programmes that have been operationalized from Agenda 2063 include AfCFTA and STISA.

AfCFTA aims at creating a single African market for goods and services facilitated by free movement of persons, capital and investment to deepen economic integration, promote and attain sustainable and inclusive socio-economic development, gender equality, industrialization, agricultural development, food security, and structural transformation. KIRDI's role in realization of AfCFTA strategy will be to support and promote linkages between MSMEs and established national, regional and global production value chains, support technology absorption and productivity gains by MSMEs and support development of competitive domestic products for AfCFTA markets through product diversifications and upgrade to meet quality standards and market needs.

The STISA-2024 is designed to respond to the need of transforming Africa into a knowledge-based and innovation-led society. It is the first of the ten-year incremental phasing strategy with the objective of mainstreaming STI in critical sectors of the economy such as agriculture, energy, environment, health, infrastructure development, mining, security and water. This will create a strong base for enhanced efficiency, sustained growth and promotion of value addition in goods and services. The strategy is anchored on six priority areas that will contribute to the achievement of AU Agenda 2063, namely, eradication of hunger and achieving food security, prevention and control of diseases, communication (physical and intellectual mobility), protection of our space, live together-build the society, and wealth creation. The four pillars of STISA-2024 are building and /or upgrading research infrastructure, enhancing professional and technical competencies, promoting entrepreneurship and innovation, and providing an enabling environment for STI development in Africa. KIRDI will utilize the four pillars to support industrial development in Kenya and establish partnerships with other institutions in the continent.

1.2.3 EAC Vision 2050

The EAC Vision 2050 is premised on the collective commitment of the EAC Partner States to fast-track integration towards a political federation. The goal of EAC Vision 2050 is to transform EAC into an upper–middle income region within a secure and politically united East Africa based on the principles of inclusiveness and accountability. The industrialization pillar of EAC Vision 2050 aims to leverage industrialization for structural transformation and improved intra-regional and global trade. Industrial sector transformation is poised to be the main driver of economic growth. Its foundation is the strong forward and backward linkages with other important economic sectors such as agriculture, because it offers high prospects for employment creation especially in labour-intensive industries, is an attractive magnet for technology transfer and attraction of FDI, and offers high prospects for integrating EAC into the global economy.

The manufacturing agenda of EAC Vision 2050 is based on the EAC Industrialization Policy (2012-2032) whose theme is structural transformation of the manufacturing sector through value addition and product diversification based on comparative and competitive advantages of the region. The policy aims to create a modern,

competitive and dynamic industrial sector, fully integrated into the global economy by investing in six strategic industries in which the region has potential comparative advantage. These are iron-ore and mineral processing, fertilisers and agrochemicals, pharmaceuticals, petro-chemicals and gas processing, agro-processing, and energy and bio-fuels.

The EAC Industrialization Policy (2012-2032) aims to diversify the manufacturing base and raise local value added content of resource-based exports to at least 40 percent from the currently estimated value of 8.6 percent by 2032; strengthen institutional frameworks and capabilities for industrial policy design and implementation; strengthen R&D, technology and innovation capabilities to foster structural transformation of the manufacturing sector and industrial upgrading; expand trade in manufacture by increasing intra-regional manufacturing exports relative to total manufactured imports into the region to at least 25 percent by 2032, and increase the share of manufactured exports relative to total merchandize exports to at least 60 percent from an average of 20 percent; and transform MSMEs into viable and sustainable business entities capable of contributing to at least 50 percent of manufacturing GDP up from 20 percent base rate.

Kenya, as a member state of EAC, is expected to play a key role in realization of the social, political and economic aspirations outlined in EAC Vision 2050. KIRDI will support the government in the development of appropriate policies that will enhance collaboration with like-minded institutions in the region in generation of knowledge and dissemination.

1.2.4 Constitution of Kenya

The Constitution of Kenya recognizes the importance of a knowledge-based economy that entrenches STI into the national production system. Chapter Two, Article 11 (2)(b) of the Constitution states that the State *shall recognize the role of science and indigenous technology in the development of the nation*. In addition, Article 11 (2)(c) states that the State *shall promote the intellectual property rights of the people of Kenya.* Investing and integrating STI into social, economic and governance policies and strategies will increase Kenya's global competitiveness and improve the socio-economic fabric of the country. KIRDI will invest her resources in supporting industrial development by providing insights on specific industrial research questions, and developing fit-for-purpose technologies, products and processes.

1.2.5 Kenya Vision 2030

The Kenya Vision 2030 is the country's long term national blue print with objective of creating a globally competitive and prosperous country by 2030. It aims to transform Kenya into a newly industrializing middle-income country providing a high quality of life for all its citizens by 2030 in a clean and secure environment. The Economic Pillar of the vision aims to maintain a sustained economic growth of 10 per cent per year in order to improve the country's global competitiveness. This is to be achieved by having a robust, diversified, and competitive manufacturing sector through restructuring key local industries and exploiting opportunities in

value addition. Further, Kenya Vision 2030 recognizes the role STI plays in economic development through the application of knowledge in wealth creation. It calls for intensified application of STI to raise productivity and efficiency in the manufacturing sector. KIRDI is the lead STI institution in the industrial sector and will play a key role in supporting development of a knowledge-driven industrial sector that is able to compete globally and create prosperity.

1.2.5.1 Fourth Medium Term Plan (MTP IV)

The manufacturing objective of MTP IV is to increase the share of manufacturing contribution to GDP from 7.5 percent in 2022 to 15 percent by 2027 and 20 percent by 2030. The sector also aims to inject one million new jobs into the economy annually. This will be achieved through development of industrial clusters, attracting investments into Special Economic Zones and Industrial Parks, instituting business sector reforms, and promoting growth and development of MSMEs through development of MSME parks.

MTP IV seeks to promote manufacture of affordable construction materials; electrical and electronic products; pharmaceutical and other medical supplies; machinery, equipment and parts for motor vehicles, motorcycles, aerospace and ship-building industry. It shall also facilitate establishment of integrated iron and steel mill plant and mineral value addition. KIRDI will utilize its technologically-skilled workforce in RTI to support establishment of a local manufacturing sector that is globally competitive and sustainable.

1.2.5.2 Bottom-up Economic Transformation Agenda

BETA is the development agenda for the current government (2022-2027). This agenda is cognizant of the critical role played by enterprises at the bottom of the economic pyramid in employment and wealth creation. Consequently, BETA seeks to direct the limited national resources to sectors with the highest economic impact by supporting economic activities at the bottom of the pyramid. The BETA has identified five priority sectors for economic transformation: agriculture and agro-processing, MSME economy, housing and settlement, healthcare, digital superhighway and creative economy. The government will adopt a value chain approach to support growth of the manufacturing sector. It has prioritized nine value chains for support, namely, leather, cotton, dairy, edible oils, tea, rice, blue economy, natural resources (minerals and forestry), and building materials. Other priority areas of focus in BETA include assembly of automotive components and electronics; chemicals and pharmaceuticals industries; manufacture of metals and engineering products; petroleum and petrochemical processing; ICT and software engineering; and clean and renewable energy. KIRDI will position itself to support MSMEs to develop and upgrade their products, technologies and processes, in line with BETA.

1.2.6 Sector Policies and Laws

KIRDI is established under the KIRDI Act (2022) with the mandate to undertake research, development and innovation in industrial and allied technologies and disseminate research findings to support industrial development. In implementing

its research mandate, KIRDI is also guided by the STI Act (2013), whose purpose is to facilitate promotion, co-ordination and regulation of STI. The STI Act (2013) established NACOSTI, to regulate and assure quality in STI sector; NRF to facilitate research for the advancement of STI; and KENIA to co-ordinate, promote and regulate the national innovation system. Other policies guiding implementation of this strategy include the Industrial Property Act (2001) that established KIPI; and Standards Act (1973) that established KeBS. KIRDI will collaborate with these agencies to accelerate mainstreaming of STI industrial activities.

1.3 HISTORY OF KIRDI

KIRDI is a public research institute in the Ministry of Investments, Trade and Industry. The Institute was established in 1942, by the British colonial government, initially as a central laboratory at Kabete, Nairobi, to promote industrial development. The laboratory was administered by Kenya Industrial Management Board (KIMBO). Later, when the East African countries gained independence (1961-1963), the management of KIMBO was transferred to the East African Community (EAC) and renamed as East African Industrial Research Organization (EAIRO) to serve Kenya, Uganda and Tanzania. EAIRO ceased operations in 1977 following collapse of EAC. The research operations of EAIRO in Kenya were transferred for an interim period to the National Industrial Research Complex. In 1979, the Science and Technology Act, came into force establishing the National Council for Science & Technology, KIRDI, Kenya Agricultural Research Institute, Kenya Medical Research Institute, Kenya Marine and Fisheries Research Institute and Kenya Forestry Research Institute. The STI Act (2013), which replaced the Science and Technology Act, established NACOSTI, KENIA and NRF but failed to re-establish KIRDI as a corporate body with perpetual succession. This omission was corrected through creation of KIRDI Act (2022).

1.4 METHODOLOGY OF DEVELOPING THE STRATEGIC PLAN

This strategic plan was developed through wide consultative and participatory approach that entailed close working and consultation with staff, management, Board of Directors and key stakeholders. To facilitate the process, the board of directors appointed a committee tasked with undertaking a situational analysis and developing the strategic framework. The committee was also tasked with coordinating stakeholder participation.

To ensure wide public participation, the committee engaged all members of staff through directorate stakeholder hearings. The committee also held several consultation and brainstorming workshops with the senior management and board of directors to evaluate past achievements, operating environment, develop key organizational strategies and agree on resource mobilization and monitoring and evaluation framework.

To ensure relevance and enhance impact, the strategic plan was subjected to a virtual stakeholder's engagement and validation workshop where comments and views on the plan were received from partners, agencies and other institutions. All comments and inputs gathered from the various forums were incorporated in the preparation of the final strategic plan which was subjected to final approval by

the Board of Directors. Concurrence with our parent ministry and the State department of Planning was also sought before finalizing the plan.

CHAPTER TWO

STRATEGIC DIRECTION

2.1 INTRODUCTION

This chapter provides an overview of the organisation's mandate, vision and mission. Strategic goals to guide the organisation direction have been formulated for implementation in the plan period. In this section the Institute has also identified its core values and set the quality policy statement.

2.2 MANDATE

The mandate of KIRDI outlined in Section 5, of KIRDI Act (2022) is to undertake research, development and innovation in industrial and allied technologies, and disseminate research findings to support industrial development.

Functions of KIRDI (Section 6 (1), KIRDI Act 2022)

The functions of KIRDI are to undertake research, development and innovation in industrial and allied technologies in: civil engineering; mechanical engineering; electrical engineering; chemical engineering; textile technology; industrial chemistry; food technology; ceramics and clay technology; power resources; mining technology; natural products technology; leather technology; emerging technologies; and building materials technology.

The functions of KIRDI are enumerated in Section 6 (2), KIRDI Act (2022), and state that KIRDI will:

a. Advise the government on all aspects of industrial research, development, technology, innovation and policy;
b. Develop an industrial research agenda based on indigenous technical knowledge, and contemporary and emerging issues;
c. Collaborate with institutions of higher learning, professional and industrial associations, government agencies and industrial research institutions to advance technology, innovation and development;
d. Disseminate and facilitate the application and commercialisation of research findings and technological developments;
e. Facilitate the implementation of government policies on industrial research and development;
f. Establish industrial research and technology transfer centres;
g. Collaborate with other organizations and institutions of higher learning in the development of industrial research training programmes;
h. Establish and maintain an industrial technology repository; and
i. Perform any other function related to industrial research, innovation, technology and development.

2.3 VISION STATEMENT

Quality industrial research for competitive and sustainable industries

2.4 MISSION STATEMENT

Provide innovative technologies for industry through research and dissemination of findings

2.5 STRATEGIC GOALS

1. Promote innovation in bio-industries.
2. Enhance industrial manufacturing capacities.
3. Advance sustainable industrial production and processes.
4. Enhance organizational capacity.

2.6 CORE VALUES

a. Integrity
b. Sustainability
c. Team work
d. Creativity
e. Customer focus

2.7 QUALITY POLICY STATEMENT

KIRDI will implement the ISO 9001:2015 quality management system, which is in line with our mandate, aspirations outlined in this Strategic Plan, internal processes and national regulations. We will also continuously improve the performance of our internal processes through innovation, business process re-engineering, and human resource development to meet our customers' needs. We will regularly review our quality management system to ensure our objectives are met.

CHAPTER THREE

SITUATIONAL AND STAKEHOLDER ANALYSIS

3.1 INTRODUCTION

This section provides a performance review on the implementation of the previous Strategic Plan. It includes an analysis of key achievements against set targets, challenges and lessons learnt. The chapter also includes a stakeholder analysis and an environmental scan to identify factors that will influence the Institute's operation during the planned period.

3.2 SITUATIONAL ANALYSIS

Analysis of the internal and external environment identified factors influencing KIRDI's operation during the planned period. The internal environment explores strengths and weakness of the Institute while the external environment reviews opportunities and threats that may affect its operations.

3.2.1 External Environment

A comprehensive analysis of the external environment demonstrates the implication of opportunities and threats facing the Institute. An analysis of the Institute's external environment is provided below.

3.2.1.1 Macro-Environment

Macro-environment refers to external factors which have a direct and indirect impact in realizing the Institute's mandate and involve analysis of the political, economic, social, technological, legal and ecological environment (Table 3.1). The global GDP growth decelerated to 3.4 percent in 2022 compared to a growth of 6 percent in 2021.The subdued growth was experienced in most countries including the advanced economies as well as emerging economies. In East Africa, the real GDP is estimated to have expanded by 4.9 percent in 2022 compared to 6.7 percent in 2021. The national GDP expanded by 4.8 percent in 2022 compared to 7.6 percent in 2021. The decelerated growth of the Kenyan economy in 2022 was due to uncertainty arising from national elections and adverse weather that suppressed growth of the agricultural sector. The manufacturing sector remained on a positive recovery path in 2022 although still subdued compared to 2021. The sector's growth rate was 4.6 percent in 2022 compared to 7.3 percent in 2021. The overall slow GDP growth rate could be attributed to poor performance in agricultural sector which makes significant contribution to agro-processing sector. Non-food manufacturing activities registered a positive growth rate of 3 percent in 2022 compared to 0.6 percent in 2021. Manufacturing sector share to GDP stood at 7.8 percent while employment, in the formal manufacturing sector increased by 4.7 percent in 2022. The increase informal employment accounted for 11.7 percent of the total formal employment in the country. In general, industrial growth was impacted negatively by external shocks and therefore there was need to strengthen manufacturing capabilities by mainstreaming STI in industrial agenda and promoting medium and high technology manufacturing.

3.2.2 Summary of Opportunities and Threats

Based on the analysis of the external environment, Table 1 highlights a summary of opportunities and threats.

Table 1: Summary of Opportunities and Threats

Environmental factor	Opportunities	Threats
Political	Government support to industrial development	Changes in national priorities affect funding for research programmes
Economic	Demand for new and improved goods and services	Global economic shocks and competition
Social	Qualified and experienced staff to deliver on mandate	Skill gaps and labour shortages to meet industry demands
Technological	Industrial support infrastructure	Rapid advances in technology
Legal	Exclusive mandate to undertake research in industrial and allied technologies	Loss of revenue from non-commercialized innovations and inventions
Ecological	Green manufacturing industrial production	Environmental degradation due to industrial activities

3.2.3 Internal Environment

These are factors in our immediate operating environment affecting the Institute's access to resources. The porters five factor model analysis indicates that the growth of an organization is impacted by threat of new entrants, bargaining power of buyers, bargaining power of suppliers, threat of substitute products, and competitive rivalry. Analysis of our internal environment shows that limitations to growth are associated with competition for skilled labour, rapid developments in frontier technologies, changing and disruptive customer preferences and unpredictable funding streams for RTI activities.

3.2.3.1 Governance and Administrative Structures

The Institute's governance and administrative structures ensure that decision-making processes remain structured, transparent and focused on achievement of the Institute's mandate. The top decision-making organ is the Board of Directors, which sets the Institute's mission, vision, purpose and core values; sets and oversees the overall strategy and approves significant policies of the organization. The Board also approves the Institute's organogram and appoints the Director-General who is responsible for the day-to-day operations of an economic, efficient and cost-effective internal management structure. The Board composition is outlined in section 9(1) of KIRDI Act (2022).

3.2.3.2 Internal Business Processes

The Institute will endeavor to strengthen business systems and processes and enhance productivity by upgrading ICT infrastructure, automating business systems and processes, undertaking productivity mainstreaming and performance management; and undertaking branding, promotion and marketing outreach to improve visibility.

3.2.3.3 Resources and Capabilities

This refers to the collection of skills, experience and qualifications the Institute possesses and develops in time to meet the future dynamic demands and meet its objectives.

3.2.4 Summary of Strengths and Weaknesses

Table 2 highlights summary of strengths and weaknesses facing the Institute.

Table 2: Summary of Strengths and Weaknesses

Factors	Strengths	Weaknesses
Governance and Administrative Structures	• Clear mandate as per KIRDI Act 2022 • Adequate Policy Framework • Committed, competent and diverse Board of Directors • Favourable compliance rating in board evaluations,	• Functions and structures are not fully staffed and operationalised • Limited KIRDI presence in the counties • Inadequate capacity on emerging global issues

Factors	Strengths	Weaknesses
	and Performance Management system	
Internal Business Processes	• Functional quality management system (ISO 9001, ISO 17025) • Available standard operating procedures • Existing partnership frameworks	• Inadequate ICT infrastructure • Low levels of digitalization and process automation • Inadequate knowledge management processes • Continued use of manual filing systems • Low corporate visibility • Inadequate succession planning
Resources and Capabilities	• Competent & experienced staff and existence of procedures, manuals and systems • Strategic location and proximity to key stakeholders • Established business incubation and common manufacturing facilities • Increased collaboration and partnership with stakeholders and development partners	• Inadequate staffing • Insufficient financial resources • Inadequate infrastructure to support industry • Continued budget rationalisation affecting completion of capital projects • Inadequate equipment and machines to support research and technology transfer

3.2.5 Analysis of Past Performance

A review of the Institute's achievements during implementation of the previous plan period was undertaken. Key achievements, challenges and lessons learnt were identified.

3.2.5.1. Key Achievements

KRA 1: Market Driven Industrial Research, Development and Technology Transfer

This key result area was achieved through two strategic objectives: undertake market-driven industrial research and development and; transfer of technologies to support growth of manufacturing sector.

Under the objective of undertaking market-driven industrial research and development the Institute achieved the following:

a. The FT-RC established: honey; juice; fruits and vegetables; cereals; and root and tuber crops pilot plants. It also commissioned a cereal technology laboratory for quality control of wheat, sorghum, millets, psuedocereals and legumes. The advanced measurement equipment in this laboratory includes the farinograph, extensograph, viscograph and texture analyser. The laboratory plays a significant role in cereal-based product development for industry and academia. The institute also developed,

tested and commissioned various drying technologies to decrease post-harvest food losses. These included the refractance-window drier, hybrid solar-biomass drier, and off-grid solar cooling and drying technology.

b. The leather and leather goods unit in KWRC was operationalized and is actively supporting numerous MSMEs in the western region of the country to add value to hides and skins. Leather goods unit in IM-RC, Nairobi was re-established by installing new equipment at the footwear and leather goods section to facilitate capacity building of MSMEs.
c. The sanitary pad-making machine and embroidery equipment in IM-RC were operationalized and are used to support MSMEs. In addition, the RC designed, fabricated and tested sanitary pad core press and banana fibre decorticator machine. The aim of the project is to develop batch machines for manufacturing of sanitary pad and eco-friendly packaging materials from banana pseudo-stem.
d. The biogas laboratory in EREE-RC was operationalised and commissioned to support biogas industry. This laboratory is able to perform tests on biogas potential of different organic substrates; and alkalinity, nitrogen, bio-methane potential, volatile fatty acids, and total suspended solids for substrates used in biogas generation. The laboratory established and operationalised an e-repository for waste-to-energy technologies in Kenya. The repository has information on best practices for operation and maintenance of biogas technologies and aims to build capacities of stakeholders in the biogas value chain.
e. The Energy Efficiency Laboratory in EREE-RC was established and operationalized. It will be used to test efficiency of mortars and light bulbs.
f. The ESCC-RC partnered with Technical University of Denmark in a pilot project that sought to demonstrate the economic and environmental benefits of enabling industrial symbiosis (where waste product from one industry is utilized as a raw material in another industry, instead of being disposed). Through this project (Green and Circular Innovation for Kenyan Companies project), ESCC-RC developed a screening tool to quantify input, output, waste and by-product for companies in Ruaraka industrial cluster in Nairobi; used the screening tool to undertake material, water, and energy flow assessments; determined the potential of each company to engage in circular economy; and developed a database to be the basis for negotiated waste and by-product exchange.
g. EICT-RC acquired advanced machinery including laser cutter, plasma cutter, press-brake, sheet roller, pipe cutter, pipe bender and powder coater. The EICT-RC now has the potential to build capacity of metal industry using computer-aided-design and manufacture software for manufacturing items for mass production and modern machinery.
h. CEAP-RC supported MSMEs to formulate cosmetic and agrichemicals and biofuels using natural ingredients as key components. They also supported MSMEs to develop chemical products such as cosmetics, household and industrial cleaning agents, disinfectants, sanitizers, bleaches, antiseptics, sanitizers, surgical spirits, and biofertilizers from biogas digestate, agro-wastes, seaweed and biochars.

i. IMB-RC established a Biosafety Level I laboratory to utilize Generally-Recognized-as-Safe microorganisms for industrial research and food production. In addition, IMB-RC developed a robust mushroom value-chain that includes characterization, spawn production and cultivation of common, wild edible and therapeutic medicinal mushrooms. IMB-RC also established a Biosafety Level 2 laboratory to address safety issues associated with pathogens and microbial contaminants in food, feed, water, waste water and cosmetic products.

Under the objective of transferring technologies that support growth of the manufacturing and MSMEs sector, the Institute supported 4,532 MSMEs through technology incubation, CMF, training, consultancy and laboratory services. This intervention is estimated to have created an additional 16,800 jobs in the manufacturing sector. In addition, the Institute upgraded 97 MSMEs products to enhance their competitiveness. These products have acquired standardisation marks and can thus access local and international markets.

KRA 2: Organizational Capacity Development

The Institute employed five strategies to improve organizational capacity development, namely: promote corporate governance, enhance mobilization and efficient utilisation of resources; strengthen human resource capacity, upgrade the Institute's infrastructure and strengthen business systems and processes.

Key achievements included review of human resource policy instruments and its subsequent implementation; re-establishment of KIRDI, through KIRDI Act (2022) as the only national public institution with the mandate to undertake research in industrial and allied technologies and to disseminate the findings for socio-economic development; and re-certification of the Institute in ISO 9001:2015. In addition, CAS, EREE-RC and ESCC-RC laboratories were accredited in ISO/IEC 17025:2017. These accreditations have increased credibility of laboratory tests as well as efficiency and effectiveness in service delivery for the institute.

KRA 3: Strengthen Partnerships and Knowledge Management

This KRA was achieved through implementation of two objectives namely: to forge and strengthen strategic partnerships with industry and other stakeholders and; facilitate knowledge management within the Institute. In the period under review, KIRDI implemented eight competitively-sourced research projects, generated IP from two technologies, published 18 Articles peer-reviewed journals, organized six research seminars, conferences and workshops, and developed a knowledge management policy.

3.2.5.2 Challenges

Limited financial resources have continued to affect implementation of planned projects and activities. Recurrent and development budget allocations from the government were not able to support RTI activities in the Institute during the reporting period. To mitigate this challenge, the IATR and TTES directorates focused

on attracting funding from development partners and responding to competitive calls for proposals.

Inadequate research equipment in various research centres and use of outdated and ageing equipment hampered the quality and quantity of research outputs and the ability to effectively provide innovative solutions to industry. Nonetheless, the Institute made efforts to upgrade laboratory and pilot plant facilities in KWRC, EICT-RC, FT-RC and EREE-RC. Inadequate research infrastructure has limited the Institute's ability to produce innovative products and technologies and this has had a negative impact on the number of registered and commercialized IPs.

Over the years KIRDI has made 67 IP applications in the following areas: patents (47), industrial designs (5), utility models (10), and trademarks (10). KIRDI has received 14 grants from these applications, which are distributed as follows: patents (5), utility models (4), trademarks (3) and industrial designs (2). In the last five years (2019-2023) years, KIRDI research scientists undertook 120 research projects, and developed 40 new products, but filed only 6 applications. This represents approximately 4 percent of IP applications, implying huge leakages of commercializable research outputs. Some of the factors contributing to the low conversion rates include low level of reporting by research scientists on the potential of their outputs for IP filing, inadequate human and financial resources to support IP management in KIRDI.

During the period the Institute lost 15 highly qualified and experienced research scientists, a situation which affected implementation of several research programmes. In addition, the support departments continued to lose staff, which affected their ability to support the core mandate activities.

3.2.5.3 Lessons Learnt

Not all research outputs have found their way to the market or generated economic value for the Institute. The strategic plan will focus on improving research commercialization in KIRDI thereby contributing to technological, economic and social growth of the country.

The modernisation of equipment and facilities in the laboratories and pilot plants enhanced research in priority areas and increased the number of MSMEs supported. However, commissioning of certain equipment in the IM-RC and FT-RC was delayed due to additional operationalization costs that were not factored in the initial procurement projections thus delaying service delivery. It is therefore important to ensure that installation and commissioning costs are included in the procurement budget for equipment.

The Institute enhanced collaboration with stakeholders by forging strategic partnerships with industries and development partners to support implementation of its research agenda. This collaboration produced impressive results in few priority research areas, especially energy and textile. Management will labour to provide an all-rounded negotiated approach during call for proposals to improve collaborations between the research centres and with external partners. The Institute initiated collaboration with several local and international partners and will

endeavour to look for additional partners to enhance dissemination of research outputs. In addition, innovation and frontier technologies will drive transformative solutions in the manufacturing sector. The Institute will build resilience of the sector through knowledge sharing, collaborations and partnerships with relevant stakeholders to build capacity and expertise in 4IR technologies.

Teamwork among staff is key in discharging the Institute's mandate. This was evident as the Institute achieved excellent performance in the 18th Cycle (FY 2021/22) performance contract evaluation score where KIRDI was ranked 15 out of 350 semi-autonomous government agencies. This is a sign of strong and competent human resource in the Institution, and their ability to make significant contribution to industrial development

3.3 STAKEHOLDER ANALYSIS

Table 3: Stakeholder Analysis

No.	Stakeholder	Role	Stakeholder Expectation from KIRDI	KIRDI's Expectation from Stakeholder
1.	Ministry of Investments, Trade and Industry	Industrial policy, planning, oversight and administration.	• Implement Institute's mandate and relevant government policy guidelines; • Participate in industrial policy formulation and implementation; • Effective service delivery to stakeholders.	• Provide enabling policy, legal and regulatory framework.
2.	The National Assembly	Enact legislation, allocate national revenue.	• Compliance to laws and regulations; • Provision of proposal for legal reviews; • Deliver on the Institute's mandate.	• Regular review of legal provisions; adequate budget allocation.
3.	NACOSTI	Regulate and assure quality in STI sector.	• Formulate and implement research policies and priorities; undertake and disseminate industrial research findings; provide timely information on industrial RTI; comply with research policies and regulations.	• Conducive operating environment that supports and guides industrial research; • Support implementation of research policies, projects and findings.
4.	NRF	Mobilize, allocate and manage financial resources to facilitate research.	• Align research proposals to national research priorities; timely implementation of RTI programmes; accountability; timely reporting.	• Financial support; • Information sharing and networking.
5.	KENIA	Co-ordination, promotion and regulation of the National Innovation System	• Coordinate establishment and implementation of appropriate policies, standards, processes, infrastructure, and partnerships to nurture innovative ideas.	• Support identification, recording and protection of innovative ideas

No.	Stakeholder	Role	Stakeholder Expectation from KIRDI	KIRDI's Expectation from Stakeholder
6.	Regulatory Agencies (KeBS, KIPI, KENAS, ACA)	Formulate, enforce and oversee policies and laws governing standards, IP, accreditation and counterfeiting.	• Support local industries to manufacture quality products; participate in standards developments; operate accredited laboratories; support local industries to generate innovations through RTI; support local industries to commercialize IP.	• Develop and enforce standards for manufactured products trading in Kenya; certification of products; • Protect IP; • Provide accreditation services and combat counterfeit trade.
7.	MSME supporting agencies (KIE, MSEA, KEPROBA)	Formulate, enforce and oversee policies and laws governing MSMEs sector relating to funding and branding.	• Provide technical support to MSMEs in manufacturing sector; • Support local industries including MSMEs to develop competitive products for local and international markets.	• Provide credit, workspace, promotion and branding services to MSMEs graduating from KIRDI programs.
8.	Industry	Implement industrial policies.	• Provide industrial technological solutions; adherence to the Service Charter.	• Adequate and accurate information on industry needs; • Comply with KIRDI's policies and guidelines; • Uptake KIRDI research outputs and innovations.
9.	MDAs	Facilitate and implement government policies	• Collaboration, compliance with laws and regulations; ease of access to information	• Collaboration and access to information
10.	Development Partners and Donor Organizations	Promote socio-economic development.	• Timely implementation of programmes; accountability.	• Technical and financial support; information sharing and networking

No.	Stakeholder	Role	Stakeholder Expectation from KIRDI	KIRDI's Expectation from Stakeholder
11.	Research Technology Organizations and Academia	Facilitate innovation, generate new knowledge and technologies.	• Collaborate in research and knowledge dissemination; • Disseminate research outputs; • Support development of MSMEs.	• Collaborate in research and knowledge dissemination; • Support development of MSMEs using local innovations and inventions.
12.	County Governments	Deepen devolution through coordination, consultation, information sharing, capacity building, performance management, and dispute resolution.	• Collaborate and network in industrial development; • Provide information on technologies and innovations; • Disseminate research outputs; • Technology transfer; • Capacity development.	• Collaborate and network; • Access to data on county resources; • Technology gaps; • Support dissemination of research outputs; • Allocate resources to set up ITTOs and CAIPs.
13.	Media	Information and communication.	• Provide accurate and timely information.	• Fair and accurate reporting; • Support awareness creation and dissemination of research findings.
14.	Board of Directors	Oversight and strategic direction	• Implement Institute's policies and guidelines; • Continuous performance improvement; • Transparency, accountability and teamwork; • Adherence to statutory requirements.	• Oversight and policy direction; • Support in resource mobilization.
15.	Members of Staff	Operationalize KIRDI Act	• Conducive working environment; • Competence and skills development; • Equal opportunities for career development;	• Commitment, integrity and professionalism; • Adherence to regulations, policies and procedures.

No.	Stakeholder	Role	Stakeholder Expectation from KIRDI	KIRDI's Expectation from Stakeholder
			• Recognition and reward; Adherence to regulatory framework.	
16.	Public	Participate in industrial development	• Adherence to service charter; • Disseminate RTI outputs; • Access Institute's services; • Corporate Social Responsibility.	• Adhere to KIRDI policies and procedures; • Uptake research outputs, provid feedback.

CHAPTER FOUR

STRATEGIC ISSUES, GOALS AND KEY RESULTS AREAS

4.1 INTRODUCTION

This chapter identifies strategic issues arising from the situational and stakeholder analysis. These strategic issues affect implementation of the Institute's mandate and are the basis for development of the strategic goals and key result areas.

4.2 STRATEGIC ISSUES

1. Manufacturing value addition of agro-produce, blue economy resources and natural products
2. Post-harvest losses
3. Food insecurity
4. Quality of leather and leather goods
5. Development of innovative textile products
6. Acquisition, operation and maintenance of fit-for-purpose machines, equipment, tools
7. Appropriate building materials
8. Frontier 4IR technologies that are disrupting traditional manufacturing models
9. Sustainable use of resources and production patterns
10. Green energy and energy efficiency.
11. Degree of innovation and ability to adapt to market demands
12. Industrial skills gap
13. Investment in R&D for product development and improvement
14. Commercialization of research outputs, innovations and IP
15. Quality of industrial products
16. Visibility of KIRDI brand
17. Automation of business processes
18. Enhancing organization culture
19. Research-industry partnership

4.3 STRATEGIC GOALS

The Strategic plan has identified strategic goals to address the strategic issues identified as follows:

1. Promote innovation in bio-industries
2. Enhance industrial manufacturing capacities
3. Advance sustainable industrial production practices and processes
4. Enhance organizational capacity

4.4 KEY RESULTS AREAS

KRA 1: Manufacturing value addition
KRA 2: Engineering and frontier technologies
KRA 3: Industrial technology transfer
KRA 4: Institutional capacity

Table 4: Strategic Issues, Goals and Key Results Areas

No.	Strategic Issues	Goal	Key Results Area
1.	Manufacturing value addition of agro-produce, blue economy resources and natural products	Promote innovation in bio-industries	KRA 1: Manufacturing value addition
2.	Post-harvest losses		
3.	Food insecurity		
4.	Quality of leather and leather goods		
5.	Development of innovative textile products		
6.	Acquisition, operation and maintenance of fit-for-purpose machines, equipment, tools	Enhance industrial manufacturing capacities	KRA 2: Engineering and frontier technologies
7.	Appropriate building materials		
8.	Frontier 4IR, 5IR technologies that are disrupting traditional manufacturing models		
9.	Sustainable use of resources and production patterns		
10.	Green energy and energy efficiency		
11.	Degree of innovation and ability to adapt to market demands	Advance sustainable industrial production and processes	KRA 3: Industrial technology transfer
12.	Industrial skills gap		
13.	Investment in R&D for Product Development and Improvement		
14.	Commercialization of research outputs, innovations and IP		
15.	Quality of industrial products		

No.	Strategic Issues	Goal	Key Results Area
16.	Visibility of KIRDI brand	Enhance organizational capacity	KRA 4: Institutional capacity
17.	Automation of business processes		
18.	Enhancing organization culture		
19.	Research-industry partnership		

CHAPTER FIVE

STRATEGIC OBJECTIVES AND STRATEGIES

5.1 INTRODUCTION

During the strategic plan period, the Institute has identified strategic objectives to implement the strategic goals and key result areas. The objectives are guided by the sustainable balanced score card model. This section outlines specific cause of action to achieve the strategic objectives.

5.2 STRATEGIC OBJECTIVES

Table 5 outlines strategic objectives and provides projections for the five-year strategy period.

Table 5: Outcomes and Annual Projections

Strategic Objective	Outcome	Outcome Indicator	Projections				
			Year1	Year 2	Year 3	Year 4	Year 5
KRA 1: Manufacturing Value Addition							
SO1.1: Enhance value addition to agricultural, natural and blue economy resources	Increased value addition of local value chains	No. of enterprises adopting agro-processing technologies	200	220	250	270	300
		No. of enterprises adopting bio-based products technologies	150	180	210	260	300
		No. of products attaining standardization marks of quality	30	60	90	120	150
		No. of enterprises adopting leather processing technologies	10	15	20	25	30
		No. of enterprises adopting utilization of alternative fibres products and processes	5	10	15	20	25
KRA 2: Engineering and Frontier Technologies							
SO2.1: Adopt smart technologies for production of industrial materials and machines	Increased manufacturing competitiveness	No. of enterprises adopting alternative building technologies	20	50	70	90	100
		No. of enterprises making innovative products from clay and minerals	10	20	30	40	50
		Value (KES million) of machinery, industrial equipment, tools and parts developed and commercialized	15	30	50	80	100
SO2.2: Promote adoption of green manufacturing technologies	Sustainable industries	No. of industrial enterprises adopting RECP and industrial symbiosis concepts	18	36	54	72	90
		No. of enterprises adopting green energy technologies	50	100	150	200	250

Strategic Objective	Outcome	Outcome Indicator	Projections				
			Year1	Year 2	Year 3	Year 4	Year 5
KRA 3: Industrial Technology Transfer							
SO3.1 Enhance dissemination and adoption of industrial technologies	Increased industrial productivity and competitiveness	No. of market ready technologies adopted	60	65	70	75	80
		No. of industry solutions patented and commercialized	NIL	1	4	6	12
		No. of IP registered and renewed	2	4	6	8	10
		Revenue (KES million) generated from IP	5	10	15	20	25
		No. of spinoffs and startups established	NIL	1	4	6	12
		No. of new direct jobs created	1,560	1,800	2,010	2,220	2,4(
KRA 4: Institutional Capacity							
S04.1: Strengthen institutional capacity to deliver mandate	Improved service delivery	Customer satisfaction level (%)	80	N/A	85	N/A	90
		Employee satisfaction level (%)	60	N/A	70	N/A	80
		Percent automation index of KIRDI processes	25	40	60	80	100
		Productivity index	T	TBD	TBD	TBD	TBD

5.3 STRATEGIC CHOICES

Table 6: Strategic Objectives and Strategies

KRA	Strategic Objectives	Strategies
KRA 1: Manufacturing Value Addition	SO1.1: Enhance value addition to agricultural, natural and blue economy resources	Develop niche agro-based, natural and blue economy products and technologies;
		Promote bio-based household, agricultural and industrial products

KRA	Strategic Objectives	Strategies
		Improve quality of leather and leather products;
		Promote alternative fibre (non-cotton) products and processes;
KRA 2: Engineering and Frontier Technologies	SO2.1: Adopt smart technologies for production of industrial materials and machines	Adopt innovative technologies for production of building materials; Incorporate smart technologies in the manufacture of equipment, tools and parts; Enhance strategic partnerships in frontier technologies (4IR and 5IR)
	SO2.2: Promote adoption of green energy and green manufacturing technologies	Promote circular economy and cleaner production processes; Promote green energy and energy efficiency
KRA 3: Industrial Technology Transfer	SO3.1 Enhance dissemination and adoption of industrial technologies	Facilitate technology adoption and growth of industrial enterprises Facilitate product standardization and quality assurance; Facilitate development of CAIPs
KRA 4: Institutional Capacity	S04.1: Strengthen institutional capacity to deliver mandate	Enhance corporate governance; Undertake infrastructure upgrade; Strengthen business systems and processes; Enhance productivity through human capacity development; Enhance resource mobilization and utilization; Strategic partnerships with industry; Institutionalize knowledge management;

CHAPTER SIX

IMPLEMENTATION AND COORDINATION FRAMEWORK

6.1 INTRODUCTION

The Institute will put in place an implementation and coordination framework for the successful implementation of the Strategic Plan. This chapter gives a description of the various components of the implementation plan.

6.2 IMPLEMENTATION PLAN

To deliver on its mandate in a dynamic operating environment, the Institute will strengthen its infrastructure, financial and human resources. The Strategic Plan will be cascaded to all levels of the Institute for ownership and ease of implementation. Implementation of the strategic plan will be done through annual budgets, work plans and performance contract cycle. The Institute will also collaborate and partner with various stakeholders during implementation of the plan.

6.2.1 Action Plan

The action for the implementation of the strategic plan is presented in the implementation matrix which is a series of tables. The tables indicate a summary action plan constituting strategic goals, KRAs, outcomes, strategic objectives, strategies, key activities, expected outputs, output indicators, annual targets, annual budget and responsibilities.

6.2.2 Implementation Matrix

The implementation matrix is presented in the four tables 7, 8, 9 and 10 which detail the strategy, key activities, expected output and the indicators that will show output against the five-year target for each of the four key results areas of the strategic plan. The matrix also indicates the resource requirement in terms of budget. The responsibility for implementation has also been indicated.

Table 7: Manufacturing Value Addition

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Strategic Goal: Promote Innovation in Bio-industries																
KRA 1: Manufacturing Value Addition																
Outcome 1.1: Increased Value Addition of Local Value Chains																
Strategic Objective 1.1: Enhance Value Addition to Agricultural, Natural and Blue Economy Resources																
Develop niche agro-based, natural and blue economy products and technologies;	Develop innovative products from plants, animals and blue economy resources	Value addition technologies developed	No. of new and improved food products developed and transferred	137	22	25	28	30	32	30	35	38	41	44	IATR TTES	FT-RC KWRC ITTOS
	Develop innovative food preservation technologies		No. of food preservation technologies developed and transferred	34	3	5	7	9	10	15	21	27	30	10	IATR TTES	FT-RC KWRC ITTOS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	Develop functional foods	Functional foods	No. of functional foods developed and transferred	34	2	4	5	6	10	20	25	30	35	10	IATR TTES	FT-RC IMB-RC
Promote bio-based household, agricultural and industrial products	Production of natural cosmetics, animal feeds, bio-fertilizers, bio-pesticides, agri-chemicals, and bio-packages	Bio-based products and technologies developed	No. of bio-based products and technologies developed and transferred	25	2	3	5	7	8	15	15	16	16	20	IATR TTES	CEAP-RC KWRC
	Establish a repository of microbial collections	Microbial information database	No. of collections of microorganisms	180	10	20	50	50	50	15	30	50	50	52	IATR	IMB-RC
Improve quality of leather and leather products;	Develop sustainable (green) leather processing technologies	Sustainable processing technologies developed	No. of green leather processing technologies developed and transferred	5	1	1	1	1	1	2	2.5	3	3.5	4	IATR TTES	IM-RC KWRC

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	Provide technical support in leather processing, design, finishing and manufacture of leather goods	Improved quality of leather and leather goods	No. of entrepreneurs supported	100	10	15	20	25	30	2	3	4	5	6	IATR TTES	IM-RC KWRC
Promote alternative fibre (non-cotton) products and processes;	Value addition of alternative fibre crops	Alternative textile fibre products	No. of products developed from alternative fibre crops	8	1	1	2	2	2	2	2.5	3	3.5	4	IATR TTES	IM-RC
	Develop green textile processing technologies	Sustainable textile technologies	No. of green textile processing technologies developed	5	1	1	1	1	1	2	2.5	3	3.5	4	IATR TTES	IM-RC IMB-RC

Table 8: Engineering and Frontier Technologies

Strategy	Key activities	Expected output	Output indicators	Target for 5 years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Strategic Goal: Enhance Industrial Manufacturing Capacities																

Strategy	Key activities	Expected output	Output indicators	Target for 5 years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
KRA 2: Engineering and Frontier Technologies																
Outcome 2.1: Increased Manufacturing Competitiveness																
Strategic Objective 2.1: Adopt Smart Technologies for Production of Industrial Materials and Machines																
Adopt innovative technologies for production of building materials	Promote production of alternative green building materials and technologies	Green construction and building materials	No. of technologies developed and transferred	5	1	1	1	1	1	2	2.5	3	3.5	4	IATR TTES	IM-RC IMB-RC KWRCC
	Design and manufacture standardized housing fittings	Replicable low-cost designs developed	No. of designs developed and transferred	8	2	2	2	2	2	2	2.5	3	3.5	4	IATR TTES	EICT-RC KWRC
	Undertake value addition of clay, and mineral resources	Household and industrial products developed	No. of products developed and transferred	8	2	2	2	2	2	2	2.5	3	3.5	4	IATR TTES	IM-RC KWRC
Incorporate smart technologies in	Design and fabricate machines, equipment, tools and	Smart machines, equipment, tools and parts	No. of smart machines, equipment tools and parts	236	17	31	43	75	70	10	15	20	25	30	IATR TTES	EICT-RC KWRC

Strategy	Key activities	Expected output	Output indicators	Target for 5 years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
the manufacture of equipment, tools and parts	parts for; including edible oils, dairy and rice value chains		developed, reverse engineered and transferred													
Enhance strategic partnerships in frontier technologies (4IR and 5IR)	Build industrial capabilities in 4IR and 5IR technologies	4IR and 5IR industries promoted	No. of partnership/collaborative programs	11	1	2	2	3	3	2	2	2	2	2	IATR TTES	All RCs
			No. of 4IR and 5IR technologies adopted	3	N/A	N/A	1	1	1	0	0	50	50	50	IATR TTES	All RCs
Outcome 2.2: Sustainable Industries																
Strategic Objective 2.2: Promote Adoption of Green Energy and Green Manufacturing Technologies																
Promote circular economy and cleaner production processes	Accelerate and scale up RECP in industries	Green industrial parks supported	No. of bi-annual capacity building and dissemination workshops held	10	2	2	2	2	2	5	5.5	6	6.5	7	IATR TTES	ESCC-RC
	Promote industrial symbiosis in industrial parks		No. of enterprises screened and capacity built on IS concept	50	10	10	10	10	10	5	5	5	5	5	IATR TTES	ESCC-RC

Strategy	Key activities	Expected output	Output indicators	Target for 5 years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Promote green energy and energy efficiency	Undertake R&D on efficient production and use of solid biomass	Solid biomass technologies improved (charcoal kiln technology)	No. of enterprises trained on improved solid biomass technologies	50	10	10	10	10	10	5	5.5	6	6.5	7	IATR TTES	EREE-RC KWRC
			No. of improved cook stoves tested for emissions and certification	50	10	10	10	10	10	5	5	5	5	5	IATR TTES	EREE-RC
	Promote biogas technologies	Biogas technology promoted	No. of enterprises trained on operation and maintenance of biogas systems	225	15	30	45	60	75	5	9	11.5	18	22	IATR TTES	EREE-RC
	Promote bioethanol and biodiesel technologies	Bioethanol and biodiesel production technology	No of bioethanol and biodiesel technologies developed and transferred	5	1	1	1	1	1	5	5	5	5	5	IATR TTES	EREE-RC
	Promote energy manageme	Increased energy	No. of enterprises trained on	75	5	10	15	20	25	5	10	15	20	25	IATR TTES	EREE-RC

Strategy	Key activities	Expected output	Output indicators	Target for 5 years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	nt and efficiency	efficiency in industries	energy management													
			No. of energy audit consultancies done	75	5	10	15	20	25	5	5	5	5	5	IATR TTES	EREE-RC EREE-RC

Table 9: Industrial Technology Transfer

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Strategic Goal: Advance Sustainable Industrial Production and Processes																
KRA 3: Industrial Technology Transfer																
Outcome 3.1: Increased Industrial Productivity and Competitiveness																
Strategic Objective 3.1: Enhance Dissemination and Adoption of Industrial Technologies																
Facilitate technology adoption and growth of industrial enterprises	Provide incubation and CMF services	Industrial enterprises supported	No. of enterprises graduating from incubation program	580	70	100	120	140	150	3.5	5	6.5	8	9.5	TTES	IATR KWRC
			No. of enterprises accessing CMF services	2,750	450	500	550	600	650	5	6.5	8	9.5	11	TTES	IATR KWRC
	Provide technology training and		No. of industrial enterprises trained	2,500	400	450	500	550	10	11	12	13	14	10	TTES	IATR KWRC

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	consultancy services including dairy, tea, edible oils, rice, leather and textile value chains		No. of consultancy services offered	40	4	6	8	10	2	2.5	3	3.5	4	2	TTES	IATR KWRC
	Develop training programmes, manuals and assessment tools		No. of accredited training programs initiated	25	5	5	5	5	2	2.5	3	3.5	4	2	TTES	IATR KWRC
Facilitate product standardization and quality assurance	Expand scope of accredited tests	Laboratory accreditation status maintained and expanded	No. of accredited test parameters	44	4	10	10	10	10	5	5.5	6	6.5	7	D-SPC	TTES KWRC
	Provide testing services	Quality products meeting market standards	No. of products attaining quality mark	2,500	300	400	500	600	700	10	12	14	16	18	TTES	IATR KWRC
Facilitate development of CAIPs	Technical support to counties to	Coordination of innovations,	No. of new ITTO's established	47	7	10	10	10	10	35	52	54	56	58	TTES	ITTOS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	establish and operationalize CAIPs	technology transfer and adoption in counties enhanced	No. of clients supported in ITTOs	350	20	30	100	100	100	2	4	6	8	10	TTES	ITTOS

Table 10: Institutional Capacity

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Strategic Goal: Enhance Organizational Capacity																
KRA 4: Institutional Capacity																
Outcome 4.1: Improved Service Delivery																
Strategic Objective 4.1: Strengthen Institutional Capacity to Deliver Mandate																
Enhance corporate governance	Implement Mwongozo Code of Governance for State Corporations	Board and Institute effectiveness enhanced	No. of Board trainings	10	2	2	2	2	2	5	5	5	5	5	DG	CS/D-L
			No. of Board meetings	30	6	6	6	6	6	3	3	3	3	3	DG	CS/D-L
			No. of Board evaluations	5	1	1	1	1	1	0.5	0.5	1	1	1.5	DG	CS/D-L
			No. of governance audits done	2	0	0	1	0	1	0	0	1.8	0	1.8	DG	CS/D-L
			No. of legal audits done	2	0	1	0	1	0	0	1.3	0	1.3	0	DG	CS/D-L

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
			Legal compliance manual developed and continuously updated	1	1	1	1	1	1	1	0	0	0	0	DG	CS/D-L
	Develop and review Institute policies		No. of policies approved and operationalized	32	24	2	2	2	2	8	1	1	1	1	Board	DG
	Monitor and report on implementation of risk management, audit charter and internal controls	Internal controls improved	Operational risk management policy/plan	5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	SPC	QA
			Risk registers updated annually	5	1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	SPC	QA
			No. of internal audit reports done	20	4	4	4	4	4	2	2.5	3	3.5	4	Board	Internal Audit
	Undertake CSR	Enhanced visibility	No. of CSR activities undertaken	5	1	1	1	1	1	1	1.5	2	3	4	DG	CS
	Undertake branding, promotion and marketing		No. of shows and exhibitions attended	20	4	4	4	4	4	10	12	14	16	18	CS	Comms & Mktng
			No. of promotional /media publicity	85	13	15	17	19	21	1	2	4	6	8	CS	Comms & Mktng

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
			activities undertaken													
Undertake infrastructure upgrade	Upgrade RTI infrastructure and equipment	Enhanced RTI outputs	Percent completion of KIRDI Techno-centre (South B)	100	85	90	100	-	-	332	1,500	-	-	-	DG	CS
			No. of research laboratories equipped at KIRDI Techno Centre (South B)	10	-	-	2	4	4	-	-	500	1,000	1,500	DG	IATR/TTES
			No. of research laboratories upgraded and equipped at KIRDI South C and regional centres	20	4	4	4	4	4	15	50	50	50	50	DG	TTES
	Management, repair and maintenance of Institute's assets and equipment	Asset management enhanced	No. of approved maintenance contracts	39	5	6	8	10	10	10	12	16	20	20	DG	CS; SCM
Strengthen business	Upgrade ICT infrastructure	Enhanced ICT security	Percent completion of ICT equipping	100	25	40	60	80	100	10	10	10	10	10	CS	ICT

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
systems and processes	Enhance data back up and business continuity	Disaster recovery and data backup tools acquired	Percentage of critical data backed up	100	25	25	25	25	-	5	5	5	5	5	CS	ICT
	Automate business systems and processes	Business process re-engineering on process.	Acquisition/ Operationalization of ERP	1	-	1	-	-	-	-	50	-	-	-	CS	ICT
			No. of service provision channels digitalized	5	1	1	1	1	1	2	2	2	2	2	CS	ICT
	Review and implement ISO management systems	Enhanced efficiency and effectiveness	No. of procedures reviewed and implemented	100	25	40	60	80	100	10	10	12	15	15	SPC	Quality Assurance
			No. of surveillance audits undertaken	15	3	3	3	3	3	0.5	0.5	0.5	0.5	0.5	SPC	Quality Assurance
Enhance productivity through human capacity development	Undertake Skills Gap Analysis	Improved productivity	Institutional skills gaps analysis report	1	N/A	1	N/A	N/A	N/A	-	-	-	-	-	CS	HR&A
	Undertake Training Needs Assessment and implement		Annual training needs assessment report	5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	CS	HR&A
			Annual training plan	5	1	1	1	1	1	-	-	-	-	-	CS	HR&A

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	recommendations		No. of staff trained	420	20	40	60	100	200	1	2	2.5	4	6	CS	HR&A
	Develop and implement staff succession plan		No. of staff recruited	75	5	10	15	20	25	6	12	18	25	30	CS	HR&A
	Undertake productivity mainstreaming and performance management	Improved staff performance and Productivity metrics developed	Performance management tool reviewed	1	1	1	1	1	1	-	-	-	-	-	CS	HR&A
			Workplace productivity improvement strategy approved and implemented	1	1	-	-	-	-	1	-	-	-	-	CS	HR&A
			No. of metrics in place	5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	CS	HR&A
		Performance management system implemented	Percentage (%) of staff performance appraisal reports recommendations implemented	100	100	100	100	100	100	-	-	-	-	-	CS	HR&A

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
		HR modules digitalised	No. of HR modules digitalised	4	1	2	1	-	1	1	2	1	-	-	CS	HR&A
	Improve employee satisfaction	Employee satisfaction survey undertaken	No of surveys done	2	1	-	-	1	-	-	-	-	-	-	CS	HR&A
			% of employee satisfaction survey recommendations implemented	100	100	100	100	100	100	2	2	2	2	2	CS	HR&A
		Employee wellness activities implemented	No. of wellness programs/fora's undertaken	20	4	4	4	4	4	1	1	1	1	1	CS	HR&A
	Implement performance contracting	Service delivery improved	No. of PC reports done	20	4	4	4	4	4	-	-	-	-	-	SPC	S&P
			Overall PC evaluation score	1.00	1	1	1	1	1	-	-	-	-	-	SPC	S&P
Enhance resource mobilization and utilization	Raise A-in-A	Costing policy reviewed	Approved costing and pricing policy	1	1	-	-	-	1	-	-	-	-	-	DG	Finance
		Increased AIA generation	Project donor funds (KES million) generated	1,500	100	200	300	400	500	10	10	10	10	10	CS TTES IATR	All RC

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
			AI A (KES million) generated	246	26	40	50	60	70	0	0	0	0	0	CS	All directorates
	Digitalization of Financial Management modules	Improved business processes	Percentage (%) of financial modules/processes digitalized	100	100	100	100	100	100	2	5	5	5	5	CS	Finance
Strengthen strategic partnerships with industry	Promote collaboration w industry	Increased industrial productivity	No. of consultancies undertaken	75	5	10	15	20	25	5	5	5	5	5	RMP	TTES; IATR
	Promote collaboration w academia	Academia and industry linkages enhanced	No. of attaches/ interns/ graduate students supported	1,675	305	320	335	350	365	3	3.5	3.5	4	5	CS	All Directorates
			No. of joint successful proposals	38	3	5	8	10	12	3	5	8	10	12	RMP	All RC's
			No. of collaborative research prototypes/outputs disseminated	65	15	20	20	50	50	1	2	2	4	5	RMP	All RC's
Institutionalize knowledge management	Build capacity t knowledge management	Institutional knowledge management enhanced	No. of staff trained and champions appointed	250	50	50	50	50	50	0.2	0.2	0.2	0.2	0.2	SPC	IRC

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget (KES million)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
			Knowledge management repository established	1	1	-	-	-	-	5	-	-	-	-	SPC	IRC
	Disseminate documented knowledge outputs to staff and stakeholders		No. of peer-reviewed publications, policy briefs, technical reports	150	10	20	30	40	50	0.1	0.2	0.3	0.4	0.5	SPC	IRC
			No. of seminars, workshop and conferences	25	5	5	5	5	5	5	10	15	20	25	TTES	RMP
			No. of research findings disseminated in conferences, workshops and seminars	200	20	30	40	50	60	-	-	-	-	-	TTES	ILPIP

6.2.3 Annual Work Plan and Budget

The Institute's annual work plan and budget will be extracted from the Strategic Plan implementation matrix and will adopt activity-based costing to inform the annual budget.

6.2.4 Performance Contracting

Performance contracting is aimed at improving efficiency and effectiveness in the management of the Public Service. This is guided by performance contracting guidelines and takes into consideration government priorities and organization core priority areas. Annual performance contracts will be prepared and linked to the annual work plans. This will ensure that implementation of the strategic plan is also linked to the performance contract and productivity improvement plan.

6.3 COORDINATION FRAMEWORK

The Institute will maintain an organizational culture that emphasizes teamwork and holistic approach to operational issues. In addition, the Institute will leverage on modern technology, benchmarking and human capital development. The Institute has a total approved staff of 553 with an in post of 282. To achieve the Institute's mandate, it is critical to attract and retain skilled human resource skills and competencies. The Institute will focus on improved productivity by addressing human resource gaps, capacity development and welfare improvement. The following strategies will be employed: strengthen human resource planning by reviewing organisation structure and establishment; and enhance productivity mainstreaming and performance management.

6.3.1 Institutional Framework

The institutional framework describes the Institute's organizational structure, policies, rules and regulations to support implementation of the strategic initiatives.

6.3.2 Staff Establishment, Skills Set and Competence Development

The Institute has undertaken an evaluation of existing staff levels, skills sets and competencies to ascertain their adequacy and relevance in supporting implementation of the strategy. This is shown in Table 6.5 and 6.6.

Table 11: Staff Establishment

Cadre	Designation	KIRDI Grade	Optimum Establishment	In-post	Variance
Director-General	Director-General	1	1	1	0
Directors	Director - Industrial & Allied Technologies Research	2	1	1	0
	Director - Corporate Services	2	1	1	0
	Director - Strategic, Planning and Compliance	2	1	1	0
	Director - Technology Transfer and Extension Services	2	1	1	0
	Director - Resource Mobilization and Partnerships	2	1	0	-1
	Director - Internal Audit	2	1	0	-1
Legal	Corporation Secretary/Director Legal Services	2	1	1	0
	Deputy Director, Legal Services, Assistant Director, Legal Services, Principal Legal Officer, Senior Legal Officer/Legal Officer	3/4/5/6/7	1	0	-1
Supply Chain Management	Deputy Director - Supply Chain Management	3	1	0	-1
	Assistant Director - Supply Chain Management	4	1	1	0
	Principal Supply Chain Management Officer	5			
	Supply Chain Management Officer/Senior	7/6	3	1	-2
	Supply Chain Management Assistant/Senior	9/8	5	11	6
Internal Auditor	Principal/Assistant Director/Deputy Director - Internal Audit	5/4/3	1	1	0
	Internal Auditor/Senior	7/6	2	4	2

Cadre	Designation	KIRDI Grade	Optimum Establishment	In-post	Variance
Deputy Directors	Deputy Directors - Kisumu Centre, Agro-Processing Technologies, Power Resources & Emerging Technologies, Chemical Engineering and Natural Products, Engineering. and Building Materials, Technology Transfer and Extension Services, Resource Mobilization and Partnership	3	8	0	-8
Assistant Directors	Assistant Directors - Food Technology, Textile and Leather, Power Resources, Emerging Technologies, Chemical Engineering and Natural Products, Mechanical Engineering, Electrical Engineering, Civil Engineering and Building materials, RMP (Resource Mobilization and partnership)	4	10	0	-10
Research Scientists	Senior Principal Research Scientist	2	2	1	-1
	Principal Research Scientist	3	6	0	-6
	Assistant Principal Research Scientist	4	27	11	-16
	Senior Research Scientist	5	30	30	0
	Assistant Research Scientist/ Research Scientist	7/6	40	52	12
	Senior/Principal Resource Mobilization and Partnership	6/5	2	0	-2
	Senior/Principal Intellectual Property Officer	6/5	1	0	-1
Technologists	Principal Technologists	5	16	0	-16
	Technologist/Senior	7/6	73	11	-62
	Assistant Technologist/Senior	9/8	18	16	-2
Technicians	Technician/Senior	10/9	64	12	-52
Engineering	Engineering Assistant/Senior	9/8	4	0	-4
Artisans	Artisan/Senior	11/10	62	26	-36

Cadre	Designation	KIRDI Grade	Optimum Establishment	In-post	Variance
Apprentice	Apprentice/Senior	12/11	20	0	-20
Human Resource Officers	Deputy Director - Human Resource Management & Admin	3	1	0	-1
	Assistant Director - Human Resource Management	4	1	0	-1
	Principal Human Resource Management Officer	5	1	1	0
	Human Resource Management Officer/Senior	7/6	3	6	3
	Human Resource Assistant/Senior	9/8	6	5	-1
Administrative Officers	Principal/Assistant Director Administration	5/4	1	1	0
	Administrative Officer/Senior	7/6	2	2	0
	Administrative Assistant/Senior	9/8	4	5	1
	Maintenance Engineer/Senior	7/6	1	0	-1
Office Administrators	Office Administrator/Senior	7/6	1	5	4
	Assistant Office Administrator/Senior	9/8	20	6	-14
Office Assistant	Office Assistant/Senior	10/11	27	0	-27
Security Officer	Assistant Security Officer/Senior	9/8	4	3	-1
Drivers	Driver/Senior	11/10	24	16	-8
Clerical officers	Clerical/Senior	11/10	0	8	8
Finance & Accounts	Deputy Director (Finance & Accounts)	3	1	0	-1
	Assistant Director (Finance & Accounts)	4	1	1	0
	Principal Accountant	5	1	1	0
	Accountant/Senior	7/6	8	7	-1
	Accounts Assistant/Senior	9/8	8	4	-4
	Deputy Director, Corporate Communication & Marketing	3	1	0	-1

Cadre	Designation	KIRDI Grade	Optimum Establishment	In-post	Variance
Corporate Communications & Marketing	Assistant Director, Corporate Communication & Marketing	4	1	0	-1
	Principal Marketing Officer	5	1	1	0
	Principal Communication Officer	5	1	1	0
	Marketing Officer/Senior	7/6	3	2	-1
	Communications Officer/Senior	7/6	3	3	0
	Customer Relations Assistant/Senior	9/8	6	10	4
Information Communication Technology	Deputy Director - ICT	3	1	0	-1
	Principal ICT Officer/Assistant Director - ICT	5/4	1	1	0
	ICT Officer /Senior	7/6	2	1	-1
	Assistant ICT Officer/Senior	9/8	2	3	1
Strategy and Planning	Deputy Director - Strategy and Planning	3	1	0	-1
	Principal Strategy and Planning Officer/Assistant Director	5/4	1	0	-1
	Strategy & Planning Officer/Senior	7/6	2	2	0
Quality Assurance and Risk Management	Assistant Director - Quality Assurance and Risk Management/Deputy Director	4/3	1	0	-1
	Principal Quality Assurance and Risk Officer	5	1	0	-1
	Quality and Risk Officer/Senior	7/6	2	2	0
Industrial Resource	Assistant Director, Knowledge Management and Intellectual Property/Deputy Director - Industrial Resource Centre	4/3	1	0	-1
	Information Officer/Senior/Principal	7/6/5	1	1	0
	Assistant Information Officer / Senior	9/8	1	1	0
Total			**553**	**282**	**-251**

Table 12: Skills Set and Competence Development

Cadre	Skills Set	Skills Gap	Competence Development
Research Scientists	• Communication and writing skills • Project management skills • Data management skills • Research skills • Data Analysis • Critical thinking and problem solving • Planning skills • Resource management skills	• Proposal writing. • Managerial and supervisory skills • Data analysis	• Training • Coaching and mentoring
Technologists	• Analytical skills • Computer skills • Data management • Coding • Audio visual editing and design • Digital marketing • Programming • Cloud computing	• Analytical skills	• Training • Coaching and mentoring
Technicians	• Assessment skills • Mechanical Skills • Technical Expertise • Resource management • Problem solving skills • Organization skills.	• Mechanical skills • Assessment skills	• Training • Coaching and mentoring
Artisan	• Interpersonal skills • Technical skills • Team work	• Technical skills	• Training • Coaching and mentoring

Cadre	Skills Set	Skills Gap	Competence Development
Human Resource	• Communication • Interpersonal skills • Management skills • Problem solving skills • Listening skills • Counselling skills • Decision making • Record management skills	• Supervisory skills • Management skills • Leadership skills • Strategic planning skills	• Training • Coaching and mentoring
Administration	• Decision making skills • Supervisory skills • Strategic Planning • Project Management • Organizational skills • Leadership skills • Property insurance • Communication Skills • Management skills • Record management skills • Asset valuation	• Supervisory skills • Management skills • Record management skills • Property insurance skills	• Training • Coaching and mentoring

Cadre	Skills Set	Skills Gap	Competence Development
Finance	• Accounting • Investment management • Risk management • Decision making • Financial analysis • Forecasting • Strategic planning • Project management • Communication • Budgeting	• Supervisory skills • Forecasting • Strategic planning	• Training • Coaching and mentoring
Legal	• Problem solving • Defending skills • Emotional intelligence • Logical reasoning • Public speaking • Legal research • Ethics • Critical thinking • Analytical skills	• Legal research	• Training • Coaching and mentoring
Corporate Communication	• Communication skills • Computer skills • Minute writing • Project management • Media relations • Public Relation • Marketing • Editing skill • Critical thinking	• Innovation skills • Editing skill	• Training • Coaching and mentoring

Cadre	Skills Set	Skills Gap	Competence Development
Planners	• Strategic planning • Project management • Communication • Budgeting • Critical thinking • Data analysis • Monitoring and evaluation skills • Report writing	• Supervisory skills • Management skills • Leadership Skills	• Training
Marketing	• Marketing skills • Critical thinking • Advertising • Customer service • Data analysis • Interpersonal skills • Website management • Market analysis • Content creation • Creativity	• Online marketing skills • Market analysis	• Training • Coaching and mentoring
Supply Chain Management	• Monitoring and evaluation skills • Project management • Problem solving • Risk management • Information technology • Strategic sourcing • Cost accounting • Decision making • Time management	• Time management • Risk management	• Training • Market analysis

Cadre	Skills Set	Skills Gap	Competence Development
Audit	• Risk management • Problem solving • Critical thinking • Analytical skill • Decision making • Business acumen • Communication	• Communication skills • Risk based audit training • Analytical skill	• Training • Market analysis
Office Administrator	• Computer skills • Minute and report writing skills • Problem solving • Time management • Customer service • Book keeping • Interpersonal communication • Event management • Data entry • Organization skills • Public relations	• Minute writing skills • Customer service • Event management • Supervisory skills • Management skills • Report writing • Public relations	• Training • Market analysis

6.3.3 Leadership

The Institute is managed by a Board of Directors responsible for overall policy formulation and providing strategic leadership. The Director-General is the principal accounting officer and will ensure the overall coordination, implementation, monitoring and evaluation of the Strategic Plan. The Heads of Directorates will be responsible for the day-to-day implementation, monitoring and evaluation of the plan. Further, the plan will be cascaded to departments and sections.

6.3.4 Systems and Procedures

Building on our focus on continuous performance improvement, the Institute will adopt appropriate systems, policies, strategies and plans to measure, manage and improve productivity and ultimately entrench a culture of productivity. This will involve interventions on productivity awareness creation, measurement and improvement. We will also enhance and review the Institute's performance management system and build human resource capacity to enhance productivity and performance; and scope and quality of RTI programs and activities.

6.4 RISK MANAGEMENT FRAMEWORK

Risk management addresses potential risks that have to be mitigated during implementation of the Strategic Plan. This requires that possible risks be analysed to take precautionary measures in good time and prevent failure of the Strategic Plan's implementation. Some of the major risks identified for consideration, their ranking and suggested mitigation measures are as detailed in table 13.

Table 13: Risk Management Framework

No.	Risks	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measure(s)
1.	Inadequate exchequer funding for implementing Institute's planned activities	H	H	H	Source for alternative funding for Institute's operations
2.	Delayed completion of infrastructure projects	H	H	H	Seeking alternative sources of funding, lobbying for adequate project funds
3.	Changes in government priorities	M	H	M	Aligning the institute's activities as per the government's priorities
4.	Inadequate technical skills to address frontier technologies	M	M	M	Budgetary allocation for recruitment in the identified technical skill gaps
5.	Staff exits	M	M	M	Mainstream succession planning at all cadres; provide conducive work

No.	Risks	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measure(s)
					environment; improve terms of service
6.	Inadequate funding for technical skills training	M	H	M	Seek alternative sources of funding for training; budgetary allocation for training
7.	Research equipment breakdown and obsolescence	H	H	H	Preventive maintenance plan; contractual maintenance by service providers
8.	Occupational health and safety	M	H	M	Adhere to occupational health and safety regulations, sensitizing staff and visitors on health and safety
9.	Negative publicity	M	H	M	Address all correspondence to the Director General
10.	Delay in project implementation	H	H	H	Due diligence for partners and contractors before implementation
11.	IPR litigation	M	H	M	Adherence to and implementation of IP policy
12.	Loss of data	H	H	H	Use of data backup and recovery tools Staff training on emerging cyber threats
13.	Failure to adhere to laws, regulations and policies	H	H	H	Development of legal compliance manual and undertaking audits to confirm adherence to the law

KEY: H = High, M = Medium, L = Low

CHAPTER SEVEN

RESOURCE REQUIREMENTS AND MOBILIZATION STRATEGIES

7.1 INTRODUCTION

This chapter will highlight the finances that will be required during the strategic plan implementation period. The chapter further outlines how the resources will be mobilized to ensure the implementation of the plan within the stipulated period.

7.2 RESOURCE REQUIREMENTS

The financial projection for the implementation of this plan is approximately KES 9.5 billion (Table 14) This will be financed through government grants, A-in-A, and funds from development partners, donors, private individuals and organizations. The projected resource requirements indicate a funding shortfall of KES 3.35 billion over the implementation period (Table 15). The Institute will implement the resource mobilization strategies to bridge the shortfall.

Table 14: Financial Requirements for Implementing the Strategic Plan

Cost Item	Projected Resource Requirement (KES million)					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
KRA 1: Manufacturing Value Addition	103	136.5	174	187.5	154	755
KRA 2: Engineering and Frontier Technologies	50	63.5	125.5	141.5	153	533.5
KRA 3: Industrial Technology Transfer	76.5	103	114.5	126	127.5	547.5
KRA 4: Institutional Capacity	984.0	1270.2	1757.0	1797.7	1848.5	7657.4
	1213.5	1573.2	2171	2252.7	2283	9493.4

Table 15: Resource Gaps

Financial Year	Estimated Financial Requirements (KES million)	Estimated Allocations (KES million)	Variance (KES million)
Year 1	1,213.5	976.2	237.3
Year 2	1,573.2	1,220	353.2
Year 3	2,171	1,276	895
Year 4	2,252.7	1,312	940.7
Year 5	2,283	1,359	924
Total	**9,493.4**	**6,143**	**3,350.2**

7.3 RESOURCE MOBILIZATION STRATEGIES

The Institute has been largely dependent on financing from the exchequer to fund its R&D programmes. This is inadequate and results in a disconnect between the proposed RTI budget and government allocations. This has slowed down implementation of the Institute's mandate, delayed modernisation of RTI infrastructure and limited ability to attract, develop and retain high calibre staff. To mitigate the resource gaps identified in Table 7.2, the Institute will implement the following resource mobilization strategies:

7.3.1 Seek Budgetary Strategic Intervention

Seek intervention from Government to complete and equip KIRDI Techno-centre and build the requisite institutional capacity. As a non-commercial state agency, the Institute requires continuous funding for industrial R&D activities to support national industrial development.

7.3.2 Diversify Funding Sources

Design bankable research projects to unlock government funding and R&D investment in industrial RTI. In addition, the Institute will develop customised capacity building, incubation and CMF services for the industry; and constantly seek consultancy services.

7.3.3 Strengthen Strategic Partnerships and Collaborations

Review, map, deepen and diversify the portfolio of KIRDI partners using dynamic data capture instruments and tailored approaches so as to engage key partners across all relevant sectors of industrial research and national development

i. Design, advocate and execute practical engagement models with county governments, private sector and foundations and form productive and sustainable partnerships that support KIRDI research programmes.

ii. Exploit KIRDI's unique niche and role in industrial research to form linkages and collaborate with institutions of higher learning, professional and industrial associations, and government agencies to build consortia and long-term funding. Coordinate and solidify linkages within the government system in Kenya and beyond, across all centres of excellence, research clusters, consortia, hubs, and research entities across the world to access resources and lessons for institutional and national industrial development.

7.3.4 Strengthen Internal Resource Mobilization Capacity

i. Establish a RMP Directorate, in KIRDI management structure, with the mission to ensure a transparent, systematic, predictable and well-coordinated approach to soliciting, acquiring, and utilization, management, reporting, monitoring and evaluating funding from development partners and stakeholders

ii. Activate high level corporate advocacy and networks to leverage KIRDI and strategically position the Institute for funding as the premier industrial research institute with the capacity to execute the national industrialization agenda. The Institute will also increase the vertical and horizontal capacity of KIRDI's technical functional units to assemble research consortia for funding to design, implement and disseminate diverse national, international and multi-institutional industrial research interventions and programs.

iii. Promote, through communication, corporate marketing, virtual events, nationwide technology open days, field outreach programs and practical demonstrations of KIRDI's comparative advantage as the partner of choice for promoting industrialization.

iv. Undertake policy advocacy and set up an Industrialization Cluster Fund to support the institute's mandate.

v. Develop IT-based innovative and up-to-date approaches to resource mobilization that incorporate the latest tools for design, execution, management, monitoring, evaluation, learning of projects and programs.

vi. Review and operationalize costing and pricing policy.

7.4 RESOURCE MANAGEMENT

The Institute will put in place measures to ensure prudent resource management. These measures will include: linkage of work plans, procurement plans and budgets through the Budget Implementation Committee as guided by the Public Finance Management Act; enhancement of internal control systems through regular internal audits, M&E; digitalization of services; outsourcing non-core services; prudent financial management; adequate risk assessment and management.

In adopting the BETA principle of prioritisation and sequencing in the utilisation of scarce resources on impactful value chain activities, the Institute will set priorities and allocate resources on critical processes for effective performance. This is based on the fact that limited resources have to be prudently allocated to solve the pressing challenges facing industrial growth, productivity and competitiveness. The Budget Implementation Committee and Senior Management Committee will support implementation of a resource allocation criterion that is objective, transparent and participatory. This will also involve prioritising interventions that have the capacity to generate internal revenue quickly to finance other non-revenue generating activities. To ensure continuous funding of mandate activities, the institute will also align to the value chains budgeting approach by Government. This will ensure that interventions are funded and implemented to completion.

CHAPTER EIGHT

MONITORING, EVALUATION AND REPORTING FRAMEWORK

8.1 INTRODUCTION

Monitoring, Evaluation, Reporting and Learning (MERL) is vital to the successful implementation of this Strategic Plan. The framework will monitor, evaluate and report on progress towards planned objectives and provide feedback on the status of implementation for informed decision making.

8.2 MONITORING FRAMEWORK

Review of progress of the Strategic Plan shall be done on a quarterly and annual basis through the approved annual work plans and coordinated by the SPC Directorate. Routine data collection will be done on identified indicators to monitor progress of achievements on the strategic objectives. The SPC Directorate shall ensure that strategies are implemented, performance is measured, progress reports are made and discussed, and corrective action taken where necessary. All the Directorates and Departments shall be accountable for the completion of tasks indicated in their respective work plans. MERL will be integrated for all institute programs and projects and will involve:

i. Development of a logical M&E Framework for the Institute.
ii. Identification of key performance indicators to be monitored.
iii. Developing annual monitoring and evaluation plans.
iv. Preparation of quarterly and annual progress review reports on the implementation of the Strategic Plan.
v. Conduct evaluation of selected areas in delivery of mandate.
vi. Monitoring of compliance with the Institute's internal policies, strategies and procedures.

8.3 PERFORMANCE STANDARDS

The Institute's MERL will be based on accepted norms and standards. This will involve: -

8.2.1 Institutional Framework

The institutional and policy framework will allow for effective implementation of the M&E function through development of an M&E policy and guidelines. For the implementation of the Plan to be effective, the MERL shall be an integral part of the Institute's Performance Management System and will be linked to staff appraisal system. The Director General shall ensure that a Performance Management System is implemented, actual performance is measured against negotiated targets at all levels and feedback provided to key actors in the implementation. Monitoring and evaluation will be coordinated by the SPC Directorate. The directorate's human resources for the M&E function are

established in the Institute schemes of service and career progression guidelines. The SPC directorate shall also develop an Institute M&E policy and guidelines.

8.2.2 Monitoring Plan

Monitoring plans will be prepared annually and will describe what shall be monitored, type of data and information required and their sources, data collection methods and tools, frequency of data collection and responsibility. This shall be cascaded to all members of staff to enable them understand and plan for their respective roles. The monitoring matrix will consist of clear performance indicators, resources requirements and responsibility for their achievement shall be developed in line with activities in the Strategic Plan.

8.4 EVALUATION FRAMEWORK

Evaluations will be carried out to determine the achievement of targets, efficiency, effectiveness, impact and sustainability of the Institute in meeting its mandate and strategic priorities. Evaluation of the strategic plan shall be undertaken at mid-term and end-term as guided by the M&E Framework. Table 8.1 indicates the outcome indicators and targets to be evaluated.

Table 16: Outcome Performance Matrix

Strategic Objective	Outcome	Outcome Indicator	Baseline Year	Target Year	
			2022/2023	Mid-term	End-term
KRA 1: Manufacturing Value Addition					
SO 1.1: Enhance value addition to agricultural, natural and blue economy resources	Increased value addition of local value chains	No. of enterprises adopting agro-processing technologies	300	670	1,010
		No. of enterprises adopting bio-based products technologies	38	180	270
		No. of products attaining standardization marks of quality	87	540	560
		No. of enterprises adopting leather processing technologies	15	45	55
		No. of enterprises adopting utilization of alternative fibres products and processes	5	30	45
KRA 2: Engineering and Frontier Technologies					
SO 2.1: Adopt smart technologies for production of industrial materials and machines	Increased manufacturing competitiveness	No. of enterprises adopting alternative building technologies	4	140	190
		No. of enterprises making innovative products from clay and minerals	2	60	90
		Value (KES million) of machinery, industrial equipment, tools and parts developed and commercialized	12	95	180
SO 2.2: Promote adoption of green manufacturing technologies	Sustainable industries	No. of industrial enterprises adopting RECP and industrial symbiosis concepts	3	108	162
		No. of enterprises adopting green energy technologies	5	300	450
KRA 3: Industrial Technology Transfer					
SO3.1 Enhance dissemination	Increased industrial	No. of market ready technologies adopted	60	135	155

Strategic Objective	Outcome	Outcome Indicator	Baseline Year	Target Year	
			2022/2023	Mid-term	End-term
and adoption of industrial technologies	productivity and competitiveness	No. of industry solutions patented and commercialized	NIL	5	18
		No. of IP registered and renewed	2	10	18
		Revenue (KES million) generated from IP	5	25	45
		No. of spinoffs and start-ups established	NIL	5	18
		No. of new direct jobs created	1,560	3,810	4,620
KRA 4: Institutional Capacity					
S04.1: Strengthen institutional capacity to deliver mandate	Improved service delivery	Customer satisfaction level (%)	80	85	90
		Employee satisfaction level (%)	60	70	80
		Percent automation index of KIRDI processes	20	60	100
		Productivity index	TBD	TBD	TBD

8.4.1. Mid-Term Evaluation

The mid-term review will give a status report on implementation achievements, challenges, lessons learnt and take corrective measures where necessary and be done by end of FY 2025/26.

8.4.2 End-Term Evaluation

The final evaluation of this Strategic Plan shall be carried out at the end of the planned period to determine the extent to which the activities undertaken met the objectives; the achievements realized; challenges faced and mitigation measures; lessons learnt; and the way forward to guide the subsequent plan in FY 2027/28.

8.5 REPORTING FRAMEWORK AND FEEDBACK MECHANISM

Reporting of progress report implementation of the Strategic Plan is important in measuring performance and informing decision making. The progress reports will be done through the annual work plans and will involve:

i. Monthly reports will be prepared by the Directorates and presented to Senior Management Committee for review.

ii. Quarterly reports will be prepared by the Senior Management Committee and presented to the Board of Directors and to relevant MDAs as required.

iii. Annual Reports will be prepared by the Management and the Board of Directors and presented to relevant MDAs and stakeholders in compliance with statutory requirements.

ANNEXES

The Institute will use the annexed templates as presented in tables 17, 18 and 19 for reporting implementation progress of the strategic plan.

ANNEX 1: QUARTERLY PROGRESS REPORTING TEMPLATE

Table 17: Quarterly Progress Reporting Template

Expected Output	Output Indicator	Annual Target (A)	Quarter for Year (202_/202_)			Cumulative to Date			Remarks	Corrective Intervention
			Target (B)	Actual (C)	Variance (C-B)	Target (E)	Actual (F)	Variance (F-E)		

ANNEX II: ANNUAL PROGRESS REPORTING TEMPLATE

Table 18: Annual Progress Reporting Template

Expected Output	Output Indicator	Achievement for Year (202_/202_)			Cumulative to Date (Years)			Remarks	Corrective Intervention
		Target (A)	Actual (B)	Variance (B-C)	Target (D)	Actual (E)	Variance (E-D)		

ANNEX III: EVALUATION PROGRESS REPORTING TEMPLATE

Table 19: Evaluation Reporting Template

Kra	Outcome	Outcome Indicator	Baseline		Mid-Term Evaluation		End of Plan Period Evaluation		Remarks	Corrective Action
			Value	Year	Target	Achievement	Target	Achievement		

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