**NAME OF THE INSTITUTION**

**Template**

**Institutional Science, Technology, and Innovation (STI) Mainstreaming Strategy**

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# Introduction

Give a brief background about the MDA and any other relevant information more so on STI.

*E.g. Brief historical background of the MDA, legal framework establishing the MDA, mandate of the MDA, the institutional framework, type of the MDA (Research Institution, University, University College, Regulating agency, TVET institution, MDA involved in National Research Priorities Framework, MDA with a distinct research and technology development centre/unit etc).*

# MDA Situational Analysis, and Rationale

## Situational Analysis

Undertake a situational analysis of STI in the MDA based on STI Strategic/ Operational Priorities, vis-a-viz the current status of STI in the country using Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis.

*E.g.*

* *Strengths: Established Centers of Excellence, innovation hubs etc*
* *Weaknesses: Inadequate funding for Research and Development (R&D), fragmentation of R&D systems etc*
* *Opportunities: Key role of STI in achieving the SDGs, role of STI in mitigating effects of COVID-19 pandemic etc*
* *Threats: Health, social and economic crisis attributed to COVID-19 Pandemic etc*

## Rationale of the Institutional STI Mainstreaming Strategy

Clearly state the Rationale of the STI Strategy

# STI Strategic Orientation

## Vision of the MDA

## Mission of the MDA

## Core values of the MDA

## Objectives of the Institutional STI Strategy

State the main objective as well as the specific objectives of the STI Strategy

## Guiding Principles of the Institutional STI Strategy

State the principles that will guide effective implementation of STI Policies and Strategies

*(E.g. Relevance to the country’s Vision 2030 and the Constitution 2010; Quality, novelty and originality; Cost-effectiveness for desired results; Multi-disciplinary and cross-sectoral approach to problem-solving etc)*

## STI Strategies for the MDA

Based on identified strategic STI priority areas and in line with the MDA’s mandate and Strategic Plan, generate institutional STI mainstreaming objectives and Strategies. Table 3.1. provides the working layout and a list of five STI Strategic Issues to guide the development of institutional STI mainstreaming strategies.

Develop an STI Strategy Mainstreaming strategic objectives and RSTI Strategies as guided in Table 3.1

**Table 3.1: STI Mainstreaming strategies for the MDA**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **THE STRATEGIC ISSUE** | **Strategic Objective(s)** | **Strategies for Research, Science, Technology, and Innovation (RSTI) *(Specify as pertains to the MDA)*** |
|  | **Science, Technology and Innovation (STI) Education, Communication, Talent Development, and Next - generation Workforce** | *E.g.**To enhance quality and capacity of human resource and talent management***or***To re-align education, training and research programmes to the national goals and regional/counties and industry needs* | * *E.g.*
* *Increase RTI personnel (PhDs and Masters level) by x%*
* *Enhance gender parity in STI programmes.*
* *Provide mechanisms to attract and retain human resource in STI;*
* *Adopt a continuous review and implementation of the education curriculum to respond to the needs of the STI sector*
* *Train staff on current and emerging issues on RSTI including STI Communication and Diplomacy*
* *Develop a mechanism for recognizing and rewarding achievements in RSTI*
* *Provide financial support to a public institution promote Science, Technology and Innovation (STI) Education, Communication, Talent Development, and enhance Next Development, and Next - generation Workforce*
* *Formally partner with a public institution promote Science, Technology and Innovation (STI) Education, Communication, Talent Development, and enhance Next Development, and Next - generation Workforce*
* *Formally regulate and assure quality as well as relevance in the implementation of activities related Science, Technology and Innovation (STI) Education, Communication, Talent Development, and Next Development, and Next - generation Workforce as the legally mandated Regulatory Authority or Agency (RAA)*
* *Oversee and ensure implementation of the activities related to Science, Technology and Innovation (STI) Education, Communication, Talent Development, and Next Development, and Next - generation Workforce*
* *Develop programmes with industry to strengthen technological capabilities*
* *Participate in conferences, exhibitions/fairs, STI networks*
* *Ensure all Research is licensed as per statutory provisions,*
* *Ensure research is aligned to the National Research Priority areas*
* *Publish scientific papers in approved refereed journals*
 |
|  | **R&D Strengthening, R&D Priorities, R&D Financing and R&D Infrastructure** | *E.g.**To enhance and strengthen STI infrastructure to support Programmes in priority areas and develop mechanisms for sustainable financial resource mobilization and investment in STI*  | *E.g.** *Establish the status of STI infrastructure and digital readiness*
* *Allocate funds for the expansion of STI infrastructure*
* *Develop a framework for resource mobilization*
* *Invest .x% of Budget on R&D, Research Chairs Programmes, Technology & Innovation, Centre of Excellence, Science & Technology Parks, and/or Incubation Centres, Technology and Innovation activities.*
* *Determine annual R&D performance based on R&D Indicators*
* *Provide financial support to a public institution to strengthen R&D by focusing on key areas such as R&D priorities, R&D financing, and R&D infrastructure development*
* *Oversee and ensure implementation of R&D* *priorities, R&D financing, and R&D infrastructure development activities*
 |
|  | **STI Inclusivity, Diversity, Advocacy, Diplomacy, Governance, legal framework, and Policy Reviews** | *E.g.**To enhance STI advocacy and awareness and promote gender equality in all STI-related programs, activities, and decision-making processes.* | *E.g.** *Participate in, and/or coordinate annual RSTI related conferences, science weeks, congresses, STI Olympiads, STEM mentorship programmes, exhibitions, fairs and expert dialogues.*
* *Engage with the County Governments on STI-based innovative county development strategies and programmes*
* *Undertake programmes or activities that enhance gender equality and inclusivity in the STI Sector*
* *Undertake or undertake RSTI policy/legal and governance framework reviews*
* *Provide financial support to a public institution for undertaking STI Inclusivity, Diversity, Advocacy, Diplomacy, Governance, legal framework, and Policy Reviews*
 |
|  | **Technology Protection, Diffusion, and Commercialization** | *E.g.**To strengthen the Intellectual Property Rights Regime and/or establish Innovation incubation centres and Science and Technology Parks*  | *E.g.** *Develop and implement an Institutional Intellectual Property Policy*
* *Create awareness of the importance of Intellectual Property Rights.*
* *Align Technology Development activities to National Priorities*
* *Submit applications for Patents, and Register utility models*
* *Strengthen industry-academia linkages to encourage commercialization, venture capitalists, and spin-offs*
* *Establish technology transfer, and industrial liaison offices.*
* *Participate in annual conferences, exhibitions, science weeks, and expert dialogues pertaining STI*
* Strengthen industry-academia linkages within the Quintuple helix framework
* *Undertake investments or partnerships in Manufacturing, Infrastructure development, MSMEs, Start-ups, Technology Parks, and Smart Technologies*
 |
|  | **Strategic Multi-Agency, Multisectoral, and International Cooperation and Partnerships in RSTI**  | *E.g.**To establish and strengthen strategic collaborations and partnerships at national, regional, and international levels.* | *E.g.** *Participate in STI networks at national, regional and international levels*
* *Establish multidisciplinary and multi- institutional teams for collaborative research and development.*
* *Participate or enlist in international conferences, international workshops, national dialogues, and STI networks at national, regional and international levels*
* *Participate in formal multi-agency teams and taskforces*
* *Establish Quintuple helix partnership frameworks for RSTI*
* *Provide financial support to multi-agency, multisectoral, multidisciplinary teams*
 |
|  | **Other strategic STI priority areas may include:**1. *Health Security, and Substance Abuse Mitigation (including Pharmaceuticals/Traditional medicine Production).*
2. *STI for Food Security, Nutrition, Smart Agriculture, and harnessing of indigenous knowledge and technologies.*
3. *STI for SDGs, Climate Change Mitigation, and Harnessing of the Blue Economy/Aquatic Resources.*
4. *STI for Sustainable Urbanization, County Development, and Resilient Communities.*
5. *Infusion of modern technologies into the operations of an institution to enhance service delivery.*
6. *The Fifth Industrial Revolution, Digital Economy, Data Governance and Emerging/Frontier Technologies.*
7. *STI for National Security, Public safety and Emergency Response*.
 |  |  |

# Implementation Framework of the Institutional STI Strategy

Develop an STI Strategy Implementation Framework/Matrix as guided in **Table 4.1**

 **Table 4.1: Implementation Framework of the Institutional STI Mainstreaming Strategy**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **The Strategic Issue** | **Strategy** | **Expected Results** | **Performance****Indicator(s)** | **Means of Verification** | **Estimated cost** |
| *E.g.* *Science, Technology and Innovation (STI) Education, Communication, Talent Development, and Next - generation Workforce* | *Increase RTI personnel (PhDs and Masters level)* | *Increase in RTI personnel by x%*  | *Number of recruited/promoted RTI personnel* | *Human Resource Records* | *Kshs. xxxxxxx* |
| *E.g.* *STI Inclusivity, Diversity, Advocacy, Diplomacy, Governance, legal framework, and Policy Reviews* | *Support and coordinate annual conferences, science weeks, congresses* | *Increased STI advocacy and awareness* | *Number of conferences, science weeks and congresses held/participated in* | *Conference, science week and congress reports and other documentations* | *Kshs. xxxxxxx* |
|  |  |  |  |  |  |

# Monitoring and Evaluation (M&E)

## Internal mechanism for M&E

Establish Internal Quarterly and Annually M&E Mechanism

## STI Strategy Review

Review as per the MDA’s established document review procedure