



**MBARARA UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

**STRATEGIC PLAN FOR
RESEARCH, INNOVATIONS &
UPTAKE
(2013-2022)**

June 2013

PRINCIPAL'S FOREWORD

VICE CHANCELLOR'S FOREWORD

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LIST OF ACRONYMS

| | | |
|---------|---|---|
| CAMTech | - | Consortium for Affordable Medical Technologies |
| CIRIMO | - | Centralised Institutional Research, Innovations and Management Office |
| COBERS | - | Community Based Medical Education Service and Research |
| EU | - | European Union |
| GoU | - | Government of Uganda |
| ICT | - | Information, Communication and Technology |
| IDRC | - | International Development Research Centre |
| IRC | - | Institutional Review Committee |
| IT | - | Information Technology |
| ITFC | - | Institute of Tropical Forest Conservation |
| JHU | - | Johns Hopkins University |
| MakCHS | - | Makerere University College of Health Sciences |
| MBChB | - | Bachelor of Medicine and Bachelor of Surgery |
| MESAU | - | Medical Education for Equitable Services to All Ugandans |
| MoU | - | Memorandum of Understanding |
| MSF | - | Médecins Sans Frontières |
| MUST | - | Mbarara University of Science & Technology |
| NIH | - | National Institutes of Health |
| NWSC | - | National Water & Sewerage Corporation |
| PI | - | Principal Investigator |
| SNOWS | - | Scientists Networked For Outcomes From Water and Sanitation |
| SOs | - | Strategic Objectives |
| SWOT | - | Strengths, Weaknesses, Opportunities and Threats |
| TBD | - | To Be Determined / Decided |
| UNCST | - | Uganda National Council of Science and Technology |

1.0 INTRODUCTION

1.1 Mbarara University of Science & Technology

Mbarara University of Science & Technology (MUST) was opened in October 1989 after extensive modification of physical facilities of the former School of Midwifery at the Mbarara District hospital. The MUST Statute (1989) as passed by the National Resistance Council was the enabling law that established the University as a body corporate. At that time Uganda's economy and social infrastructure had collapsed due to civil wars in the 1970's and 1980's. Therefore, with the Government of Uganda's (GoU) realization that higher education was a critical asset for nation building, and in particular that Science and Technology was the most realistic driver to lead this initiative, MUST was therefore a welcome idea and has to date lived to that expectation.

Overcoming several set up challenges the founding Vice Chancellor Professor Frederick I.B. Kayanja, in collaboration with 4 Cuban professors started the pioneer Faculty of Medicine opening its gates to the first 43 students admitted to the Bachelor of Medicine and Bachelor of Surgery (MBChB) programme. Since October 28, 1989, MUST has seen many community innovations, which have contributed to her development and that of the country. It has grown from a single Medical faculty University serving a student population of 43 to two faculties of Science and Development Studies and two institutes of Computer Science and Tropical Forest Conservation (ITFC) which is based in the Bwindi Impenetrable National Park with a population of 3,508 as of January 2012. To attain this level of educational progress has been no small feat.

In May 2012, the University finally unveiled and commissioned the much awaited move to a spacious campus at Kihumuro located 7 km on Mbarara-Bushenyi road with the commissioning of the Estates and Works Block and handing over the site for the construction of the Faculty of Applied Science and Technology. This brings to fruition the whole spectrum of this great University of Science and Technology.

The vision of MUST is to be a Centre of Academic and Professional Excellence in Science and Technology, while its mission is to provide Quality and Relevant Education at national and international level with particular emphasis on Science and Technology and its application to community development.

1.2 MUST's Research Philosophy

MUST strongly believes that fostering and building research infrastructure at the University delivers a number of local and national benefits, including: first, a research-active faculty remains up-to-date in their field, benefiting the students while also developing their research skills; secondly, by doing research at the cutting edge, academia can not only identify potential

future problems, but also offer solutions when the need arises; thirdly, research builds a knowledge-based economy where entrepreneurship springs from academic efforts; and lastly, developing and retaining a pool of intellectuals and academics that can enrich any debate and social discourse within the country will be a source of think tanks that can advise government and other stakeholders on appropriate strategic interventions.

Thus, building research capacity at MUST will help the University not only contribute to community and national development but also enhance the quality of teaching and learning. Being a university of science and technology, MUST should be seen to be making a significant contribution not only to new knowledge but also providing practical solutions to community, national and international problems.

To that end therefore, MUST offers academic freedom, through innovations in course content, allowing new experimental courses which not only introduce new areas to students but also stimulates their interest in those areas, potentially helping the faculty in research. Equally, the University offers research freedom, allowing the students to choose a research area of their preference, which will contribute to better skills in the chosen area. The University will also see to it that the needs and aspirations of researchers will be taken into account and that junior research faculty will be mentored to grow into more experienced researchers.

1.3 Centralizing Institutional Research & Innovations Management and Research Uptake

The idea of having a centralised mechanism for promoting research, innovations and management as well as research uptake is by no means new to MUST. Setting up structures and systems that support university-wide research and innovations is something that is already being done in other higher institutions of learning such as: University of Malawi, Johns Hopkins University and University of Washington. In Uganda, this idea is already shared by other institutions that form the Medical Education for Equitable Services to All Ugandans (MESAU) - Makerere University College of Health Sciences (MakCHS), Gulu University, Busitema University and Kampala International University Western Campus - who are all currently in the process of developing similar arrangements.

Research Uptake is another new initiative that has come on board to strengthen research by championing utilization of the research results obtained. It is a move across 24 Universities in Sub-Saharan Africa under the umbrella DRUSSA (Development Research Uptake in Sub Saharan Africa). In Uganda DRUSSA is in Makerere University Kampala and Mbarara University of Science and Technology.

Centralising research and innovations management and research uptake will ensure that mutually beneficial collaborations are sought and pursued, the quality of research proposals submitted for funding is enhanced through appropriate review mechanisms, and that the management and

coordination of on-going research projects will proceed in accordance with set protocols (specifications, timelines, budgets, etc). In addition, research outputs at MUST will be better utilised by the intended beneficiaries and through efficient coordination, the new knowledge generated at MUST can better influence policy making both at the local and national level.

To harness these benefits, the MUST office of Centralised Institutional Research & Innovations and Management and Uptake (CIRIMO), is being put in place.

The office is expected to perform the following key functions:

- Identify, evaluate and manage research collaborations
- Manage research grants and funds
- Procure research infrastructure and supplies
- In collaboration with the University's Institutional Review Committee and other faculty research administration offices and organs, ensure adherence to ethics, protocols and all other legal requirements in all prospective and on-going research projects
- Manage innovations processes, outputs and research uptake at the University
- Provide support for Research uptake

The idea of setting up a CIRIMO office was concretised after some faculty members, under the auspices of MESAU, visited Johns Hopkins University and later the College of Medicine Malawi to learn how research is managed and administered. It was later decided that the CIRIMO be jump started with a clear strategic plan that will provide a road map for its operations. MUST MESAU is working hand in hand with MUST DRUSSA to strengthen Research & Innovations management and research uptake in the university.

1.4 The Strategic Planning Process

To come up with a strategic plan for CIRIMO, several meetings have been held. The first strategic planning meeting for MUST-CIRIMO was held on 3rd October 2012 with twenty nine (29) participants from across the faculties/institutes and administrative organs of the University. The concept of CIRIMO was introduced to the members in attendance and discussions were held regarding its mission and vision. This meeting noted that other MESAU institutions were discussing the same idea for their institutions and each office was to be tailored to the respective institutional settings. This meeting proceeded to conduct a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of MUST within the broader themes of research, innovations and management. This meeting concluded with the constitution of a working committee that would meet every Wednesday to draft the strategic plan.

The next meeting was held on the 10th October 2012, which was attended by eighteen (18) participants. The first draft that was developed by the working committee was reviewed in this meeting. The meeting deliberated on the proposed structure for CIRIMO and proposed that the office be headed by an Executive Director, being assisted by three (3) deputies who would be in charge of innovations, research and grants respectively. The meeting also proposed that a research and innovations committee be formed at each faculty. However, the meeting was informed that Faculty of Medicine already had such a committee whose inaugural meeting had been scheduled for 12th October 2012.

This meeting also proposed that the MUST-CIRIMO should fulfil three (3) broad aims:

- a) To Strengthen MUST Grants Office, which is already in existence
- b) To Establish and operationalize MUST Research Office
- c) To Establish and operationalize MUST Innovations Office

At the end of the meeting, three groups were formed in order to come up with CIRIMO objectives and activities in line with each of the broader themes.

The third meeting was held on 17th October 2012, and was attended by thirty one (31) participants. The meeting split into three groups; each handling one of the three themes – research, innovations and grants. The groups deliberated on the proposed CIRIMO vision and mission, and later met together to harmonise their views. The groups then went on to develop the goal, objectives and strategies.

The fourth meeting was held on 24th October 2012, and was attended by twenty one (21) members. This meeting built on the third meeting’s deliberations and went on to complete what was remaining. The fourth meeting was supposed to make preparations for disseminating the strategic plan to the wider MUST community; however, this did not take place as the plan was not yet complete.

The fifth and last meeting was in form of a strategic planning workshop, which was facilitated by a consultant – Ignatius Odongo from 3A Strategic Management Consultants Ltd. The workshop lasted 5 days, during which all previous outputs were reviewed as well as developing all the other strategic plan components. This draft strategic plan is thus a culmination of the outputs of these five meetings.

2.0 SITUATIONAL ANALYSIS

2.1 External analysis

External analysis examines factors outside the University’s operating environment, in particular,

political, economic, social, technological and environmental factors. These external factors could either facilitate or constrain the University's ability to achieve her research long-term goals.

Table 1 below contains a summary of external factors that are relevant to MUST in as far as research is concerned.

Table 1: External factors facing MUST's research

| | |
|--|--|
| <p><u>Political factors</u></p> <p>Positive:</p> <ul style="list-style-type: none"> • Positive political will to promote science • Government policy on higher education (encouraging science based education) <p>Negative:</p> <ul style="list-style-type: none"> • Political uncertainties • Shifting government funding priorities | <p><u>Economic factors</u></p> <p>Positive:</p> <ul style="list-style-type: none"> • Consortium based collaborations (MESAU, CAMTech, SNOWS) • Grant opportunities (NIH, IDRC, EU) • Increasing donor interest towards MUST and many visiting faculty • Increasing number of alumni in strategic positions • Emerging Universities in the region providing an opportunity for collaboration • Increasing investment on the region (Nile breweries, Chinese steel factory, Coca cola) plant, NWSC, etc.) • External opportunities/incentives to researchers <p>Negative:</p> <ul style="list-style-type: none"> • Shifting donor funding priorities • Over dependence on donor funds for research • Despite the long history of innovative research taking place at MUST, not that much significant research outputs from MUST have influenced or informed policy decisions in the country |
| <p><u>Social factors</u></p> <p>Positive:</p> <ul style="list-style-type: none"> • Increased health awareness among the population <p>Negative:</p> <ul style="list-style-type: none"> • High disease burden • Disease outbreaks (e.g. Ebola, noddling disease) • Cultural norms - culture in our communities affect research in terms of recruitment • Language barriers • Illiteracy levels, people can't read and interpret the consent forms • Religious beliefs | <p><u>Technological factors</u></p> <p>Positive:</p> <ul style="list-style-type: none"> • Availability of Software which eases analysis • Communication • Improved data storage systems e.g. flash discs (data is secured) • Equipment for storage of specimen/samples and the integrity of maintained • Transport system • Tests conducted are sophisticated levels <p>Negative:</p> <ul style="list-style-type: none"> • Technology costs are very high • Low internet connectivity • Unreliable electricity • Lack of alternative power sources • Data security compromised by hackers into data bases, virus attacks |

Environmental factors

Positive:

- Increased awareness and concern for effects of climatic change
- Growing interest in climate change research
- Natural endowments provide opportunities for research

Negative:

- Limited research opportunities in complementary and alternative medicine (herbs)
- Lack of clear policies on climate change (policy still in draft form)
- Limited adoption of climate change mitigation and adaptation approaches

2.2 Internal analysis

Internal analysis looks at factors within the University that either promote or constrain the University's ability to attract, conduct and manage research. These factors are summarised in table 2 below.

Table 2: MUST's strengths and weaknesses in research

| <u>Strengths:</u> | <u>Weaknesses:</u> |
|---|---|
| <ul style="list-style-type: none">• Dynamic and competent researchers• MUST Institutional support• Strong research collaborations e.g. Harvard, JHU, MSF, MESAU• MUST Grants Office in place• MUST-IRC accredited by UNCST• Proximity to teaching hospital• Inter-disciplinary approach to research• Vibrant Community based education program (e.g. COBERS)• Available space for expansion• Availability of infrastructure for research | <ul style="list-style-type: none">• No dedicated lab in MUST for Research• Researchers' access and utilization of the research lab is limited• Lack of clear policies and guidelines on utilization of labs• Lack of negotiation capacity/power on some projects• Inadequate knowledge & skills in grants management (e.g. grants contract management)• Weak research profile• MUST –IRC does not have office space, equipment and human resource• Weak protection rights to data• No policy on publications (like manuscripts preparation for higher degrees)• No school for postgraduate studies• Limited research communication• Many research capacity building grants do not put research training as a priority• Fragmented research projects (limited team based research)• Lack of dedicated research money by the University• High level of attrition of staff• Inadequate ICT infrastructure• Limited access to recognized journals• Individualized rather than institutionalized research• No specific policy and strategy to ensure research uptake at MUST |

2.3 Key issues

The external and internal factors above point to the following key issues that the University must deal with if she is to grow her research profile:

- a) Need to better harness collaborations for research and innovations as well as uptake (partners, governments, funders, industry, private sector, and the community)
- b) Weak research capacity (skills and infrastructure)
- c) Limited resources for research and innovations
- d) Need for an enabling environment for research and innovations (rewards, retention, motivation, policy)
- e) Integration and building innovations (policy, skills, resources, rewards, marketing)
- f) Building capacity for research uptake at MUST

These key issues form the bedrock of the University's research and innovations strategy because they point to areas that the University must address herself to over the next 10 years in order to make it a truly research focussed institution.

3.0 STRATEGIC DIRECTION FOR RESEARCH, INNOVATIONS AND UPTAKE AT MUST

3.1 Strategic positioning

MUST would like to position herself as a centre of excellence for research and innovations. That means being at the forefront of not only knowledge creation, but most importantly, transforming new knowledge into practical solutions that solve community problems. To achieve this strategic stance, the University will invest in growing her research capacity (both in terms of skills and infrastructure) and will work with several collaborators to ensure that her research profile and innovations profile grows.

3.2 Vision

CIRIMO envisions transforming MUST into a leading center for transformational research and innovations.

3.3 Mission

CIRIMO seeks to promote efficient and effective conduct and management of research and innovations at MUST.

3.4 Strategic Objectives

CIRIMO will pursue the following five strategic objectives (SOs) in order to transform MUST into a leading center for transformational research and innovations.

- SO 1: Enhance research skills and infrastructure
- SO 2: Strengthen mobilization and management of resources for research and innovations
- SO 3: Nurture an enabling environment for research and innovations
- SO 4: Promote knowledge translation, innovation and research uptake
- SO 5: Promote mutually beneficial local and international collaborations for research and innovations

3.5 Values

CIRIMO will pursue the following values in her bid to promote research and innovations at MUST:

Teamwork: this is a process of working collaboratively with others in order to achieve common goals. Teamwork is often a crucial ingredient of an organisation as it is necessary for colleagues to work well together to attain their best in any circumstance. Teamwork means that people will try to cooperate, using their individual skills and providing constructive feedback, despite any personal conflict between individuals. Consequently, CIRIMO will promote team work during the initiation, conduct, management and dissemination of research. This will also apply to the process of initiating and rolling out innovations.

Professionalism: being a professional implies a commitment to excellence and integrity in all undertakings. It places the responsibility to serve (care for) others above self-interest and reward. Accordingly, CIRIMO will encourage all researchers and research administrators at MUST to act as role models by exemplifying this commitment and responsibility, so that peers and students are exposed to and learn the kinds of behaviours that build and maintain professionalism.

Accountability: this entails the obligation of an individual or organization to account for its activities, accept responsibility for them, and to disclose the results in a transparent manner. It also includes the responsibility for finances or other entrusted property. Consequently, CIRIMO will encourage MUST faculty, staff and students to be accountable for all of their actions, adhere to the principles and policies of the University and to the ethics and standards of their professions.

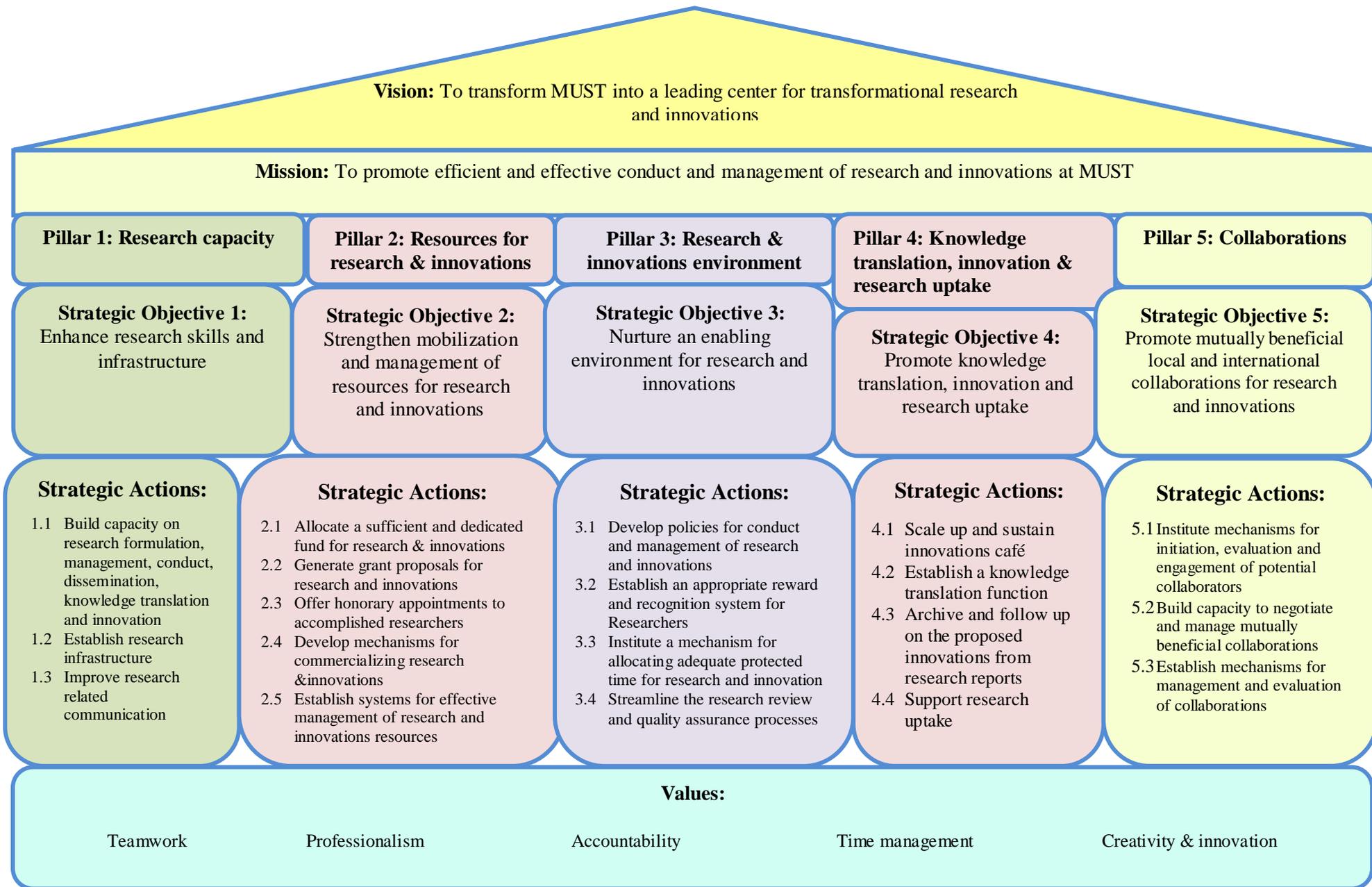
Time management: this refers to managing time effectively so that the right time is allocated to the right activity. Effective time management allows individuals to assign specific time slots to activities as per their importance. CIRIMO will therefore promote proper time management among researchers so that they can make the best use of their time.

Creativity & innovation: creativity refers to the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. In order to be creative, one needs to view things in new

ways or from a different perspective. Among other things, one needs to generate new possibilities or new alternatives. Innovation on the other hand is the process of translating an idea or invention into a good or service that creates value or for which customers will pay. To be called an innovation, an idea must be replicable at an economical cost and must satisfy a specific need. Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products. Consequently, CIRIMO will encourage MUST researchers to be creative and most importantly, to transform their creativity into practical solutions for the community.

CIRIMO's strategic direction can be summarized into a framework in figure 1 below.

Fig 1: CIRIMO's 10-Year STRATEGIC FRAMEWORK 2013/2022



3.6 Critical Success Factors

The successful implementation of the CIRIMO Strategic Plan is highly contingent on the following:

- **Ability to mobilise the required resources**

The success of the strategic plan implementation is dependent on CIRIMO's ability to identify and exploit opportunities for resource mobilisation through a well thought out resource mobilisation strategy as well as an efficient mechanism for resource deployment and utilisation.

- **Ability to marshal and coordinate efforts of faculties, researchers and collaborators**

Research and innovations bring together many actors within the University, the public, private sector, civil society and the academia. Hence, it is imperative upon CIRIMO to identify these actors and work out practical modalities of engaging and working with them. A coordination framework will improve communication, and align the different players towards a common goal and vision.

- **Ability to mobilise continued support from the University**

Being a coordination centre, CIRIMO shall require endorsement from the University management so as to have access to resources and also be able to engage effectively with other faculties and institutes in her pursuit for excellence in research and innovations. On the other hand, the University has to have a deliberate effort to support the CIRIMO and ensure her success.

- **Ability to initiate and sustain innovation**

Innovation is the key ingredient in CIRIMO's strategic positioning. Hence, the success of the CIRIMO is contingent upon her ability to drive and sustain innovation not only in research, but also in mobilising wider public support and involvement in the uptake of MUST's innovations.

- **Ability to respond to research and innovations needs of the University and the public**

This involves being able to address critical research and innovations needs of the University, which will give credibility to CIRIMO and will enable her to obtain needed resources. This responsiveness also includes acting on critical society's needs in matters of research and innovations.

3.7 Key strategic actions for each strategic objective

The five objectives of the strategic plan will be implemented using the following strategic actions:

Pillar 1: Research Capacity
Strategic Objective 1: Enhance research skills and infrastructure

To achieve the above objective, the CIRIMO will implement the following strategic actions:

- i. Build capacity of faculty members, staff and students of MUST on research formulation, management, conduct, dissemination, knowledge translation and innovation
- ii. Lobby for the establishment of research infrastructure (research labs, equipment, ICT and consumables) that will facilitate conduct and management of research and innovations
- iii. Improve research related communication so as to ensure that the right people take timely and better decisions and actions

Pillar 2: Resources for research & innovations
Strategic Objective 2: Strengthen mobilization and management of resources for research and innovations

To achieve the above objective, the CIRIMO will implement the following strategic actions:

- i. Advocate for allocation of a sufficient and dedicated fund for research and innovations
- ii. Generate grant proposals for research and innovations
- iii. Advocate for honorary appointments to accomplished researchers who can help attract research projects to the University
- iv. Develop mechanisms for commercializing research and innovations
- v. Establish systems for effective management of research and innovations resources

Pillar 3: Research & innovations environment
Strategic Objective 3: Nurture an enabling environment for research and innovations

To achieve the above objective, the CIRIMO will implement the following strategic actions:

- i. Facilitate development of policies that promote and streamline conduct and management of research and innovations
- ii. Advocate for establishment of an appropriate reward and recognition system for researchers so as create motivated research and innovations teams
- iii. Lobby for institution of a mechanism for allocating adequate protected time for research and innovations for faculty members and staff
- iv. Streamline research review and quality assurance processes within MUST to ensure timeliness, efficiency and effectiveness

| | |
|-------------------------------|--|
| Pillar4: | Knowledge translation & innovation |
| Strategic Objective 4: | Promote knowledge translation, innovation and research uptake |

To achieve the above objective, CIRIMO will implement the following strategic actions:

- i. Scale up and sustain innovations café that will be responsible for incubating, nurturing and commercializing innovations
- ii. Advocate for establishment of a knowledge translation function that will be responsible for interpreting research findings and offer a link between research and innovation
- iii. Archive and follow up on the proposed innovations from the research reports
- iv. Establish mechanisms that support research uptake

| | |
|-------------------------------|--|
| Pillar 5: | Collaborations |
| Strategic Objective 5: | Promote mutually beneficial local and international collaborations with stakeholders for research and innovations |

To achieve the above objective, the following strategic actions will be implemented:

- i. Institute mechanisms for initiation, evaluation and engagement of potential collaborators
- ii. Build capacity of MUST faculty and staff to negotiate and manage mutually beneficial collaborations
- iii. Put in place mechanisms for management and evaluation of collaborations

4.0 MANAGEMENT AND IMPLEMENTATION ARRANGEMENTS

Implementation of the CIRIMO strategic plan will be undertaken at two levels – at the University-wide level and then at the faculty level. At the university-wide level, CIRIMO is expected to undertake the following functions:

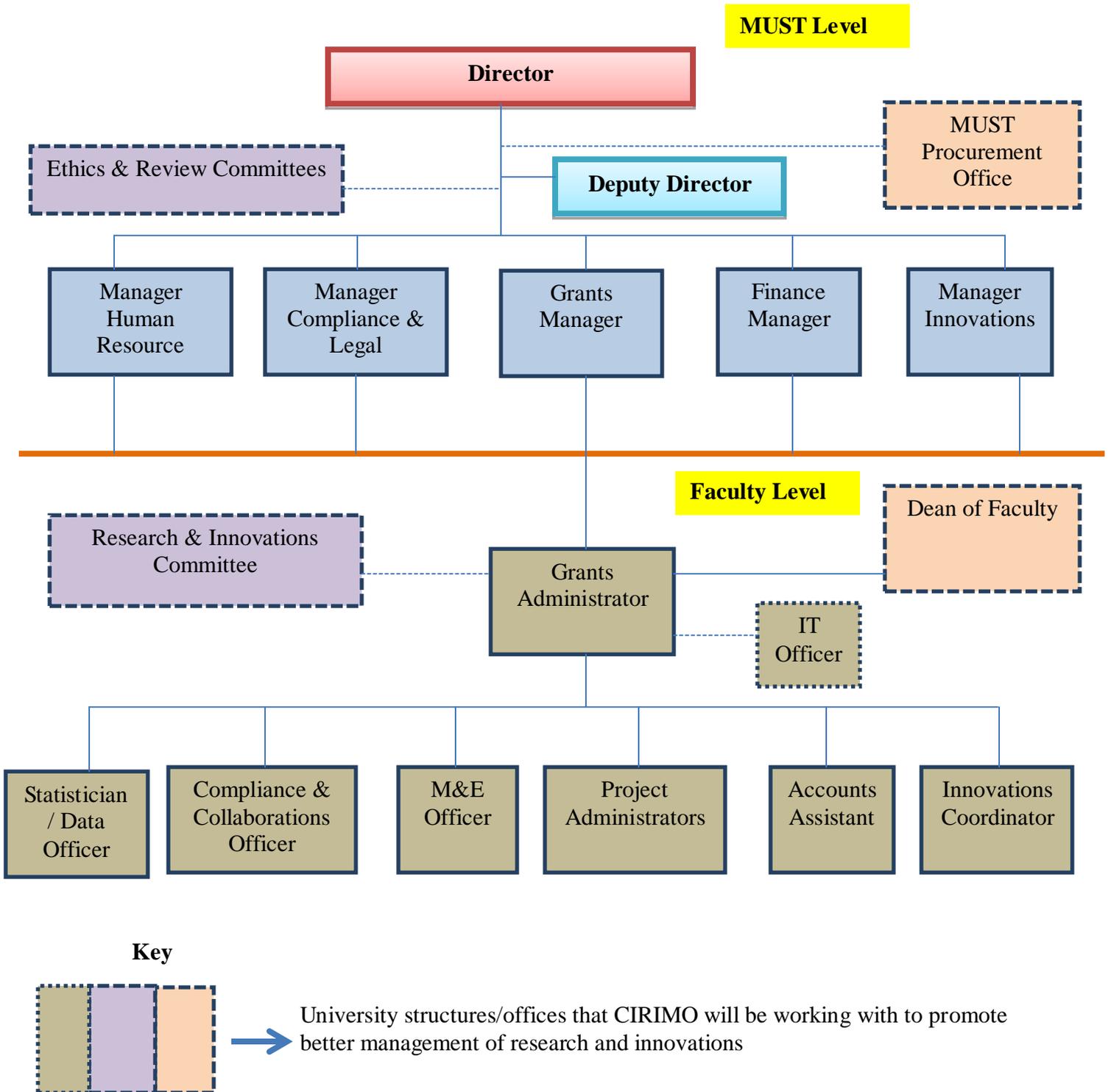
- Identify, evaluate and manage research collaborations
- Manage research grants and funds
- Procure research infrastructure and supplies
- In collaboration with the University's Institutional Review Committee and other faculty research administration offices and organs, ensure adherence to ethics, protocols and all other legal requirements in all prospective and on-going research projects
- Manage innovations processes and outputs at the University
- Work with other University bodies and committees as well as strategic partners to ensure research uptake

At the faculty level, CIRIMO will work with the faculty organs to:

- Undertake grant administration for faculty research projects and programmes
- Coordinate disbursement of funds for faculty based research projects and programmes
- Ensure accountability of all funds that have been disbursed to faculty members and staff
- Support faculty members and staff to generate research projects and submit proposals in line with stated requirements
- Support management of research projects at faculty level to ensure timely and effective completion
- Support individual researchers and teams to ensure that research uptake is planned for at the inception of the project

Here below are proposed structures at the two levels – Figure 2.

Figure 2: Proposed structure for CIRIMO – MUST and faculty levels



5.0 IMPLEMENTATION PLAN

The table below summarizes the implementation plan of the strategic actions over the next 10 years.

| Strategic actions | Key outputs | Indicators | Milestones | Responsible office | Implementation period (years) | | | | |
|--|---|--|--|--|-------------------------------|-----|-----|-----|------|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 |
| Strategic objective 1: Enhance research skills and infrastructure | | | | | | | | | |
| 1.1 Build capacity on research formulation, management, conduct, publication, knowledge translation and innovation | Increased research proposals | Percentage increase in approved proposals | At least 10% increase per year | Deans/Directors | | | | | |
| | Improved research administration and management | Number of successfully completed research projects (time & budget) | At least 80% of the submitted proposals approved | PI/Director CIRIMO | | | | | |
| | Increased publication | Number of publications | 100% of completed projects have publications | PI/ Director CIRIMO | | | | | |
| 1.2 Advocate for establishment of research infrastructure (ICT, research Laboratories & equipment) | Adequate and functional research infrastructure | Number of research labs | 1 research lab per faculty/institute | University Secretary/Planner | | | | | |
| | | Research data centre | 1 data centre per faculty/institute | | | | | | |
| | | High speed internet connectivity | In all faculties | | | | | | |
| | | Resource centres | 1 per faculty/institute | | | | | | |
| 1.3 Improve research related communication | Timely communication to the right audiences | Time taken to transmit communication | Within 2 business days | Grants Manager / Grants Administrators | | | | | |
| | Client charter | Client charter in place | Within 1 st year | | | | | | |

| Strategic actions | Key outputs | Indicators | Milestones | Responsible office | Implementation period (years) | | | | |
|--|---|--|---|--|-------------------------------|-----|-----|-----|------|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 |
| Strategic objective 2: Strengthen mobilization and management of resources for research and innovations | | | | | | | | | |
| 2.1 Advocate for allocation of sufficient funds for research and innovations | Increased funding for research and innovations | Increase in research and innovations funding | At least 1 billion shillings per year | University Planner | | | | | |
| 2.2 Generate grant proposals for research and innovations | Increase in approved grant proposals | Number of approved grant proposals | At least 2 per Faculty/Institute per year | Deans/Directors | | | | | |
| | Increase in grant requests for calls responded to | Percentage of eligible calls responded to | At least 20% | | | | | | |
| 2.3 Offer honorary appointments to accomplished Researchers | Increase in honorary appointments | Number of appointments | At least 2 per Faculty/Institute per year | Vice Chancellor & University Secretary | | | | | |
| 2.4 Develop mechanisms for commercializing research and innovations | Research and Innovations commercialized | Number of research & innovations projects commercialized | At least 10 (2 per year) | Manager Innovations | | | | | |
| 2.5 Establish systems for effective management of research and innovations resources | Utilization and accountability of resources | Timely disbursements | 100% disbursement | Grants Office/University Bursar | | | | | |
| | | Timely & accurate accountabilities | 100% accountability & accuracy | | | | | | |
| | | Time taken to disburse funds | Within 1-5 days | | | | | | |
| | | Time taken to submit accountabilities | Within 5 working days after the activity | | | | | | |
| Strategic objective 3: Nurture an enabling environment for research and innovations | | | | | | | | | |
| 3.1 Develop policies for conduct and management of research and innovations | Research & innovations policy in place | | Policy in place by 2 nd Year | Director CIRIMO | | | | | |

| Strategic actions | Key outputs | Indicators | Milestones | Responsible office | Implementation period (years) | | | | |
|---|---|---|---|--|-------------------------------|-----|-----|-----|------|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 |
| | SoPS for all key processes | Research & innovations policy in place | Policy in place by 2 nd Year | Compliance officer | | | | | |
| 3.2 Establish an appropriate reward and recognition system for researchers | Research & innovations reward & recognition policy in place | Research & innovations reward & recognition policy in place | Policy in place by 2 nd Year | Director CIRIMO | | | | | |
| 3.3 Institute a mechanism for allocating adequate time for research and innovation | To be incorporated in the research and innovations policy | | | | | | | | |
| 3.4 Streamline the research review and quality assurance processes | Reduced time for approval of proposal | Time taken | Not exceeding 30 days after submission of a complete proposal | Chairperson Institutional Review Committee (IRC) | | | | | |
| | Compliance of research projects to approved protocols | Number of projects that have complied with protocols | All projects to comply | | | | | | |
| Strategic objective 4: Promote knowledge translation, innovation and research uptake | | | | | | | | | |
| 4.1 Scale up and sustain innovations café | Operational innovations café | Number of innovations signed off for scale up | At least 5 innovations signed off per year | Manager Innovations | | | | | |
| 4.2 Establish a knowledge translation function | Operational knowledge translation function | Number of policy briefs disseminated | At least 4 per year | Head of knowledge translation function | | | | | |
| | | Number of knowledge translation dialogues held | At least 4 per year | | | | | | |
| 4.3 Archive and follow up on the proposed innovations from the research reports | Database of proposed innovations | Number of proposed innovations archived | All documented proposals from 2007 up to date | Head of Knowledge translation function | | | | | |
| | Successful innovations | Number of successful innovations | At least 10 | | | | | | |

| Strategic actions | Key outputs | Indicators | Milestones | Responsible office | Implementation period (years) | | | | |
|---|---|---|---|--|-------------------------------|-----|-----|-----|------|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 |
| 4.4 Establish mechanisms that support research uptake | Extent to which research has influenced policy and practice | Number of research projects that have influenced policy | At least 2 per year | Head of knowledge translation function | | | | | |
| | | Number of research projects that have influenced practice e.g innovations that have been taken up by industry | At least 2 per year | Head of knowledge translation function | | | | | |
| | | Number of research projects that have impacted on /influenced intended beneficiaries | | Head of knowledge translation function | | | | | |
| Strategic objective 5: Promote mutually beneficial local and international collaborations with stakeholders for research and innovations | | | | | | | | | |
| 5.1 Institute mechanisms for initiation, evaluation and engagement of potential collaborators | Collaborations framework in place | Mechanisms in place | By 1 st year of implementation | Deans/Directors | | | | | |
| | Increased collaborations | Number of MoU's signed | At least two MoU's per faculty/institute per year | | | | | | |
| 5.2 Build capacity to negotiate and manage mutually beneficial collaborations | Increased capacity to negotiate and manage collaborations | Number of staff with capacity to negotiate & manage | At least 2 per Faculty/institute | Director CIRIMO | | | | | |
| 5.3 Put in place mechanisms for management and evaluation of collaborations | To be incorporated into the collaborations framework | | By 1 st year of implementation | | | | | | |

6.0 MONITORING AND EVALUATION FRAMEWORK

The monitoring and evaluation framework is aimed at helping CIRIMO to track outcomes for research and innovations over the 10-year implementation period.

| Result area | Desired Outcomes | Indicators | Baseline | Targets | Targets over the 10-year Implementation Period | | | | | Means of Verification |
|--|---|--|------------------------------|--|--|------|------|------|------|---|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | |
| Strategic objective 1: Enhance research skills and infrastructure | | | | | | | | | | |
| 1.1 Research | Increased research | Number of research reports | TBD | 100% of completed projects | 100% | 100% | 100% | 100% | 100% | Approved research reports |
| | Publications in peer reviewed journals | Number of publications in peer reviewed journals | TBD | At least 10 per Faculty member | 2 | 4 | 6 | 8 | 10 | Copies of journal articles |
| 1.2 Research infrastructure (ICT, Laboratories & equipment) | Functional research infrastructure | Number of functional infrastructure | 0(no dedicated research lab) | All necessary research infrastructure (100%) | 25% | 50% | 75% | 100% | - | <ul style="list-style-type: none"> Physical infrastructure Asset registers Lab registers & reports |
| 1.3 Research related communication | Improved research related communication | Time taken to transmit communication | Within 2 weeks | Within 2 business days | Within 2 business days | | | | | Tracking reports |
| Strategic objective 2: Strengthen mobilization and management of resources for research and innovations | | | | | | | | | | |
| 2.1 Funds for research and innovations | Adequate funds | Increase in research & innovation funds | TBD | At least 5% increase per year | 10% | 20% | 30% | 40% | 50% | Grants office reports |
| | | Sources of funds | Collaboration & Government | New sources per year: Private Sector & locally generated funds | New sources per year: private sector & locally generated funds | | | | | |
| 2.2 Grant Proposals for research and innovations | Increase in approved proposals | Number of approved grant proposals | TBD | At least 2 per Faculty/Institute per year | 12 | 24 | 36 | 48 | 60 | Copies of approved grant proposals |

| Result area | Desired Outcomes | Indicators | Baseline | Targets | Targets over the 10-year Implementation Period | | | | | Means of Verification |
|--|---|---|-----------|---|--|------|------|------|------|---|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | |
| | | | | | | | | | | agreements signed |
| 2.3 Projects by honorary Appointees | Increased number of projects | Number of projects brought in | 0 | At least 2 per Faculty/Institute per year | 12 | 24 | 36 | 48 | 60 | |
| 2.4 Commercialization of research and innovations | Increase in commercialized projects | Number of successful commercialized innovations | TBD | At least 10 | 2 | 4 | 6 | 8 | 10 | Innovation reports |
| | Increase in volume of royalties | Number of patents sold | 0 | All the 10 | 2 | 4 | 6 | 8 | 10 | |
| | | Amount of royalties generated | 0 | 5-10% of every product sold | 5-10% of every product sold | | | | | |
| 2.5 Management of research and innovations resources | Utilization and accountability of resources | Timely disbursements | 75% | 100% disbursement | 100% | 100% | 100% | 100% | 100% | Audit reports receipts/acknowledgement of receipt of accountabilities |
| | | Timely & accurate accountabilities | 30% | 100% accountability & accuracy | | | | | | |
| Strategic objective 3: Nurture an enabling environment for research and innovations | | | | | | | | | | |
| 3.1 Implementation & compliance to policies for management of research and innovations | Improved compliance at all levels | Levels of compliance | About 20% | 100% compliance | 100% | 100% | 100% | 100% | 100% | Compliance reports |
| 3.2 Reward and recognition for Researchers | Motivated Researchers | Increased number of research proposals & grants | TBD | At least 2 per Faculty/Institute per year | 12 | 24 | 36 | 48 | 60 | Grants matrix |
| | | Number of Researchers recognized | 6 | At least 5 per Faculty/Institute/year | 10 | 20 | 30 | 40 | 50 | Deputy Vice Chancellor reports |
| | Increased University support | Number of Researchers promoted | 0 | Minimum of 3 articles in peer reviewed journals | 6 | 12 | 18 | 24 | 30 | Human Resource reports |

| Result area | Desired Outcomes | Indicators | Baseline | Targets | Targets over the 10-year Implementation Period | | | | | Means of Verification |
|---|--------------------------------|---|----------------------------|---|--|-----|-----|-----|------|--|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | |
| | | | | per year | | | | | | |
| | | Number of researchers whose work is published in peer reviewed journals | TBD | At least 5 per Faculty/Institute/year | 10 | 20 | 30 | 40 | 50 | Archive of publications |
| | | Number of Researchers facilitated to attend conferences | TBD | At least 5 per Faculty/institute per year | 10 | 20 | 30 | 40 | 50 | University Secretary /Bursar records |
| 3.3 Adequate time for research and innovation | Adequate time | Actual time spent | 10% of faculty member time | Minimum 30% of time faculty / staff time | Minimum 30% of time faculty / staff time spent on research and innovations | | | | | <ul style="list-style-type: none"> Research reports Proposal developed |
| 3.4 Efficiency of approval process | Reduced time | Number of days taken to approve | 30-60 days | Not exceeding 30 days after submission of a complete proposal | Not exceeding 30 days after submission of a complete proposal | | | | | IRC reports |
| | Success rate | Percentage of funded proposals | TBD | 60-80% of what is submitted | 60-80% of what is submitted | | | | | Grants matrix |
| 3.5 Quality Research | Improved quality of research | Positive review feedback from experts | 0 | Positive review feedback from all submitted reports | Positive review feedback from all submitted reports | | | | | Reports from reviewers |
| Strategic objective 4: Promote knowledge translation, innovation and research uptake | | | | | | | | | | |
| 4.1 Operational innovations café | More innovations | Number of innovations signed off for scale up | 0 | At least 5 innovations signed off per year | 10 | 20 | 30 | 40 | 50 | Café reports |
| 4.2 Knowledge translation operational | Increase knowledge translation | Number of policy briefs disseminated | 0 | At least 4 per year | 8 | 16 | 24 | 32 | 40 | Knowledge translation reports |

| Result area | Desired Outcomes | Indicators | Baseline | Targets | Targets over the 10-year Implementation Period | | | | | Means of Verification |
|---------------------|--|---|----------|---------------------|--|-----|-----|-----|------|--|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | |
| | | Number of knowledge translation dialogues held | 0 | At least 4 per year | 8 | 16 | 24 | 32 | 40 | |
| 4.3 Innovations | Successful Innovations | Number of successful innovations | Zero | At least 10 | 2 | 4 | 6 | 8 | 10 | Innovations reports |
| 4.4 Research uptake | Increased influence of MUST research on policy | Number of MUST researches that have influenced policy | 0 | At least 2 per year | 2 | 4 | 6 | 8 | 10 | 1. Reports by the PIs 2. Policy Briefs that have been provided to and adopted by policy makers |
| | Increased influence of MUST research on practice | Number of MUST researches that have influenced practice | 0 | At least 2 per year | 2 | 4 | 6 | 8 | 10 | 1. Reports by the Innovations Officers specifying Innovative projects that have been taken up by industry or influenced society or individuals Reports from Uganda Investment authority and information from production and community development offices in the districts. |
| | Increased research projects that have | Number of research projects that have | 0 | At least 2 per year | 2 | 4 | 6 | 8 | 10 | 1. Impact surveys reports conducted every five years |

| Result area | Desired Outcomes | Indicators | Baseline | Targets | Targets over the 10-year Implementation Period | | | | | Means of Verification |
|---|--|--|----------|--|--|-----|-----|-----|------|--|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | |
| | impacted on /influenced intended beneficiaries | impacted/influenced positively intended beneficiaries | | | | | | | | by the Director CIRIMO highlighting beneficiaries of MUST research whose lives have been changed or impacted on positively 2. Reports from Production and Community Development Offices of target districts |
| Strategic objective 5: Promote mutually beneficial local and international collaborations with stakeholders for research and innovations | | | | | | | | | | |
| 5.1 Collaborations | Increased collaborations | Number of collaborations | TBD | 120 | 24 | 48 | 72 | 96 | 120 | Signed MoU's Collaborations review reports |
| 5.2 Mutually beneficial collaborations | Increased benefits from the collaboration | Funds generated | TBD | 5 % annual increase | 10% | 20% | 30% | 40% | 50% | Grants office reports |
| 5.3 Management and evaluation of collaborations | Successful collaborations | Projects successfully implemented | TBD | All collaborations entered into | All collaborations entered into | | | | | Collaborations reports |
| | Improved staff capacity | Number of staff who have benefited from capacity building programs offered by the projects | TBD | 100% (all technical staff attached to the project) | 100% (all staff) | | | | | Capacity building reports & certificates |

| Result area | Desired Outcomes | Indicators | Baseline | Targets | Targets over the 10-year Implementation Period | | | | | Means of Verification |
|-------------|------------------|---|----------|--|--|-----|-----|-----|------|-------------------------------------|
| | | | | | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | |
| | | Number of locally generated projects by the trained staff | TBD | At least 50% of technical staff to come up with local projects | 50% | 50% | 50% | 50% | 50% | Approved locally generated projects |

7.0 ESTIMATED BUDGET FOR IMPLEMENTATION

The attached excel sheet highlights the budget items that should be resourced for successful implementation of this plan over the 10-year period.

[Filled in Budget for CIRIMO Strategic Plan.xlsx](#)