

EXECUTIVE SUMMARY

Research is central to University of Mauritius's mission and vision.

The Strategic Research and Innovation Framework (SRIF) 2009-2015 is one of the main tools for realising the commitment made by the University in its Strategic Plan 2006-2015 in the area of research and innovation. Research in universities stimulates the creation of new knowledge, drives innovation, and forms the basis for a vibrant, growing society with positive repercussions on the economy.

UoM started as a developmental university in the early 70s and grew into a research-informed university in the early 80s. Thanks to a major funding from the World Bank which the University benefited in the mid 90s, significant research enhancement occurred through the availability of research facilities and through capacity building. With a significant number of academics obtaining their PhD degrees, new opportunities emerged which allowed students to undertake advanced research degrees. From this research-informed base, the University is now well underway to become a research intensive institution. SRIF ensures this pathway is strengthened and further enhanced.

The participation of researchers in the process of developing an advanced knowledge-based society requires clear and decided efforts to foster research and technological development crucial to the development of the country's innovative capacities. For this to be possible, SRIF 2009-2015 has been drawn up with the aim of promoting, in a coherent and coordinated manner, the range of elements that go to make up the science, technology, research and innovation. The co-ordination and synchronisation of actions in the fields of research and development and innovation are necessary conditions for the achievement of the final aims of SRIF 2009-2015.

Research Agenda

A crucial goal pursuant to any organization's research agenda is to advance the reputation and performance of the organization and to strengthen its role as a centre of advanced research. The University of Mauritius (UoM) is no exception.

UoM has some 500 researchers and is well recognised by stakeholders and partners in industry and the education sector in Mauritius. UoM believes that prioritisation of research areas is necessary; the University will conduct research in areas that are aligned with national priorities without unduly penalising fundamental research. The University will strengthen its research through focused, innovative and enterprising approaches.

The University values and strives for nurturing research initiatives of quality and excellence across a broad diversity of research, basic or applied, across scholarly disciplines to support quality teaching and

learning programmes. In particular, it aims to stimulate high impact multi- and inter-disciplinary research interactions. Maintenance of a productive research culture requires a conducive research environment and a pool of talented researchers.

To improve research quality and output, it is vital to recruit staff of the highest calibre. Faculties/Centres

will be expected to lead research initiatives designed to build staff expertise so as to enhance the quality of educational outcomes. UoM will conduct various training programmes through workshops aimed at improving the quality of research - quality supervision, clearly defined projects, sufficient resources and opportunities for developing generic skills.

Though there exists some monitoring of research quality and performance, UoM will set up a proper research performance appraisal system by defining acceptable research field benchmarks. A Research Evaluation Exercise Framework will also be established. UoM also aims at improving the quality of its services including laboratories and the data that they produce.

UoM has already set up a number of incentives to promote staff and student research. It now intends to use various channels available both within and outside the University, including an increased use of internet-based dissemination and the Knowledge Channel. It is noteworthy to mention that a few supplementary and specific provisions for incentives for academics were introduced in the 2003 Pay Research Bureau (PRB) Report; the latter has evolved in the 2008 PRB Report to include multi-disciplinary research and research likely to contribute to wealth creation, policy formulation and transfer of technology or for the environmental, social and cultural development of Mauritius.

It is very important for the University to observe the highest standards of ethical and regulatory compliance for all its research activities undertaken by staff and students. All researchers are required to manage their research programmes and to maintain compliance with University regulations. UoM also needs to strengthen research policies in conformance to the best practices observed by good universities worldwide.

The University aims at fostering 'glocal' linkages to improve the competitiveness and benefits of the research undertaken. Partnerships will be built between UoM researchers and other complementary national and international government agencies, universities, industrial and commercial partners and venture capital companies.

The University will seek to increase its role in post-doctoral training programmes. Post-doctoral fellows make a very valuable contribution to enhancing the research profile of the University. However, financial support must come principally from external sources or scholarships. Faculties will be encouraged to identify new post-doctoral fellowship opportunities in their respective fields.

The University will support researchers to generate intellectual property that has potential commercial value and, where appropriate, to assist in successful technology transfer and commercialisation. The University has established procedures to cope with this aspect. To facilitate technology transfer, the University will set up a University-Industry Liaison Office. In view of inculcating a culture of innovation, the University is also developing a UoM Science and Technology Park and various Technology and Knowledge Transfer mechanisms.

Research & Innovation Programme Clusters

The following broad research programme clusters/sub-clusters represent major priority areas for investment by the University of Mauritius.

SCIENCE AND TECHNOLOGY

- *Agriscience, Business & Technology*
- *Bioinformatics & Biotechnology*
- *Engineering*
- *Food Science & Technology*
- *Marine Science & Technology*
- *Material Science & Manufacturing*
- *Pure & Applied Sciences*

HEALTH

- *Communicable Diseases (CD), Non-CDs & Epidemiology*
- *Environmental Health*
- *Medical Biochemistry & Applications in Medicine/Health*
- *Nutritional & Healthy Lifestyle*

TRANSFORMING MAURITIUS

- *Economic Studies & Development*
- *Environment & Sustainable Development (incl. MID)*
- *Finance & Accounting*
- *Innovation & IP*
- *Law & Management*
- *Recreation, Hospitality & Tourism*

SAFEGUARDING MAURITIUS

- *Alien Diseases & Pests*
- *Crime & Terrorism*
- *Culture, Heritage & History*
- *Diplomacy & International Relations*
- *Languages & Studies in Linguistics*

Given the importance of research and innovation, the wide range of sectors and areas in which research and innovation can be applied, and resources are necessarily limited, prioritisation in terms of research areas of (inter)national significance will be absolutely necessary. SRIF allows for consolidation of the above-named research areas through the use of appropriate performance criteria. SRIF also allows for mobilisation of resources allocated to research to ensure optimum interaction between all kinds of research and knowledge generation and the profitability of economic sectors considered as priorities.

Institutional Support and Management of SRIF

In order to achieve the aims of the SRIF, the good handling of its resources and of the procedures defined therein must be guaranteed.

Since research outcomes are all closely related to infrastructure provision, students' admission to higher degree candidature is crucially dependent on the provision of appropriate state-of-the-art infrastructure facilities and resources to underpin research performance.

The University seeks to provide increasing access to library facilities, high speed networks, research equipment, workshops, laboratories, and technical and administrative support within its financial capacity. The University Central Laboratory is expected to play an important role in resources sharing and in providing team building opportunities. Academic staff will be encouraged to form networks and strategic alliances to share expensive resources.

To ensure proper application of the SRIF, suitable systems will be enforced to follow up actions of the plan so as to improve research and innovations at the UoM. At the end of the plan, there will be assessment to determine the results achieved and the impacts produced.

Good assessment mechanisms and processes are key to the success of SRIF. The Quality Assurance Office has been assigned the responsibility of monitoring and assessment of SRIF. The aim of assessing the SRIF lies in improving research and innovation at UoM with all systematic, objective and control based on indicators that allow us to determine whether the extent of compliance with the objectives established in the SRIF.

Reports will be prepared on a six-monthly basis on the evolution of the indicators to oversee its situation and evolution and assess the consequences and effect of the SRIF. The final assessment is fundamental in the preparation of the follow-up Plan.

Budget and Financing

Increasing research funding is vital to achieve the mission of the UoM. UoM intends to invest more on research funding and research plans will be devised to aim at getting national and international funding and encourage industry investment in research training. The university will seek gain leverage from its targeted investment in research through internal and external research support. Income generation will be diversified and fund raising strategies and priorities are being developed.

The implementation of SRIF will require a budget of around MRs 90 for the next three years. However, an initial injection of funds for basic research equipments and maintenance contracts will provide a major boost to materialise to its fullest the proposed framework and its action plan. The sources for this initial fund would be sought through aggressive marketing from various sources.

SRIF aligns performance based budgeting, in line with Government policy. Various actions with regards to research planning to strengthen infrastructure resources and mechanisms to monitor and assess SRIF are presented.

Internal funding available for the direct costs of research programmes is limited. Apart from the commitment to staff salaries, a substantial part of the limited research funding goes into

participation in international conferences, research grants and infrastructure resource development such as laboratories, information resources and special equipment which are vital for achieving desired outcomes. These are rarely provided for by external funding bodies and are therefore priority items for the limited internal funds available.

Winning research funding is central to achieving the mission of the University. Obtaining increased external funding for research studentship and scholarship will be crucial from a sustenance point of view. Professional support services will continue to be provided to facilitate the bidding by academic staff for external research funding and consultancies. It is thus essential for the University to concentrate research efforts and to build a critical mass of expertise in priority areas.

The University will support researchers to generate intellectual property that has potential commercial value and, where appropriate, to assist in successful technology transfer and commercialisation. The University will seek to start commercialising research through seed money through the establishment of a Venture Capital Fund.

Operational Plan 2009-2015

SRIF sets the operational framework for achieving success in social, environmental and economic development through the consolidation of a change in mindset and through the inculcation of a conducting environment supported by the appropriate funding. SRIF provides for a research performance appraisal process to improve research management and output.

Key Strategies

- A. Foster and grow an active research culture that inspires discovery and innovation with emphasis on research of excellence that is world-significant
- B. Create synergies, strengthen inter-disciplinary and collaborative research through increasing the number of functional and strategic internal and external links
- C. Build future research and research capacity
- D. Increase research income from external sources to support more research

The Strategic Initiatives and major actions that will be instrumental for the implementation of the proposed SRIF are identified; along with the desired targets by 2015.