MAURITIUS

NATIONAL EXPORT STRATEGY

INNOVATION

CROSS-SECTOR

2017-2021

Republic of Mauritius

International Trade Centre

This National Export Strategy (NES) is an official document of the Government of Mauritius. The NES was developed on the basis of the process, methodology and technical assistance of the International Trade Centre (ITC) within the framework of its Trade Development Strategy programme.

UNCTAD provides intellectual leadership and serves as a source of expertise on science, technology and innovation (STI) policies for development. UNCTAD's work in STI policy for development focuses on supporting the integration of STI in national development strategies and building-up STI policy-making capacity in developing countries.

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ACRONYMS

AFMCE	Association des Femmes Mauriciennes Chefs d'Entreprises
B2B	Business-to-Business
BIT	Bilateral Investment Treaty
BOI	Board of Investment
CIDP	Centre International de Développement Pharmaceutique
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CoA	Commission of Agriculture
COMESA	Common Market for Eastern and Southern Africa
EEZ	Exclusive Economic Zone
EM	Enterprise Mauritius
EPZ	Export Processing Zone
EU	European Union
FAD	Fishing Aggregating Device
FDI	Foreign Direct Investment
FRTU	Fisheries Research and Training Unit
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
HACCP	Hazard Analysis and Critical Control Point
HS	Harmonized System
ICT	Information and Communications Technology
iEPA	interim Economic Partnership Agreement
IIA	International Investment Agreement
IMF	International Monetary Fund
IP	Intellectual Property
ITC	International Trade Centre
MCCI	Mauritius Chamber of Commerce and Industry
MEXA	Mauritius Export Association
MFN	Most Favoured Nation
MoFARIIT	Ministry of Foreign Affairs, Regional Integration and International Trade
MoOE	Ministry of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer Island
MSB	Mauritius Standards Bureau
MSMEs	Micro, Small and Medium-sized Enterprises
NES	National Export Strategy
NWEC	National Women Entrepreneur Council
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PoA	Plan of Action
QMS	Quality Management System
R&D	Research and Development
ROFCF	Rodrigues Offshore Fishermen Cooperative Federation
RPFO	Rodrigues Professional Fishermen Organization
RRA	Rodrigues Regional Assembly
SADC	Southern African Development Community
SME	Small and Medium-sized Enterprise
SMEDA	Small and Medium Enterprises Development Authority
TPP	Trans-Pacific Partnership
TISI	Trade and Investment Support Institution
TSN	Trade Support Network
TVET	Technical and Vocational Education and Training
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
WTO	World Trade Organization

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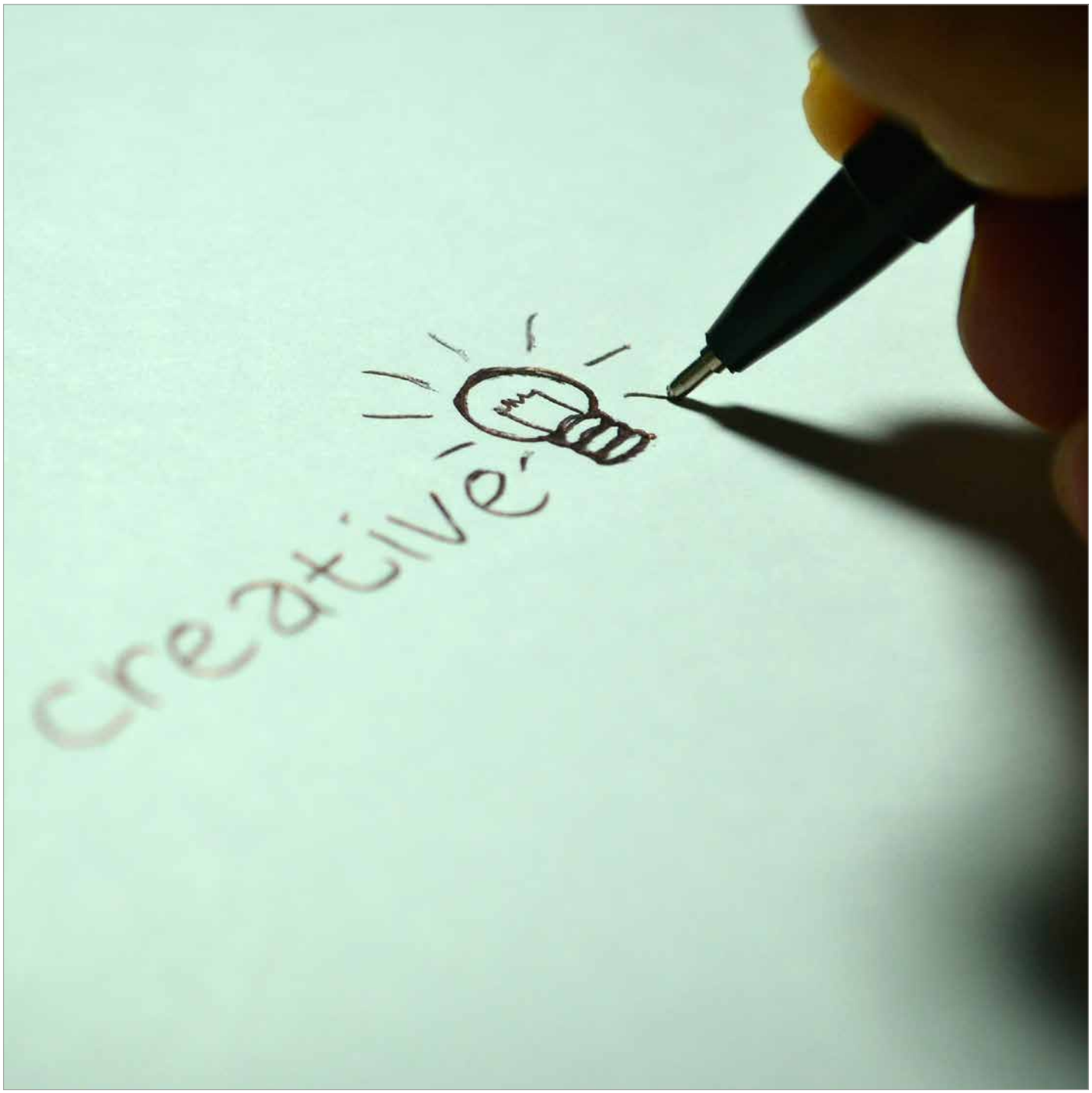

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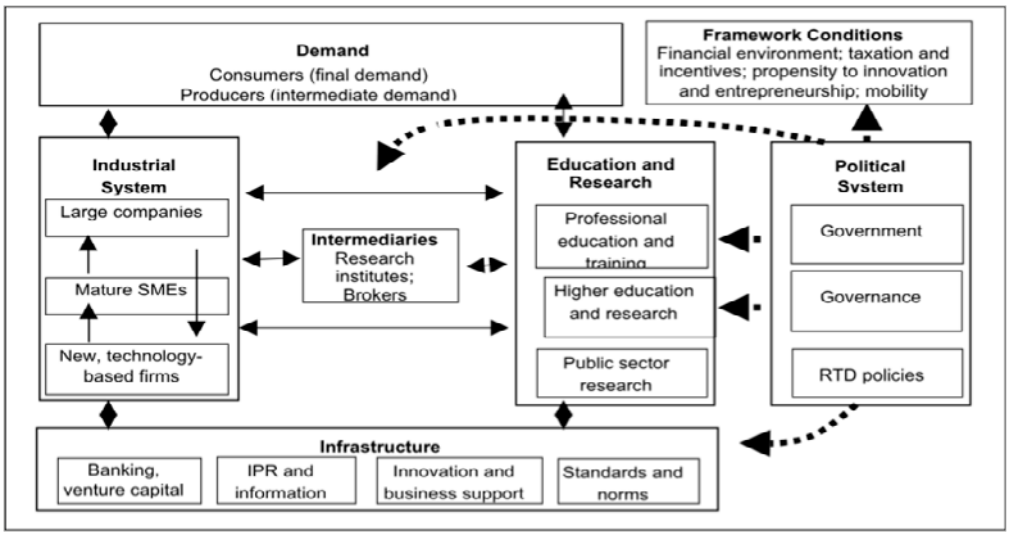
INTRODUCTION

Technology and innovation represent a major driver for sustaining economic growth and national export development. Economic growth is a direct function of the availability of physical capital, human capital (skills and education), labour (working population) and technology. Innovation is essential for improving productivity in agriculture, manufacturing and services; increasing value added locally; and diversifying production, towards more knowledge intensive activities.

Innovation is the commercial introduction of a product (good or service) or process and/or the adoption of a marketing or organisational method that is new to a country or a firm, whether or not these are new to the world. That is, innovation also occurs when a firm introduces a new product/process to the country for the first time and when other firms imitate this pioneering firm. Innovation may be technological but also non-technological (organisational, managerial or institutional). Knowledge and learning are fundamental. Learning may be based on formal training and R&D or on informal learning, trial and error, use and experience. In developing countries, incremental innovations (the adoption, diffusion and upgrading of technologies that already exist), rather than disruptive innovations, are key to technological progress.

Traditionally, innovation was thought to be driven either by basic science research (science push) or by market needs (market pull). Today there is a shared understanding that innovation takes places within ecosystems where distinct institutions (including firms, farmers, education and research institutions, public administration, banking system, intellectual property rights, quality system, broader framework conditions) and their relations, contribute to developing and diffusing technologies and supporting innovation. In other words, two dimensions are important for innovation: first, the capabilities of the different institutions involved in innovation and, second, the ability of these institutions to interact and collaborate among them. Figure 1 represents a generic national innovation system, and its main institutions and linkages.

Figure 1: *A national innovation system*



Source: (Kuhlmann and Arnold, 2001)

Government and market both play a crucial role in fostering innovation:

- Firms are at the centre of innovation. They innovate in response to incentives (i.e. competition) and when they have the necessary capacities and framework conditions permit it.
- A supportive state is needed to correct market failures (technology markets are imperfect and social returns are higher than private ones) and systemic failures (that is, to ensure appropriate coordination among different STI institutions). However, state action cannot replace firm activities.

Exporting firms usually are under greater pressure to innovate to remain competitive at the international level. At the same time, through exposure to other markets and firms, exporters enjoy more diverse opportunities to learn and adopt technologies.

A national innovation system carries 10 types of activities (Edquist, 2005) –see Table 1.

Table 1: *Activities of an innovation system*

Knowledge inputs to the innovation process	1. Provision of R&D and creation of new knowledge 2. Building competences in the labour force to be used for innovation and R&D activities (education and training, provision of human capital, production and reproduction of skills, individual learning)
Generating demand	3. Formation of new product markets 4. Articulation of quality requirements
Provision of constituents (organisations & institutions1)	5. Creating/modifying organisations to promote the development of new fields of innovation (e.g. enhancing entrepreneurship to create new firms and intrapreneurship to diversify existing firms, creating new research organisations, policy agencies, etc.) 6. Networking through markets and other mechanisms, including interactive learning from different organisations 7. Creating and changing institutions (e.g. IPR laws, tax laws, environment and safety regulations, R&D investment routines) that influence innovation organisations and innovation processes by providing incentives or obstacles to innovation
Support services for innovating firms	8. Incubating activities (e.g. access to facilities, administrative support) for new innovative efforts 9. Financing innovation activities 10. Providing services for innovation processes (technology transfer, commercial information, legal advice)

Source: Based on (Edquist, 2005).

WHERE WE ARE NOW

MAURITIUS INNOVATION SYSTEM

Innovation takes place within ecosystems where distinct institutions (including firms, farmers, education and research institutions, public administration, banking system, intellectual property rights, quality system, broader framework conditions) and their relations, contribute to developing and diffusing technologies and supporting innovation. Figure 2 provides an approximation of the national innovation system of Mauritius, its main institutions and linkages.

Figure 2 : *Mauritius national innovation system*

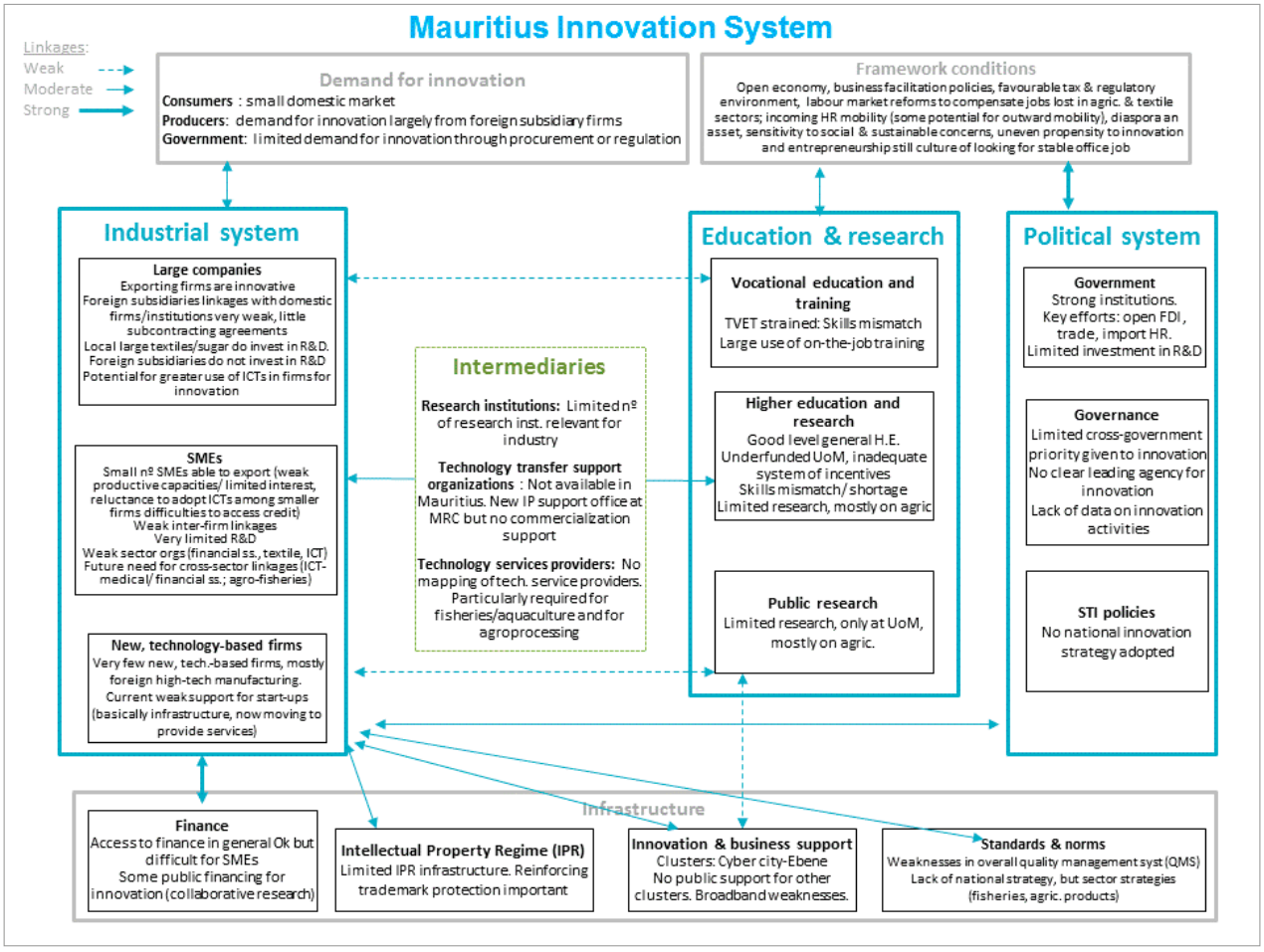
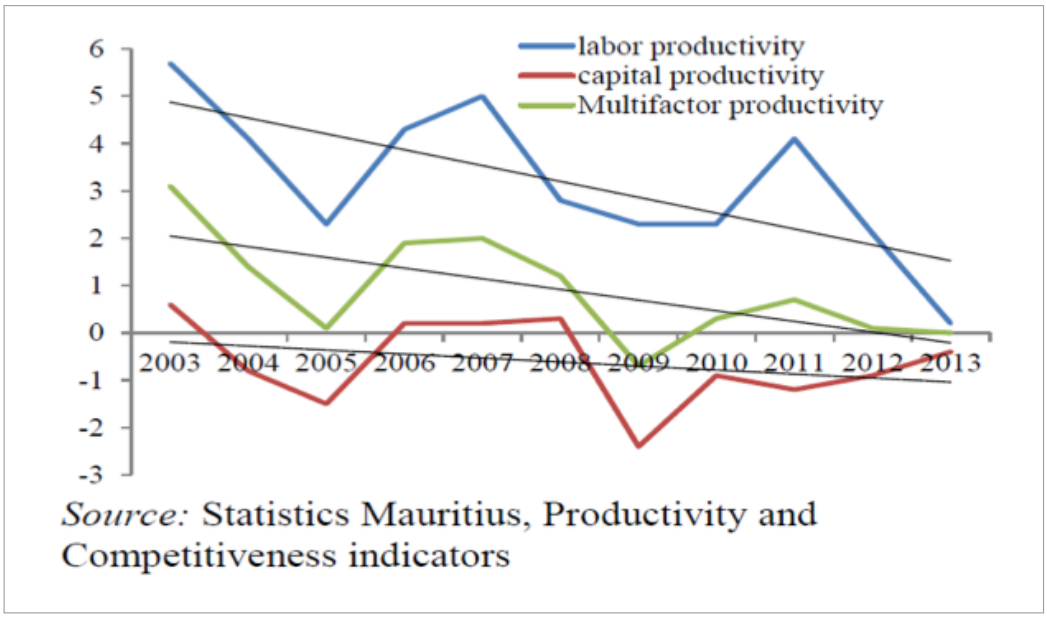


Figure 3: *Annual productivity growth in Mauritius, 2003-2013*



Source: Statistics Mauritius, 2013

Economic growth in Mauritius since 2003 has been driven in large part by capital accumulation rather than labour growth. Multifactor productivity, a proxy for innovation efforts, has been declining and by 2013 showed no progress.

To sustain long-term economic growth, Mauritius requires a shift in its growth strategy from one based on the accumulation of inputs to one based on improved productivity. Mauritius currently does not have a national innovation strategy to enable a growth strategy anchored on productivity improvement.

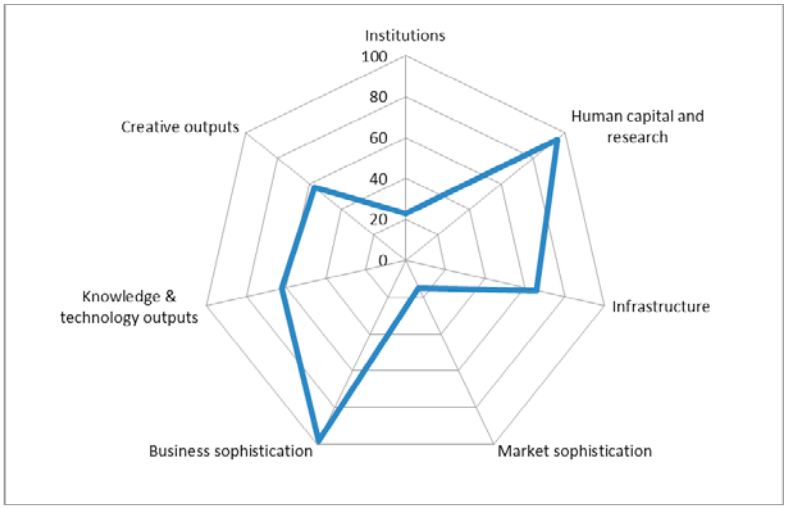
An increasingly competitive environment both at the international (greater exposure to international competition in two traditionally exporting sectors - textiles and sugar) and national (enhanced domestic market competition with the liberalization of previously protected sectors) level are strong incentives to innovate. Yet, a number of subsidies (e.g. in electricity and water tariffs) while protecting valuable employment may also be dis-incentivising innovation or slowing down the readjustment process towards more dynamic sectors of the economy (World Bank 2015).

There is limited access to new technologies and productive capital that can generate high knowledge spillovers. The allocation of FDI to productive sectors has shrunk (see macro diagnostic section). The most relevant sector has been financial and insurance activities which has accounted for 27% of total FDI and has the potential to establish Mauritius as a regional financial hub and to facilitate innovation activities. Mauritius small domestic market is a constraint to attract more FDI relevant for technology transfer (World Bank 2015). In terms of trade, there has been a reduction of imports of capital and technology goods (see macro diagnostic section), and exports are largely concentrated in natural resource-based manufacturing and low technology manufactures.

Mauritius has a good business environment and the economic and political institutional settings provide a favourable context to innovation. However, the development of an innovative export sector faces number of constraints: firms face critical challenges in terms of shortage of human capital in STI; low investments in R&D, particularly from the private sector; weak university-industry linkages; difficulties to access finance in general, and for innovation activities in particular; weak capabilities to export among SMEs; in some sectors, weak sectoral organization and interfirm linkages; weak international –domestic business linkages with limited technological spillovers.

Global indicators seem to show a middling performance in innovation. For example, The Global Innovation Index places Mauritius in position 49 out of 141. However, such performance is mostly attributable to good ratings in the general overall institutional environment. The same Index points to important weaknesses in the availability of skilled resources tertiary and higher education, in the capacity to generate knowledge and use it with impact. As a result the level of sophistication of firms is low.

Figure 4: *Mauritius -Global Innovation Index, 2015*



FUNCTIONS OF MAURITIUS INNOVATION SYSTEM

PROVISION OF R&D AND CREATION OF NEW KNOWLEDGE

Mauritius has a small base of R&D, even relatively to the size of its economy. R&D data for Mauritius is based on official budget allocations (not on actual expenditure) to R&D agencies, and does not include R&D expenditure by the private sector. Therefore, it is likely to be underestimated and thus difficult to compare with other countries. Yet, the level of human and financial R&D resources seem to be lower than other countries at similar income levels such as Costa Rica or other high-income level small island economies such as Cyprus or Singapore (Table 2). Moreover, only 36 per cent of R&D personnel are researchers, the other 64 per cent are technicians. In addition, women represent less than 30 per cent of the R&D workforce (Table 2).

Public investment in R&D is 0.18 of GDP. If we assume that the private sector finances 50 per cent of R&D expenditure1, the total gross expenditure on R&D (GERD) of 0.36 of GDP would still be very low compared with Costa Rica, Cyprus or Singapore (Table 2).

Most of the budgeted R&D activities are in the traditional agriculture sector (Figure 5), largely on sugar, and there are little R&D activities related to the new priority sectors, such as ICT/BPO (only 5 % of R&D is spent on engineering and technology).

1. This is only an assumption. Private sector participation in R&D varies largely among countries. However, in general, most of R&D investment in developing countries is done by the public sector.

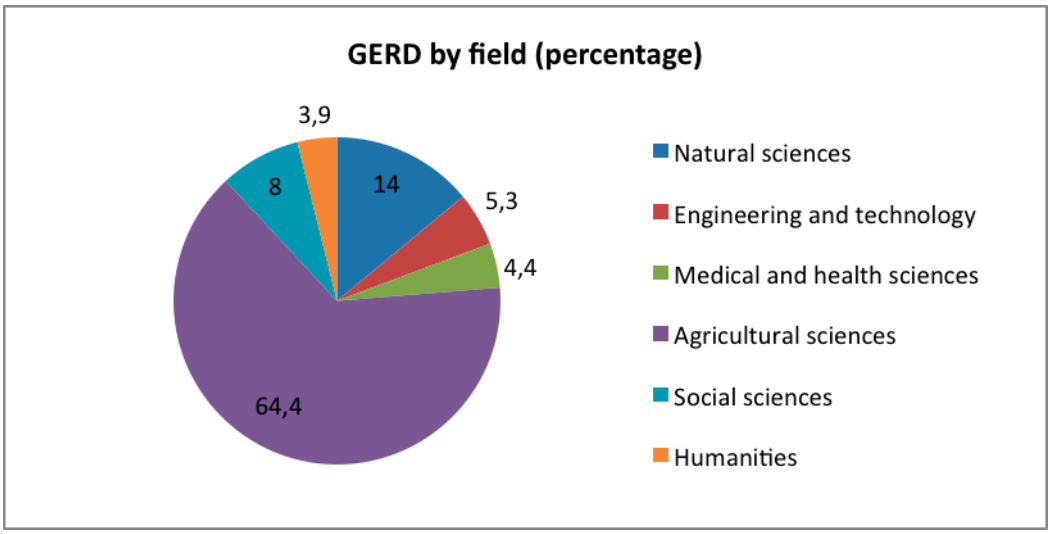
Table 2: *Key R&D indicators, Mauritius and comparators, 2012 or latest available year*

	Botswana	Costa Rica	Cyprus	Mauritius	Namibia	Singapore
GNI per capita, Atlas method (current US$)	7,240	10,120	26,370	9,630	5,630	55,150
Population, million	2.2	4.7	1.1	1.2	2.4	5.4
Total R&D personnel per million inhabitants (FTE)	305	..	1,099	498	..	7,446
Total R&D personnel (FTE) - % Female	38.2	..	41.1	29.5	..	..
Researchers as a % of total R&D personnel (FTE)	54	..	70.7	36.4	..	86.5
GERD in 000 PPP$ (in constant prices - 2005)	67,094	253,826	95,677	33,748	23,193	7,152,933
GERD as a percentage of GDP	0.25	0.47	0.43	0.18	0.14	2
GERD financed by business enterprise %	5.8	18.8	10.9	0.3	19.8	53.4

Source: UIS.Stat data, extracted on 28 Jan 2016 and World Development Indicators, last updated 22 Dec 2015

Note: Data for GNI per capita and Population is for 2014. Other data is for 2012 except for Costa Rica (2011) and Namibia (2010). R&D data for Mauritius is based on official budget allocations, and thus may be underestimated.

Figure 5: *Gross expenditure in R&D by field, Mauritius, 2012*



BUILDING COMPETENCIES IN THE LABOUR FORCE FOR INNOVATION AND R&D ACTIVITIES

Mauritius faces a number of labour shortages and skill mismatches for innovation and R&D activities.

There are shortages across a number of high-skilled fields. Some of the labour force shortages identified by stakeholders include insufficient number of IT graduates, and of engineers with applied skills. For certain specialized fields requiring a small number of labour, for instance engineers in medical devices, companies recruit from abroad. Recruiting from abroad is relatively cheap, particularly in engineering, where local graduates expect to receive high salaries.

Stakeholders have also identified the absence of specialists in specific areas relevant for innovation, such as those areas related to technology transfer and intellectual property. For instance, there are no patent attorneys in the country.

The Government of Mauritius has made efforts to expand tertiary education, for instance by expanding the number of universities. However, there is the perception that further efforts are required to enhance the quality of education to develop the type of skills relevant to industry needs.

Stakeholders also reported that traditional business sectors have limited appetite to innovate. Owners of small firms are unlikely to adopt new technologies, such as ICTs, to improve the management of their businesses, as they fear increasing transparency of their business accounts and losing control of their business. It was also reported that many traditional businesses in the jewellery and textile sectors, despite international competition, do not feel the pressure to innovate and therefore are unlikely to introduce new products or processes. What is more problematic is the fact that there is a lack of a group of dynamic and high-growth innovators large enough to provide traction for economic transformation .

There is a broad consensus that skills development is a key issue for the development of Mauritius' exports. This area is discussed in further detail under the skills development cross-sector function.

FORMATION OF NEW PRODUCT MARKETS

The state has not played a significant role in generating demand for innovation.

The overall demand for innovation in Mauritius is weak. The economy has enjoyed some degree of sheltering from global competition through a combination of trade preferences and development assistance2. As an example, preferential trade agreements enabled the development of the textiles sector. In the last decade, as labour cost increased and trade preferences waned, policies that support low-skills labour supply have enabled the survival of the textiles sector. The financial sector, relies on double taxation treaties and agreements, and is currently a mature sector based on passive, low-value added account management. These types of protective policies, while they enabled the development of economic sectors, have limited the incentives for firms to innovate and there is still a limited perception among economic actors on the urgency to innovate.

2. See National Export Strategy: Strategic Trade Development Roadmap (STDR) - Mauritius

Sustainability concerns have long been present in Mauritius in the fisheries sector. Fishing conditions and requirements introduced by the Government and developmental support (for example, the National Strategy for Regional Fish Trade and policies to promote the aquaculture sector) has supported the demand for innovation and the development of new markets.

The ICT/BPO sector has seen a major transformation in the last decade. The Government played a major role in its development with the set-up of the Cyber City of Ebene. Mauritius is currently present in the low- and mid-value segments of ICT and there are opportunities for the Government to support the formation of new higher-value added markets.

Limited consideration to the promotion of innovation is given in public procurement. For instance, in the area of medical equipment, public procurement favours international brand names over locally produced equipment meeting international quality standards. The E-Government Strategy 2013–2017 does not include plans to involve and support the local ICT sector in the development of e-government services.

ARTICULATION OF QUALITY REQUIREMENTS

The articulation of quality requirements for promoting innovation is not currently exploited in Mauritius. In the first place, there are important deficiencies and inefficiencies in the quality management system (QMS) infrastructure, which are particularly relevant for the development of the fisheries and agro-industry sector. For example, testing facilities are not readily available at testing and accreditation institutions, and institutions across a variety of functional duties (e.g. policy setting and monitoring) are not well coordinated (see macro diagnostic section).

CREATING AND MODIFYING ORGANIZATIONS

The Ministry of Technology, Communication and Innovation (MTCI) is the policy agency responsible for promoting innovation. Within the ministry, technology and communication issues have traditionally played a key role, and the visibility of innovation policy has been more limited. The High-level Steering Committee on Innovation under the Prime Minister's Office advises the Prime Minister directly on innovation policy. Its members include MCCI, BOI, MoICT, and some operators. In practice, the Mauritius Research Council (under the MTCI) acts as a central body to advise the Government on science and technology issues. The Mauritius Research Council is responsible for promoting and coordinating government investment in research. Currently, there is no agency promoting innovation. As there is an increasing recognition on the need to support innovation, the MRC has started to support innovation efforts. There are plans to modify MRC into a research and innovation agency. Successfully transforming MRC into a research and innovation agency will require, among others, ensuring that the new agency develops strong competencies and links to work with the private sector, as supporting research is a different activity to supporting innovation and requires different approaches and skills. Currently, MRC linkages with the private sector are largely informal and dependent on the networks of contacts of its senior staff.

Regarding research policy, the Ministry of Education, Human Resources, Tertiary Education and Scientific Research sets the policy for education and research. However, MRC (under the MTCI) is responsible for the coordination and implementation of public research programmes.

Overall, there is limited information and therefore confusion among stakeholders on what the roles and responsibilities are of the different research and innovation policy setting institutions, their memberships and the coordination mechanisms available. A clear division of labour and more transparency would enhance the design, coordination and implementation of research and innovation policy.

Adjusting the institutional framework is a complex task as the perspectives and interests of various actors differ. To support the institutional change process, Mauritius could work with international agencies with expertise in the governance of science, technology and innovation systems (UNCTAD, World Bank, OECD, UNESCO, UNU Merit). These agencies can provide international and independent advice on different options for strengthening the research and innovation policy setting institutions. UNCTAD, for example, provides advice to countries through the form of independent external reviews as well as training courses to policy makers in this area. Mauritius could benefit from interacting with other international innovation agencies to learn from the positive and negative experiences of other countries that have tried to transform research organisations into innovation agencies.

NETWORKING

From a systemic perspective, the linkages between actors and organisations of the system are as important as the capabilities of the actors.

In Mauritius, there are efforts to promote sector linkages (for example in the ICT sector, with the professional organisations and through the cyber city), yet interfirm linkages and collaboration tend to be weak and are preventing coordination and mutual learning. Lack of trust is often cited as a major reason behind the lack of collaboration.

Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions in specific fields that compete but also cooperate (Porter, 1998). This geographic co-location of firms can create positive economic externalities, referred to as agglomeration economies, and enable firms, particularly SMEs to improve their ability to compete and survive (UNCTAD, 2015).

Mauritius has been promoting an ICT cluster since 2001 when Business Parks of Mauritius Ltd (BPML) was created as a government-owned private company to provide state-of-the-art facilities for advanced software promotion and IT-enabled services3. Today, the Cyber City at Ebene comprises some 40 hi-tech buildings. The ICT sector contributes 7% of Mauritius' GDP and creates high-end employment for over 20,000 people. There is an initiative to develop a new business park at Rose Belle, near the airport in the south. ICT-related activities, as well as hi-tech manufacturing, light engineering and pharma, are being promoted aggressively in this park.

The development of a life sciences/biotechnology cluster could offer great opportunities for the development of a number of sectors. A number of actors, including from the private sector and academia, is highly interested in developing such a cluster. So far, public support has been limited in this area.

Clusters may have formed spontaneously over time or, as in the case of Mauritius, may be planned or constructed through deliberate policy action by policymakers. They can, but do not always, stimulate knowledge flows, upgrading and innovation among firms located in them (UNCTAD, 2015). The design and support of clusters that effectively stimulate upgrading and innovation requires careful thought. Mauritius could benefit from collaborating with successful clusters abroad and with international experts or organisations (e.g. International Association of Science Parks and Areas of Innovation) to learn from their experiences in the design and management of clusters.

Academia-industry linkages are weak too. Higher education institutions have generally focused their mission on education and training, and, to a lesser extent, on knowledge creation or research. Collaboration with industry has not been a primary mission of the main universities of Mauritius, and as a result of this limited collaboration, universities are unlikely to be considered by firms as potential partner institutions to support their innovation activities. Research institutes outside universities (such as the Centre for Biomedical and Biomaterials Research (CBBR), the Mauritius Sugar Industry Research Institute (MSIRI) or the Food and Agricultural Research and Extension Institute (FAREI)) have closer relations with industry. The impact of the public research institutions is restricted by their level of financial resources. Developing academia-industry linkages will be crucial for Mauritius to become a knowledge-driven economy. This requires decisive and sustained support from high-level policy makers, universities and industry.

Linkages between subsidiaries of multinational firms and SMEs are also generally weak. There is limited information on these linkages.

Although multiple points of interaction between firms and public agencies exist through myriad business and professional associations and consultative processes, non-public actors feel that the public sector has difficulties to respond adequately to private sector needs in the area of research and innovation.

CREATING AND CHANGING INSTITUTIONS: INTELLECTUAL PROPERTY

Mauritius has a limited IPR infrastructure. Mauritius has not ratified or joined the main international intellectual property agreements, including:

- The Madrid System for the international registration of trademarks Convention
- The Lisbon System for the international Registration of Appellations of Origin
- The Patent Cooperation Treaty
- The Hague System for the International Registration of Industrial Designs.

As industrial property registered in Mauritius is not recognised outside the country, brand and IP protection for Mauritius is weak. Provisions to ratify/join these are pending political decision.

The Industrial Property Office (IPO), under the Ministry of Foreign Affairs (MoFARIIT), has limited means both in terms of funding and human resources to exploit IP. For instance, it has limited resources to support the domestic registration of patents.

The promotion of intellectual property in the country is carried out by the IPO and by the MRC, (which has a small IP information office). There is some limited support, mainly information, for registering intellectual property (domestically and abroad) offered by IPO and MRC. There is no support for the commercialization of intellectual property or for the use of the capacity offered by patents as sources of information for innovation and technological development. To build capabilities in the area of IP, Mauritius has developed strong cooperation with the World Intellectual Property Organization (WIPO). The country could also benefit from collaborating with other

3. http://www.theneweconomy.com/business/mauritius-cyber-city-attracts-business-from-across-the-globe

Photo: © shutterstock

organizations, such as UNCTAD, that have expertise in other dimensions of IP, in particular regarding the commercialization of IP and the maximization of IP for innovation activities.

The Board of Investment (BOI) is focusing on attracting investment to develop innovation capabilities and high value added activities in the country. An example is the creation of the Smart Cities which provides for a conducive high tech environment for companies engaged in innovation and R&D activities. There is potential to couple actions to attract FDI with efforts to develop skills and high-value added activities, by focusing actions in attracting quality investments in activities that complement domestic capabilities and assets to develop priority sectors, such as in the medical services, ICTs, or fisheries.

INCUBATING ACTIVITIES

There is limited support for promoting incubation activities in Mauritius. La Plage Start-up Incubator Project is a new public-private sector partnership being implemented by MRC. Other proposals for developing business incubation activities are being made as part of proposals for smart cities. Higher education institutions do not provide business incubation services.

A major concern is to ensure a coherent approach to support business incubation activities to avoid duplication of efforts. A number of good practices should be taken into account when developing incubators (UNCTAD, 2011):

- Attention to strategic sectors or those with potential impact, regional needs and micro enterprises and SMEs
- Alignment with industrial development policies and other spheres of public policy
- Alignment with STI development policies
- Concentration of resources and convergence of instruments
- Gradual progress, contemplating the available critical mass and market opportunities
- Covering the pre-incubation-acceleration spectrum
- Participation in networks
- Systematic evaluation mechanisms

Collaboration at the international level with other incubator programmes or agencies supporting incubators and best practice in incubators could be very useful for Mauritius. International collaboration provides important opportunities to learn about what works and what does not work, to connect with resource partners and experts, and to benefit from independent advice.

FINANCING INNOVATION

Finance plays a fundamental role in technological change and innovation. Innovation often involves significant capital investments and is an uncertain, risky undertaking, which makes it more difficult to mobilize the necessary resources (UNCTAD, 2013). For enterprises, lack of finance is often a major obstacle to innovation, internationally and in Mauritius.

Public support for financing the innovation activities of firms in Mauritius is very limited. There are no tax incentives for R&D activities in firms. There are no schemes, such as competitive matching grants, that financially support innovation activities in firms. Mauritius has only recently started to financially support R&D in private firms through the Collaborative Research and Innovation Grant Scheme (CRIGS) administered by the MRC. Mauritius Research Council currently has 14 different funding schemes for research and innovation activities (see communication by (Suddhoo, 2016)). Annex lists the seven schemes that support innovation activities in firms. Most of these schemes are very recent and too small to help transform the Mauritian economy into a knowledge-based economy.

Providing public support for financing innovation is a complex endeavour which requires careful considerations and expertise. Some good practices in financing innovation and R&D emanating from international practice (UNCTAD, 2011) are:

- Attention to strategic sectors or those with potential impact, regional needs and micro enterprises and SMEs
- Alignment with industrial development policies and other spheres of public policy
- Promotion of research-industry collaboration
- Competitive funds
- Collaboration in advanced training
- Transparent evaluation mechanisms and accredited evaluators
- Systematic evaluation mechanisms

Collaboration at the international level with experts in financing innovation and with agencies that finance innovation would be very useful for Mauritius. International collaboration provides important opportunities to learn about different practices in the design of financial instruments for innovation and of the necessary structures and processes for managing such instruments. Monitoring and measuring the impact of these instruments are crucial to deliver results. External independent advice in this area and the participation of external evaluators in assessing R&D and innovation proposals would also be very valuable.

PROVIDING SERVICES FOR INNOVATION: TECHNOLOGY SERVICES

Some medium-and large-sized companies within the local manufacturing and export manufacturing sector have invested in the latest technology to improve their efficiency and competitiveness. They are today modern and high-tech manufacturing enterprises. While more advance technological services are not available in Mauritius, these leading innovative companies do not seem to have major problems (except cost and time) to access these technologies and services from abroad.

On the other hand, smaller firms in traditional sectors such as textiles, jewellery and farmers/ agro producers are often not aware of technology advancements and have difficulties to access technology services. Public support for the provision of technology services has been uneven (for example, support to develop aquaculture skills among small-scale fishermen). There is a limited range of intermediary organizations that support technology transfer in Mauritius, with unclear mandates, resources and knowledge to support technology transfer effectively in a sustained manner. The main organizations supporting technology transfer in Mauritius include the Mauritius Sugar Industry Research Institute (MSIRI), the Food and Agricultural Research and Extension Institute (FAREI), and the MRC (which provides some general support to technology transfer).

Finally, as mentioned previously, there are important deficiencies and inefficiencies in the quality management system (QMS) infrastructure, which are particularly relevant for the development of the fisheries and agro-industry sector.

INNOVATION SUPPORT NETWORKS

This section will discuss the capabilities of key organizations to promote innovation. Tables 1 to 4 identify and assess the main organizations that support innovation in Mauritius. The assessment is made along five dimensions: (1) coordination – ability to coordinate action for supporting innovation; (2) human capital – the capabilities of its human capital to promote innovation; (3) financial resources – the financial resources it counts to promote/ support innovation; (4) Advocacy – its capabilities to argue for the importance of innovation and (5) Communication – its ability to communicate the importance of innovation. Each institution will be ranked (high-1 , medium-2, low-3) by stakeholders in the context of delivering services related to innovation.

POLICY SUPPORT NETWORK

This network (Table 3) includes key public ministries and authorities responsible for influencing or implementing national policies affecting innovation. Key institutions include the Ministry of Technology, Communication and Innovation (MTCI), the Mauritius Research Council (MRC), the Human Resources Development Council (HRDC), the Ministry of Education and Human Resources, Tertiary Education and Scientific Research (MEHTESR), the Ministry of Industry, Commerce and Consumer Protection (MICCP), and the National Productivity and Competitiveness Council (NPCC).

Table 3: *Policy support network*

Name of the institution	Description of its innovation-related services
POLICY SUPPORT NETWORK	The following organizations are part of policy support:
Ministry of Technology, Communication and Innovation (MTCI)	Its main innovation-related functions are: • Set policy for innovation – National innovation framework being finalized. Pushing for more applied research
Mauritius Research Council (MRC).	Promotes and coordinates government investment in research. Set up in 1992. The MRC acts as a central body to advise Government on Science and Technology issues. Operates under the Ministry of Technology, Communication and Innovation. It counts with one Executive Director, five research coordinators/officers and 10 Research Assistants • Study on Research–Industry linkage (exploring role of these linkages, types and bottlenecks) • Collaborative Research and Innovation Grant Scheme (fosters academia and industry linkages) • National Research Foresight Exercise • Working on an SME Innovation Grant Scheme
Human Resources Development Council (HRDC)	Its main innovation-related functions are: • Advice on HRD policies – Training needs analysis • Manages HRDC Fund – National Training Fund – National Training Refund Scheme (Levy Grant Scheme)
Min. of Education and Human Resources, Tertiary Education and Scientific Research (MEHTESR)	• Set policy for education • Set policy for research (link with MRC e.g.– advice on Ocean strategy through consultative process) • Limited focus on innovation and research
High-level Steering Committee on Innovation under PMO	Members include MCCI, BOI, MoICT, and some operators
Ministry of Industry, Commerce and Consumer Protection (MICCP)	Its main innovation-related functions are: • Policy formulation • Formulation of provision of incentives for the manufacturing
Ministry of Business, Enterprise and Cooperatives (MBEC)	Becoming a very dynamic ministry in supporting SMEs but not on innovation. It would be a good partner for promoting innovation for SMEs
Board of Investment (BOI)	National investment promotion agency. Mandate to promote and facilitate (foreign and domestic) investment in the country and domestic investment in Africa. It works in close collaboration with government bodies, institutions and private sector companies. It has an important role of policy advocacy to improve the competitiveness of Mauritius continuously.
Min. of Finance and Economic Development (MoFED)	Driving smart cities, financing SMEs Has earmarked MUR 125 million for the National Innovation Fund – managed by MRC through Ministry
Ministry of Ocean Economy	New ministry. Good work to develop adequate regulatory framework. Constraint to develop aquaculture because of Pharma Act
Ministry of Agro- Industry and Food Security	Promotes development of agriculture and the agro industry focusing on safety, supply, quality, innovation and new technology through service providing institutions

KNOWLEDGE CREATION AND DISSEMINATION NETWORK

This network (Table 4) includes key research, education and training institutions in Mauritius. Key institutions include the Centre for Biomedical and Biomaterials Research (CBBR) and the three main universities of the country, as well as key sector institutions Mauritius Sugar Industry Research Institute (MSIRI), Food and Agricultural Research and Extension Institute (FAREI), Mauritius Oceanography Institute, Albion Fisheries Research Centre (AFRC), National Computer Board, and the Fashion and Design Institute (FDI). A more detailed assessment of knowledge institutions is provided in the Skills Development assessment.

Table 4: *Knowledge creation and dissemination network*

KNOWLEDGE NETWORK	The following organizations are part of the knowledge network:
Centre for Biomedical and Biomaterials Research (CBBR) (under MRC)	• Conducts research • Provide ad-hoc services to industry – One of the few in Eastern and Southern Africa – Exploring potential for new industries around biopolymers, nanotech. & biopharma – Four permanent researchers with world class expertise & 14 research assist. – Recognized as a centre of excellence in a peer review exercise conducted by African Network for Drugs and Diagnostics Innovation (ANDI)
University of Mauritius	Largest university in Mauritius Its main innovation-related functions are: • Train human resources • Conduct research (limited industrial applications)
University of Technology	Second university in Mauritius
Université Des Mascaraignes	Third university in Mauritius. Private Some specialized courses (engineering programmes) are very good.
Agriculture	
Mauritius Sugar Industry Research Institute (MSIRI)	Operates under the Mauritius Cane Industry Authority (MCIA). Its main innovation-related functions are: • Conduct research on all aspects of sugarcane, mostly focused on genetic research, recently also on byproducts
Food and Agricultural Research and Extension Institute (FAREI)	A government entity operating under the Ministry of Agro Industry and Food security. Established in 2014. It has taken over the functions of the Food and Agricultural Research Council (FARC) and the Agricultural Research and Extention Unit (AREU). Its main innovation-related functions are: • conducts research in non-sugar crops, livestock, forestry • provides extension services to farmers in Mauritius including its outer islands
Ocean Economy	
Mauritius Oceanography Institute (set up in 2000)	Advises Government on the formulation and implementation of policies and programmes in respect to oceanography. A parastatal organisation of the Ministry of Ocean Economy. Some 25 Research scientists/Associate Research scientists Its main innovation-related functions are: • Advice on oceanography policy. How does it relate to innovation activities? • Conducts research, mostly on marine life (coral reefs, pollution), some related to industry (e.g, mapping of sea bed for planting of algae)
Albion Fisheries Research Centre (AFRC)	• Conducts research on fish that can be reared on aquaculture • Breeding Industry has good potential
ICT	
National Computer Board	Implementation agency under the Ministry of TCI. Promotes development of the ICT sector • Provides training • Provides advice on ICT policy (e.g. broadband) – restricted mandated

KNOWLEDGE NETWORK	The following organizations are part of the knowledge network:
Medical devices	
None	
Textiles	
Fashion and Design Institute (FDI)	Under the Ministry of Industry (set up in 2010). Has taken over some functions (textile design) of the School of Textiles of UoM. 400 students. Its main innovation-related functions are to: • Provide academic training (HND, Degree courses) • Provide some services to industry
Financial services	
None	A public Financial Services Institute is currently being established
Cultural Tourism	
None	Many private training organizations. Cultural tourism not covered

INNOVATION SUPPORT NETWORK

This network (Table 5) includes key public and private organizations or agencies that provide innovation-related services. These may include organizations financing innovation, intermediary organizations providing technological services, supporting technology transfer, intellectual property, etc.

Table 5: *Innovation support network*

INNOVATION SUPPORT NETWORK	The following organizations are part of the innovation support network:
Mauritius Research Council (MRC).	See earlier description in policy network. MRC has also been added as a key innovation support organization as it provides finance and information for innovation activities.
Industrial Property Office MoFARIIT	IP office of Mauritius, under the Ministry of Foreign Affairs. Its main innovation-related functions are: • Grants of patents • Registration of trademarks and industrial design • Promotion of IP (but no specific budget) • Ad-hoc talks at research centres • No experts in IPO for patent drafting Provisions to join Madrid / Lisbon/ PCT/ The Hague – pending political decision
National Productivity and Competitiveness Council (NPCC)	Under Ministry of Good Governance. Promotion of productivity, and one component of this is to promote innovation at different levels (education, community, industry), through the implementation of training and capacity building programmes & recognition awards. Both with SMEs and large firms, domestic and export-oriented (not with subsidiaries of foreign firms) • Capacity building programmes: Training for employees on innovation quality management; setting up innovation management system; productivity improvement process
Mauritius Standards Bureau (MSB)	Its main function is standards development, but these are not mandatory. Limited adoption. No control of imported products (no level playing field). Export companies need to comply by high standards. Quality is controlled by the buyers Market driven in adoption of standards Provide testing services, no link to innovation, focus on consumer protection not on development of new products

INNOVATION SUPPORT NETWORK	The following organizations are part of the innovation support network:
SME Development Agency	Promotes SME development, no specific innovation service
Mauritius Business Growth Scheme (MBGS) Unit	Matching grant provides access to consultancy services. (Funds cannot be used for equipment acquisition). Originated with support from the World Bank 2010-15 The scheme has not been renewed and has been replaced by MyBiz
MyBiz	Under MoBEC. Under discussion, similar schemes to MBGS

BUSINESS NETWORK

This sector includes private sector associations and organizations supporting firm activities (leading sector development, promoting firm cooperation and linkages, advocating for the sector) (Table 6).

Table 6: *Business network*

BUSINESS NETWORK	The following organizations are part of the business network:
Enterprise Mauritius (EM)	Trade promotion organization. It offers no specific innovation-related services.
Mauritius Chamber of Commerce and Industry (MCCI)	Promoting enterprises, multi-sectoral, (export & domestic, services) Its main innovation-related services: • Advisory services to its members (but not innovation-related) • Training services (business school, but not related to innovation, serving both school leavers and firms) • Providing support services (but not innovation-related e.g. conciliation & arbitration) • Dissemination of information (trade information mainly) • Advocate on behalf of members
Mauritius Export Association (MEXA)	Represents export-oriented enterprises. Textile, fisheries. It does not provide innovation-related services.
Business Mauritius	Groups eight major private sector organizations, including Mauritius Enterprise Federation (MEF), Joint Economic Council (JEC), Mauritius Employers Federation. Its main innovation-related services: • No formal role in promoting innovation but through involvement in different public committees, certain representatives advocate actively to promote innovation
Mauritius IT Industry Association (MITIA)	Promote software development. Potential in software development
Outsourcing and Telecommunications Association of Mauritius (OTAM)	No work on innovation. Focused on BPO
Association des Hoteliers et Restaurateurs de L'ille Maurice	Group operators, hotel and restaurant industry No specific mandate on innovation

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ANALYSIS OF THE INNOVATION SUPPORT NETWORK

As discussed earlier (see analysis of function 5. Creating and modifying institutions), at the policy setting level there is limited information and therefore confusion among stakeholders on what the roles and responsibilities are of the different research and innovation policy setting institutions, their memberships and the coordination mechanisms available. A clear division of labour would enhance the design, coordination and implementation of research and innovation policy. For instance, the Mauritius Research Council is carrying out at the same time activities at the policy level (advise the MTCI and formulate science and technology policy) and at the implementation level (financing research, providing information/advisory services related to innovation). This creates confusion and potential conflicts of interest.

A general comment regarding the innovation support network, at the policy, support and knowledge levels, is that supporting innovation activities is not the main activity for most of the organizations. The mandate of these organizations includes innovation only on a secondary level and is often endowed with limited skills and funds to support innovation activities. As these organizations have no strong mandate to promote innovation, they are not strong advocators or communicators on the need to support innovation efforts.

Coordination between education institutions and industry is very weak. There are no appropriate governance structures, incentives or facilitation mechanisms

There is a very limited number of institutions providing innovation support services, and generally, these organisations have limited resources to provide such services.

INNOVATION FRAMEWORK DEVELOPMENT

Mauritius does not yet have a national innovation strategy or a visible agency that leads the design and implementation of a national innovation strategy.

The current government programme 2015-20194 notes the importance of innovation for the country5. Programme commitments include the creation of a techno park 6 and the development of a National TCI Strategic Plan 2015-20207. A Smart Mauritius Strategy was launch in early 2015 by the Ministry of Technology, Communication and Innovation, which includes the objective of encouraging innovation and adopt innovative technologies through a National Innovation programme of US$ 4 million. The current E-Government Strategy 2013-2017 proposes a number of measures that can enhance business interaction with public institutions and simplify doing business.

4. Government Programme 2015 – 2019 Achieving Meaningful Change Address by The President of the Republic of Mauritius, Tuesday, 27 January 2015.

5. Para 292. So our creed today is innovative socialism, and all members of Government believe passionately in this vision. In short, the ambition is to create an economy where Mauritius would be a regional reference in entrepreneurship, aviation and tourism, shipping and logistics, technology and innovation, just to name a few.

6. Para 179. Innovation will be a key driver of growth. In that context, a techno park will be set up to create the right environment for carrying out new research, clinical and innovation activities.

7. Para 230. In achieving meaningful change, technology, communication and innovation will constitute key drivers. In this respect, a National TCI Strategic Plan 2015-2020 will be formulated to pave the way for an Intelligent and Smart Mauritius.

In the past, there have been a number of efforts to support a national innovation strategy. These include:

- The Science Technology Innovation Programme 2009
- Mauritius National Research Foresight Exercise conducted in 2013 (Ravetz, 2013)
- Draft National Policy and Strategy on Science, Technology and Innovation (2014-2025) (Iizuka et al., 2015)

At the end of 2014, as a result of consultations among policy makers on the national innovation system of Mauritius, a set of policy recommendations was put forward in a study led by the Institute for Innovation and Technology (Meier zu Köcker et al., 2015).

The above indicates that a wide range of stakeholders has considered the importance of strengthening Mauritius' national innovation system, but also highlights repeated problems to establish a clear national innovation framework.

There is no agency clearly in charge of promoting innovation in Mauritius. The Ministry of Technology, Communication and Innovation is responsible for promoting innovation, but the information available seems to suggest that such efforts are limited and concentrated on the ICT sector and not across the economy.

Promoting fast, reliable and affordable access to broadband and the development of ICT skills can be important issues for promoting innovation. However, fostering firm innovation requires a broader set of policies and measures that help build the capacity of agents to innovate, and stimulate the exchange of knowledge and information between agents to facilitate innovation activities. A national innovation strategy should encompass a broad range of efforts aimed at ensuring that the innovation system carries out its 10 activities (see Table 1).

To promote innovation in a specific sector it is essential to rely on a clear sector strategy in the first place. Some sectors, for instance the software sector or the services sector, lack a strategy or a sector development agency.

The promotion of innovation also requires a shared understanding across a wide variety of agents, including policy makers (in STI fields as well as in other related fields), academic sector agents and business and non-governmental organisation representatives, on the role of innovation for economic development, the role of STI policies and their contribution. A common understanding is needed to enable collaboration.

Lastly, developing adequate responses to promote innovation also requires capabilities to understand what the key constraints are for firms to innovate and to monitor and evaluate policies and programmes aimed at promoting innovation. Mauritius has limited information regarding the innovative activities of its firms and the main barriers they face to innovate (for instance, it has not conducted any firm innovation survey) that would enable the design of appropriate policies and strategies.

CONSTRAINTS TO INNOVATION

This section identifies the key constraints to innovation in Mauritius:

POLICY AND REGULATORY ISSUES

1. Lack of a coherent approach to promote innovation in the export sector
   - Lack of a long term economic development strategic plan beyond one government mandate
   - Lack of clear or updated sector development strategies that provide guidance on where the sector is heading and how science, technology and innovation can support its development. For instance, there is no strategy for medical devices, cultural tourism or financial services, and the jewellery strategy is currently being updated.
   - Lack of a national innovation policy framework (a proposal is currently being finalised)
   - No visible leading agency with strong mandate to promote innovation activities. Confusion over which is/should be the apex body for promoting innovation.
   - Insufficient information on firm innovation activities to guide policy. No regular innovation surveys or R&D surveys are carried out in Mauritius. Multiple external reports carried out by experts based abroad on a one-off basis.
   - Insufficient awareness among policy makers and other key stakeholders on the role of innovation and innovation supportive policies. Innovation as a buzzword but stakeholders do not share a common understanding on what it means.
   - Uncoordinated, piecemeal and non-sustained actions to support the technological upgrade of firms.

2. Limited investment in R&D relevant for priority export sectors
   - Low levels of R&D investment (no accurate figure but estimated at 0.2 % of GDP)
   - Low level of private R&D investment (estimated at 0.05 % of GDP)
   - Most public R&D is not in priority sectors (61% is on agriculture). Insufficient R&D in aquaculture, agro-processing, biotechnology-based sciences, and ICTs.
   - Very few public research centres (FAREI, CBBR, MOI)

- R&D at university does not reflect research needs of priority sectors (funding for research at university is not linked to priority research areas).
- Lack of a national innovation policy framework
- Lack of a continued research policy. Policies and programmes change with each new government.

3. Limited number and scale of policy instruments used to promote innovation
- Mauritius does not have an incubator infrastructure. A number of efforts to support new projects or start-ups have taken place recently – for example to support private efforts to build a turbine with support of STING); a newly established business angels network; MRC pre-incubator support established in 2011 which has supported a network but has not yet incubated a firm. There is a current proposal for an incubator to support start-up firms, but only for the ICT/BPO sector.
- There is no technology transfer office at the University of Mauritius
- There is no technology park
- No successful cluster experience
- Collaborative grants recently created (2014)
- No innovation grants. One for alternative to plastic bags, a new one for biotecnology
- No fiscal incentives to innovation/R&D
- Investment policy does not consider the role of FDI as an important channel for technology transfer, and as a result there is no strategy to attract investment important for innovation / to foster technology transfer
- Small IP infrastructure (no signatory to Madrid Convention trademarks; no attorneys specialized in IP) partly owing to limited use of patents and other IP and the cost of setting the infrastructure required (e.g. courts)

SUPPLY-SIDE ISSUES (SERVICE PROVIDERS SIDE)

1. Shortage and mismatch of skilled labour force

The following are some of the key constraints regarding the Shortage and mismatch of skilled labour force. These constraints are discussed in more detail in the skills development cross-sector function analysis.
- Inadequate TVET and higher education curriculums.
- Limited number of dual training (only in banking and ICT, which have recently started). Some courses require internships, but the value of internships is limited.
- Increasing but still limited number of doctorate studies and students.
- Private training institutions respond to industry needs, but public training institutions are not responsive.
- Difficulties to keep trained skills and to import foreign skills in some sectors (e.g. financial services).
- Addressing these issues requires long-term, cross-ministerial and stakeholder commitment.

2. Deficient provision of relevant and sustained technological support
- Good assessments of the technological needs of different sectors have been carried out in Mauritius but there has been limited follow-up/continuation of efforts to build up technological capacities of firms, particularly SMEs
- Uncoordinated actions to support the technological upgrade of firms. Lack of synergies between public institutions in a given sector (e.g. aquaculture).
- Some relevant institutions only provide basic services, difficulties to provide more complex or updated services. (e.g. lack of institution providing training and services for the textile industry, the Fashion & Design Institute does not provide training on textiles).
- Underinvestment and limited upgrading of sector institutions that are critical for technological upgrade (e.g. Albion Fisheries Research Centre)

3. University's contribution to an innovative productive sector is limited
- Universities have limited financial resources
- University students do not graduate with the soft and hard skills required by industry.
- There is a lack of incentives for universities to work with the private sector
- Lack of credibility of the University of Mauritius. Decreasing performance following increasing number of students
- Limited R&D is conducted at the university (e.g. lack of incentives for professors – no salary increases – to conduct research)
- Lack of a vision/mission/culture for innovation within universities
- University R&D is not relevant to industry. A number of factors underpin this situation: the R&D conducted by universities is not in the priority sectors for industry, very few patents result from R&D conducted at universities, researchers have no incentives for the commercialization of their research, the framework for eventually creating spin-offs in universities is unclear)
- No collaboration in joint R&D projects with the private sector
- Universities do not offer advisory services to the private sector (i.e. technology assessments, market intelligence, and other reports are carried out by independent international experts)

4. Inadequate technological and innovation infrastructure
   - Limited and high-cost of broadband (cost of broadband for business is higher – and for lower speed – than for households).
   - Substantive investment in technical equipment is required to enter in newer value added segments (e.g. technical textiles), and there are no incentives for the acquisition of equipment.

DEMAND-SIDE ISSUES (PRIVATE SECTOR)

1. Lack of a critical mass in innovative subsectors
   Mauritius has a number of subsectors that are innovative (e.g. medical devices). However, the absence of a critical mass of firms in those subsectors is limiting the development of the subsector.
   - Limited firm collaboration (because of lack of culture of collaboration, weak industry associations, and piecemeal public support)
   - Given the absence of a critical mass of firms and the limited firm collaboration, research projects are of a small scale nature.

2. Smaller firms are not adopting existing technologies
   - Limited financial resources. (e.g. banks are not willing to finance the jewellery sector)
   - Insufficient access to market and technology knowledge
   - Insufficient design knowledge
   - Smaller firms require sustained support over longer periods of time, while government support programmes tend to be of short duration (e.g. jewellery, discontinued extension services for small-scale fishermen to convert to aquaculture)

3. Insufficient interest for innovation
   - Lack of interest for entrepreneurship among young graduates
   - Insufficient role models for innovation
   - Risk averse culture in Mauritius
   - Limited culture (and probably incentives) among smaller firms of working jointly with other firms in innovative projects
   - The barriers to innovate (e.g. shortage of skills, weak sector coordination & horizontal coordination, limited support available) are much higher than the pressure or the incentives to innovate

4. Lack of offer of innovative products
   - Limited number of risk takers, particularly as many SMEs cannot afford to take risk
   - Small-scale of economic activity and the small size of the domestic market is often an impediment to innovate, as for instance there is a lack of the required suppliers, technological service providers
   - Limited local availability of critical skills (design, management, soft skills) & knowledge (specialized, up-to-date knowledge of newest technologies) to innovate
   - Innovation only as a response to client demand or market pressure. Medium and large firms will innovate because they can afford the financial risks.

Box 1: Summary of constraints to innovation

Policy and regulatory issues
- Lack of a coherent approach to promote innovation in the export sector
- Limited investment in R&D relevant for priority export sectors
- Limited number and scale of policy instruments used to promote innovation

Supply-side issues (service providers' side)
- Shortage and mismatch of skilled labour force
- Deficient provision of relevant and sustained technological support
- University's contribution to an innovative productive sector is limited
- Inadequate technological and innovation infrastructure

Demand-side issues (private sector)
- Lack of critical mass in innovative segments
- Smaller firms are not adopting existing technologies
- Insufficient appetite for innovation
- Lack of offer of innovative products

THE WAY FORWARD

VISION

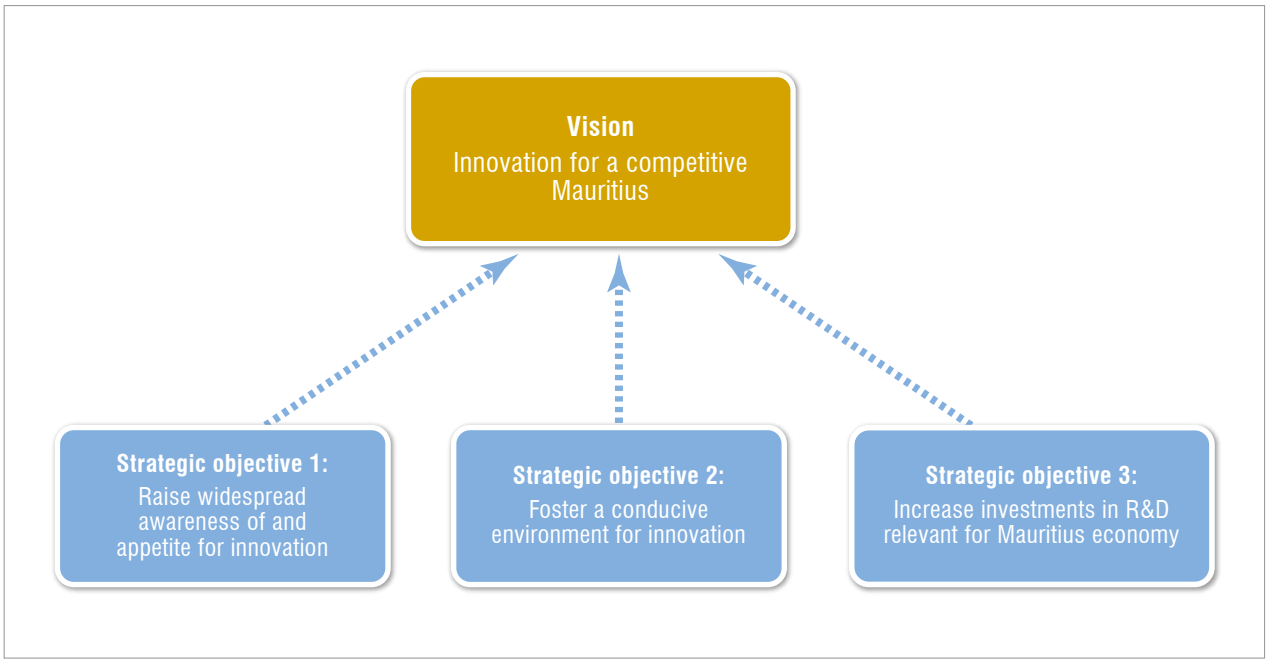
The NES consultations gave stakeholders the opportunity to come together and define their vision for the innovation cross-sector. This statement embodies in a simple and direct manner the ambition that innovation could and should support a more competitive economy. Such a simple and direct statement can be used to rally stakeholders around a common goal.

> "Innovation for a competitive Mauritius"

STRATEGIC ORIENTATION

The innovation vision will be realised through the achievement of four strategic objectives. These objectives provide a framework for addressing the constraints identified, and they highlight key areas where action is required over the coming five years.

Figure 6: *Strategic orientation for innovation*



Strategic Objective 1: Raise widespread awareness of and appetite for innovation

The first strategic objective is to have generated widespread consciousness and appetite for innovation among economic actors and policy makers. This will be done through two complementary approaches. The first one is to foster awareness among key stakeholders (policy makers, firm managers and entrepreneurs, directors of academic and training institutions) on the urgency to innovate and opportunities to innovate in firms. This should be complemented with the provision of greater incentives to innovate, through the introduction of innovation grant schemes, of an innovation box regime (see (MCCI, 2016)) and of tax incentives for R&D activities. These incentives are complementary, and target different types of innovators. For instance, innovation grant schemes are particularly useful for SMEs with limited resources that are trying to explore the development of new products or processes. They can be useful in generating appetite for innovation among smaller firms who usually do not innovate. On the other hand, tax incentives for R&D activities can encourage greater investment in R&D particularly among larger firms, which have already some experience/ resources in conducting R&D. The following operational recommendations fall under this strategic objective:

1. Increase awareness among key stakeholders (policy makers, SMEs, research, training and education institutions) on urgency to innovate
2. Provide incentives to firms to conduct innovation activities

Strategic Objective 2: Foster a conducive environment for innovation

The second strategic objective seeks to ensure that there is a conducive environment where innovation activities can flourish. Achieving the objective will require three complementary sets of activities. First, promoting and facilitating greater intra-industry collaboration. The plan of action identifies two specific areas: one fostering linkages between large firms and SMEs, and supporting the development of a cluster in the life sciences/biotechnology in which firms and research institutions interact to innovate. The second set of activities is aimed at enhancing the institutional framework for promoting innovation, that is, enhancing the governance of the national innovation system. These include the development and adoption of a national innovation framework, mainstreaming innovation in sector development strategies, reinforcing the role of MRC as the National Innovation Agency, strengthening capacities to monitor and evaluate innovation policy, collecting and making available data to inform innovation policy, and strengthening the IP framework in Mauritius. The third set of activities is aimed at promoting industry-academia collaboration through the introduction of incentives for

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universities to conduct collaborative research and research in priority sectors, adopting a strategy to enhance academia-industry collaboration, and supporting the coherent development of business incubators

The following operational recommendations fall under this strategic objective:

1. Increase levels of intra-industry collaboration
2. Enhance institutional framework (governance) for promoting innovation
3. Promote industry-academia collaboration

Strategic Objective 3: Increase investments in R&D relevant for Mauritius economy

The third strategic objective aims to increase investments in R&D relevant for Mauritius economy, both public and private investment in R&D, particularly in the priority sectors.

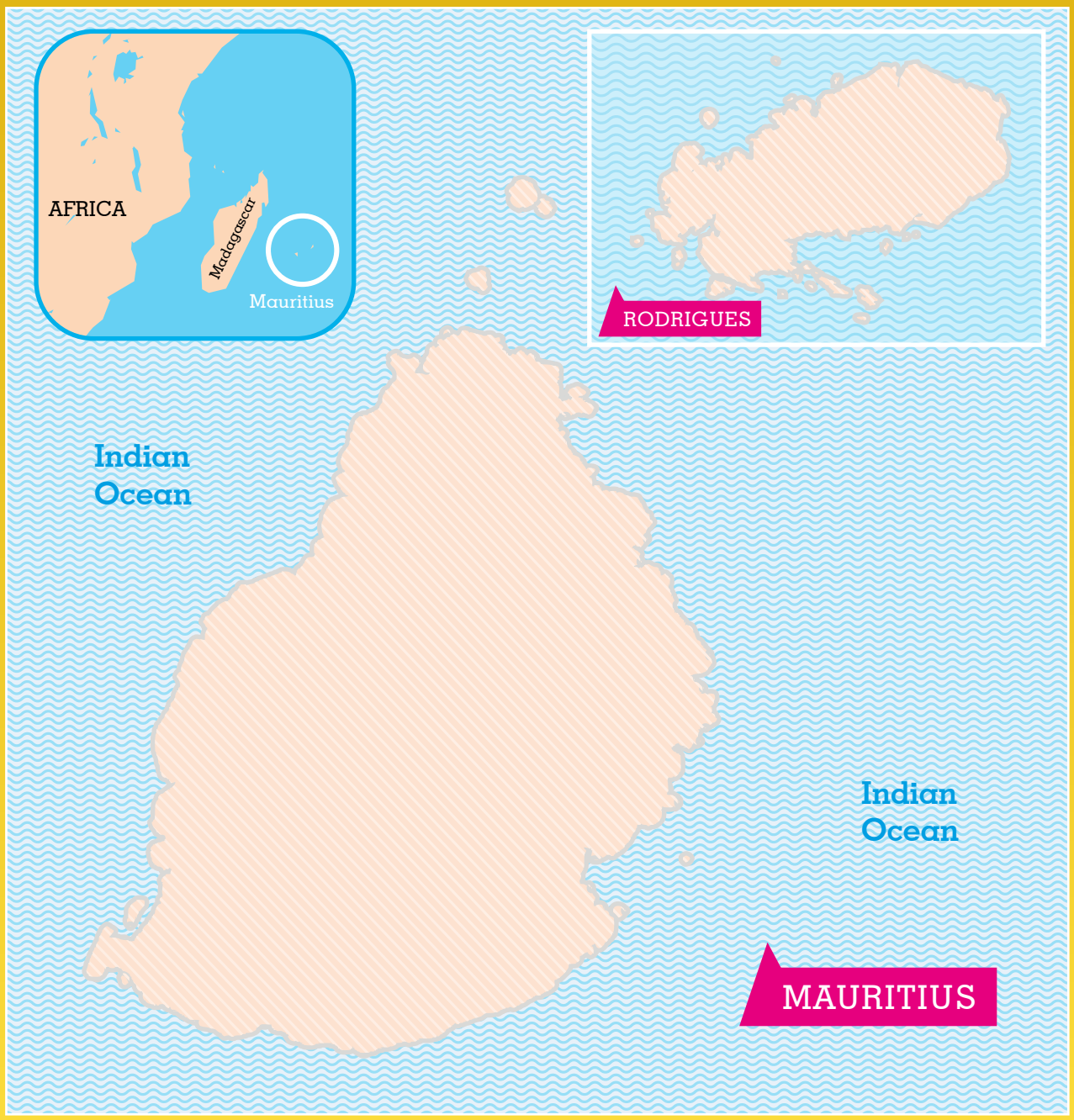
Other operational recommendations, in particular 1.2 (to provide incentives to firms to conduct innovation activities), also support this strategic objective.

The following operational recommendations fall under this strategic objective:

1. Promote and facilitate greater private investment in R&D
2. Increase public financing of R&D in priority sectors

MAURITIUS
NATIONAL EXPORT STRATEGY
INNOVATION CROSS-SECTOR

PLAN OF ACTION



Strategic Objective 1: Raise widespread awareness of and appetite for innovation										
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
1.1 Increase awareness among key stakeholders (policy makers, SMEs, research, training and education institutions) on urgency to innovate	Conduct **four awareness seminars for policy makers and other key national stakeholders on innovation policies** (including SMEs)	2						Senior & middle-level policy officials of economy-related ministries/ agencies (e.g. BOI, MTCI, MBEC, NPCC, MoEHRTESR, MoFED, MoOE, MoAIFS, MoTL, MyBiz)	» By 2018, 80% of senior and middle-level policy officials from each economy-related Ministry have attended the workshop	MRC	Min of Industry/ MCCI /EM / Foreign expert institutions (e.g. UNCTAD)	MRC budget
	Set a plan of **activities to foster learning from international experiences in promoting innovation**, including: » An annual study-tour abroad for key decision makers to become familiar with good practices in STI » An annual conference on a specific STI policy area, to explore best practices in the specific priority area for Mauritius. Priority topics would be promoting business incubators, developing clusters, enabling academia-industry collaboration, financing innovation, supporting the development of technological services » Actively participate in international networks of STI policy (such as UNCTAD STI policy network) and regularly participate in international STI Policy conferences (for example the UN Commission on Science and Technology for Development)	2						Senior & middle-level policy officials of economy-related ministries/ agencies (e.g. BOI, MTCI, MBEC, NPCC, MoEHRTESR, MoFED, MoOE, MoAIFS, MoTL, MyBiz)	» Annual study tour organized from 2017 to 2020 » Annual conference on STI policy organized from 2018 » Participation in at least two international STI policy events per year, from 2018	MRC	Min of Industry/ MCCI /EM /BOI Foreign expert institutions (e.g. UNCTAD, World Bank, UNU Merit)	MRC budget
	1.1.3 Conduct **three workshops on managing innovation for enterprises**, including SMEs, offering advanced and customised trainings for managers. Objective: » To build advanced innovation management skills among firms with growth potential. These courses would build up on courses being offered by NPCC Modalities: » Two-day workshop targeting firms with growth potential	2						Managers of SMEs with growth potential	» One annual workshop implemented in 2017, 2018 and 2019	NPCC MCCI/ MOBEC	Min of Industry MRC,	MRC under Ministry of TCI

Strategic Objective 1: Raise widespread awareness of and appetite for innovation											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
1.2 Provide incentives to firms to conduct innovation activities	Introduce a **matching innovation grant scheme** covering firm expenditures on innovation activities. Objective: » To encourage private sector investment in innovation activities. » To facilitate enhanced product value addition and ability to compete in niche markets Modalities: » Innovation activities will be qualified when working out the scheme This will require: » MRC conducts and shares with key innovation stakeholders an assessment of existing Collaborative Research and Innovation Grant Schemes (CRIGS) and other funds available for financing R&D and innovation activities in the private sector » MTCI and MRC convene a meeting/workshop with key innovation stakeholders to identify specific innovation objectives (i.e. increased innovation activities among SMEs; or increased private R&D investment) and financing gaps. » MRC convenes a technical workshop with experts in financing innovation to discuss good practices in financing innovation and explore options for Mauritius » MRC elaborates a proposal for the design of the innovation fund, comprising: – Scope of the instrument (Qualifying expenses, only R&D or also other innovation expenditure) – Conditions (the ratio of the matching grant (e.g. 50-50 for individual projects and 70-30 for collaborative innovation projects) Targeting (identify if the grant should favour specific types of firms (such as young firms, SMEs, specific sectors) » MRC elaborates a proposal for the management of the innovation fund, covering the following issues: – Publication of call for proposals – Evaluation of proposals (evaluators, criteria) – Approval – Project implementation follow up – Project evaluation – Evaluation of the impact of the fund » Adoption of the proposal for an innovation/R&D grant scheme	1						Target beneficiary firms to be identified following assessment of existing innovation funds and identification of innovation objectives and financing gaps	» MRC conducts assessment of innovation funds by end 2017 » MRC convenes meeting to identify innovation objectives and financing gaps by end 2017 » MRC submits proposal regarding the design of the innovation fund and its management by 1st quarter 2018 » Innovation grant scheme approved by 2018 » By 2020, 50 firms have carried out 50 innovation projects as a result of the innovation matching grant	MRC/MTCI	MCCI/Ministry of Industry/ Foreign experts in financing innovation (UNCTAD) and innovation financing agencies(Tekes, Fincyt Peru, Fondecyt Mexico)	Ministry of TCI

Strategic Objective 1: Raise widespread awareness of and appetite for innovation										
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
1.2 Provide incentives to firms to conduct innovation activities	Introduce the **Innovation Box Regime** in Mauritius: 10 years zero-rated tax on all income derived from IP assets (patents, designs and models, utility models, geographical indications) This will require: » MTCI and MoFED convene a working group to design the innovation box regime. The working group should include representatives from the private sector, the IPO, MTCI and MoFED » The working group organizes a discussion, preferably with an international expert on innovation box regimes, to share good practices regarding innovation box regimes, and to identify the specific objectives of Mauritius for the Innovation Box regime » Based on the identified objectives, the working group will make a detailed proposal for an Innovation Box Regime including: – Deduction rate – Eligible IP activities – Eligible IP income – Other relevant criteria » Approval of the proposal by MoFED	1						All enterprises	» Attract 20 new innovative firms to Mauritius by 2020 » MTCI convenes working group by mid-2017 » Organize discussion, 3rd quarter of 2017 » Present detailed proposal for Innovation Box Regime by early 2017	MTCI, Ministry of Finance and Economic Development	MoFED	Budgetary Measures
	Introduce a **tax incentive for R&D activities** to encourage private sector investment in R&D. This will require: » Organisation of a technical workshop on good practices in designing tax incentives for R&D » Agree on the design of the tax incentive, including – Scope of the instrument (Qualifying expenses) – Targeting (Any specific objectives? (e.g. more generous incentives for young firms, SMEs or particular sectors) – Verification methods – Evaluation of the incentive » Adoption of the tax incentive proposal by MoFED	2						Firms investing in R&D	» Organisation of technical workshop by October 2017 » Agree on design of tax incentive by end of 2017 » Inclusion of R&D tax incentive in the Budget of the Government of Mauritius for the Fiscal Year 2017	MRC	Ministry of Finance and Economic Development, Industry representatives	Budgetary Measures

Strategic Objective 2: Foster a conducive environment for innovation											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
2.1. Increased levels of intra-industry collaboration	**Foster linkages between large enterprises and SMEs.** To do so, it will be required to: » Set up a working group on linkages, including representatives from large firms and SMEs; and MoI, » Carry out Feasibility study of potential for linkages in specific sectors: » Draft the ToR of the feasibility study, » Contract the feasibility study, » Design and implement the linkages programmes following the results of the feasibility study.	2						Large enterprises and SMEs	» Set up working group on linkages by early 2017. » Design ToR for the feasibility study by mid-2017 » Feasibility study finalized by 2017 » Implement linkages programme (if feasible) in 2018	Ministry of Industry	MoBEC, MCCI, MoICCP, EM,	Budgetary Measures
	Support the **development of a life sciences/ biotechnology cluster** through BoI, and innovation and tax incentives. » Activity to be conducted in conjunction with STRATEGIC OBJECTIVE 2.1 OF THE MEDICAL DEVICES SECTOR	2						Enterprises in the life sciences/ biotechnology sector (including medical devices)		MRC, BOI	Ministry of Industry/ MoBEC	Budgetary Measures / Donor agencies
2.2. Enhanced institutional framework (governance) for promoting innovation	**Develop and adopt a National Innovation Framework.** Such framework should establish: » The governance of innovation policy in Mauritius, identifying the key bodies, their roles and responsibilities for designing, implementing and evaluating STI policy, » The key national innovation objectives, and » The key policy instruments to be used.	1						National stakeholders (industry, whole of government, academia)	» Adoption of a National Innovation Framework in the second half of 2017.	MTCI	MRC	
	Mainstream strategies promoting innovation in sector development strategies. This will require: » Identifying three priority sectors where innovation should be promoted further as part of the sector development strategy. » Setting up an innovation promotion team in each of the sectors, including sector officials, an official from MTCI/MRC, representatives from sector firms and from training & research institutions relevant to the sector » Convening, for each sector, a sector innovation workshop to identify key innovation bottlenecks and innovation objectives for the sector. » Each working team proposing an innovation strategy for the sector or a set of recommendations to mainstream innovation in the sector development strategy. The strategy should identify objectives, activities, targets, implementers and resources. » Adoption of proposals by relevant ministry.	2						Jewellery and other two sectors	» Three priority sectors have been identified by 2017. An innovation team is set up for each sector by mid-2017. » Workshops are convened for each sector by end of 2017 » Proposals for sector innovation strategies are made by 2018 » Three sectors have developed an innovation strategy by 2020	Ministry of Industry	MRC / MCCI / MTCI / MoBEC	Donor agencies

Strategic Objective 2: Foster a conducive environment for innovation

Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
2.2. Enhanced institutional framework (governance) for promoting innovation	**Reinforce the role of MRC as the National Innovation Agency** to promote and finance innovation activities and to serve as a one-stop shop for innovation-related inquiries. Such agency should have clear roles and responsibilities, adequate resources, sufficient independence to be able to perform dynamically, and its staff should have a good understanding of, and close relations with the private sector. This will require: » The establishment of a clear mandate for MRC to become the MRIC » If appropriate, revising the organizational status of the new agency so that it can act and manage its activities with sufficient independence and agility (for instance, in terms of contracting human resources or services) » Substantively enlarging the regular budget of MRIC so that it can recruit additional staff for and devote sufficient resources to its innovation promotion activities » To lead the innovation programme, appointing a manager with strong leadership skills, with extensive experience of promoting innovation in the private sector, and who is able to work collaboratively with a wide range of actors including entrepreneurs, policy makers and academia.	2						MRC	» Measures to reinforce role of MRC approved by 2018	MTCI	MRC	Mandate
	Strengthen capacities to monitor and evaluate (M&E) innovation policy so that these are conducted on a regular basis, and the information collected helps inform the adjustment of innovation policy and programmes. This will require: » Clearly identifying the organ responsible for monitoring and evaluating innovation policy in the national innovation framework. The high-level commission on innovation could, for example, be considered to take such responsibility. » Providing such organ with adequate human resources/training and financial resources to conduct M&E activities. » Agreeing on a three-year plan for monitoring and evaluating innovation policy and programmes. The plan includes the evaluations to be performed, activities to strengthen the monitoring of innovation programmes, and activities to communicating/sharing the results of monitoring and evaluation exercises to inform innovation policy	2						Innovation policy	» An agency is clearly given the mandate and resources to monitor and evaluate innovation policies and programmes in the national innovation framework (2017) » Three-year plan for M&E innovation is agreed by early 2017	MTCI/MRC	Foreign expert institutions (e.g. UNCTAD)	
	Increase the availability of information relevant to inform the design of innovation policy: » MRC conducts and shares with key innovation stakeholders an assessment of existing Collaborative Research and Innovation Grant Schemes (CRIGS) and other funds available for financing R&D and innovation activities in the private sector (see activity 1.2.1) » Collect key information and indicators of business incubators carried out by MRC (see activity 2.3.3) » Assess status of academia-Industry collaboration in Mauritius (typology, strengths, etc.) (see activity 2.3.2) » Conduct an innovation survey to help inform the design of relevant innovation policy instruments, to be carried out by MRC as the National Innovation Agency in collaboration with the national statistical office.	2						Innovation policy	» MRC conducts assessment of innovation funds by end 2017 (see activity 1.2.1) » MRC makes an inventory of existing business incubators by end 2017 (see activity 2.3.3) » Assess status of academia-Industry collaboration in Mauritius (typology, strengths, etc.) (see activity 2.3.2) » Innovation survey conducted with national statistical office by 2018	MRC	National statistical office, Foreign expert institutions (e.g. UNCTAD, UNESCO Institute of Statistics)	

Strategic Objective 2: Foster a conducive environment for innovation											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
2.2. Enhanced institutional framework (governance) for promoting innovation	(To strengthen the IP framework in Mauritius) **Endow the IP Office** with adequate funding and human resources to: – Provide services and advice to Mauritian enterprises and investors. – Manage and disseminate IP-related information. – To recruit additional staff (e.g. patent examiners) and upgrade the skills of current staff. » **REFER TO STRATEGIC OBJECTIVE 2 THE BRANDING CROSS-SECTOR FUNCTION (Activities 2.1.1-2.2.2)**	1						IP Office	» Annual outreach campaign organized by IPO » The IP office is assigned its own budget by 2017, and increases by 2% annually.	Industrial Property Office	WIPO	Government budget, WIPO
	(To strengthen the IP framework in Mauritius) – Mauritius to **join relevant WIPO-administered treaties**, e.g. the Madrid Agreement, Lisbon Treaty, Patent Cooperation Treaty, The Hague Agreement (note: legislation ready, only policy decision required). » **REFER TO STRATEGIC OBJECTIVE 2 THE BRANDING CROSS-SECTOR FUNCTION (Activities 2.1.1-2.2.2)**	2						Inventors, firms,	» By 2020, Mauritius is party to the following WIPO-administered treaties: Madrid Agreement, Lisbon Treaty, Patent Cooperation Treaty, The Hague Agreement	Industrial Property Office	-	Government budget, WIPO
	(To strengthen the IP framework in Mauritius) – Enactment of the legal framework in respect of plant varieties, geographical indication/ appellation of origin (note: legislation ready, only policy decision required). » **REFER TO STRATEGIC OBJECTIVE 2 THE BRANDING CROSS-SECTOR FUNCTION (Activities 2.1.1-2.2.2**	1						Plant breeders, firms	» Legal framework for plant varieties, geographical indications enacted by 2017	Industrial Property Office	-	Government budget, WIPO
2.3. Promote industry-academia collaboration	Progressively **increase the percentage of research budget allocated to collaborative research and to research in priority sectors**. To do so, the following steps would need to be taken: » Set up a working group to review public research group (for example Committee on academia-industry collaboration). The working group responsible for this activity should be led by Budget office (2017) and MRC,MoEHRTESR and comprise representatives from UoM, UoT; from private sector, » Identify public budget allocated for research (through universities and through public research institutions).(2017) » Identify priority economic sectors (2017) » Establish criteria for research to be considered collaborative » Agree on targets for collaborative research and research allocated to priority sectors » Review conditions for public funding of research (including funds allocated through university budgets, financing of public research institutions and for individual research projects) to ensure that the percentages of resources allocated to collaborative research and priority sectors increase over time in accordance with agreed targets » Communicate such conditions to research departments/ institutions	2						Industries	» Research budget allocated to priority sectors: 20% (2018); 30% (2020). » Research budget allocated to collaborative research: 10% (2018); 20% (2020).	Ministry of Finance and Economic Development MoEHRTESR. MRC	UoM, UoT	MRC

Strategic Objective 2: Foster a conducive environment for innovation

Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
2.3. Promote industry-academia collaboration	**Adopt a strategy to enhance academia-industry collaboration.** To do so: » Set up a committee on academia-industry collaboration, conformed by high-level decision makers from government, industry, universities and public research centres. The Committee should be led by MTCI and MoEducation » Conduct a series of assessments/workshops to identify opportunities for academia-industry collaboration, and to identify the mechanisms and financial resources for collaboration. – Assessment/Workshop 1: Assess status of academia-industry collaboration in Mauritius (typology, strengths, etc.) – Assessment/Workshop 2: Identify areas in which academia-industry collaboration (training, curriculums development, sharing infrastructure, joint research, technological services, business incubation, advisory services could contribute to supporting innovation efforts, – Proposal/Workshop 3: Propose a five-year plan of action to strengthen academia-industry collaboration. The proposal should specify objectives and targets, activities, timeframes, implementers, commitments by different actors. – Adoption of plan of action to strengthen academia-industry collaboration	2						UoM, UTM, Public research centres,Pvte universities and training centre, IPO, industrialists	» Committee on academia-industry collaboration set up by end of 2017. Conformed by high-level decision makers, and with a clear ToR » A series of three assessments/ workshops are carried out by end 2017 to identify opportunities of industry-academia collaboration, as well as mechanisms and financial resources for such collaboration implemented by 2017 » Adoption of plan of action to strengthen academia-industry collaboration	MTCI, Ministry of Education	MCCI, MEXA, AMM, Min of Industry,UoM	Min of ICT and Min of Education
	Support the development of **coherent Business Incubators proposals.** To do so: » Continue support for La Plage Start-up Incubator Project, a public-private sector partnership project which is being implemented by MRC after extensive discussions among stakeholders. » Set up a multi-stakeholder group that includes different public agencies, private organizations, and education institutions promoting business incubators with the objective to share experiences regarding business incubating initiatives (including the new La Plage Start up Incubator Project and other proposals being made as part of smart city projects) » Foster learning from international good practices in the setting up and management of incubator programmes, by, for example, inviting on a regular basis managers of incubator programmes and developing partnerships with such institutions (e.g. EPFL, Tekes, World Bank's InfoDev incubator programme) » Agree on key information and indicators on business incubators that would be useful to collect and monitor.	2						Incubatees	» La Plage Start-up Incubator is fully set up by 2017. » By 2020, 15 firms have been incubated. » By 2018, there is a core multistakeholder group supporting business incubators » By 2019, there is regular information on key information and indicators regarding business incubators in Mauritius	Business Mauritius, MRC	Ministry of Finance and Economic Development, International agencies (World Bank, UNCTAD), well-known foreign incubators (e.g. EPFL, Tekes)	Government budget, private sector, donors
2.4. Reinforce the offer of technology services	Develop a technology centre on a PPP basis, to support firms, specially SMEs, with facilities and linkages for 3D prototyping and printing	2						Any firm, including jewellery firms	» By 2017 the technology centre is in place. By 2020, 30 enterprises are regularly using the services	BPML	MTCI	Budgetary Measures
	Develop support for innovation and reinforce private initiatives in **Aquaculture** » REFER TO STRATEGIC OBJECTIVE 3 FOR THE FISHERIES SECTOR											
	Develop support for innovation and reinforce private initiatives in **agro-processing** » REFER TO STRATEGIC OBJECTIVE 1 and 3 FOR THE AGRO-PROCESSING SECTOR (activities 1.3.2, 3.1.1 and 3.2.2)											

Strategic Objective 3: Increase investment in R&D relevant for Mauritius economy											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation period					Beneficiaries	Targets	Lead implementer	Supporting implementers	Possible funding source
			2017	2018	2019	2020	2021					
3.1. Promote and facilitate greater private investment in R&D	**Expand the Collaborative Research and Innovation Grant Schemes (CRIGS) and other relevant schemes to finance joint R&D projects** between firms and research departments/centres.	1						University departments, research centres and firms conducting collaborative research	» Increase by 50% on an annual basis the public resources allocated to collaborative research grants (to be matched by a 50% increase in private resources)	MRC	Ministry of Finance and Economic Development	Government budget
	Review regulatory framework to enable and regulate clinical trials for **medical devices** » REFER TO THE MEDICAL DEVICES SECTOR OPERATIONAL OBJECTIVE 1.1.	2						Entire value chain	» Medical Devices Act drafted and introduced to the Parliament for enactment by mid-2017	Steering Committee	Ministry of Health and Quality of Life Ministry of Industry, Commerce and Consumer Protection	No budget required
	Note: Activities 1.2.1, 1.2.2, and 1.2.3 also contribute to this operational objective.											
3.2. Increase public financing of R&D in priority sectors	Strengthen the capacities of the Albion Fisheries Research Centre, increase its R&D budget and infrastructure in particular to support R&D-related aquaculture and to the use and valorization of by-catch. » REFER ALSO TO THE FISHERIES SECTOR OPERATIONAL OBJECTIVE 3.1.	2						Albion Fisheries Research Centre	» Budget of Albion Fisheries Research Centre to double by 2020	MoOcean Economy		Government budget
	Increase investment in R&D infrastructure and programmes for **agro-processing**. » REFER TO THE AGROPROCESSING SECTOR OPERATIONAL OBJECTIVE 3.2.	2								Ministry of Agro Industry and Food Security	FAREI, MRC, UoM, UoT	Government budget, private sector contribution
	Increase official budget allocations to R&D progressively to reach 0.5 % of GDP by 2020 (from a current estimate of 0.18 %)	2							» Budget allocations to R&D reach 0.5 percent of GDP by 2020	Ministry of Finance and Economic Development	MTCI, Ministry of Education, MRC	Government budget
	Set up a **formal research cluster** to strengthen linkages between existing research centres and related institutions (e.g. CBBR, Mauritius Oceanographic Institute, IP Office, MRC, MCIA, FAREI) and to support the demand-driven R&D geared towards development of innovative and commercially viable materials and products in priority subsectors (e.g. biotechnology for fisheries and software development for financial services/ medical devices/ textile industry)	3						Research organisations & enterprises	» Formalise the research cluster by 2018.	MRC	Ministry of Industry/ MCCI	Budgetary measures
	Activities 1.2.1, 1.2.2, and 1.2.3 also contribute to this operational objective.											

ANNEX 1. INNOVATION AND COMMERCIALIZATION SCHEMES RELEVANT TO FIRMS, MAURITIUS

Innovation and commercialization schemes

Scheme	Objective	Institutions	Beneficiaries	Details
Private Sector Collaborative Research Grant Scheme (PSCRGS)		MRC	Firms, research centres	Projects < one year, three phases I: Feasibility (< MUR 0.5M) II: Concept (< MUR 1.25M) III: Commercialization (<MUR 2.5M)
Collaborative Research and Innovation Grant Scheme (CRIGS)	Promote collaborative research	RDWG, MRC, JEC, MTCI	All firms, and university & research institutions	Ongoing call Up to MUR 5M for two years Priority sectors: renewable energy; ocean/ marine; ICT/BPO/Telecom., life sciences (health, medical & pharma); manufacturing
Business Angels Forum Support Scheme	Organize Business Angel Forums to bridge research-industry gap, present innovative ideas, encourage in-house innovation	MRC	Any institution	Annual call Grant of MUR 25,000 Set up in 2010
Intellectual Property Promotion Scheme (IPPS)	Support applications for patents and registration of industrial designs	MRC, IPO	Any Mauritian firm, organization or individual	Up to 50 % of registration fees (patents / industrial design). Open call, first-come-first-served basis, subject to availability of funds (i.e. MUR 100,000/year)
Research Industry Linkage Award (RILA)	Support collaborative research industry academic experiences (MSc Taught Programmes) of relevance to external business partners based in Mauritius	MRC, MoTESRT	Foreign business and public organizations with base in Mauritius	Grant to study full-time MSc taught programme, dissertation linked to industry issue. Annual call Priority sectors: ICT, green tech., health/ bioscience, engineering, financial, legal & management services.
SME Innovation Grant Scheme (SIGS)	Proposals for innovative and environment friendly alternatives to plastic bags	RDWG, MRC, JEC, MoFED	SMEs with annual turnover under MUR 50M	A grant of up to MUR 1,000,000 Closed
Biotechnology Research and Innovation Grant (BRIG)	Collaborative research and development projects with commercial potential in the field of biotechnology	RDWG, MRC, BM, MTCI	Firms; consortium of firms, academia, can include overseas partners	Matching grant of up to MUR 5M per project not exceeding 24 months Priority sectors: medical; sustainable agriculture, biofarming & food security; industrial, environment & energy; marine.

RDWG: Research and Development Working Group, MRC: Mauritius Research Council, MoTCI: Ministry of Technology, Communication and Innovation, JEC: Joint Economic Council, IPO: Industrial Property Office

MoTESRT: Ministry of Tertiary Education, Science, Research and Technology

Source: based on information from Mauritius Research Council http://www.mrc.org.mu/funding_schemes

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