Republic of Mauritius

Ministry of Information Technology and Telecommunications

National ICT Policy 2007-11

September 2007

Foreword

The ever-increasing capacity of Information and Communication Technologies (ICT) is further empowered by the rapid growth of a global network of computer networks and the Internet. These multiple convergences have transformed the way in which business is conducted, revolutionised learning and knowledge sharing, generated global information flows and empowered citizens and communities in new ways that have redefined governance. This has in turn led to the creation of significant wealth and economic growth resulting in a global information economy.

Living in a small country with limited resources, coupled with the pressure facing the existing pillars of our economy, has forced our Government to look for opportunities to take advantage of modern technology, transform the ICT sector into the fifth pillar of our economy and position Mauritius as a regional hub for ICT. And these efforts are being crowned with success: the ICT and IT Enabled Services (ITES) sectors have seen a healthy growth over the last two years and there are several well established names in the ICT Services and Business Process Outsourcing (BPO) Sectors which have set up their businesses on the island. This should not, however, give us reason to rest on our laurels. On the contrary, if Mauritius is to maintain and increase its competitiveness in the ever-globalising world, a lot more has to be done.

This is the first time that a comprehensive ICT Policy has been elaborated to realise the vision of government in the making of an Information-based economy and of an information society in our country. ICT and ICT enabled development in Mauritius should be policy led, ensuring a better synergy between the public and private sectors and alignment with national goals. This first ICT Policy document is an important step in determining the principles and objectives to be achieved. It in fact goes one step further in as much as it aims at strengthening the central ICT co-ordination and increasing consistency and collaboration in developing the information society.

The vision of the Government of Mauritius is to make of the ICT sector the fifth pillar of the economy and transform Mauritius into a regional ICT hub. Government wishes to position Mauritius as a major destination in the region for investments in this sector. In order to achieve the above vision, Mauritius will have to leverage its investments in ICT in order to move towards becoming both an Information-based Economy and an Information Society.

The coming five years will represent an important challenge for Mauritius on our resolute journey towards the goal of emerging as a preferred destination for ICT and IT enabled Services in the region. The development of the ICT sector will be vital if we are to succeed in producing more value with information-based decision-making processes, developing an inclusive information society and sustaining economic activities and growth towards making the country more prosperous.

We have much to do in the years ahead. This National ICT Policy document brings together the economic, the social and the political dimensions of our initiatives in the area of Information and Communication Technologies. Accordingly, the Government has already taken the commitment to implement a coherent National ICT Strategic Plan (NICTSP), which sets out the action programme for the next five years to realise its vision.
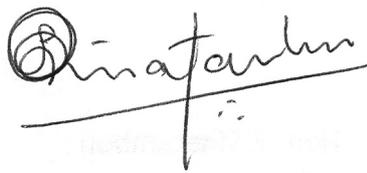
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1   Introduction

Mauritius has moved from a low-income mono-crop economy, with a narrow production base at the time of its independence, to a middle-income country with a more diversified structure, reliant on four main economic pillars, namely, manufacturing, sugar, tourism and financial services. Notwithstanding its economic success, Mauritius now has to reckon with a number of challenges to ensure sustainable development. The rapid pace of technological progress, the increasing integration of global commodity and financial markets, the emergence of new low-cost competitor countries, the strengthening of major trading blocs, the likely erosion of market preferences under the WTO regime, and the increase in non-tariff barriers in the form of "green" and "social" protectionism all require innovative, flexible and determined responses.

Confronted with the economic challenges of the 21st Century, the vision of the Government of Mauritius is to make of the Information and Communication Technology (ICT) sector the fifth pillar of the economy and to transform Mauritius into a regional ICT hub. Government indeed wishes to position Mauritius as a major destination in the region for investments in the ICT sector, and, in order to achieve the above vision, Mauritius will have to leverage its investments in ICT in order to move towards becoming both an Information–based Economy and an Information Society.

The implementation of the policy is dependent on the National ICT Strategic Plan (NICTSP), which sets out the different programmes and projects to be initiated to realise the vision of Government.

2   Vision

The Vision of the Government is to make of the ICT sector the fifth pillar of the economy and to transform Mauritius into a regional ICT hub.

3   Objectives

The broad objectives of the National ICT Policy are to:

a) Provide a framework that will enable ICT to contribute towards achieving national development goals;

b) Develop the export markets for ICT Services and BPO/ITES;

c) Position Mauritius as a regional ICT centre of excellence and knowledge hub;

d) Ensure that ICT infrastructure and capacity are utilised effectively, are compliant with regional and international standards and are internationally competitive;

e) Establish a trusted and secure information infrastructure and a culture of cyber security at all levels of society;

f) Enhance the exploitation of ICT across the economy for increased productivity and efficiency; and

g) Transform Mauritius into an Information-based society where everyone has equitable and affordable access to ICTs.

4   Main Policy Priorities

The following broad areas of interventions are required to achieve our vision and objectives:-

a) Strengthen the legal and regulatory framework;

b) Developing ICT infrastructure;

c) Enhanced productivity and efficiency across economic sectors and SMEs through ICT;

d) ICT In Education;

e) Developing a culture of Cyber Security;

f) Accelerating e-Government;

g) Harnessing ICT For Social Development;

h) ICT Leadership in the region; and

i) Boosting our ICT Exports.

4.1   Strengthen the legal and regulatory framework

A reliable and trusted legal and institutional framework sets the structure for realising the objectives and vision of the ICT policy. With the focus now on transforming the sector into the economy's fifth pillar, there needs to be a comprehensive framework for the ICT sector as a whole that would lend strategic directions to the initiatives taken in the sector. This framework (a) is in turn aligned with the needs of the information economy, (b) is harmonised with international norms, (c) takes into account emerging developments in technology, including the important issue of convergence, and (d) promotes increasing uptake of ICT in economy and society through high levels of trust and confidence.

The following measures would be implemented:-

a) With regards to the Electronic Transaction Act 2000 (ETA), having adopted the UNCITRAL Model law for eCommerce in 2005, there are a few areas of variance that lie between the ETA and the later UNCITRAL convention of 2005 which now need to be closed;

b) With regards to the Data Protection Act 2004, requisite changes in legislative and institutional domains need to be effected with an objective to eventually bring about an official recognition for Mauritius in the

European Community as a "third country" whose data protection provisions are compliant with EU norms;

c) The Copyright Act 1997 will be harmonised with practices contained in Internet Treaties (the "World Copyright Treaty" and the "World Photograph and Phonogram Treaty");

d) Appropriate legal interventions will be undertaken to proclaim and enact an anti-spam legislation;

e) Appropriate legal and policy interventions will be undertaken to proclaim and enact appropriate legislation and policy measures for the protection of children from the dangers of the Internet;

f) Changes will be effected towards effective regulation of ICT activities that take into account requirements and benefits from convergence and makes for a fair, trusted and transparent regulatory regime; and

g) Within the public sector, a comprehensive scope review of the organisations such as the National Computer Board, Central Information Systems Division, Central Informatics Bureau and ICT Authority will be undertaken in order to clearly establish an unambiguous and coherent role allocation to those different organisations.

4.2 Developing telecommunications and infrastructure.

The availability of a robust telecommunications network and an affordable broadband access network underpins the sustainable growth in the ICT services sector. Similarly, the harnessing of emerging ICT technologies helps us develop new services, make existing operations more efficient and open up new markets. A pivotal area of intervention is the definition of a set of policies on Infrastructure and ICT Emerging Technologies divided into supply side and demand side dynamics. This double-sided dynamics will put into place effective public policies to complement the effective functioning of the market so that development of better

content and services depends on infrastructure and ICT emerging technologies deployment and vice-versa.

The following are key measures that will be implemented:-

a) Government will provide for a National Broadband Policy that clearly signals the Government's intention of promoting broadband as an instrument of economic development, through a mix of interventions that would accelerate uptake of broadband in Mauritius among businesses and citizen communities in an equitable, transparent and customer-centric way;

b) Government will create the enabling framework for the deployment of broadband across the country to decentralise the ICT and IT enabled services industry, to encourage the development of local content and creativity and to facilitate broadband access;

c) Government will prioritise the development of high-speed communications infrastructure;

d) Government will ensure the availability and reliability of broadband connectivity through a continued monitoring of the market and through the setting up of a quality of service framework;

e) Government will ensure the development of broadband-enabled open and interoperable e-services benchmarked against a software deployment and development quality assessment framework;

f) The regulatory agency will have to ensure more affordable Internet connection prices as well as promote competition between telecommunication operators; and

g) Telecommunications reforms will be implemented through regulatory interventions required for the deployment of a converged licensing model and for the provision of a flexible, market-oriented spectrum licence rights to cater for both technical and market convergence aspects of this sector.

4.3 Enhanced productivity and efficiency across economic sectors and SMEs through ICT.

In the critical sectors of economic importance and/or social relevance, ICTs are seen as a catalyst to bring about better sector management and sector development, and to facilitate collaborative interaction.

The development of eBusiness for innovation will be promoted and facilitated at the level of all the economic sectors and SMEs. Smart exploitation of ICTs together with organisational change allows businesses to increase their productivity and improve their competitiveness.

The following policy objectives will be implemented:-

a) The innovative use of ICTs at the level of SMEs will be supported in order to enable them to enter export markets and develop competence in those respective areas;

b) The adoption of ICTs in the economic sectors will be further enhanced through adoption of electronic channels to sustain competitiveness in the ever globalising market; and

c) Capacity building focused on raising awareness of benefits of new technologies will be further promoted.

4.4 ICT in Education

The effective usage of ICT in education is seen as a very important aspect in improving learning methods, the quality of education as well as allowing greater mobility. ICT has a great potential of making lifelong learning more readily available for everybody.

The main policy measures to be implemented are:-

a) The curricula at the level of primary and secondary levels will be reviewed in order to improve the quality of education for Science and Technology and introduce new learning methods;

b) The IT base of primary and secondary schools will be improved and the use of e-learning increased; and

c) Teachers will be trained with the necessary ICT skills in order to be able to use ICT in the teaching process.

4.5 Developing a culture of Cyber Security

The functioning of societies is increasingly dependent on data systems and the faultless operation of electronic communications networks and services. Information security is essential to ensure the functionality of services. New information security threats will appear alongside the rapid technological development and diffusion of IP-based solutions. A high level of functionality is essential for information and communications systems particularly to safeguard important functions in society, especially the critical infrastructure. The protection of consumers against security threats will also become a greater challenge, since security breaches are aimed at the weakest link. In a changing society, the implementation of information security will be a global challenge.

The aim of improving information security is to prevent disruption, protect against attacks aimed at information and services, maintain trust and safeguard continuing functions amid a variety of disruptions. This should take place at all levels of society, from the individual to the international. Information security is not an independent function; it must support all other functions.

A National Information Security Strategy (NISS) in line with the recommendations of Action Line C5 of the World Summit of Information Society (WSIS) Geneva Action Plan will be implemented to establish a culture of cyber security at national level and build trust and confidence in the use of ICTs. Its main purpose will be to combat threats to information security. The NISSP will provide a common platform

for the information security efforts of the Government, businesses, organisations and individual citizens.

In this respect, the following measures are targeted: -

a) A National Information Security Strategy will be formulated which will encompass measures for instilling a culture of cyber security at national level;

b) Promoting the adoption of Information Security standards at national level as well as mandatory compliance for information assurance will be implemented especially for operators of critical information infrastructure;

c) The necessary infrastructure to support secure electronic transactions for e-business and e-government will be implemented;

d) Setting up of an emergency response team, which will act as a trusted single point-of-contact for stakeholders to report Internet security problems;

e) Implement measures to protect the confidentiality and privacy of citizens;

f) Increase the level of awareness at national level of information security threats and best practices that can be adopted to safeguard data; and

g) Promote capacity building in the field of Information Security at national level in order to increase the supply of qualified professionals in this area.

4.6 Accelerating e-Government

ICT stands considerably harnessed in governance and a significant beginning has been made in the provision of electronic services to citizens as well. It is time now to accelerate eGovernance in the country through consolidation and collaborative working. E-Governance must be seen not just as a tool for citizen

convenience but also as a spur to the domestic ICT industry in Mauritius and a compelling reason for communities to adopt ICT in their daily lives.

The following policy measures will be implemented:-

a) Government will launch a special initiative to cater for delivery of e-government applications through other electronic channels other than Internet such as mobile communications and digital TV in an integral part of ANYTIME, ANYWHERE, ANYHOW E-Governance service delivery;

b) A comprehensive business process re-engineering in departments and ministries will be undertaken to bring about efficient delivery of services to businesses and citizens and the use of electronic document management in the public sector will be enhanced;

c) The implementation of information systems and shared databases will be enhanced across ministries and departments in order to facilitate information sharing and communications within and across ministries and departments;

d) With the increasing use of electronic networks and delivery of e-services, it is necessary that the privacy of citizens should be ensured. The Government will introduce policies and procedures to safeguard the privacy of citizen data; and

e) With the availability of better security technologies and lower costs, smart cards have the potential for use in many applications such as banking, vehicle registration, internet payments, citizen ID cards, driving licences, health records etc. The Government will encourage the use of smart cards and biometrics in e-government applications and will enhance the current ID card to one based on smart card technologies.

4.7   Harnessing ICT For Social Development

In order to realise the vision of Government, the majority of the population must have adequate access to ICTs and comfortably harness the use and application of ICTs in everyday life. A major area of intervention is the definition of a set of policies on ICT for Social Development to transform Mauritius into an Information Society. The set of policies will ensure that all segments of the population have access to ICTs and are IT literate. In parallel, the community needs to be able to develop local content and have access to local information online.

The Government is committed to build a people-centered, inclusive and development-oriented Information Society, where everyone can create, access, utilise and share information and knowledge, enabling individuals, communities and people to achieve their full potential in promoting sustainable development and improving their quality of life. The Government intends bridging the digital divide and creating an inclusive Information Society.

The following measures are targeted:-

a) Action will be taken to increase ICT integration in society, by providing access to ICTs to all communities including those who are isolated geographically or economically. In order to increase household PC penetration, financing options will be provided for low-income individuals to purchase a computer with broadband Internet access. The primary school PC penetration will also be increased;

b) Government will provide access to ICTs through the enhancement of existing Public Internet Access Points (PIAPs) in post offices and the setting up of PIAPs with multipurpose functions at new locations to be accessed by the whole community. Different modes of financing and operating the PIAPs will be analysed so that they are sustainable in the long-term;

c) The development of online local content will be encouraged by initiating the Community Empowerment Programme which will comprise the development

of a Community Web Portal to empower the community in building an information society. Awareness will be spread on the usefulness of ICT as a tool for sharing information and providing services for a better society;

d) The use of ICT for information and services will be promoted as a means for socio-economic development and empowerment. ICT will be used to increase the employability of the unemployed, under-employed and vulnerable sections of society. Entrepreneurship in the ICT sector will be encouraged;

e) In order to reduce the digital divide, the youth will be encouraged to set up computer clubs with the aim to encourage their interest in IT-related fields and to provide online fora so that they can express their needs; and

f) The Universal ICT Education Programme (UIEP) will be enhanced through industry recognition of the IC3 certificate and promotion of the IC3 as an industry pre-requisite for employment. Higher IT courses will be provided to trainees who complete the IC3 certification.

4.8 ICT Leadership in the region

Mauritius aims at attaining leadership in the information economy by developing local enterprise (business organisations) and by attracting best in class ICT companies and educational institutions. Mauritius has for long been and is seen as a frontrunner in the field of ICT in the region. In its journey to becoming a regional ICT hub of expertise, Mauritius must build symbiotic partnerships with other countries of the region that, even as they help build Mauritius' own ICT industry, also further the growth of ICT in the partnering nations. Along the way, Mauritius needs to identify a few niche areas in which it is seen as leader for the region.

The ICT sector today faces new challenges that need to be addressed. For example, the key drivers for attracting investments in ICT sector are the availability of skilled talent, apart from high quality infrastructure and a

supportive Government. The present ICT policy seeks to focus on development of Human Resources and Incentives.

Policy measures to be implemented include the following:-

a) Special programmes will be developed for the training of our young people to increase their employability in the ICT sector, especially in the BPO and Call Centre segments, and to meet the demand of the industry in terms of qualified manpower;

b) Government and industry will jointly sponsor applied research projects in ICT in local universities;

c) Government is strongly committed to attract top names in the ICT Industry to set up a Regional Centre of Excellence, which would assume leadership for focused education on high-end technology areas and research activities and thus serve the region as a fountain of expertise in such areas;

d) Government will enhance entrepreneurship development at tertiary level and capacity building for SMEs as well as promote the expertise of Mauritius in Business Incubation at the regional level; and

e) The ICT Incubator Scheme will be reviewed and consolidated to create a more conducive environment for the promotion of a local entrepreneurial culture.

4.9 Boosting our ICT Exports

Confronted with a choice between Mauritius and another country while choosing to offshore their operations, many may fall for past performance rather than promised potential. Mauritius needs to counter that through concerted campaigns that advertise both inherent and emergent strengths of the country in its total offering to the world while, in the process, heralding its arrival as an emerging offshore location of the world.

The ICT sector is steadily growing as the fifth pillar of the Mauritian economy and as a major engine of economic growth. The development in this sector has so far been rapid, sustained and above all very encouraging. However, it is a clear fact that due to the small size of the local ICT market, there is limited potential for the growth of this sector. As a result, the only way to further stimulate the development of the Mauritian ICT sector is by encouraging ICT exports. In the context of the expanding global ICT market, to develop this sector in Mauritius, it is essential to have clear policies for the export of ICT, which will positively impact on the economy and give rise to benefits in terms of generation of export revenues, employment and wealth creation.

The following actions will be implemented:-

1. Government will take appropriate measures to promote the export of ICT products and services both on the regional and international markets. An Export Development Fund would be set up with the objective of enlarging the market for ICT exports;

2. A comprehensive branding strategy for ICT exports will be developed to attract the top names in ICT to Mauritius through a targeted approach;

3. Regular promotional activities need to be undertaken worldwide to brand Mauritius as a world-class and competitive outsourcing destination for ICT and BPO and as the "preferred Gateway" to Africa. Participation of Mauritius in selected international ICT trade fairs and

exhibitions, with the objective of promoting the local expertise and export potential of Mauritius and assisting local operators in establishing contacts with foreign outsourcers and business partners, will be encouraged;

4. A dedicated approach to ICT export facilitation services aiming particularly at attracting businesses and investments for the ICT, BPO and ITES export sector will be adopted. This approach will include the gathering of up to date market intelligence and the preparation of annual plans to facilitate the creation of more business in ICT export; and

5. The introduction of specific schemes to encourage the creation of export-oriented SMEs in ICT will be strongly considered.