KINGDOM OF SWAZILAND

National Information and Communication Infrastructure

Policies, Strategies and Plans

Implementation Plan 2012 — 2016

Economic Commission for Africa

Government of Finland

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ACRONYMS

AISI	African Information Society Initiative
ATM	Automated Teller Machine
CBS	Central Bank of Swaziland
CSD	Computer Services Department
CET	Computer Education Trust
E	Emalangeni – Swaziland currency
ECTB	Electronic and Communications Transaction Bill
EMIS	Education Management Information System
EPRS	Early Poverty Reduction Strategy
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GNI	Gross National Income
HIV/ AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HW/SW	Hardware/Software
ICT	Information and Communications Technology
IPR	Intellectual Property Rights
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
Kbps	Kilo bits per second
LAN	Local Area Network
ECOS	Examinations Council of Swaziland
MLSS	Ministry of Labour and Social Security
Mbps	Mega bits per second
MDGs	Millennium Development Goals
MICT	Ministry of Information, Communications and Technology
MISA	Media Institute of Southern Africa
MNRE	Ministry of Natural Resources and Energy
MCIT	Ministry of Commerce, Industry and Trade
MoET	Ministry of Education and Training
MoEPD	Ministry of Economic Planning and Development
MoF	Ministry of Finance
MoHSW	Ministry of Health and Social Welfare
MoTARD	Ministry of Tinkhundla Administration & Regional Development
MoPS	Ministry of Public Service
MJCA	Ministry of Justice and Constitutional Affaires
MTEA	Ministry of Tourism, Environment Affairs
MP	Member of Parliament
MTN	Mobile Telephone Networks,
NCC	National Curriculum Centre
NDS	National Development Strategy
NEPAD	New Partnership for Africa's Development
NERCHA	National Emergency Response Council on HIV/AIDS
NGO	Non-Governmental Organisation

NICI	National Information and Communication Infrastructure
NSDI	National Spatial Data Infrastructure
NSO	National Statistics Office
PC	Personal Computer
PIAC	Public Internet Access Centres
PMS	Performance Management System
PPP	Public- Private Partnership
PRSAP	Poverty Reduction Strategy and Action Plan
RSA	Republic of South Africa
SACU	Southern African Customs Union
SADC	Southern African Development Community
SCOT	Swaziland College of Technology
SDI	Spatial Data Information
SEA	Swaziland Environmental Authority
SEDCO	Small Enterprises Development Company
SEC	Swaziland Electricity Company
SG	Swaziland Government
SMME	Small Micro and Medium Enterprise
SMS	Short Message Service
SNAJ	Swaziland National Association of Journalists
SPEED	Smart Programme on Economic and Empowerment Development
SPTC	Swaziland Posts and Telecommunications Corporation
SWASA	Swaziland Standards Authority
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Education and Scientific Organisation
UNISWA	University of Swaziland
VOCTIM	Vocational and Commercial Training Institution Matsapha
VSAT	Very Small Aperture Terminal
WSIS	World Summit on the Information Society
WUSSD	World University Services Swaziland

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The Government of the Kingdom of Swaziland and the Ministry of ICT are immensely grateful to the United Nations Economic Commission for Africa (UNECA) and its Southern African Subregional Office ECA-SA, for the technical assistance and financial support given for the development of the (National Information and Communication Infrastructure (NICI) Policy and NICI Plan 2016. This was done under the auspices of the African Information Society Initiative (AISI) and with financial assistance from the Government of Finland, through the Cooperation in the Development of Information and Communications Technologies in Africa Programme.

The NICI Plan 2016 is the product of coordinated and sustained efforts of a Cabinet established multisector Committee (ICT Task Team) and stakeholders whose invaluable input initially led to the development and adoption by Parliament of the NICI Policy in August 2006 and has now led to the development of the implementation plan.

The committee members were drawn from:

- The Office of the Prime Minister
- Ministry of Tourism, Environment and Communications
- Ministry of Finance
- Ministry of Economic Planning and Development
- Ministry of Enterprise and Employment
- Ministry of Public Service and Information
- Ministry of Housing and Urban Development
- Ministry of Education and Training
- The Federation of Employers and Chambers of Commerce
- The Swaziland Internet Service Providers Association
- The Swaziland Posts and Telecommunications Corporation
- Swazi MTN
- Swaziland Broadcasting and Information Services
- Tibiyo TakaNgwane
- Swaziland Investment Development Corporation
- Central Bank of Swaziland
- University of Swaziland
- Coordinating Assembly of Non Governmental Organisations
- Swaziland Consumers Association

Also acknowledged are various officials from other Government Ministries, the business community, ICT experts and the rest of the stakeholders who provided integrated inputs to enrich this plan, ensuring its relevance to the current environment. This comprehensive plan represents the nation's commitment to using ICT in solving development problems with innovative solutions and approaches that are effective scalable and replicable. It is with hope that this spirit will be carried forward for the successful implementation of the NICI Plan 2016 thus ensuring the achievement of the ICT vision and vision 2020.

Foreword

Information and Communication Technology (ICT) has become a strategic resource, a commodity and a foundation of most activities in society. It plays a major role in education, agriculture, health, commerce and in poverty alleviation by introducing efficiencies and generating new jobs and investment opportunities. In August 2006, the Government of the Kingdom of Swaziland, taking into consideration agreements and treaties to which Swaziland is party, including the African Information Society Initiative (AISI), the Southern African Development Community Information and Communications Technology strategy framework (eSADC), the New Partnership for Africa's Development (NEPAD) and the Declaration of Principles and Action Plan of the first phase of the World Summit on the Information Society (WSIS), adopted the Swaziland National Information and Communication Infrastructure (NICI) Policy. The NICI Policy was to be followed by the policy implementation plan.

It is with great pleasure and on behalf of the Government of the Kingdom of Swaziland that I present the National Information and Communication Infrastructure Implementation Plan for 2012-2016 (NICI Plan 2016). This plan is based on the principles espoused in the National Development Strategy (NDS) and will guide Swaziland in the exploitation of ICT as a catalyst in the national development efforts.

Although the plan has been delayed, the creation of the Ministry of Communication, The Swaziland Standards Authority, the Competition Commission and the Swaziland Revenue Authority, are clear indications that the Government recognizes ICT as a strategic imperative for development and takes cognizance of its immense benefits. Government has resolved in this Plan to provide considerable national resources for the realization of the ICT vision statement and the achievement of internationally-agreed development goals and objectives, including the Millennium Development Goals (MDGs).

I would like to express my gratitude to all involved in this process for their commitment in the development of a realistic and relevant Swaziland Policy and Plan to guide the nation through the next five years of ICT development, in particular, the ICT Task Team for their sterling efforts in leading and facilitating the process and all the stakeholders (government, business and civil society) who were actively involved in this cross-cutting project that allows for the mobilization of resources around key development objectives. My profound appreciation goes to the United Nations Economic Commission for Africa (ECA) the driver of the NICI process and the Government of Finland for their continued support.

It is my fervent hope that the excellent working relations and team spirit exhibited during the Plan development process will also be mirrored through the successful implementation of the cross-cutting programmes and activities enunciated in this Plan.

Hon. Ms. WINNIE MAGAGULA
Minister for Information, Communications and Technology

The evidence of ICTs' impact on a country's economy and growth is becoming increasingly clear. Recent World Bank research shows that a 10 percent increase in mobile phone subscribers leads to a 0.8 percent increase in economic growth. Similarly, a 10 percent increase in high-speed Internet connections leads to a 1.3 percent increase in economic growth.

Infodev

1.0 Background to the NICI Policy process

1.1 Introduction

Recognizing the important role that ICT plays in facilitating attainment of development goals and their multiplier effects on economic and social development, the Government of the Kingdom of Swaziland requested for technical assistance from the United Nations Economic Commission for Africa (UNECA) in order to develop a National Information and Communication Infrastructure (NICI) policy and plan for the country. This process commenced in 2004 under the auspices of the African Information Society Initiative (AISI) which was launched in May 1996 as a common vision for Africa's quest to bridge the digital divide. The AISI remains the cornerstone of ECA's activities to promote ICT in the development process as a means to accelerate African economic and social development.

Based on the AISI framework and with capacity building by ECA, a draft ICT policy was developed by a multisectoral multi-disciplinary ICT Task Team and endorsed during a stakeholder validation workshop in January 2006. This policy was subsequently adopted by Cabinet in August 2006 denoting the conscious realization by the leadership of the need for an ICT-led socio-economic development process with the potential of transforming the country into an information-rich, knowledge-based and technology driven society.

1.2 The Swaziland NICI Policy

The Swaziland ICT Policy (dubbed the NICI Policy) was launched by His Excellency, the Right Honourable Prime Minister Themba Dlamini on the 3rd of August 2007. During the launch, he acknowledged that the Government was cognizant of the fact that the dynamics of the 21st century dictated that ICT became the vehicle for development in all sectors and that access to information and creation products (content, applications etc) contributed significantly to strengthening economic, social and cultural development, thus helping in the attainment of the millennium development goals (MDG's).

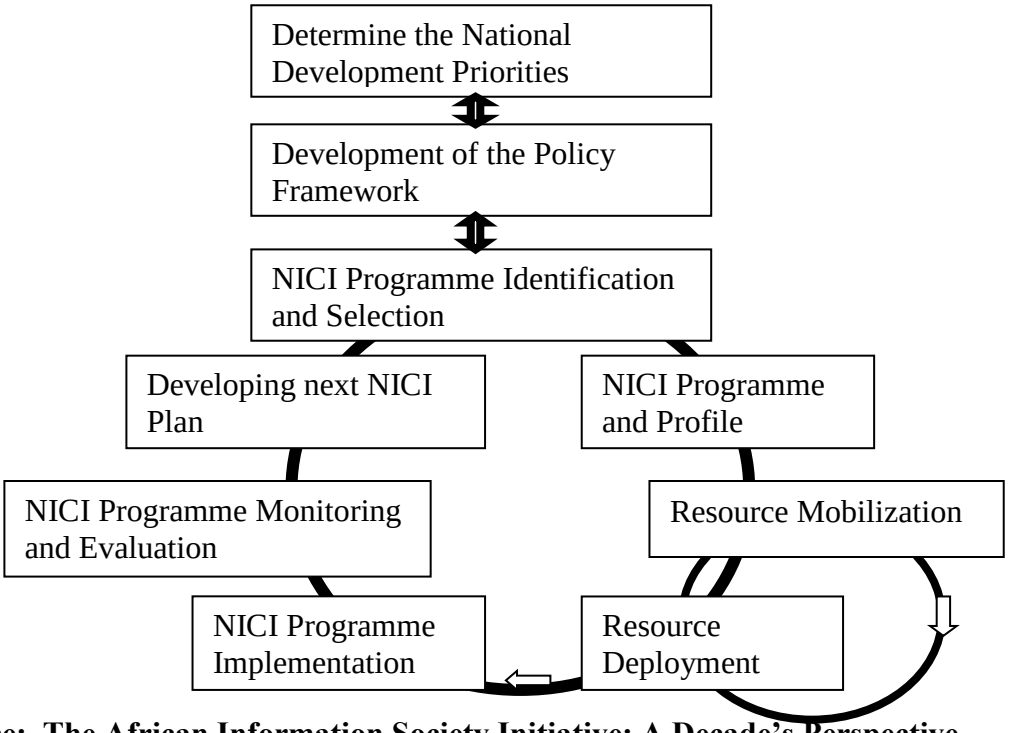
The policy document represents Government's commitment to the implementation of ICT initiatives aimed at facilitating and accelerating development. Broadly:

- Increasing national consciousness on the role and potential of ICTs for the sustainable development of Swaziland;
- Guiding the successful integration of ICT in the education system - ensuring standardisation, reducing wastage and ineffective use of technology thereby optimising technology use in enhancing teaching and learning;
- Facilitating the development and implementation of the necessary legal, institutional and regulatory framework and structures to support the deployment, utilization and development of ICT;
- Creating a conducive/enabling environment for cooperation and partnerships in ICT, between the public and private sectors and all interested stakeholders at the national, regional and international levels;
- Creating a favourable investment climate in the ICT sector and to identifying innovative financing mechanisms that address specific needs for ICT development;
- Facilitating the deployment, expansion, rehabilitation and modernization of the national information and communications infrastructure;
- Facilitating the development of a viable ICT industry to facilitate research and development, manufacturing, content development and distribution of ICT products and services and employment creation;
- Development of national human resource capacity to enable the exploitation of ICTs within the society;
- Providing universal access to information for all citizens in order to improve the quality of life through inclusive access to education, science and technology, health, culture, entertainment etc;
- Ensuring that the benefits of ICTs are utilised in addressing gender (disadvantaged groups) inequalities in education, employment opportunities, and decision making;
- Ensuring that all sectoral development plans and projects have an ICT component and to coordinate ICT activities in the country including the formulation of appropriate policies, strategies and plans for the implementation of e-applications e.g. electronic government and governance, e-health, electronic commerce etc; and
- Facilitating Swaziland's integration and participation in the local and global economy and in the global Information Society.

The successful realization of the NICI policy will be based on an implementation strategy that takes into account the identified priority areas and the current environment. In drawing up the implementation programmes in each of the priority areas, crosscutting issues will be taken into account to ensure a balance between technology and social development. Economic growth as described by Infodev and development is the ultimate goal.

1.3 The NICI Process

Figure 1: THE NICI CYCLE(UNECA)



Source: The African Information Society Initiative: A Decade's Perspective

By completing the NICI 2016 Plan Swaziland is enroute to completing the first NICI cycle. The next steps will be resource mobilization, deployment, implementation, monitoring and evaluation which will measure the success of the plan. The plan is linked to national development priorities against which it can also be evaluated. Since, the policy is a few years old it is important to review the priorities espoused in the national development plans and the current economic conditions.

1.4 State of the Economy and National Development Plans - Reviewed

The Kingdom of Swaziland is a landlocked country bordered by South Africa and Mozambique. It has an area of 17 364 sq km. It is heavily dependent on its neighbours for access to the international community and markets. It has a population estimated to be about 1,018,449, of which 78.9% is rural and 22.1% is urban (Table 2).

Table 1: **Basic Demographic Indicators**

Description of Indicator	Measurement
Total Population	**1,018,449**
Growth Rate	0.9
Poplulation Density/sq.km	58.7
Ratio men/women	89.6 / 100
City population	22.1%
Rural Population	78.9%
Age distribution of population	
Under 15 years	39.5%
15-64 years	56.7%
65 years and over	3.8%
Literacy	**81.1%**
Life expectancy	**43.3 years**

Source: 2007 Population and Housing Census

Swaziland is one of the countries that have felt the impact of the second round effects of the global economic meltdown, and is still recovering though at a slow pace given the severity of the crisis. The country was affected mainly due to the strong trade links with the global economy and international finance as well as South Africa, the country's largest trading partner who has been hit hard by the global recession. The country experienced declines in the volumes of exports and earnings given the slowing global demand and declining commodity prices in world markets. In addition, there was a reduction in capital and investment flows coupled with scaled down production levels adding to the existing high unemployment levels which is currently at 40 percent (2008 Population Census).

The development process of the Implementation plan was geared towards recognising the areas where ICT could effectively contribute towards the achievement of the much broader agenda of the National Development Strategy (NDS) and the Transformation Policy Statement which also incorporated other existing government initiatives such as the Smart Programme on Economic Empowerment and Development (SPEED), the Poverty Reduction Strategy and Action Plan (PRSAP), Public Sector Management Programme (PSMP), the Fiscal Restructuring Programme, the Millennium Development Goals (MDG's) and the Millennium Action Plan (MAP) and the recent Economic Recovery Strategy (ERS).

1.4.1 The National Development Strategy (NDS)

The purpose of the NDS is to formulate a government vision and mission with appropriate strategies for socio-economic development for the next 25 years and to provide guidelines for the formulation of development plans and for the equitable allocation of resources. It is

designed to strengthen the Government's development planning and management capacities and anchor it firmly to a national consensus on the direction of future developments in the country. The current NDS which spans 25 years has passed the midpoint review with the end date being June 2022. ESRA offered schedules of the policies that needed to be in place in order to achieve the NDS vision. The vision statement is "by the year 2022, the Kingdom of Swaziland will be in the top 10% of the medium human development group of countries founded on sustainable economic development, social justice and political stability". Underlying this vision is the focus on the quality of life.

Box 1 contains the NICI Policy vision and mission statements which are in line with the NDS and include input from the other strategy documents and includes cross cutting issues such as gender and disabilities.

Box 1: NICI Policy vision and mission statements

Vision statement

To harness ICT infrastructure and ICT solutions that enhance the building of a truly Twenty-First Century Kingdom of Swaziland with sustainable socio-economic development, accelerated poverty reduction, equal opportunities for all regardless of gender and physical ability.

Mission statement

To enhance national socio-economic development by encouraging the beneficial activities of ICT in all sectors through the provision of a conducive environment that will progressively maximize the quality and security of the life of the people of Swaziland and make the best use of the country's human and natural resources, and promote multi-layered co-operation and knowledge sharing nationally, regionally and globally.

The NICI is characterized by this vision and mission (Box 1), which in summary is to enhance the delivery of mainstream development goals whilst creating opportunities for the disadvantaged and empowering the poor, ICT would be integrated into each of the macro areas and sectoral strategies of the NDS which focused on seven (7) key areas whilst also taking into consideration the PRSP goals

1.4.2 Poverty Reduction Measures

Government's vision to reduce the poverty rate by 50 percent by 2015 requires a minimum annual economic growth rate of 5 percent. The population is growing at a rate of 0.9 percent

and the economic growth rate of 1.9 percent in 2010, thereby clearly demonstrating a shortfall in the quest to meet the MDG on poverty. This shows a declining standard of living of the citizens and hence Governments' need to enhance the social sectors.

In response to the high poverty incidence currently prevailing in the country, at the beginning of 2009/10, Government set aside over E993 million for poverty related programmes. These are programmes that relate to provision of clean water and sanitation, grants and subsidies and agribusiness development. On the same vein, disaster management interventions were allocated a total of E100 million to cater for water supply, food rations and the fight against alien invasive species which are threatening the environment.

Government continued with its commitment to provide an improved and dignified standard of life, to empower, protect the rights and social well-being of the most disadvantaged groups of the society. For instance, in the 2009/10 budget, Government increased social grants to the elderly from E500.00 to E600.00 quarterly per head and bursaries for needy children from E16 million to E123 million between 2002 and 2010, respectively.

1.4.2 Economic Recovery Strategy

To address the domestic economy challenges, the Government of Swaziland has embarked on an Economic Recovery Strategy (ERS) whose objective is to create an overall macroeconomic environment conducive to broaden growth.

The Economic Recovery Strategy seeks to achieve the following:

- Accelerated, shared and sustainable economic growth which is required to re-dress the macroeconomic imbalances and other structural deficiencies in the economy
- ERS aims at growing the economy so that reforms proposed in FAR could be achievable, these include diversifying the economy so as to increase the taxable base of both individuals and companies.
- Empowerment and integrating SMMEs into the mainstream economy- to provide more job opportunities which can absorb retrenched civil servants under EVERS.
- Provide relief to the national resources as more people graduate from social relief as they become empowered and self reliant
- Long-term solution to structural problems that the country faces

1.4.3 Unemployment

Another huge challenge is that of unemployment. This is structural in nature and tends to be aggravated by low growth of the economy. Growth in the economy over the years has not created enough sustainable employment opportunities. In 2007, the level of unemployment

was estimated at 40.6 percent of the population and much more severe for the youth at 69 percent for males in the age group 15 to 19 years and 77 percent for females in the same group. The majority of the population is engaged in low productivity economic activities in subsistence agriculture, and the urban and rural informal sectors.

Armed with the information on the other national plans and strategies, the task force discussed the economic issues along with the ICT baseline study and , the following ICT Policy pillars were confirmed:

- Human resource capacity
- Education
- Infrastructure development – Equal access for all
- Strategic ICT Leadership
- Environmental Management
- The Financial Services Sector
- Media
- ICT Industry
- Legal and regulatory frameworks

A transparent enabling environment, the appropriate infrastructure, capacity and leadership were found to be critical towards the achievement of all the goals. The relationship between the pillars and NDS is documented in the table below.

Table 2: Correlation between the NDS and NICI Policy

National Development Strategy goals	Pillars
Sound Economic Management	• Enabling legal and regulatory framework • ICT leadership • Infrastructure - access for all
Economic Empowerment	• ICT industry • Infrastructure - access for all • Capacity building
Human Resource Development	• Capacity building in all sectors • Infrastructure and Content • Enabling legal and regulatory framework
Agricultural Development	• ICT infrastructure • Capacity building
Industrialization (diversification)	• ICT industry • Financial Services sector • Infrastructure - access for all
Research for Development	• Capacity building • Technology transfer • Infrastructure
Environmental Management	• Infrastructure – access for all, content, website development
Media	• Legal and regulatory enabling environment • Capacity building

1.5 The Pillars

Based on the NICI policy the importance of the pillars towards a sustainable development of the knowledge economy can be summarized as follows**:**

1.5.1 Legal and regulatory frameworks

Inadequate legal and regulatory frameworks have been one of the limiting factors constraining *e*-economy and Information Society development in the country. Creating an enabling environment

does not simply entail the removal or placement of regulations or regulators but it includes implementing sound statutes and institutions as a prerequisite to attracting investment, fostering applications of new technologies and developing ICT networks and services

1.5.2 Environmental Management

Environmental management is necessary for sustainable development and an ecological balance has to be maintained. Both the public and private sectors have to accommodate environmental considerations in their policies, strategies and programmes. Strong coordination mechanisms are required if compliance procedures are to be effectively monitored. To be able to achieve this, capacity building and information exchange will also play a vital role.

1.5.3 Infrastructure development – Equal access for all

As a developing nation Swaziland faces a number of challenges with the availability, quality and affordability of infrastructure for ICT. To facilitate effective and sustainable social and economic development, there is an urgent need for the appropriate application of ICT in all sectors of the economy, acceleration of infrastructure development and provision of access to ICT for all.

1.5.4 Financial Services Sector

The financial services sector is one of the critical sectors in the development of the ICT industry. Although Swaziland has a stable and well developed financial services sector with adequate capacity, systems and technologies for the effective and efficient delivery of financial services and products, access to these services is hampered resulting in a high unbanked population and SMEs with no access to financing. The plan is to ensure that the financial services sector avails access to affordable finance and credit, with equal access to both men and women.

1.5.5 Media

The media has an essential role to play in the development of the Information Society and is recognised as an important contributor to freedom of expression and plurality of information. In addition to being an essential means for information dissemination, the mass media plays a critical role in spreading awareness of the importance and benefits of the information revolution.

1.5.6 Human resource capacity

Human capital is critical for the development and management of ICTs. The shortage of skilled ICT professionals has been identified as one of the challenges in the development of ICTs. In order to facilitate the embracement of ICT applications, capacity building initiatives/programmes are a must for policy makers, the public and private sectors and civil servants.

1.5.7 Education

In order to compete in a competitive global economic environment, a highly skilled and educated workforce with aptitude and skills in the application of information and communication technologies is essential. The curriculum and the development and management of the education system may take into consideration the overall goal of becoming an information society..

1.5.8 ICT Industry

The current scenario of being a net importer of almost all ICT products – computers, communication equipment, software and related services must gradually be reversed. It is envisaged that an effective ICT industry will also address the digital divide issues both in country and internationally.

1.5.9 Strategic ICT Leadership

Government can fuel demand for ICTs by being a visible user of the technology which can lead to increased government efficiency. By doing this the Government of Swaziland will be taking the leadership role and can institutionalize this role.

1.4 Strategies

In order to achieve the goals set in the ICT policy, broadly, the strategies include:

- Developing the necessary legal, institutional and regulatory enabling environment and structures for supporting the development, deployment and exploitation of ICT within the economy and society;
- Developing the physical ICT infrastructure for Swaziland using innovative methods including unbundling and co-location with other infrastructure providers e.g. electricity, roads, railways etc;
- Building broadband capacity in the information and communications infrastructure and introduce new services to improve universal access and service quality;
- Promoting the development of a competitive local ICT industry for the manufacture of technology products and services coupled with the facilitation of private sector involvement in the development of the economy;
- Improving human resource development through identified capacity building initiatives in order to meet national development demands and requirements; and
- Promoting the deployment and exploitation of information, knowledge and technology within the economy and society in order to address issues related to equitable access to education, training etc.

In the design of ICT projects within the plan, gender balance will be ensured so as to raise the level of awareness on the role, use, application and potential of ICT in gender empowerment and meeting specific developmental needs of women. This would lead to the increased participation and empowerment opportunities for women in national development through ICTs.

The NICI process promotes a multi-stakeholder approach in the development of both the policy and implementation plan. This approach ensures cooperation and coordination of the initiatives involved in the plan. This does not mean that government must then relinquish its leadership role. Also considered in the plan process was the fact that although government has a leading role in developing and implementing comprehensive forward looking and sustainable national e-strategies, the private sector, and civil society have an important role to play in the consultative process. Annex 1 explains the role of government as envisioned by ITU and ADB for Rural ICT development which can be applied to developing economies especially countries in the SADC sub-region. These structures have been used in the ASEAN sub-region.

Regional Developments

Swaziland is behind in terms of the harmonization of the ICT environment and with the development of the eSADC Strategy Framework, the divide is widening in terms of the liberalisation and development of the ICT industry. Swaziland is one of the last administrations that still have a parastal PSTN. However, it is important to note that the pillars of the NICI policy and plan are in line with the eSADC framework whose summary is found in Annex 3. A number of initiatives in the African region were discussed in the introduction.

International Developments

Sustainable development is at the top of every nation's development agenda. Rio 20+ has spelt out the goals for achieving a green economy. This NICI plan does take environmental management issues into consideration especially, e-waste management. There are several programs proposed under this pillar.

In addition, there is much consideration in terms of expanding participation in the knowledge economy and harmonization of legal frameworks in order to participate in the globalized economy. Programmes consider the creation of an enabling environment and improvement of capacity of both infrastructure and human.

The pillars of Networked Readiness Index NRI were also considered. The index has four subindexes namely environment, readiness, usage, and impact:

Under environment

- political and regulatory environment
- Business and innovation environment

Readiness:

- Infrastructure and digital content
- Affordability
- Skill

Usage:

- Individual usage
- Business usage
- Government usage

Impact:

- Economic impact
- Social impact

Currently, Swaziland ranks no.136 out of 142 countries measured in NRI. Ranked number 1 is Sweden, Mauritius is no. 53 and South Africa ranks no. 72. In the SADC sub-region the only country ranking lower than Swaziland in the NRI 2012 index is Angola. It is only in the last few years that countries like Lesotho, Zambia and Zimbabwe have out ranked Swaziland by creating an enabling environment for ICT to thrive and implementing strategies that catalyze the industry.

Swaziland's lowest scoring in sub indexes were usage and impact. ICT Readiness is the first process on the ICT for development value chain. The purpose of the implementation plan is to improve the access, usage and economic and social impact. The next section discusses the current situation in the ICT industry.

2.0 ICT in Swaziland

Time elapsed between the adoption of the policy and the development of the implementation plan. To gauge the current situation with regards to ICTs, table 3 below gives us the basic indicators. Swaziland had made some progress in ICT since 2006 and the leadership has taken interest in ICT development. This was pronounced by His Majesty King Mswati III, in the 2010 Speech from the Throne. An example is the development of the Royal Science Park.

The table also indicates that most of the progress made in ICT is in mobile communications with 72 subscriptions per 100 inhabitants in 2011, compared with 22 in 2006. During the same time, the fixed line penetration has remained stagnant at 4.4 subscription and for a period showed a trend towards decline before picking up. Noted is that the number of ISPs increased from 2 in 1999 to 7 in 2010 and there was an introduction of fixed line broadband in 2010 and 3G in 2011. It is evident from these indicators that some critical steps need to be taken in order to bridge the digital divide, to harness ICT for development and move toward the creation of a digital economy..

Even though statistics are critical towards making developmental decisions and monitoring progress and these are lacking in some areas, especially with regards to radio and personal computer ownership and a mechanism will have to be set up for monitoring progress.

Table 3: Basic ICT Indicators

Indicators	**1999**	**2003**	**2005**	**2008**	**2011**	**2012**
Population (in millions)	0.98	1.0	1.0	1.0	1.1	1.1
Main telephone lines per 100 inhabitants	3.0	3.5	4	4	5.4	7.5
Number of fixed operators	1	1	1	1	1	1
Number of mobile operators	1	1	1	1	2	1
Mobile cellular subscribers per 100 inhabitants	4	10	13	53	68	72
Percentage of population covered by mobile telephony	13	70	90	91	93	95
Data communications operators	1	1	1	1	2	2

Internet service providers	2	6	7	7	7	7
Internet capacity (total bandwidth Kbytes)	256	2500	6500	36000	160 000	512 000
Number of Internet subscribers per 100 inhabitants	0.5	1	1.2	1.4	1.6	1.8
Total Broadband Internet subscribers	n/a	n/a	n/a	n/a	2352	11059
Number of PCs per 100 inhabitants	2.3	2.7	3.3	4.8	6	6.5’
Percentage of localities with Public Internet Access Centres (PIACs) by number of inhabitants (rural/urban)	2	9	15*		14*	14*
Internet access tariff (20 hours per month) as a percentage of per capita income	n/a	n/a	n/a	n/a	n/a	n/a
% of households with Television sets	7	31	31	35	43	45’
% of households with radio		79	79	77	76	76’
% of households with electricity	^	27	^	35	44	48’
% of ICT investments and expenditures (% vis a vis GDP and vis a vis general Government expenditures)	^	^	^	^	^	

* Number of cafes nationally
^ Data not available
‘ Figures obtained from projections

2.1 ICT Environment

Although, progress is visible and pronounced, it is not remarkable or sufficient enough to have a significant impact on the economy and it is mostly on the setting-up of institutions needed to drive the ICT agenda and on infrastructure development that urgent action is needed.

2.1.1 Institutional Structures

The Ministry of Information Communications and Technology (MICT) was established in late 2008 and is responsible for the ICT industry. The NICI policy and its implementation is the responsibility of this Ministry. As a new ministry and while it is still in its infancy, it is in the process of mobilizing manpower and putting together the strategies for accomplishing its mandate. Annex 1 is a summary of the existing MICT structure, strategy and the existing statutes and legal instruments currently in use or in the process of being enacted.

Other new institutional structures have been set up and their existence will help to facilitate the implementation plan and are part of NDS, Poverty Reduction Strategy and are listed in the table below:

Table 4 : New Institutional Structures

	Institution	Year Created
1.	The Swaziland Revenue Authority	2009
2.	The Swaziland Competition Commission	2008
3.	The Swaziland Standards Authority	2007
4.	The Anti-Corruption Commission	2008

Although at different stages of operationalisation, they are in existence and are functioning and some already have the necessary MOUs for working with other entities.

Still outstanding are cyber security statutes and a majority of the ICT reforms. Over 15 years ago, Swaziland was supposed to implement the SADC Telecommunications Model Bill. This has not happened because for a long time there was no department of Communications in the country and due to the dynamic nature of the ICT industry, Swaziland has missed opportunities to align it frameworks with the world environment. These include bills and policies in the following:

- Telecommunications Bill
- Technology neutral licensing
- Interconnection
- Number Management
- Spectrum Management and
- Universal access/service
- An Independent regulator
- Public Private Partnership funding
- Cyber security laws

The absence of the reforms makes it difficult to deal with issues of:

- Cross-border roaming,
- Technical and financial auditing,
- Pricing and costing models,
- Dispute settlement,
- Cyber-security,
- Market data collection and information sharing
- Universal access and service funding
- Monopoly power

This makes the development of the sector extremely stunted and difficult for Swaziland, not to mention, being out of tune with the region and the world. There is a need for acceleration of the processes involved in the enactment/approval and operationalisation of statutes and regulations.

2.1.2 Market Structure

The Swaziland Posts and Telecommunication Corporation (SPTC) Act of 1983 and the Swaziland Television Authority (STVA) Act of 1983 are the major ICT statutes currently used to guide the ICT industry. The Swaziland Posts and Telecommunications Corporation (SPTC), is the monopoly national operator by law. It dominates the telecommunications sector for fixed line service provisioning and also participates in mobile as a joint venture partner. SPTC as a regulator has liberalized Internet services provision though it also participate as a another provider (ISP).

The Government through the Ministry of ICT (MICT) is taking steps towards unbundling the national operator in order to create discrete telecom, postal and regulatory entities because of conflict of interest and with intent, to privatise the national operator in due course. This is being implemented through the introduction of the Swaziland Communications Commission (SCC) bill and the Electronic Communications (EC) bill. These bills have been under parliamentary discussion for the last two (2) years and stakeholders have been invited to express their comments.

Government has also indicated plans to work on postal reforms. The communications regulator which will be established via the Swaziland Communication Commission (SCC) bill will also have jurisdiction over the postal services. The focus is on the reviewing and updating of the current postal Act and regulations. Other work involves the studying of the viability of separating the postal services from the telecommunications services or simply

splitting the incumbent (SPTC). Table 3 annotates the current number of players and any intent to increase the number of players in the ICT market in Swaziland.

Table 5: Industry Players

License	Current Number of Players	Planned Increase of Players
Fixed Telephony	1*	2015
Mobile Telephony	1	2013
International Gateway	1*	2015
Internet	7	N/A
Leased Line	1*	2015
DSL	1*	2015
DATA	2	2011
VSAT	1*	2015
Fixed Wireless Broadband	1*	2015
Wireless Local Loop/Limited Mobility	1*	2015
Television	2	N/A
Radio	2	2014

*The national operator (SPTC).

With a population of just over a million inhabitants, it may prove prudent to limit the numbers of players per sector for investors to realize returns on investment and have latitude to improve on service quality.. However bearing in mind that countries such as Botswana, Lesotho, Uganda, etc are creating competitive ICT industries despite low populations, is encouraging.

2.2 ICT Infrastructure

The government of Swaziland is committed to infrastructure development. In the 2010 Speech from the throne, His Majesty King Mswati III, made it clear that "we need to intensity our efforts … and that ICT has proven to be a catalyst for success in our development objectives" and noted aspects of e-government, e-agriculture, e-commerce, e-education and e-health. He further pushed the ICT agenda during his last tenure as the Chairman of COMESA. Although growth in ICT is not huge especially with regards to fixed

line network, the mobile penetration is impressive and there is access to the Internet via both networks.

2.2.1 Fixed Network

The SPTC switching and transmission networks are 100% digital and supported by a countrywide optical fibre network with self - healing capabilities via national rings. Backup is also provided via microwave radio networks. The fibre network has drop/insert facilities to deliver services to the communities through which it traverses along the major routes. The network can support Integrated Services Digital Networks (ISDN) up to 128 Kilobits per second (Kbps). Fixed line connections are currently 75 000 giving us a 7.5 % teledensity. There is a single International Gateway linking Swaziland to the UK and the USA via satellite and to the Republic of South Africa (RSA) and Mozambique via terrestrial microwave radio and optical fibre.

Data communication is enabled via a managed leased line network and data rates of up to 8 Megabits per second (Mbps) can be supported although the commonly utilised rate is 512 Kbps. An ADSL network also exists and can support rates of upto 2048Kbps. There is also in existence an Internet Protocol (IP) Gateway with international bandwidth of 512 Megabits per second

Consistent with its mission to improve service delivery, as early as 2008 the Corporation embarked on the implementation of the medium to long term strategic plan, which sought to transform the SPTC fixed network, which was already 100% digital and supported by optical fiber country wide, to the Next Generation Networks (NGN). The Corporation's technological transformation is founded on an evolution that should take it from a voice services dependent entity to one that offers mobility, broadband and managed data services.

Key components of the NGN project include the following:

- Wireless Connectivity, Radio Services and full Mobility (deployment of which is held back by agreements the corporation has with the current mobile provider).
- A Soft-switch with redundancy providing fixed and mobile services
- An Intelligent Network (IN) Platform providing Pre-paid services

Since 2010, SPTC has extended and upgraded the telecommunications infrastructure to the borders with Swaziland neighbours (Mozambique and South Africa) by providing cross border links at Lomahasha, Lavumisa and Mahamba. This was meant to:-

- Achieve the objectives of regional integration, and provide alternative routes to the ones existing currently
- Enable Swaziland, through SPTC, to tap to the undersea optic fibre cables for purposes of accessing more affordable international bandwidth to improve the internet service.
- Improve cross-border trade.

2.2.2 Mobile Communications

Swazi MTN was awarded an exclusive GSM mobile network licence in 1998, which exclusivity expired in 2008. However it is still enjoying a monopoly status because the ICT statutes that allow competition in Swaziland are yet to be enacted.

Swazi MTN is a joint venture between the state owned SPTC (51%), MTN International (30%) and Swaziland Empowerment Limited (19%). Swazi MTN has built an extensive infrastructure that includes a network of over 200 base stations across the nation to provide connectivity in the ragged terrain of the country. This gives a geographic coverage of over 90% and population coverage of over 93%. Currently Swazi MTN operates on GSM, 2.5G technology and has recently also been granted a UMTS 3G license which has enriched the mobile services experience for users by providing higher speed access for data.

There are currently over 700 000 subscribers connected to the mobile network representing a teledensity of over 70%. Data connectivity is available via the GPRS, EDGE and 3G. Internet services are available to all subscribers to the network.

New developments include international roaming for pay-as-you-go (prepaid) customers which is available in the countries where sister MTN companies exist and a few others partners outside the MTN family, but of course the list will continue to grow with time. Another new development is the introduction of mobile money transfer (MMT). The major focus for network expansion is in the rural areas since there is almost total coverage in the urban areas, the goal being 100% coverage of the country.

2.2.3 Internet

The University of Swaziland is the sponsor of the country domain name and SISPA has been designated as the Administrator of the .sz domain name. There are currently 7 major ISPs including Swazi.net which is owned by SPTC, together they have an estimated customer base of over 25 000 users. Also over 26 % of mobile phone users access the Internet through their mobile phones. There were no licence obligations for ISPs prior to April 2008 as a

license was not required for operators. Currently, all commercial ISPs pay a license fee to the regulator.

For dial-up calls to any Internet Service Provider (ISP) connected to the national gateway, the rate is equivalent to the fixed line local call tariff regardless of location within the country. However, this level of discount still leaves ICT unaffordable to the majority of the population and levels of around 20% of these normal tariffs would be considered appropriate i.e. affordable.

All ISPs provide Internet services from SPTC backbone infrastructure and so the internet coverage goes as fast as the bandwidth SPTC can provide internationally. Current regulations prohibit wireless and satellite provision of Internet services by ISPs. An individual organization can have satellite link for own usage but not for resale. Some of the ISPs have satellite link for download only – that is allowable. Dial-up internet is available everywhere the landline and wireless network reach but ADSL and 3G broadband and leased lines are still concentrated around the major population centres.

2.2.4 Postal

Contrary to expectations, amidst the growth of email usage and mobile telephony, postal services are also growing. Post boxes are being added in all the major towns of the country. The post office is also engaged in diversifying its services to the consumer. Utility bills payments can be made in many post offices and they are also acting as money collecting agents for schools and other entities. SPTC is also initiating plans for the automation of the postal services.

2.2.5 Broadcasting

Radio and Television generally transmit high quality signals as received by the public. Both state owned broadcast houses (SBIS and STVA) have state of the art digital studios. Generous assessments put Swazi TV at 80 % coverage of the country and 70 % penetration. Radio transmission (SBIS) covers over 90 % of the country. However, with the help of Multichoice Africa, STVA is on satellite and in this manner there is 100% coverage of the country. But, the Satellite service is very expensive and unaffordable to many households. There, also, is a privately owned Christian radio station which broadcasts nationally on Frequency Modulation (FM) and internationally on Medium Wave and Short Wave. Its local coverage is about 75% and internationally it broadcasts to over 10 countries on the African continent.

The country has begun its path for the creation of a roadmap for the digital migration from analogue terrestrial television in line with the international deadline for analogue switchoff

set for mid June 2015. The country together with its counterparts in the SADC region has to meet a switch over deadline of December 2013.

To kick start the digital migration process, the country sought assistance from the ITU to assist it chart its own country specific migration programme. An expert was discharged by the ITU to come up with a scoping mission report on the roadmap towards terrestrial TV digital migration. A multisectoral task force has been formed by Cabinet and mandated to come up with a draft Digital Terrestrial Television Migration Roadmap.

2.4 Financial Services Sector

Banks in Swaziland have taken giant steps in ensuring that they include ICT in their operations to improve on efficiency and to harness the benefits of utilizing ICT. Commercial banks have installed automated teller machines (ATM) enabling clients to withdraw their money most efficiently.

As an example, the Standard Bank of Swaziland has 44 ATMs spread around the country. It has at least one ATM in every town in the country. ICT facilitated services offered by Standard Bank include International banking, Internet banking, Mobile banking, and new business.

The Banks in Swaziland also issue out credit and debit cards to clients with which to pay for goods and services and the money is then transferred electronically between bank accounts. This has placed a demand on many retailers to install speed points in their premises to accept payments by these cards.

2.5 The Hospitality Industry

The country's hotels and most lodges have good telephone systems. Terrestrial and satellite television is available in the rooms. The big hotels also have broadband internet (wired and Wi-Fi) available to resident clients.

As an example, the Swazi Sun Group collectively boast of 7 satellite dishes, 476 television sets for the provision of sports channels, kids and grownups entertainment as well as news channels. In addition to wired Internet connections they have 33 Wi-Fi access points strategically distributed throughout the hotel complexes and the management village. These make the Internet available in the rooms, conference centres, the business centre and the village everyday of the week. The services are availed through a 512 kb/s leased line from SPTC. This bandwidth is good enough to facilitate teleconferencing and video conferencing. An Alcatel PABX with a third party telephone management system ably handles all telephone extensions with accurate records of all calls made.

An ATM Cash point is also available at the Royal Swazi Sun and plans are underway for a Standard Bank branch to open at the hotel. Bookings can also be made online for room reservations at the hotel through their centrally managed Sun International website. Instant quotations are given during the booking.

All the big hotels accept payments made by the major international credit cards.

2.6 The Education Sector

The Ministry of Education headquarters is equipped with computers for all its senior staff and they are connected to the government network with Internet services provided by Government Computer Services (GCS). The Education Management Information System (EMIS) has a small network of its own and servers where statistics on schools are held.

A complete IT curriculum for colleges in the country was developed in 2005 and it is now a requirement of the ministry that all teacher training colleges offer an introductory IT course to all their students. The ministry has also managed to establish an IT inspectorate unit.

Primary Schools: About 6% (31)of public primary schools have some sort of computer laboratories. Computer numbers range from 3 to 50 per primary school. All the big private primary schools have adequately equipped computer laboratories. However, there is no standard curriculum from the ministry, so each school has to rely on own resourcefulness in this area.

Secondary and High Schools: Above 60% (146) of secondary schools in Swaziland have computer laboratories with an average of 15 computers each. However a majority are not networked and are not connected to the Internet. The ministry is still working on a curriculum to be followed by schools on IT subjects and policies to guide usage.

The Swaziland College of Technology (SCOT) offers introductory IT course to all students enrolled with them. All students and academic staff have access to the IT facilities in the college which comprise 310 PCs and servers. Out of these 130 are networked and but only 61 are on the internet. For a community of 1300 the People to computer ratio therefore is 4 to 1 but for internet access, the ratio is 21 to 1 in this community. For a modern academic institution this falls too far short.

The college offers 3 year diploma courses in Computer Science and in Electronic Engineering for further IT competence. About 25 students graduate per year in Computer Science and a similar number from Electrical and Electronic Engineering. A further 40 take Computer Science part time. The college has plans to integrate its computer networks and increase the internet connection to improve ICT access to its community, however, the challenge is in the lack of funds. The College has recently launched its website to make its

presence known far and wide. One notable weak point at the college is that it does not have a dedicated IT administrator to push the developments forward.

The University of Swaziland (UNISWA) offers degree courses in Computer Science and Electronic Engineering. For its community and its academic purposes, the university has an elaborate ICT infrastructure, connected by optic fibre, UTP cables as well as wireless at convenient points. There is a WAN consisting of 1100 PCs and servers distributed among the 3 campuses. The main gateway is connected by a 1.5Mbps leased line from SPTC and a backup of 320kbps from the Republic of South Africa (RSA). The other campuses are connected by 1Mbps leased lines from the main gateway. All the 4600 strong community has access to the facilities. Access to webmail for staff and students, online library catalogue, online journals and publications to which the university subscribes and an online academic discussion forum (through an e-learning application), are some of the services available to the university community. Their website is good. Plans are also afoot to increase the wireless access points and expand the online services. The institution has a fully fledged ICT administration unit.

Other Colleges

There are a number non state **private colleges** scattered around the country that offer IT courses in the major towns, however, the structure and quality of the courses are not monitored nor have they been evaluated by government.

Initiatives

ICT in Education initiatives according to a 2011 education report presented by the Minister of ICT include:

- Republic of China-Taiwan funded Computer Project in collaboration with the Ministry of Education (MoE) to supply high schools with IT equipment;
- ADB funded Prevocational Project to equip secondary schools with ICT equipment through Government's Computer Services Department;
- Japanese-funded Teacher Training Colleges ICT Curriculum Development.
- Other initiatives between education, the private sector and individuals include:
    - the Computer Education Trust (CET) which is providing ICT skills to teachers and learning resources and ICT equipment to schools;
    - Future Kids/teachers ICT Literacy initiative for schools[1].

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2.7 Utility Companies

Utility Companies appear to have fully embraced the idea of using ICTs in their internal operations though a bit slower on the customer services side.

The Swaziland Electricity Company

The Swaziland Electricity Company (**SEC)** has a huge modern communications infrastructure connecting different parts of the kingdom. They also have sophisticated SCADA systems for controlling and monitoring the generation as well as the transmission and distribution of power. Their website is good and informative, provides downloadable documents and online queries.

An email address is available for customer contact and a 24/7 toll free line for fault reporting, prepaid processing and general enquiries. Customers are able to pay bills online, or buy prepaid electricity by mobile money transfer.

The Swaziland Water Services Corporation (SWSC) which is yet another utility company, in addition to their administrative and reporting systems, also have SCADA systems used to monitor water levels in reservoirs and monitoring the distribution systems as well as the purity of the water. Meter readers are equipped with GPS controlled devices which will geographically locate meters and totally eliminate the possibilities of meter reading mix-up in neighbourhoods. These readings are downloaded to a GIS system which will link data with the rightful meter and customers billed correctly. The piping network information around the country is also stored in the GIS system.

The SWSC offers to its customers the following ICT Services:

1. Online bill payment
2. Email service for customer queries.
3. SMS facility for customer notifications on service interruptions
4. A 24/7 toll free line (landline only)
5. A good informative website

2.8 Meteorology and the Environment

The meteorology department has a modern and sophisticated system that includes Automatic and mobile weather observing systems, satellite ground receiving systems, automatic message switching systems as well as visualization systems. They have their own video

recording studio. They are also equipped with a mobile air quality monitoring system to help measure amounts of impurities in the air.

This department reaches out to the public through the national media; print and electronic, internet and email as well as telephone. Plans are on the table for putting up small electronic billboards in shopping centres and busy areas to improve information dissemination and enhance issuing of climate and weather related warnings.

2.9 Government Computer Services

The government has a computer services department (GCS) under the Ministry of ICT whose responsibility is to ensure the availability of government services through an effective government electronic communications infrastructure. One of the recent accomplishments is the linking of border posts to the government servers. This was done along with the issuance of computer readable travel documents and identity cards. The Computer Services Department seconds staff to the ministries as and when needed. Senior staff of the government including local government are accessible by e-mail in all the towns and cities.

The Government Computer Services Department (GCS) is currently designing an e-government strategy through the assistance of the Commonwealth Secretariat.

2.10 Health

In 2010, the Ministry of health commissioned SPTC to carry out a study on a project to network government hospitals, health centres and clinics for clinical purposes. Inclusive of terminal equipment and video conferencing facilities, the project had a price tag in the region of 50 million Emalangeni. In 2011, a pilot video conferencing system was installed between Mbabane Government Hospital and Matsanjeni Health Centre. Tests thereof were carried out successfully and now only the lack of funds stands in the way of the continued provision of this service. Of course, all the major hospitals are linked by the Government Computer Services network which runs the payroll and human resources matters. On this system, the Ministry of Health has added some servers for specific medical purposes like patient data mangagement, at a small scale. Other systems exist within the ministry but operate on localized levels to run specific programs like Malaria control, etc. The pharmacies of the different hospitals run ARV management systems, and again, as silos.

Evidently, a fully networked health management system for the country is needed, urgently. This is critical towards the treatment of HIV and all other diseases and towards extending reach to the rural areas rather than the patients having to travel long distances to where the doctor is stationed, in town. About 80% of the country's population resides in the rural or semi-urban areas.

Although the project has not gone ahead because of a lack of funding it shows that the Ministry is keeping digitalization in mind. An e-Health policy and plan would be very helpful here. There is a major hospital in each region and community clinics exist or are being built in different parts of the country; and improvements are constantly being made to the referral hospital in Mbabane. The grand idea is to link all these facilities in a wide area network (WAN) to enable data, resources and clinical expertise sharing in an effective and efficient manner. The project will include private hospitals as well for a nationwide ubiquitous healthcare system. Resources like the ICU are being shared between the government hospital and private hospitals through MOUs.

2.11 Skills

There is consensus among the industry leaders that there is a general shortage of ICT skills in the country. There are many factors contributing to this state of affairs. Chief among them, obviously, is education. The University of Swaziland produces in the region of 12 Computer Science graduates per year and SCOT about 25 diploma holders. In this front, however, the situation is expected to improve with the recent opening of the Limkokwing University which is, to a large extent, an IT and Multimedia university. It promises to produce more graduates per year than any of the existing tertiary institutions. Also in the pipeline is the establishment of a university in Mbabane, sponsored by Korean missionaries, which promises to produce a high caliber of health, engineering and IT professionals.

The country has very little, if at all, any engineering manufacturing, currently. So, for big IT projects, project owners tend to go turn-key because of warranty conditions and hence the contracts get awarded to foreign companies, leaving the locals with no involvement at all and so lose out on the invaluable experience they would otherwise have gained.

Another important factor is students who graduate from the institutions of higher learning are are hardly market ready, and have nowhere to practice, thus there is a general feeling that there should be greater cooperation between the institutions and industry.

3.0 Swaziland NICI Plan process highlights

3.1 ICT Task team

This implementation plan is the product of coordinated and sustained efforts of a Cabinet established multi-sector Committee (ICT Task Team) and stakeholders whose invaluable input initially led to the development and adoption of the NICI Policy in August 2006 and has now led to the development of the NICI Policy implementation plan 2012-2016 (NICI Plan 2016).

The committee members were drawn from:

- The Office of the Prime Minister
- Ministry of Tourism, Environment and Communications
- Ministry of Finance
- Ministry of Economic Planning and Development
- Ministry of Enterprise and Employment
- Ministry of Public Service and Information
- Ministry of Housing and Urban Development
- Ministry of Education
- The Federation of Employers and Chamber of Commerce
- The Association of Internet Service Providers
- Swaziland Posts and Telecommunications
- SwaziMTN
- Swaziland Broadcasting and Information Services
- Tibiyo
- Swaziland Investment Development Corporation
- Central Bank of Swaziland
- University of Swaziland
- NGO Association
- Association of Consumers

At the beginning of this task, the team confirmed and resolved that the policy approved in 2006 and its pillars were still relevant today and to go ahead with the implementation plan. The only change was the order of priority. The team further discussed that it was critical to have an enabling environment and infrastructure in order for ICTs to thrive. Even during sector related discussions almost all sectors had input related to legal, regulatory issues and infrastructure. Above all the concerns was the need for the independent regulator.

The adopted pillars of the policy are:

- Legal and Regulatory frameworks
- Environmental Management
- The Financial Services Sector
- Infrastructure development – Equal access for all .
- Education
- Media
- ICT Industry
- Human resource capacity
- Strategic ICT Leadership

The implementation plan addresses each pillar.

3.2 Emerging Issues and Concerns

During the policy and plan development processes several key sectors expressed some concerns which the policy and plan addresses. These issues and concerns entail the needs that are specific to that sector.

3.2.1 Broadcasting

The discussions on broadcasting yielded the following concerns and issues:

- Effective quality coverage of the country is not 100% for both Radio and Television, this means that some sections of the population are subjected to inherently noisy signals received
- and therefore a portion of the Swazi population is effectively not part of the information society as yet.
- The introduction of the satellite coverage by DSTV to be implemented cannot in itself be said to be the answer as a significant number of people will not be able to purchase the satellite decoders and accompanying satellite receiving equipment.
- There is a need to license some commercial and community broadcasters to diversify content.
- Swaziland is lagging behind other SADC member Countries in the roll out of Digital Terrestrial Television.

3.2.2 ISPs

ISPs stated:

- Improvements in the coverage of the country with fixed phone lines as well as ADSL and leased lines were needed.
- Improvements in the capacity of the Internet gateway and national backbone for international connectivity were needed.
- The process of demonopolising the market and the establishment of an independent Communications regulator needs to be accelerated so that service providers would have a choice of bandwidth providers based on good service.
- VoIP should be legalised and
- ISPs should be licensed to self provide via VSATs and to source their own bandwidth and not to solely rely on SPTC.

3.2.3 Utilities

For the Swaziland Electricity Company (SEC), the introduction of prepaid meters shows that there is a capability for data communications. Their concerns were as follows:

- As a power network SEC is allowed to operate a private communications network for its own use.
- SEC has the capability to also supply telecommunications but the existing laws only allow them to use the existing network for self provisioning.
- Technologies that allow for power-line communications exist
- Installation of optic fibre on electricity poles already exists but it is not used.
- There is a need for policies on infrastructure sharing

For the Swaziland Water Services Corporation (SWSC), communication is critical with regards to customer services.

- Noted that there are over 700,000 mobile customers versus 45000 fixed line and for savings they would like to use premicells on the PABX for least cost routing. This is illegal at this point in time.
-

3.2.4 Education

Statistics on primary schools with computers are indicative of the status quo in regard to ICT education, proliferation and use. Clearly the ICT knowledge or education building process is still at its infancy as far as primary school education is concerned. The stakeholders said:

- Although, 60% of secondary schools are fairly equipped with stand-alone computers, there is a grave shortage of qualified IT teachers.
- As of June 2012, the ministry could vouch for only 9 qualified IT teachers found in secondary schools around the country.
- The majority are privately employed by the schools with a variety of qualifications and earning widely varying wages.
- The ministry needs to quickly finalize the standardized IT curriculum for both primary and secondary schools.
- The cost of the Internet in the country, notwithstanding the discounted rates offered by some ISPs, are such that some schools have had to cancel connectivity after enjoying the fruits of technology for only a short time.

3.2.5 Hospitality Industry

In as much as the Royal Swazi Sun Group of hotels and other big hotels have good ICT facilities, only a few hotels in the country have their own locally managed websites and interactivity is limited. Prospective clients cannot get instant quotations and booking confirmation.

Some of the concerns of hotels in the country were as follows:

- The incumbent (SPTC) should introduce high technological automated data communication resources within a secure and safe environment. Complaints are that many a time there are instances of outages of internet connectivity experienced which are due to an unstable network infrastructure and working processes in place
- VSAT and VOIP technologies are available but realize that the current legal framework environment is not conducive to their use.
- The hospitality industry is image based, speed or bandwidth is critical especially for International tourism. Localisation of the booking and payment systems cannot be carried out until there is sufficient bandwidth..

3.2.6 Financial Sector

In as much as developments are unfolding in the financial sector through the use of ICT, it is recognized that

- there is a slow uptake of Internet banking and on-line transactions by the general public.
- This may be due in part to little publicity afforded the services and also the fact that domestic internet penetration is very slow.
- There is real need for all the banks to promote this service among clients.

Other factors that inhibit the rollout of ATMs in the rural areas include the following:-

- Low density of people in geographic area;
- Low disposable income for most rural communities.
- Expensive telecommunications infrastructure
-

When due considerations of the issues above are undertaken, it is observed;

- that the challenge is due to the fact that the country lacks a clear Universal Service/Access policy on communications infrastructure and, the rural folk tend to lose out.
- The loss includes people with disabilities who do not find ATMs that are equipped with the assistive technologies that would enable them to enjoy the resultant benefits.
- The loss due to language.

3.3 Policy and Plan development framework

Overall, Plan development framework entails the following: -

- Identifying specific ICT strategies for key pillars;
- Determining the programmes consistency with the policy and strategies;
- Developing action plans associated with the implementation programmes; and
- Measuring and monitoring progress and outcomes.

In order to realize the national ICT vision, a set of programmes and projects to implement during the course of the Plan have to be identified. The programmes and projects are broadly in line and consistent with the principles and objectives of the Vision 2022. Gender balance will be ensured so as to raise the level of awareness on the role, use, application and potential of ICT in gender empowerment and meeting specific developmental needs of women. This would lead to increased participation and empowerment opportunities for women in national development through ICTs. The same will apply for the youth who will continue to play a crucial role in linking Swaziland to the global Information Society.

3.4 The Implementation Plan

The NICI Implementation Plan 2012-2016 (NICI 2016) is an aggregation of sectoral plans which the Government will support through the national budgetary process. The Plan is flexible and will be updated if need be, during the 5 year implementation timeframe. In order to ensure the effective utilization of ICT and exploitation of its immense potential in the economic, social, commercial and scientific fields, a National ICT Task Force will guide in the updating, standardizing, implementing and monitoring of the ICT Policy and Implementation Plan.

The main objective of the Plan is to undertake a comprehensive exercise to implement the Policy along the following lines:

3.4.1 Reviewing and documenting the objectives associated with each pillar as enshrined in the Policy

Each of the priority areas has a set of associated objectives, the purpose of which is to achieve the following:

- To establish direct linkages between the Policy and the plan; and
- To drive the types of programmes and actions to be proposed in the plan to avoid the recommendation of programmes that may appear relevant but do not contribute in the implementation of the Policy.

3.4.2 Reviewing and documenting the programmes associated with each of the 9 pillars

This is the first of the two operational levels i.e. key initiatives/programmes which sets out how objectives will be implemented. In order to achieve each objective a set of programmes will be implemented for each pillar. For each programme, the following information is provided:

- Programme Title and Identifier e.g. HR/Pr1;
- Implementation Lead Agency;
- Policy-relevant goal;
- Programme specific goal;
- Programme Resource Requirements; and
- Monitoring, Evaluation and Reporting Mechanism.

3.4.3 Reviewing and documenting the actions/interventions relating to each programme

An *action* (second operational level) is a set of activities that need to happen when implementing a *programme*. Actions feed into the programme. These are a set of actual activities associated with the implementation of a programme also identifying links with the other programmes and prerequisites with respect to other issues which must be in place.

For each action, the following information is provided:

- Action Title and Identifier e.g. HR /Pr1/Act1;
- Resource Requirements;
- Timeframe and Key Performance Indicators (to measure the extent to which the action is being progressed);
- Implementation Lead Agency, key stakeholders, implementation partners and beneficiaries;
- Prerequisites/Links – with respect to other programmes that must be in place; and
- Monitoring and evaluation,

3.4.4 Documenting the resources requirements and a resource plan for the Plan implementation

A clear understanding of resource requirements is an important link between the strategy and its implementation and forms the basis upon which all elements of the strategy depend. A summary of resource requirements and a resource plan (sources of funding) for all the proposed programmes to be implemented will be presented.

3.4.5 Monitoring, Evaluation, Reporting and Feedback Mechanism

Monitoring and evaluation is a vital part of design and implementation and a condition for effectiveness. Developing M&E components of this Plan is a means to ensure that the strategies are explicit and realistic with regard to what they aim to achieve and that their implementation is regularly assessed and realigned to ensure the efficient use of scarce resources.

The WSIS Plan of Action emphasises the need for countries to incorporate within their respective national ICT for development plans, provisions for monitoring and evaluating the implementation of the plans with a view to measuring their impact and progress towards the development of the Information Society and economy.

The success of the implementation of this Plan will therefore, to a greater extent, depend on how the planned programme activities and outputs are monitored and evaluated. Periodic monitoring and evaluation of the Plan will be undertaken under the existing monitoring and evaluation framework. Sectors will be responsible for monitoring activities in their work plans and preparing progress reports. A methodological and organisational framework will be set-up to evaluate and to monitor Policy impact on economic growth, poverty reduction, ICT literacy, infrastructure development and any other relevant parameters. Periodic review of the Policy will be undertaken to match sector dynamism with national objectives. M&E of ICT policy impact will be a continuous process and requisite amendments will be effected according to the evaluation.

3.4.6 Institutional Framework

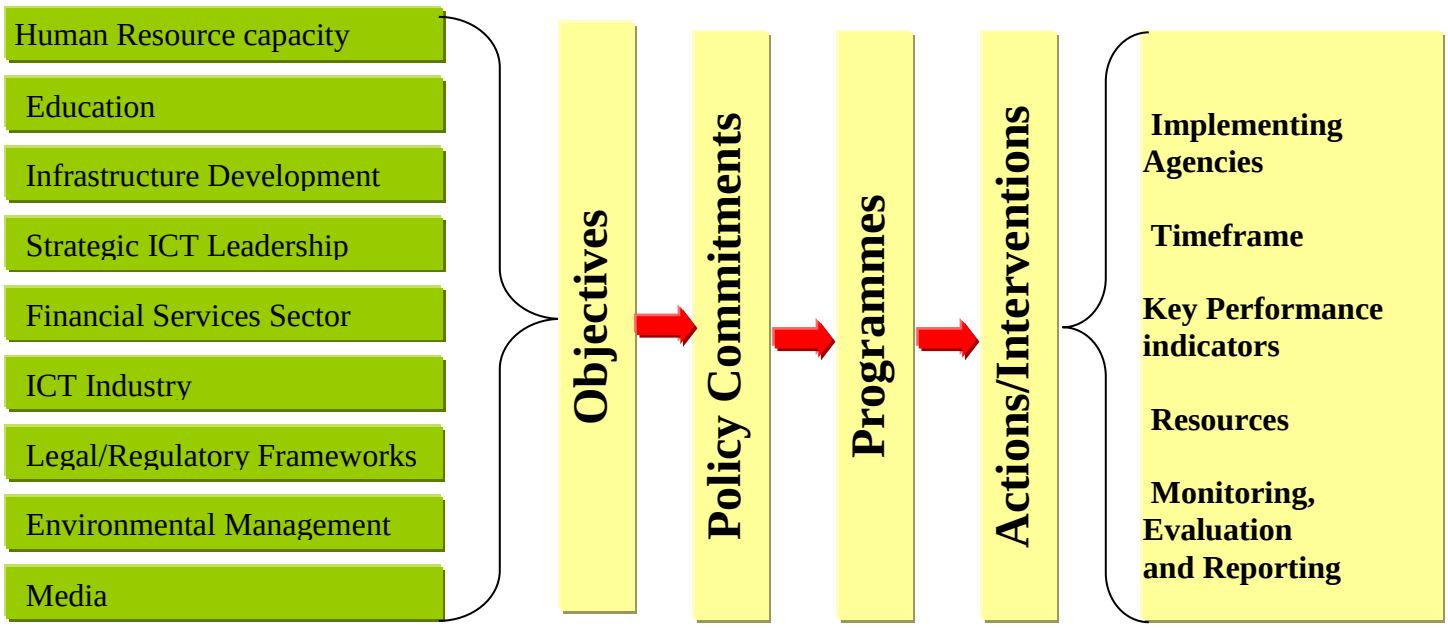
It is important therefore to identify institutional structures for the implementation of the ICT Policy. This will ensure that the various institutions have clear roles and that they complement each other in meeting the overall goal of supporting growth and development. The structural transformation of ICT institutions is essential in order to achieve the targets that have been set for the growth of ICT services in an investor-friendly environment conducive for rapid development. During the implementation process reforms will be undertaken within the ICT sector to ensure clear separation of policy, regulation and service delivery. Regular reviews of the various legislations and the policies will take into account the institutional requirements for implementing the various policy commitments where necessary.

The key objectives of the institutional framework will be to:

- Allocate clear roles and responsibilities to key role-players (Government, regulators, investors, operators and service providers, consumers/users);
- Promote an investor-friendly environment whilst creating a level playing field;
- Promote market growth; and
- Promote ICT diffusion, universal service and access.

Table 6: Structure of the Swaziland NICI Plan

Strategic Plan Priority Areas



4.0 Components of the Swaziland NICI Plan (2012-2016)

4.1 Legal and regulatory frameworks

The development and implementation of an enabling legal and regulatory framework and environment will support the development of the local ICT sector and ensure a competitive environment for the development and deployment of services. Inadequate regulation has been one of the limiting factors constraining the *e*-economy and Information Society development. The Government will play its role of promoting the development and the use of ICTs in the economy and society as well as the development of the information and knowledge economy supported and facilitated by appropriate legal provisions and legislation

.

The establishment of appropriate legal and regulatory frameworks and supply chains drives the success of developmental initiatives. The role of government is to provide a vision and strategy, within a legal and regulatory framework that will promote the development of the Information Society and to ensure that all sectors of society can benefit from it. This will also facilitate the creation of a competitive environment and a level playing field that not only encourages local and foreign investment in the ICT sector, but also eliminates entry barriers for new players.

Objectives:

- Create a transparent and predictable climate for the private sector to invest in the country;
- Create an environment for the development and growth of e-commerce; and
- Improve the regulation of the communications sector (including broadcasting and postal).

Government Policy Commitments:

- Take the necessary actions to facilitate the development and implementation of the legal, institutional and regulatory framework and structures to support the deployment, utilization and development of ICTs;
- Liberalize the telecommunications sector by opening up markets for competition thereby attracting private investment;
- Establish appropriate legal frameworks on cyber security and establish appropriate structures for managing the Internet in Swaziland;
- Improve the governance of ICTs by creating a regulatory body for the ICT industry and provide for an adequate dispute resolution mechanism for legal and regulatory issues;
- Encourage the formulation of harmonised regulatory policies in line with other countries in the region to enhance cooperation; and
- Regularly review policies and legislation to facilitate the introduction of new services and technological innovation.

Key Players:
Ministry of Information, Communications and Technology
Private Sector
Cabinet
Parliament
General Public

Legal and regulatory frameworks (LRF)					
Programme 1	***LRF/Pr 1:* Create a competitive environment in the communications industry**				
Implementation target groups	National				
Relevant Policy objectives	• Take the necessary actions to facilitate the development and implementation of the legal, institutional and regulatory framework and structures to support the deployment, utilization and development of ICTs; • Liberalize the telecommunications sector by opening up markets for competition thereby attracting private investment				
Programme specific goals	• Creation of a competitive environment and a level playing field that not only encourages local and foreign investment in the ICT sector, but eliminates entry barriers for new players; • To address anti-competitive behaviour reported in some of the sectors of the economy.				
Actions/Activities/Interventions					
Activity 1	***LFR/Pr1/Act1a* :Formulation and approval of the NICI Policy implementation plan**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoICT	End June 2012	Approved implementation Plan	Funding for validation workshops	Reporting; MoICT, Monitoring: UNECA, Head of government thro performance targets
	***LFR/Pr1/Act1b* :Institutionalise implementation, monitoring and evaluation structures - NICI Implementation plan**				
	MoICT	End March 2013	Implementation Sturctures Gazetted	Information workshops	Reporting; MoICT, Monitoring: UNECA, Head of government thro performance targets

Activity 2	***LRF/Pr 1/Act 2:*** **Enact the Swaziland Communications Commission, the Electronic Communications and Broadcasting Bills**				
	1.MICT (Directorate for Communications) 2.MoJ 3.Parliament	By end of Dec 2012	1.Bills drafted 2. Draft Bills passed by Cabinet 3. Bills passed by Parliament 4. Bills assented to and gazetted	1.Consultancy Services, 2.Funding 3.Draft bills	1.Reporting :MICT 2.Monitoring: funding agency & Head of Gov't through PMS
Activity 3	***LRF/Pr 1/Act 3*****: Operationalise the Swaziland Communications Commission Act to create an independent communications regulator (SCC)**				
	1.MICT 2.SPTC 3.STVA	By end of Dec 2013	1.Existence of an established Swaziland Communications Commission complete and functional	1.Swaziland Communications Commission Act. 2.Consultancy, 3. Support services	1.Reporting; MICT 2.Monitoring: Head of Govt
Activity 4	***LRF/Pr 1/Act 4:*** **Restructuring the Swaziland Posts and Telecommunications Corporation**				
	1. SPTC 2. MICT	Jan 2014	1.Valuation reports on each business 2. Two ring fenced businesses complete with asset registers	1.Funded by SPTC 2.Constultants	1.Reporting: MICT & SPTC 2.Monitoring:Head of Govt
Activity 5	***LRF/Pr 1/Act 5: Draft and enact the Swaziland Telecommunications Company, and Swaziland Postal Corporation bill to*** **separate the two business currently operating within SPTC this will allow for dissolving other relations in the windup**				
	1.SPTC 2.MICT 3.Parliament	By end of June 2014	1. Existence of a Swaziland Telecommunications CompanyAct 2. Existence of a Swaziland Postal	1.The SPTC Act 2.Consultants 3. Financial resources	1.Reporting: MICT 3.Monitoring:Head of Govt

			Corporation Act. 3. SPTC Act Abolished		
Activity 6	***LRF/Pr 1/Act 6:*** **Operationalise the Swaziland Telecommunications Company Act and the Swaziland Postal Corporation Act**				
	1.MICT 2.MoF 3. The Companies	By December 2014	1.Existance of Swaziland Telecommunications Company 2.Existance of Swaziland Postal Corporation	1.Statutes 2. Valuation reports 2.Constultants	1.Reporting: MICT & SPTC 2.Monitoring:Head of Govt
Activity 7	***LRF/Pr 1/Act 7: Develop and*** **Operationalise the privatisation policy**				
	Ministry of Finance (MoF)	By end of June 2015	Operational privatization policy in place	1.Funding 2.Lead consultants	1.Reporting: MoF 2.Monitoring; Head of Government
Activity 9	***LRF/Pr 1/Act 8:*** **Privatise the Swaziland Telecommunications Company**				
	1.MICT 2.MoF	By end of December 2015	1.Valuation report 2.Vesting date indicating the available of shares for sale 3. Existence of other shareholders besides Government-Form-J.	1.Operational Privatization policy 2.Funding 2.Lead consultants	1.Reporting: MoF 2.Monitoring; Head of Government

Programme 2	***LFR/Pr 2:* Create and Implement a National roadmap for the analogue to digital Migration of terrestrial TV by end of 2013.**				
Implementation target groups	National				
Relevant Policy objectives	• Create a transparent and predictable climate for the private sector to invest in the country; • Create an environment for the development and growth of e-commerce.				
Programme specific goals	• To develop a national policy and plan for the digital terrestrial television and make sure the broadcasting laws are in synch.				
Activity 1	***LRF/Pr 2/Act 1:* Undertake a scoping exercise and undertake a situational analysis of Swaziland to establish the readiness and status of Swaziland for Digital switchover from Analogue by 2013**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT (Director Communications)	By end of June 2012 (Work is in progress)	1 A report of the scoping mission adopted by Government.	1.Funding 2.Lead consultants	1.Reporting: Director Communications 2.Monitoring; P.S. MICT & Minister through reports to EXCO meetings.
Activity 2	***LFR/Pr 2/Act 2:* Synchronise legislation with technological developments for digital migration including key policy issues that will affect broadcasting and draft the migration policy**				
	MoICT (Director Communications)	By Dec. 2013	1.Single regulatory document addressing ICT developments and their effects on the media2.Draft Migration	1.Funding 2.Human resources	Reporting; MoICT Monitoring; head of Government thro Performance targeting

			Policy		
Activity 3	***LFR/Pr 2/Act 3:*** **Establish digital migration task force to drive the Digital Migration process.**				
	MICT (Director Communications)	June 2011	1. Formal Establishment by government of a national digital migration committee;	Funding	Reporting; Director Communications (MICT) Monitoring; P.S & Minister (MICT)
Activity 4	***LFR/Pr 2/Act 4: Develop the National Analogue to Digital TV Migration roadmap with a target to switchover by December 2013*** **and switch off analogueby July 2015**				
	1Task Force	December 2012	1. Completion of a Digital Migration policy document 2. Completion of implemention plan document	1.Funding 2. Human resources 3. Consultancy	Reporting; Director Communications (MICT) Monitoring; P.S & Minister (MICT)
Activity 5	***LFR/Pr 2/Act 5: Implement the National Analogue to Digital TV Migration roadmap with a target to switchover by December 2013*** **and switch off analogueby July 2015**				
	STVA and other broadcasters	December 2013	1. Commencement of Digital broadcast tests 2. Commencement of public education campaigns 3. National rollout of digital broadcast and reception equipment	1.Funding 2. Human resources 3. Consultancy	Reporting; Director Communications (MICT) Monitoring; P.S & Minister (MICT)

Programme 3	**LFR/Pr 3: Develop Communications Infrastructure regulations and National frequency Plan of Spectrum.**				
Implementation target groups	Regulator, Operators, Service Providers, Media Houses				
Relevant Policy objectives	Create an environment for the development and growth of e-commerce Improve the regulation of the communications sector (including broadcasting and postal).				
Programme specific goals	To develop regulations for Infrastructure sharing, collocation and a framework for service level agreements (SLA)				
Actions/Activities/Interventions					
Activity 1	***LFR/Pr 3/Act 1:*** **Draft Regulations for Infrastructure sharing and collocation in broadcasting, internet and telecommunications**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT (Director Communications) 2.Regulator	December 2013	1. Audit of transmission infrastructure around the country 2. Drafting of document with stakeholder input	1.Electronic Communications Act 2.Broadcasting Act 3.Task Teams 4. Funding	Reporting; MICT (Director Communications) Monitoring; MICT (PS & Minister) through EXCO meetings
Activity 2	***LFR/Pr 3/Act 2:*** **Undertake industry practices audit with the view to remove exclusivities and amend acts for opening the ICT Industry**				
	MoICT Regulator Stakeholders	By end of 2015	1.Completion of audit 2.Acts of Parliament with exclusivities	Financial Human resources	Reporting; MoICT Monitoring; Head of Government through performance targets

			reviewed		
Activity 3	***LFR/Pr 3/Act 3 :*** **Establishment of number portability, local loop unbundling policies and guidelines**				
	National Regulator	By end of 2013	Existing policy	Appointment of a National Regulator	Reporting- Regulator Monitoring -MICT and HOG
Activity 4	***LRF/Pr 3/Act 4: Draft National Radio Frequency Spectrum Plan***				
	1.MICT (Director Communications) 2. SCC	By end of December 2013	Commencement and completion of the plan document	1.Funding 2.Lead consultants	1.Reporting: Director Communications 2.Monitoring; P.S. MICT & Minister through reports and meetings

Programme 4	***LRF/Pr 4:* Create a multi-sector stakeholder group to manage the country level domain name**				
Implementation target groups	National				
Relevant Policy objectives	• Establish appropriate legal frameworks on cyber security and establish appropriate structures for managing the Internet in Swaziland; and • Regularly review policies and legislation to facilitate the introduction of new services and technological innovation.				
Programme specific goals	• Creation of an environment for the development and growth of *e*-commerce				
Actions/Activities/Interventions					
Activity 1	***LRF/Pr 4/Act 1*: Review current arrangements and Appoint a domain management Board**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT, 2.Swaziland Internet Services Provider Association 3.ISPs	By end of December 2013	1.Existence of a domain name management board 2. A report on the review of current arrangement.	1.Funding, 2.Offices, 3.Staff	Reporting; The regulator Monitoring; MICT
Activity 2	**LFR/Pr 4/Act 2: Establish guidelines for acquisition and and management of country level domain names**				
	Established Board	By end of 2014	Existence of guidelines	Human resources	Reporting: Director Communications.MICT Monitoring: PS MICT
Activity 3	**LFR/Pr 4/Act 3: Initiative to build the necessary infrastructure**				
	Established Board	By end of December 2024	Infrastructure exists	1.Financial Resources 2.Human Resources	Reporting: Director Communications.MICT

					Monitoring: PS MICT:

Programme 5	***LRF/Pr 5:* Facilitate electronic transactions by means of reliable electronic communications supported by appropriate legislation - Electronic Payments and Transaction (EPT) and Cyber Security Bills**				
Implementation target groups	National				
Relevant Policy objectives	• Regularly review policies and legislation to facilitate the introduction of new services and technological innovation. • Take the necessary actions to facilitate the development and implementation of the legal, institutional and regulatory framework and structures to support the deployment, utilization and development of ICTs				
Programme specific goals	• Promote the development of the legal and business infrastructure necessary to implement secure electronic commerce; • Eliminate barriers to electronic commerce resulting from uncertainties over writing and signature requirements; • Promote public confidence in the integrity and reliability of electronic communications and electronic transactions; and Establish uniformity of legal rules and standards regarding the authentication and integrity of electronic communications.				
Actions/Activities/Interventions					
Activity 1	***LRF/Pr 5/Act 1:* Carry out a due diligence audit of all the laws or sections of laws that may be affected by the EPT and Cyber Security Bills**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT 2.MoF 3.MoC 4.Central Bank	By end of December 2013	Due diligence concluded	1. Funding 2. Consultancy services	1.Reporting : MICT,MoF, MoC, Central Bank 2. Monitoring: Head of Government
Activity 2	***LRF/Pr 5/Act 2:* Review of current policies & legislation relating to Electronic payment transactions and Cyber Security**				
	1. MoF 2. MICT 3. MoC	By end of June 2014	1. A review report of current policies and legislation	1.Funding 2. Consultng services	Reporting; MICT, MoF and MoC Monitoring; Head of Government

Activity 3	***LRF/Pr 5/Act 3:*** **Draft EPT and Cyber Security bill**				
	1.MoF 2. MICT 3.2. Central Bank 4.. MoJCD	By end of March 2014	1,A draft Bill from the Attorney General	1. Funding 2.Consulting Service	Reporting; MICT, MoF, Central Bank & MoJCD Monitoring; Head of Government through PMS,
Activity 4	***LRF/Pr 5/Act 4:*** **Submit Bill to Cabinet and Parliament respectively**				
	1.MoC, 2.MoJCD	By end of June 2014	1.Act of Parliament	N/A	Reporting: MICT &MoJCD Monitoring: Head of Government through PMS
Activity 5	***LRF/Pr 5/Act 5:*** **Train law enforcement agencies, magistrates, prosecutors and judges on EPT and Cyber Security Acts**				
	1.MoJCD 2.MICT 3.Central Bank	By end December 2014		1.Funding 2.Consultants	Reporting; MoJCD, MICT& Central Bank Monitoring; Head of Government through Ministerial quarterly reports

4.2 Environmental Management

Government recognises that environmental management is necessary for sustainable development and an ecological balance has to be maintained. Both the public and private sectors have to accommodate environmental considerations in their policies, strategies and programmes. Strong coordination mechanisms are required if compliance procedures are to be effectively monitored and to achieve this, capacity building and education are critical. Information exchange will also play a vital role. Some of the challenges include, recognising the link between environment management and sustainable development and ensuring that environmental policy, regulation and legislation are in line with development.

Objectives:

- Fully integrate environmental management and development planning;
- Initiate a collaborative coherent program approach with public and private sectors, each contributing in their area of expertise;
- Establish a national environmental mechanism for ensuring that the environmental priorities of national planning are observed and sought after;
- Coordinate, monitor and control environmental protection measures;
- Carry out specific research and studies to develop methodologies and tools for the implementation of sustainable development; and
- Develop the environmental data themes of the NSDI to support planning, implementation, control and evaluation of environmental programmes.

Government Policy Commitments:

- Encourage the use of ICT for effective monitoring, resource management and mitigation of environmental risks;
- Support the use of ICT to increase access to, and awareness of, sustainable development strategies in areas such as agriculture, sanitation and water management, tourism, etc;
- Encourage the use of ICT for greater transparency and monitoring of environmental abuses/enforcement of environmental regulations;
- Support the use of ICT to facilitate knowledge exchange and networking among policy makers, practitioners and advocacy groups;
- Support the initiation of actions and implementation of projects and programmes for sustainable production and consumption and the environmentally safe disposal and recycling of discarded hardware and components used in ICT;
- Support the development of updated websites particularly for the critical stakeholders; and
- Support the development of core environmental data sets.

Key Players: Ministry of Environment and Tourism**,** Ministry of Information, Communications and Technology**,** Private Sector**,** Cabinet**,** Parliament**,** General Public

Environmental Management (EM)					
Programme 1	***EM/Pr 1*: Establish initiatives and policies in place for electronic equipment disposal**				
Implementation target groups	National				
Relevant Policy objectives	• Support the initiation of actions and implementation of projects and programmes for sustainable production and consumption and the environmentally safe disposal and recycling of discarded hardware and components used in ICT; • Encourage the use of ICT for effective monitoring, resource management and mitigation of environmental risks; and Encourage the use of ICT for greater transparency and monitoring of environmental abuses/enforcement of environmental regulations.				
Programme specific goals	• Ensuring that environmental policy, regulation and legislation is in line with development; • Coordinating, monitoring and controlling environmental protection measures; and • Developing anti-dumping policies and standards;				
Actions/Activities/Interventions					
Activity 1	***EM/Pr 1/Act 1:* Undertake an inventory analysis to ascertain how much electronic equipment is redundant in the country**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.SEA, 2.MICT 3.MTEA	By end of June 2013	Study report	1.Budgets, 2. Human resources with required skills, 3.Consultancy	Reporting : SEA Monitoring; MICT & Head of Government through quarterly ministerial reports.
Activity 2	***EM/Pr 1/Act 2:* Develop anti-dumping policies and standards**				
	1.SEA, 2.SWASA	By end of 2014	1.Policy document 2.Standards document	1.Funding, 2.Consultants	Reporting; MoTE, Monitoring; MICT
Activity 3	***EM/Pr 1/Act 3:* Establish guidelines for disposal**				
	1.SEA, 2.SWASA	By end of December 2015	1.Guidelines; 2.Designated dumping sites	1.Human resources with skills 2.Funding 3,Consultancy	Reporting; SEA, SWASA Monitoring;Head of Government through quarterly ministerial; reports

Programme 2	***EM/Pr 2*: Institute sustainable programmes to create awareness/attitude change nationally**				
Implementation target groups	National				
Relevant Policy objectives	• Support the use of ICT to facilitate knowledge exchange and networking among policy makers, practitioners and advocacy groups; • Support the use of ICT to increase access to, and awareness of, sustainable development strategies; and • Support the use of ICT to increase access to, and awareness of, sustainable development strategies in areas such as agriculture, sanitation and water management, tourism, etc.				
Programme specific goals	• To enable the recognition of the link between environment management and sustainable development; and • To enhance cooperation among stakeholders in a bid to focus priorities.				
Actions/Activities/Interventions					
Activity 1	***EM/Pr 2/Act 1:* Build connectivity and websites for knowledge sharing and networking among the key stakeholders**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT, 2. SEA, 3.SWASA	By end of 2014	Relevant websites developed	1.Funding, 2.Human Resource, 3.Consultancies	Reporting;MICT, MoTE Monitoring; Head of Government thro, PMS
Activity 2	**EM/Pr 2/Act 2: Develop radio, television and other media content on use of ICT for climate change awareness campaigns and sustainable development**				
	SEA	By 2015	Television programmes Radio programmes Media presence	1. Financial Resources 2. Human resources	Reporting:MoTE Monitoring: Head of Government
Activity 3	**EM/Pr 2/Act 3: Develop programs and materials for educational institutions on environmentally safe use of ICTs**				
	SEA MTEA	By end of 2015	1.School programs and meaterils 2.College materials and programs	1.Financial Resources 2.Human Resources	Reporting:MoTE Monitoring: Head of Government

Programme 3	***EM/Pr 3*: Initiate a collaborative coherent program approach with public and private sectors to enable them to accommodate environmental considerations in their policies, strategies and programmes**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage the use of ICT for greater transparency and monitoring of environmental abuses/enforcement of environmental regulations; and • Support the initiation of actions and implementation of projects and programmes for sustainable production and consumption and the environmentally safe disposal and recycling of discarded hardware and components used in ICT.				
Programme specific goals	• Ensuring that environmental policy, regulation and legislation is in line with development; • Facilitating access to finance for the various programmes; • Establishing strong coordination mechanisms between the public and private sectors; and • To ensure that both the public and private sectors embrace environmental compliance procedures in their activities.				
Actions/Activities/Interventions					
Activity 1	***EM/Pr 3/Act 1*: Establish a national environmental mechanism for ensuring that environmental priorities of national planning are observed**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	SEA	**By end of 2014**	**Compliance to environmental priorities**	**1.Funding 2.Human resources**	**Reporting; MICT, MoTE Monitoring; Head of Government through PMS.**
Activity 2	***EM/Pr 3/Act 2*: Fully integrate environmental management and development planning**				
	1.SEA, 2.MoEPD	By end of 2014	Both the public and private sector embracing environmental compliance procedures in their activities	1.Funding	Reporting; SEA, MoTE Monitoring; Head of Government through PMS

Programme 4	***EM/Pr 4*: Initiate specific research and studies to develop methodologies and tools for the implementation of sustainable development in mitigating environmental issues and green economy management**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage the use of ICT for effective monitoring, resource management and mitigation of environmental risks; and • Support the development of core environmental data sets.				
Programme specific goals	• Establishing credible benchmarks/indicators for sustainable development; and • Building and retaining capacity in environmental management and the development of core environmental themes of the NSDI.				
Actions/Activities/Interventions					
Activity 1	***EM/Pr 4/Act 1:* Develop the environmental data themes of the NSDI to support planning, implementation, control and evaluation of environmental programmes**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.Surveyor General, 2.Uniswa, 3.MNRE, 4.SEA	By end of December 2013	Availability of data sets,	1.Funding, Consultants , 2.Human Resource,	Reporting:MNRE, Survey General Monitoring; Head of Government through PMS
Activity 2	**EM/Pr 4/Act 2: Develop studies and ICT tools for monitoring climate change**				
	SEA/Meteorology	By end of 2014	Availability and use of tools	1.Funding 2. Human Resources	Reporting: MNRE Monitoring: HOG

4.3 The Financial Services Sector

Indications are that a large number of the Swazi population is currently "unbanked". Financial services, in particular banking, seem rather too far and not easily accessible to the people, especially in the rural or semi-urban areas. The country generally lags behind in terms of developing and/or adopting new ICT systems and technologies aimed at improving the delivery of financial products to the public. There is currently no focused drive to explore, exploit and share in the development or acquisition of expensive technologies and infrastructure necessary for a wide and more efficient delivery of financial products and services. Satellite banking e.g. could address some of the access difficulties e.g. rural farmers, rural SMME's etc encounter.
There is currently no legislation specifically addressing *e*-commerce, *e*-trade, *e*-banking, etc, security and digital signatures. It is necessary that such legislation is developed to promote the use of technology in the *e* space.

Objectives:

- To ensure that Swaziland has a stable and well developed financial services sector with adequate capacity, systems and technologies for the effective and efficient delivery of financial services and products;
- To ensure that the financial sector operates in a coherent and well managed environment;
- To ensure that electronic payments systems are introduced and have key functionality for the security and certainty necessary for electronic transactions;
- To ensure that the financial services sector avails access to affordable finance and credit, with equal access to both men and women;
- To ensure that the goods and services the institutions offer cater for the disabled and illiterate among others; and
- Being ICT intensive, the sector is to ensure ICT skills development for all their staff regardless of rank.

Government Policy Commitments:

- Encourage the financial sector to pursue a policy of expediting the development and adoption of new systems and technologies aimed at improving the delivery of financial products and services and to ensure that more products and services are offered using the same in a manner that is cost effective for the financial institutions and customers;
- Encourage the financial services sector to develop mechanisms to share in the development, acquisition and deployment of expensive technologies and infrastructure (for example ATMs, satellite banks, clearing and payment systems) necessary for a wider and more efficient delivery of financial products and services;

- Encourage every institution in the financial services sector to fully ascribe to, adopt and practice best practices and ICT Governance to ensure the proper management of the ICT infrastructure, security of customer information, and good and tested Disaster Recovery Plans (DRP) to inspire confidence in the financial sector and a good rating for the country as a whole;
- Encourage the financial services sector to also continuously seek ways of exploiting and using technology to broaden its reach to the public, in particular the so- called "unbanked" members of society;
- Encourage that global trends and developments in the "*e"* space be closely monitored to ensure that Swaziland does not fall far behind in the development and use of technologies in the *"e"* space (for example *e*-banking, *e*-cards, *e*-money, *e*-commerce, etc). The modernization of the clearing and payment system shall be pursued more aggressively to ensure easy and fast flow of funds and capital, whilst reducing the inherent risks;
- Encourage the adoption of systems and technologies to make the products and services, rates and charges of different financial institutions transparent thus providing for a more competitive environment and helping customers make more informed decisions;
- Encourage the financial services to develop policies to ensure that as much as possible, all technologies and facilities are accommodative of the illiterate and disabled members of society; particularly in terms of language used and general ergonomics;

- Fast–track the enactment of Electronic Communications and Transactions Bill (ECTB, Cyber Law);
- Encourage the sector to provide access to affordable finance and credit to both men and women ICT entrepreneurs;
- Encourage the financial services sector, as ICT intensive, to provide niche opportunities local enterprises especially the SMMEs; and
- Encourage the sector to provide ICT skills development to all their employees regardless of rank.

Key Players:
Ministry of ICT
Ministry of finance
ICT Regulator
Central Bank(Regulator)
Financial Sector
Banking
Insurance institutions

The Financial Services Sector (FS)					
Programme 1	***FS/Pr 1:*** **Initiatives by financial institutions that promote the use of ICT by the public and the private sector**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage the financial sector to pursue a policy of expediting the development and adoption of new systems and technologies aimed at improving the delivery of financial products and services; • Encourage the financial services sector to also continuously seek ways of exploiting and using technology to broaden its reach to the public, in particular the "unbanked" members of society; and • Fast–track the enactment of Electronic Communications and Transactions Bill (ECTB, Cyber Law).				
Programme specific goals	• To ensure that electronic payments systems are introduced and have key functionality for the security and certainty necessary for electronic transactions; • To ensure that Swaziland has a stable and well developed financial services sector with adequate capacity, systems and technologies for the effective and efficient delivery of financial services and products;				
Actions/Activities/Interventions					
Activity 1	***FS/Pr 1/Act 1:*** **All financial institutions to reduce average costs per electronic transaction by 25%**				
	Central Bank of Swaziland (CBS)	By June, 2013	Reduced costs	business will	Reporting; Financial Institutions Monitoring; Central Bank
Activity 2	***FS/Pr 1/Act 2:*** **To have at least two local (Swazi) credit and debit cards**				
	CBS	By end of 2013	Circulation of local credit and debit cards	Infrastructure	Reporting; Financial institutions Monitoring; CBS
Activity 3	***FS/Pr 1/Act 3:*** **Development of websites and delivery of most services via electronic means**				
	Financial Institutions	By end of 2013	Websites and web based transactions	Human resources.	Reporting: Financial Institutions Monitoring; CBS, SCC
Activity 4	***FS/Pr 1/Act 4:*** **To operationalize a local inter-bank ATM and point of sale/switch and facilitate mobile banking**				
	CBS	By end of 2014	ATM's and Point of sale Terminal	Human resources and business case	Reporting; Banks Monitoring; CBS

Programme 2	***FS/Pr 2:*** **Introduce initiative that promote local SMMEs participation in the ICT value chain**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage the financial services sector, as ICT intensive, to provide niche opportunities local enterprises especially the SMMEs; and • Encourage the sector to provide access to affordable finance and credit to both men and women ICT entrepreneurs.				
Programme specific goals	• To ensure that the financial services sector avails access to affordable finance and credit, with equal access to both men and women.				
Actions/Activities/Interventions					
Activity 1	***FS/Pr 2/Act 1:*** **Institute programmes that promote local SMMEs by ensuring that they acquire at least 30% stake in all ICT procurement ventures by local financial institutions**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.Swaziland Revenue Authority 2.Central Bank-Regulation 3.Banks and other financial institutions, 2Operators and.ISPs 3.SEDCO	By end of 2013	Locally supplied solutions	1.Experts from the vendors	Reporting: Central Bank , SRA & SEDCO Monitoring; MoC
Activity 2	**FS/Pr 2/Act 2: Establish initiatives that promote ICT entrepreneurship and provide funds to ICT start-up**				
	1.CBS 2.ICT Training Institutions 3.Ministry of Commerce	By December 2014	1.ICT entrepreneurship programs 2.ICT Startup fund	1. Financial resources	Reporting: MoF Monitoring: MoC

Programme 3	***FS/Pr 3:*** **Develop and implement ICT Governance and cyber security policies and infrastructures that ensure trust.**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage every institution in the financial services sector to fully ascribe to, adopt and practice best practices and ICT Governance to ensure the proper management of the ICT infrastructure, security of customer information, and good and tested Disaster Recovery Plans (DRP) to inspire confidence in the financial sector and a good rating for the country as a whole; and • Encourage the adoption of systems and technologies to make the products and services, rates and charges of different financial institutions transparent thus providing for a more competitive environment and helping customers make more informed decisions.				
Programme specific goals	• The financial sector to adopt best/good ICT practices and ICT Governance to inspire confidence in the sector				
Actions/Activities/Interventions					
Activity 1	***FS/Pr 3/Act 1:*** **All financial institutions to fully comply with national ICTand cyber security, data protection and eCommerce laws, policies and guidelines**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.Central Bank Swaziland (CBS) 2.Financial Institutions	By end of 2013	I. Information Systems Policy guidelines for financial institutions 2.Compliance	1.ICT/Corporate Governance Consultants 2.Cyber space security experts	Reporting; Financial Institutions Monitoring;CBS, MoF
Activity 2	**FS/Pr 3/Act 2: Financial Institutions to establish and grow inhouse security protocols and promote international anti fraud best practices among staff**				
	1.Financial institutions 2.CBS	By End of December 2015	Mechanism in place	1.Human resources 2. Financial resources 3.Infrastructure	Reporting: CBS Monitoring: MoF

Programme 4	***FS/Pr 4:* To encourage financial institutions to embrace 'access for all' policies to their services and products**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage the financial sector to pursue a policy of expediting the development and adoption of new systems and technologies aimed at improving the delivery of financial products and services; • Encourage the financial services sector to also continuously seek ways of exploiting and using technology to broaden its reach to the public, in particular the "unbanked" members of society; and • To ensure that the goods and services the institutions offer cater for the disabled and illiterate among others.				
Programme specific goals	• To ensure that the disabled and illiterate members of society have access to financial services • To ensure that rural populations also access financial services • To ensure that Swaziland has a stable and well developed financial services sector with adequate capacity, systems and technologies for the effective and efficient delivery of financial services and products;				
Actions/Activities/Interventions					
Activity 1	***FS/Pr 4/Act 1:* Put in place mechanisms for banks to explore ways and means to have ATMs that are accessible to wheelchair users**				
	1.Central Bank 2.Financial Institutions 3. MoF 4.DPM's Office	By end of 2013	Wheelchair accessible ATMs around the country	Infrastructure	Reporting; Financial Institutions Monitoring; Central Bank
Activity 2	***FS/Pr 4/Act 2:* Draft frameworks to encourage banks explore possibilities to have ATMs that have instructions in the local language and some equipped with voice assistance for equal access for all**				

	1.CBS 2.Financial Institutions 3. MoF 4. Parliament	By end of 2013	ATMs with SiSwati instructions ATMs with voice to guide the illiterate	Infrastructure	Reporting; Financial institutions Monitoring; CBS
Activity 3	***FS/Pr 4/Act 3:*** **Draft guidelines for banks to explore means to install ATMs with instructions in Braille or screens with big font to help the visually impaired**				
	1.Financial Institutions 2.CBS 3.MoF 4.DPM's Office	By end of 2013	ATMs with Braille instructions ATMs with big font	Infrastructure Expertise	Reporting: Financial Institutions Monitoring; CBS, SCC
Activity 4	***FS/Pr 4/Act 4:*** **Incentivize banks to expand their presence into rural areas by establishing satellite banks or standalone ATMs**				
	1.Banks 2. CBS 3. MoF 4. Parliament	By end of 2014	Satellite banks and ATMs in rural areas	1.Infrastructure	Reporting; Banks Monitoring; CBS

4.4 Infrastructure development – Equal access for all

Information and communication infrastructure is an essential foundation for an inclusive Information Society. The prerequisite for the creation of an information-based economic structure is the existence of an efficient information infrastructure and services ICT diffusion is often limited to urban areas, thus disadvantaging the 70 percent of the population in the rural areas. Although the basic infrastructure exists, affordable and equitable access remains a critical issue for economic empowerment. There is also a need to address the internal digital divide between rural and urban, man and woman, boy and girl, able and disabled. The Government will ensure the development and implementation of policies that create a favourable climate for stability, predictability and fair competition in order to attract private investment for ICT infrastructure development and meeting of universal service obligations.

Objectives:

- To deploy a universal, ubiquitous, equitable, affordable and reliable ICT infrastructure;
- To utilise broadband and other innovative technologies for service provision whilst ensuring compatibility and interoperability;
- To develop a National Spatial Data Infrastructure (NSDI);
- To ensure that ICT infrastructure meets the needs of the disabled persons;
- To enforce the responsible dissemination of content via the Internet;
- To foster an environment for stability and fair play at all levels in order to attract private sector investment in ICT infrastructure development; and
- To ensure that all licensed service providers contribute to meet universal service obligations.

Government Policy Commitments:

- Accelerate sector reforms to separate functions - policy, regulation and operations;
- Review the exclusivity timeframes in basic services with a view to accelerating the liberalization of all services;
- Facilitate the creation of a universal access fund to which all operators will contribute;
- Facilitate the building of a state of the art ICT infrastructure premised on broadband;
- Facilitate the provision of connectivity to Tinkundla, schools, health institutions, community centres etc to ensure efficient and cost effective delivery services;
- Encourage and support coordinated delivery of communications, roads, electricity, pipeline, housing infrastructure etc to reduce costs;
- Encourage and support local assemble of some of the basic ICT equipment;
- Facilitate the importation of ICT equipment and services through duty reduction, tax breaks, incentives etc;
- Encourage Internet Service Providers ensure that delivered content protects the violation of human rights especially women and children against on-line sexual exploitation which is also culturally inappropriate for society e.g. the youth;;
- Fast track the implementation of the recommendations of the UNDP *e*-government study;

- Setup a roadmap into the implementation of e-governance and
- Facilitate the conclusion of a MoU between the Competition and National Regulatory Authorities (anti-competitive practices in a liberalised sector).

Key Players:

- Government taking the lead in collaboration with educational institutions,
- the private sector,
- civil society etc.

Infrastructure development – Equal access for all (ID)					
Programme 1	**ID/Pr 1: Establish initiatives that increase the fixed line teledensity from 4-10.**				
Implementation target groups	National				
Relevant Policy objectives	• Facilitate the building of a state of the art ICT infrastructure premised on broadband; • Facilitate the creation of a universal access fund to which all operators will contribute; • Mobilising investment in the development of ICT infrastructure and services.				
Programme specific goals	• To deploy a universal, ubiquitous, equitable, affordable and reliable ICT infrastructure; • To utilise broadband and other innovative technologies for service provision whilst ensuring compatibility and interoperability; • To foster an environment for stability and fair play at all levels in order to attract private sector investment in ICT infrastructure development; and • To ensure that all players contribute to meet universal service obligations.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 1/Act 1*: Expand network capacities and coverage using license obligations**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MTN, SPTC, private sector, Gov, regulator	ongoing	1.Number of lines per 100 2.Increase in geographical coverage	1.Funding 2. Human resources 3. Capacity to undertake projects	Reporting; MTN, SPTC,Private Sector, GCS, Regulator Monitoring: MICT
Activity 2	***ID/Pr 1/Act 2*: Establish Universal Services/Access (US/A) Policy and review the fund and management system**				
	MICT (Dir of Commmunications)	End of December 2013	1.Universal Services/Access Policy document.	1. Funding 2. Consultancy services 3. Regulator	Reporting; Dir. Communications Monitoring; Principal Secretary (MICT), Minister (MICT)
Activity 3	**ID/Pr 1/Act 3: Operationalise the US/A policy including institutionalization of US/A Fund**				
	MICT (Dir. Communications)	End December 2014	Universal Services / Access Fund Management (USAF)	1. Financial Resources 2.Human Resources	Reporting: MICT Monitoring : HOG

Programme 2	***ID/Pr 2:* Initiatives to connect the 55 Tinkundla to the Internet and to parliament**				
Implementation target groups	National				
Relevant Policy objectives	• Facilitate the building of a state of the art ICT infrastructure premised on broadband; • Facilitate the provision of connectivity to Tinkundla, schools, health institutions, community centres etc to ensure efficient and cost effective delivery services; and •				
Programme specific goals	• To utilise broadband and other innovative technologies for service provision whilst ensuring compatibility and interoperability; and • To promote the responsible dissemination of content via the Internet.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 2/Act 1:* Development of strategy for connecting the tinkhundla centres with Parliament and Government ministries**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MoTDev, 2.Government Computer Services	By end of June 2013	Strategic plan document	1. Financial 2. Human Resources	Reporting; Committee spearheaded by MoE, MoICT, MoTdev & Private sector Monitoring: Head of Government through Quarterly reports
Activity 2	***ID/Pr 2/Act 2: Implement strategy and* synchronise activities with National Physical Development Planning**				
	MoTdev	By end of 2013	1. Tinkhudla connectivity 2. Coordintation meetings	1.Financial 2. Human resources	Reporting: MoICT (Dir. Communications & MoE Monitoring; MICT P.S. and head of Government
Activity 3	***ID/Pr 2/Act 3:* Explore innovative sources of funding for connectivity programs**				
	1.MoTDev 2.MoF	2012 - 2016	1.Availabity of funds 2.Report	Human Resources	Reporting; MoICT & MoF Monitoring; Head of Government through performance reports

Programme 3	***ID/Pr 3:*** **Develop initiatives to set up at least 100 multimedia community communication centres(CCC) by 2016**				
Implementation target groups	National				
Relevant Policy objectives	• To provide access information to the population that does not own or cannot afford equipment in communities • To facilitate the provision of connectivity to Tinkundla, schools, health institutions, community centres etc to ensure efficient and cost effective delivery services; and • To facilitate ICT awareness and education to communities • To encourage and support coordinated delivery of communications, roads, electricity, pipeline, housing infrastructure etc to reduce costs.				
Programme specific goals	• To address the internal digital divide between rural and urban, man and woman, boy and girl, able and disabled; and • To facilitate service provision in rural and unserved areas.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr.3/Act 1:*** **Identify communities and create implementation strategy and sustainable business models for centres and synchronise with national development planning and USAF**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1MICT 2.MoTink 3.Private Sector 4. Operators and ISPs	By end 2013	1.Implementation strategy 2.Existence of centres	1.Funding, 2.Skilled human resources	Reporting: MoICT & MoTink Monitoring: head of Government

Activity 2	***ID/PR.3/Act 2:*** **Promote entrepreneurship and raise awareness on the business opportunities in the development of the CCC and ICT in general**				
	1.MICT 2.MoC 3SEDCO 4.Private Sector Tech	By the end of 2014	1. Increase SMEs in the ICT sector	1. Human Resources 2.Funding	Reporting ; MoC with SEDCO Monitoring : Head of Government
Activity 3	***ID/PR.3/Act 3:*** **Mobilise resources and ensure participation of women and the physically disabled**				
	1.MICT 2.MoF 2.SEDCO 3.Private Sector	ongoing	Availability of funding through Banks.	1.Human resources	Reporting: MoF, SEDCO, Private sector Monitoring: Head of Government through Quarterly reports
Activity 4	**ID/Pr 3/Act 4: Implement Strategy for Community Communication Centres**				
	MICT	Start by June 2014	Increase in the number of community communications centres	Financial resources Human resources	Reporting: MICT Monitoring : HOG
Activity 5	**ID/Pr 3/Act 4: Ensure training for operators and include facilitation of training as part of the business model**				
	MICT	Start by June 2014	Trained operators, Training available at CCCs	Human resources Financial resources	Reporting:MICT Monitoring HOD

Programme 4	***ID/Pr 4:* Expand both the national and international broadband backbone**				
Implementation target groups	National				
Relevant Policy objectives	• Facilitate the building of a state of the art ICT infrastructure premised on broadband; and • Accelerate sector reforms to separate functions - policy, regulation and operations.				
Programme specific goals	• To build an ICT infrastructure which ensures access for all; • To foster an environment for stability and fair play at all levels in order to attract private sector investment in ICT infrastructure development; and • To utilise broadband and other innovative technologies for service provision whilst ensuring compatibility and interoperability • To realise economic growth through the increased use of broadband.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 4/Act 1:* Government to consider and develop a policy regarding the use of Public, Private Partnerships and other financing mechanisms in the development of ICT infrastructure**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoF	By end of 2014	Policy existing and operational	1. Human resources	Reporting: MoF Monitoring; MoICT
Activity 2	***ID/Pr 4/Act 2:* Build the national backbone broadband network(1Tb/s) minimum and International bandwidth of 10Gb/s and reduce interconnection and bandwidth charges to encourage use**				
	Incumbent Operator	by December 2015	Backbone infrastructure in place Affordable bandwidth	1.Funding 2.Human resources 3.Consultancies	Reporting: SPTC Monitoring; MoICT
Activity 3	***ID/Pr 4/Act 3*: Remove exclusivities on Backbone and international bandwidth**				
	MICT	By December 2015	Other operators offering bandwidth Mechanism for regulation in place	1.Human resources 2.Regulations	Reporting: MICT Monitoring: HOG

Programme 5	***ID/rR 5: Propagate the use of ICT in the health industry by* connecting all health centres, clinics and hospitals into one health network and establish a Health Management Information System(HMIS)**				
Implementation target groups	**All health centres, major clinics and hospitals**				
Relevant Policy objectives	• Facilitate the provision of connectivity to Tinkundla, schools, health institutions, community centres etc to ensure efficient and cost effective delivery services; • Facilitate the creation of a universal access fund to which all operators will contribute; • Encourage and support coordinated delivery of communications, roads, electricity, pipeline, housing infrastructure etc, to reduce costs; and •				
Programme specific goals	• To ensure that all players contribute to meet universal service obligations; • To build an ICT infrastructure which ensures access for all; and • Liberalising the sector to attract investment and ensure immediate gains				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 5/Act 1:* Development of an eHealth strategy spelling out connectivity, applications and content**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoH,	By end of 2013	Strategy Document,	1.Funding 2.Human Resources	Reporting: MoH, MICT Monitoring: Head of Government through performance reports
Activity 2	***ID/Pr 5/Act 2:* Rolling out of Network infrastructure and terminal equipment, sharing of infrastructure being central to minimize costs**				
	1.MoICT 2.MoE 3.MoHSW	By end of 2015	1.Meetings and agreements 2.Commencement of installations	1. Funding 2.Human Resources	Reporting: MoICT, MoE, MoH Monitoring: Head of Government through performance reports

Activity 3	***ID/Pr 5/Act 3:*** **Implement strategy for eHealth using fixed and mobile technologies**				
	1.MoICT 2. MoH 3. MoE	By end of 2016	Clinics, health centres and hospitals connected E health, Telemedicine, disease monitoring programs in place	1. Funding 2.Human Resources	Reporting: MoICT, MoE, MoH Monitoring: Head of Government through performance reports

Programme 6	**ID/Pr 6: Set up initiatives that make ICT terminals and equipment affordable to the public, attract investment in the ICT industry and facilitate the flow of FDI**				
Implementation target groups	Swazi registered companies				
Relevant Policy objectives	• Facilitate the importation of ICT equipment and services through duty reduction, tax breaks, incentives etc; and • Encourage and support local assemble of some of the basic ICT equipment.				
Programme specific goals	• To facilitate the availability of ICT equipment/gadgets and hence increasing ICT diffusion; and • Reduce current high costs of landed ICT equipment.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 6/Act 1:*** **Explore Tax incentives or other cost of sales lowering methods for ICT industry investors and importers**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.SRA, 2.MoF 3.MoC	By end of 2013	1.Implementation Strategy 2.Increase in the number of ICT equipment	1.Human resources	Reporting: SRA, MoF &, MoC Monitoring: Head of Government
Activity 2	***ID/Pr 6/Act 2:*** **Promote local production and innovation**				
	1.MICT, 2.MoC, 3.MoF	Ongoing	Promotion program in place	1.Human resources	Reporting; MoC Monitoring; head of Government

Programme 7	**ID/Pr 7: Set up initiatives to harmonize and consolidate electromagnetic wave and electronic signal distribution in the country**				
Implementation target groups					
Relevant Policy objectives	• To deploy a universal, ubiquitous, equitable, affordable and reliable ICT infrastructure • To utilise broadband and other innovative technologies for service provision whilst ensuring compatibility and interoperability				
Programme specific goals	• To establish a national terrestrial signal carrier agency in the country				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 7/Act 1:*** **Draft into existence a national signal distributor entity in the country**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT 2.Regulator	By end of 2013	Existence of such legislation	1.Human resources	Reporting: MICT Monitoring: Head of Government
Activity 2	***ID/Pr 6/Act 2:*** **Evaluate all radio and television broadcast transmission sites in the country**				
	1.MICT, 2.MoF	June 2014	Evaluation exercise completed	1.Human resources 2.Funding	Reporting; MICT Monitoring; head of Government
Activity 3	**ID/Pr 7/Act 3: Operationalize national signal distributor agency and commit ownership of broadcast signal distribution infrastructure to national agency**				
	1. MICT 2. Regulator	Sept 2014	Broadcast Signal distribution infrastructure in the hands of national agency	Funding Personnel	Reporting: MICT Monitoring: Regulator, HOG
Activity 4	**ID/Pr 7/Act 4: Draft regulations and guidelines for infrastructure sharing, service level agreements and protocols for the distribution service on behalf of operators**				
	1.Signal distributor 2.Operators 3.MICT	Sept 2014	Regulations and guidelines in place	Funding Human resources	Reporting: MICT Monitoring: Regulator, HOG
Activity 5	**ID/Pr 7/Act 5: Explore ways and means of incorporating all telecommunications signal carriage in the country**				

	1.Signal distributor 2.MICT	2016	Commencement of exploration exercise	Funding Personnel	Reporting: MICT Monitoring: Regulator, HOG
Activity 6	**ID/Pr 7/Act 6: Expand signal distribution infrastructure to cover the whole country using Universal Service and Access Funds, distribution agency funds and other funding**				
	1.Signal Distributor 2.MICT	Ongoing	Expansion of infrastructure	Funding Personnel	Reporting: MICT Monitoring: Regulator, HOG

Programme 8	**ID/Pr 8: Develop initiatives to establish a national Geo-Information System**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage and support coordinated delivery of communications, roads, electricity, pipeline, housing infrastructure etc to reduce costs; and • Facilitate the provision of connectivity to Tinkhundla, schools, health institutions, community centres etc, to ensure efficient and cost effective delivery services.				
Programme specific goals	• For the proper management of infrastructure in terms of position location; and • To facilitate the sharing of facilities thus necessitating the need for a common national data infrastructure pool for the land system.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 8/Act 1:*** **Establish a national GIS policy to address SDI infrastructure**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoNRE (Surveyor General)	By end of 2013	Policy approved by Cabinet	1.Funding 2.Human Capacity	Reporting: MoNRE (Surveyor General)
Activity 2	***ID/Pr 8/Act 2:*** **Establish a centralised system and populate data**				
	1.Surveyor General 2.MoAg 3.Utilities 4.MoNRE 6.MoEPD 7.Private Sector 9.MoF 10Central Statistics Dept.	By end of 2014	1.Available Development Data 2.National GIS System	1.Funding 2.Human Capacity	Reporting: All implementing agencies Monitoring: MICT, head of government through Performance Targets
Activity 4	***ID/Pr 8/Act 4:*** **Create awareness among the users**				
	Surveyor General Central Statistics Dept.	By end of 2015	1.Awareness campaigns 2.Press & Electronic publications 3. Workshops	1.Funding 2.Human Capacity	Reporting:Surveyor General Central Statistics Dept. Monitoring: head of government through Performance Targets

Programme 9	**ID/Pr 9: Provide 100% transmission coverage of radio and television broadcasting**				
Implementation target groups	National				
Relevant Policy objectives	• To foster an environment for stability and fair play at all levels in order to attract private sector investment in ICT infrastructure development • To deploy a universal, ubiquitous, equitable, affordable and reliable ICT infrastructure				
Programme specific goals	• To develop a very robust media sector that uses state of the art technologies to reach all sectors of the population; and •				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 9/Act 1:*** **To participate in Satellite TV broadcasting with Satellite broadcasting entity in recognition of a the must carry rule**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.STVA 2.Multivhoice 3.Other entrepreneurs	June 2012	1. Qualitative signal coverage Reports on Reception of TV broadcast countrywide.	1. Equipment from Multichoice 2. Human resources	Reporting; STVA (CEO) Monitoring; MICT
Activity 2	***ID/Pr 9/Act 2*****: Install, commission and switch on Terrestrial digital Broadcasting Equipment**				
	1.STVA 2.MICT 3.TASK TEAM	By Dec 2013	Switch on Digital Television Available	1.Equipment 2. Funds 3.Human Resources	Reporting: STVA, MICT Monitoring: HOG
Activity 3	***ID/Pr 9/Act 3*****: Switch Off Analogue Television**				
	1.STVA 2.MICT Director Communication 3.TASK TEAM	July 2015	1. No anologue signal	1.Funds 2.Equipment 2.Human resources	Reporting :MICT, STVA Monitoring: HOG
Activity 4	***ID/PR 9/Act 4:*** **Public broadcaster to train staff on new digital system as part of arrangements with suppliers**				
	STVA	On going	1.Report of training	1.Funding	Reporting; STVA (CEO)

			progress for all departments		Monitoring; MICT
Programme 10	**ID/Pr 10: Develop initiatives for eAgriculture**				
Implementation target groups	National				
Relevant Policy objectives	• Encourage and support coordinated delivery of communications, roads, electricity, pipeline, housing infrastructure etc to reduce costs; and • Facilitate the provision of connectivity to farmers and to ensure efficient and cost effective delivery services and access to markets.				
Programme specific goals	• Facilitate the provision of connectivity to Tinkundla, schools, health institutions, community centres etc to ensure efficient and cost effective delivery services;To facilitate the sharing of facilities thus necessitating the need for a common national data infrastructure pool for the land system.				
Actions/Activities/Interventions					
Activity 1	***ID/Pr 10/Act 1:* Establish a national ICT Master Plan for Agriculture**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	Ministry of Agriculturend Cooperatives(MoAC)	By end of 2013	Policy approved by Cabinet	1.Funding 2.Human Capacity	Reporting: MoAC Monitoring: HOG
Activity 2	***ID/Pr 10/Act 2:* Implement the Master Plan**				
	MoA	By end of 2014	Initiatives being implemented according to plan	1.Funding 2.Human Capacity	Reporting: MoAC Monitoring: head of government through Performance Targets
Activity 3	***ID/Pr 10/Act 3:* Create information databases for available agricultural produce, commercial markets and other information streams for farmers utilizing mobile phone, PC and like gadgets**				
	MoAC	By end of 2014	1.Working system	1.Funding 2.Human Capacity	Reporting: MoAC. Monitoring:HOG
Activity 4	**ID/Pr 10/Act 4: Establish early warning systems for farmers on food security, water resources, animal and crop diseases adverse weather conditions and natural disasters using ICT handhelds and information boards as well as the national media**				
	MoAC	By end of 2015	Early Warning System in place	1.Funding 2.Human Capacity	Reporting:MoAC Monitoring: HOG

4.5 Media

The Government is committed to freedom of the press and recognises that freedom of the press is an essential ingredient for good governance. One of the imperatives of ICT development and use is the creation of awareness and positive attitudes towards ICT. Given the extent to which radio is available to the majority of the population in Swaziland, wider access to ICT can be achieved via this medium. Newspapers, radio and television provide an easy, accessible and cheap means of conveying information to end-users. ICT will only become relevant for sustainable development when it provides content (value) to the end user. The mass media can access many of the existing sources of information and provide broad channels of communications to the poor and to remote areas. Some of the challenges to be addressed include the feasibility of converting state broadcasting stations to public entities, combating illegal and harmful content and allocating adequate resources to media institutions to ensure that benefits of ICT are reaped.

Objectives:

- To increase awareness of and change of attitude towards ICT;
- To develop legislation to put in place a Freedom of Information Act;
- To develop a very robust media sector that uses state of the art technologies to reach all sectors of the population; and
- To develop content and applications which are responsive to user needs and local conditions.

Government Policy Commitments:

- Support and encourage the development and use of ICT (both traditional and new) to assist the media in promoting the use of ICT in order to narrow the digital divide and to assist the country in meeting the objectives and priorities enshrined in the NDS, SPEED, MDGs and the extract of the Early Poverty Reduction Strategy (EPRS);
- Encourage media to develop and promote ICT local content and the strengthening of cultural values of the Swazi society (essentially it seeks to embrace the acceptance of cultural diversity);
- Support the use of ICT for the drive towards a proactive and pluralistic yet responsible media society enabling all sectors of society to fully participate in the fight against poverty, unemployment and diseases such as HIV/AIDS;
- Encourage the use of ICT by media in the promotion and improvement of access to information by all sectors of society; and
- Support the use of ICT for the development of capacity within the media sector to ensure proper utilisation of ICT.

Key Players: Government taking the lead in collaboration with educational institutions, the private sector, civil society etc.

Media (M)					
Programme 1	**M/PR/1: Set-up initiatives to entrench the constitutional position of the media in the country**				
Implementation target groups	National and Media Houses				
Relevant Policy objectives	• Encourage the use of ICT by media in the promotion and improvement of access to information by all sectors of society • Create an environment that encourages the development of the media Institute legislation that guides the media industry				
Programme specific goals	• To develop legislation that promotes Freedom of Information • Develop legislation to guide the media and content development				
Actions/Activities/Interventions					
Activity 1	**M/PR. 1Act 1: Draft and enact Freedom of Information, Media Commission, and Newspaper and Books bills**				
	MICT (Director Media)	By end of June 2013	Parliament passes bills	funding	Reporting; Media Directorate (MICT) Monitoring; P.S. & Minister through Ongoing quarterly departmental and annual ministerial reports
Activity 2	**M/Pr 1/Act 2: Educate public on the existing media related legislation**				
	1.MICT (Director Media) 2. MISA 3.SNAJ 4.Other Media organisations	By end of September 2013	Number of meetings and follow-ups	1. Funding 2. Human resources	Reporting; Media Directorate (MICT) Monitoring; PS &Minister through MICT Ongoing quarterly departmental and annual ministerial reports
Activity 3	***M/PR 1/Act 3:*** **Operationalise the Acts**				

	MICT (Director Media)	By end of Dec 2015	Media Commission is in place. STVA Status Changed. Regualtion of Broadcasting with SCC	funding	Reporting; Media Directorate (MICT) Monitoring; P.S. & Minister through Ongoing quarterly departmental and annual ministerial reports
Activity 4	***M/PR 1/Act 4:*** **Setup media rights and responsibilities public awareness campaigns**				
	Media houses	ongoing	1.Increased Internet presence. 2.Improved standards reflected thru reports in the media 2.Improved Programmes on SBIS,STVA	1.Funding to sensitize media personnel 2.Human resources	Reporting; MICT (Director Media) Monitoring; PS & Minister through ministerial quarterly reports

Programme 2	***M/Pr 2:* Operationalise skills development section of Information and Media Policy**				
Implementation target groups	National				
Relevant Policy objectives	• Support the use of ICT for the development of capacity within the media sector to ensure proper utilisation of ICT				
Programme specific goals	• To develop a very robust media sector that uses state of the art technologies to reach all sectors of the population				
Actions/Activities/Interventions					
Activity 1	***M/Pr 2/Act 1:* Conduct needs assessment survey of ICT skills development in media sector**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT (Media Directorate)	June 2013	1. Report on Skills assessment.	1. Funding 2. Human resources	Reporting: Media Director (MICT) Monitoring ; P.S. & Minister thru quarterly reports
Activity 2	***M/Pr 2/Act 2*:Create skills development Plan including funding, and management mechanisms**				
	MICT(Media)	June 2014	Existing skills development plan for media sector	1.Funding 2. Consultants	Reporting: Media Director(MICT) Monitoring: PS and Minister
Activity 3	**M/Pr 2/Act 3: Implement skills development plan**				
	MICT(Media)	December 2014	1.Development program 2.Certification and Management System 2.Improvement in ICT skills for Media practitioners	1.Human resources 2.Funding	Reporting: Media Director(MICT) Monitoring: PS and Minister

Programme 3	***M/Pr 3:* Encourage the use of ICT technology and creation of media content**				
Implementation target groups	National				
Relevant Policy objectives	• Support the use of ICT technology in the media industry • Support the use of ICT for the development content within the media sector to ensure proper utilisation of ICT • Support the development of cultural content				
Programme specific goals	• To develop relevant content • Encourage the use of ICT				
Actions/Activities/Interventions					
Activity 1	***M/Pr 2/Act 1:* Develop national ICT Awareness program plans with stakeholders**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.MICT (Media Directorate)	By end of 2012	Stakeholder meetings Awareness programme designed	1. Funding 2. Human resources	Reporting: Media Director (MICT) Monitoring ; P.S. & Minister thru quarterly reports
Activity 2	***M/Pr 2/Act 2*: Implement national Awareness programs**				
	MICT(Media)	By the end of 2013	A number Programmes running Training programs for ICT advocates	1.Funding 2. Consultants	Reporting: Media Director(MICT) Monitoring: PS and Minister
Activity 3	**M/Pr 2/Act 3: Develop and promote media content creation programs**				
	MICT(Media)	By the end of December 2014	Promotions in place Training programs in place	1.Human resources 2.Funding	Reporting: Media Director(MICT) Monitoring: PS and Minister
Activity 4	**M/Pr 2/Act 4: Set-up Fund for the development of media content, especially indigenous content and applications**				
	MICT(Media)	By the end of June 2015	Fund operational	1. Human resources 2.Funding	Reporting: Media Director(MICT) Monitoring: PS and Minister

Programme 4	***M/Pr 4: Set up* initiatives to increase participation in broadcasting and content development and facilitate access to Information**				
Implementation target groups	National (Citizens)				
Relevant Policy objectives	• Encourage media to develop and promote ICT local content and the strengthening of cultural values of the Swazi society (essentially this seeks to embrace the acceptance of cultural diversity) • Create a conducive environment to encourage indigenous entrepreneurs to establish media institutions for pluralism and promotion of independent content • Encourage the use of ICT by media in the promotion and improvement of access to information by all sectors of society.				
Programme specific goals	• Ensure that necessary structures for ICT content development are in place • Ensure that licensing mechanisms for community radio stations are in place • To remove government monopoly				
Actions/Activities/Interventions					
Activity 1	***M/Pr 4/Act 1:* Establish licensing criteria and license conditions for community and commercial broadcast houses**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1. MICT (Director Communications) 2.MICT (Director Media) 3. MoJCA (Attorney General's Office) 4.Regulator	Dec 2013	1. Clear licensing criteria and conditions published. 2.Availablity Community broadcasting institution with multi-media ICT services.	1.Funding (both local and Donor) 2. Human resources	Reporting; Director Communications (MICT) Monitoring. 1.PS & Minister (MICT) thru EXCO meetings on quarterly reports 2. Donor agencies
Activity 2	**M/Pr 4/Act 2: License at least 1 community radio and 1 commercial radio stations per region**				
	Regulator	Dec 2014	1. Processing of	Human resources	Reporting: Regulator

			applications carried out 2. Licenses issued to deserving applicants		Monitoring: Director and PS MICT
Activity 3	**M/Pr.4/Act 3: Establish mechanism for addressing broadcasting complaints**				
	Regulator	December 2014	Legal instrument	Financial Resources	Reporting: Regulator Monitoring: Director and PS MICT
Activity 4	**M/Pr 4/Act 4: Establish initiatives to pluralize radio and television content development**				
	1.Regulator 2.Operators 3.MoC 4.MICT	December 2014	1.Local broadcasting programs 2.Cultural and vernacular content.	Financial Resources	Reporting: Regulator Monitoring: Director and PS MICT

4.6 Education

In order to compete in a competitive global economic environment, a highly skilled and educated workforce with aptitude and skills in the application of ICT's is essential. This calls for policies that promote broad access to skills and competencies and especially the capability to learn and ICT literacy. This includes providing broad-based formal education, establishing incentives for firms and individuals to engage in continuous training and lifelong learning in order to facilitate continuous learning and re-skilling thereby matching labour supply and demand in terms of skill requirements. It is important that all sectors of the education system understand the benefits of investing in ICT and in the basic infrastructure required for introducing ICT in education. Partnerships between government and the private sector and other sectors are necessary for resource mobilisation to fund the use of ICT in education.

Objectives:

- To promote equitable access to educational resources through the strategic application of ICT;
- To introduce computer education at primary level in all government schools;
- To introduce specialised computer education for disabled youth;
- To introduce computer education in all institutions of higher learning - Vocational and Commercial Training Institution (VOCTIM), Swaziland College of Technology (SCOT), etc;
- To ensure school leavers ICT literacy, hence providing them with the requisite ICT skills to secure employment and to gain entry in tertiary programmes offering training in ICT;
- To enable all teachers to be competent users of ICT as a tool in enhancing the teaching and learning process;
- To improve the efficiency and effectiveness of educational administration through the promotion of the use of appropriate school management information systems;
- To develop ICT programmes for out of school youth, senior citizens and illiterates;
- To exploit ICT in the provision of life-long learning through distance education programmes;
- To create sustainable ICT programs in education through collaboration with the public, private and community sectors;
- To establish an educational network system for the sharing of educational resources;
- To encourage partnerships and communication between the various stakeholders in the education sector;
- To improve professional development opportunities for all educators;
- To develop gender based ICT programmes to target the disabled persons; and
- To provide distance learning education through ICT.

Government Policy Commitments:

- Ensure that the Ministry of Education and related departments' Management Information Systems (MIS) are developed, operational and integrated;
- Ensure that ICT are deployed and taught at all levels of the formal education system in order to facilitate learning and also create an information based society;
- Ensure that basic computer studies are integrated in all programs offered in tertiary institutions (including cyber security);
- Through the Ministry of Education, ensure the development of a computer studies curriculum (gender based approach), to be offered by all secondary and high schools;
- Prioritise schools in rural communities for special attention in provision of basic ICT infrastructure required for the introduction of ICT.
- Prioritise teacher in-service training in computer literacy (gender based approach);
- Encourage higher educational institutions within the country and the region to share information and knowledge through data networks;
- assist tertiary institutions in the country to increase the output and quality of gender based ICT skilled human resources; and
- Ensure the girl-child's full participation in science and technology education.

Key Players:

- Government taking the lead in collaboration with educational institutions,
- the private sector,
- civil society etc.

Education (E)					
Programme 1	***E/Pr1:* Initiative to establish an Educational Management Information Systems (EMIS)**				
Implementation target groups	National and regional stakeholder groups				
Relevant Policy objectives	• Ensure that the Ministry of Education and related departments' Management Information Systems (MIS) are developed, operational and integrated				
Programme specific goals	To improve the efficiency and effectiveness of educational administration through the promotion of the use of appropriate school management information systems				
Actions/Activities/Interventions					
Activity 1	***E/Pr 1 /Act 1:* Undertake a needs assessment exercise and design and develop EMIS Master Plan**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	ECOS, NCCE, CET, MoET, SG	End of 2013	1.Master Plan	1.Funding 2. Consultancy 3. Human resources	Reporting ;- ECOS, NCCE, CET , MoET Monitoring; Head of Government through quarterly reports;
Activity 2	**E/Pr 1/Act 2: Implementation of EMIS;**				
	ECOS, NCCE, CET, MoET, SG	End of 2013	Existing and operational EMIS	1.Funding 2. Consultancy 3. Human resources 4.Master Plan	Reporting ;- ECOS, NCCE, CET , MoET Monitoring; Head of Government through quarterly reports

Activity 3	**E/Pr 1/Act 3: Operationalise the Plan and Populate EMIS/GIS through a school mapping exercise nationwide;**				
	ECOS, NCCE, CET, MoET, SG	End of 2013	1.Populated EMIS/GIS 2.User Awareness	1.Funding 2. Consultancy 3. Human resources 4.Master Plan	Reporting ;- ECOS, NCCE, CET , MoET Monitoring; Head of Government through quarterly reports;
Activity 4	**E/Pr 1/Act 4: Design a website and make information available**				
	ECOS, NCCE, CET, MoET, SG	End of 2013	**4**.MoET/EMIS Website 5Annual publications	1.Funding 2. Consultancy 3. Human resources 4.Master Plan	Reporting ;- ECOS, NCCE, CET , MoET Monitoring; Head of Government through quarterly reports;

Programme 2	***E/Pr 2Establish* initiatives to ensure that all teacher training institutions offer basic computer training to all incoming trainees, lecturers and teachers**				
Implementation target groups	Teacher training Institutions				
Relevant Policy objectives	○ To introduce computer education in all institutions of higher learning ○ To enable all teachers to be competent users of ICT as a tool in enhancing the teaching and learning process				
Programme specific goals	○ To introduce ICT training to in teacher training colleges				
Actions/Activities/Interventions					
Activity 1	***E/Pr 2/Act 1:* Adoption of the pilot curriculum for teacher training colleges, evaluation and review workshops**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1. UNISWA 2.William Pitcher 3.Ngwane 4.All Teacher training institutions,	By end of 2013	1. Curriculum blue print for ICT in colleges 2.Accreditation Authority, 3.UNISWA Learning materials and textbooks; 4.Institutional calendars and year books	1.Funding,Meetings 2.Capacity building initiatives 3.Human resources	Reporting : All Teacher training institutions. Monitoring; MoET & Head of Government through quarterly reports
Activity 2	***E/Pr 2/Act 2:* Development of ICT policy or guidelines for teacher training**				
	1.MoEDT 2.Teacher Training Institutions (colleges and Uniswa), Board of Affiliation Institutions	By end of By end of 2013	1.ICT policy or guidebook for colleges	1.Funding Workshops and meetings	Reporting; Tertiary Institutions & Board of affiliation Institutions Monitoring; MoEdT (Inspectorate of Colleges) Monitoring; Head of Government through PMS

Activity 3 a	***E/Pr 2/Act 3a:*** **Adoption of ICT as a compulsory course in all departments and the infusion of ICT into all subject areas including training workshops for college lecturers and INSET**				
	1.MoEdT, 2.Teacher Training Institutions	By end of 2013	1. ICT lessons in all subject areas; 2. ICT competent teacher training graduates; and 3.Use of ICT in teaching & learning in all subject areas 4.Portfolios system	Funding, Workshops and meetings	Reporting ; MoEdT (Inspectorate of Colleges),, Training Institution. Monitoring; Head of Government through quarterly reports
Activity 3 b	***E/Pr 2/Act 3b:*** **training workshops for college lecturers and INSET**				
	MoEdT,	By end of 2013, However this is going to be an ongoing process.	-1.Certified Lecturers 2ICT competent Lectures training graduates; and 3.Use of ICT in teaching & learning in all subject areas 4. Portfolios system -	Funding, Workshops and meetings	Accreditation Authority,

Programme 3	***E/Pr 3:*** **To ensure that an examinable computer studies curriculum for secondary and high schools is in place and that ICT literacy is a mandatory requirement for entry into tertiary institutions**				
Implementation target groups	Secondary and high schools				
Relevant Policy objectives	• Through the Ministry of Education, ensure the development of a computer studies curriculum (gender based approach), to be offered by all secondary and high schools; • Ensure that ICT are deployed and taught at all levels of the formal education system in order to facilitate learning and also create an information based society; and • Ensure that basic computer studies are integrated in all programs offered in tertiary institutions (including cyber security).				
Programme specific goals	• To introduce computer studies to all secondary schools in the country to ensure that every high school graduate leaves the school being computer literate; and • Ensure that all children going into tertiary education posses basic ICT skills.				
Actions/Activities/Interventions					
Activity 1	***E/Pr 3/Act 1:*** **Employment of a senior inspector of ICT by the MOET and the creation of an ICT subject panel**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1. MoET, 2.MoF, 3.MoPS	End of December 2011	- Employment, identification of a Senior Inspector responsible for ICT; - National ICT subject panel; and - Creation of regional inspector posts for ICT.	Funding	Reporting; MoEDT Monitoring; Head of Government through quarterly reports

Activity 2	***E/Pr 3/Act 2:*** **Reviewing current ICT curriculum and development of a new one in line with SGSCE/AS and adopting relevant pedagogical approaches to the teaching of ICT in schools**				
	NCC, ICT Subject Panel	By end of 2012	A nationally approved ICT curriculum for all schools in the country/ AS syllabus in place	Funding, Workshops and meetings	Reporting: NCC Monitoring; MoEDT
Activity 3	***a)E/Pr 3/Act 3:*** **Development of a school ICT policy (standards and requirements)** **b)and empowerment of teachers in subjects already existing in curriculum**				
	a) MoET b) MoPS and MoET	By end of 2013 By end of 2013	1.Approved policy 2.Usage of constructivist learner centred approach 3.IDE programme	Funding, Workshops and meesings	Reporting : MoEDT & MoPS Monitoring: Head of Government through PMS MoPS and MoET
Activity 4	***E/Pr 3/Act 4:*****Introduce ICT in non-formal and long distance institutions like Mlalatini, SEBENTA and skill centres**				
	MoET	By end of 2014	1.ICT in curriculum 2.Schools time tables	Funding, Workshops and Meetings	Reporting; MoET Monitoring: MICT & head of Government

Programme 4	***E/Pr 4: Initatives that* ensure that 100% of the secondary and high, and 50% of primary schools have computer laboratories with Internet access**				
Implementation target groups	Schools and government				
Relevant Policy objectives	• Ensure that ICT are deployed and taught at all levels of the formal education system in order to facilitate learning and also create an information based society; and • Prioritise schools in rural communities for special attention in provision of basic ICT infrastructure required for the introduction of ICT.				
Programme specific goals	• To ensure that the necessary ICT infrastructure is available in all school communities; and • Increase the number of schools having fully functional computer laboratories in all regions of the country				
Actions/Activities/Interventions					
Activity 1 (with related sub-activities)	***E/Pr 4/Act 1:* Undertake a situational analysis to find out the extent of ICT in all schools in the country;**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoET	By end of 2013	-Report with recommendations	Human Resources	Reporting: MoET, Monitoring; MoICT and \head of Government thru PMS
Activity 2	**E/Pr 4/Act 2: Develop a Master Plan that will strategically put computers in schools/communities that are in need and review findings with private sector**				
	MoET	By midyear of 2014	Master Plan for setting up and managing ICT laboratories	Human Resources Funding,	Reporting: MoET, Monitoring; MoICT and \head of Government thru PMS
Activity 3	**E/Pr 4/Act 3: Implementation of Master Plan setting up of ICT labs and equipping schools**				
	MoET	By end of 2015	1.100% of all schools with labs	Funding,	Reporting: MoET, Monitoring; MoICT and \head of Government thru PMS

Activity 4	**E/Pr 4/Act 4: Encourage communities to contribute in the setting up of computer labs, monetary and/or in kind and set up local ICT working groups for support, security and maintenance and Solicit support from local and international private sector especially for project implementation**				
	MoET	By end of 2013	1.Number of contributing communities 2.Increase of companies participating	Funding,	Reporting: MoET, Monitoring; MoICT and \head of Government thru PMS
Activity 5	**E/Pr 4/Act 5: Develop guidelines for operations at school community level**				
	MoET	By end of 2014	1.Guidelines exist 2.Increased Sustainability	Funding,	Reporting: MoET, Monitoring; MoICT and \head of Government thru PMS

Programme 5	***E/Pr 5:* To ensure that the Ministry of Education has an ICT standards monitoring body and that all private training schools receives official accreditation**				
Implementation target groups	Private Training Schools and government				
Relevant Policy objectives	• Ensure that basic computer studies are integrated in all programs offered in tertiary institutions (including cyber security);				
Programme specific goals	• To ensure that all graduates of any ICT course acquire the minimum competency skills to compete effectively in the world; and • Create a forum that will sustain the institutionalisation of ICT in all educational programmes in the country.				
Actions/Activities/Interventions					
Activity 1	***E/Pr 5/Act 1:* Development of ICT policy for private tertiary institutions and a design of registry of all tertiary institutions in the country**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoET	By end of 2013	1. Policy and registry developed for private institutions	Consultancy, Workshops, Meetings and Funding	Reporting: MoET Monitoring ; Head of Government thru PMS
Activity 2	***E/Pr 5/Act 2:* Evaluate all syllabuses offered in the country public and private and develop a MOET sector policy on ICT**				
	Accreditation Authority	By end of 2013	1.ICT in Education Policy Document	Consultancy, Workshops, Meetings and Funding	Reporting: Accreditation Authority Monitoring: MoET
Activity 3	***E/Pr 5/Act 3:* Finalise the National Qualification Framework and include ICT**				
	MoET	By end of 2014	1.National Quality assurance and regulatory body on ICT in place	Consultancy, Workshops, Meetings and Funding	Reporting; MoET Monitoring; Head of Government thru PMS
Activity 4	***E/Pr 5/Act 4:* Create body for accreditation and standards for all ICT training in the country, minimum standards to be observed and create partnerships with business and industry**				
	1.Regulator 2.SWASA,	By end of 2013	1.Document on Standards/ Registration	Consultancy, Workshops, Meetings and Funding	Reporting: Regulator, MICT Monitoring: head of Government

	3..MoET		and certification		thru PMS

Programme 6	***E/Pr 6:* Initiatives to ensure that Graduates from Tertiary Institutions have advanced ICT Competences**				
Implementation target groups	National				
Relevant Policy objectives	• Ensure that ICT are deployed and taught at all levels of the formal education system in order to facilitate learning and also create an information based society; • Encourage higher educational institutions within the country and the region to share information and knowledge through data networks; and • Assist tertiary institutions in the country to increase the output and quality of gender based ICT skilled human resources.				
Programme specific goals	• All employees and the public at large would acquire skills to engage in ICT at their places of work, living and daily life. • Increase the number of ICT literate Swazis.				
Actions/Activities/Interventions					
Activity 1	***E/Pr 6/Act 1:* Undertake a situational analysis of current graduates who leave the institutions ICT literate at all levels of education and strategic plans developed to ensure that ICT is integrated into all courses**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.UNISWA, Tertiary Institutions 2. Department of Statistics 3. MoET	End of 2014	- Strategic plan to increase and strengthen the output in ICT - ICT used a tool in all subjects - Statistical data reports on situational analysis undertaken.	Funding	Reporting; UNISWA, Tertiary Institution, Department of statistics, MoET

Activity 2	***E/Pr 6/Act 2:*** **Integrate the strategic plan into the university development plan and colleges to integrate their plans into the MOET sector plan**				
	1. UNISWA 2. Tertiary Institutions	By June 2015	1. UNISWA Plan of Action 2. Other Tertiary institutions' plans of action	Consultancy, Workshops, Meetings and Funding	Reporting; UNISWA, other Tertiary Institutions Monitoring; MoET,
Activity 3	***E/Pr 6/Act 3:*** **University and other colleges must introduce highly advanced and specialized courses in ICTs, especially software development**				
	1.MoET, 2.MoEPD, 3. UNISWA	By end of 2015	- specialized programs commence - increased collaboration with industry on specialized programs	Funding	Reporting; UNISWA Monitoring; MoET

4.7 ICT Industry

The Government is committed to promote and stimulate the ICT industry in order to enhance the country's capacity to develop, produce, manufacture and assembly ICT products and services as a step towards developing a local globally competitive ICT industry and services sector. The current scenario of being a net importer of almost all ICT products – computers, communication equipment, software and related services must gradually be reversed. Mechanisms for promoting and supporting efforts in Research and Development (R&D) will be established and private sector investment in R&D encouraged in collaboration and cooperation with local institutions and the university. Institutions dedicated to research must receive adequate funding which could be encouraged by appropriate fiscal incentives. This will also entail the design of private-public partnership mechanisms and models with a clearly defined role for academia. The Government's strategy will also be that of encouraging partnership, collaboration and linkages between local R&D Institutions and regional centres of excellence to speed up the process of knowledge transfer.
Some challenges include market size which could deter potential investors, the mismatch between the needs of industry, business and public services and the quantity and the quality of ICT professionals.

Objectives:

- To support the development of a viable ICT industry to facilitate research and development, manufacturing, content development and distribution of ICT products and services and employment creation;
- To enable the country to rely on ICT products that are locally produced to solve local problems;
- To support joint research and development programs between the private sector and tertiary institutions/universities for e.g. content, software development, products etc;
- To establishing mechanisms such as simplified processing of business registration/taxation, including tax holidays (for companies which demonstrate commitment to staff ICT capacity development) as incentives for industry growth;
- To support the establishment of industrial development zones and the promotion of technology incubators; and
- Encourage entrepreneurship and specialist skills development to foster innovation and industry growth.

Government Policy Commitments:

- Facilitate the development of an extensive pool of trained ICT human resources at all levels to meet sector demands - there is a need for mass human resource development (users, developers and managers);
- Establish mechanisms that promote collaboration between industry and training institutions to build adequate human resources;
- Support Research and Development in ICT;

- Ensure the structures are in place to evaluate technology standards in the country;
- Ensure equitable ICT access provision;
- Provide for the establishment of an enabling legal and regulatory framework that takes into account the convergence of technologies; and
- Lend support to regulatory harmonisation initiatives as a means to achieving broader regional integration objectives and strategies

Key Players:

- **Ministry of ICT**
- **Government**
- **Private Sector**
- **Individuals**

ICT Industry (II)					
Programme 1	***II/Pr1:* Establish National ICT Agency and/or National Research Commission to harmonize with Government operations and coordinate the implementation of the NICI 2016**				
Implementation target groups	National				
Relevant Policy objectives	Develop a legislation for the establishment of the Research and Development Directorate/ Commission To support the development of a viable ICT industry to facilitate report and development, manufacturing, content development and distribution of ICT products and services and employment creation To support the establishment of industrial development zones and the promotion of technology incubators To develop ICT industry as a lead economic sector with an increased contribution to EGDP				
Programme specific goals	To accelerate technology commercialization in support of ICT industry				
Actions/Activities/Interventions					
Activity 1	***II/Pr1/Act 1:* Draft and enact a bill for the establishment of the National ICT Agency and or National Research Commission to coordinate the implementation of the NICI 2016 and carry out research for the development of the ICT industry**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MICT	2012	Agency and/or Commission Act	Funding	MICT-Reporting HOG-Monitoring
Activity 2	**II/Pr 2/Act 2: Operationalise the Act for the Agency and/or commission.**				
	MICT	2012	Agency/Commission exist	Human resources Financial resources	Reporting: MICT Monitoring: HOG:

Programme 2	**II/Pr 2: Initiatives to facilitate a stable environment and provide incentives in support of the development of the ICT industry**				
Implementation Group	National				
Relevant policy objectives	Develop a legislature for the establishment of the Research and Development Directorate/ Commission To support the development of a viable ICT industry to facilitate report and development, manufacturing, content development and distribution of ICT products and services and employment creation To support the establishment of industrial development zones and the promotion of technology incubators To develop ICT industry as a lead economic sector with an increased contribution to EGDP				
Programe specific goals	To accelerate technology commercialization in support of ICT industry				
Activity 1	***II/Pr2/Act 1;* Ensure that an enabling environment is in place by harmonizing and synchronizing ICT legislation (cyber laws, intellectual property laws, information protection laws, technology transfer etc.)**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MICT and MOJCA with all the line ministries	Start 2012	Enacted laws	Funding Consultants	MICT- Reporting MOJCA and HOG- Monitoring
Activity 2	***II/Pr 2:* Establish special tax instruments and incentives for the development of the ICT production and services subsectors**				
	MoF	Start 2012	Enacted laws	Funding Consultants	MoF- Reporting HOG- Monitoring

ICT Industry (II)					
Programme 3	***II/Pr2 :*Establish programmes that facilitate and promote the development of Science and Technology Parks**				
Implementation target groups	National				
Relevant Policy objectives	Opening up the industry to privately owned specialist companies through outsourcing of opportunities Encourage entrepreneurship and specialists skills development to foster innovation and industry growth and poverty alleviation				
Programme specific goals	Enhance economic development of the country				
Actions/Activities/Interventions					
Activity 1	***II/Pr 3/Act 1 :* Establishment of policies, guidelines and infrastructure for Science and Technology Parks**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MICT 2.Operator 3.Regulator	By end of 2015	1.Existing policy 2.Strategy 3.Infrastructure	1.Land 2. Consultants 3.Funds	Reporting- Regulator Monitoring -MICT and HOG
Activity 2	***II/Pr3/Act2 :Implement pilot and* identify and facilitate establishment of at least four ICT companies in the technology parks annually starting in December 2013**				
	Science and Technology Directorate	By end of 2015	Four ICT companies established	Funding Training	Reporting- S and T Directorate Monitoring- MITC and HOG
Activity 3	**II/Pr 3/Act 3: Adopt and enforce ICT industry standards**				
	S&T Directorate	By end of 2015	Four ICT companies established	Funding Training	Reporting- S and T Directorate Monitoring- MITC and HOG
Activity 4	**II/Pr 3/Act 4: Develop and implement incentives programmes for STPs to attract investors**				
	S&T Directorate	By end of 2015	Four ICT companies established	Funding Training	Reporting- S and T Directorate Monitoring- MITC and HOG

ICT Industry (II)					
Programme 4	***II/Pr4 :*Encourage local entrepreneurs to participate in global/regional and local ICT industry**				
Implementation target groups	Local ICT companies				
Relevant Policy objectives	Encourage local ICT companies to participate in SADC/COMESA Market				
Programme specific goals	Provide information of available tenders in the region				
Actions/Activities/Interventions					
Activity 1	***II/Pr4/Act1 :*Establish a roadmap comprising of a policy and strategic implementation plan to encourage SMMEs to participate in the ICT Industry**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoC SEDCO (a parastatal of Government)	By end of 2013	1. A Policy to encourage SMMEs to participate in ICT	1.Funding 2.Consultancy services	Reporting: MoC, SEDCO Monitoring: Head of government thro Performance targets reports
Activity 2	***II/Pr4/Act 2 :*Establish a fund to finance SMMEs to participate in the ICT Industry**				
	MoF SEDCo MICT	By end of 2013	1.An exist fund tailored for ICT SMMEs 2.Institution 3.Guidelines	Funds Human resources	Reporting:MoF Monitoring: Head of Government
Activity 3	**II/Pr4/Act 3: Create initiatives to encourage electronic commerce (e-commerce) and electronic trade(e-trade) by setting up pilot projects and resource centres**				
	MICT	Start Jan 2014	E-commerce portal	Infrastructure Human resources Financial resources	Reporting: MICT Monitoring: HOG
Activity 4	***II/Pr4/Act1 :*Establish and implement a Public Private Partnership(PPP) policy**				
	MoF	By end 2014	1.Policy exists 2.Guidelines exist 3.Projects	1.Funding 2.Consultancy 3.Human resources	Reporting: MoF Monitoring: Head of Government

4.8 Human Resource Capacity

Human resource development is considered critical in the development of the ICT sector and in stimulating ICT usage in other sectors. The shortage of skilled ICT professionals has been identified as one of the challenges in the development of ICTs. New global and local competitive opportunities for ICT put a premium on skills development. The NDS acknowledges that the importance of human resource development as a key macro strategy stems from the fact that human resources are one of the primary resources Swaziland has. This resource can only contribute meaningfully to sustainable economic and political development if its capabilities and qualities are enhanced. For ICT's this would entail specialized orientation to leverage their capability for distinctive productivity that would benefit the country.

Objectives

- To increase the ICT skills base, including for disadvantaged groups such as women, disabled, and unemployed in Swaziland;
- To increase the number and improve the quality of ICT professionals in Swaziland;
- To develop strategies to encourage and support ICT training for politicians, private and public sector executives, as well as community and civil society leaders;
- To develop strategies that will promote e-literacy and create a sustainable culture of ICT use and development;
- To develop strategies to encourage the conversion of ICT knowledge and skills into goods and services;
- To ensure the establishment of an institution/agency to set standards and accredit ICT training offered by local institutions focusing on life-long learning;
- To support schemes aimed at capacity building of local ICT training institutions, focusing on life-long learning; and
- To ensure that all national information resources are accessible through ICT.

Government Policy Commitments

- Encourage public, private and community sector participation in the development of ICT human capital;
- Promote and support ICT training for politicians, private and public sector executives, as well as community and civil society leaders;
- Support schemes aimed at upgrading existing ICT skills and competencies, especially in the civil service. This will also reduce the dependence on external consultants and also stem capital flight;
- Provide an environment that will facilitate the preparation of communities for electronic service delivery; and
- Adopt measures to establish an Institution/Agency to set standards and accredit ICT training offered by local institutions, focusing on life-long learning.

Key Players: Government taking the lead in collaboration with educational institutions, the private sector, civil society etc.

Human resource capacity (HR)					
Programme 1	***HR/Pr1 :*Development of a master plan for ICT capacity building**				
Implementation target groups	National				
Relevant Policy objectives	• To increase the ICT skills base, including for disadvantaged groups such as women, disabled, and unemployed in Swaziland; • To develop strategies that will promote e-literacy and create a sustainable culture of ICT use and development				
Programme specific goals	To develop strategies that will promote e-literacy and create a sustainable culture of ICT use and development				
Actions/Activities/Interventions					
Activity 1	***HR/Pr 1/Act 1:* Strengthen and restructure the public and private Human resources agencies**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoPS/MoLSS	By June 2013	Functioning Agency	Consultants Financial resources	Reporting: MoPS/MoLS Monitoring: HOG
Activity 2	***HR/Pr1/Act 2 :* Conduct a human resources assessment study including skills audit**				
	MOPS MoLSS MoE Statistics Dept Private Sector	By June 2013	1.Population of National ICT Skills Tables. 2.GAP Analysis	1.Consultants 2.Funding	Reporting: MoLSS - Monitoring: HOG –
Activity 3	***HR/Pr 1/Act 3 :*Development ICT HRD strategy taking special care of women and the disabled**				
	MICT MoLSS	By end of December 2013	Existence of HRD Strategy (short, medium and long term goals)	1.Consultants 2.Funding	Reporting: MoLSS Monitoring: HOG
Activity 4	**HR/Pr 1/Act 4: Implement initiatives which include upgrading of colleges and universities and the establishment of a human resources development fund**				
	MoF	By End of December 2014	Existance of a fund and financed projects	Consultants Financial Resources Human resources	Reporting: MoF Monitoring HOG
Activity 5	**HR/Pr 1/Act 5: Create incentives and tax breaks for ICT Human resources development by the private sector**				

	MoF	By End of December 2014	Incentives utilized	Consultants Financial Resources Human resources	Reporting: MoF Monitoring HOG
Activity 6	***HR/Pr 1/Act 3 :*Develop ICT human resources development and computer acquisition programmes targeted towards youth and women**				
	MoLSS MoPS	By March 2015 onwards	1.increase in skills and access for youth and women 2.Awareness	1.Strategy 2.Funding 3.Connectivity	Reporting: MoLSS - Monitoring: HOG –

Programme 2	***HR/Pr2 :*Establishment of a National standardization and accreditation agency for ICT Training Institutions**				
Implementation target groups	National				
Relevant Policy objectives	All ICT Training institutions should be certified and accredited by the National Education and Training Standards and Accreditation Agency				
Programme specific goals	Ensure that all ICT training institutions are compliant to the National Education and Training Standards and Accreditation				
Actions/Activities/Interventions					
Activity 1	***HR/Pr2/Act1 :*Development of the standardization and accreditation policy**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoLSS	By end Dec 2013	1. Policy Document launched	Funding Consultants	Reporting: MoLSS Monitoring: Head Of Government
Activity 2	***HR/Pr2/Act2 :*Development of Accreditation standards**				
	MoE, MoLSS, MoICT	By end of 2014	Approved standards published.	Funding	Reporting: MoE Monitoring; Head of Government through performance targets.
Activity 3	***HR/Pr2/Act3 :*Creation of Accreditation and Standards Body**				
	MICT MoET MoPS	June 2014	Body in place	Funding Human Resources	Monitoring: MICT, HOG

Programme 3	***HR/Pr3 :*Institute programme for ICT skills development and upgrading within the Public Service**				
Implementation target groups	National				
Relevant Policy objectives	• To increase the ICT skills base, including for disadvantaged groups such as women, disabled, and unemployed in Swaziland; • To increase the number and improve the quality of ICT professionals in Swaziland; • To develop strategies to encourage and support ICT training for politicians, private and public sector executives, as well as community and civil society leaders;				
Programme specific goals	To develop ICT skill in the civil service and in the private sector To ensure the establishment of a culture of life-long learning.				
Actions/Activities/Interventions					
Activity 1	***HR/Pr31/Act 1:* Establish ICT Leadership training program for Politicians, PSs, and uUSs**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoPS/MoLSS	Start January 2013	Ministers, PSs, USs Trained.	Consultants Financial resources	Reporting: MoPS/MoLS Monitoring: HOG
Activity 2	***HR/Pr3/Act 2 :* Training program on ICT for the rest of the civil service from directors downwards at a rate of 25% per annum.**				
	MOPS MoLSS	Start June 2013	Increased number of ICT literate civil servants	1.Consultants 2.Funding	Reporting: MoPS - Monitoring: HOG –
Activity 3	***HR/Pr 3/Act 3 :*ICT literacy to become mandatory for professional employment in the civil service**				
	MoPS. CSC, TSC	By end of December 2013	Policy		Reporting: MoLSS Monitoring: HOG
Activity 4	**HR/Pr 1/Act 4: Establish programme to provide professional courses for IT Staff in government and public enterprises**				
	MoPS/MoLSS	Start January 2014	Experts exist in civil service	Financial Resources	Reporting: MoPS Monitoring HOG
Activity 5	**HR/Pr 1/Act 5: Create incentives for private ownership of PC and for completing the ICT training programmes**				
	MoF	By End of	Incentives utilized	Consultants	Reporting: MoF

		December 2013		Financial Resources	Monitoring HOG
Activity 6	***HR/Pr 1/Act 3* :Link HRD programmes to improving employment opportunities and equitable employment for women and youth, also link to enrollment of women in maths, science,ICT courses in high school and in college**				
	MoE/MoPS	Start January 2015	1.increase in skills and access for youth and women 2.Awareness	1.Strategy 2.Funding 3.Connectivity	Reporting: MoPS - Monitoring: HOG –

Program 4	***HR/PR4 :*To Develop a top notch ICT Skills base within the country**				
Implementation Target Groups	ICT Fraternity				
Relevant Policy Objectives	Development of national human resource capacity to enable the exploitation of ICT's within the society				
Program Specific Goals	To enable the country to fully utilize ICT and solve its inherent problems without reliance on outsiders				
Actions/ Activities/Interventions					
Activity 1	***HR/Pr4/Act1 :*Involve industry experts in ICT teaching i.e. Universities, Colleges, other training institutions**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.Ministry of Education, 2. IT companies' formations	ongoing	Employable ICT graduates	Funding for schools, Industry experts	Reporting; MoEDT, Private Sector Monitoring; Ministry of ICT & head of Government thru PMS
Activity 2	***HR/Pr4/Act2* :Practice sharing of skills in the industry**				
	Private sector	ongoing	1. workshops involving varying stakeholders 2. Improved productivity reports thru performance	1.Funding 2.Human resources	Reporting: Private Sector Monitoring: MICT

			reports		
Activity 3	***HR/Pr4/Act3*** **:Encourage research and continual training**				
	1.MoEDT 2.Tertiay Institutions 3. Science and Technology Park	ongoing	1.University research programmes 2. Other tertiary institutions research programmes	1. Funding 2. Human resources	Reporting: MoEDT Tertiary Institutions and Science and Technology Park Monitoring: MICT and Head of Government through PMS

Programme 5	***HR/Pr5:*Create initiatives to promote the acquisition of PCs by the private citizen and private sector**				
Implementation target groups	National				
Relevant Policy objectives	To develop strategies that will promote e-literacy and create a sustainable culture of ICT use and development To develop strategies to encourage the conversion of ICT Knowledge and skills into goods and services To ensure that all national information resources are accessible through ICT.				
Programme specific goals	To promote PC ownership by the individual				
Actions/Activities/Interventions					
Activity 1	***HR/Pr 5/Act 1:*** **Tax policy to facilitate purchasing of computer and other ICT equiment**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoF	By December 2013	Increase in ICT imports	Consultants Financial resources	Reporting: MoF Monitoring: HOG
Activity 2	***HR/Pr5/Act 2 :*** **Tax break for purchasing locally assembled or manufactured equipment and services**				
	MoF	By June 2013	Establishment of viable local companies	1.Consultants 2.Funding	Reporting: MoF - Monitoring: HOG –
Activity 3	**HR/Pr 5/Act 3: Explore other avenues for encouraging PC ownership by the private citizen and the home**				
	MoPS MoLSS	Ongoing	Emergence of strategies and public promotion exercises	Human resources	Monitoring: MICT, HOG

4.9 Strategic ICT Leadership

In order to avoid a situation where initiatives in the ICT sector are fragmented, in some cases resulting in a duplication of efforts/resources resulting in unexploited economies of scale and loss of potential synergies, there is need for strategic leadership by Government to ensure oversight and leadership capability to streamline and harmonise ICT initiatives. The Government will provide the political environment for development including the appropriate policies, standards, guidelines and a conducive regulatory and legislative environment for the achievement of agreed development goals. The Government will fuel demand for ICTs by being a visible user of the technology which can lead to increased government efficiency.

Objectives:

The objectives relating to strategic leadership are as follows:

- To develop an ICT policy and regulatory framework and create institutions that would enable the co-ordination of the country's ICT efforts/initiatives;
- To improve service delivery to the people of Swaziland, through the effective use of ICT;
- To create awareness across all sectors of the Swazi society on the role and potential of ICT in national development (economic, social, political and cultural);
- To create an enabling ICT investment environment which would foster strong co-operation and partnerships among all stakeholders at local, national, regional and international levels;
- To develop a robust e-government programme that would promote the use of ICT across all ministries and departments, with a deliberate gender bias;
- To encourage the increased use of ICT in all sectors of the Swazi economy; and
- To facilitate the participation of Swaziland in regional and global Information Society activities.

Government Policy Commitments:

- Provide a clear vision and leadership role in the promotion and the development an inclusive and sustainable Information Society (IS) in a convergent environment;
- Recognising the importance ICT as a catalyst for development, provide strategic leadership for ICT and promote ICT as a key strategy for national development and an effective instrument for empowering citizens to improve their quality of life;

- Create enabling policy, legislative and regulatory frameworks, that will ensure the proper leadership and co-ordination of ICT issues and the utilisation and exploitation of ICT in all sectors of life;
- Dedicate an appropriate budget and resources for ICT investment in order to improve ICT access and deployment;
- Promote bilateral relations and co-operation with regional, and international organizations that generate, process, store and disseminate ICT driven information in order to expand and strengthen local ICT capacity; and
- Apply ICT to improve the delivery of services to the people of Swaziland.
- support the use of free and open-source software (FOSS) in the development of e-strategies and plans;
- support the development of updated websites for Government departments;
- enable public, private and community sector partnerships through business incentives for both local and foreign investors including market entry at cost competitive prices; and
- Providing a basic efficient and cost-effective infrastructure backbone required for equitable access to national and international networks and markets. This includes requisite electric power networks etc;
- Mainstreaming ICT integration into national development plans/goals and enhancing the utilisation of ICT applications in Government offices; and
- The implementation of ICT programs could inevitably negatively affect the employment market through possible job losses. The government will have to develop strategies which militate against this.

Key Players:

Government
Private sector
Parastatals

ICT Leadership (IL)					
Program 1	***IL/Pr1*:Set up effective Legislative and Regulatory oversight institutions**				
Implementation Target Groups	National				
Relevant Policy Objectives	To develop an ICT policy and regulatory framework and create institutions that would enable the co-ordination of the country's ICT efforts/initiatives To acquire and strengthen national support				
Program Specific Goals	Create enabling policy, legislative and regulatory frameworks that will ensure the proper leadership and coordination of ICT issues and the utilization and exploitation of ICT in all sectors of life.				
	Actions/ Activities/Interventions				
Activity 1	***IL/Pr1/Act1* :ICT parliamentary Committee to champion and push implementation plan in the legislation arm of government**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	Parliament Minister ICT	on-going	Approved implementation Plan	1.Plan 2.Workshops 3.Funding	Reporting: Committee, Monitoring: UNECA, Head of government thro performance targets
Activity 2	***IL/Pr1/Act2* : Institutionalise the creation of a national task team to coordinate the ICT efforts and initiatives with the MoICT**				
	MoICT	By end June 2013	Appointment and gazzeting of a national task team	1.Human resources 2.Funding	Reporting;MoICT, Monitoring; Head of Government through performance reports
Activity 3	**IL/Pr1/Act3 :HOG to champion National Implementation and Awareness Campaigns - ICT Policy Implementation Plan**				
	1.Task Team 2.MoICT 3.Sector Leaders	Starting from Approval of the implementation plan to review	National awareness	Funding	Reporting; MoICT, Monitoring; Head of Government thro performance reports

Program 2	**IL/Pr2 :Improving government service delivery to the people of Swaziland through effective use of ICT**				
Implementation Target Groups	Regional , National, International				
Relevant Policy Objectives	Apply ICT to improve the delivery of services to the people of Swaziland and enhance job creation.				
Program Specific Goals	Recognise the importance of ICT as a catalyst for development, provide strategic leadership for ICT and promote ICT as a key strategy for national development and an effective instrument for empowering citizens to improve their quality of life.				
Actions/ Activities/Interventions					
Activity 1	**IL/Pr2/Act1 : Improve the gov .sz portal and Effective provision of government online services and e-documents through the existing network**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoICT, Computer Services, Cabinet Office	By end of March 2013	Existence of effective Online government services	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports
Activity 2	**IL/Pr 2/Act 2: Develop an eGovernment strategy which includes leadership, implementation and management mechanisms**				
	MoICT, CSD, Cabinet Office	By end of March 2013	Strategy document and task team	Human resources Financial resources	Reporting; MoICT Monitoring; Head of Government thro performance reports
Activity 3	**IL/Pr 2/Act 3: Implement eGovernment strategy**				
	MoICT, CSD, Cabinet Office	By end of March 2015	Fully functional portal Projects completed Management in place	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports

Activity 4	**IL/Pr2/Act 4: Enhance coordinated and centralized network planning and services procurement with local business involvement**				
	MoICT, Computer Services	By end of March 2013	Meetings held Planning team in place	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports
Activity 5	**IL/Pr 2/Act 5: Development of common platforms, housed in national data centres**				
	MoICT, Computer Services	By end of March 2013	Meetings held Planning team in place	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports
Activity 6	**IL/Pr 2/Act 6: Coordinate capacity building programs for Civil Servants, youth, women and the disabled**				
	MoICT, Computer Services	By end of March 2013	Meetings held Planning team in place	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports
Activity 7	**IL/Pr 2/Act 7: Put in place plans to commence awareness campaigns for eGovernment**				
	MoICT, Computer Services	By end of March 2013	Meetings held Planning team in place	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports
Activity 8	**IL/Pr 2/Act : Develop applications utilizing ICT to support rural farmers providing access to market information and innovation techniques**				
	MoICT, Computer Services	By end of March 2013	Meetings held Planning team in place	Funding for systems and HR	Reporting; MoICT Monitoring; Head of Government thro performance reports

Program 3	***IL/Pr3*** **:Initiatives to create networks and partnerships to keep the country abreast with and firmly tapped on the knowledge economy**				
Implementation Target Groups	National				
Current Status					
Relevant Policy Objectives	To create an enabling ICT investment environment which would foster strong co-operation and partnerships among all stakeholders at local, national, regional and international levels To facilitate the participation of Swaziland in regional and global Information Society activities				
Program Specific Goals	To connect with and participate in international fora for the proper administration of ICTs in the country and for the empowerment of key personnel				
Actions/ Activities/Interventions					
Activity 1	***IL/Pr3/Act1*** **:Establish bilateral and multilateral strategic relationships with relevant regional and international ICT organizations**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	MoICT,	Ongoing	Paid up memberships in the relevant organizations like CRASA, ILO, etc	Funding for	Reporting; MoICT,, Monitoring; head of Government thro performance targets reports
Activity 2	**IL/Pr 3Act 2: Endeavor to put in place mechanisms to make it possible to attend in all strategically important meetings, conferences, workshops, etc geared towards creating a progressive and responsible ICT environment**				
	MICT ICT operators Regulator	Ongoing	Attendance and reports from participants	Funding Personnel	Reporting: MICT Monitoring: HOG
Activity 3	**IL/Pr 3/Act 3: Establish collaboration mechanisms with local associations and other bodies dealing in ICT issues for the empowerment of local businesses and communities**				

	MICT Regulator	Ongoing	Mechanisms in place and publicized to stakeholders	Funding Personnel	Reporting: MICT Monitoring: HOG
Program 4	***IL/Pr4 :*****To make ICTs accessible to industry and consumers**				
Implementation Target Groups	National				
Relevant Policy Objectives	To encourage the increased use of ICT in all sectors of the Swazi economy; and To facilitate the participation of Swaziland in regional and global Information Society activities				
Program Specific Goals	To make service affordable To make content available				
Actions/ Activities/Interventions					
Activity 1	***IL/Pr4/Act1*** **:Introduce price regulation in order to provide ICT service at affordable cost**				
	Implementation Lead Agency/ Responsibility	**Timeframes**	**Performance Indicators**	**Required Resources**	**Monitoring and Reporting**
	1.The Regulator 2.Telecommunications operators 3. Private sector 4.MoICT	By end of June 2013	1. Existence of a communications regulator 2. Increased competition thro participation of more telecommunications companies	1. Funding 2. Human resources	Reporting: MoICT, Regulator Monitoring: Head of Government thro performance target reports
Activity 2	***IL/Pr 4/Act 2*****: promote the Swazi language on the Internet including supporting an on-line dictionary and sponsoring google**				
	1.SPTC 2.Private sector 3.Government	By the end of 2013	1.search engine available in Siswati 2. existence of an on-line siSwati dictionary 3.Government on Line docs available in SiSwati. 4.New Swazi	1.Funding 2.Human resources	1.Reporting SPTC 2.Minitoring:MICT,

			Language sites established		

ANNEX 1: Ministry of Information and Communications Technology (MICT) Strategic Direction & Institutional Review

1.0 MICT Mandate & Functions

The Mandate of the Ministry is the formulation, coordination and administration of policy with respect to Information, Communications and Technology in accordance with Gazette No 15 of 2009 and Legal Notice No 25 of 2009. Further, the MICT has the responsibility to provide an enabling environment for all stakeholders in the sector including:

- Planning and Policy-making *(*Policy formulation): Overall policy formulation, implementation, monitoring and review in collaboration with stakeholders.
- Regulation, monitoring and setting standards with oversight authority in all IC&T issues.
- Develop Information, Communications and Technology Legislation, Policy and Guidelines.
- Infrastructure development- e.g. libraries, telecom, broadcasting etc.
- To monitor Network performance, standards and security,
- To ensure consumer protection
- Resource Management- Human, Finance, Infrastructure etc
- Coordinate with international, regional and local institutions on IC&T issues.
- Internal and external resource mobilization for the development of IC&T
- Establishment of an enabling legal and regulatory framework, promotion investments in technology development
- Coordinating capacity development and setting of standards in the Information, Communications and Technology industry.
- Undertake and coordinate research and development in the IC&T sector.
- Provision of Central Communication Services
- Advising the Government on emerging Information, Communications and Technology issues.
- Develop in-house-programs and customizing off-the-shelf software
- Designing and Updating the Government's Website.
- Administer and manage Government System Servers.
- Designing and implementation of Local Area Network & Wide Area Networks
- Ensure Compliance to ICT Standards.
- Monitoring the performance of ICT equipments.
- Repair and Maintain ICT Equipment.
- Receiving, Installing and certifying ICT equipments.
- Configuring new ICT equipments.
- Preparing specification for ICT equipments and providing technical evaluation on new ICT equipments.
- Provide technical support and ICT training Skill to members of staff.
- Carry out Research on internet security.
- Prepare Progress reports on Information, Communications and Technology status in the country.

- Information Dissemination

1.1 MICT Objectives

- To provide efficient cost effective Information, Communications and Technology services
- Collection & preservation of public & non-public records
- To provide info through radio, TV, publications and other media technology
- Provide advice and direction on national communication policies, licensing regimes and regulatory frameworks designed to support socio-economic well-being of Swazi citizens
- Promotion of lifelong learning;
- Provide policy guidelines and coordinate key information and media development processes with Government.

1.2 Mission

To provide an efficient national IC&T delivery framework for Swazi citizens, the public and private sectors through converged services, applications, knowledge exploration and exploitation, documented heritage, and quality developmental information services.
To facilitate mainstream socio-economic integration. in order to promote Government policies and programmes.
To preserve public records for posterity; and encourage knowledge management through universal access to information, and well-developed, efficient and affordable communications facilities to minimize information poverty.

1.3 Vision

To be a regional leader in providing a conducive environment for Information, Communications and Technology development.

1.4 Core Values

In carrying out the mission, the Ministry will be guided by the following core values:

- Quality service delivery
- Integrity, transparency, accountability and confidentiality
- Efficiency and effectiveness in utilization of resources.
- Social equity.
- Innovation and creativity
- Proactive leadership
- Commitment
- Teamwork;
- Professionalism;
- Timeliness

1.5 MICT Structures

To undertake the above mandate and core functions, the ICT Ministry operates through seven functional Directorates/ Departments. These are;

- Information & Media Development
- Swaziland National Library Service
- Swaziland National Archives
- Swaziland Broadcasting and Information Services
- Communications
- Government Computer Services
- Research and Technology Development (at embryonic stage)

In addition, the Ministry is responsible (charged with overseeing) for overall guidance and policy coordination for the following state corporations and organizations:-

- Swaziland Television Authority
- Swaziland Posts and Telecommunications Corporation
- National Research Council
- Royal Science and Technology Park
- Royal Bio-Technology Park

1.6 Organizational Structure

The Ministry has a current staff establishment complement of 565 excluding the 400+/- registry staff of various cadres. All parastatals under the Ministry are semi-autonomous and are responsible to the Minister through the Principal Secretary who is also responsible for the seven Directorates. The current structure is represented in *Figure1*

The Information and Media Development Directorate provides strategic guidance, guides policy initiatives, leads, and coordinates key information and media development processes within Government.

The Swaziland Broadcasting and Information Services is mandated to disseminate news and information aimed at educating, informing and entertaining the Swazi nation effectively and impartially for purposes of development and social welfare through broadcasts and publications

The Communications Department is mandated to develop policies, licensing regimes and regulatory frameworks for the communications sector in Swaziland

The Swaziland National Library Service is mandated to provide free and equitable access to library services, preserve and promote universal access to a broad range of human knowledge, experience, information and ideas in a welcoming and supportive environment, and the use of new technologies that extend access to global information beyond library walls.

The Government Computer Services is mandated to provide Administration and management of Government System Servers. Designing and implementation of Local Area Network & Wide Area Networks, monitoring the performance of ICT equipments, repairing and maintaining ICT equipment and ensuring compliance to ICT Standards.

The Swaziland National Archives are responsible for the preservation of records for posterity and the management of the public registries of the Kingdom of Swaziland.

The Research, Technology and Development Directorate is tasked with the initiation, management and development of all cross-sectoral research and technological development including Royal Science and Technology Park and Royal Bio-Technology Park

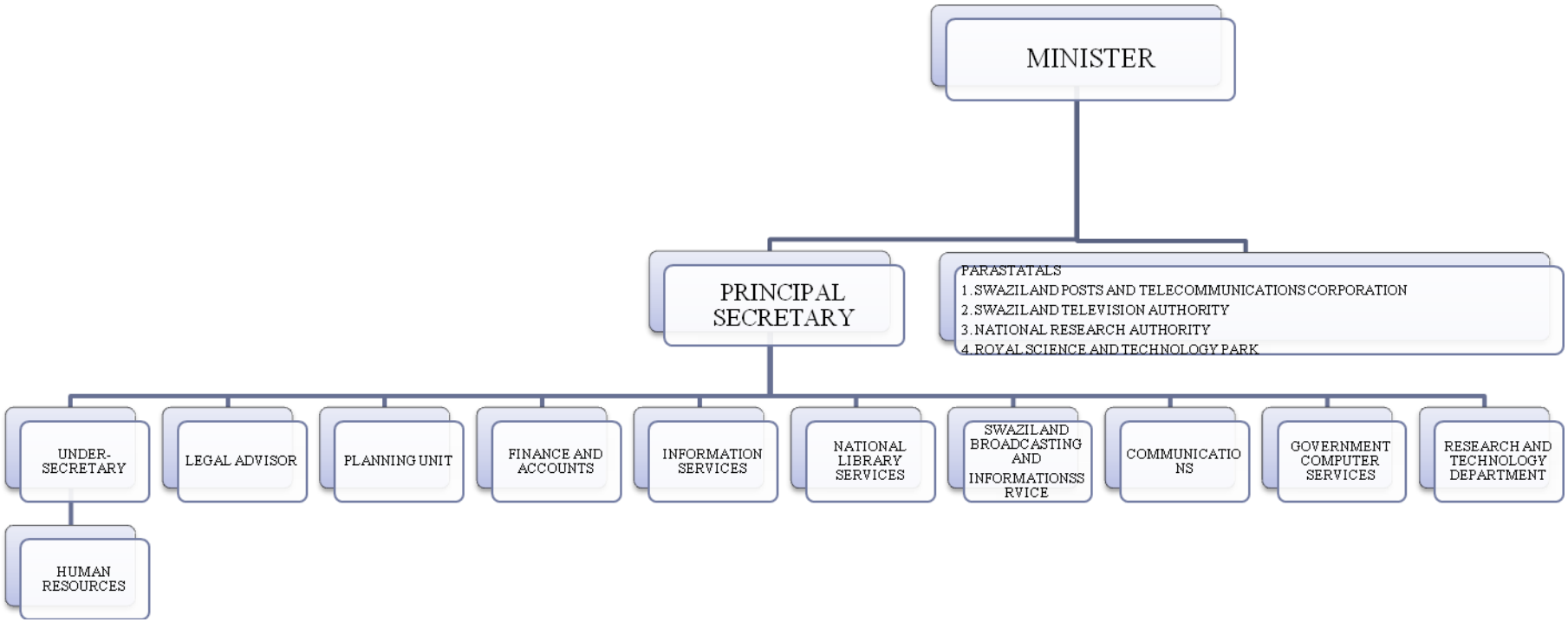


Table 7: MINISTRY OF INFORMATION AND COMMUNICATION TECHNOLOGIES ORGANOGRAM

2.0 CURRENT SITUATION APPRAISAL

2.1 MICT Institutional Review

The PESTEL analysis reveals that the environment within which the MICT has been created is fluid and requires a careful and measured approach in determining what programmes and projects have the highest chances of success. On the economic and social front there is the reality of Swaziland as a developing country.

The analysis of the technological component revealed that though great strides had been realized in infrastructure such as IC&T development there are gaps that need to be addressed in transforming Swaziland into a knowledge based economy. On the environmental front, the analysis brought to the fore the need to take cognisance of issues such as the disposal of IC&T equipment.

The SWOT analysis identifies key strengths and opportunities that the MICT will take advantage of, and weaknesses and threats it will mitigate against when implementing this Strategic Plan. The key strengths are centred on the existence of an enabling legal and administrative framework e.g. the MICT is a constitutional office which has strategic linkages.

The key weaknesses are based on existing institutional gaps such as the existence of parallel structures and weak processes (e.g. planning & human resource deployment & utilization). Opportunities identified from the analysis include: goodwill from stakeholders, the coordination and supervisory mechanisms. The threats include silo approach to formulation and implementation of policies, projects and programmes.

Portfolios reviewed:

- Information Services
- National Library Service
- Swaziland National Archives
- Swaziland Broadcasting & Information Service
- Swaziland Television Authority
- Communication Services
- Swaziland Post and Telecommunications
- Government Computer Services Department
- Research and Technology Department
- Royal Science and Technology Parks

2.2 MICT Related Regulations, Policies and Legislation

- Legal Notice Number 25 of 2009
- Swaziland Communications Commission Bill, 2009
- The Media Commission Bill, 2009
- Archives Act Draft Amendment 2009
- The National Archives (and Records Administration) Act no 5 of 1971 as amended

- The National Constitution of 2005;
- The Official Secrets Act 1968
- Books and Newspapers Act 1963
- Swaziland Radio Regulations 1992
- Telecommunications Regulations 1992
- Swaziland National Library Services Act Draft Amendment
- National Records Management Policy
- Government Communication Policy
- Draft Electronic Communication Bill
- National Information & Communication Infrastructure Policy
- The Finance and Audit Act 18/1967 as amended;
- Civil service Board (Regulations) 1973
- Swaziland General Orders 1968
- Employment Act 1985
- Industrial Relations 2005 amended
- SPTC Act No. 11 of 1983 as amended
- STVA Act 1983
- The PEU Act of 1989;
- Swaziland Constitution 2005
- Regional African Satellite Communications System (RASCOM) Convention
- International Telecommunications Regulations (ITU)

ANNEX 2: Rural ICT Development Matrix(ITU/ADB)

Component	ICT Policy Roles and initiatives			Private Market investment and competition		Public Financing, Government Programs		
	ICT Agency	**Ministry of Communications**	**Regulatory Authority**	**National Operators and suppliers**	**Local Entrepreneurs**	**Financing (PPP, SOE)**	**UA/US Policy and Fund**	**E-Govt, Ministries**
National Backbone Network and Rural Backbone	Develop national ICT Strategy, Implementation Plans, Oversee coordination among stakeholders	Define national ICT policy framework, develop legislation, define competition and licensing targets, international agreements	Define competition regime, issue licenses, assign spectrum, regulate prices, interconnection, consumer affairs, QoS	Network investment, construction, service operation, equipment sales and services	Purchase capacity from national backbone	PPP co-financing of infrastructure and/or network investment by SOE	Contribution to network financing through competition	Lease network capacity from licensed providers
Local Access Network					Local network investment, construction		Access network competitive subsidies	
Retail ICT Services					Independent or affiliated local service	SOE rural service provisioning	Designated USO provider	Purchase services from local providers
Public Access ICT Facilities	Provide technical support to community communications centres	Manage national community communications centre program	Regulate pricing, right of access for community communications centres	Provide services, equipment, discounts	Local ownership, operation, franchise	National Post Office, Libraries, Local government support	USF Funding for community communications centres	Delivery of E-Government services through community communication centres
End User Equipment and devices	Evaluate, support equipment procument	Advocate policies on import fees, domestic development	Type approval , QoS Review	Equipment import, sale and manufacture	Local sales of equipment and devices	Bulk contracts with suppliers for devices and software for rural projects	Support for device and software purchases, development under USF projects	Procurement and design of specialized devices and applications for schools, clinics , etc
Software, Applications and Content	Support software, application design and implementation		Consumer protection	Large-scale software and applications development, sales	SME and university apps and content programs			
Human resources	Support HR Capacity Development	Support ICT Training	Monitor and evaluate HR development	Employee and public training	Local training	Financing of National HR capacity building	Incorporate capacity building in USF Projects	ICT in education and skill development

ANNEX 3: eSADC Framework

Theme 1: Enabling the delivery of quality ICT services

Strategic objective 1: To provide a conducive policy, legal and regulatory environment for the development of an ICT culture

Actions:

- Enact digital/cyber security laws and regulations and continuously update the legal framework;
- Develop a SADC regional cyber law model for adoption and harmonisation; and
- Develop a SADC regional model on convergence.
- To develop regional policy, legal and regulatory model guidelines and laws to harmonize national e-strategies to the regional framework;
- To develop regional guidelines and laws for integrating cross-border e-applications;
- Create an enabling policy, legal and regulatory environment and incentives conducive for both foreign and domestic investment and to facilitate electronic transactions;
- Develop taxation policies needed to encourage the development of e-applications and other innovations; and
- Review the banking and financial services regulations to facilitate electronic transactions at national and regional levels.

Strategic objective 2: To develop ICT Infrastructure and Services

Actions:

- Create an enabling environment for investment in infrastructure and technology development and increase infrastructure provision to achieve affordable access and enhance its use;
- Coordinate the development of roads, energy supply and ICT infrastructure to enhance access and quality;
- Develop and adopt a regional cyber security framework and model cyber security/crime legislation;
- Deploy regional cross-border broadband networks and links to connect national capitals to the submarine cables;
- Explore Private Public Partnerships and other similar mechanisms for the effective and efficient deployment of ICT infrastructure and services; and
- Build synergies amongst initiatives such as the COMESA, EAC, SADC Tripartite and other continental initiatives.

Strategic objective 3:To invest in human resource development

Actions:

- Develop human resources and skills which are critical to meeting the knowledge economy;
- Develop a strategy to fill or compensate gaps in human resource needs;
- Develop curricula (at all levels) that includes an ICT component;
- Equip teacher training colleges to prepare teachers in the integration of ICT in the curriculum;
- Engage the public and private sectors in relevant training to meet the needs of the ICT sector;
- Develop a skills retention strategy (skills transfer, incentive program);
- Support regional R&D initiatives.
- Capacity building for SMME's to embark on e-business;
- Develop a regional programme for knowledge and skills development for the creation of an ICT labour pool for the information economy;
- Strengthen and/or include ICT capacity building programmes in regional and national Centres of Excellence;

- Prioritize innovation in the development of the education curriculum from primary to tertiary levels including lifelong learning;
- Develop a regional capacity building programme in partnership with the private sector; and
- Take advantage of existing human resources capacity building programmes for ICT knowledge development offered by business and management schools.

Theme 2: E-applications and innovation

Strategic objective 3:To invest in human resource development

Actions:

- Develop common standards to enable e-applications to facilitate cross-border and regional services and transactions, including banking and financial transactions;
- Promote and provide incentives for the development of innovative e-applications relevant to regional needs; and
- Initiate an e-government programme to promote more efficient regionally-based applications to better serve citizens, businesses and consumers in the region.

Strategic objective 5: Increase the use of ICTs in Business

Actions:

- Introduce regional measures such as certification, authentication to ensure trust in the use of e-services and e-commerce; and
- Removal of barriers to increased use through PPP's and other mechanisms in the development of e-applications.

Strategic objective 6: Developing an ICT Industry

Actions:

- Engage in regional programmes to promote innovation that leads to the development of the local ICT manufacturing including the support of Research and Development in institutions of higher learning;
- Develop regional partnerships amongst member States already involved in the ICT industry;
- Develop regional standards and agreements with upstream suppliers to achieve economies of scale;
- Explore the potential of developing a regional ICT manufacturing industry and ICT services sector;
- Promote entry into the ICT Industry through PPP's and other mechanisms in the development of e-applications;
- Promote incubation for start-ups and also for commercializing R&D; and
- Provide for innovation and technology diffusion by structuring Intellectual Property Rights regimes to bolster innovation.

Theme 3: Governance of the e-SADC Strategy

Strategic objective 7: Development of an Institutional Mechanism

Governance

Actions:

- Strengthen SADC Secretariat to facilitate implementation, monitoring and evaluation of progress; and
- Strengthen the regional ICT implementing agencies to drive the ICT agenda.

Financing

Action:

- Adopt regional sustainable financing mechanisms with emphasis on domestic sources.

Multi-stakeholder Partnerships

Action:

- Strengthen existing regional multi-stakeholder fora and engage them in policy making and build

synergies.

E-SADC Communication strategy

Actions:

- Engage with the regional ICT professional networks and media bodies to develop and rollout the communication strategy; and
- Develop a regional media training program to create awareness on ICT reporting.

ANNEX 4: SCHEDULES OF PROGRAMS AND ACTIVITIES

Summary **Legal and regulatory frameworks (LRF)** **(Scheduling of Activities)**																					
Program and Activity Description	Implementing Agency	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
***LRF/Pr 1:* Create a competitive environment in the communications industry**																					
LRF/Pr1/Act1 : Development of an ICT policy implementation plan																					
LRF/Pr 1/Act 2: Enact the Swaziland Communications Commission(SCC), the Electronic Communications(EC) and Broadcasting Bill																					
LRF/Pr 1/Act 3: Create an independent communications regulator by operationalising SCC																					
LRF/Pr 1/Act 4: Restructuring the Swaziland Posts and Telecommunications Corporation																					
LRF/Pr 1/Act 5: Draft and enact the Swaziland Telecommunications Company(STC), and Swaziland Postal Corporation(SPC) bill to Separate the two businesses, this will allow SPTC to																					

dissolve relations and windup																					
LRF/Pr 1/Act 6: Operationalise the STC and SPC Acts																					
LRF/Pr 1/Act 7: Develop and operationalize the privatization policy																					
LRF/Pr 1/Act 8: Privatise STC																					
LRF/Pr.1/Act 9: Develop and Enact Cyber Security Legislation																					
LFR/PR 2: Create and Implement a National roadmap for the analogue to digital Migration of terrestrial TV by end of 2013																					
LRF/Pr 2/Act 1: Undertake a scoping exercise and undertake a situational analysis of Swaziland to establish the readiness and status of Swaziland for Digital switchover from Analogue by 2013																					
LRF/Pr 2/Act 2: Synchronise legislation with technological developments for digital migration including key policy issues that will affect broadcasting																					
LRF/Pr 2/Act 3: Establish digital migration task force to drive the Digital Migration process.																					
LRF/Pr2/Act 4: Develop the National Analogue to Digital TV Migration Roadmap with a target to swtchover by December																					

2013																						
LRF/Pr 2/Act 5: Implement Analogue to Digital TV roadmap to analogue switchover by December 2013																						
LFR/Pr 3: Develop Communications Infrastructure regulations, National frequency Plan of Spectrum, and Broadcast Content regulations																						
LRF/Pr 3/Act 1: Draft Sectoral paper that addresses area of inadequacy and lobby relevant policy makers																						
LRF/Pr 3/Act 2: Review exclusivities in the Bill, introduce number portability, undertake a market survey and draft regulations																						
LRF/Pr 3/Act 3 : Establishment of unbundling and co-location Policy on ICT																						
LRF/Pr 3/Act 4: Develop Broadcasting regulations																						
LRF/Pr 3/Act 5: Develop cyber security guidelines																						
***LFR/Pr 4:Set up* initiatives to increase radio broadcasting coverage, content and access to information**																						
LRF/Pr 4/Act 1: Establish licensing criteria and license conditions for community and commercial radio stations																						
LRF/Pr 4/Act 2: License 4 community radio stations and 1 commercial radio station																						
LRF/Pr 4/Act 3: Establish mechanism for addressing																						

broadcasting complaints																					
LRF/Pr 4/Act 3: Establish mechanism for regulation and production of content																					
***LRF/Pr 5:* Create a multi-sector stakeholder group to manage the domain name**																					
LRF/Pr 5/Act 1: Review current arrangements and Appoint a domain management Board																					
LRF/Pr 5/Act 2: Establish guidelines for the acquisition and management of domain names																					
LRF/Pr 5/Act 3: Initiatives for building and managing the necessary infrastructure																					
***LRF/Pr 6:* Facilitate electronic transactions by means of reliable electronic communications supported by appropriate legislation - Electronic Payments and Transaction Bill (EPT)**																					
LRF/Pr 6/Act 1: Carry out a due diligence audit of all the laws or sections of laws that may be affected by the EPT Bill																					
LRF/Pr 6/Act 2: Review of current policies & legislation relating to Electronic payment transactions																					
LRF/Pr 6/Act 3: Draft EPT bill																					
LRF/Pr 6/Act 4: Submit Bill to Cabinet and Parliament respectively																					
LRF/Pr 6/Act 5: Train law enforcement agencies, magistrates, prosecutors and judges on EPT Bill (ACT)																					

Summary

Environmental Management(EM)

(Scheduling of Activities)

Program and Activity Description	Implementing Agency	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
***EM/Pr 1*: Initiatives to determine policies to be put in place for electronic equipment disposal**																					
EM/Pr 1/Act 1: Inventory analysis to ascertain how much electronic equipment is redundant in the country																					
EM/Pr 1/Act 2: Develop anti-dumping policies and standards																					
EM/Pr 1/Act 3: Establish guidelines for disposal																					
***EM/Pr 2*: Institute a 3-5 year programme to create awareness/attitude change nationally**																					
EM/Pr 2/Act 1: Build connectivity and websites for knowledge sharing and networking among the key stakeholders																					
EM/Pr 2/Act. 2: Develop radio, television and other media content on use of ICT for climate change and sustainable development																					
***EM/Pr 3*: Initiate a collaborative coherent program approach with public and private sectors to enable them to accommodate environmental considerations in their policies, strategies and programmes**																					
EM/Pr 3/Act 1: Establish a national environmental mechanism for ensuring that environmental priorities of national planning are observed																					
EM/Pr 3/Act 2: Fully integrate environmental management and development planning																					
EM/Pr 3/Act 3:Operationalise and																					

environmental policy and regulation and Establish mechanism for rewarding/fining private sector for performance on environmental management																					
EM/Pr3/Act 4: Establish fund for environmental disaster cleanup through tax instruments and environmental regulations and donation																					
***EM/Pr 4*: Initiate specific research and studies to develop methodologies and tools for the implementation of sustainable development**																					
EM/Pr 4/Act 1: Develop the environmental data themes of the NSDI to support planning, implementation, control and evaluation of environmental programmes																					
EM/Pr 4/Act 2: Develop studies and ICT tools for monitoring climate change																					

Summary

The Financial Services Sector(FS)

(Scheduling of Activities)

Program and Activity Description	ESTIMATED COST	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
FS/Pr 1: **Initiative by financial institutions that promote the use of ICTs by by the public and private sector**																					
FS/Pr 1/Act 1: All financial institutions to reduce average costs per electronic transaction by 25% per annum																					
FS/Pr 1/Act 2: Introduction of at least two local (Swazi) credit and debit cards																					
FS/Pr 1/Act 3: Development of websites and delivery of most services via electronic means																					
FS/Pr 1/Act 4: To Operationalise a local inter-bank ATM and point of sale/switch																					
FS/Pr 2: **Introduce initiative that promote SMME's participation in the ICT value chain**																					
FS/Pr 2/Act 1: Institute programmes to promote local SMMEs by ensuring that they acquire at least 30% stake in all ICT procurement ventures by local financial institutions																					
FS/Pr 2/Act 2: Establish initiatives that promote eCommerce and provide funds for ICT start-ups																					

FS/Pr 3: **Develop and implement ICT Governance policies, structures and regulations for financial institution**																						
FS/Pr 3/Act 1: All financial institutions to fully develop and implement ICT Governance based on guidelines to be issued by the central bank.																						
FS/Pr 3/Act 2: Investigate and establish a public key system and other digital indentification and certification mechanism																						

Summary

Infrastructure development(ID)

(Scheduling of Activities)

Program and Activity Description	Implementing Agency	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
ID/Pr 1: Establish initiatives for increasing the fixed line teledensity by 20% per annum																					
ID/Pr 1/Act 1: Develop and implement a strategy for increasing the fixed line teledensity by 20% per annum																					
ID/Pr 1/Act 2: Expand network capacities and coverage leveraging on license obligation																					
ID/Pr 1/Act 2: Establish Universal Services/Access Policy and review the existing Fund and management system																					
ID/Pr 1/Act 3: Operationalise the US policy including the Universal Service Committee(USC)																					
ID/Pr 2: **Initiatives to connect all 100% of the 55 Tinkundla to the Internet and to parliament**																					
ID/Pr 2/Act 1Development of a strategy for the connection of the 55 tinkhundlas in line with the Parliament ICT Master Plan																					
ID/Pr 2/Act 2: Implement the strategy and synchronise activities with MoE, National Physical																					

Development Planning																						
ID/Pr 2/Act 3: Explore innovative sources of funding for the connectivity programmes																						
***ID/Pr 3:* Initiative to set up at least 100 community communication centres(Multimedia)(CCC) by 2016**																						
ID/Pr.3/Act 1: Identify communities and develop a strategy and a sustainable business model s for centres and synchronise with national development planning(mini 30 per year)																						
ID/Pr3/Act 2: Promote entrepreneurship and raise awareness on opportunities in the development of CCCs																						
ID/Pr.3/Act 3: Mobilise resources and ensure participation of woment and the physically disable																						
ID/Pr 3/Act 4: Implement CCC Strategy starting with 1 prototype per region.																						
ID/Pr 3/Act 5: Ensure training for operators and include facilitation of training as part of the business model																						
***ID/Pr 4:* Expand both the national and international broadband backbone**																						
ID/Pr 4/Act 1: Government to consider and develop a policy regarding the use of Public Private Partnerships and other financing mechanisms in the development of ICT infrastructure																						

ID/Pr 4/Act 2: Build the national backbone broadband network(1Tb/s)minimum and 10Gb/s international and reduce interconnection and bandwidth charges to encourage usage of ICT																					
ID/Pr. 4/Act 3: Remove exclusivities on Backbone and international bandwidth																					
***ID/Pr 5:* Propagate the use of ICTs in the health industry by connecting all health centres, major clinics and hospitals**																					
ID/Pr 5/Act 1: Development of an eHealth strategy including connectivity, applications and content																					
ID/Pr 5/Act 2: Implement strategy connecting Clinics, health centres to regional hospitals and creating a national health information network and pilot telemedicine programme																					
ID/Pr5/Act 3: Institute programmes for private practices to connect to the health network																					
ID/Pr 5/Act 4: Accelerate infrastructure sharing and coordination amongst Ministries																					
ID/Pr 6:Set up initiatives that make ICT terminals and equipment affordable to the public, attracts investment in the ICT industry and facilitates the flow of FDI																					
ID/Pr 6/Act 1: Retrieve relevant information on																					

computer and ICT equipment imports from Customs and Excise and develop an implementation plan																					
Benchmark studies on how to make the ICT equipment affordable and accessible																					
ID/Pr 6/Act 2: Prepare relevant Cabinet Paper for approval of tax instruments ie. Exempt ICT equipment from duty, Tax exemption of computers assembled in Swaziland, tax holidays for ICT companies																					
ID/Pr 7: Initiatives to establish a national Geoinformation System																					
ID/Pr 7/Act 1: Establish a national GIS policy to address SDI infrastructure																					
ID/Pr 7/Act 2: Establish a centralised system and populate data																					
ID/Pr 7/Act 3: Create awareness among the users																					
ID/Pr 8: Provide 100% transmission coverage public television broadcasting and with appropriate content																					
ID/Pr 8/Act 1: To participate in Satellite TV broadcasting with Satellite broadcasting entity in recognition of a the must carry rule																					
ID/Pr 8/Act 2: Install , commission and switch onTerestrial digital Broadcasting Equipment																					
ID/Pr 8/Act 3: Switch Off Analogue Television																					
ID/Pr 9: Develop initiatives for Agriculture																					

ID/Pr 9/Act 1: **Establish a national ICT Master Plan for Agriculture**																					
ID/Pr 9/Act 2: **Implement national ICT Master Plan for Agriculture**																					
ID/Pr 9/Act 3: **Create database, commercial electronic market and weather advisory board for farmers via mobile phone and PC**																					
ID/Pr 9/Act 4: Establish a food security and water resources monitoring network, database and awareness campaign																					

ID/PR 8/Act 4: Public broadcaster to train staff on new digital system as part of arrangements with supplier																					
ID/Pr 8/Act 5: Set up initiatives for the development of Local content and new television channels																					

Summary Media (M) (Scheduling of Activities)																					
Program and Activity Description	ESTIMATED COST	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
M/PR/1: Set up initiatives leading to the passing of media bills by Parliament																					
M/Pr/1/Act 1: Lobby parliamentarians and key government officials for support for Freedom of Information,, Media Commission, Newspaper and Books Amendment, Broadcasting, Intellectual Property and Copyright Bills																					
M/Pr 1/Act 2: Convene meeting of Steering Committee to prepare for broader stakeholder consultations and lobby parliamentarians and key government officials for support																					
M/Pr 1/Act 3: Passing of the necessary Acts and operationalisation																					
M/Pr 1/Act 4: Education of the police and media industry on the media related legislation																					
M/Pr.1/Act 5: Set up awaremess campaigns on the legislation																					

***M/Pr 2:* Operationalize skills development section of Information and Media Policy**																					
M/Pr 2/Act 1: Conduct needs assessment survey of ICT skills development in media sector																					
M/Pr 2/Act 2:Create skills development plan including funding and management mechanisms																					
M/Pr 2/Act 3: Implement skills development plan																					
M/Pr 3: Encourage the use of ICT Technology in the creation and delivery of Content																					
M/Pr 3/Act 2: Develop national ICT awareness programmes																					
M/Pr 3/Act 3: Implement plans																					
M/Pr 3/Act 4: Set-up fund for the development of indigenous content and applications																					

Summary Education (E) (Scheduling of Activities)																					
Program and Activity Description	Implementing agency	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
***E/Pr1:* Initiative to establish an Educational Management Information Systems (EMIS)**																					
E/Pr 1 /Act 1: Undertake a needs assessment exercise and design and develop EMIS Master Plan																					
E/Pr 1/Act 2: Implementation of EMIS																					
E/Pr 1/Act 3: Operationalise the Plan Populate EMIS/GIS through a school mapping exercise nationwide;																					
E/Pr 1/Act 4: design a website and make information available																					
***E/Pr 2: Begin* Initiatives to ensure that all teacher training institutions offer basic computer training to all incoming trainees, lecturers and teachers**																					
E/Pr 2/Act 1: Development of ICT policy or guidelines for teacher training																					
E/Pr 2/Act 2: Adoption of the pilot curriculum for teacher training colleges, evaluation and review																					

workshops																					
E/Pr 2/Act 3a: Adoption of ICT as a compulsory course in all departments and the infusion of ICT into all subject areas including training workshops for college lecturers and INSET																					
E/Pr 3: **To ensure that an examinable computer studies curriculum for secondary and high schools is in place and that ICT literacy is a mandatory requirement for entry into tertiary institutions**																					
E/Pr 3/Act 1: Employment of a senior inspector of ICT by the MOET and the creation of an ICT subject panel																					
E/Pr 3/Act 2: Reviewing current ICT curriculum and development of a new one in line with SGSCE/AS and adopting relevant pedagogical approaches to the teaching of ICT in schools.																					
E/Pr 3/Act 3:a) Development of a school ICT policy (standards and requirements) b)and empowerment of teachers in subjects already existing in curriculum																					

E/Pr 3/Act 4: Introduce ICT in non-formal and long distance institutions like Mlalatini, SEBENTA and vocational skill centres																					
E/Pr 4: **Ensure that 100% of the secondary and high schools and 50% of primary schools have computer laboratories with Internet access (possibly even after school hours**																					
E/Pr 4/Act 1: Undertake a situational analysis to find out the extent of ICT in all schools in the country																					
E/Pr 4/Act 2: Develop a Master Plan that will strategically put computers in schools/communities that are in need and review findings with private sector engagement																					
E/Pr 4/Act 3: Implementation of Master Plan setting up of ICT labs and																					

E/Pr 4/Act 4: Encourage communities to contribute in the setting up of computer labs, monetary and/or in kind and set up local ICT working groups for support, security and maintenance and Solicit support from local and international private sector especially for project implementation																					
E/Pr 4/Act 5: Develop guidelines for operations at school community level.																					
E/Pr 5: **To ensure that the Ministry of Education has a standards monitoring body and that all private training schools receives official accreditation**																					
E/Pr 5/Act 1: Development of policy for private tertiary institutions and a design of registry of all tertiary institutions in the country																					
E/Pr 5/Act 2: Evaluate all syllabuses offered in the country public and private and develop a MOET sector policy on ICT																					

E/Pr 5/Act 3: Finalise the National Qualification Framework and include ICT																					
E/Pr 5/Act 4: Empower Regulator to act as a bureau of standards for all ICT in the country, minimum standards to be observed and create partnerships with business and industry																					
***E/Pr 6:* Initiatives to ensure that Graduates from Tertiary Institutions have advanced ICT Competences**																					
E/Pr 6/Act 1: Situational analysis of current graduates who leave the institutions ICT literate at all levels of education and strategic plans developed to ensure that ICT is integrated into all courses																					
E/Pr 6/Act 2: Integrate the ICT plan into the university development plan and colleges to integrate their plans into the MOET sector plan																					

E/Pr 6/Act 3: Undertake a studies to investigate whether the university cannot create a whole faculty for ICT and how ICT could be used by IDE students at regional level																					

Summary

ICT Industry (II)

(Scheduling of Activities)

Program and Activity Description	Implementing agency	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
II/Pr1: **Establish National ICT Agency and/or National Research Commission Bill to harmonize with Government operations and coordinate the implementation of the NICI 2016**																					
II/Pr1/Act 1: Draft and enact a bill for the establishment of the National ICT Agency to coordinate and carry out research for the development of the ICTindustry																					
II/Pr 1/Act 2: Operationalise National ICT Agency																					
II/Pr 2: Initiatives to facilitate a stable environment and provide incentive in support of exploitation of ICTs in industry																					
II/Pr2/Act 1: Ensure and enabling environment by Harmonizing and synchronizing ICT legislation (intellectual property laws, information protection laws, technology transfer e.t.c)																					
II/Pr 2/Act 2: Establish special tax instruments and incentives for the development of ICT production																					

sector(3years)																					
II/Pr 2/Act 3: Establish special incentive packages for the development of the ICT services sector(3 years)																					
II/Pr2 : **Establish programmes to promote the development of Science and Technology Parks**																					
II/Pr2/Act1 : Establishment of Science and Technology parks policy and guidelines and facilitate the set-up of both private and public parks																					
II/Pr2/Act2 :Implement pilot and identify and facilitate establishment of at least four ICT companies in the technology parks annually starting in December 2013																					
II/Pr 2/Act 3: Adopt and enforce ICT industry standards																					
Develop and implement incentives programmes for STPs to attract investors																					
II/Pr3 : **Encourage local entrepreneurs to participate in global/regional and local ICT industry**																					
II/Pr3/Act1 :Establish a roadmap comprising of a policy and strategic implementation plan to encourage SMMEs to participate in the ICT Industry																					

II/Pr3/Act1 :Establish a fund to finance SMMEs to participate in the ICT Industry																					
II/Pr3/Act1 Create initiatives to encourage electronic commerce (e-commerce) and electronic trade (e-trade) by setting up pilot projects and resource centres																					
II/Pr4/Act1 :Establish and implement a Public Private Partnership(PPP) policy																					

Summary

Human resource capacity (HR)

(Scheduling of Activities)

Program and Activity Description	Impementing Agency	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
***HR/Pr1 :*Development of a master plan for ICT capacity building including structures and bodies**																					
HR/Pr 1/Act 1: Strengthen and restructure the Human Resources development agency																					
HR/Pr1/Act1 :Conduct a human resources assessment study including a skills audit																					
HR/Pr1/Act2 : Development of ICT HRD policy and implementation strategy taking special care of inclusion of women and the disabled																					
HR/Pr1/Act 3 : Implement initiatives which may include upgrading of colleges and universities and the establishment of a human resources development fund(HRDF)																					
HR/Pr 1/Act 4: Create																					

incentive and tax breaks for ICT HRD by private sector companies.																					
HR/Pr 1/Act 5: Develop ICT HRD and computer acquisition programmes targeted towards the youth and women																					
HR/Pr2 :**Establishment of a National standardization and accreditation agency for ICT Training Institutions**																					
HR/Pr2/Act1 : Development of the standardization and accreditation policy																					
HR/Pr2/Act2 : Development of Accreditation standards																					
HR/Pr 3: Institute programme for ICT skills development and upgrading within the civil service and in the private sector																					
HR/Pr 3/Act 1: Training programme on ICTs for Ministers, PSs, and Undersecretaries																					
HR/Pr 3/Act 2: Training programme on ICT for the rest of the civil service from Directors downwards 25% per year																					
HR/Pr 3/Act 3: ICT literacy to be mandatory for professional employment in the civil service																					
HR/Pr 3/Act 4:																					

Program to provide professional courses for IT staff in Government and public enterprises																					
HR/Pr 3/Act 5: Incentives for private ownership of PC and for completing the ICT program																					
HR/Pr 3/Act 6: Link the HRD programmes to improving employment opportunities and equitable employment for women and youth and also link to enrollment in high school and college for women.for maths, science and ICT.																					
HR/Pr 4: Create initiatives to promote the acquisition of computer equipment by civil and public service organizations including private ownership																					
HR/Pr 4/Act 1: Tax policy to facilitate purchasing of computers and other ICT equipment																					
HR/Pr 4/Act 2: Tax break for locally assembled or manufactured computers and other ICT equipment. and services																					

Summary ICT Leadership (IL) (Scheduling of Activities)																					
Program and Activity Description	ESTIMATED COST	2012				2013				2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
***IL/PR1 :*To Develop a top notch ICT Skills base within the country**																					
IL/Pr 1/Act1 :Involve industry experts in ICT teaching i.e.UNIVERSITIES, Colleges, other training institutions																					
IL/Pr 1/Act2 :Practice sharing of skills in the industry																					
IL/Pr 1/Act3 :Encourage research and continual training																					
***IL/Pr2* :Set up effective legislative and regulatory oversight institutions by June 2012)**																					
IL/Pr 2/Act1 :ICT parliamentary Committee to lobby for the ICT policy plan implementation																					
IL/Pr 2/Act2 :Creation of ministerial and national task teams to coordinate the ICT efforts and initiatives with the MoICT																					
IL/Pr 2/Act3 :National Awareness Campains-ICT Policy Implementation Plan																					

IL/Pr3 :Improving government service delivery to the people of Swaziland through effective use of ICT																						
IL/Pr 3/Act 1: Improve the gov.sz portal and effective provision of government on-line services and e-documents through the existing systems																						
IL/Pr 3/Act 2: Develop an eGovernment Strategy which includes leadership, implementation and management mechanisms and structure																						
IL/Pr 3/Act 3: Implement eGovernment Strategy.																						
IL/Pr 3/Act 4: Implement a coordinated and centralized network planning and services procurement with local government in order to gain economies of scale.																						
IL/Pr 3/Act 5: Development of common platforms and create national data centres																						
IL/Pr 3/Act 6: Set up eGovernment Capacity Building for Civil Servants																						
IL/Pr e/Act 7: Develop and implement awareness campaigns on eGovernment																						
IL/Pr 3/Act 8: Develop ICT information systems for agriculture, health, education and justice in coordination with relevant ministries																						

IL/Pr 4: Provide strategic leadership for ICT development and promote ICT as a key strategic imperative for national development and an effective instrument form empowering citizen																					
IL/Pr 4/Act 1: Formalise ICT literacy as a mandated for all citizens and provide facilities including mobile facilities programme in addition to schools, tinkhundla centres, libraries and community centres where people would have access to ICT.																					
IL/Pr. 4/Act 1: Develop a stakeholders forum to discuss the use of ICT in development.and to allow for participation and feedback																					
IL/Pr 4/Act 3: Develop and a nomination strategy for the TIGA Awards that is forwarded to the regional awards.																					
IL/Pr 5: Develop initiatives that make ICT accessible to consumers and industry To make ICT accessible to key sectors and consumers																					
IL/Pr 5/Act 1: Introduce price regulation in order for ICT services to be affordadable.																					
IL/Pr 5/Act 2: Promote the Swazi language on the Internet including supporting an on-line translation service and on search engines.																					
IL/Pr 5/Act 3: Promote the development of indigenous social networks and																					

professional networks																						
IL/Pr 5/Act 3: Promote the development of on line resources and tutorials																						
IL/Pr 6: Set up initiative, policies and structures to facilitate the involvement of Women in ICT																						
IL/Pr 6/Act 1: Set up an ICT directorate within the ministry that is responsible for Gender.to advocate for the involvement of women in ICT																						
Il/Pr 6/Act 1: Set up initiatives to increase the enrollment of women in ICT educational programmes at tertiary level																						
IL/Pr 6/Act 2: Establish Initiatives and recruitment policies to increase the representation of women in the ICT related professions																						
IL/Pr 6/Act 3: Design programmes to facilitate the involvement of women in the ICT services sector and industry.																						
IL/Pr 6/Act 4: Set up initiatives to increase the number of women in management position in the ICT Industry and Service sector.																						
IL/Pr 6/Act 5: Create initiatives directed towards encouraging girls to take science and technology education and training programmes																						

ANNEX : BUDGETARY ESTIMATES

PILLAR 1: Legal and Regulatory Frameworks (LRF)		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE(USD)**
LFR/Pr 1	Create of a competitive and enabling environment for the ICT industry	5,000,000.00
LFR/Pr 2	Create and implement a National Road Map for Digital Terrestrial Broadcasting Migration by the end of 2015	2,000,000.00
LFR/Pr 3	Develop communications infrastructure, national spectrum plan, and broadcasting regulations	REGULATOR FUNDS
LFR/Pr 4	Set up initiatives to increase radio broadcasting coverage and content; and facilitate access to information	2,000,000.00
LFR/Pr 5	Create a multi-sector stakeholder group to manage the country level domain name	50,000.00
LFR/Pr 6	Facilitate electronic transactions by means of reliable electronic communications supported by appropriate legislation- Electronic Payment and Transaction(EPT) and Cyber Security bills	50,000.00
PILLAR2: Environmental Management(EM)		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
EM/Pr 1	Establish initiatives and policies for electronic equipment disposal	100,000.00
EM/Pr 2	Institute a 3-5 year programme to create awareness and attitude change nationally	50,000.00
EM/Pr 3	Initiate a collaborative coherent program approach with public and private sectors to enable them to incorporate environmental considerations in their policies, strategies and programmes	50,000.00
EM/Pr 4	Initiate specific research and studies to develop methodologies and tools for the implementation of sustainable development in mitigating environmental issues and green economy management	2,000,000.00
PILLAR3: Financial Services		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
FS/Pr1	Initiatives by financial institutions that promote the use of ICT by the	20,000.00

	public and the private sector.	
FS/Pr 2	Introduce initiatives that promote SMME participation in the ICT value chain.	2,000,000.00
FS/Pr3	Develop and implement ICT Governance policies, structures and regulations for financial institutions that ensure trust.	50,000.00
PILLAR 4: Infrastructure Development		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
ID/Pr 1	Establish initiatives for increasing the fixed line teledensity by 20% per annum	750,000,000.00
ID/Pr 2	Initiatives to connect 100% of the 55 Tinkhundlas to the parliament and to the Internet	2,000,000.00
ID/Pr 3	Initiative to set-up at least 100 multimedia community communications centres (CCC) by 2016	5,000,000.00
ID/Pr 4	Expand the national and international broadband backbones	250,000,000.00
ID/Pr 5	Propagate the use of ICT in the health industry by connecting all health centres, clinics and hospitals into one health network and establish a Health Management Information System(HMIS)	1,000,000.00
ID/Pr 6	Set-up initiatives that make terminals and equipment affordable to the public, attracts investment in the ICT industry and facilitates the flow of FDI	50,000.00
ID/Pr 7	Initiatives to establish a national geo-information system	500,000.00
ID/Pr 8	Provide 100 transmission coverage public television broadcasting, with appropriate content	1,000,000.00
ID/Pr 9	Develop initiatives for Agriculture	300,000.000
PILLAR 5: Media		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
M/Pr 1	Set-up initiatives leading to the passing of media bill by parliament	50,000.00
M/Pr 2	Operationalise skills development section of information and media policy	100,000.00
M/Pr 3	Encourage the use of ICT Technology in the creation and delivery of content	100,000.00

PILLAR 6: Education(E)		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
E/Pr 1	Initiative to establish an Education Management Information System(EMIS)	500,000.00
E/Pr 2	Establish initiatives to ensure that all teacher training institution offer basic computer training to all incoming trainees, lecturer, and teachers	1,000,000.00
E/Pr 3	Ensure that an examinable computer studies curriculum for secondary and high schools is in place and that ICT literacy is a mandatory requirement for entry into tertiary institutions	100,000.00
E/Pr 4	Ensure that 100% of secondary and high schools, and 50% of primary schools have computer laboratories with Internet access	500,000.00
E/Pr 5	Ensure that the Ministry of Education has a standards monitoring body and that all private ICT training schools receive official accreditation	100,000.00
E/Pr 6	Initiatives to ensure that Graduates from Tertiary institutions have advanced ICT competences	5,000,000.00
PILLAR 7: ICT Industry (II)		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
II/Pr 1	**Establish National ICT Agency and/or National Research Commission Bill to harmonize with Government operations and coordinate the implementation of the NICI 2016** Establish National ICT Agency /National Research Agency to coordinate the implementation of the NICI plan and national development in ICT	500,000.00
II/Pr 2	**Initiatives to facilitate a stable invironment and provide incentives in support of the development of the ICT industry**	100,000.00
II/Pr 3	Establish programs to promote the development of Science and Technology Parks (STPs)	1,000,000,000.000
II/Pr 4	Encourage local entrepreneurs to participate in global/regional and local ICT industry	
PILLAR 8: Human Resources Capacity (HR)		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
HR/Pr 1	Development of a master plan for ICT capacity building including structures	200,000.00

HR/Pr 2	Establishment of a National Standardization and Accreditation Agency (NSAA) for ICT Training Institutions	100,000.00
HR/Pr 3	Institute programmes for ICT skills development and upgrading within the civil service and in the private sector	2,000,000.00
HR/Pr 4	Create initiatives to promote the acquisition of computer equipment by civil and public service organizations including private ownership	100,000.00
PILLAR 9: ICT Leadership		
PROGRAMME NO.	**DESCRIPTION**	**BUDGET ESTIMATE**
Il/Pr 1	To develop top notch ICT Skills base within the country	50,000,00
Il/Pr 2	Set-up effective legislative and regulatory oversight institutions	50,000.00
IL/Pr 3	Improve government service delivery to the people of Swaziland through the effective use of ICT	500,000,000.00
IL/Pr 4	Provide strategic leadership for ICT development and promote ICT as a strategic imperative for national development and an effective instrument for empowering citizens	100,000.00
IL/Pr 5	Develop initiatives to make ICT accessible to consumers and industry (may include setting up a SOE computer assembly plant).	5,000,000.00
IL/Pr 6	**Set up initiatives, policies and structures to facilitate the involvement of Women in ICT -**	2,000,000.00