**Kingdom of Swaziland
Ministry Of Health**

Kingdom of Swaziland eHealth Strategy 2016 - 2020

Transforming healthcare for a better life

Ministry Of Health March 2016

Foreword

Dear Reader, on introducing the eHealth Strategy document, allow me to share the three following scenarios:

Phindile is a 34years old woman who is on her third pregnancy and is due for her antenatal care appointment at King Sobhuza II (KS II) Clinic in Manzini. She is not worried about having to wait in a long queue when she arrives at the facility. The clinic recently implemented an information system that facilitates the capture, tracking and storage of patient-level health information. With this system, Phindile will simply share her unique identifier and the system will schedule her seamlessly through the waiting hall, into the consultation room and out through the pharmacy if necessary.

Dvokolwako Health Centre serves a vast rural population in the Manzini Region. Around 8pm, nurses on duty attend to a patient who has been brought in with feverish symptoms. A rapid malaria test turns out to be positive. As malaria is among the notifiable conditions in Swaziland, the nurses on duty place a call to a dedicated number 977 at the Emergency Preparedness and Response (EPR) call centre. An attendant at the EPR centre captures information about the patient on a database and in the process, triggers a short messaging service (sms) that goes to a select group of people who initiate actions aimed at addressing one of Africa's leading causes of death – Malaria. The Malaria programme will initiate a quality assurance protocol aimed at ensuring the client has been fully treated; the Epidemiology unit will initiate a surveillance protocol aimed at establishing if that person came from a malaria endemic country and advise on further health actions to be taken by the Malaria field-based team; - the M&E unit-captures these triggers on a cumulative basis and generates data reports that provide comparative statistics on reported and documented malaria cases.

Sibusiso is part of a five-person nursing triaging team for the back-to-school male circumcision campaign that takes place during the scheduled three school term holidays over the past two years. Just yesterday, he received a call from a client who had been through a circumcision procedure and was at home recovering. The client noticed swelling and pus on the wound but is not feeling any pain except when he touches the wound. Concerned, he calls the triaging team on the hotline that is listed on the information booklet provided at the end of circumcision procedure. Sibusiso was able to use established triaging protocols over the phone, to provide health care services that resulted in the client not visiting a health centre, thereby reducing on patient load, saving the client extra time and costs and overall, bringing a new experience in health care service delivery in Swaziland.

The three scenarios exemplify how investments in Information Communication and Technology (ICT) are ushering in unprecedented efficiencies and benefits in health care service delivery for the people of Swaziland. Notwithstanding, these advances are few, far apart and lack a coordinated framework for support and continued investments. Like many other African countries, we too face challenges in having successful examples of ICT coordination in the health care environment, hence the need for the establishment of this strategy document. It thus my pleasure to share with you the country's first eHealth Strategy document, that aims to resolve this conundrum.

Swaziland has a number of policy and strategic guidance documents that outline the need for investments in ICT for health including the NHSSP II, the National Health Policy, the National Development Strategy (NDS), National Information and Communication Infrastructure (NICI) policy and implementation plan, and the eGovernment strategy. These documents have provided the bases and mandate for the establishment of a single, coherent and comprehensive framework for investments in ICT for Health Services through this eHealth Strategy.

Through the publication of this strategy, the ministry of health is taking bold calls to action for all members of the health care sector to own this document and engage with us and those who were involved and contributed to processes of developing this strategy, to usher in a new era of deliberate and strategic choices in bringing ICT to the benefit of health care services for our people. Clients of the health care sector are invited to become watchdogs and provide us with an objective perspective of how these investments are changing the way they access and benefit from delivery of health care services. Health care providers are challenged to embrace the actions outlined in this document to help generate more examples of successful implementation. Health care providers and non-traditional health sector partners such as ICT providers are invited to emulate past and ongoing partnerships in ICT for health to help generate a groundswell in investments for ICT, not just as part of corporate social responsibility but as equal players in contributing towards the achievement of the health sector strategic plan's vision – "A healthy and productive Swazi population that lives longer, fulfilling and responsible lives!"

Dr.Simon M. Zwane
Principal Secretary - MOH
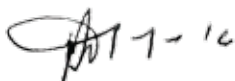
Acknowledgement

The realization of this strategy has been achieved through tremendous effort and commitment of several individuals, organizations, and partners who have contributed to the development of this ehealth strategy 2016 – 2020 strategy document.

This strategy has been developed in two phases. The first phase was characterized by a participatory process that was spearheaded by a Technical Working Group (TWG) commissioned by the Ministry's directorate leading to the launch of the strategy development roadmap in December 2014. During this phase, consultative meetings were held with different health sector implementing partners including non-traditional health sector partners such as MTN, SPTC, FRSA, SCOMM, Chamber of Commerce, GCS, the eGovernment Unit in the Prime Minister's Office and SEC to create a common understanding of the process of the eHealth strategy development and to seek preliminary commitment to contributing to the strategy development. Out of these meetings, a draft eHealth Strategy was produced. To each of the contributors to the draft strategy, as well as to those who assisted and supported them, we send our profound appreciation.

The second phase of the Swaziland eHealth Strategy development was aimed at securing final inputs from all stakeholders based on current and future plans that impact the delivery of health services and introduction of ICT for the health sector. This phase was characterized by several consultative meetings that validated input from the first phase and included dedicated technical advisory support from the WHO on ICT for health, through Professor Yunkap Kwankam, President of the International Society for Telemedicine and eHealth to quality assure the development process and oversee the technical writing of the strategy.

The Ministry of Health (MOH) would like to acknowledge with thanks, the World Health Organization (WHO) for providing continued technical and financial support from the beginning of the process of developing the strategy and the eHealth TWG for their tireless commitment and dedication to this process. Many individuals and organizations contributed to the development of this strategy and the MOH acknowledges with gratitude their commitment and looks forward to their continued involvement going forward.

As a Ministry, this launch is a pre-cursor for the real work that is, rolling out the strategy over the next five years. We are not stopping!

Dr. S.V. Magagula
Director of Health Services

Contents

List of Tables

List of Figures

List of Acronyms

EGPAF	Elizabeth Glaser Paediatric AIDS Foundation
EHCP	Essential Health Care Package
EMR	Electronic Medical Record
EPR	Emergency Preparedness and Response
GCS	Government Computer Services
HMIS	Health Management Information Systems
HR	Human Resources
HRIS	Human Resources Information System
HSU	Health Statistics Unit
ICT	Information and Communication Technology
IDM	Institute for Development Management
IHM	Institute for Health Measurement
ITU	International Telecommunications Union
LAB	Laboratory
LAN	Local Area Network
M&E	Monitoring and Evaluation
MET	Ministry of Education and Training
MOH	Ministry of Health
MOHA	Ministry of Home Affairs
MICT	Ministry of Information, Communication and Technology
MTN	Mobile Telephone Networks
NDS	National Development Strategy
NHSSP	National Health Sector Strategic Plan
NICI	National Information and Communication Infrastructure
OECD-DAC	Organisation for Economic Co-operation and Development - Development Assistance Committee
R&D	Research and Development
SDI	Swaziland Development Index
SEC	Swaziland Electricity Company
SID	Strategic Information Department, of the Ministry of Health
SMS	Short Message Service
SPTC	Swaziland Posts and Telecommunications Company

Section One

Introduction

The Government of Swaziland has been charged by His Majesty King Mswati IIIwith a clear vision to attain first world status by the year 2022, as outlined in The National Development Strategy. A country is classified as part of the first world based on the extent ofits use of information and communication technology (ICT) in the production and delivery of goods and services.Vision2022, is thus an imperative for all sectors of the Swaziland economy to re-engineer their individual and collective service provision interventions and to develop appropriatestrategies so as to attain this goal. With this in mind, in 2011 the Government of Swaziland embarked on a journey of establishing and implementing an eGovernment Strategy which expects all Ministries to incorporate ICT in their daily business.

Swaziland has also taken the initiative, through the Ministry of Health (MoH), to introduce eHealth in Swaziland in accordance with the World Health Assembly eHealth resolution of 2005. The World Health Organization (WHO) defines eHealth as the use of ICT to improve health service offerings . In its broadest sense, eHealth is concerned with improving the management of the flow of information through electronic means to support the delivery of health services and the management of health systems. ICT is recognised as a core and intrinsic component of eHealth in achieving global set health goals.

This definition points to different domains of eHealth implementation, such as: electronic health records to ensure seamless continuity of patient care across mobile health services (mHealth); telehealth, health research, and health informatics to support health decision making; and e-learning by health workers. eHealth ensures the timely provision of accurate health information to the relevant and appropriate parties in a secure, electronic form for the purpose of improving the quality and efficiency of health care delivery and prevention programs. eHealth should be viewed as both the essential infrastructure underpinning information exchange between all participants in the Swaziland health care system, as well as the key driver of improved health outcomes for the Swazi population. Due to its high impact potential, eHealth should be enthusiastically embraced and implemented by all relevant programs.

Other than the aforementioned documents, the country has a number of policy and strategic documents which compel the existence of an eHealth strategy. The NICI policy and implementation plan provide a framework which guide the different sectors in the development of their specific plans for setting ICT infrastructure and its use and the health sector is one of the key pillars for the implementation of this framework. The ministry of health has also developed its national health sector strategic

plan second version which calls for the implementation of different ehealth initiatives for the improvement of service delivery. From this call it is evident that the best way to have these demanded initiatives requires proper coordination which include the investments towards such. These documents have provided the basis and mandate for the establishment of a single, coherent and comprehensive framework for investments in ICT for Health Services through this eHealth Strategy

1.1 Overview of Swaziland's Health System

Swaziland's health service delivery system is structured around a four-tier system of service provision comprised of: the 1) community;2) clinics and public health units;3) health centres and regional referral hospitals; and4) nationalreferralhospitals.

- **Community:** This level is the foundation of service delivery. Services at this level should include community-based promotion, prevention and basic curative care.
- **Clinics:** Rural clinics are categorized into Type A (without a maternity wing) and Type B (with a maternity wing). Rural clinics form the backbone of the primary health care infrastructure. They are the bases from which primary health care programmes operate and provide first-line curative andemergencyinterventionsaswellaspromotiveandpreventiveser-vicestotheruralpopulation.
- **Public health units:** The public health services include promotive, preventive, outpatient curative, outreach health care services and interface with community-based health systems, including households and individuals.
- **Health centres:** The purpose of the health centres is to provide an intermediate range of services at this level, including promotive, preventive, out-patient curative, maternity and in patient services as well as diagnostic services, outreach care and interface with community-based health systems.
- **Regional referral hospitals:** In addition to primary services, they provide curative, rehabilitative and selected specialist services. They are referral facilities and are responsible for providing technical support and supervision to sub-regional and primary health care facilities within their defined catchment areas. The regional hospitals also provide in-service training, consultation and research in support of primary health care programmes.
- **National referral hospital:** This is the highest referral level, also known as the tertiary level. The kingdom has three national referral hospitals: Mbabane Government Hospital receives referrals from regional hospitals and also serves as a general hospital, while the National TB Hospital and the National Psychiatric Hospital provide specialized services.

Health services are delivered through a decentralized system in the four regions of Hhohho, Manzini, Lubombo and Shiselweni as illustrated in Figure 1 below. The central level performs executive and administrative functions and also provides strategic guidance on the delivery of health care services at all levels of care based on The Essential Health Care Package (EHCP). Each region is headed by a Regional Health Administrator and supported by the Regional Health Management Teams(RHMTs). About85%ofthecountry'spopulationliveswithinaradiusof8kmfromahealthfacility (National Health Policy,2007).
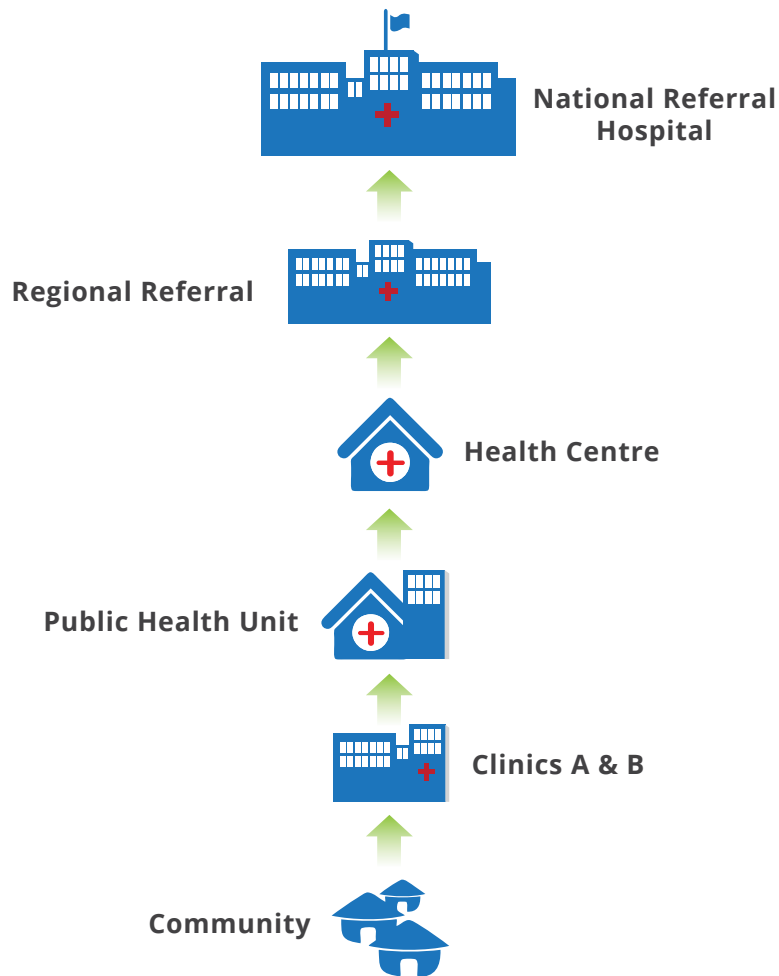
Figure 1: Structure of the Health Service Delivery System

The total numbers of facilities of different types are shown in table 1 and their locations are displayed on the map of figure 2.

Table 1: Service Delivery Capacity, by Region

Region	Numbers of facilities				#of facilities per 10,000 population(2013)
	Total	Tier2	Tier3	Tier4	
Hhohho	82	79	3	1	2.7
Lubombo	48	46	2	0	2.2
Manzini	121	117	2	2	3.4
Shiselweni	36	33	3	0	1.7
Total	**287**	**274**	**10**	**3**	**2.6**

Source: Service Availability Mapping, 2013
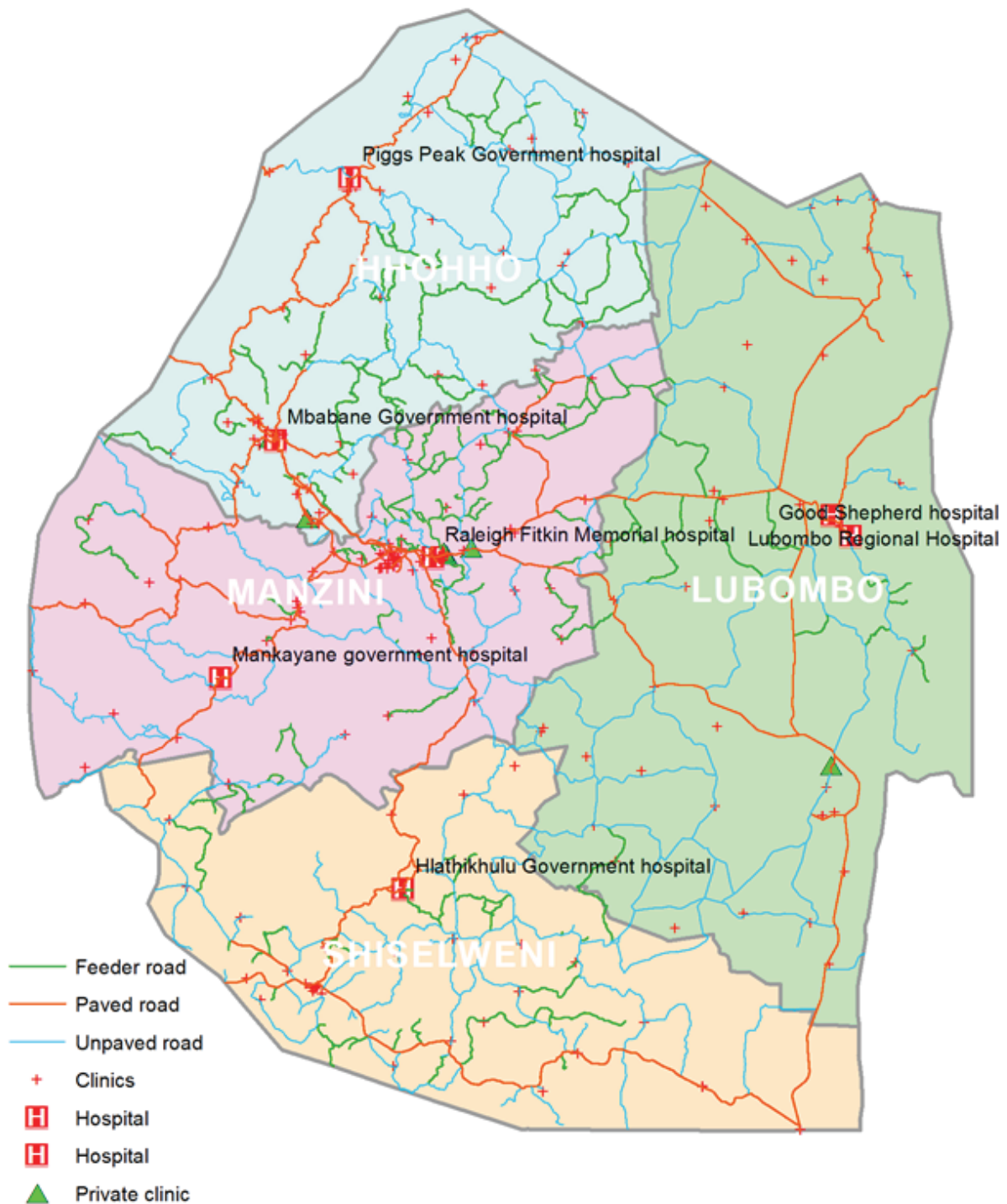
Figure 2: Map of health facilities in Swaziland

1.2   eHealth in Swaziland

As in other sectors of an economy, the health sector in Swaziland is faced with the need to adapt and integrate ICT in delivering health services. Coming from a background of health information management that was largely characterised by paper-based data management systems, the MoH has embraced the role that ICT plays in revolutionising the collection, processing, storing analysis and reporting of health information for policy, programmes, health service delivery and research.

As a concept, eHealth is relatively new. However, its aspects have been in play from the time that only telephones were the primary electronic means of communicating health information to today, where Local Area Networks (LANs), Wide Area Networks (WANs) and access to the internet facilitating email communication are now commonplace in a number of health facilities in Swaziland.

Swaziland's health sector is characterised by a relatively well developed communications infrastructure that retains some nascent features. Features such as the use of web-based email addresses for most government staff to sophisticated setups like the telemedicine centre at Mbabane government hospital demonstrates WHO's definition of the use of eHealth.

1.2.1 Problem statement

With different financial investments to improve ICT and HIS in the health sector, it has become more integral to have an eHealth Strategy that will coordinate and guide the different HIS initiatives. With Swaziland's vision of first world status, it has become even more imperative that financial investments made into systems in the health sector translates into improved services at health facility level. Here are some common challenges of the lack of a guiding document:

- Uncoordinated ICT/HIS investments and interventions (also refer to parallel investments in the private sector that run contrary to the health sector)
- Lack of clearly articulated vision and gaps in existing ICT legislation for adoption, implementation and growth of ICT technologies in the health sector.
- Lack of a clearly articulated health information management framework that would drive the generation and utilization of data and information for supporting business processes of the health system.
- Lack of a clearly articulated health information management framework that is based on, and underpins health enterprise business processes.

1.2.2 Current status

WHO has defined a framework for classifying and categorising a country's stage of growth in implementing eHealth policies and strategies. Although no formal assessments have been made against this framework to determine Swaziland's current standing, existing projects and past work undertaken provide a reasonable picture of the status of eHealth in Swaziland which indicates that the country is exiting stage II and entering stage III.This is outlined in figure 3 below.
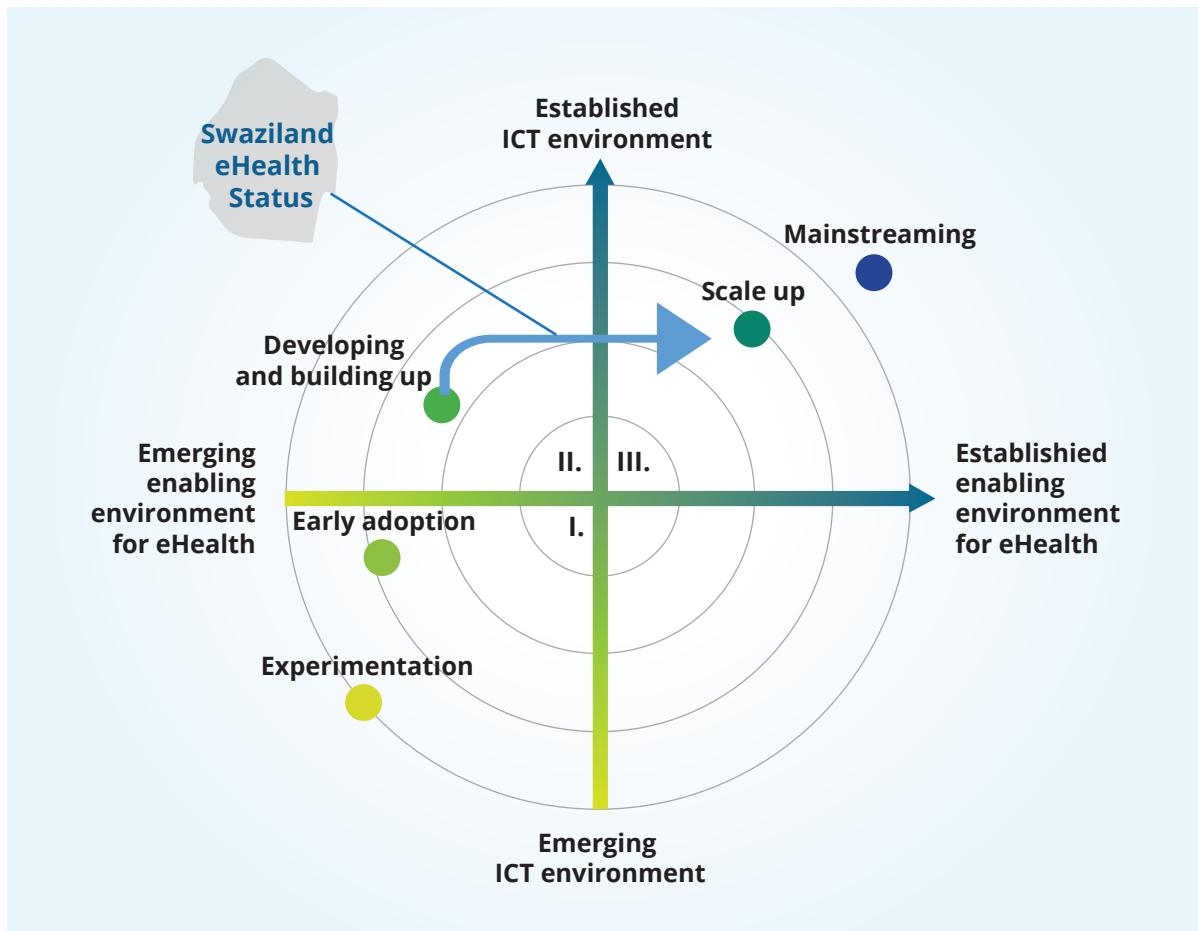
Figure 3: National Context for eHealth Development

1.2.3 Challenges

Some of the challenges faced by the health sector in implementing eHealth include:

Leadership and Governance for eHealth
- Lack of a culture of data use (evidence-based decision making?)
  Strategy and Investment
- No eHealth strategy to guide HIS initiatives in the health sector
- The lack of a coordinating body for investments made to improve Health Information Systems

Services and Applications
- Lack of supervisory and regulatory capacity for the adoption of technological and software solutions.
  Standards and Interoperability
- The existence of parallel systems with no interoperability or communication
- The existence of silos of information systems within different levels of government, govern ment departments, programmes within the Ministry of Health, resulting in duplication of effort and disparities in reporting

Infrastructure
- Internet connectivity proliferation is mainly limited to urban areas whereas a significant proportion of the population accesses services in the rural areas.

- Limited extent of government WAN coupled with slow roll-out of government WAN. Legislation and Policy, compliance
- ICT policy and legislation in Swaziland has to change to allow the growth and full potential of the existing technology to be used to full capacity

Workforce
- Lack of a professional society or association aimed at fostering eHealth intelligence.
- Lack of technical competence and capacity in eHealth

1.2.4   eHealth initiatives in Swaziland

CMIS

The Client Management Information System is an initiative by the Ministry of Health through the HMIS Unit to introduce an electronic medical record in Swaziland. It is complete migration of the patient registration systems into one modular database that will usher in the collection of patient-level data. A complete migration of the patient registration systems into one modular database that will usher in the collection of patient-level data. Whereas the current HMIS is report-driven, Client Management Information System (CMIS) is patient-centred and patient healthcare outcomes driven. Currently the system is operating in four facilities across three regions in Swaziland. The system uses the national identification number to uniquely identify a patient thus ensure that each patient has one consolidated medical record. Whereas the current HMIS is report-driven, the Client Management Information System (CMIS) is patient-centred and patient healthcare outcomes driven.

mHealth

SMS notification for the emergency response task force. The original procedure for an outbreak of a notifiable condition, according to WHO standards, it was that the health facility which receives a patient(s) presenting with any of these conditions e.g. malaria, measles, cholera, etc, that clinic or hospital nurse had to call the chairperson of that regional response team to report the case. In turn the chair person would then call each one of the response team members to report the incident then they would then respond to the case as reported. With the use and implementation of mobile services, the clinician who receives the notifiable condition can now make a free call to the "977" call centre which then captures the incident into a system which then sends SMSes to all the response team members in one time. This has improved the response turnaround time.

Telemedicine

The Ministry of Health, in collaboration with PAN African eNetwork project has implemented the telemedicine facility at Mbabane government hospital. The telemedicine centre showcases the government's understanding and appreciation of the role of technology in improving health care service delivery to the general public.

ICT infrastructure for health

Currently, the HMIS unit is implementing a project aimed at increasing the number of health facilities with access to the Swaziland Government Wide Area Network (WAN). As of the preparation of this roadmap document, there are a total of approximately 300health facilities in Swaziland and around a quarter have network infrastructure enabling both Local Area Network (LAN) and WAN communication capabilities.

Section Two

Swaziland's National eHealth Strategy

This eHealth strategy is inspired by the Second National Health Sector Strategic Plan 2014-2018: Towards attainment of universal health coverage (NHSSP II). Universal Health Coverage is defined as "ensuring that all people have access to needed promotive, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while ensuring that the use of these services does not expose the user to financial hardship" (WHO). It is derived from the national health vision, mission and goal statements, and serves as the health sector component of the National eGovernment initiative of **"Strengthening the Management Information System at national, regional and facility level; Improving ICT coverage and ensuring system-wide connectivity."**

This eHealth Strategy recognises three broad health sector groups that are central to its establishment:

Clients: These are individuals who access and receive services from Swaziland's public and private health care and community services. The strategy recognises that clients should benefit from accessing health information from multiple sources and not just diagnoses offered by care providers to increase their awareness and understanding of health issues affecting them. Often, clients have to repeatedly provide personal health status information each time they visit health care facilities with care providers not being able to access information from prior visits.

Health Care Providers: Health care workers in public and private health care facilities that provide services to the general public have expressed a need for the availability of health information in a timeous manner to inform decision making on service quality, performance and delivery. These individuals have expressed the need for secure access to summary health information for clients they serve and for systems that bring efficiencies and effectiveness in their ability to provide health services.

Health Care Managers: These include programmes and clinic managers, regional and hospital administrators, health ministry administration, health partners, general public, researchers and policy makers etc. Having timely, accurate and complete health information is crucial to assessing the impact of health interventions for planning and decision making.

2.1 The Vision and mission

2.1.2 Vision

By 2020 eHealth will have transformed 90% of the Health systems.

2.1.2 Mission

To support, promote, advocate and establish eHealth as an integral part of the transformation and improvement of health services for all.

2.1.3 Core Values

The strategy is guided by the following core values of eHealth:

1. eHealth is not a goal in itself. Its value is in supporting the higher purpose of health system goals and functions;
2. eHealth shall take into account the needs and aspirations of the population, the environment, and the available resources;
3. Harmony of the health systems actions with national, regional, and international, priorities and policies shall be maintained.
4. eHealth learning shall be through knowledge exchange.
5. The security, privacy and confidentiality of information shall be maintained.

2.2 Thematic Areas and Strategic Objectives

The vision and mission statements help set the expectations and direction for investments and actions in ICT for health. However, to get all stakeholders focused over the next five years, this strategy has a set of ten (10) comprehensive objectives that are classified into three thematic areas as outlined table 3 below:

Table 2: Thematic areas and strategic objectives

	Thematic Areas	Objectives	Specific Objectives
1	**Thematic Area 1 – eHealth Foundation**	**Objective 1 - Laying the Foundation for eHealth**	1.1 eHealth essentials for service delivery 1.1.1 Gap analysis
			1.2 Norms and standards
			1.3 Regulatory environment
			1.4 Developing guidelines for Public-private partnerships
2	**Thematic Area 2 – eHealth Solutions**	**Objective 2 - eHealth Solutions that are practical, relevant and sustainable**	2.1 Health education and promotion
			2.2 eHealth solutions
			2.3 eHealth intelligence
3	**Thematic Area 3 – Sustainability**	**Objective 3 – Change Management and Governance**	3.1 Development of the Health Workforce
			3.2 Change management
			3.3 Risk Management

Thematic Area 1

Objective 1 - Laying the Foundation for eHealth

Establishing the bases for electronic information exchange across the health sector is critical in ensuring the capacity for eHealth. Being able to securely capture, store and process client health information is crucial in this regard. The following are objectives that fall under this thematic area:

Objective 1.1: eHealth essentials for service delivery: To develop and promote, a minimum set of requirements for responsible eHealth use, including the technical, human and financial resources required at the operational, managerial, and political levels of the health system.

Objective 1.1.1 GAP Analysis: To assess and establish the differences in performance between current information systems; to determine whether requirements are being met and, if not, what steps should be taken to ensure they are met successfully.

Objective 1.2: Regulatory environment: To create an enabling legal and ethical environment that ensures data privacy, confidentiality and security (including integrity, authenticity, non-repudiation) which are essential to the respect for human rights and privacy, in the management and exchange of medical data and electronic health records.

Objective 1.3: Norms and standards: To develop, adopt and adapt, implement and continuously review national and international norms and standards to improve interoperability and the quality, safety and performance of eHealth practice in the country.

Objective 1.4: Public-private partnerships for ICT R&D for public health: To develop principles and guidelines for governance of eHealth public-private partnerships, joint-ventures and donor assistance as to facilitate national cooperation and international exchange in eHealth services as well as IT R&D for public health.

Thematic Area 2

Objective 2 - eHealth Solutions that are practical, relevant and sustainable

This strategy intends to facilitate the delivery of specific computing systems, tools and infrastructure that put information into the hands of clients, care providers and health care stakeholders enabling quality service delivery. The following are objectives that fall under this thematic area:

Objective 2.1: eHealth solutions and infrastructure: To identify, develop and/or adapt and enhance model eHealth solutions, infrastructure and best practices which, are integrated across Swaziland various tiers of the health system.

Objective 2.2: Health education and promotion: To promote quality criteria for health content and encourage content development for different cultures, education levels, relevant languages, physical and mental ability, age and gender, with a view to reaching the public at home, school, and the work place, and for providing information on demand.

Objective 2.3: eHealth intelligence: To create a network of coordinated nodes to systematically analyse and report on eHealth in Swaziland, with the aim of improving the evidence base to guide policy and practice in the kingdom.

Thematic Area 3

Objective 3 - Sustainability (Change Management and Governance)

The success of this strategy will not only lie in bringing ICT hardware and software to the health sector but also in ensuring that a sufficiently large constituency of stakeholders adopt and adapt to these solutions quickly. Commitment to eHealth as espoused in this document and other government initiatives such as the eGovernment strategy are important. However, greater sustaining factors are assured through effective leadership, coordination and management of the national eHealth work program, including the establishment of appropriate national eHealth governance structures and mechanisms. The following are objectives that fall under this thematic area:

Objective 3.1: Development of the Health Workforce: To identify develop and/or adapt model eHealth for HRH solutions and best practices which, are integrated across Swaziland in various tiers of the health system.

Objective 3.3: Change management: To develop and implement a change management plan through multi-stakeholder engagement (including communities and patient organisations) advocacy, education, training and awareness on the process and benefits of eHealth, so as to mitigate resistance to the culture change necessary for the wide-scale adoption of eHealth in Swaziland.

Objective 3.4: Risk Management: To identify, assess, and prioritise risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.

Section Three

A Roadmap for Implementing the National eHealth Strategy

The Ministry of Health recognizes that the development and implementation of the eHealth strategy requires a multi-stakeholder and consensus-building approach as health is a cross-cutting issue and relies on non-health infrastructure. With this underlying understanding, implementation of this strategy involves a number of actors with specific roles and responsibilities.

3.1 Stakeholder analysis

HMIS Unit

The Health Management Information Systems (HMIS) Unit of the Strategic Information Department (SID), in the Ministry of Health was tasked with initiating and overseeing a process that would result in the development of the eHealth Strategy in 2014. The HMIS unit will continue to play a galvanizing and care-taker role in the implementation of the strategy until such a time that eHealth governance structures and mechanism that are described elsewhere in this document are firmly established. This role includes serving as the secretariat of the eHealth TWG, managing communication of important events and facilitating oversight for the implementation of the strategy action plans. The HMIS unit will also continue to be the primary liaison for eHealth in the Ministry of Health under the auspices of the Director of Health Services.

eHealth TWG

Until the formation of governance structures such as the National eHealth Council, the TWG will continue to advise the MoH on the implementation of the eHealth Strategy. Comprised of representatives from both the public and private sectors, the TWG will continue to lobby and advocate for key actions in this strategy, specifically supporting the roll-out of quick wins.

eGovernment Unit

The mandate of the eGovernment unit is to lead, direct and coordinate the implementation of the eGovernment programme, of which eHealth is a component. The placement of the eGovernment unit under the office of the Prime Minister is to provide the necessary political support and commitment in relation to the implementation of the eGovernment institutions and further facilitate the integration of system to facilitate the integration of the systems to ensure interoperability amongst other things. The eGovernment unit has championed the work of the eHealth TWG and provided political backstopping for eHealth activities in the health sector. The eGovernment unit will continue to provide leverage for political support and recognition of key actions requiring support across other government ministries.

Government Computer Services (GCS)

GCS, in line with its current mandate, will continue to support eHealth initiatives primarily by having a representative on the TWG. Beyond this, however, GCS will facilitate access to the mGov platform that is currently offering information on services from Home Affairs only. Working closely with identified representatives from the MoH, GCS will facilitate trial runs of health content on the mGov platform and later support the roll-out of health content on mGov.

Line Ministries

The process of developing the eHealth strategy included consultative meetings with other line ministries. The different ministries involved included the Ministry of Tinkhundla and Administration; Ministry of Finance; Ministry of Economic Planning and Development; Ministry of Public Service; Ministry of Information, Communication and Technology and; Ministry of Education and Training. Given that MOA and MOE are pilot ministries for the eGovernment process, the Ministry of Health understands the benefit of collaborating with these ministries and joining resources in order to accomplish the expectation of the eGovernment policy.

Health Sector Implementing Partners (MSF, PEPFAR, UN Agencies, World Bank, etc.)

The MoH will lobby implementing partners to broaden their Strategic Information definitions to embrace eHealth as an overarching concept to facilitate support in this regard as SI is key constituent of Health. At present, implementing partners are expected to allocate 10% of their organisational budgets towards M&E/SI activities. By adopting the eHealth framework, and consulting this strategy, implementing partners will contribute a proportion of their SI budget to the achievement of this strategy. The MoH, will work with implementing partners to raise awareness and consult comprehensively to ensure this approach is well understood.

Parastatals and Private Sector Stakeholders

The majority of organisations that fall in this category work in the area of energy and communications, particularly in the provision of voice and data services and infrastructure. Their experience in bringing trending technology solutions to the market at scale and efficiently will be crucial in making ICT beneficial to the general population that seeks health care services. MTN Swaziland is already partnering with the Government of Swaziland to provide mobile connectivity services, (voice, SMS and data) and the mGov platform. SPTC continues to provide terrestrial and broadband connectivity and voice services including the establishment of Wide Area Network and Wi-Fi internet hotspots across the country. Preliminary discussions in the TWG have been exploring and exploiting such services for health facilities.

General Citizenry/Clients Accessing Health Care Services

With the proliferation of cellular network coverage across the country, Swaziland has seen the establishment of a foundation for superior means of communication when compared to other Southern African countries. With a cellular network coverage of over 96%, with a large proportion of this being HSDPA capable, citizens will have access to high-speed internet access. As the price of smartphones keeps falling and the proliferation of feature phones with social media connectivity increases, citizens from lower income brackets are increasingly beginning to enjoy access to the internet in new albeit limited forms. This access raises the prospects of accessing health information that previously has been the preserve of those with high-end smartphones and other hand-held devices such as tablets. This strategy calls upon citizens to pro-actively demand health information, in many electronic formats to enable them to take greater control of their health status. The Ministry of Tinkhundla Administration and Development is engaged in establishing multiple community access centres. These centres will have internet connection therefore enabling citizens to have easy access to the eHealth services that are on offer.

3.2   Summary Actions of the Strategy

A number of action plans have been developed as part of the implementation of this strategy. They are described below.

Laying the Foundation for eHealth: The benefits and opportunities presented by eHealth are unparalleled. However, getting the basics right can often be a missed opportunity that would frustrate even the best of intentions. For example, eHealth solutions have been tested that require health facilities to have reliable power and internet connectivity have not been implemented because the connectivity lacking in many facilities. Such promising solutions have been placed on the shelf, pending such a time that reliable power connectivity becomes widespread and the norm.

Getting the foundational aspects right is therefore important and urgent, to ensure the population reaps the benefits of eHealth.

Objective 1.1: eHealth essentials for service delivery: To develop and promote a minimum set of requirements for responsible eHealth use, including the technical, human and financial resources required at the operational, managerial, and political levels of the health system.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2018	MoH/HMIS/GCS	**High-Speed Data Connectivity** In 2014, the MoH through the HMIS unit working collaboratively with implementing partners conducted a network infrastructure needs assessment for facilities implementing ART programmes. Under this strategy, HMIS will leverage that experience to conduct a more comprehensive assessment for networking and related infrastructure leading to resource requirements estimates for networking. Out of this work, a network infrastructure coverage will be developed with resource requirements for consideration by stakeholders.
	MICT/GCS & MoH/HMIS	**Computing Infrastructure** The MICT through GCS will build on their expertise and experience in providing training for HMIS/IT staff on virtual server technology administration and storage area networks. Working various development partners, the HMIS unit will lobby for, and secure funding for procurement of computing infrastructure including servers and server virtualization software.

Objective 1.2: Regulatory environment: To create an enabling legal and ethical environment that ensures data privacy, confidentiality and security (including integrity, authenticity, non-repudiation) which are essential to the respect for human rights and privacy, in the management and exchange of medical data and electronic health records.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2020	Ministry of ICT	**Finalization of Communication Legislation** The Privacy and Protection Act, Information Protection Act, E-transaction and E-commerce Act, Computer/Devices Misuse Act are bills that are still in draft. Working collaboratively with stakeholders, the MICT will initiate efforts to get these pieces of legislation approved.
	MoH/CSO	**Review of Health and related Bills** The Public Health, Pharmaceutical and National Statistics Bills are in draft. The MoH will work collaboratively with stakeholders to review these bills to incorporate e-governance aspects including addressing the collection of routine service statistics.
	Ministry of ICT	**Review of Communication Bills** The Electronic Records and Evidence Act is in existence. However, there is need to have this act amended to become the electronic and e-Commerce Act to facilitate some of the benefits that eHealth will usher in to the health sector. The MICT will lead this effort in collaboration with stakeholders.
	MoH	**Development of Policies** The MoH recently reviewed the National Health Policy to incorporate aspects of eHealth. Building on this experience, the MoH will work collaboratively with stakeholders to finalize a draft e-procurement policy that has already been developed.

Objective 1.3: Norms and standards: Two kinds of standards are in place already. In the first instance, GCS uses enterprise software that meets ISO specifications for software and database applications standards. Secondly, as the custodian of government databases, GCS has standards and structures in place for software accreditation. Beyond these, there is need to review what is in place and to update existing documents to ensure they are up to date. The strategy aims to implement the following actions:

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2018	MoH/HMIS	**Development of Data Structure Standards Document** The MoH through the HMIS unit will lead agencies to hold consultative meetings and constitute a **standards-and-data-structures sub-task team** that will be responsible for reviewing existing data structures and developing the standards.
	MoH/HMIS	**Common Terminologies - Review of Diagnostic Coding Standards** The MoH through the HMIS Unit will lead collaborating agencies to form a Diagnostic Coding Standards sub-task team. The sub-task team will be responsible for gathering and reviewing all the ICD versions to establish most applicable and make recommendations to the MoH.
	MICT/GCS & MEPD/CSO	**Secure Messaging Standards** The MICT through the GCS will work collaboratively with the CSO to facilitate processes leading to the drafting of legislation on data protection. Together with the HMIS unit and the TWG, GCS will lead the review of existing secure messaging standards and recommend the most applicable for use in Swaziland.
	MICT/GCS	**Software Accreditation Standards (SAS)** The MICT through the GCS will lead agencies in reviewing existing standards and work collaboratively with the MoH to develop eHealth Software Accreditation Standards.

Objective 2.1: eHealth solutions: To identify, develop and/or adapt model eHealth solutions and best practices which, are integrated across health facilities in various tiers of the Swaziland health system.

eHealth Solutions that are practical, relevant and sustainable: under this rubric, a few examples exist in Swaziland where communication and computing systems and software solutions are being used in the health sector to advance service delivery and to improve client/provider interactions. Similarly, a number of trials have been conducted to introduce and determine the viability of new solutions, particularly in the area of mobile health (mHealth). For example, using an SMS solution to remind individuals who test HIV positive to go to their nearest or preferred health facility has been tested and found to impact on the numbers of people linking with treatment services. On the other hand, systems to support service delivery continue to be tested, piloted and deployed. Towards the end of 2015, the MoH through the HMIS unit has been testing the use of dashboards to support clinic management in a number of pilot health facilities. The aim is to test and deploy dashboards that make service delivery data readily available for analysis and decisions making.

What remains is to bring these technological solutions to scale rapidly in the health sector, albeit in a strategic and coordinated manner. Below are proposed actions under this rubric.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2020	MoH/HMIS Unit	**Individual Electronic Health Information** The HMIS unit has already made progress in the development of an electronic health record through the Client Management Information System(CMIS). Being readied for scale-up beginning in 2016, the CMIS is expected to be in deployed in all health facilities by end of 2018. In similar fashion, the HMIS is continuing to deploy electronic health record systems. Examples include the Laboratory Information System, Commodity Tracking System and other modules of the CMIS.
	MoH/HMIS Unit & GCS	**Health Care Communications and Collaboration** Client/provider-specific scheduling, booking and management systems/apps with auto-reminders and apps that provide electronichealthevent summaries,prescribing andtest ordering are being tested and are planned for deployment in 2016 onwards. Working with clinicians, the HMIS unit aims to transform the basis on which clients and clinicians schedule interactions in public health service delivery.
	HMIS & GCS	**Health Care Service Delivery Tools** The HMIS unit will lead the testing and deployment of systems including medications management, prescription, test ordering decision support, Clinical decision support, Alerts monitoring and management, chronic disease management, real-time clinical data access and analysis.

Objective 2.2: Health education and promotion: To promote quality criteria for health content and encourage content development for different cultures, age, gender, education levels, relevant languages, physical and mental ability with a view to reaching the public at large by providing information on demand.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2020	Health Promotion Unit	**Consumer Health Education Resources** Using the SMS platform that has been developed by MTN and is currently administered and managed by GCS, the health promotion unit will work with stakeholders to develop health content for clients to access health-related information, SMS educational messaging. The MoH will seek to setup a dedicated website with the support of MICT to feature health content for the general public.
	Directorate of Health Services/Health training institutions	**Health Care Provider Knowledge Sources** HMIS Unit will lead collaborating agencies to form a Diagnostic Coding Standards sub-task team. The sub-task team will be responsible for gathering and reviewing all the ICD versions to establish most applicable and make recommendations to the MoH.
	Directorate of Health Services/ Health training institutions	**Distance Learning and Electronic Resources** The health training institutions will explore and seek to establish online learning resources for health personnel aimed at increasing opportunities for distance learning within Swaziland and with established regional/international online medical learning centres.

Objective 2.3: eHealth intelligence: To create a network of coordinated nodes to systematically analyse and report on eHealth in Swaziland, with the aim of improving the evidence base to guide policy and practice in the kingdom.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2018	HMIS Unit	**Health Care Management and Administration** Tele-class/webinars to update people about new diseases, technologies, practices and facilitate knowledge maintenance.
	HMIS Unit	**Communities of Practice** The MoH will continue to hold the biennial health research conference that brings together front-line field staff, administrators and academics. Through established TWG, the MoH will continue to expand stakeholder involvement in the health sector. In these and similar instances, the HMIS unit is exploring the use of systems to foster sharing and documentation such as MS SharePoint.
	MICT & CSO	**Knowledge Management and Learning** Existing knowledge repositories and databases will be strengthened to create a health sector knowledge hub. The HMIS unit will lead these efforts commencing with a health sector data warehouse. The HMIS unit will work in collaboration with institutional libraries, National Archives and Biotechnology Park and these will promote Learning.

Thematic Area 3: Sustainability (Change Management and Governance): Building sustaining effects early in the implementation of this strategy will be critical to its success. It is generally acknowledged that the health sector has been lagging behind in adopting ICTs in its operations. Like many issues that are well appreciated but poorly addressed, risks exist that threaten to halt or even reverse the limited work that has been accomplished under the broader definition of eHealth. Under this rubric therefore, actions will address issues such as having in place human resources for eHealth, continued experiences of working with private partnerships and pro-actively anticipating challenges and mitigating these through change management and capacity building.

Equally important will be having champions for eHealth and defined bodies like the eHealth council, steering committee and health institutions to own and oversee the implementation of the strategy in both the MoH and amongst stakeholders. The defined structures will be responsible for leadership and governance ensuring accountability, ownership, participation and transparency in growing eHealth for the health sector as a whole.

Below are proposed actions to be implemented in this regard.

Objective 3.1: Development of the Health Workforce: To identify, develop and/or adapt an eHealth model for HRH solutions and best practices which, are integrated across health facilities in various tiers of the Swaziland health system.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2018	MoH/MoPS/MoE	**Classification of ICT and Related Training for Health Sector Under the Rubric of eHealth** Working with curriculum development centres in the MoPS and MoE, UNISWA, the MoH will develop ICT and related education and training standards for the health sector that will enable the recognition of health sector-related ICT training. The MoH will spearhead initiatives to partner with similar ventures in the region and internationally.
	MoH	**Capacity Building on eHealth** The MoH will establish an internal IT unit to oversee the capacity building on eHealth. Together with the HMIS, M&E units, MoPS, MICT, eGov and other stakeholders, the IT unit will form the hub for eHealth in the health sector.
	MOH/PSC/MICT	**eHealth Cadre Establishment** The MoH will work collaboratively with Management Services Division (MSD) under the Public Service Ministry to develop an eHealth cadre that will provide a clear career path for ICT in the health sector.

Objective 3.2: Public-private partnerships for ICT R&D for public health: To develop principles and guidelines for governance of eHealth public-private partnerships and joint ventures. This will facilitate national cooperation and international exchange in eHealth services as well as IT R&D and infrastructure for public health.

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2018	MoH/MoF/MEPD /MICT/Private Sector	**Public-Private Partnerships** Selected IT projects within the MoH may require a PPP approach. The MoH will identify at least two eHealth pilot projects and relevant partners for implementation early in the life of this strategy.

Objective 3.3: Change management: To develop and implement a change management plan through multi-stakeholder engagement (including communities and patient organisations).

By When	Lead Agency/Other Agencies	Actions to be Performed
By 2018	MoPS/MoEP/MICT/MoH	**Change Management for eHealth** The MoH will develop a change management plan that mitigates for adaptation and adoption of eHealth solutions.
	Planning Unit/HMIS	**Leadership for eHealth** The planning unit in the MoH will work in close consultation with the SID and related units to prepare and present two concept notes for the establishment of an eHealth unit in the MoH. One will present the potential of transforming an existing unit in the MoH while the second will present the potential for establishing a completely new unit.
	TWG/HMIS	**Governance for eHealth** By its nature, eHealth involves different role players, with the health sector being the main players. The TWG will present proposals to the directorate and the larger stakeholder constituent governance structures for eHealth, including an eHealth Council, eHealth Corps and a steering committee that will continue to guide and sanction the implementation of the strategy.

Section Four

Monitoring and Reporting, Evaluation and Research for eHealth

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A Framework for M&E of the Strategy

The monitoring and evaluation framework of this strategy will be performance based (results based M &E Management). In addition to performance measurements input, processes, and output indicators will also be captured as outlined in box 1 below

Box 1: M&E Framework for eHealth

A results Chain for the eHealth Strategy: Using a traditional result-chain model, the following is proposed for the eHealth strategy.

	INPUTS	PROCESS	RESULTS		
			OUTPUTS	OUTCOMES	IMPACT
eHealth Foundation	- Funding - Networking & computing equipment. - Broadband Internet. - Legislation expertise for the communication sector. - Technical expertise.	- LAN & WAN deployment and functioning for all health facilities. - Active broadband internet connectivity. - Formulation of legislation and policies. - Formulation and documentation of standards and procedures.	- Facilities utilising computing equipment for managing and sharing health data. - ICT related legislation. - Norms and standards for eHealth.	- **Improved client experiences in the health sector by the Swazi population.**	
Ehealth Solutions	- Databases and Data warehouse. - Client/Provider health information sharing portals. - Applications for decision making for health care providers. - Health education content. - eHealth research grants/funding.	- Collection, processing and storage of health data. - Sharing data for decision making and programme management. - Conduction of data quality audits	- Quality health data. - IEC Materials Learning and knowledge management	- **Improved health service delivery in public and private health facilities in Swaziland.**	- **Improved health and well-being of Swazis.**
eHealth Sustainability	- eHealth learning portal - Pre-service & in-service training - eHealth cadre - PPP projects - eHealth leadership and governance structures.	- Implementation of Distance/online learning/other methods of learning. - Establishment and functioning of eHealth unit in the MoH. - Establishment of eHealth council, and steering committee - Integration of eHealth into health curriculum	- Competent eHealth workforce - Stewardship for eHealth. - Accountability and transparency on eHealth	- **Improved Health Care Mgt & Admin of health in Swaziland.**	

(Thematic Area)

4.1 Monitoring Activities – Assessing Metrics of Success

The success of every strategy requires effective Monitoring & Evaluation through relevant M & E tools. Monitoring and evaluation should be executed by individuals and institutions (stakeholders) which have an interest in the strategy. To efficiently implement a project, the people planning and implementing it should plan for all the interrelated stages from the beginning.

Who: With the above, monitoring is a function that will be performed by the steering committee. By virtue of their constitution (including representation) and functions, the steering committee possess a reasonable degree of independence to objectively assess, review and document the performance of the health sector in implementing actions that are outlined in this strategy. The TWG will be responsible for the planning and execution of the M&E and report to the Steering Committee.

What/Where: For inputs, monitoring, will be best articulated by answering the question "What are things or activities that are needed to ensure processes, interventions or big picture activities can be undertaken.

When: monitoring will be an ongoing process which will produce reports quarterly, half yearly and annually,

4.2 Evaluating Impact of eHealth

Good monitoring makes evaluation less tedious and easy to conduct. As shown in Box 1, evaluation documents the sustaining effects on implementation of the strategy by capturing and documenting the link between outputs, outcomes and impact.

What: Based on the OECD- DAC principles, evaluation will be conducted thrice during the life of the strategy - at baseline, mid-point (two and a half years) and at end-point (five years).

When: At baseline, a formative evaluation will be used to set benchmarks, from which analytical insights will highlight change and impact attained. The mid-point process evaluation will help highlight, confirm, and provide the reasons for progress or the lack thereof., It will also afford mid-course corrections, strengthen the likelihood of sustaining effects and motivate for more efficient implementation in a resource-constrained environment. The end-point impact evaluation will justify the second iteration of the strategy and make concessions for new learning and knowledge to be outlined, thereby ushering in a new strategy. Evaluation will seek to establish views of clients, service providers, health managers and administrators on eHealth and its impact.

Who: Evaluation will be outsourced to ensure credibility of findings and increase its utility

Research and eHealth

There are Three kinds of research approaches adopted for this strategy – Research & Development (R&D), Operations Research (OR) and Evaluation Research. The third is basically subsumed in the preceding section. This section will focus on R&D and OR. OR will help document the introduction and scale-up of new technologies, approaches and learning of eHealth in the health sector. This strategy specifically advocates for the health sector to deliberately invest 5% of resources for eHealth to OR. This has been documented to maintain the dynamism of eHealth in ensuring that advances in ICT, both in- and extra-country, can be brought to bear on health for the benefit of the general population.

the eHealth Council will be responsible for lobbying, monitoring and reporting on the investments in OR in the health sector on eHealth.

In terms of R&D, the strategy calls for an investment of resources amounting to 10%. This is modest in comparison to the percentages that range between 25 -35% in developed countries. R&D covers the conceptualization, testing and bringing to market of innovative context-specific and/or original technology, approaches and new learning that has wider applicability (both nationally and regionally) for the health and related sectors.

The eHealth Council will institute, administer and oversee a grant-making process that is based on the criteria outlined above – innovation, context-specific mass benefit, relatively lower cost implications, and related criteria to spur R&D.

To ensure research takes place during the life of the strategy, a minimum of two OR projects will be sponsored annually through the auspices of the research unit in the MoH. Funding for these will be secured from development partners, PPP collaborative initiatives and government grants. For R&D a minimum of two R&D projects will be conducted throughout the lifespan of this strategy. This also will be funded under the same mechanisms. These will forge a way forward for research in eHealth becoming the bases for a groundswell for further research activities.

Section Five

Appendices

Appendix 1

Swaziland eHealth Roadmap Process

eHealth Roadmap Process

Proposed Time Frame

Table 3: Draft Roadmap for development of the national eHealth strategy

	Steps and Activity	Responsible	Proposed Time Line	Venue & Time	Resource Requirement	Status/Comment
1.	Establish Multidisciplinary Technical Working Group (TWG)	HMIS	30 July 2014	**WHO by 12:30 pm**	Meeting at WHO, inform the participants	Completed by Oct 24th 2014.
2.	Draw the roadmap for the strategy development	Kelvin, Danicia, Sikhumbuzo			1 August 2014	Draft developed. Awaiting input from Stakeholder Consultative meeting.
3.	Draw terms of reference of the TWG	TWG	13 Aug 2014	WHO Conference Room	Submit to IHM consolidate	Completed by Oct 24th 2014.
4.	Report to the steering committee with the progress.	TWG				Reports will be made to the DHS. First briefing held on 13.10.14.
	Drive or lead the development of the strategy					

1.	Conduct Situational Analysis	TWG	14th Nov (12-14 drafting meeting)	Hire a conference Room	Write a request to WR to finance	This will be done prior to the bigger stakeholder meeting – can co-opt people to work with and come up with the drafts for the bigger team to work on Collect all documents, policies, strategic plans for and avail to TWG members Literature review and data collection. Prepare technical presentations for stakeholders' meeting
2.	Conduct the stakeholder meeting	MoH/WHO	26th Nov 2014	Ezulwini	*	
3.	Finalise the Roadmap	TWG	26th Nov	Ezulwini	*	
4.	Presentation of Roadmap to MOH Senior Staff	SID	8th Dec	Cooper Centre	*	
5.	Presentation of Roadmap document to Govt and stakeholders	MoH/WHO				
6.	Engage eHealth Strategy Development Consultant	SID/WHO	February 2015	WHO Conf.	*	
7.	Produce zero draft strategy document	TWG	March 2015			
8.	Series of consultative meetings	TWG	March/ May 2015			
9.	Conduct stakeholder meeting		April 2015	Ezulwini	*	
10.	Finalise the Roadmap	TWT	May 2015	Ezulwini	*	

Draft road map by 1 August 2014 – Secretariat

Appendix 2

Table 4: National context for eHealth development

Context	Characteristics
I. Experimentation and early adoption	- eHealth is project-based with initiatives usually small, few in number and disconnected - Projects are proof-of-concept pilots where ICT is introduced in a limited context - Projects are rarely sustainable due to the lack of infrastructure, skills and integration - The commercial ICT market is fragmented with little local expertise available - Funding and technical support is often provided by aid agencies, donors and external actors - International obligations for public health reporting cannot be met
II. Developing and building up	- eHealth is still project-based, but larger in scale with greater awareness of its potential - eHealth systems (e.g. health information systems, supply-chain management systems, electronic medical records systems) emerge, but remain vertical, fragmented and unable to scale up - Growth occurs in the commercial ICT market, with significant effort to attract international ICT vendors. Local vendors emerge and government interest grows - Initiatives such as e-government, e-banking and other commercial ICT services begin to take hold; but the health sector lags behind - There is a lot of activity, learning by doing, and significant project risk - Aid agencies and donors are still active funders; there is more private sector and government investment in development and adoption of cost-effective technologies - Public-private partnerships increase in number - eHealth is viewed as part of a broader effort to expand ICT and economic development - Early successes are promising, but scale-up is not possible and health impact remains limited - International obligations for public health reporting can sometimes be met through vertical systems - Examples of eHealth include more extensive telemedicine networks, adoption of EMR systems on a limited basis, procurement and stock tracking systems, and mHealth trials
III. Scale up and mainstreaming	- Investment and adoption scales up with a more comprehensive policy basis - The commercial ICT market is well established with larger vendors, both international and local - The health sector takes a leading role in planning and using eHealth to deliver on health objectives - The health ICT industry is active; with new business models and competition, paid services commonplace, and insurance reimbursement increasing - New businesses and economic opportunities arise; there are new platforms for innovation and services, including for other markets - International obligations for public health reporting can be met - Health information systems are increasingly linked, but still face problems due to legacy systems - Examples of eHealth include hospital and care networks, home health monitoring, chronic disease management applications, and tailored online services for self-management of health records

Appendix 3

Draft Terms of Reference for eHealth structures

Appendix 3.1 – Statutes of the National eHealth Council of Swaziland

Introduction

The National eHealth Council (NeHC)is the central policy-advisory body for a comprehensive and integrated eHealth system in Swaziland.Its overriding mandate is to advise Government on eHealth matters in the country. The National eHealth Council is created through Executive Order by the Prime Minister within the framework of the Swaziland eGovernment Programme. The order mandates the NeHC to advise the Minister of Health, Minister of ICT and other Members of the Cabinet regarding policy and practice for the development and promotion of eHealth as a tool to support the health system of the country. As an advisory body, the NeHC is a forum for intensive policy discussion between government and the private sector and civil society. This should ensure that policies to be formulated and actions to be taken truly respond to eHealth as a platform for improving all aspects of health service planning and delivery requiring multi-sectoral attention.

Vision

A fully empowered health system where different sectors and stakeholders work in partnership to use information and communication technology effectively and efficiently to strengthen the health system and improve quality and equity of health services.

Mission

The NeHC shall lead in developing and sustaining an enabling environment where individuals and sectors can appropriately, effectively and expeditiously respond to the many challenges of eHealth. NeHC shall foster commitment, coordination, cooperation and collaboration.

Functions

The functions of the NeHC shall include the following:
1. Articulating consistent, ethical and evidence-based policy and advocacy positions with regard to the use of ICT in health in policy briefs to the Ministry of Health and other Government organs
2. Supporting the Ministry of Health in its role as convener, among its development partners, on issues of ICT and health development
3. Collaborating with, supporting, and strengthening the work of other public and private eHealth organizations in their defined eHealth endeavors

Priority action areas

The work of the NeHC shall give priority to implementation of strategies 7 and 8 of the national eHealth of Swaziland, namely:

a) Creation of an enabling environment for eHealth (strategy 5); and
b) mobilization of resources for eHealth in Swaziland.

An enabling environment for eHealth in Swaziland

Legal and regulatory framework.

Increased use of eHealth services requires a legal and ethical environment that ensures data privacy, security and confidentiality.

Norms and standards. Standardization can bring substantial benefits to eHealth practice, such as

avoiding subsystem within the health system which do not communicate with each other. Norms and standards for the whole system work only if the parts either use the same, or not only communicate with each other but actually "understand" each other. This speaks not just to functional equivalence, but to semantic interoperability of systems. Interoperability will be promoted across a number of dimensions:

    i.   across geographical areas within the country
    ii.   across programmatic areas
    iii. across health care settings
    iv. across technology platforms

The NeHC will promote the development of evidence-based national eHealth guidelines to assist provider, recipient and other stakeholder organizations to make informed decisions about appropriate eHealth interventions. The guidelines should be robust enough to meet the unique circumstances and constraints of the specific situation to which they are being applied. The basic nature and intent of guidelines may also been expressed in other formats variously labeled as protocols, best practices, algorithms, consensus statements, expert committee recommendations, and integrated care pathways.

Strengthen eHealth knowledge through monitoring and evaluation. To inform its policy advice, the NeHC will promote:

- Gathering intelligence on eHealth from within, as well as outside, the Swazi health system;
- Sharing eHealth knowledge and experiences among identified stakeholders
- Carrying out assessments and aggregation of knowledge and best practices in eHealth, and sharing the results throughout Swaziland
- Monitoring trends in the field of ICT, identifying new areas of ICT application in health, and promoting appropriate ICT use in Swazi programs

Resources for eHealth in Swaziland

The NeHC will develop policy and advocacy papers with regard to funding eHealth in the country. In this effort it shall examine:

    i.   Funding from Government coffers, such as through budgets of the Ministry of Health, hospi
        tals and related structures.
    ii.   Options for resourcing the implementation of the strategy, through:

        • waivers or reduced tariffs for the health sector as concerns charges and running costs for connectivity and telecommunications
        • creation of a special ICT fund for the health and social sectors in the country
        • Build partnerships for eHealth through, for example, strengthening and expanding existing agreements or developing new compacts with donor and foreign agencies, and further development of internal (inter-organizational) partnerships.

Service Charter

To realize its mandate, the NeHC has this Service Charter to communicate its commitment to provide quality advice to all stakeholders. The Charter provides information to stakeholders on what they can expect from the NeHC and what they can do to help NeHC serve them better.

The NeHC is charged with the responsibility of providing coordination among sectors and stakeholder categories and technical support for the national adoption and use of ICT in health. In performing this duty, The NeHC emphasizes the following core principles of the national eHealth strategy:

1. eHealth is not a goal in itself – its value is in supporting the higher purpose of health system goals and functions;
2. eHealth must take into account the needs and aspirations of the population, the environment, and the available resources;
3. Swaziland values harmony of the health systems actions with international, regional and country's priorities, policies and MDG goals
4. Swaziland values learning from one another;
5. The security, privacy and confidentiality of people's personal information must be ensured. All your personal information which is collect is stored, used and disclosed in accordance with the confidentiality that befits such information.

Operations of the NeHC will be guided by the need for:
- Multi-sectoral approach, including the development of strategic partnerships and main streaming eHealth in the health sector
- Targeting of the most needy groups
- Maximum engagement of all stakeholders categories in the implementation of the strategy
- Evidence-based interventions
- An empowered, participatory approach

Commitment to quality: The Council is committed to promoting eHealth quality in all its dimensions – safety, effectiveness, citizen-centeredness, timeliness, equity, and cost-effectiveness.

Commitment to stakeholders: The NeHC's is committed to providing policy advice and undertaking advocacy actions for the improvement of health using information and communication technology throughout Swaziland.

Communication: The Council will communicate promptly, openly and regularly so as to provide accurate information. Its members will be accountable to the stakeholders. This charter commits them to offer the stakeholders the best scientific and ethical advice independent of political and other influences.

Trust: The Council upholds the values of trust, honesty and integrity, and will listen to its stakeholder, address their needs and seek new and better ways to serve them.

Coordination and support

Among the key social and economic sectors engaged by the NeHC in the national debate are:
1. The public sector (Government and state corporations)
2. The private sector
3. Civil society
4. Development partners

Annex 3.2 – Statutes for a National eHealth Network and Resource Center

Background
At the fifty-eighth session of the World Health Assembly in May 2008, 192 members states of the World Health Organization, including Swaziland, passed resolution WHA58.28, which urges countries, *inter alia*:
- to consider drawing up a long-term strategic plan for developing and implementing eHealth services in the various areas of the health sector, including health administration, which would include an appropriate legal framework and infrastructure and encourage public and private partnerships;
- to establish national centres and networks of excellence for eHealth best practice, policy coordination, and technical support for health-care delivery, service improvement, information to citizens, capacity building, and surveillance.

The need for a national eHealth center of excellence

Despite the great potential of eHealth, many health facilities in Swaziland, especially those that are small or in rural areas are unable to derive great benefit from it because they lack the capacity to systematically evaluate developments in ICT and make informed decisions about potential applications, readiness for their adoption and adaptation to their specific needs, circumstances and resources. They look to the Ministry of Health and research organizations, to provide guidance and technical assistance on how to use eHealth to strengthen their health services. The national eHealth strategy for Swaziland, developed in 2009, therefore recommended, in keeping with the WHA58.28, the creation of **the Swazi National eHealth Centre of Excellence (NeHRC). The NeHRC shall be a Centre for research and expertise that gathers, produces, and disseminates information about eHealth both nationally and internationally.**

Vision
Decision-making in health systems is supported by the availability of the right knowledge, at the right place, at the right time and in the right format, through an ICT-based knowledge-coupling system which ensures that:
- all relevant options are readily available for consideration
- unique features of the situation at hand that bear on the discrimination among these options are appropriately evaluated
- appropriate associations are made between the unique features of the situation and the options
- the right technology is deployed and local capacity is developed, to facilitate access to the knowledge and its translation into action

NeHRC mission
The NeHRC aims to foster generation, management, sharing and use of eHealth knowledge, through the application of electronic information and communications technology in order to strengthen health systems and improve health outcomes in the country. The NeHRC's will provide new solutions and new knowledge in telemedicine and eHealth.

The center's activities will be organized in three different programmatic areas, each with a programme coordinator:
- Telemedicine services, linked to leading causes of mortality and morbidity, such as cardiovascular diseases, and maternal and child health issues
- ICT for development of the health workforce as well as for health promotion among the general public
- Building capacity for eHealth in Swaziland

To fulfill its mission the NeHRC will undertake forward-looking action research that supports health programs. Thus the NeHRC shall conduct research and development in national areas of focus described in governing documents, health action plans and priorities identified in the eHealth strategy of Swaziland. The center shall provide documentation and contribute advice and recommendations to health professionals, health authorities and decision-makers. The NeHRC shall also work together with business and industry to develop and adapt services and products for the health sector in Swaziland.

Funding
The budget of the NeHRC's shall be funded from two sources; a) the budget of the Government – host institutions and Ministry of Health; and b) resources generated by the NeHRC. Internally generated funds will consist of funds from requests for proposals (RFPs) and other forms of grant funding, and fees for services performed by the Center. In addition, the NeHRC shall generate income through national and international collaborative projects.

Organization
The Swazi National eHealth Center of Excellence shall be built around the national reference center for cardiovascular disease at the Shastin Hospital, as a core. Other institutions with complementary competences, in the priority programmatic areas will be added to form a distributed networked national center. The NeHRC is expected to have an appropriate number of staff with multidisciplinary education and work experience.

Priority action areas
The NeHRC will choose as its initial priority for action, items from the national eHealth strategy which fall within its area of competence. In particular, building capacity and creating an enabling environment for eHealth, and gathering intelligence on eHealth.

Build capacity for eHealth. Training in the use of ICT for health workers so they become knowledgeable users of information and communication tools and services - ePractitioners. training of eHealth experts. To do this effectively, proper planning must be undertaken for selection/development of training courses, training institutions, and identification of projected needs.

Strengthen eHealth knowledge through monitoring and evaluation. This will be done through:
- Gathering intelligence on eHealth from within, as well as outside, the Network;
- Sharing eHealth knowledge and experiences
- Articulating consistent, ethical and evidence-based policy and advocacy positions with regard to the use of ICT in health
- Carrying out assessments and aggregation of knowledge and best practices in eHealth, and sharing the results throughout the Swaziland
- Monitoring trends in the field of ICT, identifying new areas of ICT application in health, and promoting appropriate ICT use in Swaziland programs

Annex 3.3 – Terms of Reference for the eHealth Steering Committee

Background
The eHealth Steering Committee (eHSC) shall serve as a coordination mechanism and act as management committee for telemedicine projects in Swaziland. As of June 2009 there are three major telemedicine projects operating in Swaziland – a) the Cardiovascular Diagnostic Centre project; b) the Maternal and Child Health project, and the c) the Telemedicine support for Maternal and New-born Health project. These projects, which were developed and started, before the adoption of a nation-wide eHealth strategy in Swaziland, now need to be aligned. This is vital, in order to avoid duplication of effort or the creation of overlaps and gaps in telemedicine coverage. The eHSC will be responsible for efficient coordination of existing projects and all new telemedicine activities.

1. Functions

The eHSC will provide scientific and technical guidance to Telemedicine projects in Swaziland. It will have the following functions:

1.1 to provide independent evaluation of the strategic, scientific and technical aspects of telemed icine projects proposed to the Ministry of Health;

1.2 to review from a strategic and technical viewpoint, the content and scope of telemedicine activities in the country and make recommendations to the Ministry of Health;

1.3 to review and make recommendations to the Ministry of Health, on the establishment of working groups or sub-committees, and other means through which operational and techni cal matters regarding telemedicine can be addressed;

1.4 to serve as a legal watch mechanism, monitoring the situation and proposing modifications to laws or new laws and regulations as appropriate; and

1.5 to advise the Ministry of Health on priorities for Telemedicine in Swaziland.

In order to ensure coordination of, and provide operational guidance to, telemedicine projects in Swaziland, the eHSC will also exercise the following additional functions:

1.6 to evaluate the operational aspects of telemedicine projects in the country;

1.7 to review from an operational and technical viewpoint, the content and scope of telemedicine activities in the country;

1.8 to review and make recommendations to the heads, funders, and sponsors of telemedicine projects, so as to ensure proper coordination of telemedicine activities in the country.

Pursuant to the above functions, the eHSC may submit to the Minister of Health, through the Director of the Department of Information, Monitoring and Evaluation (DIME), such technical documents and recommendations as it deems necessary.

2. Composition

2.1 The eHSC shall consist of seven members – a Chair and six ordinary members – from a range of health care professional disciplines relevant to the proper application of telemedicine for improving health services. Each members shall serve in his or her personal capacity.

2.2 The eHSC shall have technical balance in terms of the professions represented (for example, clinicians, technologists, project managers, etc.) and include one representative from each of the three major telemedicine projects mentioned above.

2.3 Members of the eHSC, including the Chair, shall be appointedby the Minister of Health to serve for a period of three years, and shall be eligible for re-appointment.

3. Operation

3.1 The Telecardiology Center at the Shastin Hospital shall serve as the Secretariat of the eHSC. DIME shall provide any necessary scientific, technical and other support for the eHSC.

3.2 The eHSC shall usually meet once each month. However, extraordinary meetings may also be called by the Chair. In addition to the Members, selected experts may be invited by the Chair to eHSC meetings as advisors on specific issues when their technical collaboration is required. Representatives from major institutions supporting telemedicine activities in the country may be invited by the Chair to eHSC meetings as observers.

3.3 The eHSC shall prepare an annual report on its activities. However, consistent with the para graph following section 1 above, key findings and recommendations may be submitted at any time to the Minister of Health, through the Director of the DIME.

3.4 The eHSC may develop and use any assessment tools and methodologies it deems necessary in carrying out its functions. In a structured project management methodology large projects are implemented in a phased manner with the opportunity to review progress on a regular basis. Phasing of this needs to fit the technical and resourcing capability. In the event of centrally funded initiatives, allocation of funds will be on receipt and approval of stage or phase reports.

Future direction

It is anticipated that the Technical Working Group (TWG) will eventually evolve into the eHealth *Steering Committee.*

Annex 3.4 – Terms of Reference for the eHealth Coordinating Group

Background

The eHealth Coordinating Group (eHCG) shall serve as a coordination mechanism and act as alignment committee for existing eHealth projects in Swaziland. Projects, which were developed and started, before the adoption of a nation-wide eHealth strategy in Swaziland, now need to be aligned. This is vital, in order to avoid duplication of effort and to minimize overlaps and gaps in telemedicine coverage. The eHCG will be responsible for efficient coordination of these existing projects. It shall therefore put in place a structured project management methodology for large projects, which should be implemented in a phased manner, allowing the opportunity to review progress on a regular basis. The phasing of these projects will need to be tailored to their technical and resource capabilities.

1. Functions

The eHCG will provide scientifically based technical guidance to Telemedicine projects in Swaziland, so as to ensure better coordination of these projects. The eHCG will have the following functions:

1.1 to provide independent evaluation of the operational and technical aspects of existinge Health projects carried out under the auspicies of the Ministry of Health;

1.2 to review from an operational and technical viewpoint, the content and scope of these activi ties;

1.3 to review and make recommendations to the heads, funders, and sponsors of these projects, so as to ensure proper coordination of eHealth activities in the country.

Pursuant to the above functions, the eHCG may submit to the Minister of Health, through the Director of Medical Services (DMS), such technical documents and recommendations as it deems necessary.

2. Composition
2.1 The eHCG shall consist of seven members – a Chair and six ordinary members – from a range of health care professional disciplines relevant to the proper application of telemedi cine for improving health services. Each members shall serve in his or her personal capacity.
2.2 The eHCG shall include one representative from each of the three major eHealth projects in operation in Swaziland.
2.3 Members of the eHCG, including the Chair, shall be appointedby the Minister of Health to serve for a period of three years, and shall be eligible for re-appointment.

3. Operation

3.1 The HMIS Unit shall serve as the Secretariat of the eHCG. Directorate of Medical Services shall provide any necessary scientific, technical and other support for the eHCG.

3.2 The eHCG shall usually meet once every two weeks. However, extraordinary meetings may also be called by the Chair. In addition to the Members, selected experts may be invited by the Chair to eHCG meetings as advisors on specific issues when their technical collaboration is required. Representatives from major institutions supporting telemedicine activities in the country may be invited by the Chair to eHCG meetings as observers.

3.3 The eHCG shall prepare an annual report on its activities. However, urgent key findings and recommendations may be submitted at any time to the Minister of Health, through the DMS.

3.4 The eHCG may develop and use any assessment tools and methodologies it deems necessary in carrying out its functions.

Future direction

It is anticipated that the eHealth Coordination Group will eventually evolve into a subcommittee of the *eHealth Steering Committee*, when the latter is created.

Annex 3.5 – Constitution of the eHealth Society of Swaziland

CHAPTER I   Name, Headquarters, Purpose

Article 1

A professional society in the sense of Article xx of the Swazi Civil Code is hereby created under the name eHealth Society of Swaziland (herein after referred to as "eHSSwa"). eHSSwa shall be an independent body operating on a not-for-profit basis and not aligned with any particular political party or religion.

The eHSSwa shall be headquartered in Ulaanbaatar.

Article 2

eHSSwa's purpose shall be to promote national health eHealth – particularly telemedicine and associated fields – including research, development, practical applications and initial and supplementary training.

Article 3

To achieve its purpose, eHSSwa may, in particular:
- support cooperation between non-governmental organizations on the one hand and govern mental and non-governmental institutions on the other
- support national telemedicine and eHealth organizations
- promote the cause of telemedicine and eHealth within the country, as well as with internation al institutions or organizations
- contribute to the dissemination and exchange of knowledge, information and technologies relating to eHealth applications
- promote initial and supplementary theoretical and practical training in the field of telemedi cine and eHealth, including its applications throughout the health sector regardless of profes sional or geographical limits
- support daily activities relating to eHealth research and development and its application
- bring together eHealth users, scientists and researchers and sponsors, advisers and manufac turers and distributors and their scientific personnel
- promote the formulation and publication of rules for good practice and also guidelines and information on such practice

- support activities relating to the establishment of appropriate legal and regulatory frame works for telemedicine and eHealth applications.

CHAPTER II   Membership

Article 4
The society shall consist of physical persons as individual members and legal persons as collective members. The members shall be classified as individual members (individuals), institutional members (institutions), corporate members (corporates), and student members (students).

Individual members shall be physical persons living in Swaziland or Swazi citizens abroad, concerned with eHealth.

Institutional members shall be not-for-profit governmental and non-governmental institutions such as universities, clinics, research institutes and their sponsoring organizations.

Corporate members shall be commercial organizations such as manufacturers, distributors and service providers in the field of eHealth.

Student members are non-voting members (except for the selection of their Executive Committee member) who shall be physical persons undergoing academic training and interested in eHealth.

The Executive Committee of the eHSSwa shall accept and classify members in accordance with its own fair judgment.

The General Assembly shall rule on the exclusion of a member. In case of good cause for an exclusion relating to the behavior or character of a member, the Executive Committee shall rule on the exclusion.

CHAPTER III   Organs

Article 5
The organs of the association shall be:
a) the General Assembly
b) the Executive Committee

Article 6
The ordinary General Assembly shall be held once a year. Extraordinary General Assemblies may be convened by the Executive Committee or if a fifth of the members request this whilst specifying their purposes for doing so. The Executive Committee shall issue written invitations to attend the General Assembly with at least 60 days' notice and indicating the General Assembly's agenda.

The Executive Committee shall be notified in writing at least 30 days prior to a General Assembly of motions submitted by members on which the General Assembly is to vote.

Members unable to attend may also vote on motions by means of a suitable form of telecommunication. They may cast their votes by telephone, facsimile, email or other suitable means. The meeting's chairperson must take into account all votes for which there is no reasonable doubt as to the identity of the sender.

At least two-thirds of the individual members votes shall be required in order to amend the statutes of the society.

Article 7

The General Assembly shall be responsible for carrying out the following tasks:
- electing the Executive Committee
- amending the statutes of the society

Article 8

Election of Executive Committee members: The Executive Committee shall consist of nine elected Executive Committee members. Six Executive Committee members shall be drawn from the group of individual members. The other three Executive Committee members are drawn from the institutions, the corporates and the students. Each group shall elect one Executive Committee member. Each member within a category shall have one vote. An Executive Committee member shall have a three-year term of office. Executive Committee members may be re-elected an unlimited number of times.

Executive Committee Structure: Each member of the Executive Committee shall have one vote. The Executive Committee shall appoint from amongst its members a president, a vice-president, a secretary, a treasurer and further officers if it considers these necessary. The Executive Committee shall indicate competences and responsibilities whilst making these appointments. The Executive Committee shall formulate rules of procedure for itself. The Executive Committee shall take key decisions in a collegiate organ.

The Executive Committee may invite individuals as co-opted Executive Committee members by virtue of their skills and expertise in the field of eHealth.

Co-opted members have no voting right in the Executive Committee meetings.

Article 9

The Executive Committee shall be responsible for conducting all such business of the society as is not assigned to another organ in accordance with these statutes. In particular, it shall be responsible for implementing the society's purpose and associated financial and strategic decisions and activities. It shall notify the members of these in an appropriate manner and carry out appropriate public relations activities. The Executive Committee may establish working groups to support its work.

The Executive Committee shall, as a rule, organize an international scientific conference once a year.

eHSSwa commits itself to organize or co-organize, once a year, an event specifically directed to the practical applications in the field of eHealth. The Executive Committee shall be responsible for conducting this activity.

The Executive Committee shall also establish a list of eHSSwa supported events during a working year, which will be promoted as such on its website and through its newsletters.

CHAPTER IV   Finances, Liability, Liquidation

Article 10

eHSSwa shall finance its activities through members' dues, donations, and other gifts and from the proceeds of events. The Executive Committee shall decide with a simple majority on the amount of the members' dues.

Article 11

eHSSwa's financial commitments shall be covered by the society's assets alone. The members' liability shall be excluded.

Article 12

In the event of eHSSwa being dissolved, following its liquidation its assets shall be transferred to a charitable organization whose purpose is as close as possible to that of the eHSSwa. Such a beneficiary charitable organization cannot be one in which any current member of the Executive Committee is a member.

CHAPTER V   Concluding Provision

Article 13

These statutes were approved at the constituent General Assembly held on xx of yy 2009 in Ulaan-baatar.

List of founding members:

Annex 3.6 – Job description for the position of Officer-In-Charge of eHealth development policy and coordination

Objectives of the position:
- Information technology policy and coordination in the health sector and provision of necessary information on the subject
- information network planning in the health sector
- E-health and telemedicine development policy and coordination

Responsibilities/main operations of the position:
As part of objective 1:
- Create a legal environment for introducing information technology into health sector
- Develop policies on information technology in health sector
- Manage policy implementation and with necessary information

As part of objective 2:
- Develop a general plan for sectoral information network and take control over its implementation
- Develop policy on network safety and manage its implementation

As part of objective 3:
- Introduce international standards on eHealth and decide on best technology solutions
- Develop telemedicine development policy and manage its implementation

Requirements:

Requirements:

General requirements	Indicators	Compulsory	Desirable
	Education	Higher education	Master's degree
	Profession	Information technology engineer	
	Specialty	Health management	English proficiency
	Experience	At least 3 years experience in public service, and more than 5 years of work in the profession	
	Skills	- organizational - working as a team - raise issues and process documents - creative and rational decision maker	- Knowledge on health information systems - Leadership for change
Specific requirements	Adhere to the code of ethics for civil servants and the culture and rules of the civil service, and not to disclose privacy		

Appendix 3.7 – Mapping of main eHealth functions

eHealth function	National eHealth Council	Ministry of Health	National eHealth Resource Center	*eHealth Steering Committee	Training institutions	National eHealth society
Articulating consistent, ethical and evidence-based policy and advocacy positions with regard to the use of ICT in health	XXXX	XXXXX				
Carrying out assessments and aggregation of knowledge and best practices in eHealth, and sharing the results throughout the country			XXXXX	XXX	XXXX	XXXX
Monitoring trends in the field of ICT, identifying new areas of ICT application in health, and promoting ICT research and development to meet identified health needs			XXXXX		XX	XXX
Building capacities, creating synergies, and facilitating the development of networks of expertise, for ICT-based knowledge management in countries				XXXX	XXXXX	
Creating synergies, and facilitating the development of networks of expertise, for eHealth in the country				XXXXX		

Empowering health professionals by providing them with online access to needed information and knowledge		XXXXX	XXXXX	XXXXX	XXXXX	
Contextualizing health services, information, and knowledge in space and time through GIS			XXXXX	XXX	XXX	XX
Developing and maintaining partnerships for improved development and application of ICT in health		XXXXX	XXXX	XXXX	XXXX	XXXX
Supporting the development of eHealth norms and standards		XXXXX	XXXX		XX	
Promoting the application of eHealth norms and standards, including information exchange standards, protocols, methods and policies for improving data and information quality and interoperability		XXXXX		XXXXX		XXXX
Facilitating the development of frameworks, guidelines, methods and tools for improving eHealth policy development			XXXXX		XX	
Facilitating the development of frameworks, guidelines, methods and tools for improving eHealth practice			XXXXX	XXX	XXX	XXX

* Note that the TWG can serve as the eHealth Steering Committee (eHSC).

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