THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

MWANZA REGION

ICT STRATEGIC PLAN

2014 - 2018

REGIONAL COMMISSIONER'S OFFICE,

P.O.BOX 119,

MWANZA.

Tel: 028-2500366/2501037

Fax: 028-2501057/2541242   August, 2014

FOREWORD

The Information and Communication Technologies (ICT) Strategy 2014-2018 aims at guiding

The deployment of IT systems to improve internal and external service delivery and to

Improve efficiency and effectiveness of operations in the Mwanza RS. The strategy is aligned with the National ICT policy 2003 and e-Government Strategy 2009 (Draft). The national e-government strategy has been developed as a higher-level plan to address the need and role of the application of Information and Communication Technologies (ICT) in improving government services for RS.The ICT Strategy is intended to provide a framework for more coordinated and user driven focus on the use of IT systems as part of enabling Mwanza RS development objectives and streamlining the implementation of e-Government Strategy.

The strategy sets ambitious and specific goals and targets whose achievement will not only deliver better services to more citizens, but will also result in cost saving in the delivery of services while enabling many new types of services to be created as part of RS.

It is worth noting that this strategy will not only enable the RS to use ICT systematically, but also to apply ICT in reforming and improving the internal working processes, and ultimately making service delivery to the public easier and quicker. Similarly the strategy will ensure proper utilization of public resources and avoid duplication of efforts in technology and service delivery.

Effective ICT Management requires people to deploy the right technology in the right way

For the right reasons, commonly referred to as "people, process and technology". This

Strategy explores these themes with a view to arriving at the best possible fit to ensure it is

Achieved. The strategy is a result of considerable effort made by a number of stakeholders

Working groups in which the challenges and opportunities facing the deployment of ICT in

The RS at large were explored. I would like to thank all involved exhausting and in providing the valuable inputs. I now look forward to the delivery of commitments contained in the Strategy. Through this work, we can achieve a more integrated approach to the development and management of ICT and information systems as we strive to achieve our mission, goals and business strategies within the Mwanza RS.

……………………

NDARO KULWIJILA

REGIONAL ADMINISTRATIVE SECRETARY

MWANZA

Table of Contents

ACKNOWLEDGEMENT

Putting together an Information Technology Strategic Plan requires a collaborative effort from many people. The RAS and Information Technology Unit would like to thank to all Staff, who participate in creating ICT STRATEGIC PLAN.

The task force was drawn from ICT Unit under coordination of Mr. NG'WANASHIGI GAGAGA (Head of ICT Unit). The members of team were as follows:

No	Name	Dept/Unit
1.	NG'WANASHIGI GAGAGA	ICT Unit
2.	GEORGE S.LEONARD	ICT Unit
3.	MARIAM LUSEWA	ICT Unit
4.	JOSEPH D.CHALI	ICT Unit
5.	MAIGE J. MAGOTI	ICT Unit

LIST OF ACRONYMS

G2G	Government to Government
ICT	Information and Communication Technologies
IT	Information Technology
LAN	Local Area Network
M&E	Monitoring and Evaluation
MIS	Management Information Systems
SDLC	System development Life Cycle
SWOT	Strength, Weaknesses, Opportunities and Threats
VPN	Virtual Private Network
WAN	Wide Area Network
RS	Regional Secretariat

EXECUTIVE SUMMARY

Information and Communication Technologies (ICT) Strategy Plan 2014-2018 aims at guiding the deployment of ICT systems to improve internal and external service delivery and to improve Efficiency and effectiveness of operations in the Mwanza RS. The rationale behind the strategy includes:

a) Prioritizing ICT processes and projects based on what provides the most value.
b) Managing scarce ICT resources optimally.
c) Planning strategically the ICT investment.
d) Instituting standards and minimize risks in ICT deployment in the Mwanza RS.

The goal of the strategic plan is to enable systematic ICT deployment within the Mwanza RS as a tool to facilitate the implementation of ICT Development Services and this is in terms of monitoring and evaluation as well as the overall capturing and use of the data and ICT equipment to the Mwanza RS and the whole country.

CHAPTER 1: BACKGROUND

Introduction

The term ICT encompasses a range of computing and communications technologies for capturing, manipulating, storing, retrieving, processing, analyzing and transmitting information. There is no universally accepted definition of term owing to the fact that the concepts, methods and applications involved in ICT are constantly evolving in line with the fast pace of change in technology itself. A simple definition is thus derived by considering all the uses of digital technology that help individuals, businesses and organizations use information to solve practical problems. In business, ICT comprises traditional computer-based technologies - things you can typically do on a personal computer or using computers at home or at work; and the more recent, and fast-growing range of digital communication technologies including mobile phones – which allow people and organizations to communicate and share information digitally.

An Information and Communications Technology (ICT) Strategic Plan defines the way an Mwanza RS proposes to manage and enhance its information assets to support its current and future business needs. The ICT Strategic Plan becomes a tool that Mwanza RS use to communicate its ICT Strategy both internally and externally.

The purpose of an ICT Strategic Plan is to ensure that ICT activities and investments are aligned with strategic and corporate objectives, and to define the ICT standards and policies that Mwanza RS have in place.ICT Strategic Plans are used as tools for decision-making about future acquisitions. Any new proposal to change or enhance business processes should be tested to ensure that it conforms to the approved ICT Strategic Plan.

An ICT Strategic Plan, like Corporate and Business Plans, is an output from an ICT strategic Planning process. The ICT strategic planning process involves planning for business Systems, information management, asset management, and information and communications technology that supports the strategic and corporate objectives of Mwanza RS. The planning process should also take into account wider government policy priorities to ensure the needs of key stakeholders are met. ICT strategic planning also includes establishment of appropriate governance and

accountability structures to ensure that Government, strategic and corporate objectives effectively drive the ICT strategies being pursued. Therefore, the purpose of undertaking an ICT strategic planning process is to look ahead and determine whether the existing ICT environment in an Mwanza RS will effectively support future business needs and contribute to achieving the Mwanza RS's Results and Services Plan (RSP) outcomes and wider government policy priorities, and if not, what changes can and will be made.

ICT in a Broader Context

ICT also takes into consideration some aspects that may not be directly technological, but

Inform how technology is harnessed to achieve business objectives.

These include:

a) Information (the "I" in ICT); covering such aspects as the nature of information, meaning and value of information; how information is controlled; and legal aspects of information;

b) Management of information - this covers how data is captured, verified and stored for effective use; the manipulation, processing and distribution of information; keeping information secure; designing networks to share information; and

c) Strategies and policies – covering the aspects of how ICT should be used to achieve organizational goals and objectives; policies guiding the management of ICT, and guidelines on how to use ICT with optimal effectiveness and efficiency.

Rationale for the ICT Strategy

In this strategy, the wider context of technology that encompasses Information and Communication Technologies (ICT) as well as Information Systems (IS) is adopted in order to Serve the purpose of systematic deployment of the Information and Communication Technologies and IT systems in particular. The use of ICT in Mwanza RS therefore intended to Optimize performance, improve cost effectiveness; and enhance quality and speed in services Delivery.

Mwanza RS will endeavor to provide the following:

a) Planning strategically the ICT investment;

b) Managing scarce ICT resources optimally;

c) Prioritizing ICT processes and projects based on what provides the most value;

d) Instituting standards and minimize risks in ICT deployment in the RS.

The ICT Strategy establishes a framework in which to fit the existing and proposed solutions, infrastructure investments and determines a framework for setting priorities. It also identifies the core systems and supporting resources and investment required over the medium term, it identifies the management and technical policies that determine the means and the ground rules by which information systems will be developed and managed. The strategy also outlines the migration plan needed to carry the work forward.

REGIONAL SECRETARIAT's ORGANISATIONAL PROFILE

The REGIONAL SECRETARIAT is mandated with the task of managing all activities and providing technical services to develop Mwanza Region in the United Republic of Tanzania. The approved organization structure of the Mwanza Regional Secretariat consists of the following sections and units:

1. Administration and Human Resources Management Section

2. Planning and Coordination Section

3. Social Sector Section

4. Economic and Productive Sector Section

5. Infrastructure Section

6. LGA's Management Services

7. Regional Hospital

8. District   Commissioner

9. Finance and Accounts Unit

10. Internal Audit Unit

11. Procurement Management Unit

12. Information and Communication Technology Unit

13. Legal Services Unit.

The following agencies are also Support Mwanza REGIONAL SECRETARIAT:

a) TTCL and
b) UCC

The framework for Mwanza Regional Secretariat has necessitated movement of staff from the Regional Secretariat to levels where functions and responsibilities have been devolved and the Mwanza Regional Secretariat remains with a coordination role and policy formulation. The implication of Mwanza RS framework in ICT strategic planning and deployment is that data and information ownership should be devolved to the appropriate level; and consolidated upwards to support decision making in coordination of Mwanza RS development of technical services country wide.

BASIS FOR MWANZA REGIONAL SECRETARIAT ICT STRATEGY

This ICT strategy articulates the approach to be adopted by Mwanza RS to support its sectoral policies and strategies by use of ICT. Its development is based on the required alignment with REGIONAL SECRETARIAT's Policies and Strategies. Also it is based on relevant policies, strategies and targets prescribed by the national ICT policy 2003 and e-government strategy 2013.

ALIGNMENT WITH MWANZA RS ICT POLICY

The Information and Communication Technology Systems in Mwanza RS are provided for the use by staff in performing their duties. For the system to bring the desired goals a policy should be in place to govern their procurement and disposal, the ICT POLICY is designed as a guideline governing the use of Mwanza RS' ICT Resources. It outlines the Policy that should be applied to Information and Communication Technology within or by Mwanza RS.

ALIGNMENT WITH NATIONAL ICT POLICY

The National ICT Policy's broad objectives are to:

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

b) Transform Tanzania into a knowledge-based society through the application of ICT.

ALIGNMENT WITH NATIONAL E-GOVERNMENT STRATEGY

The E-Government Strategy in Tanzania aims to "Deliver quality services to the public through technology". With that intention, e-Government involves using ICT to support processes within the government (G2G) as well as for the delivery of services to beneficiaries, such as citizens, businesses and other organizations in all sectors. The e-Government Strategy specifies seven guiding principles for developing initiatives and services.

These are:

a) **Service Innovation:** The use of e-Government must be geared towards introducing network methods by creating new operational processes and changing current processes, as well as by changing the government's relationship with the public. Any such innovations must clearly identify resource requirements for sustainable operations. It requires continuous research, development and M&E;

b) **Equal Access:** The implementation of ICT in government processes must ensure that all citizens will have equal access; for this purpose, factors such as geographic location, the issue of time, and diversity must be taken into account. It requires developing shared internal facilities that will enable service delivery channels to be available across the general public;

c) **Ease of use:** Applications that are to be implemented must be oriented towards stakeholders and, hence, be user friendly. It requires providing user-friendly stakeholders-Care and Business-Centric services for all.

d) **Benefit Realization:** Applications should ensure that the benefits obtained by citizens from using e-Government services will be greater than those from visiting government offices in person. Therefore, e-Government investments need to be justifiable in terms of how they help

citizens and taxpayers. It requires ensuring services are aligned to client expectations and address pertinent needs;

e) **Security and privacy:** When implementing applications, consideration should be given to using security and privacy mechanisms to ensure the proper use and handling of Personal information and transactions. It requires assuring security, legality, protection of privacy, prevention of intrusion and detection of attempts at unauthorized access;

f) **Partnership and Involvement of all stakeholders:** The private sector can assist the State in providing e-Government solutions, as well as in training government employees. It requires building strategic partnership with private sector stakeholders and encouraging private-sector led innovations in delivering public services; and

g) **Interoperability:** Each government Sections/Units will be responsible for maintaining its electronic services and data sets, as well as for ensuring that newly implemented systems leverage existing systems and are aligned to the principle of Open Access. This requires holistic oversight and management of systems with broad participatory design processes for new systems.

SWOT ANALYSIS

SWOT has established itself as a framework for analyzing **strengths, weaknesses, opportunities** and **threats.** Strengths and weaknesses are mainly based on internal audit, as a result of introspection of an organization. The opportunities are related with the internal as well as external environmental factors. Threats are concerned mainly with the external environment factors. The external factors imply economy, competition, sources of funding, demographics and culture. These are needed to be taken care in strategic planning and activities.   Opportunities represent factors that can be beneficially exploited. Threats need to be considered because of the potential of damaging Mwanza RS . SWOT analysis normally reflects a viewpoint which can be used by others. It has to be positive so that the analysis is exploited for the benefit of the Mwanza RS. Different variants of SWOT provided a structure based planning and implementation. This

technique is used to develop a project or find a solution to a problem that takes care of several different internal and external factors and maximizes the potential of strengths and opportunities while minimizing the effect of weakness and threats.

STRENGTHS

- Existence of an ICT Unit at the Mwanza RS to provide coordination, expertise and support in the systematic deployment of ICT systems.
- Strong commitment from Mwanza RS Management in relation to budgetary resources.
- Desktop computer equipment is of a high standard with processes in place for the replacement of computers at end of lease.
- Most computers have LCD displays which consume low power.
- Updated ICT strategy
- Presence of Video Conferencing Facility- Mwanza RS is successfully running different meeting with different organization   through Video conferencing since 2011 without traveling, this reduce cost to an organization.

WEAKNESSES

- Most of ICT systems lack documentation and change management procedures.
- There is no enough power protection for ICT equipments in the offices.
- There is no dedicated ICT training room and presentation facilities.
- There is no Thunder/Lighting ARRESTOR
- There is no enough Budgets for the ICT Unit.
- Training programme not fully implemented due to budgetary constraint.
- Insufficient working space and tools.
- There is no alternative energy source and power server.
- Safety strategies on ICT Facilities are not fully implemented.
- Lack of incentives to motivate staff to improve services and productivity
- Under-investment on ICT.

OPPORTUNITIES

- Availability of Human Capital.
- Availability of telecommunications infrastructure.
- Availability of National ICT Policy and e-Government Strategy.
- Strong commitment of Mwanza RS management.
- The intended availability of reliable internet connectivity through Mwanza RS.
- Upgrading of ICT infrastructure
- Data centre and cloud facility-Time has come when data is to be kept at the data centre or cloud, so that the data is secured and could be available at any time and anywhere.

THREATS

- High cost of telecommunications Infrastructure and ICT investment vs. allocated budget
- Damage of ICT equipment due to electrical fluctuation and lightning effect since there is no thunder arrestor.
- ICT services users for this case Sections and Units make technical decisions and commitments without consultation with ICT Unit which result into inconsistencies in IT systems deployments and standards.
- Reluctant of ICT users and other stakeholders in implementing security measures and standards may lead to security risks.
- Non availability of fund- No proper budgetary provision also posing a great threat to ICT implementations , maintenance and future projects

CHAPTER 2: VISION, MISSION, GOAL ICT GUIDING PRINCIPLES & OBJECTIVES

Mission, Vision, Goal

Vision

"Deployment of appropriate ICT as the enabler of Mwanza RS' operations to enhance socio-economic and quality service delivery to all stakeholders."

Mission

"We aim to strengthen Stakeholders systems through excellent customer service, continuous improvement, innovative problem-solving, adherence to standardized information technology best practices, and collaborative solutions."

Goals

The technology services goals for the ICT Unit are:

- Build association with potential decision-makers.
- Deliver high quality ICT services to all stakeholders timely.
- Aspire and commit to excellence and going beyond expectation.
- Become a tool for converting business requirements to technical solution.
- Provide modern problem-solving solutions using agile technologies.
- Maximize Mwanza RS return on investment in ICT.
- Develop and manage a telecommunication infrastructure and share knowledge to the RS other stakeholders.
- To attract, motivate and maintain highly skilled ICT experts.
- To provide staff with efficient and reliable IT infrastructure that meets the business requirements of each office.

IT Guiding Principles

The RS IT Guiding Principles are used to govern the daily actions of the ICT Unit staff.

The Guiding Principles are also used during the planning process to consider a project's relationship to the IT strategic initiatives before the project is approved and prioritized. The Guiding Principles are broken down into four main categories: **organizational, infrastructure, data, and application**

Organizational Principles

1. The RS will be the "best" technology user, not the first technology user.
2. Technology solutions must add value, which means that the systems are cost-effective while optimizing usefulness.
3. Only proven technologies will be implemented for critical systems.
4. People are the key to success in any organization. Invest in training in parallel with technology to ensure that employees can use that technology effectively and proficiently.

Infrastructure Principles

1. Mwanza RS ICT infrastructure (networks, telecommunications, wireless systems, etc.) is the foundation of the RS operations and must be capable of delivering secure, innovative, and accessible systems.
2. Mwanza RS ICT infrastructure must be secure, reliable, and disaster resilient to provide good services.

Data Principles

1. Access to information must be easily available anytime-anywhere to promote the RS Wellbeing to enable day-to-day decision-making, enhances learning and cultural opportunities, and engages residents in civic participation.
2. Technical solutions should improve information sharing (as appropriate and ensuring confidentiality) across the Mwanza RS.
3. An information security strategy balances the need to minimize risk with the desire to maintain an open environment that facilitates the exchange of information.

Application Principles

1. Innovative solutions will use business intelligence, be web-enabled, and assure data integration with other applicable applications.
2. Implemented, whenever available and practical.
3. Maintain up-to-date capabilities of systems with software version upgrades.
4. Optimize application functionality.

Strategic   Objectives

To address the existing challenges and fulfill the vision and mission, the Mwanza RS is adopting five strategic objectives that will be achieved by focusing on the continuous development of its People, processes and technologies.

Objective 1: Document and implement Management Information System.

Objective 2: Information system governance (e-Governance).

Objective 3: Improve the technical infrastructure to facilitate communication and

   automation of key business functions.

Objective 4: Implementation of ICT capacity building and change management

Objective 5: Infrastructure development.

The strategic plan objectives are further discussed in the strategies for implementation in Chapter 3 of this document. Each strategic objective is translated into implementation strategies and plans. The strategies are categorized into ICT Architecture as follows:

a) Data and Information Strategy.
b) Public Access Strategy.
c) Hardware and communication strategy.
d) ICT Governance and Capacity Building Strategy.

CHAPTER 3: ICT STRATEGIES

Data and Information Strategy

Improved information availability provides a breakthrough in the levels of productivity, quality and improved customer service level. The strategic objectives shall be achieved within specified time but through milestones within that period.

CURRENT ENVIRONMENT

> ➢ Currently, it is difficulty in accessing the communications infrastructure required to support ICT.
> ➢ There is no sharing of data and information within the organization and outside the organization.

Strategic Objective 1: Document and implement Management Information System.

No	Key Result Area (KRA)	Main Activities	Timescale
1.1	Information sharing, efficiency and effectiveness of IT processes	Document systems development guidelines	Short Term
		Identify systems that can be shared by different	
		Entities in the Mwanza RS.	
1.2	Database ownerships	Identify key users of each existing database	Short to Medium Term
		Identify information clients	
1.3	Standardization of definition of datasets for interoperability and coordinated Monitoring and Evaluation purposes.	Identify categories of data	Short to Medium Term
		Agree on dataset definitions.	

Public Access Strategy

The prime target of information is to improve service delivery to staffs. Therefore, technology should be employed to improve the interaction between the Mwanza RS and its stakeholders whenever and wherever possible.

Current Situation and Issues

Currently, Mwanza RS works through papers, request for services or information by internal and external customers is done through letter communication or through completion of forms and other requisitions. The result of this process is the delays in providing services to the public.

Strategies

The strategic actions to be taken to address the challenges are:

a) All forms for service request will be made available in hard copy as well as on websites, and whenever possible dynamic databases should be developed so that forms are completed on-line;

b) All public information that is usually requested by and provided to the general public through calls, written requests or physical visits to the Mwanza RS offices shall be made available on the Mwanza Regional website, affiliated agencies or authorities and where possible through mobile phone access;

c) The ICT staff who are responsible for database will regularly keep the websites and databases updated, and ensure completed forms are channeled to responsible personnel and that response to the forms and queries are made in a timely manner, either on-line or by any other means possible; and

d) Mwanza RS shall describe what information, service can be provided by the RS to the public and other stakeholders; how the public can access such information, service and whether such is for free or for fee.

Strategic Objective 2: Information system governance (e-Governance).

No	Key Result Area (KRA)	Main Activities	Timescale
2.1	Customer Service management system (including complaints issues)	Identify information for the public	Medium to Long Term
		Identify forms for online uses	
		Identify information demands for internal and external customers	
		Prepare requirement document (functional and non functional)	
		Design ,update and develop Regional website	
		Train technical staff and all users	
		Support implementation activities	

Hardware, Software and Communication Services Strategy

ICT Hardware and Software Standards.

Current Situation and Issues

➢ Currently, Mwanza RS does not have ICT hardware and software standards and the result is having different hardware and software platforms which are not interoperable and create difficulties in support.

➢ Mwanza RS does not have a strategy for replaced a hardware and software after a certain period. Also application software is not upgraded to keep abreast of the systems in place.

➢ Most of staffs do not have office computers.

➢ The standard computers configuration made to all staffs as follows:

  • Computers with a minimum processor speed of 2.8GHz

  • Random access memory of 2GB,

- OS windows 7.
- Microsoft office 2007 and kaspersky antivirus software.

➢ Currently, Mwanza RS has a video conference for communication purpose.

➢ There are no networked printers and photocopies/scanners at Mwanza RS.

➢ Most of computers and servers are fitted with UPS.

➢ Currently, Mwanza RS we don't have IT Security equipment like firewall, Cyberoam

Strategies

ICT Hardware will be based on standards prescribed by the relevant government body responsible for ICT Standards and based on the RS information security policy to be developed. The strategic actions to be accomplished are:

a) There shall be off-site backup servers for security purposes. A secure place will be identified.

b) Standards shall be developed and all ICT hardware shall be procured network ready at delivery;

c) Servers will be installed at the RS as file and application server, database server, web/Internet server and backup servers. The web/internet server will also provide for

d) VPN link between locations. An additional servers will be installed as a database server at points where databases are located;

e) There should be data center for security purposes.

f) The ICT Unit shall be responsible for ensuring that ICT hardware standards are adhere to during procurement processes.

g) Hardware must be replaced over a certain period example three year cycle.

h) Operating systems must be replaced in a manner that will ensure that it is transparent to the user.

i) Application software must be upgraded to keep abreast of the systems in place.

j) To purchase computers for all staffs in sections/units.

k) Mwanza RS ICT Unit should have IT security equipment like firewall, cyberoam for security purpose.

Local Area Networks

Current Situation and Issues

> Most of offices have a dedicated switched Local Area Network providing 2Mbps to the computers over a minimum category 5 cable, with a copper backbone. Switches are typically 24-port Trendnet managed switches.

> Installation of local area networks at Mwanza RS was previously undertaken as part of Public Service Reform program (PSRP II).

> No access to networked printers and scanners.

Strategies

There will be a Local Area Network (LAN) at Mwanza RS Head Quarters. The strategic actions for local area networks to be achieved are:

a) The minimum network standards shall be as per standards provided by any government Mwanza RS mandated to provide government standards as issued from time to time.

b) The new Mwanza RS building offices, Regional Hospital must include a Local Area Network as part of construction works.

c) The RS ICT Unit shall oversee design of LANs, WANs, Internet Provision, Intranet Provision, Website Design, Email Services, etc.

d) To improve internet connection to Mwanza RS.

e) To improve power supply and secure charging stations and storage to achieve successful implementation.

f) Improve network sharing of printers and scanners.

Internet and Intranet

Current Situation and Issues

> There is no Mwanza RS-wide Intranet that would enable staffs in the RS to share documents, bulletin boards and other communication facilities.

Strategies

The Head office local area network will be installed essentially to facilitate the sharing of Internet broadband, intranet and provision of management information. The strategic actions to achieve this objective are:

a) Documenting the objectives of the RS Internet and intranet and setting respective access privileges.

b) Developing and deploying the intranet.

c) Building capacity for staff to utilize the Intranet for document and information sharing and Internet for access to web based Mwanza RS related systems and individual Unit/Sections specific and general use.

Strategic Objective 3: Improve the technical infrastructure to facilitate electronic communication and automation of key business functions

No	Key Result Area (KRA)	Main Activities	Timescale
3.1	Standards for ICT Hardware and Software	Obtain government recommended standards	Short to medium Term
		Choose standard for each application in the Mwanza RS	
		Sensitive users on selected standards	
		Train users on selected standards	
3.2	Improvement of ICT Infrastructure and backbone	Prepare and furnish IT support rooms	Short to medium Term
		Procure and commission Central servers	
		Procure and commission Workstations	
		Procure and commission printers	
		Procure and commission UPS	
		Design, configure, install and support LAN/WAN/Internet/Intranets and Extranets	

ICT Governance and Capacity Building Strategy

ICT Governance

The primary goals of ICT Governance are to assure that the investments in ICT generate business value, and to mitigate the risks that are associated with ICT. This can be done by implementing an organizational structure with well-defined roles for the responsibility of information, business processes, applications and infrastructure. ICT governance should be viewed as how ICT creates value that fits into the overall corporate governance strategy of the organization, and never be seen as a discipline on its own. In taking this approach, all stakeholders would be required to participate in the decision making process. This creates a shared acceptance of responsibility for critical systems and ensures that ICT related decisions are made and driven by the business and not vice versa.

Issues and Current Situation

a) There is no computer room   for ICT unit due to lack of budget.

b) There is no coordination of technology matters among business units: The various entities resort to using available tools to develop and create small database to do their work. This has resulted in many databases with related data in the enterprise.

c) The ICT Unit at Mwanza RS level was established and mandated to oversee and provide expertise and services to Mwanza RS on all ICT and e-Government deployments as well as undertaking research and studies so as to advise on areas for computerization and automation. Mwanza RS ICT Unit as a central coordinating unit for all ICT activities is currently staffed with 5 members of staff.

Strategies

a) With the current technology available, many more proposed business applications and much needed alignment to business, the ICT Unit for Mwanza RS will be responsible for managing the data centre and its support to the business. The new and appropriate structure for the Unit is therefore proposed in the Strategy in order to   effectively incorporate sub sections under the Unit that are necessary to coordinate each specific ICT areas; and

b) To have the Internal Working Structure of the proposed ICT Unit.

c) To have a computer room with full ICT equipments up to 2018.

d) Improvement of Mwanza RS budget.

Capacity Building

Current Situation and Issues

➢ Currently , Analysis conducted to establish ICT literacy at Mwanza RS shows that the literacy ranges from 75% Microsoft office, 80% for Application software, 63% for internet, and 44% for database management. While in many application systems staff have the basic skills, the area of concern is for applications that are key to Mwanza RS business.

➢ There are no enough budgets to training staffs.

Strategies

The strategic actions for capacity building are:

a) To achieve 95% for basic computer knowledge and internet/intranet usage for all employees in Mwanza RS. All officials who require information from specialized databases should be able to access the information directly.

b) All ICT technical staff should get a specialized ICT training based on their area of usage of the systems.

c) Improvement of budget.

Strategic Objective 4: Build ICT implementation capacities and change management

This strategic objective will facilitate smooth management and operationalisation of the IT resources and applications

No	Key Result Area	Main Activities	Timescale
4.1	Management Sensitization and Training on ICT	Undertake ICT training needs assessment for Management	Short to medium Term
		Prepare ICT Training and sensitization programmed	
4.2	End User commitment and capability on ICT	Undertake ICT training needs assessment	Short to medium Term
		Prepare ICT Training Programme	

**Strategic Objective 5:** *Improve Infrastructure development*

Objectives

The study highlighted that Mwanza RS has some basic ICT infrastructure, including desktop computers, laptops, and video conference and, printers, photocopiers, scanners and Internet access through Local Area Network (LAN). Systems with clearly-defined processes and automated procedures are needed to facilitate a seamless flow of information. This involves an infrastructure that needs to be maintained so it can offer full-time delivery of information whenever needed.

Human resources play a critical part in ensuring that ICT supports and fulfills Mwanza RS functions and values. Therefore strategies need to be developed to strengthen and increase the skills, quality and number of personnel with ICT skills, who will be able to convert their ICT knowledge and skills into goods and services for the benefit of Mwanza RS and the whole country.

The activities of the infrastructure programme are depicted in the following diagram:

Diagram of Infrastructure programme activities
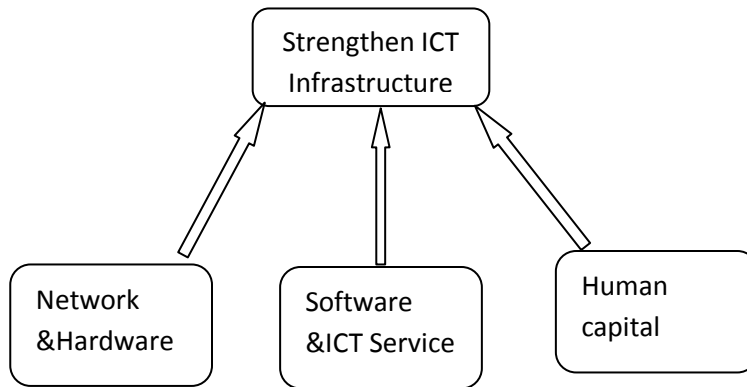
Activity 1: To strengthen network and hardware infrastructure

The infrastructure at the headquarters building of Mwanza RS is still fairly recent. most office within the Mwanza RS building has a fully-networked computer. All Staffs have official/ government e-mail addresses, although some of them do not use the addresses. Only 20 out of 100 Offices are not connected to the Internet.

Improvements required include wireless access to the Internet within the Mwanza RS building and the Region Hospital. There is also a need to get all RS Offices connected to the Internet.

Activity 2: To strengthen software and ICT services

The main goal of this activity is to strengthen the **tools** and **applications** used by Mwanza RS staffs to perform their functions. Challenges, inadequacies and weaknesses have been identified and should be addressed. The survey has shown that some of the major challenges faced by staffs were lack of awareness of the opportunities and benefits of ICT operation and insufficient computer training which limited due small budget.

Activity 3: Human capital infrastructure

Strengthening human resource skills and capacities (human capital infrastructure) is critical for developing, managing and using ICT applications and services. Mwanza RS should focus on developing and implementing innovative strategies that will ensure that skilled and competent staff is retained in order to facilitate high-quality ICT governance. The human capital

infrastructure would consist of the technical and administrative support staff, Mwanza RS management and ICT Committee members.

ICT technical staff

The Mwanza RS have an ICT Unit. All major ICT services and applications are supported by a ICT technical team There is a strong need to have a workshop for ICT Unit, and this Unit will be the channel to provide continuous training of RS Staffs and other users.

As the use of ICT grows, the need will grow for regular maintenance of equipment, new software and upgrades, implementations of recently-developed better-performing technical equipment and many other improvements. Mwanza RS will become increasingly dependent upon its technical staff for service delivery without blocks or constraints. Thus Mwanza RS must be able to attract and retain good technical support staff by offering attractive terms and conditions of service and regular in-house training, and by providing new opportunities for them to develop their careers within Mwanza RS.

Administrative staff

The staff should be aware of the functions of Mwanza RS and the overall document management process. They will need specialized and continuous training to develop their skills further, ensuring that Mwanza RS is efficient and effective.

ICT Committee members

The members of ICT Committee have a role to play which is to coordinate and ensure the effective implementation of the ICT Strategic Plan. They will be key in lobbying for the deployment and use of ICT in Mwanza RS. Therefore all members of the ICT Committee should receive special training and sensitization on all ICT services. They also should be trained and sensitized in ICT policy formulation, implementation and monitoring, including policy development stages, identification of priority development area. They also need to learn and be aware about ICT e-security, e-governance.

If ICT Committee members are trained well, they will actively support awareness-raising and capacity-building activities to enhance the capacity of Mwanza RS to monitor existing policies to ensure that they comply with national standards and developments. They will also lobby for

enabling ICT policy frameworks and for making signed national ICT instruments applicable in Tanzania.

CHAPTER 4: CONCEPTUAL FRAMEWORK FOR INFORMATION SYSTEMS

This chapter describes the conceptual framework of the Information Systems/Business applications that are of relevance for Mwanza RS business processes. The objective is to describe at a high level the general needs and roles of sub-systems and linkages. From the strategic visioning presented earlier, and based on the information requirements, the high level systems requirements that are components of the overall Mwanza RS ICT applications are:

Core Business Applications:

i. IFMIS (Epicor) - Designed to Process payment, tracking funds received, physical implementation and expenditure.

ii. HCMIS-Lawson 9 - Maintain payroll employees' information.

iii. SBAS5 - Designed to be used by Ministry Units and Agencies(MDAs) such as RS which receives Funding from the Consolidated Fund (Ministry of Finance and Economics)

iv. PlanRep3 - Designed to assist Local government in Planning, budgeting, revenue Projection from all sources, and tracking funds received, physical implementation and expenditure. Preparation of the Comprehensive Council Health Plan (CCHP), at RS level PlanRep3 is used by Regional Health Management Team (RHMT) for Previewing and Assessment of CCHP before submitting to PMORALG and other stakeholders.

Support business Applications

(i) **Operating systems**- Microsoft operating systems and office tools are taken as de-facto standard for the Mwanza RS . However, Mwanza RS is now deploying Windows Servers 2008R2 and may transform into open source applications but with consideration of the existing and planned Government Circulars, directives and Policies that are given by mandated Government RS and agencies such as PMORALG, e-Government.

(ii) **Antivirus** –this software is very important for making other programs to run safe.

(iii) **General and specialized Applications** - A set of applications will enhance productivity, improve quality of service delivery, facilitate sharing the information in Mwanza RS , and with other government agencies include:

a) Computer aided design.

b) Office productivity software (word-processing, spreadsheet, presentation, publishing, project management, desktop publishing, etc);

c) Statistical Analysis software (SPSS)

d) Adobe reader

Adobe Acrobat is a program designed to make computer documents accessible across various hardware and software platforms.

e) Other specialized technical software applications

f) PMIS - Designed to enable exchange of information between PPRA and Procuring Entity (PE) such as RS, the system allows PE to submit online Annual procurement Plans, Monthly Reports and Checklist forms.

g) LGHRIS - Maintains a database of all employees in Local Government Authorities and RS, this information includes employees' qualifications, history with organization, position and salary histories and record the reason when the employee leaves. The system does not Process Payroll at all.

h) LGMD2 - Designed to assist Local, Regional and National Authorities in Monitoring agricultural sector data on a quarterly and annual basis.

i) WMIS - The system tracks the expenditure of Project No. 3280 Rural Water Supply and Sanitation Project (RWSSP) also maintain Water Project Contract information and operations.

CHAPTER 5: CRITICAL SUCCESS FACTORS AND RISKS

Critical Success Factors and Risks

The successful deployment of ICT in Mwanza RS requires a high level of coordination, a constant demand of tangible results, proactive leadership and strong management. There are always a number of critical success factors and risks associated with ICT implementation. Some of the key ones are highlighted.

Critical Success Factors

Critical success factors for the successful implementation of the strategy include the following:

Table 5.2 Analysis of Critical Success Factors

Critical Success Factors	Requirements
Management support and management commitment	➢ Strategy acceptance in the Mwanza RS ➢ Continuing engagement of management at all levels of implementation.
ICT Leadership	➢ Consolidate IT structures to ensure responsiveness and Accountability. ➢ Clear and adequate roles and responsibilities for ICT Units and related coordinating committees.
Human Resource capacity	➢ Continuous capacity development. ➢ Continuous public involvement.
Effective communication among ICT Unit and none ICT Units/Sections.	➢ Create an environment that enhances interaction between the ICT unit and none ICT Units/Sections within the Mwanza RS

Consolidated IT structures to ensure responsiveness and accountability	➢ ICT unit with sufficient powers to coordinate with other unit/sections within the Mwanza RS to achieve ICT objectives.
Financial Resources	➢ Recognition of ICT as a priority area in the delivery of Mwanza RS services.
Commitment by all actors	➢ Continuous coordination and buy-in by all state and non state actors. ➢ Active coordination among all stakeholders to delivery and enforce the improvement of services delivery through ICT.
Protractible ICT or telecommunication Infrastructure.	➢ Reliable infrastructure to support continuous availability of data from fields. ➢ Telecommunication infrastructure to prolong the use of IT systems. ➢ Network and data security.

Risk Management

Risk is about uncertainties and constraints. There are a number of risks and dependencies that may affect the successful implementation of this strategy. In this manner, risk management shall be a major concern and will involve activities undertaken with the intent of providing a plan that minimizes the adverse impacts of risk on project resources. Possible risks and mitigation measures have been identified in the table 5.3 below.

Table 5.3 Risk Environment

Risk	Impact	Mitigation
Donor dependence	High	➢ Local funding ➢ Public private partnerships
Resource un-availability	Medium	➢ Government funding for IT projects ➢ Effective Management of development partner's funds
Management Commitment and support	High	➢ Sustain management commitment ➢ Solve issues related to non-ICT solutions ➢ Delivery of electronic services for decision making
Resistance to change	High	➢ Raise awareness and continuous ICT training. ➢ Manage expectations ➢ Stakeholders Involvement. ➢ transparency of scope, roles and responsibilities ➢ Change management and technological exposure to stakeholders.
Technological failure	Medium	➢ Implementation of Disaster recovery

		plan.
		➢ Implementation of Business continuity strategic plan.
		➢ Do not over trust in technology solutions
Technological Obsolescence	Low	➢ Planning of technological refresh
		➢ Build internal capacity
Privacy and security	High	➢ Effective rules and regulations
		➢ Information security policy
		➢ Security measures
Dependence on a single technology supplier	Medium	➢ Use standard-based technology
		➢ Effective contract management
Poor data quality	High	Computers will not clean up a mess that exists already. If the existing procedures are not well defined, if there is incomplete data and if there are conflicting objectives for the systems, ICT is not a substitute. Therefore the following are needed: ➢ Non conflicting of objectives for the system ➢ Well defined procedures

IT structure that is not strong enough (e.g. unit instead of Section).	Medium	Create a decentralized ICT Structure which is closely coordinated by the Mwanza RS ICT Unit.

CHAPTER 6: IMPLEMENTATION PLAN AND MONITORING FRAMEWORK

This section describes the plan for implementing the ICT strategy for Mwanza RS and the means of monitoring the implementation progress.

Implementation Organization

A Project Implementation Team (PIT) comprising ICT and key users will be formed for each project to be implemented to coordinate the plan implementation. Also there will be ICT Steering Committee to provide directives, monitor implementation progress and effect the required initiatives at policy and administrative levels where as the PIT will be responsible for the day to day implementation of the new system and shall work closely with the developer/supplier of the new system, provide guidance as regards to site preparation and survey, prepare for the implementation of the applications on the centralized servers and client sites.

Implementation Tasks

The plan covers activities to be implemented, responsibilities and time frames. However, the plan does not cover the specific dates when the activity implementation will occur; it contains indicative half yearly timing. The implementing unit or entity will need to estimate the duration for each activity to be implemented in order to determine the start and finish dates for each activity in each financial year based on government Medium Term Expenditure Framework (MTEF).

Monitoring and Evaluation

The implementation plan contains detailed activities for monitoring progress of implementation and indicators for evaluation of the implemented projects. The plan covers four types of projects, these are: infrastructure projects, systems/applications projects, operational policies documentation projects and capacity building projects. Table below shows some concerns at each level which can be used to identify the relevant indicators of performance.

The Matrix for Concerns for ICT Unit and Systems Owners

Area of Implementation	ICT Unit	Systems' Owners
Objective 1: Document and implement database management principles	➢ Is all staff concerned been trained in the principles? ➢ Are all the principles documented? ➢ Are they based on the current based practice in database management? ➢ Are they practical? ➢ Have they been implemented successfully? ➢ Have they resolved issues that existed?	➢ Are there improvements in the way databases are designed and managed? ➢ Has this made our work easier?
Objective 2: Improve interaction with stakeholders	➢ Are the systems providing relevant information to users? ➢ Is the information regularly updated?	➢ Has the implementation of the systems improved our work? ➢ Has it improved service delivery to stakeholder?
➢ Objective 3: Improve the	➢ Are systems installed? ➢ Is the mapping and	➢ Have the infrastructure solved the problems

technical infrastructure to facilitate communication and automation of key business functions	documentation completed? ➢ Are the maintenance plans in place? ➢ Is the inventory of infrastructure maintained? ➢ Are users trained? ➢ Is the entire target users reached?	that existed? ➢ Has the project improved our efficiency and effectiveness? ➢ Are we getting value for money?
➢ Objective 4: Build ICT implementation capacities and change management	➢ Are the support staff provided with sufficient skills and training? ➢ Has it improved their performance? ➢ Are users trained in ICT in general and in their specific applications in particular?	➢ Have the infrastructure solved the problems that existed? ➢ Has the project improved our efficiency and effectiveness? ➢ Are we getting value for money?

APPENDIX A: STRATEGY IMPLEMENTATION PLAN AND MONITORING FRAMEWORK

Implementation Plan

S/O	Strategic objective, Key Result Area and Summary of Main Activities	Responsibility	2014/15	2015/16	2015/16	2016/17	2017/18	Indicators
	IMPROVE THE TECHNICAL INFRASTRUCTURE TO FACILITATE COMMUNICATION AND AUTOMATION OF CORE BUSINESS FUNCTIONS							
	Standards for ICT Hardware and Software							Hardware and software standard documented
	Obtain government recommended standards	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, E-Government, ICT unit						Network standards documented
	Choose standard for each application in the RS's	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, E-Government, ICT unit						Standard applications Enough licenses for IT hardware and software
	Sensitize users on selected standards	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, E-Government, ICT Unit						Interoperability and sharing of IT resources
	Train users on selected standards	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, E-Government, ICT Unit						
	Improvement of ICT Infrastructure							
	Prepare and furnish server room	ICT Unit, ICT Steering Committee						Enhanced network access and capability. Less complaints
	Prepare and furnish IT support rooms	ICT Unit, ICT Steering Committee						Improved data backups, recovery procedure and server environment
	Procure and commission Workstations	ICT Unit, ICT Steering Committee						

	Procure and commission printers	ICT Unit, ICT Steering Committee							
	Procure and commission power stabilizers	ICT Unit, ICT Steering Committee							
	Configure, install and maintain LAN/WAN/Intranets and Extranets	ICT Unit, ICT Steering Committee							
1	**DOCUMENT AND IMPLEMENT DATABASE MANAGEMENT PRINCIPLES**								
1.1	**Information Sharing, Efficiency and Effectiveness of IT Processes**								
1.1.1	Develop guidelines for business process reengineering	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, ICT unit							- Data sharing among the departments/units within the Mwanza RS
	Document systems development guidelines	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, ICT unit							- Sharing of data between Mwanza RS and other implementing entities under PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation
	Identify systems that can be shared by different entities in the Government	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, ICT unit							
	Assess type of system support to be provided to Mwanza RS and that may be outsourced	PMO-RALG, MoFE, PO –PSM, PPRA, Ministry of Water and Irrigation, ICT unit							- Systems support and development guideline
	Standardization Of Disaster preparedness for Mwanza RS ICT equipments and Infrastructure								
	Review and Identify categories of disaster and their likeliness of their occurrences	ICT Unit, ICT Steering Committee, ICT disaster recovery Teams							**Disaster recovery Plan Document** **.** **Disaster recovery Plan. Test report**
	Review disaster recovery strategy.	ICT Unit, ICT Steering Committee, ICT disaster recovery Teams							**ICT Security policy**
	Amends the disaster recovery strategy.	ICT Unit, ICT Steering Committee, ICT disaster recovery Teams							

	Activity	Responsible						Output
	Testing, Amends and Maintaining Disaster recovery	ICT Unit, ICT Steering Committee, ICT disaster recovery Teams		▓	▓	▓	▓	
	IMPLEMENT THE CONCEPTUAL FRAMEWORK FOR SPECIFIC SOLUTIONS AND SECTOR MIS TO SUPPORT BUSINESS PROCESSES							
	Integrated Financial Management Systems (Epicor 9.05 – IFMIS							
	Identify core data sets needed for Process payment, tracking funds received, physical implementation and expenditure for all RS's	PMO-RALG, PO –PSM, ICT unit	▓					-Data Required -Design documentation, Electronic processing and reporting on Mwanza RS employees.
	Prepare IFMIS requirement document for RS's	PMO-RALG, MOFEA, ICT unit		▓				
	Train technical staff and all users	PMO-RALG, PO –PSM, ICT unit			▓	▓	▓	-Electronic production of Mwanza RS employees Reports Computer System.
	Support implementation activitie	PMO-RALG, PO –PSM, ICT unit			▓	▓	▓	
	Support post implementation activities	PMO-RALG, PO –PSM, ICT unit			▓	▓	▓	
	Planning and Reporting Database - PlanRep3							
	Identify core data sets needed for Planning, budgeting, revenue Projection from all sources, and tracking funds received, physical implementation and expenditure.	PMO-RALG, PO –PSM, ICT unit	▓					-Data Required -Design documentation, Electronic processing and reporting on Mwanza RS plans, budgets, procurement and disbursement data -Electronic production of Interim Financial Reports (IFR) through Computer System
	Prepare PlanRep3 requirement document for RS's	PMO-RALG, PO –PSM, ICT unit	▓	▓				
	Train technical staff and all users	PMO-RALG, PO –PSM, ICT unit		▓	▓	▓	▓	
	Support implementation activitie	PMO-RALG, PO –PSM, ICT unit		▓	▓	▓	▓	
	Support post implementation activities	PMO-RALG, PO –PSM, ICT unit			▓	▓	▓	

	Strategic Budget Allocation System – SBAS5									**PMO-RALG, MoFE, PO -PSM**
	Identify core data sets needed for RS's in budget Allocation Systems	PMO-RALG, MoFE, PO –PSM, ICT unit								-Data Required -Design documentation, Electronic processing and reporting on Mwanza RS plans, budgets, procurement and disbursement data -Electronic production of Interim Financial Reports (IFR) through Computer System
	Prepare SBAS5 requirement document for RS's	PMO-RALG, MoFE, PO –PSM, ICT unit								
	Train technical staff and all users	PMO-RALG, MoFE, PO –PSM ICT unit								
	Support implementation activities	PMO-RALG, MoFE, PO –PSM ICT unit								
	Support post implementation activities	PMO-RALG, MoFE, PO –PSM ICT unit								
	Human Capital Management Information System - HCMIS-Lawson 9									
	Indentify the information needs for effective HRM	PMO-RALG, MoFE, PO –PSM, ICT unit								-Data Required -Design documentation, Electronic processing and reporting on Mwanza RS plans, budgets, procurement and disbursement data -Electronic production of Interim Financial Reports (IFR) through Computer System
	Train technical staff and all users	PMO-RALG, MoFE, PO – PSM, ICT unit								
	Support implementation activities	PMO-RALG, MoFE, PO – PSM, ICT unit								
	Support post implementation activities	PMO-RALG, MoFE, PO – PSM, ICT unit								