UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE RECORDS AND ARCHIVES

MANAGEMENT DEPARTMENT

INTERNAL INFORMATION AND COMMUNICATION TECHNOLOGY STRATEGY

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LIST OF ABREVIATIONS

CCTV	Closed Circuit Television
DICTS	Directorate of ICT Services
DRAMD	Director of Records and Archives Management Department
EPOCA	Electronic and Postal Communications Act
ESARBICA	Eastern and Southern Africa Regional Branch of the International Council on Archives
GePG	Government electronic Payment Gateway
GMS	Government Mailing System
GoT	Government of Tanzania
GovNet	Government Communications Network
GSPP	Government Salaries Payment Platform
HCMIS	Human Capital Management Information System
HICTU	Head of ICT Unit
HR	Human Resource
ICA	International Council on Archives
ICT	Information and Communication Technology
IP	Internet Protocol
IRMT	International Records Management Trust
KPI	Key Performance Indicator
KRA	Key Results Area
LAN	Local Area Network
LGAs	Local Government Authorities
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
MWTC	Ministry of Works Transport and Communication
NICTBB	National ICT Broadband Backbone

NRC	National Records Center
PO-PSM	President's Office Public Service Management
PO-RAMD	President's Office Records and Archives Management Department
SLA	Service Level Agreement
SWOC	Strength, Weaknesses, Opportunities and Challenges
TANePS	Tanzania National eProcurement System
TANESCO	Tanzania Electric Supply Company
UPS	Uninterrupted Power Supply
VOIP	Voice over Internet Protocol
WAN	Wide Area Network

DEFINITION OF TERMS

Term	Definition
Disaster Recovery	Methods for ensuring that an organization recovers from natural and human caused disasters that affect its computer based operations.
Disaster Recovery Plan (DRP)	A master plan specifically developed for an organization describing how to deal with the potential disaster to its information systems. Other related terms include Business Continuity Plan (BCP), Business Process Contingency Plan (BPCP) or Disaster Recovery and Business Continuity Plan (DRBCP)
e-Government standards and guidelines	A set of detailed guidelines that provide directives to public institutions on the implementation of e-Government. The guidelines are aimed at improving government operations that ultimately result into improved public service delivery.
End User	A person who actually uses the hardware or software, distinguished from those who designed, developed, installed or services of the system.
Firewall	A security device comprising of a set of related programs that protects the resources of a private network from users from other networks. I.e. Restrict access in communication networks.

Term	Definition
ICT Management Frameworks/ Documents	These are set of documents used in ICT management by public institutions. These include but not limited to ICT policy, ICT strategy, ICT Acceptable use guidelines, Risk Register, ICT Security Guidelines, Business Continuity plan and other ICT guidelines and circulars to coordinate and guide ICT issues in the public institutions.
ICT Security Policy	An ICT Security Policy is a set of policies issued by an organization that identifies the rules and procedures that all persons accessing computer resources must adhere to in order to ensure the confidentiality, integrity, and availability of data and resources.
ICT Service Management Framework/ documents	Is a set of functions, processes and guidelines for managing various ICT services over their life cycles. These may include Service Level Agreements, service charters and guidelines for ICT services and service providers
ICT Strategy	IT strategy (information technology strategy) is a comprehensive plan that outlines how technology should be used to meet ICT and business goals. An ICT strategy, also called a technology strategy or ICT/technology strategic plan, is a written document that details the multiple factors that affect the organization's investment in and use of technology.

Term	Definition
Information Confidentiality	Assurance that information is shared only among authorized persons.
Risk Register	A tool for documenting risk and actions to manage each risk. The risk register is essential to the successful management of risks. As risks are identified, they are logged on the register and actions are taken to respond to the risks.
Voice over IP (VoIP)	A telephone system which uses local and wide area networks (in the context of this policy the Government communications network-GovNet).
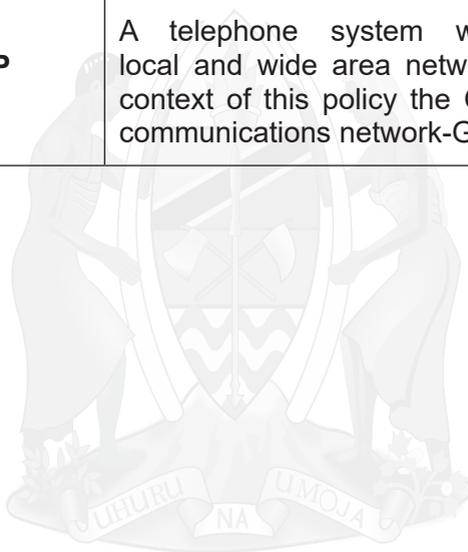
FOREWORD

The President's Office, Records and Archives Management Department (PO-RAMD) is introducing its first Information and Communication Technology (ICT) Strategy to be used for the next five years of 2020/2021 to 2024/2025. The Strategy aims to respond to directives from PO-RAMD's ICT Policy, 2019 that provides high-level guidance in the use of ICT in implementing core and support functions; improve transparency and communication between management, staff and stakeholders; and establish priorities for efficient and effective resource allocation in terms of ICT initiatives within PO-RAMD.

This ICT Strategy appreciates the potential roles of ICT in furthering the improvement of PO-RAMD's performance and delivery of quality services. The Strategy has been prepared through a consultative process, where, both internal and external key stakeholders were involved. It serves as a road map to attainment of the spelt out vision, mission, ICT Policy and the strategic objectives, which are further translated into targets and activities to be implemented. The activities are associated with indicators for performance measurement. Implementation of the Strategy will be undertaken on a phased sequencing and measured annually.

I would like to acknowledge PO-RAMD's appreciation

to all the internal and external stakeholders for their support and enormous contributions into the development of this Strategy. It is my sincere hope that, in the event all necessary working conditions required are met, the Strategy will yield the intended outcomes within its lifespan and hence realize positive impact on PO-RAMD business operations and enhance service delivery to the public.

Firmin Msiangi
Acting Director
Records and Archives Management Department

EXECUTIVE SUMMARY
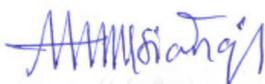
The President's Office, Records and Archives Management Department (PO-RAMD) has been using Information and Communication Technology (ICT) in implementing its core and support functions since it's establishment in 1999. Usage of ICT at PO-RAMD in delivery of internal and external services entailed huge investment in ICT. These investments in ICT over the years have made tremendous changes and impacted the way PO-RAMD staff undertake their duties and how they interact internally with fellow staff and externally with their clients and other stakeholders. Regardless of the efforts undertaken by PO-RAMD, there are challenges that still require to be addressed by strategic interventions.

PO-RAMD has developed this ICT Strategy to provide a road map for implementation of its ICT initiatives and interventions. It articulates the approach to be adopted in facilitating PO-RAMD in the implementation of National Policies, Strategies and Plans as well as its Strategic Plan in the use of ICT. This is geared towards supporting the Government's efforts of undertaking a number of Policy, Structural and Institutional measures in order to develop and harness the use of ICT to deliver services to both citizens and businesses and at the same time enhance its administrative effectiveness.

This ICT Strategy intends to facilitate the achievement of the PO-RAMD's Objectives, Vision; and Mission contained in its Strategic Plan (2018/19 – 2022/23).

The rationale behind developing this strategy is to provide a roadmap for strategic direction and implementation of strategic interventions for harnessing the exploitation of the opportunities availed by ICT so as to improve

internal operations; have in place a guiding framework for harnessing the opportunities availed by shared resources; facilitate the transformation and integration of PO-RAMD business processes and systems through the use of ICT; and provide a basis for strategic allocation of resources in ICT interventions within the period of its implementation.

This ICT Strategy identifies five pillars of ICT Policy Objectives serving as Key Result Areas that provide technical and strategic support to PO-RAMD operations. These are ICT Governance, ICT Infrastructure, ICT Applications Management, ICT Security Management and ICT Human Resources.

The pillars or objectives have further been translated and cascaded into implementation strategies, activities, outputs and indicators to measure the progress attained. Achievement of the outputs implemented under this strategy will lead to achievement of intermediate outcomes under the five Key Result Areas, which will overtime contribute to achievements of the PO-RAMD's development objectives.

Further, a monitoring and evaluation plan has been included to be used to measure and gauge results and benefits of implementing interventions under this ICT strategy. The M&E framework has been established to define, describe and devise methods, techniques and feedback mechanisms for supervision and achievements measurements using agreed performance indicators.

The framework contains twenty (20) outcome indicators, twenty five (25) milestones (outputs), a number of review meetings and reports which will be used to measure achievement of five (5) Key Result Areas and thirty one (31) intermediate outcomes presented in The Results Framework Matrix is attached as **Appendix II**.

The ICT Strategy has also elaborated the budget and funding arrangements for supporting the implementation of the interventions under the strategy. Therefore, the planned expenditure for a 5-year period stretching from 2020/21 to 2024/25 to finance the strategy is estimated to be **1,849,300,000.00** Tanzanian Shillings.

Chapter 1

Introduction

1.1   Background and Context

The Government of Tanzania (GoT) recognizes the importance and benefits of Information and Communication Technology (ICT), specifically its critical role as an enabler in fostering socio-economic development. It is from this backdrop that the Government has undertaken a number of Policy, Structural and Institutional measures in order to develop and harness the use of ICT to deliver services to both citizens and businesses and at the same time enhance its administrative effectiveness.

These measures, among others, included the formulation of the National ICT Policy (2003, and its revision 2016); development of the e-Government Strategy (2009, and its revision 2013); enactment of the e-Government Act No.10 of 2019 and establishment of e-Government Authority; enactment of the Cybersecurity Act of 2015, the Electronic Transactions Act of 2015, the Electronic and Postal Communications Act of 2010 and the Universal Communications Service Access Act of 2006. Other measures taken by GoT included capacity building on ICT; and establishment of ICT Divisions/Units and developing the Government ICT Scheme of Service in order to harness mainstreaming of the ICT functions within the structures of Public Institutions.

These initiatives have largely contributed to measures undertaken by Public Institutions in developing and harnessing the use of ICT to deliver services to the public. This needs to be supplemented by adequate planning, linking with other ICT initiatives undertaken at Central Government level as well as allocation of adequate ICT resources (financial, human, equipment and services). It is in this context that Public Institutions need to have in place well articulated ICT Policies and Strategies to facilitate the effective deployment of ICT assets, realization of the value of ICT Investments, and subsequent impact in improving their internal operations and service delivery.

In this respect, this ICT Strategy has been developed to respond to PO-RAMD's Internal ICT Policy directives and therefore, provide a road map for implementation of ICT initiatives and interventions that address various identified issues and challenges. Implementation of this strategy will also facilitate alignment with e-Government policy and strategic frameworks and achievement of PO-RAMD's objectives.

1.2 Rationale for the ICT Strategy

The rationale behind development of the PO-RAMD ICT strategy is:

(i) To provide a roadmap for strategic direction and implementation of interventions for harnessing the exploitation of the opportunities availed by ICT so as to improve internal operations as well as service delivery to clients;

(ii) To provide a guiding framework for harnessing the opportunities availed by shared resources (cross cutting Government systems) among public institutions and thus undertaking ICT

investment in a cost effective manner;

(iii) To facilitate the transformation and integration of PO-RAMD business processes and systems through the use of ICT; and

(iv) To provide a basis for strategic allocation of resources in ICT interventions for the next five years i.e. 2020/21 to 2024/25.

Generally, this ICT strategy articulates the approach to be adopted in facilitating PO-RAMD in the implementation of National Policies, Strategies and Plans as well as its Strategic Plan through the use of ICT.

1.3 The process for Preparing this Strategy

The development of this document has been through a systematic, participatory and consultative approach involving PO-RAMD Management, staff and key external stakeholders. A number of sources were consulted including PO-RAMD ICT Policy (2019), e-Government Act No. 10 (2019), e-Government General Regulations (2020), PO-RAMD Strategic Plan (2018/19 – 2022/23); and e-Government Standards and Guidelines (2017).

1.4 Summary and Contents of this Strategy

This ICT Strategy is composed of six main chapters. Chapter one consists of background and context of the strategy as described above. The remainder of the document is structured as follows:

(i) Chapter Two contains The Situational Analysis;

(ii) Chapter Three provides Vision and Overarching Strategy giving a strategic overview ;

(iii)   Chapter Four contains the Strategy's Five Key Result Areas;

(iv)   Chapter Five contains the Monitoring and Evaluation Plan; and

(v)   Chapter Six contains Budget and Funding Arrangements.

Chapter 2

Situational Analysis

2.1 Background

In order to determine the state of ICT functions at PO-RAMD, this situation analysis will analyze the Strength, Weakness, Opportunities and Challenges in ICT efforts. Results of the Situation Analysis will form the basis of interventions to be carried out under this Strategy.

The Records and Archives Management Division was established in 1999 through the Government Notice Number 289 of 1999, which transferred the National Archives of Tanzania from the Ministry of Education and Culture to the President's Office, Public Service Management. In 2002, the Government enacted the new Records and Archives Management Act. No.3 of 2002, which repealed the National Archives Act No. 33 of 1965. Although the National Archives of Tanzania had existed since 1965, the Records and Archives Act of 2002 broadened its power by establishing it as the Records and National Archives Division (RAMD) within the President's Office - Public Service Management (PO-PSM). The new Act also covered the management of both non-current records and the current records.

ICT use in records management evolved, when digital records were created by the Government of Tanzania, through both the digitisation of hard copy records by the using microfilms and scanners and the creation of 'born

digital' records in e- government systems. This era saw the need of management of digital records. In 2009, the Government issued two significant circulars (Circular No.5 and No.6) that demonstrated its recognition that records management is a vital component of ICT and e-Government. The circulars provided clear guidance on controlling and using information created in electronic form. Circular No.6 referred to the role of the National Archives in relation to preserving digital records 'for future data recovery'.

By 2009, a number of significant ICT developments were underway within the Government from which RAMD benefitted. These included the installation of a Government-wide Communications Network (GovNet), sensitizing large numbers of public servants to ICT opportunities, and implementing several government-wide systems, including the Integrated Human Resource and Payroll Management System, Integrated Financial Management System and the Geographical Information System. The Local Area Network (LAN) was installed at the RAMD Head Office and a good number of staff were equipped with ICT equipment. The National Records Centre (NRC), Dodoma was built and modern ICT facilities were installed including the LAN, Public Addressing System and other Conference facilities. During this time, all ICT related activities were under the Directorate of ICT Services (DICTS) at the PO-PSM. RAMD has also recently connected to other Government crosscutting ICT Systems such as the Tanzania National eProcurement System (TANePS), Government electronic Payment Gateway (GePG), Government Mailing System (GMS), Human Capital Management Information System (HCMIS), MUSE and Government Salaries Payment Platform (GSPP),

Following the establishment of PO-RAMD, all ICT activities were placed under the newly established ICT Unit. The main objective of the Unit is to provide expertise and services on application of ICT to PO-RAMD

The Unit performs the following activities:

(i) Implementation of ICT and e-Government policy.

(ii) Develop and coordinate Integrated Management Information System for the Records and Archives Management Department;

(iii) Maintain hardware and software systems;

(iv) Coordinate and provide support on procurement of software for the Office;

(v) Establish and coordinate use of Electronic mail communications LAN and WAN;

(vi) Carryout studies and propose areas of using ICT to improve services delivery.

2.2 Interventions and Achievements

In facilitating the use of ICT at PO-RAMD, a number of interventions were undertaken in the areas of ICT Governance, Infrastructure, Human Resources, Service Management, Applications and Security. Notable achievements that were realized include:

(i) Existence of ICT Unit to manage and oversee ICT operations;

(ii) Existence of Internal ICT Policy;

(iii)   Existence of ICT Acceptable Use Policy;

(iv)   Staff readiness in using ICT in day to day operations;

(v)   Existence of reliable Local Area Network (Dar es Salam, Dodoma and Mwanza);

(vi)   Existence of mini data center;

(vii)   Availability of Power Backup (Dar es salaam and Dodoma);

(viii)   Existence of facilities to preserve documentary materials in variety of formats (microfilm, audio visual or mechanical recordings, digital);

(ix)   Increased ICT awareness and usage among PO-RAMD staff;

(x)   ICT technical training to PO-RAMD staff;

(xi)   Installation of security cameras (NRC Dodoma and Mwanza);

(xii)   Existence of security appliances for RAMD's network security (Firewalls);

(xiii)   Improvement of internal ICT equipment and Network infrastructure;

(xiv)   Existence of Trusted Digital Repository Management System for managing archival resources/heritage;

(xv)   Existence of Semi-current Records Management System;

(xvi) Installation of Voice Over Internet Protocol (VOIP), a telephone system which uses Local Area Network (LAN) and Wide Area Network (WAN);

(xvii) Installation of security cameras (NRC Dodoma and Mwanza);

(xviii) Operational PO-RAMD Website has enabled PO-RAMD to disseminate information and interact with the Public;

(xix) Equipping some of professional staff with ICT equipment hence increasing usage of ICT;

(xx) Sustained maintenance of LAN, WAN, ICT equipment and applications to facilitate operations and improved ICT support services;

(xxi) Use of crosscutting Government ICT Systems such as the National eProcurement system, Government electronic Payment Gateway (GePG), Government Mailing System (GMS), HCMIS, Government Salaries Payment Platform (GSPP), MUSE;

(xxii) Use of electronic technology in conservation and preservation of records and archives;

(xxiii) Existence of training plan which also accommodates training needs of ICT staff; and

(xxiv) Establishment of a state-of-the-art conference equipped with ICT facilities at NRC Dodoma.

The above initiatives led to a number of benefits including:-

(i) Increased staff efficiency in undertaking day to day operations

(ii) Improved communication and collaboration within PO-RAMD Units and Divisions.

(iii) Enhanced communication and cooperation between PO-RAMD and external stakeholders.

(iv) Increased Public access to information on PO-RAMD matters.

(v) Reduction in paperwork and operational costs.

(vi) Increased visibility of PO-RAMD Office.

2.3 Challenges/Weaknesses

The above benefits to a large extent have led to increase in the use of ICT in core and non-core functions, however, there still are a number of issues and challenges in the areas of ICT Infrastructure, Human Resources, Service Management, Applications and Security which need to be addressed. These include:-

(i) Absence of ICT Steering Committee;

(ii) Current ICT Structure faces challenges to support new and extended functions and electronic systems;

(iii) Absence of mechanism for evaluating and monitoring ICT services;

(iv) Absence of mechanisms for managing and

monitoring ICT projects;

(v)   Absence of clear plans on ICT interventions;

(vi)   Absence of service management guidelines for ICT equipment, services and applications;

(vii)   Absence of ICT business continuity plan;

(viii)   Absence of ICT Security Policy;

(ix)   Insufficient adoption of ICT Standards and Guidelines to guide ICT interventions;

(x)   Inadequate resource allocation to facilitate ICT related activities in the Department;

(xi)   Absence of ICT Service Management Framework for maintenance and support of ICT resources;

(xii)   Inadequate knowledge of advanced ICT security appliances such as firewall and capacity to manage rapid developments in ICT;

(xiii)   Absence of ICT Service Management Framework for maintenance and support

(xiv)   Absence of documented standard operating procedures;

(xv)   Insufficient working tools especially ICT equipment;

(xvi)   Inadequacy of Power Backup facilities in Mwanza, Arusha and Mbeya;

(xvii)   Unreliable mini data centres (poor cooling systems, fire suppression system, power backup system);

(xviii) Absence of ICT equipment maintenance plan;

(xix)   Absence of centralized computer systems administration (domain controller/active directory) system;

(xx)   Server Rooms run in non-conducive (as recommended) environment;

(xxi)   Absence of control on the use of unlicensed proprietary Software;

(xxii)   Absence of application systems to support some institution's core functions (archives, e-library, research database, researcher database and semi-current records);

(xxiii) Lack of proper awareness on some ICT Applications among staff;

(xxiv)   Inadequate ICT staff at zonal offices, which affects work organization and implementation of ICT initiatives;

(xxv)   Skills gap on advanced security infrastructure;

(xxvi)   Inadequate training for ICT staff on emerging and advanced technologies;

(xxvii) Lack of incentives to encourage ICT creativity and innovation;

(xxviii) Insufficient ICT infrastructure and

helpdesk which affects service delivery;

(xxix) An unstable power supply which interrupts service provisioning and work operations using ICT;

(xxx) Absence of electronic tools and equipment for physical security of records and archives repositories;

(xxxi) Insufficient fire detection and suppression systems at records and archives repositories, server rooms; and

(xxxii) Insufficient/Inadequate/ security monitoring tools/equipment for the purpose of protecting the institution's business interests, quality control, detecting abuse of the systems, detection or prevention of crime/ misconduct while accessing records and archives resources and facilities.

The strengths, weaknesses, opportunities and challenges (SWOC) analysis assessed the internal environment (strengths and weakness) and the external environment (opportunities and challenges) under which PO-RAMD ICT function operates. Please See **SWOC Analysis Matrix** attached as **Appendix I**.

2.4 Critical Issues

(i) From the situation analysis, and findings of various ICT studies in the Government, the following are the critical issues that need to be addressed

(ii) Strengthening ICT governance;

(iii) Institute strategic investments, deployments, management and maintenance of ICT infrastructures and applications;

(iv) Promote the provision of e-services;

(v) Mobilization of resources for ICT interventions;

(vi) Increasing ICT HR Capacity;

(vii) Increasing internal ICT awareness and capacity;

(viii) Improving ICT Infrastructure and resources;

(ix) Enhancing Capacity to cope with rapid technological changes;

(x) Enhancing the utilization of ICT resources by external stakeholders;

(xi) Transforming Manual systems and processes into digital form;

(xii) Strengthen information security framework to curb increased ICT security risks and threats;

(xiii) Enhance collaboration with ICT related institutions to tap ICT opportunities; and

(xiv) Create awareness on availability of e-services to internal and external stakeholders.

Chapter 3

Objective, Vision, Mission and Overarching Strategy

3.1 Objective, Vision, Mission and the Long Term Perspective

This ICT strategy intends to facilitate the achievement of the Objective, Vision and Mission contained in the President's Office, Records and Archives Management Department Strategic Plan (2018/19 – 2022/23) as detailed below:-

3.1.1. Objective

Improved service delivery in terms of quality, timeliness and efficiency.

3.1.2. Shared Vision

To become a centre of excellence in providing the highest standards of Records and Archives Management Services.

3.1.3. Shared Mission

To ensure efficient and effective records management systems in the public service, preservation of archival heritage and provide its accessibility to the public.

3.1.4. Long Term Perspective

The strategy will facilitate PO-RAMD to institutionalize opportunities offered by ICT to improve the efficiency

of work processes and internal operations, improve interaction and collaboration within and outside PO-RAMD and delivery of services to clients and other stakeholders.

3.2 Main Drivers

The main drivers that led to the initiation of ICT Strategy are as follows:

(i)   The current state of ICT functions at PO-RAMD.

(ii)   PO-RAMD Internal ICT Policy.

(iii)   Commitment of the Government to improve performance in public institutions.

(iv)   Opportunities brought by ICT.

The main drivers are explained in details below:

3.2.1. The current state of ICT functions at PO-RAMD

The current ICT Unit supports the PO-RAMD in execution of the day-to-day ICT functions at Head Office and Zonal Centers as well as implementation of ICT projects. The current structure faces challenges to support new and extended functions brought by Government cross cutting electronic systems such as e-Office and Government Mailing System (GMS). This brings the need for more staff, more ICT equipment and facilities and in addition review of ICT Unit structure, so as strengthen it from its current supporting role at PO-RAMD to a supporting and coordination role (across public institutions).

3.2.2.   PO-RAMD internal ICT policy

The internal PO-RAMD ICT policy has been developed to provide strategic guidance in planning, implementation, monitoring and evaluation of ICT interventions. This is in consistent with the National ICT Policy 2016, e-Government policy frameworks and other relevant strategies. Therefore, PO-RAMD needs an ICT strategy to operationalize the PO-RAMD ICT policy.

3.2.3.   Commitment of the Government to improve performance in Public Institutions

The Government has shown a strong commitment to improving service delivery, which creates a conducive environment for Public Institutions. This includes the use of ICT and taking appropriate measures to address performance challenges. In this case PO-RAMD is amongst Public Institutions undertaking the above initiatives.

3.2.4.   Opportunities brought by ICT

The Information and Communication Technology revolution has provided opportunities to improve Government efficiency and effectiveness of its operations. In this regard, PO-RAMD needs to take these tremendous opportunities to use ICT in its day to day operations.

3.3 Strategic Imperative of ICT Strategy

The success of this ICT strategy will depend on the existence of the following:-

(i)   Sustaining Management commitment and support to the ICT agenda in the Government.

(ii) Effective resource mobilization (Funds, HR,

Equipment and Services) for ICT interventions.

(iii)   Availability of competent ICT staff to support ICT services.

(iv)   Involvement and participation of PO-RAMD staff in ICT initiatives.

(v)   Involvement of external stakeholders in ICT initiatives.

(vi)   Effective coordination of ICT activities across PO-RAMD.

3.3.1.   Sustaining Management commitment and support to the ICT agenda in the Government

Recently, there has been a massive support and commitment of the top management on the use of ICT to improve operations and service delivery at PO-RAMD. However the success of this strategy is dependent on continuous support of the management and other stakeholders.

3.3.2.   Effective resource mobilization (Funds, HR, Equipment and Services) for ICT interventions

ICT interventions, such as the acquisition and maintenance of infrastructure; development and support of application software and security, require sufficient resources to successfully implement planned activities. Therefore, the effectiveness of this strategy is dependent on adequate resources for ICT initiatives within PO-RAMD and across the Government.

3.3.3. Availability of competent ICT staff to support ICT services.

The success of this strategy is dependent on availability of competent ICT professionals at PO-RAMD. Existence of competent professionals will facilitate tapping of tremendous opportunities, innovations, experience sharing and effective implementation of ICT interventions under this strategy.

3.3.4. Involvement and participation of PO-RAMD staff in ICT initiatives

The success of ICT interventions under this strategy is dependent on how PO-RAMD staff are involved in planning, designing and implementation of ICT initiatives.

3.3.5. Involvement of external stakeholders in ICT initiatives

The success of ICT interventions under this strategy is highly dependent on how external users such as other Public Institutions, Development Partners, Non State Actors, Academia, Media and General Public perceive the interventions in-terms of benefits and risks. Therefore, it is imperative that PO-RAMD management takes initiatives to involve all external stakeholders for a successful implementation of this strategy.

3.3.6. Effective coordination of ICT activities across PO-RAMD

The success of this strategy is dependent on effective

coordination of ICT interventions across PO-RAMD Divisions and Units. Effective coordination will ensure use of shared ICT resources such as human resources, infrastructure, networks, application systems and e-services. Sharing of resources will lead to economies of scale and make ICT interventions cost effective. This will be advantageous to PO-RAMD in implementing this strategy by tapping opportunities availed by shared Government ICT resources.

3.4 Key Beneficiaries of the Strategy

Implementation of this ICT strategy will facilitate PO-RAMD to effectively implement objectives in the Strategic Plan (2018/19 – 2022/23). This will in the long term ensure the creation of an enabling environment for PO-RAMD Division and Units to deliver quality e-services to MDAs as well as facilitate MDAs and LGAs to deliver better services to the general public.

Achievement of the outcomes under this Strategy will therefore benefit both internal and external stakeholders including Management of the PO-RAMD, Employees, Public Leaders, MDAs, Private Sector and Business Communities, Development Partners, Non State Actors and the General Public.

3.5 Organization of the Outcomes of ICT Strategy

Outcomes of this ICT Strategy which were derived from the situation analysis as areas of improvement from the critical issues have been grouped into Five Key Result Areas (KRAs). The KRAs which will be covered in detail in chapter four should be seen as interactive interventions that work together towards a common Objective, Vision and Mission indicated in 3.1 above.

The KRAs are:

(i)   KRA 1: ICT Governance

(ii)   KRA 2: ICT Infrastructure

(iii)   KRA 3: ICT Applications Management

(iv)   KRA 4: ICT Security Management

(v)   KRA 5: ICT Human Resources

Chapter 4

The Strategy

4.1 Key Results Area 1: ICT Governance

1.1.1 Background

ICT Governance is a strategic framework, which includes overarching leadership framework, organizational structures and processes or procedures that oversee and provide guidance in the development of strategies, implementation, monitoring and evaluation of ICT interventions in the organization and ensuring compliance to ICT standards and guidelines.

PO-RAMD faces challenges in ICT Governance including absence of an effective framework to oversee operations and implementation, secure ICT environment, ICT investment decisions, accountability, monitoring and evaluation of ICT initiatives.

In order to ensure that there is an effective framework to oversee operations and implementation of ICT initiatives, a number of measures and interventions are undertaken to address above issues and challenges, emerging issues which will arise in the course of implementation of this Strategy and achieve the goals and intermediate outcomes under this KRA.

1.1.2   Strategic Objective

To put have in place a strategic and management framework to guide PO-RAMD ICT initiatives and facilitate application of the principles of ICT Governance in its day to day operations.

1.1.3   Intermediate Outcomes

The overall goal of this KRA is to implement interventions that lead to development and operationalization ICT Governance. It is expected that achievement of the interventions under this KRA will lead to the following intermediate outcomes:

- (i)   Improved service delivery

- (ii)   Increased customer satisfaction

- (iii) Informed decision making in ICT intervention

- (iv) Increased use of ICT in internal operations and service delivery

1.1.4   Strategies

The achievement of the above intermediate outcomes is dependent on commitment of resources in implementation of the following strategies:

- (i) ICT Steering Committee established and operationalized

- (ii) Enhance mechanisms for ICT resource mobilization from various sources (Treasury, Professional Bodies, ICA, IRMT, ESARBICA)

(iii) Review PO-RAMD organization structure and functions to accommodate ICT Division (promote from current supporting role at RAMD to coordination and support role of ICT related records and archives initiatives across the Public sector)

(iv) Develop and operationalize PO-RAMD ICT Strategic Plan

(v) Develop, operationalize and review ICT Management Documents (ICT Acceptable Use policy, Project Management guideline, ICT Acquisition guideline, Business Continuity Plan, ICT Security Guideline etc.)

(vi) Establish mechanisms for monitoring and evaluating PO-RAMD ICT Services

1.1.5   Expected Outputs

To realize the above strategies the following expected outputs will be delivered:

(i)   PO-RAMD ICT steering committee in place and operations sustained by June, 2021

(ii)   ICT Resource Mobilization Strategy and Action Plan developed and operationalized by June, 2022

(iii) Review Proposal for PO-RAMD structure submitted to PO-PSM by June, 2022

(iv)   PO-RAMD ICT Strategic Plan operationalized by June, 2022

(v)   PO-RAMD ICT Strategy reviewed by June,

2023

(vi) At least 6 ICT Management documents operationalized by June, 2023

(vii) Monitoring and Evaluation framework for PO-RAMD ICT Services/Projects developed and operationalized by June 2023

1.1.6 Outcome Indicators

The realization of the above outputs will lead to achievement of the intermediate outcomes indicated in 4.1.3 that will be measured using the following outcome indicators.

(i) Number of ICT Steering Committee meetings conducted

(ii) Percentage of compliance to ICT guidelines

(iii) Level of understanding by top leadership on the strategic role of ICT towards the achievements of Organization roles

(iv) Number of Standard Operating Procedures

It is expected that effective implementation and realization of the strategy output and intermediate outcomes will enhance ICT Governance therefore achieve the main goal of this KRA.

4.2 Key Results Area 2: ICT Infrastructure.

4.2.1.   Background

ICT infrastructure consists of all hardware such as network devices, servers, workstations, laptops, desktops, storage devices, back-up, operating facilities and supporting platform like operating systems and databases. ICT infrastructure is the backbone for supporting the PO-RAMD business operations as it enables information exchange and providing secure access to different software applications and services. Reliable ICT infrastructure is imperative for supporting and facilitating the achievement of PO-RAMD strategic goals.

The main Challenges facing PO-RAMD in this area include insufficient ICT infrastructure; inadequate power backup facilities in zonal offices; absence of a reliable helpdesk; Mini Data Centres (Server Rooms) not hosted in conducive (recommended) environment; absence of infrastructure maintenance plan; absence of centralized computer systems administration (domain controller/ active directory) and an unstable power supply source.

In order to ensure that PO-RAMD has adequate and reliable infrastructure, a number of measures and intervention will have to be taken in order to address above issues, challenges, and other emerging issues that may arise in the course of implementation of this Strategy and the achievement of the goals and intermediate outcomes under this KRA.

4.2.2.   Strategic Objective

To have in place an optimized ICT infrastructure that supports business operations based on ICT planning, management and best practices.

4.2.3.   Intermediate Outcomes

The overall goal of this KRA is to implement interventions which will ensure there is adequate and up and running infrastructure which will facilitate PO-RAMD to use ICT effectively in internal operations and service delivery to its customers and stakeholders. It is expected that achievement of the interventions under this KRA will lead to the following intermediate outcomes:

(i)   Increased staff efficiency in undertaking day-to-day operations

(ii)   Improved systems administration

(iii)   Reliable and uninterruptible service delivery

(iv)   Improved communication and collaboration within PO-RAMD Units and Division

(v)   Enhanced communication and cooperation between PO-RAMD and external stakeholders

(vi)   Increased Public access to information on PO-RAMD matter

(vii)   Efficiency of service, which is based on the average time to complete a specific service

(viii) Customer satisfaction

(ix)   Reduction in paperwork and operational costs

4.2.4. Strategies

The achievement of the above intermediate outcome is dependent on commitment of resources in implementation of the following strategies:

• Enhance PO-RAMD ICT Infrastructure

4.2.5. Expected Outputs

To realize the above strategies the following expected outputs will be delivered:

(i) PO-RAMD ICT Infrastructure architecture developed and operationalised by June, 2025

(ii) ICT software and hardware acquired by June, 2025

(iii) Computing and Storage equipment hosted at Government Data Center by June, 2023

(iv) Additional storage equipment acquired by June, 2025

(v) Additional power backup equipment acquired by June, 2025

(vi) Server Rooms enhanced by June 2022

(vii) ICT infrastructure preventive Maintenance plan developed and operationalized by June, 2022

4.2.6. Outcome Indicators

The realization of the above outputs will lead to achievement of the intermediate outcomes indicated in 4.2.3 which will

be measured using the following outcome indicators.

(i) Perception of PO-RAMD staff on ICT infrastructure service

(ii) Reliable network service availability

(iii) Number of ICT infrastructure deployed

(iv) Percentage of ICT resources acquired

It is expected that effective implementation and realization of the strategy, output and intermediate outcomes will ensure availability reliable services and adequate hardware, software, and network services for both internal operations and service delivery therefore achieve the main goal of this KRA.

4.3 Key Results Area 3: ICT Application Management

4.3.1. Background

ICT Applications are software programmes designed for end-users to use in their daily operations to support the organization's business. The essence of applications is to integrate operations and functions of the organization, help end users to perform multiple functions, improve productivity, increase work efficiency and improve service delivery. In order to support PO-RAMD operations, a number of applications software have been deployed to facilitate end users to accomplish their day-to-day activities. The current applications software deployed at PO-RAMD include in-house developed, off-shelf procured through various means and Government crosscutting systems.

The management of applications software is facing a number of challenges including absence of guidelines for software version control, upgrade and support; absence of control on the use of unlicensed proprietary software; absence of plan to manage various applications; absence of application systems to support some institution's core functions (archives, e-library, research database, researcher database and semi-current records); and lack of mechanism to control installation of non-approved applications which could be destructive and incompatible with existing systems.

In order to enhance the management of ICT Applications, a number of measures and interventions will have to be undertaken to address above issues and challenges which will arise in the course of implementation of this Strategy so as to achieve the goals and intermediate outcomes under this KRA.

4.3.2. Strategic Objective

To have in place software applications that are properly developed, acquired, managed and appropriately used in assisting PO-RAMD to achieve its objectives.

4.3.3. Intermediate Outcomes

The overall goal of this KRA is to implement interventions that will ensure that software applications are developed, acquired and are appropriately used to assist PO-RAMD achieve its objectives. It is therefore expected that achievement of the interventions under this KRA will lead

to the following intermediate outcomes:

(i) Enhanced application systems to support core functions

(ii) Reduction in ICT outsourcing cost and associated risks

(iii) Improved controls for acquiring software applications

(iv) Improved applications security and safety

(v) Improved systems performance

4.3.4. Strategies

The achievement of the above intermediate outcomes is dependent on commitment of resources in the implementation of the following strategy

- Enhance ICT applications management

4.3.5. Expected Outputs

To realize the above strategies the following expected outputs will be delivered:

(i) Guidelines for conformity of e-Government Standards and Guidelines for Software applications developed by June, 2021

(ii) Application systems for all core PO-RAMD functions in place by June, 2023

(iii) Semi-current Records Management System improved by June, 2022

4.3.6. Outcome Indicators

The realization of the above outputs will lead to achievement of the intermediate outcomes indicated in 4.3.3 which will be measured using the following outcome indicators:-

(i)   % of customers satisfied with the e-services provided

(ii) Number of people accessing e-services offered by PO-RAMD

(iii) % of PO-RAMD business processes digitalized

It is expected that effective implementation and realization of the strategy, output and intermediate outcomes will ensure appropriate acquiring, development and deployment of ICT Applications therefore achieving the main goal of this KRA.

4.4 Key Results Area 4: ICT Security Management

4.4.1.   Background

ICT Security covers all the processes which ensure computer-based equipment, information and services are protected from unintended or unauthorized access, change or destruction throughout an organization. In modern world of technology, the security of networks, data and all ICT resources are very important.

Management of ICT Security at PO-RAMD faces a number of challenges including inadequate protection of the ICT resources from accidental or malicious acts while preserving the open sharing requirement of the Government; lack of monitoring mechanisms for users

accessing records and archives; limited ICT security awareness to staff and other stakeholders in the course of undertaking their responsibilities; inadequate ICT security resources; insufficient knowledge of advanced ICT security appliances such as firewalls; and capacity to manage and keep in pace with rapid technological advances in ICT.

In order to enhance the ICT Security at PO-RAMD a number of measures and interventions will have to be undertaken to address above issues, challenges and emerging Security issues in the course of implementation of this Strategy so as to achieve the goals and intermediate outcomes under this KRA.

4.4.2. Strategic Objective

To protect PO-RAMD's ICT resources from cyber-attacks, accidental, intended or malicious acts while preserving the open information sharing requirements of the Government.

4.4.3. Intermediate Outcomes

The overall goal of this KRA is to implement the interventions that will enhance physical, information, hardware and network security at PO-RAMD offices. It is expected that achievement of the interventions under this KRA will lead to the following intermediate outcomes:

  (i)   Increased Integrity of information

  (ii)   Increased confidentiality of information

  (iii)   Increased availability of information

  (iv)   Increased reliability of information

(v)   Increased security controls

(vi) Increased staff awareness on ICT security matters

(vii) Reduced information security risks

4.4.4. Strategies

The achievement of the above intermediate outcome is dependent on commitment of resources in implementation of the following strategies:

(i)   Enhance PO-RAMD ICT security management framework

(ii)   Develop and operationalize ICT Security awareness program for PO-RAMD staff

(iii) Enhance ICT security controls

(iv)   Develop PO-RAMD disaster recovery plan

(v)   Enhance PO-RAMD ICT Staff skills on advanced security

4.4.5. Expected Outputs

To realize the above strategies the following expected outputs will be delivered:

(i)   PO-RAMD ICT Security policy developed and operationalized by June, 2022

(ii)   ICT Security awareness program developed and operationalized by June, 2022

(iii) PO-RAMD disaster recovery plan developed and operationalized by June, 2022

(iv) PO-RAMD ICT Security equipment and systems acquired by June, 2023

(v) 50% of ICT staff trained on advanced ICT security appliances by June, 2025

4.4.6. Outcomes Indicators

The realization of the above outputs will lead to achievement of the intermediate outcomes indicated in 4.4.3 that will be measured using the following outcome indicators.

(i) Rate of occurrence of security violation incidents

(ii) Vulnerability level

(iii) % of user awareness on security issues

(iv) Number of ICT Security equipment and systems in place

It is expected that effective implementation and realization of the strategy, output and intermediate outcomes will enhance physical, information, hardware and network security; minimize security violation incidences; and ensure the systems are safeguarded and therefore achieve the main goal of this KRA.

4.5 Key Results Area 5: ICT Human Resources

4.5.1. Background

ICT Human Resource covers the collective skills, knowledge, professional ethics, wisdom and other

intangible assets possessed by individuals that can be used to achieve the Department's ICT business goals. PO-RAMD needs qualified and multi-skilled ICT human resources with leadership, managerial and specialized skills to achieve its business goals.

On the other hand, other non-ICT personnel need to be well versed on proper ICT resources utilization, in order for ICT to bring a meaningful contribution to achieve PO-RAMD goals. Regular training and awareness for non-ICT personnel needs to be provided in line with technological development and change of business processes.

In the area of ICT human resource PO-RAMD is facing a number of challenges including shortage of specialized ICT technical staff, inadequate capacity building and training interventions to both technical and non-technical staff, inadequate incentives to attract, retain and encourage creativity and innovations.

In order to enhance the ICT HR capacity at PO-RAMD a number of measures and interventions will have to be undertaken to address above issues and challenges, emerging HR issues that will arise in the course of implementation of this Strategy to achieve the goals and intermediate outcomes under this KRA.

4.5.2. Strategic Objective

To equip PO-RAMD with adequate, multi-skilled personnel and ICT professionals to facilitate achievement of ICT organizational goals

4.5.3. Intermediate Outcomes

The overall goal of this KRA is to implement interventions that will ensure PO-RAMD has adequate number and quality of ICT professionals. This KRA also intends to ensure that PO-RAMD staff are well versed on the use of ICT services and resources as well as being aware of vulnerable security risks. It is expected that achievement of the interventions under this KRA will lead to the following intermediate outcomes:

(i)   Increased staff competence in ICT matters

(ii)   Increased staff productivity

(iii)   Increased availability of ICT expertise

(iv)   Reduction in ICT outsourcing cost and risks

(v)   Increased e-Government initiatives

(vi)   Increased ICT literacy level

4.5.4. Strategies

The achievement of the above intermediate outcome is dependent on commitment of resources in implementation of the following strategies:

(i)   Develop and operationalise internal staff training and awareness program on ICT

(ii)   Conduct specialized ICT professionals training needs assessment and develop training plan for PO-RAMD ICT staff

(iii)   Enhance Capacity, Innovation and Creativity in

the strategic use of ICT

4.5.5. Expected Outputs

To realize the above strategies the following expected outputs will be delivered:

(i) ICT Training and awareness programme for PO-RAMD staff developed and operationalized by July, 2023

(ii) Specialized ICT professionals skills gap document and training plan developed and incorporated in PO-RAMD plans by June, 2023

(iii) Recruitment of competent ICT Professionals facilitated by June, 2023

(iv) Incentive scheme for ICT innovation and creativity in place and incorporated in PO-RAMD Strategic plan by June, 2023

4.5.6. Outcome Indicators

The realization of the above outputs will lead to achievement of the intermediate outcomes indicated in 4.5.3 that will be measured using the following outcome indicators.

(i) PO-RAMD ICT staff satisfaction

(ii) % of training courses matching organization needs

(iii) Number of vacant posts filled

(iv) Number of ICT staff with professional

certifications

(v)   % of ICT literacy level

It is expected that effective implementation and realization of the strategy, output and intermediate outcomes will ensure availability of adequate number and quality of ICT professionals as well as enhance ICT knowledge to all PO-RAMD staff for undertaking effectively and efficiently internal operations and service delivery to its customers and therefore achieve the main goal of this KRA.

4.6 Summary of the Key Result Areas

The above five KRAs form the basis of interventions that will be implemented during the five years period i.e. 2020/21-2024/25 of this ICT strategy. The ICT strategy matrix which summarizes the Key Result Areas, Strategies, Targets and Activities is attached as **Appendix III.** The implementation of the interventions and results under this ICT Strategy will be tracked and assessed using a comprehensive Monitoring and Evaluation plan which is covered in chapter five.

Chapter 5

Monitoring and Evaluation

5.1 Monitoring and Evaluation - Introduction

This monitoring and evaluation plan will be used to measure and gauge results and benefits of implementing interventions under this ICT strategy which will trickle to clients, stakeholders and other beneficiaries of services offered by PO-RAMD.

This plan contains twenty (20) outcome indicators, twenty five (25) milestones (outputs), a number of review meetings and reports that will be used to measure achievement of five (5) Key Result Areas and thirty one (31) intermediate outcomes as shown in **The Results Framework Matrix** attached as **Appendix II**.

5.2 Results Framework

The results framework contains five Strategic Objectives, five Key Result Areas, 31 intermediate outcomes whose achievement will be measured by 20 outcome indicators. The result framework matrix shows the causal linkage of high level results of PO-RAMD which will be triggered by allocation of inputs into the various activities and implementing activities which will lead to achievement of the outputs.

Achievement of the outputs implemented under this strategy will lead to the achievement of intermediate outcomes under the five Key Result Areas, which will

overtime contribute to achievements of PO-RAMD objectives.

5.3 Monitoring Plan

A monitoring plan containing indicator description, baseline values, indicator target values, data collection method of analysis, means of verification, frequency of reporting and the responsible person for each of the twenty outcome indicators under this Strategy shall be prepared by the unit responsible for Policy and Planning.

5.4 Planned Reviews

Planned reviews consist of review meetings, milestones and rapid appraisals which will be used to track implementation activities and outputs under this Strategy. These are explained in detail below:

5.4.1 Review Meetings
Three types of Review meetings will be used to track down the implementation of activities and outputs of this Strategy. The type of meetings, their frequency, the designation of the chairperson and participants to each of the meetings are detailed in the table below:

Planned Review Meetings

S/N	Type of Meeting	Frequency	Designation of the Chairperson	Participants
	Fortnightly review meeting	Every two Weeks	HICTU	All Staff in the Unit
	Management meeting	Every two Weeks	DRAM	All Heads of Divisions and Units
	Steering Committee meeting	Quarterly	Chairman of Steering Committee	Members of Steering Committee

5.4.2 Milestone Review

Planned Milestone review will involve developing a number of milestones every year over the period of 5 years. The milestones will be determined every year during the budgeting circle depending on the amount allocated for ICT interventions under this strategy. The process of planned milestone review will involve determining review years, types of review, milestone to be reviewed and responsible person for reporting.

5.5 Evaluation Plan

The evaluation plan consist of in-depth analytical formative and summative evaluation work which will be undertaken to determine Strategy relevance, efficiency, effectiveness, sustainability, and outcomes. One outcome evaluation with a total of 4 questions will be conducted. The details of evaluation study including title, description, questions, methodology, timeframe and the person responsible for managing the process is detailed in below.

Planned Evaluation

S/N	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible person
	Outcome evaluation of the implementation of PO-RAMD ICT Strategy.	This evaluation aims to measure benefits of ICT interventions to staff ,customers and other stakeholders	What were the planned targets? Have the targets been achieved? Has the target achievements ready to the realizations of the outcomes? What changes can be done to improve the outcomes?	Questionnaires Semi structured interviews Key informant interview Focus group discussions	To be determined by Planning Unit	Head of Planning Unit

5.6 Reporting Plan

There will be six type of reports to be prepared under this Strategy, the table below details the type of report, the recipient of the report, frequency of reporting and the responsible person/body to prepare the report.

SN	Type of Report	Recipient	Frequency	Responsible Person
1.	Implementation Reports	HICTU	Fortnightly	Technical Officers
2.	ICT Unit Reports	DRAM	Fortnightly	HICTU
3.	Steering Committee Progress Reports	eGA[1]	Quarterly	HICTU
4.	Performance Reports	DRAM	Quarterly	HICTU
5.	ICT Policy Implementation Reports	DRAM	Annually	HICTU
6.	Annual Report	DRAM	Annually	HICTU

Chapter 5

Budget and Funding Arrangements

6.1 Budget Summary

The planned expenditure over the 5 year period stretching from 2020/21 to 2024/25 is Tshs. **1,849,300,000.00**. This translates into roughly Tshs. **369,860,000.00** per annum please see the detailed budget attached as **Appendix VI** and summarized as follows:

SNo.	KEY RESULTS AREA	AMOUNT (TSHS)
1	ICT Governance	**129,500,000**
2	ICT Infrastructure	**1,133,000,000**
3	ICT Application Management	**229,100,000**
4	ICT Security Management	**323,000,000**
5	ICT Human Resources	**34,700,000**
	TOTAL	**1,849,300,000**

6.2 Sources of Funds

This expenditure will be financed by the Government of Tanzania through Personnel Emolument, Other Charges and Development Expenditure. However, through the Resource ICT Resource Mobilization Strategy and Action Plan to be prepared, other sources for funds, human resources, equipment or services may be identified.

APPENDICES

Appendix I - SWOC Analysis

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
1	**ICT Governance** (Leadership, Structures, Processes)	Existence of ICT Unit to manage and oversee ICT operations	Absence of ICT Steering Committee	Political willingness on ICT initiatives	Inadequate budget allocation to support ICT interventions
		Existence of ICT Manpower (Staff)	Current ICT Structure faces challenges to support new and extended functions/electronic systems	Existence of institutions providing Governance on ICT (MWTC, PO-PSMGG & e-GA)	Inadequate policies and legal frameworks
		Management willingness on ICT initiatives	Absence of mechanism for evaluating and monitoring ICT services	Existence of the National ICT Policy of 2016	External stakeholders resistance to change
		Existence of Internal ICT Policy	Absence of mechanisms for managing and monitoring ICT projects	Existence of ICT legal frameworks (e-Government. Act of 2019, EPOCA 2010, Electronic Transactions Act of 2015, Cybercrimes Act of 2015...)	
		Existence of ICT Acceptable Use Policy	Absence of clear plans on ICT interventions	Existence of Public Procurement Act of 2011 and e-Government Act No 10 of 2019	
		Existence of Records and Archives Management Policy, 2011	Absence of service management guidelines for ICT equipment, services and applications	Existence of e-Government Authority to support ICT initiative in the Ministry	

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
		Existence of Records and Archives Management Act No.3 of 2002	Absence of ICT business continuity plan document		
		Existence of Founders of the Nation (Honouring Procedures Act) No. 18 of 2004	Absence of ICT Security Policy		
		Existence of Strategic Plan 2017 – 2023	Insufficient adoption of ICT Standards and Guidelines to guide ICT interventions		
		Existence of staff rules and regulations	Absence of ICT Service Management Framework for maintenance and support of ICT resources		
		Staff readiness in using ICT in day to day operations	Absence of documented standard operating procedures		
2	ICT Infrastructure	Existence of reliable Local Area Network (Dar es Salam, Dodoma and Mwanza)	Insufficient working tools especially ICT equipment	Existence of reliable shared Government Communications Network (GovNet)	Absence of infrastructure to allow sharing of large archived documents
		Existence of mini data center	Unreliable mini data centers (poor cooling systems, fire suppression system, power backup system)	Existence of the Government and National Internet Data Centers	Uncontrolled price increase on data services
		Availability of Power Backup (Dar es salaam and Dodoma)	Inadequacy of Power Backup facilities in Mwanza, Arusha and Mbeya	Existence of Government purchased international Internet Bandwidth	Unreliable TANESCO Power Supply

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
		Existence of facilities to preserve documentary materials in variety of formats (microfilm, audio visual or mechanical recordings, digital)	Absence of ICT equipment maintenance plan	Existence of the National ICT Broadband Backbone (NICTBB)	Absence of ICT facilities to translate documents preserved in other languages (German and Arabic)
		Existence of improved communications (emails, Installed Voice Over Internet Protocol (VOIP) phones, State of the art video conferencing facilities installed in Dodoma) system which uses Local Area Network (LAN) and Wide Area Network (WAN);	Underutilization of ICT data storage facilities	Increased Internet and Mobile communications coverage	Existence of uncoordinated ICT infrastructure initiative in the Government
		Installation of security cameras (NRC Dodoma and Mwanza)	Absence of centralized computer systems administration (domain controller/active directory) system		Rapid change in technologies
		Equipping some of professional staff with ICT equipment hence increasing usage of ICT	Server Rooms run in non-conducive (as recommended) environment;		Change in Government policies, strategies and priorities
		Existence of a state-of-the-art conference equipped with ICT facilities at NRC Dodoma.	Unstable power supply which interrupts service provisioning and work operations using ICT		Resistance to change

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
3	ICT Applications Management	Existence of Microsoft Office Application Software	Absence of control on the use of unlicensed proprietary Software	Availability of open source software which can be customized to suit RAMD's requirements	Absence of Client Service Charter
		Existence of Trusted Digital Repository Management System for managing archival resources/heritage	Absence of application systems to support some institution core functions (archives, e-library, research database, researcher database and semi-current records)	Availability of Government cross cutting systems (HCMIS, GMS, TANePS, GePG, e-Office, MUSE, Vibali, CBMS etc.)	Absence of control to deal with frequent disruption of some e-Government cross cutting systems.
		Existence of Semi-current Records Management System	Absence of plan to manage various applications	Establishment of online help desk to support users of RAMD's services	Absence of collaboration in the development, deployment and delivery of e-Government systems (to provide room for interoperability)
		Operational PO-RAMD Website	Lack of proper awareness on some ICT Applications among staff		
			Absence of mechanisms to improve Trusted Digital Repository Management System and Semi-current Records Management System		

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
			Absence for guidelines for software version control, upgrade and support		
			Lack of mechanism to control installation of non-approved applications		
		Existence of electronic security systems in Dodoma and Mwanza offices	Limited ICT Security awareness program for users	Existence of password security policy in GMS system (password to be changed every 3 months)	Existence of cybersecurity threats and attacks globally
		Existence of access control in records storage areas	Lack of monitoring mechanisms for users accessing records and archives repository resources and PO-RAMD ICT facilities and premises	Existence of legislations and circulars to support ICT security (Cybercrime, Electronic transactions)	Keeping in pace with technological changes
4	ICT Security Management	Maintenance of updated antivirus software in Computers	Inadequate protection of ICT resources from accidental or malicious acts while preserving the open sharing requirement of the Government	Government readiness to support ICT security by establishment of Tanzania Computer Emergency Response Team (TZ-CERT)	Rapid changes of technology
		Security controls in place for personal computers (use of passwords)	Information loss due to obsolesce of ICT equipment	Existence of an authority to advise and assist on Government ICT Security matters	

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
		Existence of security appliances for RAMD's network security (Firewalls)	Insufficient knowledge of advanced ICT security appliances such as firewalls and capacity to manage rapid development in ICT		
		Existence of Risk Register	Absence of electronic tools and equipment for physical security of records and archives repositories;		
		Existence of Network Security Appliances (Firewalls)	Insufficient fire detection and suppression systems at records and archives repositories;		
			Insufficient/Inadequate/ security monitoring tools/equipment for the purpose of protecting the institution's business interests, quality control, detecting abuse of the systems, detection or prevention of crime/ misconduct while accessing records and archives resources and facilities		
			Absence of ICT security monitoring and auditing system		

No.	Criteria/Area	Strength	Weakness	Opportunities	Challenges
		Existence of competent ICT Staff	Inadequate ICT staff to support service delivery at HQ and zonal offices	Existence of ICT Scheme of Service for Government ICT cadres	
		Existence of training plan which also accommodates training needs of ICT staff	Inadequate capacity building interventions to both technical and non-technical staff	Existence of training institutions and scholarship opportunities on ICT	
5	ICT Human Resources		Inadequate incentives to attract, retain and encourage creativity and innovation in ICT	Existence of Government research and innovation centres on ICT	
			Skills gap on advanced security infrastructure	Existence of online content and training platforms on ICT	
			Inadequate training for ICT staff on emerging and advanced technology		

Appendix II - The Results Framework Matrix

DEVELOPMENT OBJECTIVE AND STRATEGIC OBJECTIVES	KEY RESULT AREA	INTERMEDIATE OUTCOMES	KEY PERFORMANCE INDICATORS
OBJECTIVE 1: To put in place a strategic and management framework to guide PO-RAMD ICT initiatives and facilitate application of the principles of ICT Governance in day to day operations	ICT Governance	a) Improved service delivery b) Increased customer satisfaction c) Informed decision making in ICT intervention d) Improved communication with internal and external stakeholders e) Increased use in ICT in internal operations and service delivery	a) Number of ICT Steering Committee meetings conducted b) Percentage of compliance to ICT guidelines c) Level of understanding by top leadership on the strategic role of ICT towards the achievements of Organization roles d) Number of Standard Operating Procedures
OBJECTIVE 2: To have in place an optimized ICT infrastructure that supports business operations based on ICT planning, management and best practices.	ICT Infrastructure	a) Increased staff efficiency in undertaking day-to-day operations b) Improved systems administration c) Reliable and uninterruptible service delivery d) Improved communication and collaboration within PO-RAMD Units and Division e) Enhanced communication and cooperation between PO-RAMD	a) Perception of PO-RAMD staff on ICT infrastructure service b) Reliable network service availability c) Number of ICT infrastructure deployed d) Percentage of ICT resources acquired

Objective	Area	Outcomes	Indicators
		and external stakeholders f) Increased Public access to information on PO-RAMD matter g) Efficiency of service, which is based on the average time to complete a specific service h) Customer satisfaction i) Reduction in paperwork and operational costs	
OBJECTIVE 3: To have in place software applications that are properly developed, managed and acquired, appropriately used in assisting PO-RAMD to achieve its objectives.	ICT Application Management	a) Enhanced application systems to support core functions b) Reduction in ICT outsourcing cost and associated risks c) Improved controls for acquiring software applications d) Improved applications security and safety e) Improved systems performance	a) % of customers satisfied with the e-services provided b) Number of people accessing e-services offered by PO-RAMD c) % of PO-RAMD business processes digitalized
OBJECTIVE 4: To protect PO-RAMD's ICT resources from accidental, intended or malicious acts while preserving the open	ICT Security Management	a) Increased information Integrity of b) Increased information confidentiality of c) Increased availability of	a) Rate of occurrence of security violation incidents b) Vulnerability level c) % of user awareness on security issues

information requirements of Government. sharing of the		information d) Increased reliability of information e) Increased security controls f) Increased staff awareness on ICT security matters g) Reduced information security risks	d) Number of ICT Security equipment and systems in place
OBJECTIVE 5: To equip PO-RAMD with adequate, multi-skilled personnel and ICT professionals to facilitate achievement of ICT organizational goals	ICT Human Resources	a) Increased staff competence in ICT matters b) Increased staff productivity c) Increased availability of ICT expertise d) Reduction in ICT outsourcing cost and risks e) Increased e-Government initiatives f) Increased ICT literacy level	a) PO-RAMD ICT staff satisfaction b) % of training courses matching organization needs c) Number of vacant posts filled d) Number of ICT staff with professional certifications e) % of ICT literacy level

Appendix III - ICT Strategy Matrix

S/NO	KRA	STRATEGY	TARGET	ACTIVITY	RESPONSIBLE
1	ICT Governance	i) ICT Steering Committee established and operationalized.	PO-RAMD ICT Steering Committee in place and operations sustained by June 2022	To facilitate establishment and launching of ICT steering committee	HICT
				To conduct quarterly meetings	
				To facilitate monitoring of PO-RAMD ICT interventions	
		ii) Enhance mechanisms for ICT Resource (Funds, HR, Equipment & Services) mobilization from various sources (Treasury, Professional Bodies, ICA, IRMT, ESARBICA)	ICT Resource Mobilization Strategy and Action Plan developed and operationalized by June 2022	To develop ICT Resource Mobilization Strategy	DPP/HICT
				To develop Action Plan for Resource Mobilization	
				To develop Concept Notes and Proposals for Resource Mobilization	
				To engage resource partners through field visits, working forums and meetings	
		iii) Review PO-RAMD organization structure and functions to accommodate ICT Division (promote from current supporting role at RAMD to coordination and support role of ICT related records and archives initiatives across the Public sector)	Review proposal for PO-RAMD structure submitted to PO-PSMGG by June 2022	To prepare proposal for review of PO-RAMD organization Structure	DAHRM/HICT
				To conduct stakeholders meetings and working forums	

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S/NO	KRA	STRATEGY	TARGET	ACTIVITY	RESPONSIBLE
		iv) Develop and operationalize PO-RAMD ICT Strategic Plan	PO-RAMD ICT Strategic Plan operationalized by June 2022	To design ICT programmes and projects To design implementation roadmap To facilitate monitoring of implementation of ICT Strategy	DPP/HICT
			PO-RAMD ICT Strategic Plan reviewed by June 2023	To conduct strategy implementation progress studies To conduct stakeholders meetings To review ICT strategy	
		v) Develop, operationalize and review ICT Management Documents (ICT Acceptable Use policy, Project Management guideline, ICT Acquisition guideline, Business Continuity Plan, ICT Security Guideline etc.)	At least 6 ICT Management documents operationalized by June 2023	To develop/review the ICT Management documents	HICT
		vi) Establish mechanisms for monitoring and evaluating PO-RAMD ICT Services	Monitoring and Evaluation framework for PO-RAMD ICT Services/Projects developed and operationalized by June 2023	To develop monitoring and evaluation framework (identify and define performance indicators) To develop monitoring and evaluation plan. To facilitate stakeholders' meetings To finalize the monitoring and evaluation framework and plan.	DPP/HICT
2	ICT Infra structure	i) Enhance PO-RAMD ICT	PO-RAMD ICT Infrastructure	To develop the PO-RAMD ICT Infrastructure architecture	HICT

S/NO	KRA	STRATEGY	TARGET	ACTIVITY	RESPONSIBLE
		Infrastructure	architecture developed and operationalised by June 2025	To conduct awareness programs on the ICT Infrastructure Architecture	
			ICT Software and Hardware acquired by June 2025	To procure ICT infrastructure	PMU/HICT
				To procure ICT software	
				To maintain ICT software and infrastructure	
			Computing and Storage equipment hosted at Government Data Center by June 2023	To conduct technical needs assessment and design requirement	HICT
				To procure ICT storage equipment and associate facilities	
				To facilitate the hosting fees facilities on Government Data Center	
		ii) Acquire Storage equipment for hosting various PO-RAMD ICT Applications	Additional storage equipment acquired by June 2025	Procurement of ICT storage facilities based on new requirements	PMU/HICT
				To maintain ICT storage facilities	
		iii) Enhance power backup solutions for PO-RAMD	Additional power backup equipment acquired by June 2025	To facilitate acquiring of power backup as per requirements	PMU/HICT

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S/NO	KRA	STRATEGY	TARGET	ACTIVITY	RESPONSIBLE
		iv) Enhance PO-RAMD's Server Room for reliable, stable and alternative power; cooling systems and fire suppression systems	Server Rooms enhanced by June 2022	Procurement of Server Room equipment based on new requirements	HICT
		v) Develop and operationalize mechanism for Preventive, Maintenance and repair service for ICT equipment at PO-RAMD	ICT infrastructure preventive Maintenance plan developed and operationalized by June, 2022	To conduct needs assessment To finalize the ICT maintenance plan To implement ICT maintenance plan	HICT
3	ICT Applications Management	i) Develop PO-RAMD check list for conformity with e-Government Standards and Guidelines and other internal guidelines	Guidelines for conformity of e-Government Standards and Guidelines for Software applications developed by June 2021	To develop draft conformity check list To convene stakeholders meetings To finalize the conformity check list	HICT
		ii) Enhance application systems to support PO-RAMD core functions (archives, e-library,	Application systems for all core PO-RAMD functions in place by 2025	To develop framework for maintenance of software application. To develop ICT application maintenance plan.	PMU/HICT

S/NO	KRA	STRATEGY	TARGET	ACTIVITY	RESPONSIBLE
		research database, researcher database and semi-current records)		To conduct ICT applications maintenance awareness programs for users	HICT
			Semi-current Records Management System improved by June 2023	To design and develop Semi-current Records Management System	HICT
		i) Enhance PO-RAMD ICT security management framework	PO-RAMD ICT Security policy developed and operationalized by June 2022	To conduct assessment to identify required security elements	HICT
				To develop Security Policy	
				To finalize the Security Policy	
				To publish and operationalize the ICT Security Policy	
	ICT Security Management	ii) Develop and operationalize ICT Security awareness program for PO-RAMD staff	ICT Security awareness program developed and operationalized by June 2022	To conduct awareness programes on the ICT security policy to users	DAHRM/HICT
		iii) Develop PO-RAMD disaster recovery plan	PO-RAMD disaster recovery plan developed and operationalized by June 2022	To review existing disaster recovery guidelines	DAHRM/HICT
				To develop the guidelines	
				To convene stakeholders meeting	
				To publish and operationalize the ICT Disaster recovery guidelines	
				To monitor implementation of the guidelines	
4		iv) Enhance ICT security controls	PO-RAMD ICT Security equipment and systems acquired	To design ICT security equipments and software requirements	HICT
				To acquire the ICT security facilities	

S/NO	KRA	STRATEGY	TARGET	ACTIVITY	RESPONSIBLE
			by June 2023	To operationalize ICT security facilities	HICT
		v) Enhance PO-RAMD ICT Staff skills on advanced security	50% of ICT staff trained on advanced ICT security appliances by 2025	To develop ICT security training plan	
				To implement ICT security training plan	
		i) Develop and operationalise internal staff training and awareness program on ICT	ICT training and awareness program developed and operationalized by July 2022	To develop ICT training awareness plan	DAHRM/HICT
				To implement Employees ICT training plan	
5	ICT Human Resources	ii) Conduct specialized ICT professionals training needs assessment and develop training plan for PO-RAMD ICT staff	Specialized ICT professionals skills gap document and training plan developed and incorporated in PO-RAMD plans by June 2023	To develop ICT professionals skills gap documents and training plan	DAHRM/HICT
		iii) Enhance Capacity, Innovation and Creativity in the strategic use of ICT	ICT incentive scheme for innovation and creativity in place and incorporated in PO-RAMD Strategic plan by June 2023	To undertake the ICT incentive need assessment	DAHRM/HICT
				To monitor and evaluate the ICT incentive need assessment plan	

Appendix IV - **Detailed ICT Strategy**

S/ NO	TARGET	ACTIVITY	ESTIMATED BUDGET
1	PO-RAMD ICT Steering Committee in place and operations sustained by June 2022	To facilitate establishment and launching of ICT steering committee	3,200,000
		To conduct quarterly meetings	12,800,000
		To facilitate monitoring of PO-RAMD ICT interventions	14,000,000
		Target Total	**30,000,000**
2	ICT Resource Mobilization Strategy and Action Plan developed and operationalized by June 2022	To develop ICT Resource Mobilization Strategy	500,000
		To develop Action Plan for Resource Mobilization	1,000,000
		To develop Concept Notes and Proposals for Resource Mobilization	7,500,000
		To engage resource partners through field visits, working forums and meetings	20,500,000
		Target Total	**29,500,000**

3	Review proposal for PO-RAMD structure submitted to PO-PSMGG by June 2022	To prepare proposal for review of PO-RAMD organization Structure	500,000
		To conduct stakeholders meetings and working forums	3,500,000
		Target Total	**4,000,000**
4	PO-RAMD ICT Strategic Plan operationalized by June 2022	To design ICT programmes and projects	500,000
		To design implementation roadmap	1,500,000
		To facilitate monitoring of implementation of ICT Strategy	2,700,000
		Target Total	**4,700,000**
5	PO-RAMD ICT Strategic Plan reviewed by June 2023	To conduct strategy implementation progress studies	600,000
		To conduct stakeholders meetings	9,000,000
		To review ICT strategy	15,000,000
		Target Total	**24,600,000**

6	At least 6 ICT Management documents operationalized by June 2023	To develop/ review the ICT Management documents	7,500,000
		Target Total	**7,500,000**
7	Monitoring and Evaluation framework for PO-RAMD ICT Services/ Projects developed and operationalized by June 2023	To develop monitoring and evaluation framework (identify and define performance indicators)	4,500,000
		To develop monitoring and evaluation plan.	6,700,000
		To facilitate stakeholders' meetings	15,000,000
		To finalize the monitoring and evaluation framework and plan.	3,000,000
		Target Total	**29,200,000**
8	PO-RAMD ICT Infrastructure architecture developed and operationalised by June 2025	To develop the PO-RAMD ICT Infrastructure architecture	100,000,000
		To conduct awareness programs on the ICT Infrastructure Architecture	5,000,000
		Target Total	**105,000,000**

9	ICT Software and Hardware acquired by June 2025	To procure ICT infrastructure	150,000,000
		To procure ICT software	80,000,000
		To maintain ICT software and infrastructure	60,000,000
		Target Total	**290,000,000**
10	Computing and Storage equipment hosted at Government Data Center by June 2023	To conduct technical needs assessment and design requirement	2,000,000
		To facilitate the hosting fees facilities on Government Data Center	50,000,000
		Target Total	**52,000,000**
11	Additional storage equipment acquired by June 2025	Procurement of ICT storage facilities based on new requirements	300,000,000
		To maintain ICT storage facilities	50,000,000
		Target Total	**350,000,000**
12	Additional power backup equipment acquired by June 2025	To facilitate acquiring of power backup as per requirements	150,000,000
		Target Total	**150,000,000**

13	Server Rooms enhanced by June 2022	Procurement of Server Room equipment based on new requirements	30,000,000
		Target Total	**30,000,000**
14	ICT infrastructure preventive Maintenance plan developed and operationalized by June, 2022	To conduct needs assessment	3,000,000
		To finalize the ICT maintenance plan	3,000,000
		To implement ICT maintenance plan	150,000,000
		Target Total	**156,000,000**
15	Guidelines for conformity of e-Government Standards and Guidelines for Software applications developed by June 2021	To develop draft conformity check list	1,400,000
		To convene stakeholders meetings	10,000,000
		To finalize the conformity check list	700,000
		Target Total	**12,100,000**

16	Application systems for all core PO-RAMD functions in place by 2025	Enhanced application systems to support core functions	125,000,000
		To develop framework for maintenance of software application.	5,000,000
		To develop ICT application maintenance plan.	2,000,000
		To conduct ICT applications awareness programs for users	20,000,000
		Target Total	**152,000,000**
17	Semi-current Records Management System improved by June 2023	To design and develop Semi-current Records Management System	95,000,000
		Target Total	**95,000,000**
18	PO-RAMD ICT Security policy developed and operationalized by June 2022	To conduct assessment to identify required security elements	2,000,000
		To develop Security Policy	5,000,000
		To finalize the Security Policy	1,000,000
		To publish and operationalize the ICT Security Policy	3,000,000
		Target Total	**11,000,000**

19	ICT Security awareness program developed and operationalized by June 2022	To conduct awareness programmes on the ICT security policy to users	15,000,000
		Target Total	**15,000,000**
20	PO-RAMD disaster recovery plan developed and operationalized by June 2022	To review existing disaster recovery guidelines	2,000,000
		To develop the guidelines	5,500,000
		To convene stakeholders meeting	4,500,000
		To publish and operationalize the ICT Disaster recovery guidelines	3,000,000
		To monitor implementation of the guidelines	5,000,000
		Target Total	**20,000,000**
21	PO-RAMD ICT Security equipment and systems acquired by June 2023	To design ICT security equipment and software requirements	5,000,000
		To acquire the ICT security facilities	150,000,000
		To operationalize ICT security facilities	12,000,000
		Target Total	**167,000,000**

22	50% of ICT staff trained on advanced ICT security appliances by 2025	To develop ICT security training plan	5,000,000
		To implement ICT security training plan	80,000,000
		Target Total	**85,000,000**
23	ICT training and awareness program developed and operationalized by June 2022	To develop ICT training awareness plan	3,000,000
		To implement Employees ICT training plan	15,000,000
		Target Total	**18,000,000**
24	Specialized ICT professionals skills gap document and training plan developed and incorporated in PO-RAMD plans by June 2023	To develop ICT professionals skills gap documents and training plan	7,700,000
		Target Total	**7,700,000**

25	ICT incentive scheme for innovation and creativity in place and incorporated in PO-RAMD Strategic plan by June 2023	To undertake the ICT incentive need assessment	3,000,000
		To monitor and evaluate the ICT incentive need assessment plan	1,000,000
		Target Total	**4,000,000**
Total			**1,849,300,000**