THE UNITED REPUBLIC OF TANZANIA

Ministry of Finance and Planning

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) STRATEGIC PLAN 2020-2023

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LIST OF ACRONMYMS AND ABBREVIATIONS

ACGEN	Accountant General Department
AHRM	Administration Human Resource Management
ALS	Advanced Loan System
AMP	Aid Management Platform
BOT	Bank Of Tanzania
CBMS	Centralized Budget Management System
COBIT	Control Objectives for Information and Related Technologies
DSTS	Depute Secretary of Treasury Services
EFT	Electronic File Transfer
EGA	Electronic Government Agency
E-GOV	Electronic Government
EPICOR	Accounting Software used for Government for payment processing for MDA's and Independent Department
GEPG	Government Electronic Payment Gateway
GOT	Government Of Tanzania

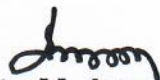| GSPP	Government Salary Payment Platform
FISMD	Financial Information Systems Management Division
HCMIS	Human Capital Management Information System
ICT	Information Communication Technology
ICTU	Information Communication Technology Unit
IFMIS	Integrated Financial Management Information Systems
IP-PBX	Internet Protocol – Private Branch Exchange
LGAs	Local Government Agency
MOFP	Ministry of Finance and Planning
MDAs	Ministry Department Agency
NICTBB	National ICT Broadband Backbone
PO-PSM	President Office - Public Service Management and good government
PFMRP	Performance Financial Management Reform Program
SDU	System Development Unit
SOP	Standard Operation Procedure
SWOC	Strength Weakness Opportunity Challenges
VoIP	Voice over IP
WAN	Wide Area Network
MINISTRY	Ministry of Finance and Planning

FOREWORD

The importance of Information and Communication Technologies (ICTs) services does not need to be overemphasized. ICT advantages and benefits are now vivid, and the services are recognized by the strategic roles played in enhancing attainment of institutional strategic business growth. ICT is an efficient tool for facilitating transformation and integration of business processes and systems to foster development that continue improving e-government service delivery.

The Government of the United Republic of Tanzania embarked on promoting use of ICT services in 2003 when passed the National ICT Policy. In 2004, e-Government initiatives were launched with the aim of instituting transformation of government processes and systems into e-services. The targeted outcome of the transformation was to increase efficiency and effectiveness in providing communication services within and outside the Government for improved delivery of quality services to customers.

There are number of ICT activities which are implemented; all aim to improve MoFP business operations sustainably. These include acquisition of ICT working tools, the building internal infrastructure (LAN) and development of a Website. There have been several stumbling blocks in realization of benefits of ICT services. Insufficient funds, inadequate trained and well skilled staff, and absence of ICT Strategy to provide proper focus on implementation of ICT are amongst them.

The ICT Strategy serves as a road map to attainment of the spelt-out vision, mission and the strategic objectives which are further translated and cascaded into strategies, and activities to be implemented. Each activity is associated with an indicator for making it easy to measure performance. However, it should be noted that implementation will be undertaken on a phased sequencing, measured annually due to the fact that resources are not always enough to implement all at a time.

I would like to acknowledge MoFP's appreciation to all internal and external stakeholders (Uongozi Institutes, BoT, and eGA) for their support and enormous contributions into the making of this Strategy. It is my hope that in the event all necessary working conditions required are met, the Strategy will yield the intended outcomes within its lifespan, and be able to realize positive impact on ES business operations.

Doto M. James

PERMANENT SECRETARY - TREASURY

EXECUTIVE SUMMARY

Information and Communication Technologies (ICTs) has been recognized as a vital enabler of sustainable socio-economic development due to its potential powers in exploiting existing and new business opportunities for facilitating sectors of the economy to grow. ICT is an efficient tool for facilitating transformation of and integration of business processes, systems, culture, mindset and attitude, to harness development that continue improving e-government, and governance services for better management of the economy.

The Government of the United Republic of Tanzania, for this reason developed the necessary ICT policies, strategies and guidelines in order to ensure that ICT is embraced and given the necessary deserving attention. The policies and strategies include: The National ICT Policy of 2003, and e-Government Strategy (2012) which mainly focus on accelerating the achievements of goals and objectives of the National Development Vision 2025, Five Year Development Plan II (2016/17-2021) and also promoting e-Government services. A common-shared broad goal is to promote good governance and accountability. The Ministry through the Information and Communication Technology Unit has decided to come up with a plan that clearly shows the Strategic direction of the Information and Communication Technology.

An ICT strategy is expected to enhance an organization's effectiveness by aligning ICT with business needs and improving efficiency through timely adoption and use of new technologies.

The Plan consists of Three Chapters which contains several sub-sections as shown here under;

Chapter One; Consists of an Introduction, Rationale of the Plan, Purpose of the plan, Methodology, Organization Structure, objectives and Functions, Vision and Mission of the Ministry.

Chapter Two; Depicts MoFP Information and Communication Technology Operations, Assessment of ICT position which includes analysis of the current ICT issues, its Strengths, Weaknesses, Opportunities and Challenges. After the SWOC analysis, Critical issues with focus areas were identified to be addressed in the plan.

Chapter Three, consists of the Strategic plan which contains six core elements namely: Vision, Mission, Strategic Areas of Focus, Goals, Strategic Objectives and Action Plans. This plan will be reviewed quarterly in order to track the status and measure performance of the strategic objective

CHAPTER 1

1. INTRODUCTION

The Ministry of Finance and Planning (MoFP) recognize ICT as an important instrument which supports the service delivery, quality and timeliness of regulatory decisions and assists the Ministry in achieving its objectives. Having ICT Strategic Plan in place, will assists the Ministry to improve Innovation and Investment in Information Communication Technology.

The ICT Strategic Plan supports and enables the Ministry to meet its regulatory and legal responsibilities, effectively manage and monitor organizational risk. The ICT Plan includes strategies to ensure measurable and achievable ICT related outcomes that support the planning and management of ICT Services, Asset Management, Procurement of ICT Goods and other Services.

1.1. RATIONALE

The Ministry of Finance and Planning (MoFP) through its Information and Communication Technology Unit (ICTU) desired the best ways to facilitate the use of Information and Communication Technology within public business sectors due to certain existing challenges; therefore, the establishment of ICT strategic Plan was prerequisites to meet the vision of the Ministry.

This ICT Strategic Plan, covering the period 2019/20 to 2022/23, is aligned with a revised MoFP Medium Term Strategic Plan 2017/18-2021/23 and a number of development policy documents such as, e-Government Strategy and National ICT policy of 2016. The plan was prepared through a participatory and contributory process involving key stakeholders.

Implementation of the projects will be monitored based on the measurable Key Performance Indicators (KPI) set out in the projects identified. Monitoring and Evaluation (M&E) will take place at all levels of implementation in order to ensure the Strategic Plan is successfully implemented.

1.2. PURPOSE

The main purpose of ICT Strategic Plan is to provide direction and guidance for sustainable development through the systematic application of ICT practices as well as focus on better improvement, faster and more secure services to the Ministry and

Government as a whole. This requires a strong move towards online services, better protection of private information, more collaboration between Government Institutions and a change in public services culture. This Plan will encompass the relevant business needs of about 1,300 ICT users in Organization.

1.3. METHODOLOGY

The process of developing this document has been through a systematic, participative and consultative process. The preparation involving members from ICT Unit, MoFP Divisions and External stakeholders. A number of sources were referred including the MoFP Medium Term Strategic Plan 2017/18-2021/22 and Performance Reports, the National ICT Policy (2003) and their reviews of 2016, Five Year Development Plan II (2016/17-2021) and the Tanzania e-Government Strategy (2013). Other inputs were obtained from various Government Agencies' Strategic Plans.

The prepared ICT strategic document will be reviewed regularly due to the rapid change of technology and business processes.

1.4. ROLES AND FUNCTIONS

The major roles of the Ministry of Finance and Planning are to ensure sustainable macroeconomic stability, proper coordination of the implementation of national development plans through optimal mobilization and efficient allocation of resources to key and priority sectors that will have immediate impact on improvement of economic growth and service delivery to the public.

MoFP core functions include:

i. Revenue collection and expenditure management.

ii. Formulation and implementation of policies and strategies for: fiscal, monetary, Public Private Partnership, Research, Follow-up of poverty eradication; Mobilization and management of external resources; Management of public assets and public investments.

iii. It is also responsible for formulation and follow up the implementation of the national development plans.

iv. Formulation of National budget and presentation to Parliament.

v. Management of national statistics and Public Debt; and Enforcement of the Public Finance Act CAP 348 (R.E), Budget Act No. 11 of 2015, The Public Procurement Act CAP 410

CHAPTER 2: SITUATION ANALYSIS

In order to determine the state of ICT functions in MoFP, a situational analysis is carried out to determine: the efforts undertaken to strengthen ICT functions; strength, weakness, opportunities and challenges; and stakeholders' analysis. The results of Situation Analysis will form the basis of intervention to be carried out under this Strategy.

Situational analysis comprises a detailed examination of internal and external factors affecting a business. A number of initiatives were taken to enhance the use of ICT in internal operations and service delivery improvement. These include: -

i. Establishment of ICT Unit;

ii. Acquisition of ICT software and hardware including computers, UPS, scanners, printers and photocopiers;

iii. Regular and spot maintenance and repairs services of ICT equipment and facilities;

iv. Building of Local Area Network (LAN) to both MoFP Head-Quarter and remote Offices;

v. Development of a Ministry Website and Government Mailing System (GMS);

vi. Linking MoFP Office with National Fiber Optic and Government Network (GovNet);

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

i. Increased staff efficiency in undertaking day to day operations

ii. Improved communication and cooperation within and between MoFP and external stakeholders.

iii. Reduction of operational cost in relation to outputs and outcomes.

The above benefits led to increase in the use of ICT in core and non-core functions, however, there are still a number of challenges including: -

i. Inadequate ICT staff;

ii. Inadequate ICT Infrastructure;

iii. Increasing ICT security risks and threats;

iv. Absence of guidelines and manuals on ICT Security and other related matters; and

v. Limited use of ICT in core functions of MoFP;

In order to overcome these challenges and provide proper focus on implementation of ICT services there is a need to have an ICT Strategy as part of the requirement of implementation of the National ICT Policy and e-Government Strategy. Therefore, this ICT Strategy is a road map for increasing usage of ICT in enabling the attainment of the MoFP strategic objectives.

A situational analysis serves as the basis for setting priorities to be addressed in ICT strategy. In order to understand various issues regarding ICT adoption, usage and management within MoFP, a thorough Organizational and ICT Assessment was conducted in the Ministry. The assessment focused on Ministry's ICT Governance, Infrastructure and Applications, ICT Service Delivery and Support as well as ICT Security.

The SWOC tool matrix below analyses the ICT Strengths, weaknesses, opportunities and challenges to be addressed on supporting the Ministry.

The Internal assessment revealed number of challenges which need short- and long-term interventions in order to align Ministry's strategic objectives with ICT processes.

Table 1: SWOC Analysis Table

CRITERIA	STRENGTH	WEAKNESSES	OPPORTUNITY	CHALLENGES
ICT GOVERNANCE	➤ Existence of ICT directorate of ICT Unit which reports direct to Deputy Permanent Secretary. ➤ Presence of ICT security Guidelines ➤ Existence of Competent ICT Staffs ➤ Staff readiness in Using ICT in day to day operations. ➤ Improved ICT Scheme of service ➤ Existence of professional IT training programs. ➤ Existence of ICT steering committee	➤ Absence of Business Continuity Plan ➤ Absence of Risk Management Framework (RMF) ➤ Undocumented SOP (Standard Operating Procedures) ➤ Inadequate Specialization of ICT staff personnel. ➤ Absence of Change Management framework. ➤ Inadequate ICT working equipment	➤ Government Support on ICT projects implementation ➤ Existence of Institutions and agencies which provide Governance on ICT (PO-PSM, e-GOV Agency .etc) ➤ Existence of National ICT policy of 2016 ➤ Existence of ICT legal framework ➤ Existence of Training Institutions and Scholarships on ICT.	➤ Rapid increasing of global Cyber Crime. ➤ Inadequate policies and legal frameworks ➤ Lack of National ICT policy implementation strategies ➤ Improper ICT Investments and Management due to absence of ICT Strategy ➤ Absence of ICT staff retention schemes ➤ External stakeholders Resistance for changes

CRITERIA	STRENGTH	WEAKNESSES	OPPORTUNITY	CHALLENGES
			➢ Presence of online training and platforms (i.e. Google, Bing etc.) ➢ Increased awareness of people about technology and innovations	
ICT INFRASTRUCTURE AND APPLICATIONS	➢ Existence of reliable Government Network (GovNet) provided by eGA. ➢ The presence of Network Infrastructure (LAN, WAN) ➢ Existence of some automated Office systems (E-Office, Government Mail System).	➢ Inadequate Unautomated business processes ➢ No open data standards ➢ Lack of harmonized information management System leading to inconsistence of data. ➢ Decentralized ICT coordination structures slows ICT projects	➢ Government support ➢ Existence of international Software and Hardware vendors locally ➢ Existence of National Data Center. ➢ Existence of Government Shared Network (GovNet).	➢ Resistance for change ➢ Rapid change in Technologies ➢ Geographical and Climatic changes ➢ Change in Government Policies ➢ Unreliable TANESCO power supply

CRITERIA	STRENGTH	WEAKNESSES	OPPORTUNITY	CHALLENGES
	➢ Availability of Internet services.	implementation and its innovations; ➢ Lack of standardize server rooms ➢ Existence of standalone ICT infrastructures ➢ Dependency on the third-party vendors ➢ Lack of stable power back up	➢ Availability of National Information and Communication Technology Broadband Backbone (NICTBB) ▢ Increased Internet and Mobile phone coverage ➢ Advancement of technologies (e.g modern hardware and software)	➢ Uncontrolled price Increase on data services ➢ Existence of uncoordinated ICT infrastructure initiative in the Government. ➢ Unreliable Government Network Link (GovNet).
ICT SECURITY AWARENESS	➢ Existence of Manual and Automated Surveillance and Access Control systems ➢ The Existence ICT Security Policy. ➢ Presence of Internal Controls Systems	➢ Inadequate mechanisms for protecting ICT equipment ➢ Lack of Business Continuity Plans ➢ Slow pace of training on the use of security systems.	➢ Readiness of Government to support ICT safety and Security. ➢ Existence of laws and circulars to support ICT security (Cyber Crime, Electronic	➢ Rapid change in technologies. ➢ Cyber security threats and attacks (Cybercrimes) ➢ Terrorist activities due to

CRITERIA	STRENGTH	WEAKNESSES	OPPORTUNITY	CHALLENGES
	➤ Physical presence of Security Guards and Police Officers ➤ Existence of Risk Management Framework ➤ Existence of Network security Appliance and Network devices in the Ministry ➤ Exitance of automated fire suppression system.	➤ Insufficient Security Awareness programs to the users. ➤ Lack of Integrated Security Systems ➤ Lack of Disaster recovery plan and Backup Systems ➤ Absence of formalized ICT risk management section/unit ➤ Lack of ICT security monitoring and auditing system ➤ Lack of Integrity, Privacy and availability of data due to human interventions.	Transaction, Data protection) ➤ Existence of Tanzania computer emergency response team (TZ-Cert) ➤ Existence of e-Government Authority supporting ICT Security issues.	advancement use of ICT
ICT SERVICES AND DELIVERY SUPPORT	➤ Ongoing Initiatives of harmonizing use of ICT Services. ➤ Automated Information systems	➤ Lack of ICT help desk ➤ Absence of Training Needs Analysis (TNA) conducted for	➤ Existence of advanced technologies to support online service delivery	➤ Rapid change in technologies. ➤ Unreliable internet connection to

CRITERIA	STRENGTH	WEAKNESSES	OPPORTUNITY	CHALLENGES
	applications for business processes (E-Office)	technical and non-technical staff	Existence ICT legal framework to support public service delivery.	some places for supporting online service delivery
	➤ Timely and accurate delivery of some MoFP services to stakeholders	➤ Lack of proper project management		➤ Low level of ICT skills usage to the service consumers.
	➤ Existence of client's service charter	➤ Inadequate awareness of users on ICT issues.		➤ Resistance to change regarding the use of ICT.
	➤ Advance in technology which facilitates improved communication and availability of online services (e.g emails, VoIP, portals, video conference			➤ Absence of mobile Network in some remote areas.

2.1. CRITICAL ISSUES

From the situational analysis, the following issues were established as being CRITICAL to promoting ICT usage in MoFP for enhanced performance and improved delivery of quality services to customers such as inadequate:

i. ICT Governance

ii. ICT infrastructure,

iii. ICT security awareness and

iv. ICT services delivery and support,

Also, there some several issues needed to be addressed in order to improve operation deficiencies in ICT operation situation. This is only done by identifying Focus Area issues, Goals, Objectives and Strategies from the SWOC Analysis.

2.1.1. STRATEGIC FOCUS AREA ISSUES FROM THE ANALYSIS

There are several issues needed to be addressed in order to improve operation deficiencies in ICT operation situation from the above analysis:

2.1.1.1. ICT Governance

Effective ICT governance is a critical factor for successful ICT operation in an organization; it ensures that the organization's ICT is aligned to and supports its objectives. ICT Governance covers leadership, organizational structures and processes that ensure ICT accomplishes institutional strategic objectives.

Issues:

i. Absence of ICT Steering Committee

ii. Absence of Risk Management Framework (RMF)

iii. Absence of Change Management framework.

iv. Absence of ICT Enterprise Architecture

The above ICT issues threatens ICT advancement in the area of ICT Governance as the result hinders the pace and direction of ICT and innovation in an organization.

2.1.1.2. ICT Infrastructure and Applications

Having reliable and secured technologies, ICT applications and ICT infrastructure in terms of network, computing and storage is very important to support the MoFP's business operations and in achieving its vision. The insufficient ICT infrastructure and unfair distribution of ICT facilities is the depraved situation that gave rise to most problems associated with performance of ICT staffs and organization business process.

Issues:

i.   Lack of standardize server rooms and stable power backup

ii.   Existence of standalone Network infrastructures

iii. Presence of some unautomated business processes

iv.   Dependency on the third-party vendors

2.1.1.3. ICT Security and Risk Management

The adoption and use of ICT at the Ministry is increasing gradually with operationalization of various ICT initiatives. The unstable ICT Security and Risk Management in the organization may cause the organization to fail proactively to manage open threats by controls corrective actions and other measures to mitigate risks.

Issues:

i.   Inadequate mechanisms for protecting ICT equipment's.

ii.   Lack of Business Continuity Plans, Disaster recovery plan and Backup Systems plan

iii. Insufficient Security Awareness programs to the users.

iv.   Lack of Integrated Security Systems and ICT security monitoring and auditing system.

v.   Inexistence of formalized ICT risk management section/unit.

2.1.1.4. ICT Services Delivery and Support

Established ICT infrastructures, applications, technologies in the MoFP should be operated, managed and maintained to deliver effective solutions and services to Ministry's End-Users at optimised costs towards its business goals & objectives as the results Ministry will optimize financial expenditure.

Issues:

i.   Lack of ICT help desk

ii. Lack of Service Level Agreement (SLA)

iii. Lack of ICT Service Client Charter

iv. No Training Needs Analysis (TNA) conducted for technical and non-technical staff

CHAPTER 3: ICT STRATEGIC FORMULATION, IMPLEMENTATION AND ACTION PLAN

3.1. ICT PERSPECTIVES

Currently Tanzania is one of Africa's fastest growing ICT markets where ICTs have increased productivity in all spheres of production process and have enabled expansion of skills, contributing to improved standards of living. The First Strategic plan will build on the areas consists of the following: ICT Governance, ICT Infrastructure and Applications, ICT Security and risk Management and ICT Service delivery and support.

Vision

To be a focal point of providing expertise on ICT services to the Ministry.

Mission

Promoting standardized and proper use of ICT services in the Ministry for effective and efficiency economic growth.

3.2. ICT STRATEGIC FORMULATION

The MoFP ICT strategy focuses on improving business processes and preparing conducive, secure and safe ICT environment in order to meet organization objectives

3.2.1. ICT Strategic Plan Guiding Principles

The Plan includes; Strategic Goals, Strategic Objectives and Implementation of Strategies.

In order to improve ICT service delivery of an Organization the following Strategic Goals, Objectives and Implementation Strategies were identified based on the key focus areas; ICT Governance, ICT Infrastructure and Applications, ICT Services Delivery and Support and ICT Security and Risk Management.

3.2.1.1. ICT GOVERNANCE

ICT governance provides a structure for aligning ICT strategy with timely organization of strategies. It is a framework that provides a structure for organizations to ensure that ICT supports Organization Objectives. Example of most commonly used frameworks are: **COBIT** (Control Objectives for Information and Related Technologies) and **ITIL** (IT Infrastructure Library).

Strategic Goal:

ICT Governance enhanced.

Strategic Objectives:

A.   **A well-functioning ICT Management established.**

Strategies:

i.   ICT governance Structure, Processes and Leadership established by June, 2023.

ii.   Enterprise Architecture developed by June, 2023.

iii.   Enforce ICT steering committee engagement enforced by June, 2023.

B.   **Capacity, innovative and strategic use of ICT enhanced.**

Strategies:

i.   ICT awareness to MoFP staff created by June, 2023.

ii.   ICT Documents such as Standard Operation Procedure (SOP) developed and reviewed by June, 2023.

3.2.1.2.   ICT INFRASTRUCTURE AND APPLICATIONS

ICT Infrastructure is the backbone for supporting the MoFP Business Operations by providing Secure Access to different applications.

Strategic Goal:

Secure and reliable ICT Infrastructure improved

Strategic objectives:

A.   **A robust, secure and reliable ICT infrastructure provided.**

Strategies:

i.   MoFP Network Infrastructure and CCTV Surveillance system implemented and upgraded by June, 2023 to enhance performance of business process.

ii. Licensing agreements verified and inventory of genuine licenses for Government use maintained by June, 2023.

iii. Regular auditing of ICT Infrastructure conducted by June, 2023.

iv. Capacity building for managing and maintaining the infrastructure conducted by June, 2023.

B. Sustainable MoFP ICT services to Stakeholders provided

Strategies:

i. Reliable connection between MoFP services and stakeholders facilitated by June, 2023.

ii. File sharing system (file server) supported by June, 2023.

iii. Services offered by Government Network and Communication Infrastructure (GovNet) facilitated and utilized by June, 2023.

3.2.1.3. ICT SECURITY AND RISK MANAGEMENT

ICT Security covers all the processes by which computer-based equipment, information and services are protected from unauthorized access, change or destruction throughout an Organization.

Strategic goal

Management of security controls and risks ensured.

Strategic Objectives

A. Confidentiality, availability and integrity of information ensured

Strategies:

i. Secure architecture developed and implemented by June, 2023

ii. ICT risk management developed and implemented by June, 2023

iii. Security controls appliances (eg. Sophos) across the enterprise implemented/installed by June, 2023

B. Security awareness training programs ensured.

Strategies:

i. ICT Security Policy developed and implemented by June, 2023.

ii.   Security awareness training programs conducted by June, 2023

3.2.1.4.   ICT SERVICES, DELIVERY AND SUPPORT

ICT service deals with how ICT resources and core business practices altogether are delivered in such a way that the end user experience the most desired results from the entire solutions stuck.

Strategic goal:

Effective and efficiency MOFP Service delivery to the Stakeholders ensured by June, 2023.

Strategic Objectives:

A.   Ministry's ICT Human capacities to sustain service delivery enhanced.

Strategies:
i.   ICT awareness training to MOFP staff conducted by June, 2023.
ii.   ICT resource Centre developed by June, 2023
iii.   ICT Service Client Charter developed and implemented by June, 2023.

B.   Stakeholder's satisfaction on ICT service delivery by MoFP improved.

Strategies:
i.   Online Portal for MoFP services developed by June, 2023.
ii.   MoFP online Help Desk established by June, 2023.

3.3. IMPLEMENTATION

In order to achieve the planned objectives, the Ministry has adopted the following implementation model to guide the coordination, resource mobilization and implementation of the Strategic Plan.

3.3.1.1.   Strategy Implementation Plan

The ICT Strategy Implementation Plan needs to be prepared to provide initiatives in terms of critical areas required to realize the strategies identified. While ICT is a strategic enabler affecting all aspects in MoFP operation, the ICT Unit shall be the focal point in the

implementation of this strategy and responsible for working very close with all other departments in initiating, implementing and monitoring of ICT projects.

The ICT Unit role also shall include among other things Management, Control and Maintenance of the network, ICT systems and security, end-user support and training. The implementation plan will be implemented phase-wise based on priority and shall be reviewed once in every three years or when such a need arises.

3.3.1.2. ICT Strategy Implementation Critical Success

The Success of ICT strategy implementation requires **high levels coordination** within the Ministry as well with other stakeholders including Sponsors, Experienced senior leaders in Government. The table below highlights some of the key critical success factors.

Table 2: Analysis of Critical Success Factors (CSF)

S. No	Critical Success Factors	Impact	Requirements
1	Availability of resources	High	➤ Involvement of MOFP executive management and stewardship of ICT strategy at MoFP. ➤ Plans to implement ICT application(s) and Infrastructure to support Ministry's core business functions and back-office functions.
2	Availability of skills to implement and maintain ICT initiatives	High	➤ Plans to strengthen ICT related skills and capacity
3	Availability of ICT governance framework	High	➤ Operationalize ICT policies, rules, standards and procedures. ➤ Operationalize ICT-related risks management. ➤ MoFP change management.

3.3.1.3. Analysis of Risks

The perceived risks are categorized into two aspects: **Delivery Risks;** mainly associated with strategy not delivering the promised capabilities and **Benefits Risks;** mainly concerned with not reaching the expected benefits. The analysis based on likelihood of occurrence, impact and its mitigation plan as described below:

Table 3: Delivery risks

S. No	Risk Description	Likelihood	Impact	Mitigation
1.	Resistance in adopting new working environment	Medium/low	High	➢ Senior executive management involvement and leadership ➢ Having in place projects steering committee
2.	Inadequate resources to implement the proposed changes	High	High	➢ Securing alternative investment funding ➢ Acquire sufficient human resource with adequate skills within the government.
3.	Inadequate investment planning and management	Low	High	➢ Use of standardized project management guidelines and procedures ➢ Collaborate with the Agency responsible in coordinating e-government initiatives

Table 4: Benefits Risks

S.No	Risk Description	Likelihood	Impact	Mitigation
1	Opportunity cost	Medium	high	➢ Use of standardized project planning guidelines and procedures
2.	Lack of preparedness and capability to handle the anticipated change	High	High	➢ Put in place appropriate transition procedures (senior management commitment, vision policies and procedures, training and infrastructure)

3.3.1.4. Monitoring and Evaluation

The MoFP ICT Steering Committee will be embedded as the organizational vehicle to take forward ICT strategies, work very close with all other units/departments to monitor implementation and measuring performance of all ICT-related activities. For each ICT area there are Key Performance Indicators (KPIs) which should be used to monitor and evaluate the progress of each ICT area, achievement of MoFP ICT strategies in alignment with Ministry's strategic objectives.

3.3.1.5. ICT Organization and Management

The implementation of these areas requires ensuring project sponsorship and participation from the widest range taking into consideration of e-Government initiatives specifically for Government-Wide Area Network (WAN) and shared systems (such as Government Mailing System, e- Office Management System, Data Center Services etc.).

The MoFP Management input is particularly important during the planning, specification and design phases of each project. To ensure this, it is desirable to establish a committee headed by a senior level manager and representatives from user departments.

The committee should review and approve system users and custodian of the data and take major steps to ensure that the system is owned and adopted by the users once it is

completed. Some of these steps include overseeing awareness training programs for managerial team, User Training programs to end-users and appointing project managers to manage, coordinate and oversee implementation of the project.

A. Enhancement of ICT Governance

Effective and efficient support of Ministry's business operations requires establishing appropriate ICT structure with enough skilled ICT human resources and operational processes that aligns to the Ministry's strategic directions. (*See Appendix 2*)

Scope

The entail, enhancing the Ministry's ICT unit/Department structure, improvements of ICT services and empower the unit with the required resources.

Strategies	Key Performance Indicators (KPIs)
i. Establishing of appropriate ICT governance Structure, Processes and Leadership. ii. Development of Enterprise Architecture. iii. Enforce engagement of ICT steering committee. iv. Plan and conduct ICT awareness to MoFP staff. v. Develop and Review ICT Documents such as Standard Operation Procedure.	i. ICT Steering Committee in place. ii. Enterprise Architecture in Place (EA) iii. Minutes of the ICT Steering Committee Meeting conducted iv. Number of awareness report with Attendance register of MoFP staffs trained. v. SOP and guidelines in place

B. Improved secure and reliable ICT Infrastructure

Data, Internet and Voice communication infrastructure is the backbone for supporting smooth business operations of the MOFP by enabling cost-effective and efficient information exchange, availability and ensuring security to different applications systems. (See Appendix 2)

Scope

The area will entail key activities to streamline Ministry's business processes through a fashionable sharing and exchange of information, efficient information storage and retrieval as well as availability of sufficient ICT tools for smooth operations.

Strategies	Key Performance Indicators (KPIs)
i. Develop and Upgrade MoFP systems and ICT facilities. ii. Verify Licensing agreements and maintain inventory of genuine licenses for Government use. iii. Conduct regular Auditing of ICT Infrastructure. iv. Build the necessary capacity for managing and maintaining the infrastructure. v. Facilitate reliable connection between MoFP services and stakeholders. vi. Implement file sharing system (file server). vii. Facilitate and utilize services offered by Government Network and Communication Infrastructure (GovNet).	i. Upgraded running systems in place. ii. Updated Genuine Licenses for software and hardware in place. iii. Infrastructure audit reports in place iv. Number of training ICT staffs on ICT infrastructure. v. MoFP services up and running for 24 hours out of 7 days. vi. Working file server in place vii. MoFP Electronic Financial systems connected to GovNet

C. Maintained ICT Security and Risk Management

Security awareness is one of the significant approaches to reduce human error, vulnerability, theft, fraud and misuse of computer assets within an organization. A strong ICT cannot grow in any organization if awareness programs to staffs are not conducted regularly. Therefore, Enhancing and fostering the Ministry's employees to leverage ICT as a practical tool through various ICT Training and Awareness Programs is crucial to support Ministry's business operations. (See Appendix 2)

Scope

The area will entail, establishing and maintained high levels of security and safety ICT access within the Ministry.

Strategies	Key Performance Indicators (KPIs)
i. Develop and implement secure architecture ii. Develop and implement ICT risk management iii. Implement security controls across the enterprise iv. Develop and implement ICT Security Policy. v. Conduct security awareness training programs	i. Secured architecture in place. ii. ICT risk register in place. iii. Security controls implementation manuals in place. iv. ICT Security Policy in Place. v. Security awareness report with Attendance register of users trained in place.

D. ICT Services, Delivery and Support

Established ICT infrastructures, applications, technologies in the MoFP should be operated, managed and maintained to deliver effective solutions and services to Ministry's End-Users at optimised costs towards its business goals & objectives.

(See Appendix 2)

Scope

The area will entail, enhancing the Ministry's ICT Unit/Department structure, improvements of ICT services and empower the unit with the required resources to enhance service delivery to the public.

Strategies	Key Performance Indicators (KPIs)
i. Plan and conduct ICT awareness training to MOFP staff. ii. Develop ICT resource Centre iii. Develop ICT Service Client Charter. iv. Develop online Portal for MoFP services. v. Establish MoFP online Help Desk.	i. Training report on ICT awareness with Attendance register of users trained in place. ii. ICT Resource Center framework in place iii. ICT Service Client Charter in place. iv. Percentage of accessed services via online portal v. Existence of online Help Desk

2. APPENDICIES

Appendix : Strategic Table Analysis

FOCUS AREA	STRATEGIC GOALS (Rephrase as per Chapter 3 above)	STRATEGIC OBJECTIVES (Rephrase as per Chapter 3 above)	STRATEGIES (Rephrase as per Chapter 3 above)
ICT GOVERNANCE	Enhanced ICT Governance.	➤ Establishing a well-functioning ICT Management. ➤ Enhance capacity, innovative and strategic use of ICT.	➤ Establishing of appropriate ICT governance Structure, Processes and Leadership. ➤ Development of Enterprise Architecture. ➤ Enforce engagement of ICT steering committee. ➤ Plan and conduct ICT awareness to MoFP staff. ➤ Develop and Review ICT Documents such as Standard Operation Procedure.

ICT Infrastructure and Applications	Improved secure and reliable ICT Infrastructure	➤ Provide a robust, secure and reliable ICT infrastructure that support on demand access to information. ➤ Provide sustainable MoFP ICT services to Stakeholders.	➤ Develop and Upgrade MoFP systems and ICT facilities. ➤ Verify Licensing agreements and maintain inventory of genuine licenses for Government use. ➤ Conduct regular Auditing of ICT Infrastructure. ➤ Build the necessary capacity for managing and maintaining the infrastructure. ➤ Facilitate reliable connection between MoFP services and stakeholders. ➤ Implement file sharing system (file server). ➤ Facilitate and utilize services offered by Government Network and Communication Infrastructure (GovNet).

FOCUS AREA	STRATEGIC GOALS (Rephrase as per Chapter 3 above)	STRATEGIC OBJECTIVES (Rephrase as per Chapter 3 above)	STRATEGIES (Rephrase as per Chapter 3 above)
ICT Security and Risk Management	Ensure appropriate management of security controls and risks.	➤ Ensure confidentiality, availability and integrity of information. ➤ Ensure Security awareness training programs.	➤ Develop and implement secure architecture ➤ Develop and implement ICT risk management ➤ Implement security controls across the enterprise ➤ Develop and implement ICT Security Policy. ➤ Conduct security awareness training programs
ICT Services Delivery and Support	Ensure effective and efficiency MOFP Service delivery to the Stakeholders.	➤ Enhancement of ministries ICT Human capacities to sustain service delivery. ➤ Improve Stakeholders satisfaction of service delivery.	i. Plan and conduct ICT awareness training to MOFP staff. ii. Develop ICT resource Centre iii. Develop ICT Service Client Charter. iv. Develop online Portal for MoFP services. v. Establish MoFP online Help Desk.

REFFERENCES

a) Ministry of Finance and Planning Medium Term Strategic Plan of 2017/18 – 2021/22

b) http://www.porthedland.wa.gov.au/documents/735/ict-strategic-plan-2012-2017

c) http://www.mitec.gov.rw/fileadmin/Documents/Strategy/ICT_SECTOR_STRATEGIC_PLAN _2018-2024_.pdf

d) Government-ICT-Strategy-and-Action-Plan-to-2017- NEWZLAND.pdf

e) ICT STRATEGY DRAFT-for KENYA.pdf

f) ICT Strategic Plan Draft for Uongozi Institute

g) Five Year Development Plan II (2016/17-2021)