

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE, PUBLIC SERVICE
MANAGEMENT AND GOOD GOVERNANCE

TANZANIA e-GOVERNMENT STRATEGY 2022

“Digital Government Services, Anywhere and Anytime”



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ABBREVIATIONS AND ACRONYMS

4IR	Fourth Industrial Revolution
API	Application Programming Interface
BRELA	Business Registration and Licensing Agency
BRS-4G	Fourth Generation Birth Registration System
CBMS	Central Budget Management System
CCM	Chama Cha Mapinduzi
CMVRS	Central Motor Vehicle Registration System
D-FUNDS MIS	Donor Funds Management Information System
DSM	Dar-es-Salaam
EGA	e-Government Authority
eGovRIDC	e-Government Authority
-Government Research, Innovation and Development Center	
FYDP III	Third National Development Plan
G2B	Government to Business
G2C	Government to Citizens
G2E	Government to Employees
GAMIS	Government Asset Management Information Systems
GDC	Government Data-centre
GDSXP	Government Data Exchange Platform
GDP	Gross National Product
GeOS	Government e-Office System
GePG	Government e-Payment Gateway
GMS	Government Mailing System
GOT	Government of Tanzania
GovNet	Government Network
GSD	Government Services Directory
HCMIS	Human Capital Management Information System
HoMIS	Hospital Management Information System
ICT	Information and Communication Technology
ILMIS	Integrated Lands Management Information System
ITAX	Integrated Tax Administration System;
IT	Information Technology
KPI	Key Performance Indicators
LAN	Local Area Network
LGA	Local Government Authority
LGRCIS	Local Government Revenue Collection Information System
LMS	Loan Management System
LTE	Long-Term Evolution
M&E	Monitoring and Evaluation
MDAs	Ministries, Independent Departments and Executive Agencies
mGov	Mobile Government Platform
MNRT	Ministry of Natural Resources and Tourism
MOFP	Ministry of Finance and Planning
MUSE	Mfumo wa Ulipaji Serikalini
MVM-MIS	Motor Vehicle Maintenance Management Information System

NHIF	National Health Insurance Fund
NICTBB.....	National ICT Broadband Backbone
NIDA	National Identification Authority
NPGIS.....	National Petroleum and Gas Information System
NPS	National Payments System
ORS	Online (Business) Registration System
OSB	One Stop Border Post
OSSC.....	One-Stop Service Centres
OTS	Online TIN Service
POLIS	Parliament Online Information System
PO-PSMGG	President's Office, Public Service Management and Good Governance
PO-RALG.....	President's Office, Regional Administration and Local Government
PPP.....	Public-Private Partnership
PSRP	Public Sector Reform Programme
PSSSF	Public Service Social Security Fund
PWD	Persons/People with Disabilities
RAIS	Road Accident Information System
RS.....	Regional Secretariat
SMS	Short Message Service
TANCIS.....	Tanzania Customs Integrated Systems
TANePS.....	Tanzania National e-Procurement System
TANLITS	Tanzania National Livestock Identification and Traceability System
TR&I.....	Technology Research and Innovation
TDV-2025.....	Tanzania Development Vision 2025
TeSWs.....	Tanzania Electronic Single Window System
TRA.....	Tanzania Revenue Authority
TTCL.....	Tanzania Telecommunications Corporation Limited
TZCERT.....	Tanzania Computer Emergence Response Team
UN.....	United Nations
URT	United Republic of Tanzania
USSD.....	Unstructured Supplementary Service Data
WAMS.....	Workflow Automation Management System
WAN	Wide Area Network

FOREWORD



The rapid development of Information and Communication Technology (ICT) globally, has created new business opportunities including new ways for businesses to serve their customers. The widespread adoption of ICT can play a significant role in the socio-economic development of the country and it has the potential to affect many aspects of the national economy including GDP growth, employment, productivity, poverty alleviation, quality of life, education, and healthcare. ICT has been an enabler for innovation and has changed the way the Governments deliver services to their citizens. Tanzania Government has realized the need for digital transformation as an effective mechanism for the Government to deliver its services to both citizens and businesses.

The Government has undertaken a variety of steps to facilitate e-Government implementation, including tasking the President's Office, Public Service Management and Good Governance (PO-PSMGG) to oversee e-Government implementation; establishing the e-Government Authority to coordinate, oversee, promote e-Government initiatives and enforce compliance of e-Government; establishing related policies, laws and regulations; instituting appropriate ICT governance structure; improving Government Business Processes; acquiring and implementing various application systems to support Government internal operations; and establishing e-Government infrastructure.

With these developments and the need to link e-Government objectives with National Development Goals, it is imperative to have in place a clear strategy for achieving these objectives. Therefore, the Government is introducing its Second National e-Government Strategy to be implemented from 2022 to 2027. The e-Government Strategy, 2022 will build on past efforts and initiatives while incorporating current aspirations to create a vision for the future including strategic interventions that need to be undertaken to achieve a connected, coordinated and secure e-Government.

It is worth noting that many stakeholders were involved in the formulation of this strategy. On behalf of PO-PSMGG, I would like to extend my gratitude and appreciations to everyone who contributed to the development of this Strategy.

A handwritten signature in blue ink, appearing to be 'J. Mhagama'.

Hon. Jenista J. Mhagama (MP)

Minister of State, President's Office, Public Service Management and Good Governance

PREFACE



The Government of the United Republic of Tanzania has long recognized the importance of applying Information and Communication Technology (ICT) in enhancing work efficiency and service delivery to the public. This has driven the need to couple ICT with Government administration to deliver services to citizens, businesses and other Governmental agencies while enhancing its administrative effectiveness.

This emergence of e-Government has allowed the Government to reap the benefits of digital transformation in reshaping the public sector. Systems and services implemented under various e-Government initiatives have been instrumental in providing convenient access to Government services. This has largely been contributed by the Tanzania e-Government Strategy, 2013. The Strategy which expired in the year 2018, provided a more coordinated and citizen-driven focus for the Tanzania's e-Government initiatives, and therefore brought services closer to citizens through an organized and holistic adoption of ICT.

Implementation of the Tanzania e-Government Strategy 2013–2018 has led to the following results: major achievement in the establishment of an effective and efficient institutional e-Government framework; successful provision of various e-Government trainings; construction of the e-Government Infrastructure, including the Government Network and Data-centre; establishment of shared Government –wide operations support systems; launch of Government e-Services flagship projects; and launching of Government e-Services flagship projects; and promoting Citizens literacy and awareness on e-Government.

The Government has prepared the Tanzania e-Government Strategy 2022 in an effort to expand on previous accomplishments. The Strategy envisions a digital government that is more interconnected, integrated, and coordinated for the efficient delivery of public services. It sets up ambitious and specific goals and objectives whose achievement will not only result in the delivery of better services to a significantly larger population, but also in increased transparency and cost savings in the delivery of existing services, The Government will ensure that the objectives of this Strategy are attained towards its commitment in improving service delivery, enhancing transparency and greater accountability to the public.



Dr. Laurean J. P. Ndumbaro

Permanent Secretary, President's Office
Public Service Management and Good Governance

EXECUTIVE SUMMARY

BACKGROUND

Information and Communication Technologies (ICTs), especially mobile communication and the internet have transformed traditional means of communication and interaction between Government and its citizens through the provision of online services or e-Services. These developments are evident in many countries, and Tanzania, has no exception.

The use of ICTs in the administration of Government functions and the delivery of public services helps Government institutions achieve greater operational efficiency and cost efficiencies in performing their administrative functions. This, at the same time improves public service delivery by enhancing efficiency and effectiveness, which makes access to Government information and services, both convenient and less costly.

Improving the quality of services delivered to citizens and businesses is a key element of the Government of Tanzania Public Services Reform Programme (PSRP) which was initiated, inspired and spearheaded by the President's Office Public Service Management and Good Governance over two decades ago. The programme was vitally important to Tanzania's sustainable growth and is expected to spur socio-economic development in the country that is supported by a strong GDP growth.

The growing demand for ICT applications and online services increased significantly when the Government implemented the high-capacity fiber optic based National ICT Broadband Backbone (NICTBB) with national coverage, which was followed by the implementation of the Government Network (GovNet) connecting Government MDAs and LGAs to the global Internet. The successful deployment of these key ICT infrastructures has paved the way for more advancements in the quest for Tanzania to become more digital, data-centric, and business-driven. With execution of the e-Government policy and strategy being the centerpiece of Tanzania's digital transformation vision, the economic dividends will be felt in the mid to long-term when the country takes its rightful place on the global stage.

In its effort to create a conducive environment for the increased and sustained use of ICT, the Government undertook to develop a new e-Government Strategy 2022 in place of the now-expired e-Government Strategy 2013. The new strategy takes into account the latest national initiatives and achievement in ICTs including the following national strategic thrusts:



- i. Tanzania Vision 2025
- ii. Third National Five-Year Development Plan (2021/22–2025/26)
- iii. CCM Manifesto 2020
- iv. Digital Economy
- v. Fourth Industrial Revolution

These strategic thrusts encompass efforts by the Government of Tanzania to develop a stronger, synergistic and holistic e-Government ecosystem as the country marches in unified lockstep to achieve its goal of becoming a semi-industrialized economy by 2025.

THE E-GOVERNMENT STRATEGY 2013

During the preparation of the e-Government Strategy 2022, it was observed that it is necessary to review the accomplishments and challenges faced during the implementation of the existing strategy to ensure that any barriers encountered, such as lack of sufficient resources or budget, resistance to organizational culture shift to digitization, and limited understanding of the change and its impact on Government operations, were addressed. Much was achieved under the e-Government Strategy 2013 including the following notable cross-cutting accomplishments:

- i. The e-Government Act, 2019 and its Regulations 2020 were enacted, allowing for legal provisions on the implementation, management and operations of e-Government;
- ii. The e-Government Agency was transformed into a fully-fledged and strengthened e-Government Authority in 2019 with responsibility for coordination, overseeing and promotion of e Government initiatives and enforcement of e-Government policies, laws, regulations, standards and guidelines.
- iii. Development and operationalization of key sectorial systems including: the Government electronic Payment Gateway (GePG) at the MoFP; the Online (Business) Registration System (ORS) at BRELA; the Integrated Lands Management Information System (ILMIS) at the Ministry of Lands and Human Settlements; the Tanzania National e-Procurement System (TANePS) at PPRA; and the Fourth Generation Birth Registration System (BRS-4G) at RITA.

Various e-Government awareness campaigns were undertaken to fulfil the needs for citizens awareness, including: Various e-Government training and awareness programmes attended by 2,871 Government staff; e-Government conferences held in Arusha and Dodoma attended by 1556 participants; and 169 TV programmes and video clips were aired that targeted to raise citizen awareness on e-Government initiatives in the country.

Some other ICT applications systems implemented under the e-Government Strategy 2013 include but not limited to the following:



- Human Capital Management Information System
- Central Budget Management System (CBMS)
- Tanzania electronic Single Window System (TeSWS)
- Planning and Reporting System (PlanRep)
- Integrated Tax Administration System (ITAX)
- Government Asset Management Information Systems (GAMIS)
- Tanzania Customs Integrated Systems (TANCIS);
- Mining Cadastral Portal;
- Government ICT Service Portal
- National Identification System;
- Government e-office system (GeOS)
- MadeniMIS
- Geological and Mineral Information System;
- National Petroleum and Gas Information System (NPGIS);
- Facility Financial Reporting and Accounting System (FFARS)
- DART Automated Fare Collection System (DART - AFCS)
- Central Motor Vehicle Registration System (CMVRS)
- Tanzania Electronic Visa Application System;
- Tanzania Electronic Passport Issuance System
- Government Mailing System
- Parliamentary Online System
- School Information System (SIS)
- Government of Tanzania Health Operations Management Information System (GoTHOMIS)

E-GOVERNMENT STRATEGY 2022

Critical e-Government strategic issues that contributed to the challenges encountered during the operationalization of the e-Government Strategy 2013, which have now been factored into the new e-Government Strategy 2022 include:

- i. Non-interoperable Government service delivery systems
- ii. Un-harmonized and uncoordinated business processes
- iii. Limited bandwidth and coverage of GovNet infrastructure to the facility level
- iv. Inadequate Government Data-centre resources
- v. Increase in cyber-attacks on Government systems

vi. Inadequacy of advanced ICT knowledge and skills in Government

Among these, the issues of non-interoperable Government service delivery systems, un-harmonized and uncoordinated Government business processes have been singled out by the President of the United Republic of Tanzania and the Chief Secretary for special attention when the 6th phase Government came into power. The core issue is the existence of traditional, bureaucratic silos that encourage duplication of efforts and functions in Government. These must be eliminated by encouraging public sector collaboration and resource sharing among MDAs and LGAs.

Without interoperability at the business processes level, the existing legacy departmental systems used to provide Government services lack the ability to exchange service data electronically and therefore will continue to operate in silos. Under this crippling bureaucratic environment, that encourages silo mentality, individual Government departments lose sight of the broader purpose of providing efficient and effective public services-

The concept of Connect, Coordinated and Integrated Government highlighted in the e-Government Strategy 2022 is also perfectly harmonized with the ruling party (CCM) Manifesto 2020. The Ruling Party Manifesto places a strong emphasis on the need for Tanzania's socio-economic sectors to be digitally transformed through Information and Communication Technology, as well as the need to decrease incidences of cybercrimes in order to strengthen the use of ICT in the nation.

E-GOVERNMENT 2022 STRATEGIC PILLARS

The strategic pillars that will pave the way and shape the implementation of this e-Government strategy over the next five years are:

Pillar-1: Connected Government:

Is the establishment of shared Data-centre and broadband ICT infrastructure that connects all Government institutions, specifically institutional service delivery systems, to assist in the automated delivery of public services electronically and in a seamless manner. The Government network (GovNet) must aim to reach the majority of Government institutions with facilities in rural communities which remain underserved and excluded from the digital economy.

Pillar-2: Institutional Collaboration and Coordination:

Collaboration among Public Institutions in the digital era is crucially important to mitigate divergences between departmental policies and priorities in order to promote mutually supportive actions across all sectors for efficient and effective service delivery. Implementation of Data Sharing Exchange Platform and business process improvement

and integration are crucially important for successful inter-institutional collaboration for efficient and effective delivery of public services.

Pillar-3: E-Government Services:

Accessibility to e-Services must also take into consideration the issue of diversity and inclusion with respect to persons with disabilities, literacy, rural versus urban, age, and language. The service providers are public institutions that include Ministries, Departments and Agencies and Local Government Authorities while citizens and businesses are the main clients and beneficiaries of e-Services.

E-Government services provided are categorized as Foundational Services and Dependent Services. Foundational Services are defined as core services that form the foundation or the base upon which most if not all business processes are supported. Dependent Services are the services whose business processes ride on top of the Foundational Services. In summary, the list of foundational and dependent services identified for the e-Government include but not limited to:

Foundational Services	Dependent Services
i. Civil Registration Services	i. Business Registration and Licensing Services
ii. National identification Services	ii. Billing, Tax and Revenue Services
iii. Citizenship and Immigration Status Verification Services	iii. Education Registration Services
iv. Residential Address Verification Services	iv. University Students Admission Services
v. Electronic Payment Services	v. Social Security Services
vi. Employment Verification Services	vi. Land and Property services
vii. Digital Signing and Signature Verification Services	vii. Social Health services
viii. Etc.	viii. Police Services
	ix. Government Management Support services

Pillar 4: E-Government Research and Innovations:

The Government of Tanzania has done much to leverage information technology to deploy e-Government services. For example, the Government has established an e-Government Research, Innovation and Development Center (**eGovRIDC**) to oversee the management and monitoring of research, innovation and development of e-Government solutions for the purpose of increasing efficiency in service delivery, process improvement, regulation and policy improvement through the use of ICT. Since its operationalization, the **eGovRIDC** has already

researched and developed some home-grown solutions for the Government built capacity of youth from various higher learning institutions.

Much work remains to be done before the nation e-Government vision can be fully realized. For instance, Public-Private Partnerships (PPPs) in technology research and innovation can help make research and innovation policy more responsive to the dynamically changing societal needs in the digital transformation era.

Pillar-5: E-Government Cyber-Security Ecosystem:

The rapid advances in digital technologies has led to the development and implementation of new online service delivery solutions and processes in the public sector. However, these advances have created new risks in the form of cyber-attacks and information breaches. Information Security refers to measures, controls and procedures applied in order to ensure integrity, confidentiality and availability of information in ICT systems. Digital technologies and service platforms connected to the Internet are always vulnerable to cyber-attacks that could potentially result in unacceptable socio-economic losses. Such negative aspects of digitalization have to be addressed by policy makers by ensuring e-Government cyber-security plans are integrated into the digital transformation programs.

Pillar-6: E-Government Human Capital Development:

The availability of skilled and professional workforce with good capacity for learning is essential in this Strategy and is one of the key factors in determining the success or failure of e-Government. However, ensuring the availability of the digital skills needed to keep pace with dynamically evolving digital technologies is an increasingly challenging proposition requiring to harness the potential value of e-Government.

As the Government continues to embrace digital transformation, there is a need to have adequate skilled ICT personnel; develop special training programmes to cope with new upcoming and innovative solutions and emerging technologies; and review ICT scheme of service.

Pillar-7: E-Government Policies, Legal and Institutional Framework:

A well thought out policy, legal and institutional framework is essential for the establishment of an effectively managed, maintained and successfully operated e-Government. Digital transformation in the public

sector must be anchored on a firm policy, legal and Institutional foundation in order to achieve the intended goals effectively and efficiently.

SUMMARY AND OBSERVATIONS

The e-Government Strategy 2022 has set the stage for further developments in the e-Government sector in the quest for Tanzania to become more digital, data-centric, and business-driven. The strategy supports much broader strategic thrusts encompassing efforts by the Government of Tanzania to develop a stronger, synergistic and holistic e-Government ecosystem. These thrusts act as the catalyst for digital transformation in the public sector, and they also form the conduit to catapult Tanzania into a semi-industrial economy status by 2025 as the country marches in lockstep under the shadows of the emerging digital economy and the fourth Industrial Revolution

1 INTRODUCTION

1.1 Overview

The latest advances in Information and Communication Technologies (ICT), have led to the emergence of e-Government that has allowed the Government of Tanzania to reap the benefits of digital transformation in reshaping the public sector. Systems and services implemented under various e-Government initiatives have been instrumental in providing convenient access to Government services. This also leads to the beginning of bridging the 'digital divide' between urban and rural areas and harnessing the digital revolution for positive change and social betterment.

Tanzania e-Government Strategy 2022 has been developed using broad stakeholder engagement with a large number of Government entities. It aims at helping to remove existing digital barriers, reduce administrative burdens and improve the quality of interactions with Government services. The Strategy sets out what is needed to translate Tanzania e-Government 2022 vision into concrete actions and propel the nation to the next level of achievement and excellence. The Strategy focuses on connected, coordinated and collaborative Government.

The e-Government Strategy 2022 aligns with the Government's development priorities as articulated in the Tanzania vision 2025, National Five-Year Development Plan III (FYDP III) and the ruling party manifesto 2020. It is also in line with the National ICT Policy 2016, and other sector-specific plans. The five thrusts articulated in the FYDP III that will contribute substantially to pillars and objectives of the e-Government Strategy 2022 are digital economy, fourth industrial revolution, social services, investment and trade, and skills development. These strategic thrusts encompass efforts by the Government to develop a stronger, synergistic and holistic e-Service ecosystem as Tanzania marches towards attaining Tanzania Government Vision 2025.

1.2 Evolution of e-Government in Tanzania

This Strategy has adopted the United Nations five-stage e-Government model due to its relevance to e-Government evolution in Tanzania in the last decade. The UN model defines the five stages of e-Government evolution as:

- i. **Emerging Stage:** Where Government presence online is limited to static websites which contain webpages with "fixed" information.
- ii. **Enhanced Stage:** Where Government presence online transitions to "dynamic" and frequently updated websites.

-
- iii. **Interactive Stage:** Where the Government allows greater interaction with users. The website allows user to download application forms that can be completed and submitted manually.
 - iv. **Transactional Stage:** Where the Government allows two-way online transactions such as applying for a Passport, National ID card and birth certificate. It also allows submission of tenders online, as well as make financial payments online.
 - v. **Seamless Stage:** This is the highest e-Government maturity stage under UN Model in which most or all business processes are fully and seamlessly integrated. This allows the Government to provide highly efficient, complex and personalized services, which allows customers to enjoy Single Window services under One-Roof.

The implementation of the online electronic Passport system, Government electronic Payment Gateway (GePG), other online systems and mobile platforms, allow citizens to make online payments for Government services. This places e-Government in Tanzania in the e-Government Transactions Stage as defined in the e-Government evolutionary model proposed by the United Nations.

The proposed e-Government Strategy 2022 is intended to set the initial stage to transition the Government of Tanzania from the current Transactions Stage into a fully blown integrated and seamless e-Government. In the seamless stage, all institutional legacy Government systems are connected and interoperable, allowing data exchange and data sharing to prevent the duplication of efforts and functions. Also, business processes are automated, re-engineered and integrated thus paving the way for Government institutions to work collaboratively and cost effectively in offering single-window services under one roof.

This strategy has been developed to build upon the first e-Government Strategy (e-Government Strategy 2013-2018) with the aim of succinctly setting out the next phase of e-Government in Tanzania. As it provides a roadmap, government institutions must implement initiatives that are lined in this Strategy to achieve implementation of e-Government successfully.

2 SITUATIONAL ANALYSIS

This chapter focuses on evaluating performance of the e-Government Strategy 2013 and presents the assessment of its implementation against the key result areas and other relevant information. Assessment is made in the current national context in which e-Government initiatives are grounded with an ultimate goal of developing a forward-looking e-Government Strategy 2022.

2.1 E-Government Strategy 2013 Key Result Areas Analysis

The assessment covers performance based on implementations of six Key Result Areas (KRAs) as stipulated in the Tanzania e-Government Strategy 2013, and the way forward to incorporate the new Strategy. The Key Result Areas that were assessed to determine the achieved performance and challenges were:

- i. Effective and efficient e-Government Institutional framework
- ii. Human Resources Capacity building
- iii. An e-Government Support Infrastructure
- iv. Shared Government-wide operations support systems
- v. Government e-Services flagship projects
- vi. e-Government awareness among the citizenry

2.1.1 E-Government Strategy 2013 Achievements

The accomplishments in each of the KRAs identified are described as follows:

A. Effective and Efficient e-Government institutional framework

The major e-Government 2013 accomplishment with respect to effective and efficient e-Government institutional framework include:

- i. Enactment of the e-Government Act No. 10, 2019 and its Regulations 2020 allowing for legal provisions on the implementation, management and operations of e-Government;
- ii. Transformation of the e-Government Agency into a fully-fledged and strengthened e-Government Authority in 2019, with responsibility for coordination, overseeing and promotion of e-Government initiatives and enforcement of e-Government policies, laws, regulations, standards and guidelines.
- iii. Development of e-Government standards and guidelines for Public Institutions that also include ICT governance structure for the Public Service.

-
- iv. Review and implementation of improved ICT scheme of service in the public service.
 - v. Establishment of ICT Management Units in all Ministries, Departments, Regions and LGAs, and some Agencies.

B. Human Resources Capacity Building

The major e-Government 2013 accomplishment with respect to Human Resource Capacity Building include:

- i. Provision of e-Government technical training in; network management to 240 institutions; e-services to 76 institutions; website management to 411 institutions; ICT strategic management to 150 staff; ICT infrastructure and connectivity to 173 staff; e-Government standards and guideline to 149 staff; project management to 133 staff; and application systems to 783 staff.
- ii. Increase the number of ICT staff in the public service from 913 in 2013 to 1707 in 2020

C. E-Government Support Infrastructure

The major accomplishment with respect to the establishment of an e-Government support infrastructure include:

- i. Connection of 265 MDAs and LGAs to Government Communications Network (GovNet)
- ii. Establishment and operationalization of the Government Data-centre (GDC) which serves as the primary delivery hub for Government services including cloud computing, web hosting, server colocation, and other operations.
- iii. Establishment of mobile Government Platform (mGov)
- iv. Establishment of Government electronic Payment Gateway (GePG) in all Government institutions

D. Shared Government-wide Operations Support Systems

The major accomplishment with respect to the establishment of a shared Government-wide operations and sector specific systems include:

Table 1: Shared Government-wide Operations Support Systems

Public Service Management and Good Governance	Regional Administration and Local Government Authorities
<ul style="list-style-type: none"> ● Human Capital Management Information System ● Government ICT Service Portal ● e-Mikutano ● e-Mrejesho ● e-Office System, ● Enterprise Resource Service Management Suite ● Government Mailing System ● Trusted Digital Repository ● Recruitment Portal ● Ethics Management Information System ● Government official travelling permit, ● Corruption complaints ● Government Performance Reporting Dashboard ● Incident Reporting System ● Parliamentary Online System (POLIS). 	<ul style="list-style-type: none"> ● School Information Management System ● Government of Tanzania Health Operations Management Information System (GOTHOMIS) ● Local Government Revenue Collection Information System (LGRCIS) ● Online Teachers Application Systems ● Facility Financial Accounting and Reporting System ● District Road Maintenance System ● Planning and Reporting System (PlanRep)
Health, Education and Social Services	Financial Services
<ul style="list-style-type: none"> ● Online Work Permit System, ● Workers compensation self-service, ● NHIF Service Portal, ● Central Admission System, ● Public Service Social Security Fund system ● Loan Management System (LMS). 	<ul style="list-style-type: none"> ● Central Budget Management System (CBMS) ● Government Asset Management Information Systems (GAMIS) ● Mfumo wa Ulipaji Serikalini (MUSE) ● Donor Fund Management Information System (D-FUNDS MIS) ● Treasury Registrar Management Information system ● Tanzania Customs Integrated Systems (TANCIS) ● Integrated Tax Administration System (ITAX) ● Revenue Gateway System ● Central Motor Vehicle Registration System ● Tanzania Electronic Single Window System ● Machinga Registration System ● Online TIN Service (OTS) ● National Payments System (NPS) ● Tanzania National e-Procurement System (TANePS) ● Salary Slip Portal
Land and Tourism Services	
<ul style="list-style-type: none"> ● Integrated Land Management Information System, ● Government Real Estate Management System, ● MNRT Portal and Safari Portal. 	
Industry, Trade and Investment Services	
<ul style="list-style-type: none"> ● Online Registration System (ORS), ● EPZA Electronic One Stop Solution (eOSS) ● Business Licensing Portal. 	

Works and Transport and Communications Services	Agriculture, Livestock and Fisheries
<p>Road Toll System, Road Accident Information System (RAIS) , Shipping Business Information System, Tanzania Electronic Single Window System (TeSWs) , Airport Management Information System (AMIS), Traffic Information Data Base System, Motor Vehicle Maintenance Management Information System (MVM-MIS).</p> <p>National Addressing and Postcode System (NAPS), Train e-ticketing and Cargo Management System, Meteorological Aviation Information System (MAIS), Marine Meteorological Information System (MMIS), SUMATRA Road Licence Information System (SURLIS), Aeronautical Message Handling System (AMHS), Special Load Permit System</p>	<p>Farmers Registration System, Agricultural Trade Management Information System, e-Extension Services and Marketing, National Agricultural Management Information System, Agriculture Products Licensing and Plant Health Management Information System, Fisheries Management System, Tanzania National Livestock Identification and Traceability System (TANLITS), Water Point Mapping System for Rural Water Supply Services and MAJI Information System.</p>
Information, Culture, Arts and Sports Services	Minerals, Energy and Water Services
<p>Wananchi Portal, Gaming Licensing, Inspection and Compliance Application System.</p>	<p>Mining Cadastral Portal, Geological and Mineral Information System, National Energy management information system, LUKU Vendors UP- Country, Water Point Mapping System for Rural Water Supply Services and MAJI Information System.</p>
Home Affairs, Foreign Affairs and Legal Services	
<p>e-immigration, National Identification system, Traffic offence verification system, Lost Property Report system (Property loss registration) and Birth Registration System Fourth Generation (BRS4G).</p>	

E. Government e-Services Flagship Projects

The major accomplishment with respect to launching e-Government e-Service flagship projects include the design, development and operationalization of BRELA's Online Business Registration System (ORS); the Integrated Lands Management Information System (ILMIS); the PPRA's Tanzania National e-Procurement System (TANePS); the Muhimbili National Hospital's Telemedicine System; and RITA's Fourth Generation Birth Registration System (BRS-4G)

F. e-Government Awareness Among the Citizenry

The success of e-Government initiatives is dependent not only on Government support but also on citizens' willingness to accept and adopt e-Government services. Awareness of e-Government initiatives to the citizens is of paramount importance for them to accept and use the e-services.

To fulfil the needs for citizens' awareness, various e-Government awareness programmes were undertaken, including 2,871 Government staff attending and benefitting from various trainings and e-Government awareness programmes; 1556 participants attended e-Government conferences held in Arusha and Dodoma; and 169 TV programmes and video clips were aired to raise citizen awareness on e-Government initiatives in the country.

2.1.2 Challenges of Implementing e-Government 2013

Despite the achievement made on implementation of e-Government Strategy 2013, there were also some challenges that were encountered including:

Table 2: Challenges of Implementing e-Government 2013

<ul style="list-style-type: none">i. Existence of digital divide between rural and urban areas which hindered effective implementation and use of e-Government services;i. GovNet not fully operationalized to provide accessibility to services in LGAs and service facilities;ii. Existence of digital illiteracy among citizens who are to receive e-Services;iii. Inefficient monitoring and evaluation framework for e-Government implementation;iv. Delays in enacting e-Government laws and regulations to provide strategic direction and enforces usage of e-Government to late 2019;v. Delay on having in place an Authority to enforce and oversee e-Government activities to late 2019;vi. Most of e-Government systems are still not at maturity stage and work in silos;	<ul style="list-style-type: none">vii. Lack of ICT professionals and required skills in the area of e-Government system development and security.viii. Some e-Government systems were implemented without effective security controls;ix. Existence of many e-Government applications that perform similar functionsx. There is uneven maturity in applying e-Government initiatives to enhance Governmental functions and services delivery among public institutions;xi. Most e-Government systems are developed and implemented separately, according to the jurisdictional boundaries of an individual institution, rather than being integrated cooperatively according to function or discipline.
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2.2 Stakeholders Analysis

Stakeholder Analysis provides inputs on the expectations of key stakeholders of e-Government in Tanzania and it identifies key issues which are critical in meeting the expectations of stakeholders. Key stakeholders are categorized as follows: MDAs/RSs/LGAs, Public Institutions, Parliament, Trade Unions, Judiciary, Private Sectors, General Public, Media, Academic and Research Institutions, Regulators, Development Partners, Politicians, Investors, Financial Institutions and Government Employees as shown below;

2.2.1 Stakeholders Expectations

Table 3: Stakeholder's expectations

Stakeholder	Expectations
MDAs/RSs/LGAs	<ul style="list-style-type: none"> ● Effectiveness and efficiency in provision of e-Government services ● Creating and enabling environment for promotion of e-Government ● Implementation of the sector policies and Acts ● Value for money and legal compliance in all e-Government operations ● Good governance practices ● Timely provision of accurate information for decision making. ● Alignment of the technical and economic regulation programme with the national agenda on promoting an industrial economy ● Transparency and professionalism in delivery of e-Government services
Public Institutions, Financial Institutions & Private Sectors	<ul style="list-style-type: none"> ● Transparency and active engagement ● Impartiality ● Professionalism and integrity ● Consistency and timely response to queries and inquiries
Parliament/ Politicians	<ul style="list-style-type: none"> ● Expanded coverage of e-Government services ● Affordable e-Government services for their voters ● Sustainable and reliable access to the e-Government services ● Available, quality, affordable and reliable e-Government services from Service Providers ● Accurate information and knowledge
Trade Unions	<ul style="list-style-type: none"> ● Transparency and active engagement ● Impartiality. ● Professionalism and integrity. ● Consistency and timely response to queries and inquiries
Citizens	<ul style="list-style-type: none"> ● To know their rights and obligations ● Fair, affordable prices/charges of e-Government services

	<ul style="list-style-type: none"> ● Quality and reliable e-Government services from service providers ● Available, quality and reliable e-Government services from Service Providers ● Safe, quality and environmentally friendly e-Government service delivery infrastructure.
Media & Non-State Actors	<ul style="list-style-type: none"> ● Timely dissemination of accurate information ● Access to information of public interest ● Openness and cooperation in issues of national/public interest ● Active participation in the e-Government processes to enhance knowledge
Academic and Research Institutions	<ul style="list-style-type: none"> ● Correct and accurate data ● Partnership in research and use of knowledge from findings ● Partnership in research and use of their research knowledge/findings
Development Partners	<ul style="list-style-type: none"> ● Transparency and active engagement ● Impartiality ● Professionalism and integrity ● Consistency and timely response to queries and inquiries
Investors	<ul style="list-style-type: none"> ● Conducive legal and business environment in e-Government issues. ● Fair and reliable e-Government processes. ● Transparency, credibility, consistency. ● Timely decision making on e-Government matters
Government Employees	<ul style="list-style-type: none"> ● Transparent, effective and efficient performance e-Government services ● Sharing of information ● Effective, accessible and affordable e-Government services ● Attractive remuneration packages and timely payment. ● Conducive working environment ● Enhanced capacity building to staff ● Attractive career development schemes ● Job security and transparent staff appraisal systems ● Staff participation; and ● Sharing of information timely and feedback.
Suppliers and Service providers	<ul style="list-style-type: none"> ● Transparency and active engagement ● Impartiality ● Professionalism and integrity ● Consistency and timely response to queries and inquiries

2.2.2 Stakeholders Information Gathering and Recommendations

A stakeholders' survey has been undertaken as part of a wider process of "stakeholder engagement", a practice which is increasingly finding resonance in Government to assist in development of an effective e-Government Strategy 2022. Questionnaires were sent to gather information from 379 stakeholders in 38 Government institutions to increase the understanding of knowledge, attitudes, perceptions, interests and



experiences regarding some key aspects of e Government and the results are very encouraging. The questionnaire was guided by specific areas including policy, laws, regulations, management of ICT Governance, infrastructure, application, systems, institutional policies and guidelines.

Engaging a wide range of stakeholders and considering differing views provided opportunities to question assumptions and explore alternative explanations that have contributed to learning and innovation that would feature in the e-Government Strategy 2022. A summary of the findings of the stakeholder survey including their expectations and recommendations, serve as useful inputs to the development of the e-Government strategy 2022. Overall results from the stakeholders’ survey highlight the following observations:

Table 4: Stakeholder’s Recommendations

<ul style="list-style-type: none"> i. Public institutions should be compelled to fully implement various directives pertaining to e-Government matters. ii. Establish a specific policy, legal and administrative framework for e-Government management. iii. Plan to conduct annual e-Government Stakeholders forum and expand participants’ scope. iv. Use of e-Government research findings. v. Establish a special fund for e-Government. vi. ICT professionals’ capacity enhanced basing on actual needs of the institution and technological change. vii. Sufficient number of ICT staff in public institutions. viii. Remove duplication of various e-Government infrastructure in public institutions. 	<ul style="list-style-type: none"> ix. Establish e-Government infrastructure in the country. x. Remove duplication of various ICT systems that communicate and exchange information within and between institutions. xi. e-Government services provided by public institutions meet the needs of stakeholders. xii. Implement ICT systems that simplify work efficiency and service delivery xiii. Access low-cost e-Government information and services in accurate and timely manner. xiv. Existence of an ICT Help Desk in public institutions. xv. Involve Higher Learning Institutions on e-Government research and innovation. xvi. Compliance with e-Government standards and guidelines by public institutions.
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2.2.3 National Development Framework Analysis

The specific subjects covered under this analysis are based on evaluations of different National Development Frameworks, namely:

- a) **Tanzania Development Vision 2025 (TDV 2025)**

Strategy IV of the Tanzania Development Vision 2025 (TDV 2025) emphasizes on strengthening promotion of Information and Communication Technologies (ICTs) as one of the driving forces for the realization of the vision. The e-Government Strategy 2022 will contribute to the attainment of the vision through improving Government capacity to deliver digital public service for social and economic development.

b) Ruling Party Manifesto for General Election of Year 2020

The Ruling Party Election Manifesto (2020) cited two major areas of concern for e-Government in article 102 (d) and 103 (a) to (e), which emphasized on: i) adoption of Science, Technology and Innovation; ii) use of One Stop Service Centres approach in delivery of public services; and iii) rollout of affordable e-Government infrastructure up to the rural areas to facilitate e-service delivery. The e-Government Strategy 2022, will contribute to achievement of the Ruling Party Manifesto objectives by enhancement of the e-Government research centres to facilitate innovation of home-grown e-Government solutions, build capacity of e-Government in the public service, establishment of one stop service delivery centres across the nation, and rollout of effective and efficient e-Government infrastructure to service facility centres in all LGAs.

c) National Five Years Development Plan III (FYDP III)

The FYDP III (2020/21 – 2025/26) has identified key interventions that the e-Government Strategy 2022 needs to leverage in order to achieve plan's goals of realising competitive economy and Industrialisation for Human Development. The interventions include increase number of internet users; encourage Science, Technology and Innovation capabilities, investing on ICT Human Resources; and promote online business to enhance service delivery. To achieve the FYDP III, e-Government Strategy 2022 aims to improve e-Government infrastructure, enhance e-Government research and development and improve the capacity of ICT human resource to enhance public service delivery.

d) National ICT Policy (NICTP), 2016

The National ICT policy 2016 highlights challenges such as fragmentation of resources and non-interopability of systems between public institutions; high cost of importation of software which in turn affect local innovation and development of software for internal consumption as well as inadequate competence and investment from both public and private sectors. The e-Government Strategy 2022 will support implementation of the National ICT Policy by strengthening institutions responsible for coordination, oversight, promotion and enforcement of e-Government initiatives; promote innovations on home-grown solutions and local contents; and creating an enabling

environment that nurtures the promotion and development of partnership between the public and private sector.

2.3 e-Government SWOC Analysis

2.3.1 Strengths

- a) The instruments which form the key cornerstone that lay the foundation for building an effective and sustainable e-Government ecosystem include: Policy, Laws and Regulations, that include the e-Government Act of 2019 and its Regulations (2020). Moreover, there are e-Government Policies, Strategies, Standards and Guidelines for Public Institutions to use in shaping their e-Government initiatives.
- b) In Governance, there are well established e-Government structures with an average number of human resources to facilitate e-Government implementation.
- c) With regard to application systems, major mission critical application systems have been implemented to cater for the crosscutting business operations with majority of these systems being home-grown. Key areas where systems have been implemented include Population registry, Land Management registry, Collaboration Systems, and Human Capital and Financial systems.
- d) Significant leverage of e-Government infrastructure, as evidenced by the development of the Government e-Payment Gateway (GePG) that facilitates revenue collection; the deployment of Government Network (GovNet) that allows public institutions to communicate securely; the implementation of Government Data-centres that provide conducive hosting environment for hosting Government systems; and the existence of server rooms and high speed Local Area Networks in most Government institutions that facilitate accessibility of systems within the institutions.
- e) In terms of e-Services, over 500 websites and portals have been implemented to support e-Government services initiatives; Government Mobile Platform (mGov) has been enhanced for delivery of e-services through mobile channels (USSD, SMS, Apps); Creation of an e-Government Apps store for downloading e-Services related applications; presence of a variety of e-services and mobile services that are offered by different public institutions through different channels; and the Government Portal as a one stop service centre for Government services and information.

2.3.2 Weaknesses

- a) In terms of policy, law and regulation the weakness observed include: limited awareness of existing e-Government laws, regulations as well as standards and guidelines among public servants and law enforces. There are also some important standards and guidelines that are missing hence need to be developed and implemented.

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- b) In terms of ICT Governance, the Government is lacking adequate expertise in ICT human resources in some specialized areas, which poses risks on sustainability of some e-Government initiatives especially those that are developed in-house. The area with deficiency includes software development, cyber-security and emerging technologies such as Artificial Intelligence, Block chain, Crypto currency, Internet of Things and Robotics. Also there seems to be low awareness of e-Government opportunities among Government employees and citizens at large; lack of highly trained cyber-security personnel in Government which leads to inadequate cyber-security skills posing the risk of cyber-attacks
 - c) In terms of application systems, there is relatively low research and innovation on the e-Government systems that are developed which sometimes lead to low maturity for most of locally built e-Government solutions which also failure to address appropriately the envisaged user needs.
 - d) The e-Government infrastructure weaknesses include: -, the Government Internet bandwidth of 2.1 GB/s is inadequate to support the growing number of Government applications and clients; insufficient computing and storage capacity at the Government Data-centre; limited research and innovation on e-Government; and fragmented delivery channels.
 - e) The e-services weaknesses include:- Insufficient customer support systems (Helpdesks) for handling e-Government related complaints; limited automation of internal core business processes in some institutions; low utilization of existing e-services by the general public; un-integrated service provisioning approach that requires same person to be registered more than once for one service; e-services not designed to cater for people with disabilities/special needs; and absence of bilingual local content in e-Government services.

2.3.3 Opportunities

- a) In terms of policy, laws and regulations, the opportunities are:- presence of National ICT Policy 2016 which provides e-Government policy guidance; the Electronic Transactions Act of 2015 and the Cyber Crime Act of 2015 that provides legal provision for e-Government transactions and e-Government security; the existence of political will from the top leadership of the Government in supporting of e-Government agenda; and existence of ICT sector laws that allow to make e-Government regulations whenever necessary.
- b) Opportunities related to ICT Governance are: presence of skilled ICT workforce in the market who can be employed by the Government; and the existence of the Tanzania Computer Emergence Response Team (TZCERT) that oversees, among other functions, implementation of cyber-security issues related to e-Government.

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- c) In terms of application systems, opportunities include the existing political willingness to innovate, build and adopt e-Government systems in provision and delivery of Government services.
 - d) Opportunities related to e-Government Infrastructure include: - availability of the ICT Broadband backbone in the country that support implementation of e-Government infrastructure and presence of the National Data-centre which has dedicated 25% of its capacity for hosting e-Government e-services.
 - e) e-Services opportunities include: - presence of a robust mobile payment and mobile phone solutions across the country; existence of private mobile services operators to facilitate delivery of e-services; and existence of young and technically savvy users representing a ready market for mobile services and e-services.

2.3.4 Challenges

- a) Challenges related to policy, laws and regulations are lack of comprehensive legal framework for the whole ICT sector in the country.
- b) In terms of application systems, existing challenges are: different pace in establishing and adopting e-Government systems among Government public institutions; inadequate staff skills in public institutions to cope with emerging technologies; and lack of comprehensive sustainability of e-Government initiatives especially those that are donor funded after expiration of the funding period.
- c) On the e-Government infrastructure, existing challenges include: limited coverage of the National ICT infrastructure backbone in the Local Government Authorities to facilitate e-Government Services; high costs of hosting e-Government services in the National Data-centre; high cost of internet bandwidth and mobile bundle service to enable citizens to access e-Government services; and limited use of ICT and internet access in the household and rural areas.
- d) Challenges related to e-Services include resistance to change in using e-services by citizens; high level of computer illiteracy in the society; and lack of a unique identifier or number required to identify once and authorize users of e-Services.

2.4 Recent e-Government Initiatives

In addition to the flagship projects, the following services have prioritized for immediate implementation by the Government of Tanzania:

(i) e-Government Research, Innovation and Development Centre (e-GovRIDC)

The e-Government Research, Innovation and Development Centre (e-GovRIDC) which is under e-Government Authority, has been established to oversee the management and monitoring of researches, innovations and development of e-Government solutions. Its main objective is to coordinate researches and innovations

that will improve and increase efficiency in service delivery, process improvement, regulation and policy implementation in various sectors like health, environmental, agriculture, transport, industrialization and logistics distribution. Such innovations are key for efficient employment of technology and produce new home-grown solutions. It is also a catalyst for the development of human adaptive capacities and efficiencies for technology acquisition and for customization.

(ii) One Stop Service Centres (OSSCs)

One-Stop Service Centres is the e-Government initiative that aims to offer multiple Public Services at selected central locations under 'one roof' with 'single window' using online service delivery digital platforms. 31 One Stop Centres are planned to be established in all regions by 2026 where by at least 32 services will be offered through each centre. The objective of the Centres is on enhancing effectiveness and improving efficiency in the delivery of services to citizens and businesses based on the e-Government G2C (Government to Citizens) and G2B (Government to Business) and G2E (Government to Employees) e-Government models.

(iii) Digital Tanzania Programme (DTP)

Digital Tanzania Programme is a World Bank funded project whose development objective is to increase access to high quality internet services for Government and citizens, and to improve the Government's capacity to deliver digital public services, DTP will be implemented for five years (2021– 2026) whereby e-Government is one of the key components of the programme. The DTP initiatives that are related to e-Government include: ICT regulatory scan and review; Enhancement of Government ICT Connectivity; Rural Broadband for Development; Digital Services and Productivity Platforms; Digital Economy; Data-centre Infrastructure; Government ICT cadre training programme and Citizen Digital Literacy.

2.5 Critical Issues

E-Government issues that contributed to the challenges encountered during the operationalization of the e-Government Strategy 2013, which have now been factored as critical inputs into the new e-Government Strategy 2022 include:

- i. Non-interoperable Government service delivery systems
- i. Un-harmonized and uncoordinated business processes
- ii. Limited bandwidth and coverage of GovNet infrastructure
- iii. Inadequate Government Data-centre resources
- iv. Increase in cyber-attacks on Government systems
- v. Limited and unintegrated e-Services
- vi. E-Service skills barrier
- vii. Limited accessibility of e-services

2.5.1 Non-interoperable Legacy Service Delivery Systems

Many legacy systems operated by Government departments are proprietary and non-standard which means they are not interoperable at the business processes level. Without interoperability at the business processes level, these legacy departmental systems lack the ability to connect electronically and exchange service data – in other words they are forced to operate in silos. Silos are created when the individual departments lose sight of the overarching goal of success in public service delivery and instead focus on departmental goals.

RECOMMENDED IMPROVEMENTS:

In the case of obsolete software that were purchased or developed without compliance to open standards, it would make more sense for the Government to promote local software solutions developed internally by Government experts including establishing or strengthening innovation Centers capable of developing and sustaining software for Government applications.

2.5.2 Un-harmonized and Uncoordinated Business Processes

Traditionally, many public services are delivered in-person, within certain working hours, and with a heavy reliance on paper forms. Lack of service delivery harmonization due to un-integrated and un-harmonized business processes means public institutions are forced to work in silos. These un-integrated service provisioning procedures lead to service provisioning discontinuity from one institution to another making the entire process highly inefficient.

RECOMMENDED IMPROVEMENTS:

The solution in this case would be to promote collaboration among public institutions at the business processes level through business processes re-engineering to eliminate unnecessary exchange of manual paper documents. This would require the implementation of Government operated one stop service Centres to perform such operations based on the single window under one roof service model.

2.5.3 Limited Bandwidth and Coverage of GovNet Infrastructure

Rural areas in Tanzania provide challenging environment for implementing e-Government infrastructures for data and internet-based services. The high cost of implementation and lack of customer base due to the low income and highly scattered population are the main challenges. These challenges have resulted in inadequate e-Government infrastructure in terms of wide area coverage, bandwidth, last mile and local distribution required for the delivery of e-Service in rural areas limiting the accessibility of core public services such as GePG which reinforces socio-economic

exclusion rather than unlock socio-economic opportunities to help to address urban-rural digital divide.

RECOMMENDED IMPROVEMENTS:

The solution in this case would be to expand coverage of GovNet to reach all LGAs and facilities such as health centres and schools in Districts and Wards. Also it is recommended to increase the GovNet bandwidth from the current 2.1 Gb/s to an estimated 5 Gb/s to meet the growing demand for e-service solutions and users.

2.5.4 Inadequate Government Data-centre Resources

Inadequate Government Data-centre resources including computing servers, storage facilities and WAN bandwidth are among the critical issues, which need immediate Government's attention. As the Government steps into the digital era, data is increasingly becoming the Government's greatest asset and therefore if a Government Data-centre is not adequately equipped the consequences could be dire. One of the most frightening situation is Data-centre outage caused by Power failure, Server downtime or inadequate data storage.

By allowing hosting of Government services in departmental server rooms, some computer resources are wasted. Public Institutions still tend to limit the total utilization of computing resources on any given machine to about 60% and 80% and the rest goes to waste. The same applies to the suboptimal and inefficient use of expensive storage systems.

RECOMMENDED IMPROVEMENTS:

The solution in this case would be to strengthen the capacity of the existing Government Data-centre by increasing the number of servers, storage capacity and networking equipment. It also entails the establishment of additional Data-centre and Disaster Recovery Sites of additional Data-centre and Disaster Recover Sites to accommodate the rapid growth in the number of hosted e-Government systems and applications.

2.5.5 Increase of cyber-attacks on Government Systems

cyber-attacks on e-Government is another critical issue typically happening at unexpected time and places and comes in a variety of forms, and always evolving which may counter the latest security measures. Apart from the immediate financial costs due to the disruption of Government operations, the impact could also contribute to the reduction of productivity due to lost opportunities spread across the entire national economy.

RECOMMENDED IMPROVEMENTS:

The solution in this case would be to create a dedicated e-Government cyber-security ecosystem consisting of security solutions and professionals with the skills necessary to coordinate cyber-security efforts across all Government institutions. The development of critical infrastructure cyber-security guidelines would also be important and necessary.

2.5.6 Limited and un-integrated e-Services

The use of e-Government services is rapidly transforming Government interactions and the relationships among citizens and businesses. The implementation of the e-Government Strategy 2013 had uneven success in using e-Government solutions to deliver e-services. Some of the systems developed are not used to deliver e-service but rather are being used to process information within institutions. In addition, most of the e-services were developed and delivered separately, according to the jurisdictional boundaries of individual public institutions, rather than being integrated according to function. E-Government services involving inter-institutional cooperation are especially difficult to develop and promote, in part because of a lack of collaboration mechanisms to support such inter-institutional cooperation.

RECOMMENDED IMPROVEMENTS:

Accessibility of e-Government Services should be enhanced by promoting interoperability of systems across public institutions; integration of services and processes; use of alternative service delivery channels and as a result, e-services would be more accessible to a wider range of citizens and businesses.

2.5.7 E-Service Skills Barriers

The Tanzanian Government's vision of transforming traditional services into online services does not guarantee increased adoption. Skill gaps continue to be a significant impediment to e-service development, maintenance, sustainability, acceptance, and utilization.

Employees must be knowledgeable of digitalization or the changes in administration that result from digitalization in hopes of supporting e-Government projects, which frequently involve disruptive changes within Government. The digital divide is a significant contributor to the skills gap. This technological "haves and have-nots" divide prevents most citizens and businesses from reaping the full benefits of service quality enhancement and the availability of more options provided by internet services.

RECOMMENDED IMPROVEMENTS:

E-service skills would be enhanced by providing specialized skills to ICT technical staff responsible for e-service innovation, development and maintenance. Public service employees need to be sensitized on changes brought by technologies and how to work on new processes and technologies.

It is also important for citizens and businesses to be informed of e-Service offered by the Government and the advantages they offer. This should be done through public awareness campaign to build public recognition of e-Government services. Standard channels that can be used to conduct awareness campaigns include radio, television, social media and mobile marketing and email marketing.

2.5.8 Limited accessibility of e-services

The Government has played the leading role in enabling creation and deployment of accessible e-services and facilitate the development of a proper and non-discriminative environment for e-Government services. Further actions need to be taken to provide easier to get devices such as computers and mobile communication.

RECOMMENDED IMPROVEMENTS:

The involvement of Government in the deployment of suitable e-Government tools could become a catalyst in tackling the digital gap. Governmental ICT applications could play a crucial part in bridging the digital divide between the young and elderly, women and men, the illiterate and the educated, or even between less developed regions, districts and wards.

3 THE E-GOVERNMENT STRATEGY 2022

3.1 Vision

Connected, integrated and coordinated digital Government for efficient and effective delivery of public services.

3.2 Mission

To provide innovative and secure e-Government solutions for efficient, effective and high-quality public service delivery in support of the digital economy.

3.3 Guiding Principles

The implementation of the e-Government Strategy 2022 will be guided by nine high-level concepts recommended in the Principles of Digital Development. These guiding principles are: -



Figure 1: Guiding Principles

3.3.1. Design with the User in Mind

This principle is concerned with user-centric design in which the information gathered, leads to building, testing and redesigning tools until they effectively meet the users' needs, by continuously gathering and incorporating users' feedback. Through this approach, digital tools can be built to better address the specific context, culture, behaviors and expectations of the people who will directly interact with the technology.

3.3.2. Understand the Existing Government Ecosystem

Analyzing the e-Government ecosystem, to ensure that selected technology tools will be relevant and sustainable and will not duplicate existing efforts. Moreover, by analyzing the ecosystem, factors that can affect an individual's ability to access and use a technology or to participate in an initiative are being considered.

3.3.3. Design for Scale and Robustness

Aims to deal with the scalability issue of initiatives not moving beyond the pilot stage. It means thinking beyond the pilot and making choices that will enable widespread adoption later, as well as determining what will be affordable and usable by a whole country or region, rather than by a few pilot communities.

3.3.4. Build for Sustainability

Building sustainable programs that ensure users and stakeholder support and their contributions are not minimized due to interruptions, such as a loss of funding. Such program is more likely to be embedded into policies, daily practices and user workflow.

3.3.5. Be Data Driven and People Focused

A data driven initiative ensures that quality information is available to the right people when they need it and that they are using the data to take action. No amount of data will lead to accelerated impact if it is not used to inform decision making.

3.3.6. Use Open Standards and Open Platforms

An open approach to digital development can help to increase collaboration in the digital development community and avoid duplicating work that has already been done. Hence, programs can maximize their resources and ultimately their impact.

3.3.7. Reuse and Improve to Reduce Development Time

By reusing and improving, programs can adapt and enhance existing solutions, resources and approaches. While an existing tool or approach may not exactly fit all the needs for reuse, improving and building on it, rather than creating something entirely new should be considered. Furthermore, the time needed for development, testing and costs can be significantly reduced.

3.3.8. Address Privacy and Security to ensure Confidentiality

This principle involves careful consideration of which data are collected and how data are acquired, used, stored and shared. Measures must be taken to minimize collection and to protect confidential information and identities of individuals represented in data sets from unauthorized access and manipulation by third parties.

3.3.9. Be Collaborative by Combining Creative Ideas

Being collaborative means sharing information, insights, strategies and resources across projects, organizations and sectors, leading to increased efficiency and impact. By collaborating, those working in digital development and beyond can pool their resources and expertise not only to benefit each initiative but also to strengthen the global community.

3.4 Strategic Pillars

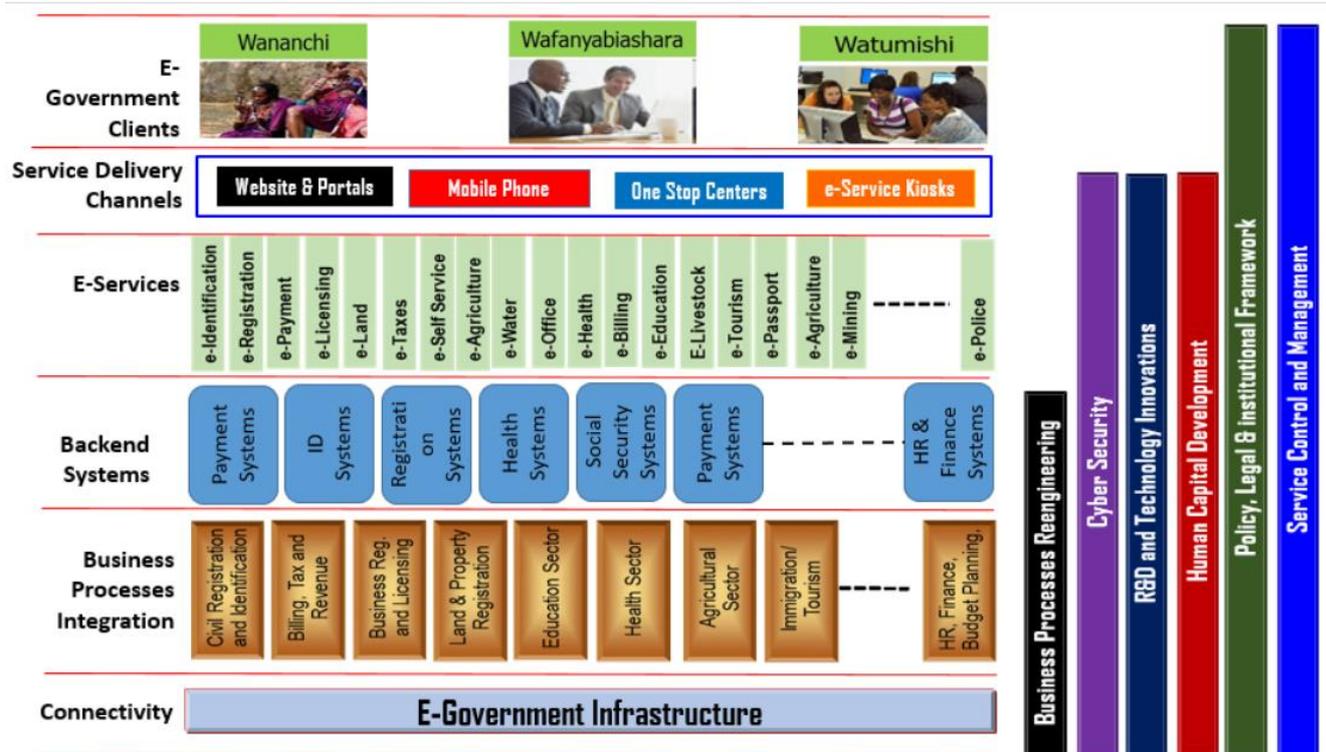


Figure 2: e-Government Strategy 2022 Focus Areas

The e-Government Strategy 2022 has seven strategic pillars that will pave the way and shape its implementation over the next five years. These include:

- i. **Pillar-1:** Connected Government
- ii. **Pillar-2:** Institutional Collaboration and Coordination
- iii. **Pillar-3:** E-Government Services
- iv. **Pillar-4:** E-Government Research and Innovations
- v. **Pillar-5:** E-Government cyber-security ecosystem
- vi. **Pillar-6:** E-Government Human capital Development
- vii. **Pillar-7:** E-Government Policies, Legal and Institutional Framework

3.5 Pillar-1: Connected Government

3.5.1 Pillar-1 Rationale

The concept of Connected Government refers primarily to the establishment of shared Data-Centre and broadband ICT infrastructure that connects all Government institutions, specifically institutional service delivery systems, to assist in the automated delivery of public services electronically and in a seamless manner. The Government broadband network (GovNet) must aim to reach the majority of

Government institutions with facilities in rural communities which remain underserved and excluded from the digital economy.

3.5.2 Government Network

Government Network (GovNet) has successfully provided low-cost high-speed data service to Government institutions since its inception in 2015. The use of the Government services offered over GovNet has undergone remarkable increase, and plans are underway to expand its capacity to keep up with increasing demand for bandwidth as newer and more sophisticated citizen and business e-services are introduced by various Government institutions. To date GovNet connects 265 public institutions.

The Government is planning to extend GovNet down to the District Councils, Wards, Villages, and Service Delivery Facilities in finance, health, education, public administration, judiciary, tourism, agriculture, lands and other sectors. Continued expansion of GovNet in support of Government-wide quality e-Services will enable citizens and businesses to benefit from the digital economy through the development and deployment of digital-based services. The Implementation of GovNet will be achieved by collaboration among MDAs, e-GA and LGAs.

a. Uncoordinated Connectivity to MDAs and LGAs

The GovNet is currently facing challenges in the form of uncoordinated solutions as far as connectivity to MDAs and LGAs is concerned. Connectivity of the MDAs and LGAs is done by e-GA, PO-RALG, TTCL and private operators who provide last mile connectivity. There are no clear guidelines on how to select the provider of last-mile connectivity and in addition, which organization should assume the support and maintenance role for each last-mile connection implemented. The uncoordinated last mile connectivity has, in some extent: caused the running and maintenance costs of last mile connectivity to increase among MDAs and LGAs; unsatisfactory quality of service provided by some MDAs and LGAs; and difficulties in monitoring security risks associated with connectivity. The e-Government Strategy needs to address the connectivity challenges by ensuring a coordinated and unified approach on the implementation of GovNet from the Central, Regional, District Councils, and Wards to the Service Delivery Facilities.

This GovNet implementation and support approach requires the establishment of last-mile connectivity guidelines for MDAs and LGAs that includes connectivity to District Councils and down to the facilities level.

b. Resilient GovNet Infrastructure

Resilience of GovNet infrastructure refers to GovNet's ability to adapt to failures and to resume normal operations when the failure has been resolved. Typically, such systems would incorporate redundant components and links. The wide area

component of GovNet is supported on the NICTBB which has redundant fiber rings to support network resilience. Therefore, the challenge of resilience or lack thereof in the case of GovNet arises at the last-mile connectivity to the client premises. Potential wireless alternatives to the fiber based solution for providing last-mile Internet connectivity resilience for GovNet as part of a business continuity include TV White Spaces, Wireless and Point-to-Point Microwave technologies.

c. Wired and Wireless Local Area Network Connectivity

Wired and wireless LANs (Local Area Networks) both play important roles in providing efficient connectivity for government institutions. Wired LANs provide reliable and consistent network connectivity that offer reliable high-speed connectivity. They are suited for critical applications that require stable and secure connections which make wired LAN ideal for transferring large amounts of data for government applications that require low latency, such as video conferencing or real-time data transfer.

On the other hand, wireless LANs, which are considered as an alternative to wired Local Area Networks for Public Institutions whose buildings are scattered over long distances, are more convenient and flexible, allowing for mobility and easy access to the network from multiple devices. They offer flexibility and mobility, allowing devices to connect to the government network from anywhere within the range of the network signal and therefore they are ideal for remote or mobile government employees who need to access the network from various locations through their mobile devices or laptops.

3.5.3 Government Data-Centre

The Government Data-centre(GDCs) have been established to provide central platform for hosting systems for Government Institutions. The GDCs can be used more efficiently and effectively as indispensable vehicle for connecting Government institutions and the dissemination of information to businesses and the general public by encouraging all public institutions to host their e-Government applications at GDCs. Enhanced GDCs can be enablers for the delivery of services such as data storage, servers, databases, networking, and software in the form of cloud computing. Implementation of cloud computing will allow processing of data away from individual Government institutions by using a shared facility where such functions can be performed cost effectively by taking advantage of the economies of scale.

3.5.4 Pillar-1 Objectives, Strategy and Targets

Objective: Connected Government for the efficient delivery of public services strengthened

-
- Strategy:**
- i. Consolidate GovNet infrastructure;
 - ii. Improve GovNet infrastructure;
 - iii. Expand coverage of GovNet to all LGA and MDAs facilities/service delivery points;
 - iv. Enhance and optimize GDC services and its replications on DR.
- Targets:**
- i. 90% of critical system replication to DR tested by June 2025;
 - ii. 184 LGAs and 600 MDAs connected to GovNet by June 2026;
 - iii. 184 LGAs and 600 MDAs installed structured LAN by June 2025;
 - iv. 90% of district hospitals connected to GovNet by June 2026;
 - v. 50% of health centres connected to GovNet by June 2026;
 - vi. 50% of all Government dispensaries connected to GovNet by June 2026;
 - vii. All Government service delivery points installed with at least two computers by June 2026;
 - viii. 43 foreign missions abroad connected to GovNet by June 2026;
 - ix. 50% of Government secondary schools installed with internet services by June 2025;
 - x. 90% of district and regional courts connected to GovNet by June 2026;
 - xi. 50% of primary courts connected to GovNet by June 2026;
 - xii. GovNet Bandwidth to all MDAs and LGAs increased from 2.1 Gb/s to 5 Gb/s by June 2025;
 - xiii. 1000 Agriculture Extension Resources Centres connected to GovNet by June 2025;
 - xiv. 90% of Higher Learning Government Institutions connected to GovNet by June 2026;
 - xv. 75% of Government institutional systems facilitated with hosting services at the GDC June 2026;
 - xvi. One additional Government Data-centre established by June 2026;
 - xvii. 26 Land Regional offices connected to GovNet by June 2026;
 - xviii. Independent Communication Services - IMSN finalized and maintained by June 2026;
 - xix. Expansion of basic infrastructure in Learning institutions increased by 20% by June, 2026;
 - xx. Rehabilitate and improve ICT infrastructures in all Universities and MoEST head quarter by June 2026;
 - xxi. Strengthen use of e-office to deliver services by June 2026.

3.6 Pillar-2: Institutional Collaboration and Coordination

3.6.1 Pillar-2 Rationale

Collaboration among Government MDAs and LGAs in the digital era is crucially important to mitigate divergences between departmental policies and priorities in order to promote mutually supportive actions across all sectors for efficient and effective service delivery.

Today's digital services are increasingly complex and multi-sectoral; they do not fit into a single ministerial or departmental portfolio and they cut across departmental jurisdictions – hence the need for coordinated and collaborative Government.

Some institutional ICT systems such as the LGAs' Muungano Gateway is already integrated with other LGA systems; the MoFP Service Bus integrates Government Financial Systems; HCMIS, MUSE, GePG, National Identification System, Fourth Birth Registration System, TANEPS, BRELA-ORS, ILMIS, e-IMMIGRATION and ERMS currently exchange data through standard Application interfaces (APIs). The complete integration of Government systems can be achieved through the use of single unique number such as NID number.

Furthermore, the e-Government Act, 2019 stipulates that eventually all Government system shall share data electronically through a Data Sharing Exchange Platform. Also, for the purpose of ensuring that there is collaboration between Government institutions, the Act requires business processes to be analyzed and documented to determine areas that can be optimized for performance improvement and re-engineering for automation.

Implementation of Data Sharing Exchange Platform and business improvement reengineering and integration are crucially important for successful inter-institutional collaboration for efficient and effective delivery of public services.

3.6.2 Documented Business Processes for all Government Services

The successful integration of business processes assumes that the business processes in every Government MDA and LGAs that provides services to the public are well documented.

Business processes documentation is important from the fact that processes are at the core of Government operations and therefore proper documentation allows business processes continuity in the event that a key talent leaves the organization or is unavailable. Effective and efficient e-Services mostly depends on business processes improvement, and this can only be achieved if there is an accurate documentation of these internal Government processes.

3.6.3 Unified Government Services Directory

A unified Government Services Directory (GSD) is essentially an authoritative repository of various services offered by the Government that will be the basis for identifying service that should be prioritized for improvement and automation. The primary output of the GSD is the business process mapping of all Government services with a view to automations through business processes re-engineering. This is a necessary first step in the business processes improvement and harmonization of

related Government services. The creation of the Government Services Directory (GSD) must involve participants from all key Public Institutions offering public services. The Government Service Directory should include, among others, the following information:

- i. Description of the Service
- ii. Requirements/ Dependencies of the service
- iii. Cost associated with the service delivery, if any
- iv. Time and any associated KPI to deliver the Services.

3.6.4 Application Systems Integration

In most countries, the public sector is still heavily reliant on older or legacy IT systems and infrastructure to deliver public services, which can significantly hamper the ability of the Government to deliver the high-level of service that we have come to expect. This will require launching a system Integration Strategy based on reviewed, documented, integrated and reengineered business processes for all Government services

The improvement and integration of the backend legacy systems will facilitate exchange of data among the systems through Government Data Exchange Platform and support integrated e-service delivery approach. The review of implementation of e-Government has revealed the following priority systems that need to be developed/improved and integrated in order to support inter-institutional collaboration and coordination in e-service delivery.

a) Civil Registration and Identification Systems

The systems to be improved and integrated to support Civil Registration and Identification services are:

- i. Birth and Death Registration System
- ii. LGA's electronic Population Registration System
- iii. National ID System
- iv. Immigration Citizenship verification system

b) Billing, Tax and Revenue Systems

The backend systems that must be improved and integrated to support Billing, Payment services are:

- i. Motor Vehicle Registration System (MVRS)
- ii. Driving License System
- iii. iTAX System
- iv. TIN Registration system
- v. Government electronic Payment Gateway

c) Business Registration and Licensing Systems

The backend systems that must be improved and integrated to support Business licensing services are:

- i. TIN Registration System
- ii. Business Online Registration System
- iii. Business Portal

d) Land and Property Registration Systems

The backend systems that must be improved and integrated to support Land and Property Registration at services are:

- i. Integrated Land Management Information System
- ii. National ID system
- iii. Geospatial technological Systems (Geographical Information System, Remote Sensing and Digital Image Processing)

e) Social Health Systems

The backend systems that must be improved and integrated to support social health services are:

- i. NHIF Membership Registration and Card Issuance System
- ii. Hospital Management Information System

f) Tanzania Police Services and Safety Systems

The backend systems that must be improved and integrated to support Tanzania Police Force services at Services are:

- i. Police Loss Report Management Information System
- ii. Public Safety Services System
- iii. Fire Safety Inspection and Revenue Management System (FSIRMS)

g) Government Management Support Systems

The backend systems that must be improved and integrated to support Government management support Services are:

- | | |
|---|--|
| i. Integrated Human Capital Management Information System (HCMIS) | vi. Government Mailing System (GMS) |
| ii. Integrated Financial Management Systems (MUSE) | vii. Government e-Procurement Systems (TANePS) |
| | viii. Government Electronic Resource Management Systems (ERMS) |

- | | |
|--|--|
| iii. Integrated Planning and Budgeting System | |
| iv. Electronic Office (eOffice) | |
| v. Complaint and Feedback Management System (e-Mrejesho) | |

h) Social Security Systems

The backend systems that must be improved and integrated to support Social Security Services are:

- | | |
|---|--|
| i. NSSF Membership Registration and Card Issuance System | v. Government electronic Payment Gateway |
| ii. PSSF Membership Registration and Card Issuance System | vi. National ID System |
| iii. Electronic Population Registration System | vii. NHIF Membership Registration and Card Issuance System |
| iv. Human Capital Management Information System (HCMIS) | |

i) Sectorial Systems

The backend systems that must be developed/improved and integrated to support Sectorial Services are:

- | | |
|----------------------------|-----------------|
| i. Minerals | vii. Works |
| ii. Transport | viii. Legal |
| iii. Communications | ix. Education |
| iv. Tourism | x. Water |
| v. Livestock and Fisheries | xi. Agriculture |
| vi. Energy | |

3.6.5 Government Data Sharing and Exchange Platform (GDSXP)

The Government Data Exchange Platform (GDSXP) serves as a systems gateway where data are exchanged. The e-Government Act, 2019 stipulates that eventually all Government system shall share data electronically through a Data Sharing Exchange Platform. Also, for the purpose of ensuring that there is collaboration between Government institutions, the Act requires business processes to be analyzed and documented to determine areas that can be optimized for performance improvement and re-engineering for automation.

Implementation of Data Sharing Exchange Platform is crucially important for successful inter-institutional collaboration for efficient and effective delivery of public services.

3.6.6 Pillar-2 Objectives, Strategy and Targets

- Objectives:** Inter-institutional collaboration and coordination in public services strengthened
- Strategy:**
- i. Improve inter-institutional business processes;
 - ii. Strengthen Data Sharing and Exchange Platform;
 - iii. Enhance system integration and interoperability;
 - iv. Enhance Government and Sectorial Portal;
 - v. Enhance public services digitalization.
- Targets:**
- i. All ICT systems and projects in MDAs and LGAs registered in the Government ICT projects database quarterly;
 - ii. Government Data Sharing and Exchange Platform (GDSXP) operationalized by June 2025;
 - iii. Huduma Data Exchange Platforms operationalized by June 2025;
 - iv. LGA Sector Sectorial Data Exchange Platforms enhanced by June 2024;
 - v. Government Services Directory (GSD) establish as an authoritative central source of standard services by December 2023;
 - vi. Business processes reengineering for 100 services implement June 2027;
 - vii. Business processes integration for 50 services implement June 2027;
 - viii. 100 Government systems share data through Data Sharing Exchange Platform by June 2027;
 - ix. Personal Unique Identification Number for accessing eService established by October 2024;
 - x. Business processes in all public institutions involving financial transactions automated by June 2026;
 - xi. Electronic records and archive repository enhanced by June 2024;
 - xii. 30,000 subject files converted to electronic files by June 2026;
 - xiii. Civil Registration Systems developed/improved and integrated by 2026;
 - xiv. Identification Systems developed/improved and integrated by 2026;
 - xv. Immigration Systems developed/improved and integrated by 2026;
 - xvi. Billing, Tax and Revenue Systems developed/improved and integrated by 2026;
 - xvii. Business Registration and Licensing Systems developed/improved and integrated by 2026;
 - xviii. Land and Property Registration Systems developed/improved and integrated by 2026;
 - xix. Social Health Membership Systems developed/improved and integrated by 2026;
 - xx. Tanzania Police and Public Safety Services Systems developed/improved and integrated by 2026;
 - xxi. Government Central Core Systems developed/improved and integrated by 2026;

-
- xxii. Social Security Systems improved and integrated by 2026;
 - xxiii. 5 Sectorial systems developed/improved and integrated by June 2026;
 - xxiv. ILMIS rollout to 150 Districts Land Councils by June 2026;
 - xxv. Water Authorities Supply Mains Mapping and the Fire Hydrants systems improved and Integrated by June 2026;
 - xxvi. A Digital Dashboard (Platform) for reporting implementation of Programs coordinated by Government, MDAs and LGAs on Government decisions and directives developed by June 2026;
 - xxvii. Digital Platform for One Health for strengthening the National One Health Coordination Unit developed by 2026;
 - xxviii. A Platform for public awareness on Disaster prevention, preparedness, responses, recovery plans developed by 2028
 - xxix. Teaching, learning and management of all Universities and Colleges digitalized by June, 2026;
 - xxx. Higher education institutions remain abreast of technological change and global trends by June, 2026.

3.7 Pillar-3: E-Government Services

3.7.1 Pillar-3 Rationale

In the context of e-Government, electronic services or e-services refers to services delivered electronically mostly over the Internet and mobile channels by means of ICT. The service providers are public institutions that include Ministries, Departments, Agencies, and Local Government Authorities while citizens and businesses are the main clients and beneficiaries of e-Services. Accessibility to e-Services must also take into consideration the issue of diversity and inclusion with respect to persons with disabilities, literacy, rural versus urban, age, and language.

E-GOVERNMENT SERVICE DELIVERY ARCHITECTURE

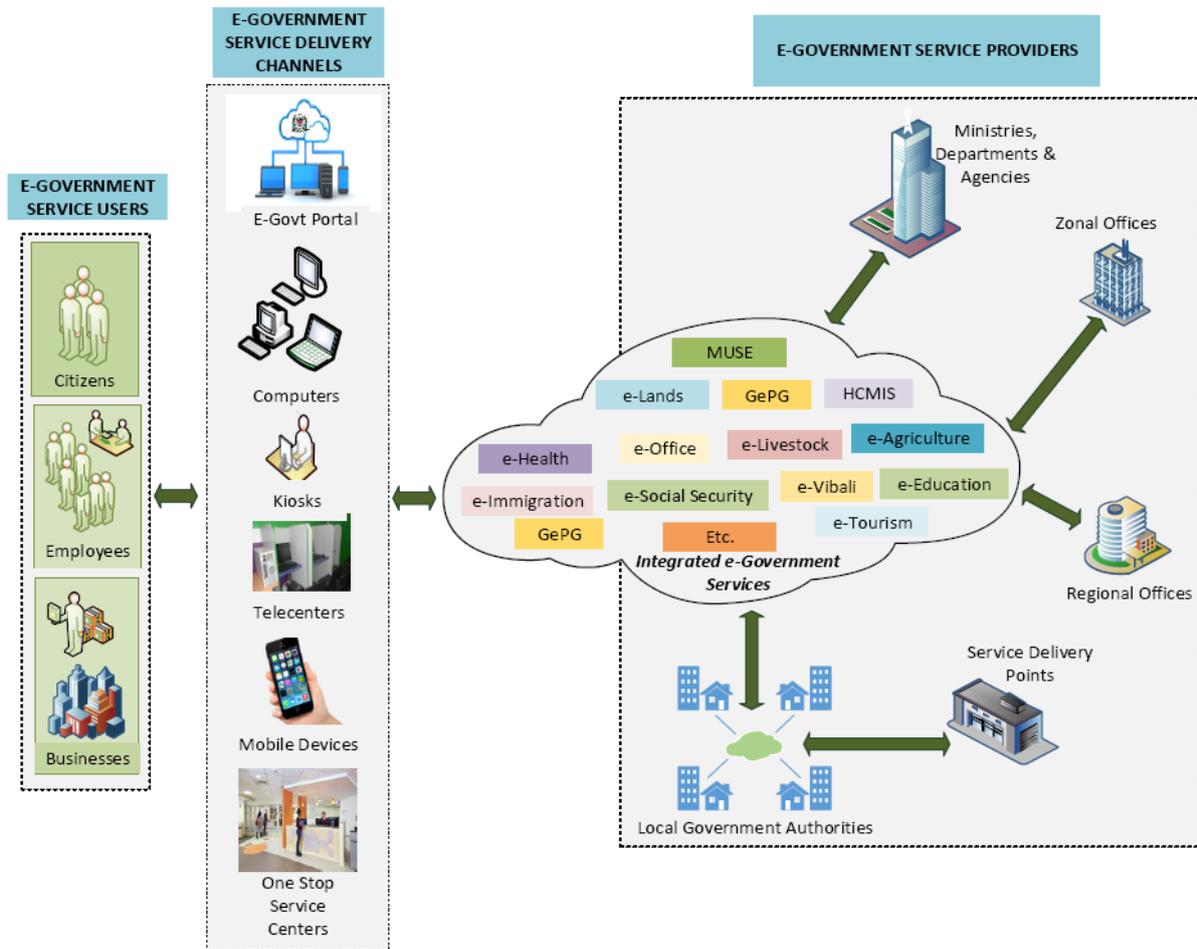


Figure 3: e-Government Service Delivery Architecture

3.7.2 Classification of e-Services

e-Services have been classified into two major categories namely: Informational Services and Transactional Services. Informational Services represent Government services that solely provide information to clients and generally do not involve processing of any transactions or submission of any documents. Informational Services involve relatively simple back-office operations and can easily be provided on any Government websites. Transactional Services include Government services that require specific processing actions to be taken by the Government department that is mandated to provide the service to the public. These services for the most part involve a higher degree of interaction between the client and backend service support system and therefore they tend to be sophisticated and involve more complex delivery operations than informational services.

Transactional Services are further subdivided into Foundational Services and Dependent Services. Foundational Services refers to core services that form the foundation or the base upon which most, if not all business processes are supported.

Dependent Services are the services whose business processes ride on top of the Foundational Services.

a) Foundational Services

The list of foundational services identified for the e-Government include:

- i. Civil Registration Services
- ii. National identification Services
- iii. Citizenship and Immigration Status Verification Services
- iv. Residential Address Verification Services
- v. Electronic Payment Services
- vi. Employment Verification Services
- vii. Digital Signing and Signature Verification Services

b) Dependent Services

Some of the dependent services identified for e-Government include:

- i. Business Registration and Licensing Services
- ii. Billing, Tax and Revenue Services
- iii. Education Registration Services
- iv. University Students Admission Services
- v. Social Security Services
- vi. Land and Property services
- vii. Social Health services
- viii. Police Services
- ix. Government Management Support services

3.7.3 One Stop Service Delivery Approach

One Stop Service delivery is a consolidated service access approach, where all services are made publicly available under one roof in a standardized and consistent approach. As a model of public service delivery that has been in practice for many decades in many countries, One Stop Service delivery operates towards the simple goal of making public services available under a single roof to improve accessibility as well as enhance efficiency and effectiveness in public services delivery.

A key component of the collaboration and coordination strategy for service provider institutions, the Government of Tanzania has embarked on the implementation of one stop service delivery Centres. One-Stop-Services-Centres initiative is a means to integrate a variety of public services, with the goal of making a multitude of public services available on a single-window system under one-roof. Successful implementation and effective of the one stop service centres model in Tanzania is demonstrated by the One Stop Border Post (OSB) model which was established to expedite the movement of goods and people, and to reduce transport costs across the borders.

3.7.4 e-Service Access Unique Number

The concept of service integration has created the need for a mechanism to uniquely identify every person that is allowed to access Government services irrespective of gender, age, or citizenship. The Unique Number is a prerequisite for the successful integration of e-services delivery in the public service delivery transformation. A person wanting to use and is granted access to Government services, will be assigned the unique identification number.

3.7.5 Diversity and Inclusion Imperative

Diversity refers to a state of acknowledging and identifying visible and invisible differences between individual, groups, employees and using those differences in creating better relationships. The differences include dimensions such as age, physical ability, gender, ethnicity, religious belief, political affiliation, geographical location and education. Inclusion refers to the act of creating environment in which any individual or group feels welcomed, belonging, respected, supported and valued to fully participate in spheres of life. An inclusive and accommodating environment embraces differences and offers respect.

The e-Government Strategy 2022 needs to address this important aspect by: reducing the existing inclusion gap in ICT so as to enable representation of ideas, talents and empowerment to people from diversified groups; and provide accessibility of e-Services to citizens of all groups including people with disabilities, women, youth, and economically disenfranchised as well as rural residents.

3.7.6 Service Implementation Prioritization

From implementation perspective, initial focus and priority shall be given to the implementation and deployment of Foundational Services that required to establish a firm business processes base upon which the Dependent Services can be rolled out. Selection and prioritization of e-Services for implementation partly depends on the evaluation and analysis of the service data collected during the Government Services Directory (GSD) creation exercise and subsequent recommendations.

3.7.7 Pillar-3 Objectives, Strategy and Targets

- Objective:** E-Services delivery enhanced and sustained
- Strategy:**
- i. Promote access high quality e-Services across multiple delivery channels;
 - ii. Promote inter-institutional collaboration in the delivery of e-Services;
 - iii. Facilitate e-Services availability;
 - iv. Facilitate e-Services accessibility to diversified groups.
- Targets:**
- i. Framework for e-Government services accessibility prepared by June 2024;

-
- ii. Civil Registration and Identification Services digitized by 2026;
 - iii. Residential Address Verification Services digitized by 2026;
 - iv. Electronic Payment Services enhanced by 2026;

 - v. Government Employee self-service digitized by 2026;
 - vi. Digital Signature Services for Government Systems implemented by 2026;
 - vii. Business Registration and Licensing e-Services enhanced by 2026;
 - viii. Government Billing, Tax and Revenue e-Services enhanced by 2026;
 - ix. Education Registration Services enhanced by 2026;
 - x. University Students Admission e-Services enhanced by 2026;
 - xi. Social Security e-Services enhanced by 2026;
 - xii. Land and Property e-services enhanced by 2026;
 - xiii. Social Health e-services enhanced by 2026;
 - xiv. Police e-Services enhanced by 2026;
 - xv. 5 Sectorial Services digitized by June 2026;
 - xvi. E-Government services delivered in English and Kiswahili by June 2025;
 - xvii. 70% of e-Government services delivered through web and mobile channel by June 2026;
 - xviii. All of e-Government mobile service accessed through SMS and USSD by June 2026;
 - xix. E-Services availability monitored daily by June 2026;
 - xx. 31 single delivery points for citizen centric e-services established by June 2026;
 - xxi. 32 services through single delivery point delivered by June 2026 ;
 - xxii. 50 transactional services on the Government Portal operationalized by June 2026;
 - xxiii. 21 Ministerial websites upgraded to Sectorial Portals by June 2025;
 - xxiv. 100% basic infrastructure that allow justice services delivered through e-justice available among justice institutions by June 2026;
 - xxv. 75% of justice institutions have effective efficient use of digital technologies in access of justice by June 2026.

3.8 Pillar 4: E-Government Research and Innovations

3.8.1 Pillar-4 Rationale

Technology Research and Innovation on e-Government solutions in Tanzania are of utmost importance for the country to deliver e-Government vision of a connected, coordinated and integrated Government.

Government service environment is dynamic and constantly changing due to recent advances in technologies. The Government of Tanzania needs to cope with rapid global technological developments by adopting emerging technologies in a timely manner. Research, scientific investigation and knowledge advancement leads to discoveries, inventions and innovations to find more efficient employment of technology and produce new home-grown solutions. It is also a catalyst for the development of human adaptive capacities and efficiencies for technology acquisition and for customization.

The Government of Tanzania has done much to leverage information technology to deploy e-Government services. This includes the establishment of the e-Government Research, Innovation and Development Centre (eGovRIDC) to oversee the management and monitoring of research, innovation and development of Government solutions for the purpose of increasing efficiency in service delivery, process improvement, regulation and policy improvement through the use of ICT. Since its inception, the eGovRIDC has already developed some home-grown solutions for the Government and also built capacities for the youth from various higher learning institutions. These positive developments notwithstanding, much work remains to be done before the nation e-Government vision can be fully realized.

In addition, higher learning institutions need to be involved in some of the eGovRIDC initiatives so that the results of some of their research and innovations in e-Government can be factored into the emerging home-grown solutions. In addition, involvement in Knowledge Sharing Programmes (KSPs) by actively engaging partner countries willing to share their development experience and knowledge is an effective approach to support capacity building in the development e-Government solutions.

3.8.2 Pillar-4 Objectives, Strategy and Targets

Objective: e-Government Research, Innovations and Development enhanced

Strategy:

- i. Promote locally developed e-Government innovations;
- ii. Promote the adoption of emerging and environmentally friendly e-Government technologies;
- iii. Promote collaboration with stakeholder in e-Government Research, Innovations and Development.

Targets:

- i. 5 Emerging digital technologies evaluated and tested by June 2026;
- ii. 5 Government sectoral innovations implemented and operationalized by 2026;
- iii. 2 e-Government innovations from higher learning institutions implemented and operationalized by June 2026;
- iv. Collaboration with 7 Higher learning and research Institutions on e-Government operationalized by June 2024;
- v. Collaboration with 3 overseas partners on e-Government operationalized by June 2026;

-
- vi. Established Proof of concepts on different disciplined areas on ICT emerging technologies by 2024;
 - vii. Three (3) ICT hubs and one incubator established at national service by 2026;
 - viii. Established MODNS ICT's innovators forum by 2024;
 - ix. Establishing three (3) multipurpose computer labs by 2025;
 - x. Innovative business models that leverage on an open access, incubation, startups and accelerators for innovation by 2026.

3.9 Pillar-5: E-Government Cyber-Security Ecosystem

3.9.1 Pillar-5 Rationale

The rapid advances in digital technologies have led to the development and implementation of new online disruptive service delivery solutions and processes in the public sector. However, these advances have created new risks in the form cyber-attacks and information breaches. Information Security refers to measures, controls and procedures applied in order to ensure integrity, confidentiality and availability of information in ICT systems.

Digital technologies and service platforms connected to the Internet are always vulnerable to hacking by cyber criminals that could potentially result in unacceptable socio-economic losses. Such negative aspects of digitalization have to be addressed by policy makers by ensuring e-Government security plans are integrated into the digital transformation programmes. It requires the Government to put in place an e-Government information security policy to impose a uniform set of rules for handling and protecting essential data and critical infrastructure. In the context of Tanzanian e-Government, Cyber-security Strategy was developed in 2016 with the objective of development of holistic cyber-security programmes and awareness of cyber-security threats to protect critical Government data, systems and infrastructures.

3.9.2 Pillar-5 Objectives, Strategy and Targets

- Objective:** e-Government cyber-security ecosystem improved
- Strategy:**
- i. Strengthen e-Government cyber-security infrastructure;
 - ii. Enhance Cyber-security technical capabilities and awareness;
 - iii. Improve security of e-service transactions.
- Targets:**
- i. Government PKI Certification Authorities operationalized by June 2025;
 - ii. e-Government Cyber-security Strategy reviewed by June 2023;
 - iii. e-Government Security, Standards and Guidelines reviewed by June 2023;
 - iv. e-Government Security Operation Centre operationalised by June 2023;

-
- v. 25 Government cyber-security awareness programs undertaken by June 2026;
 - vi. Cyber-security capacity building to 500 ICT personnel conducted by June 2026;
 - vii. Innovation Centres in LGA and RS level established by June 2026;
 - viii. Digital signature implemented on e-Government Systems by June 2026;
 - ix. All national critical infrastructure registered and secured by 2024;
 - x. Human resource development plan on cyber security prepared and implemented by 2026;
 - xi. The government to be issuing cyber security alerts timely and precisely by June 2026;
 - xii. Legal and regulatory framework reviewed to support cyber security in digital economy by June 2026.

3.10 Pillar-6: E-Government Human Capital Development

3.10.1 Pillar-6 Rationale

The availability of skilled and professional workforce with good capacity for learning is essential and one of the key factors in determining the success or failure of e-Government. However, ensuring the availability of the digital skill needed to keep pace with dynamically evolving digital technologies is an increasingly challenging proposition requiring to harness the potential value of e-Government.

E-Government Human Capital Development initiatives are intended to increase stock of knowledge and skills of Government employees. Use of ICT, as heavily promoted in the e-Government transformation, is a skill and knowledge intensive, and also a dynamic and constantly evolving discipline which requires continuous professional development. Therefore, Human resources in relation to ICT needs constant development and close monitoring in order to maintain and accelerate ICT led Government transformation. Human Capital Development must also take into consideration the issue of diversity and inclusion with respect to persons with disabilities, gender and age.

The Government has taken various efforts to ensure there are sufficient, skilled and competent ICT professionals, users and policy makers to spearhead ICT adoption and use in various sectors. Some of these efforts include recognizing basic ICT skills as important qualifications in public service recruitment; also providing in-house and specialized ICT trainings. As the Government continues to embrace digital transformation, there is a need to have adequate skilled ICT personnel; develop special training programmes to cope with new upcoming and innovative solutions and emerging technologies; and review ICT scheme of service.

3.10.2 Pillar-6 Objectives, Strategy and Targets

Objectives: E-Government Human Capital Capacity Strengthened

Strategy:

- i. Promote e-Government human capital knowledge and skill-set;
- ii. Facilitate e-Government capacity building;
- iii. Improve Government ICT cadre welfare.

Targets:

- i. 5 e-Government professional forums conducted annually;
- ii. E-Government training needs assessment conducted by June 2024;
- iii. e-Government technical training programme for 450 ICT professionals conducted by June 2026;
- iv. e-Government policy makers training programme developed and implemented by June 2026;
- v. e-Government for end-user training programme for 25,000 public servants conducted by June 2026;
- vi. e-Government long term training programme for 50 ICT professional conducted by June 2026;
- vii. ICT cadre scheme of service reviewed by June 2024;
- viii. ICT staff needs assessment conducted by June 2024;
- xiii. To facilitate the transfer of digital skill-set and capacity Building of ICT staff by June 2025;
- xiv. The TCU to have curricular for cyber security at Bachelor and Masters programs by year 2023, and PhD programs by 2025;
- xv. Skills on emerging digital technology increased by 80% in institutional level by June, 2026;
- xvi. 75% of justice actors capacitated with competencies and innovative in digital skills by June 2026.

3.11 Pillar-7: E-Government Policies, Legal and Institutional Framework

3.11.1 Pillar-7 Rationale

A well thought out policy, legal and institutional framework is essential for the establishment of an effectively managed, maintained and successfully operated e-Government. Digital transformation in the public sector must be anchored on a firm policy, legal and Institutional foundation, in the absence of which the intended goals will not be achieved.

3.11.2 E-Government Policy and Legal Framework

Any initiative to introduce or modify laws supporting the provision of e-Government services must be based on a systematic legal review that can identify significant legal obstacles, and opportunities for implementing interventions that are in conformance

with the Constitution of the United Republic of Tanzania. Legal reviews should be conducted to identify potential legal workarounds to address gaps and obstacles in the existing laws that do not require enacting new legislation that is a generally lengthy process.

The enactment of the e-Government Act (2019) and its Regulations (2020); and the development of the e-Government Standard and Guidelines (2017), are some of the Government policy and legal initiatives to strengthen e-Government service delivery. Despite these efforts, there are still some shortcomings and challenges in the area of e-Government policy and legal framework in order to facilitate conducive environment for its implementation and sustainability. Among the shortcomings are the need to have specific e-Government policy, as stipulated in the National ICT policy 2016, in order to leverage on provision of e-Government act and its regulations. Additionally, e-Government standards and guidelines need to be reviewed to cope with the emerging technologies in conformance with new laws and regulations.

3.11.3 E-Government Institutional Framework

e-Government Institutional framework is the ICT Governance in the Public Service that entails political will, executive leadership, structures and processes that aim to promote and sustain digital transformation in the Public Sector.

Coordination, promotion and oversight of e-Government implementation is under e-Government Authority which was established by e-Government Act 2019 to take over the then e-Government Agency established in 2012. There is a cabinet minister (Minister of State, Public Service Management and Good Governance) whose responsibility among others is to oversee the implementation of e-Government policy. In each public institution there is an ICT Management Unit responsible for implementation of e-Government initiative at institutional level.

On e-Government coordination, the e-Government Act 2019 has established the following three committees: National e-Government Steering Committee responsible for decision on e-Government policy matters; the e-Government Technical Committee responsible for e-Government technical matters; and Institutional e-Government Steering Committee responsible for Institutional related e-Government decision. For effective e-Government operations, the ICT Governance needs to be fully operationalized to enable efficiency and effective e-Government service delivery.

3.11.4 Pillar-7 Objectives, Strategy and Targets

- Objective: E-Government Management Frameworks strengthened
- Strategy:
- i. Enhance e-Government policy framework;
 - ii. Strengthening e-Government legislative environment;
 - iii. Improve e-Government Institutional framework.
- Targets:
- i. 50 e-Government standards and Guidelines reviewed by June 2023;
 - ii. e-Government Act and associated regulations compliance monitored in public Institutions by June 2026;
 - iii. e-Government standards and guidelines compliance monitored in public Institutions by June 2026;
 - iv. Government ICT Management Units Governance structure reviewed by June 2026;
 - v. e-Government Coordination Committees compliance monitored by June 2026;
 - vi. E-Government policy developed by June 2024;
 - vii. e-Government regulations reviewed by June 2026;
 - viii. Formulation of Defence ICT Policies, guidelines and regulations by 2022;
 - ix. Ministry of Defence And National Services (MODNS) digital economy framework established by 2023;
 - x. Government ICT policy enriched with statement on environmental care operationalized by December 2025;
 - xi. Conducting Monitoring and Evaluation Projects and Programmes under Digital Economy frame work by 2026.

4 RESULTS FRAMEWORK

4.1 Introduction

This chapter outlines how the intended results as well as the benefits of implementing interventions under this e-Government Strategy that will accrue to clients, stakeholders and other beneficiaries of digital public services will be measured. In this context the results framework presented is essentially a management tool intended to guide the Government in pursuit of its strategic vision and mission in e-Government. The framework takes cognizance of the e-Government development objective and links the Strategy with the Tanzania vision 2025, the National Five Year Development Plan III (FYDP III), and the CCM party manifesto 2020. It also provides the Results Framework Matrix, the Monitoring Plan, Planned Reviews and the Evaluation Plan.

4.2 Development Objective

The overriding objective of this e-Government Strategy is to improve Government Capacity to deliver Digital Public Services for Social and Economic Development. The overriding developmental objective represents the highest level of result envisioned by the Government and will be achieved through specific objectives of seven (7) pillars that are: -

- (a) Connected Government for the efficient delivery of public services strengthened;
- (b) Inter-institutional collaboration and coordination in public services strengthened;
- (c) E-Services delivery enhanced and sustained;
- (d) e-Government Research, Innovations and Development enhanced;
- (e) e-Government cyber-security ecosystem improved;
- (f) E-Government Human Capital Capacity Strengthened; and
- (g) E-Government Management Frameworks strengthened.

4.3 Linkage with Tanzania Vision 2025, Third National Five-Year Development Plan 2021/22–2025/26 and CCM Manifesto 2020

The e-Government Strategy 2022 outlines objectives that the Government will implement in line with the Tanzania vision 2025, National Five-Year Development Plan III (FYDP III) and the ruling CCM party manifesto 2020. The five thrusts articulated in the FYDP III that will contribute substantially to pillars and objectives of the e-Government strategy 2022 are digital economy, service delivery, investment and trade, social services and skills development. These strategic thrusts have been established to align with efforts on the critical priorities towards attaining Tanzania Government Vision 2025. Furthermore, it is stated in the Ruling Party Manifesto of the year 2020 – 2025, among others, on the need for Communication and Information Technology to transform our socio - economic sectors; decrease the incidences which are related to cybercrimes by establishing Computer Emergency Response Team (CERT); and strengthening of ICT usage in the society by increasing the number of internet users from 9 to 23.1 million in 2020.

4.4 Results Framework Matrix

The Results Framework Matrix contains e-Government overall Development Objective, the Objective Code, Strategic Objectives, Intermediate Outcomes and Outcome indicators. The matrix envisions how the Development Objective will be achieved and how the results will be measured. The indicators in the matrix will be used to track progress towards achievement of the Intermediate Outcomes and Objectives. The overall of the e-Government Development Objective will be contributed by several Public Institutions and may not be completely attributed to interventions under this Strategy. The Results Framework Matrix is as detailed in Table 5. Below.

Table 5: Results Framework Matrix

Development objective	Objective codes	Objectives	Intermediate Outcomes	Outcome indicators
To improve Government Capacity to deliver Digital Public Services for Social and Economic Development	1	Connected Government for the efficient delivery of public services strengthened	<ul style="list-style-type: none"> (i) Improved availability of Network Services (GovNet, Internet & LAN) (ii) Improved access to e-Government resources (iii) Improved Public Service Delivery 	<ul style="list-style-type: none"> (i) % of public institutions connected to GovNet (ii) % of facilities (schools, service delivery points, health facilities, district courts etc.) connected to GovNet (iii) % of public institutions hosted at the Government Data-centre (iv) % of availability of e-Government systems and services (v) % of response time of e-Government systems services (vi) % change in e-Government Development Index
	2	Inter-institutional collaboration and coordination in public services strengthened	<ul style="list-style-type: none"> (i) Increased interoperability of Public Institution's Systems (ii) Increased data sharing and exchange 	<ul style="list-style-type: none"> (i) % change of systems exchanging information through Data Sharing Exchange Platform (ii) % of time reduction to process e-services

Development objective	Objective codes	Objectives	Intermediate Outcomes	Outcome indicators
			(iii) Reduced turnaround time (standard time interval from start to finish) for Public Services (iv) Improved Government Services Directory	(iii) % of Government Business processes reviewed and documented in Government Service Directory (GSD)
	3	E-Services delivery enhanced and sustained	(i) Reduced turnaround time (standard time interval from start to finish) for Public Services (ii) Improved Public Service Delivery (iii) Reduced customer complaints (iv) Increased number of services delivered under one roof and single window (v) Increased level of Citizen satisfaction (vi) Reduced corrupted bureaucratic processes (vii) Increased number of e-Services delivery channels to	(i) % of reduction of time to receive e-services (ii) % reduction of processing time to complete e-services (iii) % of services delivered through One Stop Centre (iv) Level of user satisfaction of e-services (v) % of e-services delivered through multiple channel (vi) Level of maturity of e-service (vii) % increase in e-services Global Ranking

Development objective	Objective codes	Objectives	Intermediate Outcomes	Outcome indicators
	4	e-Government Research & Development and Innovations enhanced	<ul style="list-style-type: none"> (i) Increased number of home-grown e-Government solutions (ii) Increased number of citizen centric e-services (iii) Increased number of useful/usable e-Government research publications 	<ul style="list-style-type: none"> (i) % of e-services innovated (ii) % increase of home-grown e-Government solutions (iii) % increase in e-Government Global Ranking
	5	e-Government cyber-security ecosystem improved	<ul style="list-style-type: none"> (i) Increased confidentiality, integrity, availability, and reliability of e-Government resources (ii) Increased citizens' awareness on cyber-security matters (iii) Reduced number of cyber-security risks (iv) Increased security controls (v) Rapid response to cyber-security incidents 	<ul style="list-style-type: none"> (i) % change of e-Government cyber-attacks cases reported (ii) Level of preparedness of cyber attacks (iii) Mean time to respond to e-Government cyber attacks

Development objective	Objective codes	Objectives	Intermediate Outcomes	Outcome indicators
			(vi) Established e-Government Security Operations Centre	
	6	E-Government Human Capital Capacity Strengthened	(i) Increased competency of Government employees in ICT matters (ii) Increased availability of ICT expertise (iii) Reduction in ICT outsourcing costs and risks (iv) Increased e-Government initiatives (v) Increased ICT literacy level (vi) Improved Public Service Delivery (vii) Increased Staff performance	(i) % Certified Government ICT professional (ii) Level of satisfaction of Government ICT professional (iii) % of diversity inclusion on e-Government initiatives (iv) Level of satisfaction of end-users on e-Government services (v) Level of Staff Performance (vi)
	7.	E-Government Management Frameworks strengthened	(i) Improved Public Service Delivery (ii) Increased Customer Satisfaction	(i) % of Public Institutions comply with e-Government standard and guidelines (ii) % of e-Government ICT committees operationalized

Development objective	Objective codes	Objectives	Intermediate Outcomes	Outcome indicators
			(iii) Increased Informed decision making in e-Government interventions (iv) Increased level of compliance to e-Government regulations, rules, and procedures	

4.5 Monitoring Plan

The Monitoring Plan consists of indicators and indicator descriptions, baseline for each indicator; indicator targets values, data collection and methods of analysis, indicator reporting frequency and the entity responsible for data collection, analysis and reporting. The outcome indicators will be reported on quarterly and annual basis. Tracking of the indicators will be made on quarterly basis. The monitoring and evaluation plan is detailed in Table 6 below.

Table 6: Monitoring Plan

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
1. Connected Government for the efficient delivery of public services strengthened	<p>% increase of public institutions connected to GovNet</p> <p>This indicator intends to show the percentage of Public Institutions connected to the Government Network.</p> <p>This will be calculated as $(x/y)*100$, where x = (total number of Public Institutions Connected to GovNet) and y = (the baseline value of the Public Institutions</p>	2022/23	265	20	40	60	80	100	GovNet Connectivity reports	Surveys, Questionnaires	Semi Annually	Reports	Semi Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	connected to the Government). It will include MDAs, RS, and LGAs													
	% of facilities (schools, service delivery points, health facilities, district courts etc.) connected to GovNet This will be calculated as $(x/y)*100$, where x = (total number of facilities Connected to the GovNet) and y = (the total number of the facilities in the respective sector)	2022/23	340	40	50	60	80	90	GovNet Connectivity reports	Surveys, Questionnaires	Semi Annually	Reports	Semi Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>% of public institutions hosted at the Government Data-centre</p> <p>This indicator intends to show the Public Institutions hosting their systems or data in the Government Data-Centres</p> <p>This will be calculated as $(x/y)*100$, where x = (total number of public institutions hosting their systems or data in the GDC) and y = (the total number of the Public Institutions).</p>	2022/23	132	20	40	60	80	90	GovNet Connectivity reports	Surveys, Questionnaires	Semi Annually	Reports	Semi Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>% of availability of e-Government systems and services</p> <p>This indicator intends to show the level of availability of e-Government systems to be accessed online.</p> <p>It will be calculated as $(x/y)*100$, where x = (total number of hours of e-Government systems being online) and y =Total number of hours in one year</p>	2022/23	NA	50	70	95	90	90	GovNet Connectivity reports	Surveys, Questionnaires	Semi Annually	Reports	Semi Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>% Reduction of waiting time to complete a particular Government service</p> <p>This indicator intends to show the percentage of time reduced in accessing a Service being offered digitally in comparison to the same service when offered manually. It will be calculated as</p> <p>$((x1-x0)/x1)*100$ where $x0$ = Time taken to access a service A in digital form and $x1$ = Time taken to access service A in manual form</p>	2022/23	NA	20	40	60	80	90	General reports	Surveys, Questionnaires	Annually	Reports	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>% change in e-Government Development Index</p> <p>This indicator intends to show the percentage of change of position in the global e-Government ranking.</p> <p>It will be calculated by $((x1-x0)/x1)/100$, where $x0$ = (the score in the current position) and $x1$ = (the score in the previous position)</p>	2022/23	153	20	30	35	45	55	World Economic Forum overall e-Government Index	Report	Annually	United Nations	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
2. Inter-institutional collaboration and coordination in public services strengthened	<p>% of systems exchanging information through Government Data Sharing and Exchange Platform</p> <p>This indicator intends to measure the percentage of a number Public Institution systems exchanging or sharing data through a data sharing and exchange platform. It will be calculated as $(x/y) * 100$, where $x =$ (Number of Public Institution systems exchanging or sharing data through a data sharing and exchange platform) and $y =$ (total</p>	2022/23	52	20	40	60	80	90	Systems Reports	Survey, Questionnaire, Interviews	Annually	Reports	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	number of Public Institution systems.													
	% of time reduction to process e-services This indicator intends to show the percentage of time reduced in accessing a Service being offered digitally. It will be calculated as $((x1-x0)/x1)*100$ where $x0$ = Time taken to access a service A in digital form and $x1$ = Time taken to access service A in manual form	2022/2023	NA	25	35	45	55	70	Government Services Directory (GSD)	Report	Annually	Reports	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>% of Government Business processes reviewed and documented in Government Service Directory (GSD)</p> <p>This indicator intends to show the percentage of Government Business processes reviewed and properly documented.</p> <p>It will be calculated as $(x/y)*100$ where $x =$ (Number of Business processes documented in the Government Service Directory and $y =$ (Total number of business</p>	2022/23	NA	20	40	60	80	90	Administrative Reports	Survey, Questionnaire and Interviews	Annually	Reports	Annually	PO-PSMGG

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	processes targeted to be documented)													
3. E-Services delivery enhanced and sustained	% of reduction of time to receive e-services	2022/23	NA	25	35	45	55	70	Government Services Directorate (GSD)	Report	Annually	Reports	Annually	PO-PSMGG/eGA
	% reduction of processing time to complete e-services	2022/23	NA	25	35	45	55	70	Government Services Directorate (GSD) and e-mrejesho	Report	Annually	Reports	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	% of services delivered through One Stop Centre	2022/23	NA	20	40	60	80	100	GSD and Huduma Jamii Portal	Report	Annually	Reports	Annually	PO-PSMGG/eGA
	Level of user satisfaction of e-services This indicator intends to show how recipients of e-services are satisfied with the delivered services. It is measured by taking a number of users satisfied against a total number of users surveyed	2022/23	NA	20	40	60	80	90	Surveys	Questionnaires	Annually	Raw data collected	Annually	PO-PSMGG/eGA
	% of e-services delivered through multiple channel	2022/23	50	25	35	45	55	70	Ega	Reports	Annually	Reports	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	Level of maturity of e-service	2022/23	NA	25	35	45	55	70	e-Government Maturity Model	Reports	Annually	Reports	Annually	PO-PSMGG/eGA
4. e-Government Research & Development and Innovations enhanced	<p>% of e-services innovated</p> <p>This indicator intends to show the proportion innovations made on e-Government services as a result of research and development activities.</p> <p>It will be calculated as $(x/y)*100$</p> <p>Where x = (Number of e-services innovated)</p>	2022/23	5	20	40	50	70	80	eGA	Surveys	Annually	Raw data collected	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	n = number of year 1, 2, 3, 4, and 5 and y = Total number of services													
	<p>% increase of home-grown e-Government solutions</p> <p>The indicator intends to measure proportion of increase of e-Government solutions developed locally.</p> <p>It will be measured by $((x1-x0)/x0)*100$ where x0 is the baseline year x1, x2,x5 is the number of the e-Government solutions in each year.</p>	2022/23	89	20	40	50	60	80	eGA	Surveys	Annually	Raw data collected	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
5. e-Government cyber-security ecosystem improved	<p>% change of e-Government cyber-attacks cases reported</p> <p>This indicator intends to measure to what extent e-Government systems are secured from cyber attacks.</p> <p>This will be calculated as $((x_n - x_0) / x_0) * 100$ where x_0 is the number of cybercrime cases reported in baseline year and n = number of cybercrime cases reported in subsequent years 1, 2, 3, 4, and 5</p>	2022/23	21	100	100	100	100	100	eGA	Reports	Annually	Report	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>Level of preparedness of cyber attacks.</p> <p>This indicator intends to measure preparedness in prevention and avoidance of cyber attacks.</p> <p>This will be calculated on the number of initiatives implemented in avoidance and prevention from cyber attacks.</p>	2022/2023	10	100	100	100	100	100	Report	Survey, Questionnaire	Annually	Reports		PO-PSMGG/eGA
	<p>Mean time to respond to e-Government cyber attacks.</p> <p>This indicator intends to measure time taken to</p>	2022/2023	NA	100	100	100	100	100	Report	Survey, Questionnaire	Annually	Reports	Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>respond e-Government attacks .</p> <p>This will be calculated on the Total number of Time taken to respond on cyber attacks to the Total number of operational hours.</p>													
6. E-Government Human Capital Capacity Strengthened	<p>% Certified Government ICT professionals disaggregated by gender.</p> <p>This indicator will show the percentage of certified Government ICT professional disaggregated by gender</p>	2022/2023	NA	20	30	40	60	70	Report	Survey, Questionnaire	Annualy	Reports	Annualy	MICIT/ICTC

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>Level of satisfaction of Government ICT professional.</p> <p>This indicator will show the percentage of satisfied of Government ICT professional based on their training and incentives</p> <p>This will be calculated as $((x/y)*100$ where x is the number of ICT professional satisfied y = Total number of ICT professionals in the Public Institutions</p>	2022/2023	NA	20	60	80	90	xx	Report	Survey, Questionnaire	Annualy	Reports	Annualy	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				FREQ. OF REPORTING	RESPONSIBILITY FOR DATA COLLECTION
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		
	<p>% of diversity inclusion on e-Government initiatives</p> <p>This indicator will show the percentage of diversity inclusion on e_Government initiatives.</p> <p>This will be calculated as $((x/y)*100$ where x is the number of Government initiatives with diversity inclusion and y = Total number of E-Government Initiatives .</p>	2022/2023	20	40	50	60	40	80	Report	Survey, Questionnaire	Annualy	Reports		PO-PSMGG/eGA
	Level of satisfaction of end-users on e-Government services	2022/2023	NA	20	40	60	80	95	Report	Survey, Questionnaire	Annualy	Reports	Annualy	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>This indicator will show the percentage satisfaction of end-users on e-Government services</p> <p>This will be calculated as $((x/y)*100$ where x is the number of End-users satisfied and y = Total number of End Users surveyed.</p>													
7. E-Government Management Frameworks strengthened	<p>% of Public Institutions that comply with e-Government standard and guidelines.</p> <p>This indicator will show the percentage of compliance of Public</p>	2022/2023	151	20	40	60	80	90	Reports	Survey and Questionnaire	Quarterly	Reports	Quarterly	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION	
	<p>Institutions to Management Frameworks document.</p> <p>This will be calculated as $((x_n - x_0) / x_0) * 100$ where x_n is the Total number of Public Institutions that comply with e-Government standards and guidelines and X_0 = Total number of Public Institutions</p>												

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	<p>% of e-Government ICT committees operationalized.</p> <p>This indicator will show the percentage of operationalization of e-Government ICT Steering committees in the Public Institutions.</p> <p>This will be calculated as $((x/y) * 100$ where x is the number of Public Institution with operationalized ICT steering committee and y = Total number of Institutions required to operationalize the e-</p>	2022/2023	100	20	40	60	80	90	Reports	Surveys, Questionnaires	Semi Annually	Reports	Semi Annually	PO-PSMGG/eGA

OBJ. CODE AND DESCRIPTION	INDICATOR AND INDICATOR DESCRIPTION	BASELINE		INDICATOR VALUES (%)					DATA COLLECTION AND METHODS OF ANALYSIS				RESPONSIBILITY FOR DATA COLLECTION	
		DATES	VALUES (No.)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	DATA SOURCE	DATA COLLECTION INSTRUMENT/METHODS	FREQ. OF DATA COLLECTION	MEANS OF VERIFICATION		FREQ. OF REPORTING
	Government ICT committees.													

4.6 Planned Reviews

There will be reviews that aim to obtain progress status on the implementation of the e-Government Strategy. These planned reviews will be done through high-level meetings during the whole e-Government Strategy implementation cycle.

4.6.1 Review Meetings

Several high-level meetings will be conducted to track progress on the milestones, activities and targets/outputs critical for achievement of the e-Government Strategic Objectives. These meetings include the National e-Government Steering Committee meetings; the e-Government Technical Committee meetings; and the Institutional ICT Steering Committee Meetings. The review meeting will be as depicted in Table 7 below:

Table 7: Planned Review Meetings

S/No	Types of Meeting	Frequency	Designation of the Chairman	Participants
1.	National e-Government Steering Committee Meeting	Semi Annually	Chief Secretary	(i) The Permanent Secretary of the Ministry responsible for e-Government; (ii) The Permanent Secretary of the Ministry responsible for ICT; (iii) The Permanent Secretary of the Ministry responsible for Finance; (iv) The Permanent Secretary of the Ministry responsible for Local Government; (v) The Deputy Attorney General; and (vi) The Director General of e-Government Authority.
2.	e-Government Technical Committee Meeting	Quarterly	Chairman appointed by the Minister responsible for e-Government	(i) The Secretary as appointed by the e-Government Authority; (ii) The appointed heads of ICT of Ministries and ICT Technical Directors of Public Institutions.
3.	Institutional ICT Steering Committee	Quarterly	Chairman appointed as by Institution's Accounting Officer	(i) Institutional Head of ICT who shall provide secretariat to the Committee; (ii) Institutional Head of Planning; (iii) Institutional Head of Procurement; (iv) Chief Internal Auditor; (v) Chief Accountant; and (vi) At least one head of key business unit.

4.7 Evaluation Plan

This Evaluation Plan consists of the evaluation studies to be conducted during the Strategy's implementation cycle, description of each study, the evaluation questions, methodology, timeframe and the responsible entity to conduct the evaluation. PO-PSMGG will conduct two (2) evaluation studies over the period of 5 years with a total of 15 evaluation questions. The evaluation studies intend to obtain evidence as to whether the interventions and outputs achieved have led to the achievement of the outcomes as envisioned in the e-Government outputs. The Evaluation Plan matrix is detailed in Table 6 below:

Table 8. Evaluation Plan Matrix

No	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible
1.	Evaluation on Integrated Service Delivery	This evaluation aims at measuring the achievement of an integrated and connected Government of which Government Services are integrated together and accessible to Citizens irrespective of the Government Agency	<ul style="list-style-type: none"> ● Is there any feature to submit service forms online (PDF or Web based) when accessing a Government Service? ● Are there any multiple channel access for Government services at different levels? ● Is there a single payment gateway for all channels? ● Can Services be availed without the need for a physical touch point for document submission and verification? ● Is there a single sign on using a unique Id. On 	<ul style="list-style-type: none"> ● Surveys ● Questionnaires ● Interviews ● Focus group discussions ● Controlled studies ● Literature reviews 	December, 2023	PO-PSMGG

No	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible
			accessing Government Services?			
2.	Performance of e-Government Infrastructure, Systems and facilities	This evaluation intends to examine the efficiency of available/ installed e-Government Infrastructure, Systems and facilities	<ul style="list-style-type: none"> ● What is the state or condition of e-Government Infrastructure? ● What is the state or condition of e-Government systems? ● What is the state or condition of e-Government facilities? ● What is the efficiency of the systems/facilities? ● What are the factors affecting performance of the Infrastructure/Syste ms/facilities 	<ul style="list-style-type: none"> ● Surveys ● Questionnaires ● Interviews ● Focus group discussions ● Controlled studies ● Literature reviews 	December, 2023	PO-PSMGG
3.	Effectiveness of e-Government Cyber-security	This evaluation aims at measuring the	<ul style="list-style-type: none"> ● Are mandatory emergency and contingency activities 	<ul style="list-style-type: none"> ● Surveys ● Questionnaires ● Interviews 	December, 2023	PO-PSMGG

No	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible
		level of compliance in e-Government Cyber-security	<p>implemented as required?</p> <ul style="list-style-type: none"> ● Is there a Cyber-security Team for e-Government in place? ● Are there competent cyber-security focal persons in the Public Institutions? ● What other interventions are needed to improve e-Government Cyber-security? 	<ul style="list-style-type: none"> ● Focus group discussions ● Controlled studies ● Literature reviews 		
4.	Level of Institutional collaboration and coordination	This evaluation intends to measure the level of collaboration and coordination among Public Institution.	<ul style="list-style-type: none"> ● Are there any inter-institutional business processes? ● Are there any Data Sharing and Exchange Platform? ● Are there any systems that are integration among public institutions? 	<ul style="list-style-type: none"> ● Surveys ● Questionnaires ● Interviews ● Focus group discussions ● Controlled studies ● Literature reviews 	December, 2023	PO-PSMGG

No	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible
			<ul style="list-style-type: none"> What is the state of public services digitalization? 			
5.	Level of E-Services delivery and availability	This evaluation aim to measure level of e-service delivery across multiple channels and groups	<ul style="list-style-type: none"> What is the quality e-Services across multiple delivery channels? Is there inter-institutional collaboration in the delivery of e-Services? What is the level of e e-Services availability? What is the level e-Services accessibility to diversified groups? 	<ul style="list-style-type: none"> Surveys Questionnaires Interviews Focus group discussions Controlled studies Literature reviews 	December, 2023	PO-PSMGG
6.	e-Government Research & Development and Innovations enhanced	This evaluation aim to measure the level of achievement in e-Government research,	<ul style="list-style-type: none"> Are there any locally developed e-Government innovations? Are there any collaboration with stakeholders in e- 	<ul style="list-style-type: none"> Surveys Questionnaires Interviews Focus group discussions Controlled studies 	December, 2023	PO-PSMGG

No	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible
		development and innovation	<p>Government research, innovations and development?</p> <ul style="list-style-type: none"> • Are there any incentives, support and awards for local innovators? • Are there any programs/competitions that are targeted for local e-Government innovators? 	<ul style="list-style-type: none"> • Literature reviews 		
7	E-Government Human Capital Capacity	This evaluation aim to measure the level of human capital development in e-Government	<ul style="list-style-type: none"> • How many certified ICT Professional are available in the Government? • Are there any e-Government trainings for ICT Professional? • Are there e-Government Professional forums? 	<ul style="list-style-type: none"> • Surveys • Questionnaires • Interviews • Focus group discussions • Controlled studies • Literature reviews 	December, 2023	PO-PSMGG

No	Evaluation	Description	Evaluation Questions	Methodology	Timeframe	Responsible
			<ul style="list-style-type: none"> • Are there end users training for e-Government? • Is there any collaboration between Government institutions and Academic institutions regarding ICT curricular development that will meet e-Government human capital demand? 			

ANNEXES

Annex 1: Strategy Matrix

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
1	<ul style="list-style-type: none"> Connected Government for the efficient delivery of public services strengthened 	<ul style="list-style-type: none"> Consolidate GovNet infrastructure Improve GovNet infrastructure Expand coverage of GovNet to all LGA and MDAs facilities/service delivery points. Enhance and optimize GDC services. 	<ul style="list-style-type: none"> 90% of critical system replication to DR tested by June 2025 184 LGAs and 600 MDAs connected to GovNet by June 2026 184 LGAs and 600 MDAs installed structured LAN by June 2025 90% of district hospitals connected to GovNet by June 2026 50% of health centres connected to GovNet by June 2026 50% of all Government dispensaries connected to GovNet by June 2026 All Government service delivery points installed with at least two computers by June 2026 43 foreign missions abroad connected to GovNet by June 2026 	<ul style="list-style-type: none"> % of public institutions connected to GovNet % of facilities (schools, service delivery points, health facilities, district courts etc.) connected to GovNet % of public institutions hosted at the Government Data-centre % of availability of e-Government systems and services % of response time of e-

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● 50% of Government secondary schools installed with internet services by June 2025 ● 90% of district and regional courts connected to GovNet by June 2026 ● 50% of primary courts connected to GovNet by June 2026 ● GovNet Bandwidth to all MDAs and LGAs increased from 2.1 Gb/s to 5 Gb/s by June 2025 ● 1000 Agriculture Extension Resources Centres connected to GovNet by June 2025 ● 90% of Higher Learning Government Institutions connected to GovNet by June 2026 ● 75% of Government institutional systems facilitated with hosting services at the GDC June 2026 ● One additional Government Data-centre established by June 2026 ● 26 Land Regional offices connected to GovNet by June 2026 	<p>Government systems services</p> <ul style="list-style-type: none"> ● % change in e-Government Development Index

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● Independent Communication Services - IMSN finalized and maintained by June, 2026 ● Expansion of basic infrastructure in learning institutions increased by 20% by June, 2026. ● Rehabilitate and improve ICT infrastructures in all Universities and MoEST head quarter by June, 2026 ● Strengthen use of e-office to deliver services by June, 2026 	
2	<ul style="list-style-type: none"> ● Inter-institutional collaboration and coordination in public services strengthened 	<ul style="list-style-type: none"> ● Improve inter-institutional business processes ● Strengthen Data Sharing and Exchange Platform ● Enhance system integration and interoperability ● Enhance Government 	<ul style="list-style-type: none"> ● All ICT systems and projects in MDAs and LGAs registered in the Government ICT projects database quarterly ● Government Data Sharing and Exchange Platform (GDSXP) operationalized by June 2025 ● Huduma Data Exchange Platforms operationalized by June 2025 ● LGA Sector Sectorial Data Exchange Platforms enhanced by June 2024 ● Government Services Directory (GSD) establish as an 	<ul style="list-style-type: none"> ● % change of systems exchanging information through Data Sharing Exchange Platform ● % of time reduction to process e-services ● % of Government Business processes

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
		and Sectorial Portal <ul style="list-style-type: none"> ● Enhance public services digitalization 	authoritative central source of standard services by December 2023 <ul style="list-style-type: none"> ● Business processes reengineering for 100 services implement June 2027 ● Business processes integration for 50 services implement June 2027 ● 100 Government systems share data through Data Sharing Exchange Platform by June 2027 ● Personal Unique Identification Number for accessing eService established by October 2024 ● Business processes in all public institutions involving financial transactions automated by June 2026 ● Electronic records and archive repository enhanced by June 2024 ● 30,000 subject files converted to electronic files by June 2026 ● Civil Registration Systems developed/improved and integrated by 2026 	reviewed and documented in Government Service Directory (GSD)

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● Identification Systems developed/improved and integrated by 2026 ● Immigration Systems developed/improved and integrated by 2026 ● Billing, Tax and Revenue Systems developed/improved and integrated by 2026 ● Business Registration and Licensing Systems developed/improved and integrated by 2026 ● Land and Property Registration Systems developed/improved and integrated by 2026 ● Social Health Membership Systems developed/improved and integrated by 2026 ● Tanzania Police and Public Safety Services Systems developed/improved and integrated by 2026 ● Government Central Core Systems developed/improved and integrated by 2026 	

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● Social Security Systems improved and integrated by 2026 ● 5 Sectorial systems developed/improved and integrated by June 2026 ● ILMIS rollout to 150 Districts Land Councils by June 2026 ● Water Authorities Supply Mains Mapping and the Fire Hydrants systems improved and Integrated by June 2026 ● A Digital Dashboard (Platform) for reporting implementation of Programs coordinated by Government, MDAs and LGAs on Government decisions and directives developed by June 2026 ● Digital Platform for One Health for strengthening the National One Health Coordination Unit developed by 2026 ● A Platform for public awareness on Disaster prevention, preparedness, responses, recovery plans developed by 2028 	

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● Teaching, learning and management of all Universities and Colleges digitalized by June, 2026 ● Higher education institutions remain abreast of technological change and global trends by June, 2026. 	
3	<ul style="list-style-type: none"> ● E-Services delivery enhanced and sustained 	<ul style="list-style-type: none"> ● Promote access high quality e-Services across multiple delivery channels ● Promote inter-institutional collaboration in the delivery of e-Services ● Facilitate e-Services availability ● Facilitate e-Services accessibility to 	<ul style="list-style-type: none"> ● Framework for e-Government services accessibility prepared by June 2024. ● Civil Registration and Identification Services digitized by 2026 ● Residential Address Verification Services digitized by 2026 ● Electronic Payment Services enhanced by 2026 ● Government Employee self-service digitized by 2026 ● Digital Signature Services for Government Systems implemented by 2026 ● Business Registration and Licensing e-Services enhanced by 2026 	<ul style="list-style-type: none"> ● % of reduction of time to receive e-services ● % reduction of processing time to complete e-services ● % of services delivered through One Stop Centre ● Level of user satisfaction of e-services ● % of e-services delivered through multiple channel ● Level of maturity of e-service

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
		diversified groups	<ul style="list-style-type: none"> ● Government Billing, Tax and Revenue e-Services enhanced by 2026 ● Education Registration Services enhanced by 2026 ● University Students Admission e-Services enhanced by 2026 ● Social Security e-Services enhanced by 2026 ● Land and Property e-services enhanced by 2026 ● Social Health e-services enhanced by 2026 ● Police e-Services enhanced by 2026 ● 5 Sectorial Services digitized by June 2026 ● E-Government services delivered in English and Kiswahili by June 2025 ● 70% of e-Government services delivered through web and mobile channel by June 2026 ● All of e-Government mobile service accessed through SMS and USSD by June 2026 	<ul style="list-style-type: none"> ● % increase in e-services Global Ranking

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● E-Services availability monitored daily by June 2026 ● 31 single delivery points for citizen centric e-services established by June 2026 ● 32 services through single delivery point delivered by June 2026 ● 50 transactional services on the Government Portal operationalized by June 2026 ● 21 Ministerial websites upgraded to Sectorial Portals by June 2025 ● 100% basic infrastructure that allow justice services delivered through e-justice available among justice institutions by June 2026 ● 75% of justice institutions have effective efficient use of digital technologies in access of justice by June 2026 	
4	<ul style="list-style-type: none"> ● e-Government Research & Development and 	<ul style="list-style-type: none"> ● Promote locally developed e-Government innovations 	<ul style="list-style-type: none"> ● 5 Emerging digital technologies evaluated and tested by June 2026 	<ul style="list-style-type: none"> ● % of e-services innovated ● % increase of home-grown e-

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
	Innovations enhanced	<ul style="list-style-type: none"> ● Promote the adoption of emerging and environmentally friendly e-Government technologies ● Promote collaboration with stakeholder in e-Government Research, Innovations and Development 	<ul style="list-style-type: none"> ● 5 Government sectoral innovations implemented and operationalized by 2026 ● 2 e-Government innovations from higher learning institutions implemented and operationalized by June 2026 ● Collaboration with 7 Higher learning and research Institutions on e-Government operationalized by June 2024 ● Collaboration with 3 overseas partners on e-Government operationalized by June 2026 ● Established Proof of concepts on different disciplined areas on ICT emerging technologies by 2024 ● Three (3) ICT hubs and one incubator established at national service by 2026 ● Established MODNS ICT's innovators forum by 2024 ● Establishing three (3) multipurpose computer labs by 2025 ● Innovative business models that leverage on an open access, 	<p>Government solutions</p> <ul style="list-style-type: none"> ● % increase in e-Government Global Ranking

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			incubation, startups and accelerators for innovation by 2026	
5	<ul style="list-style-type: none"> e-Government cyber-security ecosystem improved 	<ul style="list-style-type: none"> Strengthen e-Government cyber-security infrastructure Enhance Cyber-security technical capabilities and awareness. Improve security of e-service transactions 	<ul style="list-style-type: none"> Government PKI Certification Authorities operationalized by June 2025 E-Government Cyber-security Strategy reviewed by June 2023. e-Government Security, Standards and Guidelines reviewed by June 2023 E-Government Security Operation Centre operationalised by June 2023. 25 Government cyber-security awareness programs undertaken by June 2026. Cyber-security capacity building to 500 ICT personnel conducted by June 2026 Innovation Centres in LGA and RS level established by June 2026 Digital signature implemented on e-Government Systems by June 2026 	<ul style="list-style-type: none"> % change of e-Government cyber-attacks cases reported Level of preparedness of cyber attacks Mean time to respond to e-Government cyber attacks

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<ul style="list-style-type: none"> ● All national critical infrastructure registered and secured by 2024 ● Human resource development plan on cyber security prepared and implemented by 2026 ● The government to be issuing cyber security alerts timely and precisely by June 2026 ● Legal and regulatory framework reviewed to support cyber security in digital economy by June 2026 	
6	<ul style="list-style-type: none"> ● E-Government Human Capital Capacity Strengthened 	<ul style="list-style-type: none"> ● Promote e-Government human capital knowledge and skill-set ● Facilitate e-Government capacity building ● Improve Government ICT cadre welfare ● 	<ul style="list-style-type: none"> ● 5 e-Government professional forums conducted annually ● E-Government training needs assessment conducted by June 2024 ● e-Government technical training programme for 450 ICT professionals conducted by June 2026 ● e-Government policy makers training programme developed and implemented by June 2026 ● E-Government for end-user training programme for 25,000 	<ul style="list-style-type: none"> ● % Certified Government ICT professionals disaggregated by gender ● Level of satisfaction of Government ICT professional ● % of diversity inclusion on e-Government initiatives ● Level of satisfaction of

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<p>public servants conducted by June 2026</p> <ul style="list-style-type: none"> ● E-Government long term training programme for 50 ICT professional conducted by June 2026 ● ICT cadre scheme of service reviewed by June 2024 ● ICT staff needs assessment conducted by June 2024 ● To facilitate the transfer of digital skill-set and capacity Building of ICT staff by June 2025 ● The TCU to have curricular for cyber security at Bachelor and Masters programs by year 2023, and PhD programs by 2025 ● Skills on emerging digital technology increased by 80% in institutional level by June, 2026 ● 75% of justice actors capacitated with competencies and innovative in digital skills by June 2026 	<p>end-users on e-Government services</p> <ul style="list-style-type: none"> ● Level of Staff Performance ● Level of Staff satisfaction ● % increase in the number of ICT Professionals disaggregated by gender
7	<ul style="list-style-type: none"> ● E-Government Management 	<ul style="list-style-type: none"> ● Enhance e-Government 	<ul style="list-style-type: none"> ● 50 e-Government standards and Guidelines reviewed by June 2023 	<ul style="list-style-type: none"> ● % of Public Institutions comply with e-

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
	Frameworks strengthened	policy framework. <ul style="list-style-type: none"> ● Strengthening e-Government legislative environment ● Improve e-Government Institutional framework 	<ul style="list-style-type: none"> ● e-Government Act and associated regulations compliance monitored in public Institutions by June 2026 ● e-Government standards and guidelines compliance monitored in public Institutions by June 2026 ● Government ICT Management Units Governance structure reviewed by June 2026 ● e-Government Coordination Committees compliance monitored by June 2026 ● E-Government policy developed by June 2024 ● e-Government regulations reviewed by June 2026 ● Formulation of Defence ICT Policies, guidelines and regulations by 2022 ● Ministry of Defense And National Services (MODNS) digital economy framework established by 2023 ● Establish and reviewing policy, law guiding on data storage, 	Government standard and guidelines <ul style="list-style-type: none"> ● % of e-Government ICT committees operationalised

OBJECTIVE CODE	OBJECTIVE	STRATEGIES	TARGETS	OUTCOME INDICATORS
			<p>disclosed of data, and acquiring authentic data</p> <ul style="list-style-type: none"> ● ICT policy enriched with statement on environmental care as of December 2025 ● Education and training laws, regulations and policy reviewed to support development of digital economy by June, 2026. ● Conducting Monitoring and Evaluation Projects and Programmes under Digital Economy frame work by 2026 	

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