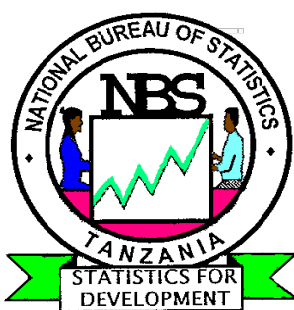**THE UNITED REPUBLIC OF TANZANIA**

INFORMATION, COMMUNICATION AND TECHNOLOGY POLICY (2017)

FOR NATIONAL BUREAU OF STATISTICS

NATIONAL BUREAU OF STATISTICS
DAR ES SALAAM
September, 2017

CONTENTS

LIST OF TABLE

GLOSSARY

Definition of terms

- **Android -** is a mobile operating system developed by Google. It is used by several smartphones and tablets. Examples include the Sony Xperia, the Samsung Galaxy, and the Google Nexus One.

- **Bandwidth -** describes the maximum data transfer rate of a network or Internet connection. It measures how much data can be sent over a specific connection in a given amount of time.

- **CISCO -** A leading manufacturer of networking equipment, including routers, bridges, frame switches and ATM switches, dial-up access servers and network management software.

- **Cyberoam -** is a vendor for information security products and services.

- **Data portal -** A visual display of data makes comparisons easier and promotes a better understanding of trends. They provide data dashboards on various topics as well as access to all the underlying data through our latest data visualization and sharing application, DataBank.

- **Firewall - is** unified Threat Management for network security.

- **Government Network (GovNet)** - It is government network that connect LGAs and MDAs to facilitate communication within government and integration of ICT systems

- **EPICOR -** is a solution with functionality for accounting, inventory control, pre-production materials planning and manufacturing execution (MES).

- **ICT Policy** – is a document that elaborates on the Public Institution's ICT Management Philosophy by providing general statements of purpose, direction and required activities for the entire ICT Management Framework, commonly known as ICT Policy of an Institution.

- **ICT ecosystem** - is the large network of firms that drive the delivery of information technology products and services

- **Intranet** - is a private network that is contained within an enterprise. It may consist of many interlinked local area networks and also use leased lines in the wide area network.

- **local area network** (**LAN**) - is a group of computers and **network** devices connected together, usually within the same building. By definition, the connections must be high speed and relatively inexpensive (e.g., token ring or Ethernet).

- **Malicious –** is any software that brings harm to a computer system.

- **National ICT Broadband Backbone (NICTBB)** – it is high speed broadband that helps to efficiently exploit the benefits from undersea submarine cables landing in Dar es Salaam by providing high quality capacity fibber optic connectivity from Tanzania to within Africa and the rest of the world.

- **Tablets** - is a wireless touch screen personal computer (PC) that is smaller than a notebook but larger than a smartphone.

- **Virtual Private Network (VPN)** – is the network that redirects connection to the Internet via a remote server run by a VPN provider. All the network traffic between device and the VPN server is directed through a secure virtual tunnel and all of the data sent and received is encrypted.

- **Wide Area Network (WAN)** - is a system of LANs connected in a relatively large geographical area. WAN consists of two or more local-area networks (LANs) and are often connected through public networks.

FOREWORD

The first NBS ICT Policy was formulated in 2012 to guide the identification and appropriate utilization of ICT at NBS by ensuring that ICT applications are integrated into the planning and implementation of NBS functions. The ICT Policy 2012 has enabled NBS to accomplish several ICT improvements, including infrastructure, systems and human resource development.

However, since the formulation ICT Policy 2012, several technological, institutional and structural changes that affect ICT development at NBS have occurred globally, nationally and within the NBS. Consequently, a number of gaps have been noted in the course of implementing the Policy.

In this view, the ICT Policy 2012 has been revised to fill the identified gaps and capture emerging ICT-related issues that are relevant to the NBS. The revised ICT Policy will enable NBS achieve excellence in statistics production and services through the development and use of ICT applications and services. The Policy is organized into five chapters.

Chapter One provides overview of the policy, background, rationale, mission, vision and objective of the policy. Chapter two provides lessons learnt, ICT situation analysis and challenges that describes the rationale for the policy review.

Chapter Three gives the focus areas, policy statements and objectives. These fall under four areas namely; ICT infrastructure, ICT human capital, ICT services management and ICT security management. Chapter four provides implementation review and institution arrangement whereby management framework, roles and responsibilities for all NBS staff are outlined.

Chapter five presents monitoring and evaluation framework where by result framework matrix, monitoring, review and evaluation plan are presented. It is worth noting that the formulation of this policy involved a number of stakeholders. We would like to thank all those who contributed to the revision of this Policy. The policy statement and objectives that are clearly defined in this Policy will be realized only if every staff play their roles effectively.

Dr. Albina Chuwa
Director General
September, 2017

CHAPTER ONE

Overview

1.0   Background

The trend towards a knowledge-based economy has emphasized the importance of Information Communication and Technology (ICT) in development efforts in production of statistics. This shift requires a well-developed technology investment plan and intelligent deployment and maintenance management.

For National Bureau of Statistics (NBS) to realize the value out of ICT investment, ICT must be deployed to improve efficiency and effectiveness in internal and external services delivery. This means that, a comprehensive framework established by ICT Policy to provide appropriate directives to harness ICT, is necessary for achievement of NBS objectives.

NBS developed ICT policy in 2012 to ensure that ICT capacity is utilized effectively and is in alignment with the NBS Strategic objectives, National ICT Policy 2003and other government ICT standards and guidelines. This was an important step towards ensuring that ICT assists NBS to attain its objectives.

The NBS ICT policy (2012) provided framework for ICT to contribute effectively to NBS objective. The NBS ICT policy has facilitated development and improvement of ICT related projects and activities. The implementation of the NBS ICT policy (2012) for over years has led to technological changes in the institution.

The institution has been making effort to accommodate these changes by adopting and making use of ICT rules and guidelines from e-Government Agency, restructuring of the NBS local area network (LAN) and adopted new and updated LAN technologies. Also, establishment of Wide Area Network(WAN) which connects NBS Regional Offices with headquarters, use of National ICT Broadband Backbone (NICTBB) for a fast and reliable internet services. On the other hand, NBS website has been updated and improved to satisfy a wide range of users. This entails use of updated and user-friendly applications in production of official statistics.

The implementation of a number of ICT initiatives at NBS has brought challenges especially in terms of interoperability and integration with existing infrastructure, security, governance, service management and skills development. To address these challenges the NBS ICT policy (2012) is reviewed to spearhead the development of ICT in the institution through process that has resulted to formulation of 2017 ICT policy.

1.1 Adoption of the National ICT Policy- 2016

The revised NBS ICT Policy 2017has been developed within the framework of the National ICT Policy 2016.The National ICT Policy strives to support the Government to achieve the aspirations of Second National Five Years Development plan 2016/17 – 2020/21 that reflects Tanzania Development Vision 2025 and Sustainable Development Goals 2030.

The NBS being a key player in supporting the Government in achieving its Goals and objectives contributes directly and indirectly to the achievement of the National Goals and related objectives and aspirations. The NBS ICT Policy 2017should therefore be viewed in its wider perspective and should not only be limited to achieving NBS Vision, Mission and Objectives. NBS ICT Policy 2017 augments the National ICT Policy 2016 and National Statistical System.

1.2 Rationale, Scope and Objective of the Policy

1.2.1 Rationale of the Policy

The NBS needs to meet its objectives of improving its services and increasing productivity by leveraging on new technologies. NBS has been investing in ICT to facilitate its internal business operations so as to attain its strategic goals. NBS operations are increasingly depending on ICT, making the Institution vulnerable to ICT related risks. In this regard, it is evident that, NBS needs to develop and operationalize a comprehensive ICT Policy to guide ICT adoption and usage within the Institution.

1.2.2   Scope of NBS ICT policy

This policy is applicable to all NBS staff including permanent and contract staff, all users of ICT equipment owned or leased by the Institution as well as all equipment connected to NBS ICT related infrastructure. This policy applies to all NBS ICT related resources and services such as provision of guidance and expertise training on ICT. It also applies to ICT support in software, hardware and any other computing infrastructure and Technical support to NBS staff and National Statistical Systems (NSS).

1.2.3   Objective of the NBS ICT Policy

The policy provides the highest-level of ICT guidelines for NBS. The main objective of this policy is to ensure that NBS ICT related investments, operations and maintenance processes and usage are well guided.

The specific objectives of this policy are;
i)   To put the strategic and operational management of ICT within the principles of ICT Governance and within the context of NBS strategic plan;

ii)   To ensure that NBSICT infrastructure operations are optimized in order to support business operations based on ICT planning, management and best practices;

iii)   To equip NBS with adequate, multi-skilled personnel and ICT professionals in orderto achieve ICT organization goals;

iv)   To set standards, methodologies, guidelines and resources mobilization in order to establish a common approach to ICT issues, resources and core business practices altogether across the NBS;

v)   To ensure that ICT applications that are in use or are acquired to address the business requirements provide reasonable return on investment;

vi)   To provide NBS with information security mechanism to support the Institution to achieve its strategic goals and provide awareness to NBS's staff and stakeholders of their responsibilities with respect of ICT security based on best practices; and

vii)   To ensure security of data, management processes and storage.

1.3   NBS Vision and Mission

1.3.1   NBS Vision

The general vision of the National Bureau of Statistics (NBS) is stated as:

To become a one-stop centre for official statistics in Tanzania.

1.3.2   NBS Mission

The general mission of the National Bureau of Statistics (NBS) is stated as:

To produce quality official statistics and services that meet needs of national and international stakeholders for evidence-based planning and decision-making.

CHAPTER TWO

Situation Analysis

2.0 Introduction

This chapter examines the current NBS ICT policy (2012), contexts and pragmatics under which the new NBS ICT policy bases its analytical assumptions. The chapter analyses the current NBS ICT status based on the former policy and leverages on analysis of strengths, weaknesses, opportunities and challenges to extract issues that need to be addressed.

2.1 Lessons Learnt from the NBS ICT Policy (2012)

The last NBS ICT Policy (2012) was developed to cover financial period of three years, 2012/13 – 2016/17 while the reviewed policy covers financial period of four years 2017/18 – 2020/21. The reviewed policy has taken into account changes on the current and future aspired government frameworks and targets.

The following points illustrate some of the lessons learnt from the NBS ICT Policy (2012);

i)   For the purpose of reducing cost of statistical production in surveys and census, the previous policy did not consider the evolution and adaptation of an on-line data collection for surveys and census; which brings the need of guidelines and protocols for use of on–line data collection.

ii)   The NBS role of coordinating statistical activities in the country was not well articulated in the ICT Policy2012. The NBS Statistics Act, 2015 and the NBS Strategic Plan 2016/17-2020/21 addresses this role. A specific objective to accommodate this function was not stated in the ICT Policy2012. In the current strategic plan, the NBS role of coordinating statistical activities in the country has been well articulated. To that end, the ICT Policy 2017needs to articulate coordination of statistical activities in the NSS.

iii) Apart from concentrating on addressing key issues on the policy implementation, the NBS ICT policy 2012 did not have a monitoring and evaluation framework to track its implementation. Based on this, the current ICT policy will include comprehensive monitoring and evaluation framework for this purpose.

2.2 Internal and External analysis

2.2.1 Internal analysis

The NBS as a Government Autonomous Institution was established by the Statistics Act No. 9 of 2015 is mandated to provide official statistics in the country. It has made outstanding development in deploying ICT systems and devices. However, there is still a need to enhance and maintain this development in order to improve production of official statistics.

The implementation of the ICT policy 2012has made progress in the development and utilization of ICT in the institution, compared to the time before the establishment of the policy. There are number of rules and regulations for the use of ICT that have been developed and implemented. These include installation and use of advanced technology such as CISCO devices that offer high processing speed and allow network segmentation that increases network security. Voice over IP VOIP) a telephone system which uses Local Area Network (LAN) and Wide Area Network (WAN) for data transfer and communication within NBS offices.

Deployment of LAN and WAN which provides a link to the NBS Regional Offices has enabled systems and file sharing among NBS staff. The use of Internet via fibber link from Tanzania Telecommunications Company Limited (TTCL) and international purchased Government bandwidth through Government Communication Network (GovNet) has improved communication within and outside the organization, and it has made tremendous changes in pursuing NBS core functions.

The availability of website that provides information to the public has enabled NBS to disseminate data to all levels of stakeholders as well as sharing global information resources and knowledge. The website has built in Data Portals with tools for organizing, storing and disseminating data. The portals allow statistical data to be easily and quickly accessed and shared across MDAs, LGAs, Development Partners and the general public.

There are a number of data portals which have been designed to cater for different sectors to ease availability and accessibility of data. The portals include:

i)   Tanzania Socio-Economic Database (TSED), this is a comprehensive and up-to-date socio-economic indicators database. It is a tool for organizing, storing and presenting data

in a uniform manner, the database is compliant with international statistical standards and operates on desktops, CDs/DVDs and on the website (www.tsed.go.tz);

ii) Tanzania National Data Archive (TNADA), this is a web-based cataloguing system or data archive for unprocessed dataset that serves as a portal for researchers, planners and decision makers. Data can be accessed and downloaded through www.nbs.go.tz/nada3; and

iii) Food and Agriculture database (CountrySTAT), this is a statistical framework designed to organize, integrate and disseminate data and metadata on food and agriculture statistics. CountrySTAT is linked to the NBS website (www.nbs.go.tz) and it can also be viewed at www.tanzania.countrystat.org.

Availability of the library and bookshop services has given opportunity for NBS to disseminate data to a wide range of stakeholders. The availability of information such as statistical reports, textbooks, journals, reviews, supplements, handbooks and electronic materials on CDs can be accessed easily by users. In order to satisfy customer's needs, the NBS has established customer care services that provide a mechanism on handling customers' requests and feedback on acquired services**.**

Working environment was improved for NBS staff so as to enhance efficiency in addressing customer's need by providing staff with appropriate working tools, such as faxes, computers, projectors, printers, scanners, and photocopier machines. Deployment of different application systems such as EPICOR for accounting purposes, Human Capital Management Information system (HCMIS) for staff management and statistical software has increased efficiency in data production.

The advancement of technology has minimised use of paper questionnaire and manual data capture. Use of electronic devices such as tablets and android in data collection has simplified the data collection and processing exercise hence improving quality of data, minimising time and cost for conducting surveys.

The NBS ICT policy (2012) has led to formulation of ICT Maintenance plan and guideline that aimed at preventing computer emergencies save from costly downtime and improve systems performance. Existing competent ICT staff with guideline provided in the maintenance plan has facilitated effective troubleshooting of different ICT problems.

Although there has been a success in the implementation of NBS ICT policy 2012 in facilitating statistics production, there are down falls in certain areas in the institution. There are number of weaknesses on the NBS ICT policy (2012) in facilitating NBS objective that were observed;

i) Absence of ICT Standards and Guidelines, which has led to duplication of technologies and platforms;

ii) Inadequate knowledge on advanced ICT security devices such as firewall, and Cyberoam;

iii) Absence of Service Level Agreement (SLA) for maintenance and support;

iv) Non-existence of e-library that hinders the online access of statistical publications and reports;

v) Absence of electronic documents management systems (DMS);

vi) Inadequate financial resources to facilitate ICT related activities in the institution;

vii) Inadequate trainings for ICT staff on updated and advance technologies;

viii) Lack of incentives to encourage ICT creativity and innovation;

ix) Lack of standard guidelines for acquisition of ICT equipment and applications;

x) Absence of ICT security policy;

xi) Absence of ICT help desk for ICT related issues and queries;

xii) Inadequate utilization of backup guidelines provided in the maintenance plan;

xiii) Absence of a mechanism to implement ICT related issues in NSS;

xiv) Absence of ICT steering framework to oversee its ICT operations, secure ICT environment, ICT investment decisions, accountability and the monitoring of ICT initiatives.

2.2.2 External Analysis

Despite the weaknesses there are existing opportunities in ICT initiatives that can be explored by NBS to achieve its core functions. The opportunities are;
i) Existence of National ICT Policy 2016, which provides guidance for implementation of ICT initiatives. The policy has facilitated the development of the Tanzania ICT industry and creates a broad range of social- economic development;

ii)   Continued provisional of funding in ICT sector where by NBS can use the funds for production of official statistics backed up with ICT;

iii)   Availability of Statistics Act, 2015 which facilitates the production of official statistics;

iv)   Existence of an institution to advise, coordinate and oversee the implementation of initiatives related to ICT in the government;

v)   Existence of institution for science and technology which creates an enabling environment for creativity and innovation; and

vi)   Existence of mutual cooperation with various international organizations has brought a great impact at NBS on production of official statistics.

2.2.3   Challenges

Despite the achievements made by NBS there are challenges brought by the rapid technological advancement. These challenges include;

i)   The need for continued investment in ICT infrastructure to cope with emerging technologies;

ii)   Insufficient specialised skills for ICT personnel;

iii)   Absence of a reliable internet connection from service provider.

iv)   Absence of ICT steering framework to oversee ICT operations, secure ICT environment, ICT investment decisions, accountability and the monitoring of ICT initiatives;

v)   Need for conducive working environment for ICT staff;

vi)   Inadequate funds to support the management of ICT resources;

vii)   Lack of robust protection of the NBS' ICT resources from accidental or malicious acts while preserving the open information sharing requirements of the Government.

CHAPTER THREE

Policy Issues and Statement

3.1   ICT Infrastructure

3.1.1   Policy Issue description

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

Challenges brought by the rapid technological advancement in ICT infrastructure necessitates NBS to ensure ICT infrastructure architecture is in place and in line with the Institution's current and future requirements including implementation of a reliable and secure network infrastructure, NBS needs to deploy a reliable internet connection and develop institution intranet.

3.1.2   Policy Objective

To ensure that **NBS**'s ICT infrastructure operations are optimized in order to support business operations based on ICT planning, management and best practices.

3.1.3   Policy Statements

NBS shall ensure that;

i)   ICT infrastructure architecture is setup, well managed and in line with the institution's current and future requirements;

ii)   Reliable, secure and ubiquitous, multi-access network infrastructure including VPN is implemented across the institution for the achievement of corporate goals;

iii)   Reliable internet bandwidth and connection is effectively deployed across the institution;

iv)   A reliable and secure intranet is developed and deployed; and

v)   A reliable, cost effective and secure data storage infrastructure is deployed across the institution.

3.2   ICT Human Capital

3.2.1   Policy Issue description

ICT Human capital covers the collective skills, knowledge or other intangible assets and wisdom possessed by individual that can be used to achieve institution objective. NBS needs more qualified ICT human capital and need for developing attractive remuneration packages for ICT-skilled staff.

3.2.2   Policy Objective

To equip NBS with motivated and adequate skilled ICT professionals in order to achieve institution objectives.

3.2.3   Policy Statements

NBS shall ensure that;
i)   Competent and motivated ICT personnel are available;

ii)   ICT staff capacity is built to adapt with change in technology; and

iii)   Succession plan for ICT professional staff is developed.

3.3   ICT Service Management

3.3.1   Policy Issue description

ICT Service management deals with how ICT resources and core business practices altogether are delivered in the institution. However, there is inadequate funds to support the management of ICT services.

3.3.2   Policy Objective

To set standards, methodologies, guidelines and resources mobilization in order to establish a common approach to ICT issues, resources and core business practices altogether across the NBS.

3.3.3   Policy Statements

NBS shall ensure availability of funds to support management of ICT services.

3.4   ICT Security management

3.4.1   Policy Issue description

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

Currently, there is less robust protection of the NBS ICT resources from accidental or malicious acts while preserving the open information sharing requirements of the Government.

3.4.2   Policy Objective

To provide NBS with information security mechanism to support the institution to achieve its strategic objectives and provide awareness to NBS's staff and stakeholders of their responsibilities with respect to ICT security based on best practices.

3.4.3   Policy Statements

NBS shall ensure that;

i)   A well-developed set of policies for ICT security is published and communicated to staff and stakeholders;

ii)   There is active support on ICT security within the institution through clear direction, demonstrated commitment, explicit assignment, and acknowledgment of ICT security responsibilities;

iii)   Information systems are designed, acquired and implemented with effective ICT security controls to safeguard the integrity, confidentiality and continual availability throughout the entire life cycle;

iv)   ICT security guideline shall be developed to highlight ICT security controls and ensure ICT security risks are mitigated and controlled;

v)   All users of NBS systems are responsible for protecting the institution's ICT resources;

vi)   Equipment such as LAN/WAN, computer hardware, digital storage media are connected, placed or stored in proper locations in order to ensure they are protected from damage, unauthorized access or prevented from hazardous environment;

vii)   Items requiring special safeguards must be stored to a secured location. These include all practices, methods, standards, guidelines, systems software and hardware (e.g. servers, firewalls, etc.)

viii)   Strong measures against unauthorized usage of NBS ICT facility for activities unrelated to the NBS business operations.

ix)   Any damage or loss to ICT assets caused by negligence, recklessness may result into appropriate legal or disciplinary action.

x)   There are guidelines for controlling usage of private personal computers and electronic computing devices or removal of ICT devices from the NBS premises.

xi)   ICT usage guideline is developed and operationalized.

CHAPTER FOUR

Implementation Review and Institutional Arrangement

4.0   Introduction

Successful implementation of the ICT policy depends on the institutional arrangement for operationalizing, enforcing, monitoring and evaluation to ensure desired outcomes. The institutional arrangements articulate the major roles of Management.

4.1   Implementation and Reviews

This policy shall come into operation once tabled and agreed in management meeting, and approved in its first page, and then shall be considered mandatory for all NBS business operations.

The policy statements provide top level guidance for common understanding of ICT adoption and usage at the institution based on Government standards and guidelines and where necessary detailed procedures could be developed.

NBS management will use this policy in conjunction with other existing or to be developed documents to ensure that it operates within a well geared ICT ecosystem. These include ICT Strategic plan, ICT usage Guideline, ICT Security guideline and others. All staff and stakeholders of NBS shall comply with requirements of this policy.

4.2   Management Framework

The NBS Management shall oversee the adherence to the ICT policy including an oversight on systems development; implementation and support that is appropriate to the business objectives. NBS shall undertake ICT management activities following the most current state of the art technologies available. Also, shall ensure that ICT management activities are embedded into all planning activities including strategic planning and annual budgeting, ICT management activities shall be reflected in financial and performance reports, annual budgeting and quarterly reports at all levels of management.

The process of ICT identification starts at department level. NBS must ensure that individual staff understands their roles and responsibilities for ICT identification and involved in the process of identification of ICT connected to their normal activities.

Apart from existing organisation structure, the Director General will appoint ICT steering committee of two members from different organisation and three from NBS

4.3   Specific Roles and Responsibilities

The following section provides high level and specific description of roles and responsibilities of entities and individuals involved in governance of the NBS ICT management process.

4.3.1   NBS Governing Board

Review and approve General ICT Policy, and provide strategic directives on utilisation of ICT in order to enhance productivity by ensuring effective and efficient systems;

4.3.2   Director General

i)   Shall be the overall in charge for implementation of the NBS ICT policy 2017;

ii)   Appoint an ICT Steering Committee and determine its terms of reference; and

4.3.3   Functional Directors

i)   Supervise heads of departments in implementing and monitoring ICT strategies approved by the Director General;

ii)   Consolidate the ICT requirement registers of departments and submit to the Director General

4.3.4   ICT Steering Committee

i)   Coordinate the establishment and continued review of **NBS** ICT Policy;

ii)   Ensure that the ICT Strategy is aligned with **NBS** Corporate Plan;

iii)   Review all ICT services and applications including **NBS** website and infrastructure with the view to advice **NBS** on required improvements;

iv)   Advice the Director general in making considered decisions about the focus of ICT resources;

v)   Ensure that risks associated with ICT are managed appropriately; and

vi)   Oversee development and implementation of ICT Policy in NSS.

vii)   ICT Steering Committee will meet at least quarterly to monitor and evaluate the achievements in ICT initiatives against NBSICT Policy and Strategic Plan.

4.3.5   Head of Department responsible for ICT

Subject to general oversight of the respective director and advice the ICT Steering Committee, the head of department will be responsible for overall implementation of this policy. In particular the head shall;

i)   Coordinate the review and amendment of this policy, as and when required in order to accommodate new technologies or services, applications, procedures and perceived dangers;

ii)   Plan and develop NBS ICT Strategy and supervise its implementation;

iii)   Monitor adherence to the ICT Policy and the presence of potential threats and risks by ensuring periodic ICT security reviews are conducted;

iv)   Provide technical guidance and support the heads of other departments on the implementation of the ICT management framework;

v)   Consolidate ICT management reports received from other departments;

vi)   Be the custodian of all ICT resources of **NBS** including those centrally stored in server room/data centre;

vii)   Coordinate the incorporation of ICT management activities into other business processes including, strategic planning, budgeting and action planning.

viii)   Responsible for identification, design and implementation of capacity building requirements for the ICT management function; and

ix)   Review and approve procedures, standards and guidelines developed from this policy for the purpose of maintaining business continuity and security of NBS ICT resources.

4.3.6   Other Heads of departments
i)   Supervise the implementation of ICT management processes within their departments;

ii)   Responsible for identification and assessment of ICT requirements in their respective departments;

iii)   Provide adequate and appropriate protection of ICT assets and resources under their control;

iv)   Ensure availability, integrity and confidentiality of information produced by systems under their areas of functional responsibilities and thereby ensure continuity of operations; and

v)   Custodian of data and information for their respective Departments/sections/Units.

4.3.7 Internal Auditor

To audit the ICT functions of NBS and ensure compliancy with the policy.

4.3.8 Monitoring and Evaluation Officer

i)   To monitor the ICT policy result frame work matrix and monitoring plan; and

ii)   Provide periodic reports.

4.3.9 Operational Staff

All staff are required to;
i)   Implement the directives of NBS Management as far as ICT is concerned;

ii)   Comply with ICT guidelines and procedures, and implementation of ICT strategic plan;

iii)   Identify individual ICT requirements and use appropriate procedures to report and;

iv)   Safeguard ICT assets entrusted to them.

CHAPTER FIVE

Monitoring and Evaluation

5.1   Introduction

This chapter shows how the NBS ICT Policy 2017 will be monitored and measured in the process of its implementations. It also explains the link between NBS ICT Policy and; Results Chain; Results Framework Matrix, Monitoring Plan; Planned Reviews; Evaluation Plan and Reporting Plan.

5.2   Development Goal

The overall development goal of NBS is to improve production of official statistics for national socio-economic development. The goal represents the highest level of results envisioned by NBS. It is expected that institution will make significant contributions towards the achievement of this goal. The achievement of this goal will be among other things influenced by the level of financial resources available, human resources skills and capabilities within the NSS, investments in service delivery infrastructure and demand for products produced and services delivered.

5.3   The Results Framework Matrix

The Result Framework Matrix shows NBS overall development goal, objectives, planned outcomes and performance indicators. It explains mechanisms that will be used to monitor the achievement of development objective of the NBS ICT Policy and how the results will be measured. The indicators in the matrix will be used to track progress towards achievement of intermediate outcomes and objectives as shown in Table 1.

Table 1:   **The Results Framework Matrix**

Development Goal	Corporate Objective	Planned Outcomes	Key Performance Indicators(KPIs)
To improve production of official statistics for national socio-economic development.	Information and Communication Technology Use in Statistical Production Improved	i) Well integrated statistical databases within NSS.	Number of harmonised and integrated databases
		ii)Easy access and retrieval of statistical products	Number of users complaints in accessing statistical information

5.4   Monitoring, Reviews and Evaluation Plan

5.4.1   Monitoring Plan

Monitoring of the NBS ICT Policy (2017)will be coordinated by the Information and Technology department. Monitoring process will include description, baseline and target values for each indicator, , methods of data collection, analysis and the frequencies of reporting. Other aspects include key players responsible for data collection, analysis and reporting as presented in a detailed NBS ICT Monitoring and Review Framework for 2017/18 - 2020/21.

2:   Indicators, Data Collection and Analysis

ators Target Value									**Method of Data Collection and Analysis**				
Objective Description	**S/No**	**Key Performance Indicators (KPIs)**	**Year**						**Data Source**	**Method of Data Collection**	**Frequency of Data Collection**	**Means of Verification**	**Frequency of Reporting**	**Re sil Se fo Di Co or**
			Baseline 2016	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/2021**						
Information Technology Use in Statistical Production improved	1	Average number of visits in NBS Websites per day	1582 visit per day	1,900 visits per day	2,000 visits per day	2,300 visits per day	2,500 visits per day	2,700 visits per day	Number of visitors (visits) in NBS website	NBS website's visitors count	Quarterly	Quarterly NBS Website Visits reports	Quarterly	In tic Te og M r

			Indicators Target Value							Method of Data Collection and Analysis					
			Year												
Objective Description	S/No	Key Performance Indicators (KPIs)	Baseline 2016	2016/17	2017/18	2018/19	2019/20	2020/2021	Data Source	Method of Data Collection	Frequency of Data Collection	Means of Verification	Frequency of Reporting	Responsible Section for Data Collection
.	2	Number of data sets uploaded to the National Data Archive (NADA)	32	37	42	47	52	57	NBS website	NBS website counter	Quarterly	Quarterly NBS Website NADA reports	Quarterly	Information Technology Manager
	3	Number of Users complaints in accessing statistical information	10	9	8	7	7	6	NBS website	NBS website e-info@nbs.go.tz	annually	NBS website		Information Technology Manager

Objective Description	S/No	Key Performance Indicators (KPIs)	Year						Data Source	Method of Data Collection	Frequency of Data Collection	Means of Verification	Frequency of Reporting	Re... sib... Se... fo... D... C... or...
			Baseline 2016	2016/17	2017/18	2018/19	2019/20	2020/2021						
														In... ti... Te... og... M... r

5.4.2 Planned Reviews

The plan is to carry out a total of four formal reviews during the implementation of the NBS ICT Policy (2017), that is, one review at the end of every June within the implementation cycle of the policy. The reviews will track progress on implementation of the OVIs and Targets on annual basis. A total of three Key Performance Indicators (KPIs) will be tracked during the period of four years.

The reviews will focus on determining whether the planned activities are moving towards achieving the planned strategic targets and will find out whether they are on track, off track or at risk. The annual reviews will track any changes in terms of outputs realized over the period as well as assessing issues, challenges and lessons learnt over the year and to what extent the outputs delivered are contributing towards achieving the corporate objectives. The review findings will be used to modify the implementation strategies whenever necessary.

The reviews to be conducted during the fourth year will focus on determining whether the planned outputs over the four-year period have been achieved against the indicators and if not what could have been the reasons for the under achievement. . The review will also assess as to what extent the achieved targets have contributed towards achievement of outcomes as well as issues, challenges and lessons learnt. The NBS management will take a lead in the review process on the completion of the NBS ICT policy cycle. These reviews will be presented in a detailed NBS ICT Monitoring and Evaluation Review Framework that is conducted each year

5.4.3 Reporting Plan

The reports of NBS ICT policy are of two types; the internal and external. The reports include progress report, annual review reports and final reports. The plan specifies who is responsible for preparation and distribution as well as the recipient of the report. It also indicates when the report will be prepared, type of actions to be taken and recommendations from the recipients.

5.4.4 Internal Reporting Mechanisms

Internal reports are prepared quarterly, semi-annually and annually. The ICT Department will provide inputs and prepare these reports. The reports will be prepared as a criterion to be used to evaluate the policy whether it is still relevant and then make necessary adjustments. The report will be shared with all NBS staff and will be presented to the NBS Management and Governing Board meetings for necessary action. The Internal Reporting Mechanisms is detailed in Table 3

Table 3: Internal Reporting Mechanisms

S/N	Report	Responsible	Time Frame	Recipient
1.	Quarterly Section Report s	Director responsible for ICT	Quarterly, semi-annually and annually	ICT Steering Committee and Director General
2.	Evaluation of the NBS ICT Policy	Director General	4 years	NBS Governing Board
3.	Annual Performance Report	Director General	Annualy	NBS Governing Board

5.4.5 External Reporting Mechanisms

At the end of the Policy implementation there will be an external evaluation based on the reports prepared quarterly, semi-annually and annually. Likewise, at the end of implementation, there will be a final report produced and submitted to external stakeholders such as President's Office-Public Service Management (PO-PSM) and Development Partners for evaluation. The External Reporting Mechanisms is detailed in Table 4.

Table 4: External Reporting Mechanisms

S/N	Report	Responsible	Time Frame	Recipient
1	Monitoring and evaluation of NBS e- government services report.	Director General	Yearly	President's Office-Public Service Management (PO-PSM)
2.	Quarterly Performance Report	Director General	Quarterly and annually	Ministry of Finance and Planning

.

5.4.7 Evaluation Plan

The Evaluation Plan consists of the evaluation study to be conducted during the Policy implementation period, description of the study, the evaluation questions, the methodology, timeframe and responsible persons. The evaluation will be conducted at the end of fourth year of the implementation of the NBS ICT policy The evaluation study aims at obtaining evidence as to whether the interventions and outputs have resulted into the achievement of the outcomes as envisioned in the policy. The evaluation plan matrix is detailed in Table 5.

Table 5:   Evaluation Plan Matrix

S/N	Evaluation Plan	Description	Evaluation Questions	Methodology	Time Frame	Responsible
1.	NBS ICT Policy 2017/18-2020/21	The purpose of evaluation is to assess the performance against targets.	1. What are the achievements? 2. How can the design of ICT Policy 2017/18-2020/21 be improved? 3. What are the challenges in implementing the policy? 4. What are the possible solutions?	Collection of Progress Reports from ICT Steering Committees and NBS Governing Board	2018/19 2020/21	Head of ICT department

VISION

To become a one-stop centre for official statistics in Tanzania

MISSION

To produce official statistics and services that meet needs of National and International Stakeholders for evidence-based planning and decision making

ough memory to open the image, or the image may have been corrupted. Restart your computer, and then open the file again. If the red x still appears, you may have to delete the image and then insert it again.