| THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR | |
|---|---|
| Applicable Public Institution<br>**<<insert the name of the Institution >>** | **Document Name**<br>ICT Service Management Procedures |
| | **Document Number**<br><<Insert your own document reference code>> |

| PPROVAL | Name | Job Title/ Role | Signature | Date |
|---|---|---|---|---|
| Approved by | <<Name of Accounting Officer>> | <<Title e.g. CEO>> | <<Signature>> | <<Date>> |

**Table of Contents**

# 1. INTRODUCTION

## 1.1. Overview

This ICT Service Management guideline document is used as a strategic approach to designing, delivering, managing and improving the way Information and Communication Technology (ICT) is used within **<< include the name of the institution >>**.

## 1.2. Rationale

ICT Service delivery and support team in **<< Include the name of the institution >>** can ensure that ICT services are aligned to and actively support business needs.

## 1.3. Purpose

This document provides guidance on how to the design, deliver, manage and improve information and communication technology (ICT) services within **<< include the name of the institution >>**.

## 1.4. Scope

This document is for **<< include the name of the institution>>**'s Head of ICT, Infrastructure Delivery and Support team.

# 2. PROCEDURES

ICT Service Management is an approach to ICT management in the definition of ICT services and their requirements in such a way that the business user, ICT staff and external user can understand. It details the measurements required to identify successful delivery of these services in such a way that they are of value and use to the customer in relation to the goals that **<<include the name of the institution>>** has. The ICT Service Management is broadly categorized into two main Areas:

a. Service Delivery
   i. Service Level Management
   ii. Capacity Management
   iii. Availability Management
   iv. ICT Service Continuity Management
   v. ICT Financial Management

b. Service support
   i. The Service Desk
   ii. ICT Inventory Management procedures
   iii. Incident Management
   iv. Problem Management
   v. Configuration Management
   vi. Release Management
   vii. Change Management

## 2.1 ICT Service Delivery

### 2.1.1 Service Level Management

Service Level Management shall set the scope for all of ICT's activities by facilitating the definition of the delivery from ICT to **<< Include the name of the institution >>**. This is done by defining and agreeing a catalogue of services, and then agreeing the service specifications, details and service levels with each business department.

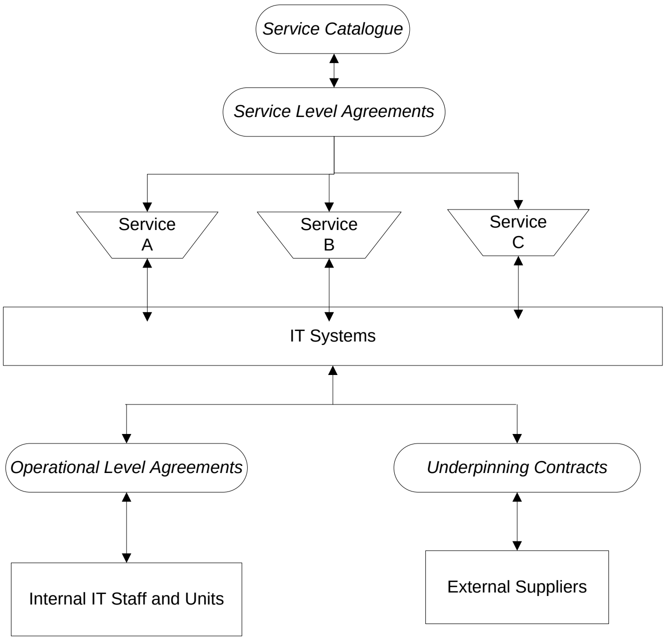
i. **<< Include the name of the institution >>** shall list down the service catalogue identifying the users for each service and obtain an understanding of the levels of service required as per table below;

ii. A list of service catalogue along with identified users for each service and the levels of service required as shown in the table below;

| **SN.** | **Service Catalog** | **<To be filled for each services and expected service level requirements>** |
|---|---|---|
| 1 | Name of the Service | |
| 2 | Service Level Responsibility | |
| 3 | Short description of Service | |
| 4 | Users of the ICT Service on the client-side | |
| 5 | Breakdown of the offered Service into Service groups, e.g. along Infrastructure Components or ICT Applications | |
| 6 | For each Service group: | |

| | | |
|---|---|---|
| | i. Which Services are offered | |
| | ii. Handling of Service interruptions (by telephone, by remote access, on site?) | |
| | iii. User Services (user administration, installation) | |
| | iv. What quality is required of the offered Services | |
| | v. Service times | |
| | vi. Availability requirements | |
| | vii. Number of interruptions allowed | |
| | viii. Availability thresholds (**xx.xx** %) | |
| | ix. Downtimes for maintenance (number of allowed downtimes, pre-notification periods) | |
| | x. Procedure for announcing interruptions to the Service (planned/ unplanned) | |
| 6 | Service Level Agreement with External Supplier | |
| 7 | Performance requirements | |

The diagram below represents the service level agreements with respect to different business services within **<<Include the name of the institution>>** as part of service catalogue.



iii. **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of service level management. Refer to example below;

a. Agreement by senior management that the catalogue is complete
b. % of services in the catalogue covered by SLAs
c. SLA monitoring and reporting occurring on time, delivered to the correct parties, reflecting the agreed items
d. SLA review meetings, on schedule, attended, minutes kept and actioned
e. Service Level manager, has followed up on issues reflected in the minutes, and report back next meeting.
f. Service Level Agreement reviews are performed on schedule.
g. Formal follow up on Service level Breaches, documented and discussed at next service performance review
h. Service Levels improving without excessive costs
i. Costs decreasing without negative effect on service levels
j. Customer and user perceptions are improving

iv. OLAs. Reviews on schedule. Signed by ICT staff. OLAs have not demonstrably fallen short of requirements

### 2.1.2 Capacity Management

Capacity management ensures that the performance of services, capability of handling and storing and managing the required volumes of information by the infrastructure meets the Institutional requirements. This is all to be achieved in a cost-effective way.

i. **<<Include the name of the institution>>** shall describe the scenarios analysed in terms of, business process impact, to understand true capacity requirements. This includes consideration for items such as scalability, throughput, availability requirements, storage, resource utilization, security, backups, etc. Also, **<<Include the name of the institution>>** shall describe items such as the strategy for developing these scenarios and a list of the individuals involved.

ii. **<<Include the name of the institution>>** shall describe plans for growth and how they will be addressed and managed. **<<Include the name of the institution>>** shall consider not only the requirements for additional hardware, software, building materials, and space but also where financial funding for these things will come from, additional resource allocation requirements, staffing, training, other expenditures, etc. (*Institution may expand upon this section by adding/removing additional scenarios if necessary*). Example/Sample given below;

| Capacity Type | Current Capacity Analysis | Planned/Expected Growth and Recommendations |
|---|---|---|
| *[Describe the capacity scenario analyzed. Enter details on current & future capacity requirements.]* | *[Describe currently available capacity.]* | *[Describe how future growth expectations have been identified and analyzed. Outline recommendations for managing and addressing this expected growth.]* |

iii. **<<Include the name of the institution>>** shall describe how expected growth will be monitored and managed. Below is a basic example of a table that may be used to illustrate one approach for monitoring and managing future capacity. The approach used to illustrate these requirements may differ from project to project;

| **Area/Item Monitored** | **Capacity Requirement(s)** | **% Increase Needed Per** *<time period>* | **Capacity Threshold(s)** | **Threshold Response Strategy** (Action to Be Taken Upon Reaching Threshold(s)) |
|---|---|---|---|---|
| *<Hard Drive Storage>* | *<enter capacity requirements and measures>* | *<enter projected increases over intervals of time>* | *<enter acceptable capacity threshold(s)>* | *<enter response strategies to varying threshold limits. Threshold is defined as the level at which an event or change occurs>* |
| *<Meeting Room Tables>* | | | | |
| *<Number of Project Staff>* | | | | |
| *<Ratio of Quality Development Staff requirements >* | | | | |

iv. **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of capacity management. Refer to example below;

a. The annual plan is produced on time and is accepted by senior management. And is linked to the supplied business plans. It provides accurate forecasts of planned expenditure

b. Recommendations for hardware or software upgrades that are identified in the Capacity Plan are accurate both in terms of the financial cost and the timescale in which they are required. These recommendations are acted on.

### 2.1.3 Availability management

Availability Management is the planning, implementation, management and optimization of ICT Services within **<<Include the name of the institution>>** so that they can be used where and when the business requires them.

For each service included in Availability Management, the following sections will be completed:

a. **Service Name & Description:** The name of the service, along with a high level description of what is included in the service as well as what is excluded.

b. **Current SLAs:** Lists the identifier for each SLA that applies to this service, along with the location of the SLA.

c. **Current OLAs:** Lists the identifier for each OLA that applies to this service, along with the location of the OLA.

d. **Current Availability Status:** Describes the recorded availability for this service over the past year.

e. **Current Availability Problems:** Describes any availability problems which were encountered during the past year, along with an evaluation of the cause of the issues.

f. **Primary Service Components:** Lists the major components which are being monitored in terms of availability for this service. The components shall be identified as: Hardware and Software

g. **Anticipated New Business Requirements:** Outlines any new business requirements which have been identified for the coming year.

h. **Availability Impacts:** Identifies the impact on availability of delivering these business Requirements.

**Recommendations:** Lists different options for addressing the new business requirements or of improving the availability for the current requirements.

i. **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of capacity management as per format below;

| **Service 1- Service Description** | |
|---|---|
| **Provide description of the service** | |

| | |
|---|---|
| **Service 1- Current SLA and Location** | |
| **SLA Identifier** | **SLA Location** |
| **[SLA-1 ID]** | **[Service Level Management Repository]** |
| **Service1 –Current OLA & Location** | |
| **OLA Identifier** | **OLA Location** |
| **[OLA-1 ID]** | **[Operational Level Management Repository]** |
| **Service1 –Current Availability Status** | |
| **Insert the Availability status for this service for the past year. (This could be tables, graphs, or text.)** | |
| **Service 1-Primary Service Components** | |
| **Hardware:**<br>• **Component 1: [Component Identifier]**<br>• **Component 2: [Component Identifier]**<br>• **Component 3: [Component Identifier]**<br>**Software**:<br>• **Component 1: [Component Identifier]**<br>• **Component 2: [Component Identifier]**<br>• **Component 3: [Component Identifier]** | |
| **Service 1-Anticipated business requirements changes** | |
| **Identify any new business requirements that have been identified for this service for the next year. These are not the technical requirements, so use layman’s terms where possible.]** | |
| **Service 1- Availability impact of new business requirements** | |
| **[Identify any impacts to Availability should the Business Requirements be delivered. In this situation, it could be necessary to identify the impacts to individual infrastructure components]** | |
| **Service 1- Recommendation** | |

**[Identify any impacts to Availability should the Business Requirements be delivered. In this situation, it could be necessary to identify the impacts to individual infrastructure components]**

- **Recommended changes in monitoring, analysis, or tuning**
- **Identification of potential bottlenecks**
- **Performance guidelines for design and development**
- **Prediction of future service performance**
- **Tools to be used**
- **Project bandwidth availability sizing**
- **Application sizing, if appropriate**
- **Monitoring requirements and alarm settings**
- **Performance Management tuning**
- **New storage requirements**
- **New technologies**
- **Estimated costs**
- **Threshold audits**
- **Projections & Forecasting**
- **Availability analysis recommendations from all previous procedures**
- **Single Point of Failure (SPoF) analysis recommendations**
- **Technical Observation recommendations**

**<<Include the name of the institution>>** shall indicate the key indicators and management metrics to evaluate the performance of availability management. Refer to the below;

a. Improvement in Service Availability

b. Lowering of costs associated with downtime

c. Reduction in the number, level of business impact and frequency of incidents

d. Time to restore service is reduced overall

e. New services have fewer problems and incidents related to them.

### 2.1.4 ICT Service Continuity Management

The ICT Service Continuity Plan contains information about measures that serve the purpose of disaster preparation, in that they counteract identified risks within **<<Include the name of the institution>>**. This activity was initially called ICT Disaster Recovery Planning (DRP).

i. **<<Include the name of the institution>>** shall list down all identified non-tolerable risks for business services as per table below. Also refer to the Institutional ICT Disaster recovery Guide.

| **Headers** | **<Provide your response as per bullets highlighted>** |
|---|---|
| •Name of the risk | |
| •Affected business processes | |
| •Affected business data | |
| •Affected ICT Services | |
| •Affected infrastructure components | |
| •Measure for reducing/ eliminating the risk | |
| ✓ Description | |
| ✓ Costs and resources | |
| ✓ Person in charge of the measure | |
| ✓ Target date | |
| ✓ Status | |
| ✓ Name of the risk | |
| ✓ Affected business processes | |

ii. **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of ICT Service Continuity management. Refer to the below;

a. Plan reviewed on annual basis.
b. Actions documented from the review are completed.
c. Tests are conducted according to schedule, reports produced from the testing.
d. Reports of actions to be taken as a result of the testing.
e. Actions completed from the review.

f. Number of incidents occurring from failed risk countermeasures, and the number of times the countermeasures were effective.
g. Number of times SLA were breached.
h. Strategy document covers all services in the catalogue. Services from the catalogue covered or explicitly left out of the planning. Exceptions not covered or reviewed at all.
i. Risk assessment project performed; follow up projects on an annual (or other regular basis) completed.
j. Countermeasures that were identified have been implemented.
k. Standby arrangements: Lists up to date. Staff aware of their responsibilities.
l. Staff training – up to date with changes in role allocations.
m. Standby site(s) kept up to date with changes on live sites.

### 2.1.5 ICT Financial Management

ICT financial management deals with ICT related costs and expenditure and to provide a sound financial basis for business decisions regarding ICT within **<<Include the name of the institution>>**. This is achieved by budgeting, identifying and accounting for the costs of providing ICT services.

i. **<<Include the name of the institution>>** shall list down its budget requirements for costs associated with the ICT projects. The budget exercise is an ongoing monitoring of current budget and is reviewed bi-annually. As part of budget exercise, the following factors will be considered;
   a. limits on capital expenditure
   b. limits on operational expenditure
   c. limits on variance between actual and predicted spend
   d. Agreed workload and set of services to be delivered.
   e. Limits on expenditure outside the institutions.
   f. Agreements on how to cope with exceptions

ii. To make easier identification of where money is being spent or where it is going to be spent, a list of cost elements should be performed. Refer to the cost element below;
   a. Hardware

b. Software

c. People and Training

d. Accommodation

e. Underpinning or external Services

f. Transfer Costs – within the institution

iii. Key indicators and management metrics to evaluate the performance of ICT financial management shall be listed. Below are the metrics;

a. The processes used to track expenditure are in place and working.

b. The budget is produced.

c. Regular (monthly or quarterly) budget and expenditure comparison reports re produced for senior management

d. Costing reports are produced

e. If charging has been implemented then invoices are sent at the correct time, and income is collected and monitored.

f. Involvement in major change decisions to ensure financial viability of the proposed solutions.

## 2.2 ICT Service Support

### 2.2.1 ICT Service Desk

ICT service desk aims to drive and improve ICT services within an Institution. The service desk provides a point of contact where customers can report incidents, obtain assistance with the use of ICT services, or request basic changes.

i. **<<Include the name of the institution>>** shall list down the service desk responsibilities and the service request form is as below.

| | | |
|---|---|---|
| Service Unique ID | Name of Person | Date and time of service request |
| | | |
| Detail of service request | | |
| | | |
| No of Users Affected | System usage in hours per week | |

| | | |
|---|---|---|
| 1, 2-5, 6-10 or more | 1, 2-10, 11-20 or more | |
| Technician required | Date and time of response | |
| How was the incident resolved | | |
| Further action required | | |
| Was the equipment repaired or replaced. | | |
| Configuration management database updated | | |

ii. **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of ICT service desk. These metrics includes;

   a. Call taking – times taken, lost/abandoned calls
   b. Time for each call
   c. Logging of calls or updating for queries VS number of incoming calls
   d. Content of incidents – complete, classifications etc. for reporting purposes complete and accurate
   e. Escalation. Where manual interference is required on lack of acceptance, follow up personally with relevant management
   f. Outgoing contacts two users and customers according to defined timeframes and impacts

iii. Any ICT service request will be reported to Institution ICT Management Services through: ictsupport@taasisi.go.tz, and/or ictsecurity@taasisi.go.tz. If available, it may include the Helpdesk system.

iv. The escalation levels of the service request shall be defined by the institution.

v. When necessary to escalate to eGAZ, then one can use of helpdesk@egoz.go.tz.

### 2.2.2 ICT Inventory Management Procedures

ICT inventory Management Procedures to **<<Include the name of the institution>>** helps to deliver its strategic priorities and services in line with risk, providing value for money services for the benefit of the institution.

All the ICT Inventory Management Procedures shall ensure;

i. Records are kept regarding the purpose, location, ownership and usage of ICT related inventories.

ii. Acquision of ICT inventories, accounting & storage of ICT inventories, aging analysis for the ICT inventories, perpetual stocking and annual ICT stock taking shall be in accordance to the regulation and guideline of the relevant institution.

iii. There shall be a preventive maintenance for all ICT assets in the institution. This is a routine maintenance of ICT equipment and assets in order to keep them running and prevent any costly unplanned downtime from an unexpected equipment failure.

iv. **<<Include the name of the institution>>** shall prepare accordingly a preventive maintenance schedule of its ICT assets and retain documentation of results after maintenance is performed.

v. The acquisition, recognition, valuation, verification, transfer, depreciation, disposal and impairment of all ICT assets shall be performed in accordance to guideline of the responsible Institution.

### 2.2.3 Incident Management

Incident Management is an approach to managing the lifecycle of all incidents within Institution. It aims to return ICT services to users as quickly as possible. A comprehensive incident management procedure should be in place to address ICT related incidents within **<<Include the name of the institution>>**.

i. **<<Include the name of the institution>>** shall record and priorities the incident with appropriate diligence, in order to provide a quick resolution to an incident.

ii. At **<<Include the name of the institution>>**, all ICT incidences shall be recorded on the incident record sheet. Below is the record incident sheet.

| **Incident Record Sheet** |
|---|

| | | |
|---|---|---|
| Unique ID: | Date and Time of recording: | |
| Method of Notification(*i.e. telephone, email, internet*): | | |
| **Incident Urgency**<br>**<<Use the templates below to derive to the incident priority>>** | **High** □ **Medium** □ **Low** □ | |
| **Incident Impact**<br>**<<Use the templates below to derive to the incident priority>>** | **High** □ **Medium** □ **Low** □ | |
| **Incident Priority**<br>**<<Use the templates below to derive to the incident priority>>** | **Critical** □ **High** □ **Medium** □ **Low** □ **Very Low** □ | |
| Service Desk Officer | | |
| Caller / User Contact | | |
| Call back Method | | |
| Description of Symptoms | | |
| Affected users, Locations, and/or business areas | | |
| Affected Services | | |

| | | |
|---|---|---|
| *Incident Priority* << **Determine the Incident Urgency and the Incident Impact to determine the incident priority. Use the templates below to derive to the incident priority>>** | | |
| | | |
| Links to related incident records: | | |
| Resolution Process: <<**State how the incident was resolved>>** | | |
| IT Staff Name: | Resolution Date | Signature: |

## a. Incident Urgency

To determine the incident category, highest relevant category is chosen:

| Category | Description |
|---|---|
| **Highest (H)** | i. Several critical users are affected<br>ii. Work that cannot be completed by staff is highly time sensitive<br>iii. The damage caused by the incident increases rapidly |
| **Medium (M)** | i. The damage caused by the incident increases considerably over time<br>ii. Few critical users are affected |
| **Low (L)** | i. The damage caused by the incident increases marginally over time<br>ii. Work that cannot be completed by staff is not time sensitive |

However, the above can be relied to the Institutional Risk Rating as per the Risk Management Framework i.e. Extreme, High, Medium, Low etc.

### b. Incident Impact

To determine the incident impact, choose the highest relevant category:

| **Category** | **Description** |
|---|---|
| **Highest (H)** | i. A large number of staff are affected and/or not able to do their job<br>ii. The financial impact of the Incident is likely to exceed <<**Insert amount likely to be incurred from the incident>>**<br>iii. The damage to the reputation of the Institution is likely to be high |
| **Medium (M)** | i. A moderate number of staff are affected and/or not able to do their job properly<br>ii. The financial impact of the Incident is (for example) likely to exceed **<< Insert lowest amount to be incurred from incident>>** but will not be more than**<< Insert highest amount likely to be incurred from the incident>>**<br>iii. The damage to the reputation of the Institution is likely to be moderate |
| **Low (L)** | i. A minimal number of staff are affected and/or able to deliver an acceptable service but this requires extra effort<br>ii. The financial impact of the Incident is (for example) likely to be less than **<<insert lowest amount likely to be incurred from incident>>**<br>iii. The damage to the reputation of the Institution is likely to be minimal |

### c. Incident priority

Incident priority is a combination of the incident's urgency and level of impact to an Institution. An Incident Priority Matrix is used to determine the level of priority to be given to any incident.

| **Priority Code** | **Description** | **Target Response Time** | **Target Resolution Time** |
|---|---|---|---|
| **1** | Critical | Immediate | << **based on institution's acceptable time>>** |
| **2** | High | << **based on institution's acceptable time>>** | << **based on institution's acceptable time>>** |
| **3** | Medium | << **based on institution's acceptable time>>** | << **based on institution's acceptable time>>** |
| **4** | Low | << **based on institution's acceptable time>>** | << **based on institution's acceptable time>>** |
| **5** | Very Low | << **based on institution's acceptable time>>** | << **based on institution's acceptable time>>** |

iv. An **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of incident management. The metrics are as below;

a. Number of incidents in total and by category
b. Average time to resolve incidents by impact code
c. Percentage of incidents handled within the agreed times
d. Percentage of incidents resolved by the Service Desk
e. Average cost per incident
f. Number of outstanding or unresolved incidents per day over SLA time
g. Number of incidents resolved remotely
h. Number of incidents re-opened if closed incorrectly

i. Number of ineffective workarounds or resolutions

### 2.2.4 Problem Management

Problem management is the process of managing the lifecycle of all ICT related problems. The objective of problem management is to prevent the occurrence of incidences causing the problems and their impact to the Institution. Proactive problem management can reduce the frequency of incidences through the identification and review of trends over a period of time.

vi. At **<<Include the name of the institution>>**, ICT problems shall be identified and recorded on the problem record sheet. The objective of using a problem record sheet is to document all the relevant details of the problem including its history in an effort to properly manage the problem from identification to closure. An example of a problem record sheet is shown below;

| **Problem Record Sheet** | | |
|---|---|---|
| Unique ID: | Date and Time of detection: | |
| Problem Owner: | | |
| Description of Symptoms: | | |
| Affected Staff / Departments: | | |
| Problem Priority **<< Determine the Incident Urgency and the Incident Impact to determine the incident priority. Use the templates above in Incident Management to derive to the incident priority>>:** | | |
| Problem Category (**<<hardware error, software error, network error etc.** | | |

| | | |
|---|---|---|
| Links to related problem records | | |
| Links to related incident records | | |
| Resolution Process: **<<State how the problem was resolved>>** | | |
| ICT Staff Name: | Resolution Date: | Signature: |

vii. Problem Categorization and Prioritization

The priority of a problem is a function of urgency and the overall impact to the Institution daily activities. By using the incident priority matrix, the ICT staff can derive to the problem priority rating and resolve it using the 3 level support approach.

viii. Problem Diagnosis and Resolution

The purpose of performing a diagnosis is to determine the root cause of a problem in order to identify a suitable solution. Misdiagnosis can lead to increased loss of ICT services to staff and loss of resources (staff time and money). During problem diagnosis, the ICT team led by the ICT Manager shall identify a workaround that would temporarily reduce or eliminate the problem whilst waiting for the full resolution.

ix. Problem Closure and Evaluation

All resolved problems shall be properly documented on the Problem Record sheet with full details of how they were resolved. During closing of the problem, the following shall be checked:

a. Documentation of the root cause of the Problem
b. Documentation of possible Workarounds
c. Documentation of the applied (causal) resolution
d. Date of Problem resolution
e. Date of Problem closure

x. **<<Include the name of the institution>>** shall list down the key indicators and management metrics to evaluate the performance of problem management. Below are the metrics;

a. From a representative sample of incidents an evaluation of whether Problem Management is identifying underlying or common problems and recording these
b. From a representative sample of problem records, verify that problems are correctly diagnosed.
c. From all problem and known error records identify that those with the greatest impact are resolved or scheduled for resolution.
d. That Problem Management staff are adhering to escalation thresholds managed by Incident Management.
e. That overall numbers and level of impact of incidents is decreasing
f. That incidents re-occur less frequently

### 2.2.5 Release Management

The aim of Release Management is to plan and oversee the successful rollout of hardware and software changes into production within an Institution. This also ensure that the changes made to hardware and software can be tracked, using the services of Configuration Management, and that only correct, authorized and tested hardware/software versions are installed.

i. At **<<Include the name of the institution>>** Institution, after the software has been tested in the test environment and is ready to be moved to the live environment. The ICT personnel responsible should fill in a release Management. An example of the release management form is provided below:

| | |
|---|---|
| Ref No. | |
| Release Date | |
| Initiator | |
| Name of application | |
| Nature of Software Release | 1) New Software<br>2) Bug Fix<br>3) Functionality Change |

| | |
|---|---|
| Deployment Path | 4) Production environment<br>5) Other - Please Specify ___________________ |
| Proposed Release Start Date/Time | |
| Proposed Release Completion Date/Time | |
| Downtime Required | 6) Yes - Specify No of. Hours __________<br>7) No |
| Backup Requirements | 8) Code files<br>a. Entire Application<br>b. Only released code files<br>9) Database |
| Rollback Plan (time to start rollback if any issue encountered) | 10) Immediate<br>11) Other – Please specify ___________________<br>___________________ |

ii. Please fill in the table below before any release. This will be authorized by ICT Manager within **<<Include the name of the institution>>**.

| **Line of Service** | **Name** | **Decision** | | **Justification** | **Signature** | **Date** |
|---|---|---|---|---|---|---|
| | | **Accepted** | **Refused** | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Final decision for the activity | | | | Name : | | |
| | | | | Comments : | | |
| | | | | Signature : | | |
| | | | | Date : | | |

iii. The release manager/IT Manager shall then deploy the software on the live environment and ensure that the software is working as expected.

| | | |
|---|---|---|
| Name of official who carried out the activity | Date | Signature |
| Change Status | 1) Successful<br>2) Unsuccessful – Specify reason | |

iv. **<<Include the name of the institution** shall list down the key indicators and management metrics to evaluate the performance of release management. Refer to example below;

a. Releases built on schedule within budgeted resources.
b. Liaison with application development is adequate to remove problems of communication over delays caused by them, if they do not fall within OLAs and cannot guarantee results on time.
c. Low numbers or no back-out of releases
d. No evidence of software that has not passed QA checks
e. Compliance of all legal restrictions on bought in software.
f. Accurate distribution of software to all sites
g. Implementation of releases on all sites as scheduled
h. No evidence of unauthorized software at any site.
i. Planned composition of releases matches the actual release, exceptions beyond the

j. Control of Release Management – e.g. suppliers not meeting commitments/contracts should be excluded. That issue should be referred to Service Level Management and the contract review process.

k. Evidence of adequate forward planning for technical and human resources for Release Management

### 2.2.6 Configuration Management

Configuration management provides accurate information on configuration and their documentation in order to support all the ICT management and service management processes within **<<Include the name of the institution>>**.

i. A list is prepared as per table below to detail the status of the configuration which involves the collection, processing, and reporting of the configuration data for all Configuration items at any given time. This also includes management stored configuration information held in the Configuration Management Database (CMDB). An example of the configuration management form is provided below:

| Configuration Item | Unique Identifier | Manufacturer | Description | Location | Assigned to | Date Recorded | Date Last updated |
|---|---|---|---|---|---|---|---|
| Desktop Computer | 1<br>2<br>3 | IBM<br>HP<br>IBM | Desktop Pro<br>HP Book<br>Lenovo | Room1<br>Room 2<br>Room 3 | XYZ<br>ABC<br>XYZ | 1-Oct 15<br>1-Oct 15<br>1-Oct 15 | |
| File Server | 4 | Compaq | Proliant | Computer room | ICT Manager | 1-Oct 15 | |

ii. Below are key indicators and management metrics to evaluate the performance of configuration management. Below are the metrics;

a. Are regular configuration database audits carried out and are the results recorded and follow up actions performed?

b. Are archived CIs retained and recorded correctly?

c. Are the versions of software used in multiple locations correct?

d. Do CI names, version numbers, etc. adhere to naming conventions?
e. Are CI variants created and handled according to procedures?
f. Do the contents of the DSL and CMDB match?
g. Is CMDB housekeeping carried out according to procedures?
h. Are reviews held regularly and followed up?

### 2.2.7 Change Management

#### a. Formally Request a Change

i. Any proposed change to the equipment or system which forms part of or supports an Institution ICT environment for which ICT is responsible, must be supported by a formal change request documentation, initiated by Change Requestor (CR) and approved by appropriate ICT management levels. Refer sample Change Request Form in Appendix 1.

ii. All change details as well as configuration records must be maintained for all changes, major, minor, routine and emergent and updated in a proper order. The change request specification must contain:

- Date of submission, date of change and date of completion
- Authorization by a line manager and all corresponding levels. Completed by sign off or in case of emergency change it can be completed by email or over the phone, and then it should be later on finalized under official procedures.
- Full Change description details, service affected scope (if any), key contacts.
- Indication of success or failure and updated change scope/details.
- For all emergency (unplanned) changes, a post-mortem report/feedback is a must after the changes.

iii. All unplanned/ad hoc changes should be treated as emergent changes and must be highly discouraged.

iv. Request for changes should be submitted for authorization in a specific time frame prior to target implementation date and must adhere to user notification timeframe to enable risk assessment process to expose threats that may be encountered thereof. Expectation will be provided on emergency changes only (Refer to APPENDIX 1.1 Change Request Form). Please refer to the below table.

| CHANGE TYPE | RISK ASSESSMENT | SUBMITTAL AND APPROVAL REQUIREMENTS | USER NOTIFICATION TIMEFRAME |
|---|---|---|---|
| **1**: **Major Change**<br>[e.g. Planned Operation Systems Patches, Database Patches,<br>Planned Hardware Upgrade,<br>Planned Application Upgrade] | **High Risk**<br>- Potential to disrupt critical business and activities for many Public Institutions<br>- Will affect all users if not implemented successfully.<br>- Affects multiple systems or elements of the infrastructure<br>- Complex or lengthy implementation and back-out. | - Change Request must be submitted 14 days prior to target implementation date.<br>- Reviewed and approved at CAC Level | 7 days prior to target implementation date |
| **2**: **Minor Change**<br>[e.g. Firewall configuration, Security Patches, Fixing a disaster recovery system] | **Medium Risk**<br>- Minor visibility to users and minimal business and/or Public Institutions impact<br>- Impact limited to specific portions of infrastructure<br>- Quick and fairly simple back-out. | - Change Request must be submitted 7 days prior to target implementation date.<br>- Reviewed and approved at supervisor or department Director level | 2 days prior to target implementation date |
| **3: Routine Change**<br>[e.g. Installation of a new printer model, deletion of user] | **Low Risk**<br>- No visibility to users and no business and/or Public Institutions impact<br>- Has been implemented in many other areas with no errors.<br>- Routinely done without any failures on the first attempt. | - Change Request must be submitted 1 day prior to target implementation date<br>- Reviewed and approved at Manager level | 1-24 hours prior to target implementation |
| **4: Emergency Change**<br>[Fixing systems problems, Fixing System attacks, Unplanned Upgrades] | **High or Medium Risk**<br>- Critical service is down or severely impaired with disruption to business and/or student activities<br>- Fix first, and document change after the fact<br>- Can be unplanned major or minor change | -If it is emergent due to lack of planning, The change must be approved before execution on a time frame approved by the respective director.<br>- Otherwise Change Requestor notifies the Help Desk and CAC and ensure that change Request is documented within 2 working days after implementation and release of change | -If it is emergent due to lack of planning, respective director may determine the user notification time frame, otherwise it should be immediate |

### b. Analyse and Justify Change

i. The change requestor will work to develop a specific justification for the change and identify the impact on infrastructure, business operations and budget, identify business as well as technical risks, develop technical requirements, and review specific implementation steps.

ii. Any change request to the system must have a full testing procedure attached explaining all required tests to be performed with their expected outcome documented, including roll-back procedures (critical components) for all unsuccessful changes.

iii. All change request received must be assessed, verified to ensure that the request contain the adequate details, including completion date and have been approved by authorized representatives of respective directorates.

iv. Any amendments to the original scope of the change request and planned implementation schedule must be re-submitted for approval to facilitate implementation on the revised schedule.

### c. Approve and Schedule the Change

i. Unauthorized change request or requests with insufficient details must be rejected and returned to the requester including remarks or justifications for rejection. A requester is supposed to re-establish the request and justify the course and expected enhancement/output.

ii. For all planned changes, all issues relating to potential business impact, resource requirements, implementation plans, back out details and conflicting requests must be resolved prior to its final sign off authorization for execution.

iii. Change requests must be authorized by respective manager and all other appropriate managers, logged and recorded in a Change Management System, with reference ticket numbers.

iv. The Institution Head of ICT will chair a Change Management Team (CMT) consisting of chosen representatives from members of different field such as Network Engineering, Server Administration, Operations, Applications Support, Security Administration, ICT Service Management, ICT Service Control, Database Administration, Desktop Support and Business Operations. The group will assess the urgency and impact of the change on the infrastructure, Institutions productivity and budget. The CMT will have a permanent Change Coordinator that will coordinate all changes. In the event of a Major Change, the change request must be approved by the Change Approval Committee/ Change Advisory Board - CAC (Consisting of

Executive Directors - and where appropriate Accounting Officer such as CEO, MD etc. as agreed by Executive Directors or on recommendation by the Change Management Team).

#### d. Plan and Complete change

i. The Change Management Team will assign appropriate members to complete the change in a manner that will minimize impact on the infrastructure and Public Institutions. In the event that the change does not perform as expected or causes issues to one or more areas of the production environment, the team will determine if the change should be removed and the production environment returned to its prior stable state.

ii. All unsuccessfully/failed changes and changes not completed within a week as per their scheduled date must be closely followed-up by Change Management Team /Change Requestor for closure /explanation/re-scheduling.

## 3. IMPLEMENTATION, REVIEWS AND ENFORCEMENT

### 3.1. Implementation and Reviews

**3.1.1.** This document 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 **<<include the name of the institution>>** business operations.

**3.1.2.** **<<Include the name of the institution>>'s** management will use this document in conjunction with the documents in Section 6, below to ensure that it operated within a well geared ICT ecosystem.

**3.1.3.** All employees and other authorised users of **<<include the name of the institution >>** shall comply with requirements in this document.

**3.1.4.** The head responsible for ICT shall enforce compliancy by using audit trails and triggering access denial to **<<include the name of the institution >>** systems and networks.

**3.1.5.** **<<Include the name of the institution >>** staff found to have violated this policy may be subject to withdrawal and or suspension of systems and network privileges or disciplinary action in accordance with rules defined by **<<include the name of the institution >>** administrative regulations.

**3.1.6.** This document shall be reviewed within three years, or whenever business environment of **<<include the name of the institution >>**changes in a way that affects this current document.

### 3.2. Exceptions

**3.2.1.** In case of any exceptions to this document, it shall be thoroughly documented and follow through a proper channel of authorization using the same authority which approved this document.

### 3.3. Roles and Responsibilities

#### 3.3.1. Board of directors or accounting officer, whichever applies

**3.3.1.1.** Review and approve the Policies, and provide strategic directives on utilisation of ICT in order to enhance productivity by ensuring effective and efficient systems;

**3.3.1.2.** Appoint an ICT Steering Committee (or equivalent) and determine its terms of reference [Could be the Management Team Sitting with a focus on ICT Matters]; and

**3.3.1.3.** Ensure implementation of the ICT services management processes.

#### 3.3.2. ICT Steering Committee

**3.3.2.1.** Shall review and provide advice on ICT investment portfolio and priorities;

**3.3.2.2.** Shall ensure alignment of ICT with the **<<include the name of the institution>>**'s business needs;

**3.3.2.3.** Shall ensure e-Government guidelines and standards are implemented by the **<<include the name of the institution>>**;

**3.3.2.4.** Shall ensure continuous monitoring and evaluation of **<<include the name of the institution>>** ICT project;

**3.3.2.5.** Shall review and approve **<<include the name of the institution>>** disaster recovery plan and ensure its effective implementation;

**3.3.2.6.** Shall approve any other **<<include the name of the institution>>** e-Government sub-committee as may, from time to time, be constituted and address specific ICT related matters;

**3.3.2.7.** Shall prepare and submit quarterly Ministerial e-Government progress report to the Authority; and

**3.3.2.8.** Shall perform such other functions as may be directed by the accounting officer or the Authority.

**3.3.2.9.** Shall perform such other functions as may be directed by the **<<include the title of the Accounting Officer>>**.

### 3.3.3. Directors/ Managers/Head of Sections/Units

**3.3.3.1.** Shall ensure that all users under their supervision are aware and comply with this document;

**3.3.3.2.** Shall provide adequate and appropriate protection of ICT assets and resources under their control;

**3.3.3.3.** Shall ensure availability, integrity and confidentiality of information produced by systems under their areas of functional responsibilities and thereby ensure continuity of operations; and

**3.3.3.4.** Shall review and approve procedures, standards, policies and guidelines developed from this policy for the purpose of maintaining business continuity and security of **<<include the name of the institution>>**'s ICT resources.

**3.3.3.5.** Shall be custodian of "Data and Information" for their respective Departments/sections/Units.

### 3.3.4. Head of ICT <<section/unit/department>>

Subject to general oversight of **<<board of directors or accounting officer, whichever applies>>** and advice of the ICT Steering Committee, the Head responsible for ICT shall oversee the overall implementation of this policy; and in particular he/she shall;

**3.3.4.1.** Coordinate the review and amendment of this document, as and when required in order to accommodate new technologies or services, applications, procedures and perceived dangers;

**3.3.4.2.** Plan and develop ICT Strategy and **<<include the name of the institution>>**'s Enterprise Architecture and ensure its implementation.

**3.3.4.3.** Keep abreast of ICT developments in respect of ICT industry in General and **<<include the name of the institution>>**'s systems in particular.

**3.3.4.4.** Initiate and recommend proposals to change, modify or improve this document; and

**3.3.4.5.** Recommend procedures, standards and policies for effective implementation of this policy in line with e-Government Standards and Guidelines.

**3.3.4.6.** Be the custodian of all ICT resources of **<<include the name of the institution>>** including those centrally stored in server room/data centre.

### 3.3.5. Head of Internal Audit Unit

**3.3.5.1.** Shall audit the ICT Function of **<<include the name of the institution>>** and ensure compliancy with the document.

### 3.3.6. Users of ICT Systems

**3.3.6.1.** Shall be responsible to safeguard ICT assets of **<<include the name of the institution>>** in their custody.

**3.3.6.2.** Shall comply with this document.

## 3.4. Monitoring and Evaluation

**3.4.1.1.** ICT Steering Committee shall meet at least quarterly to monitor and evaluate the achievements in ICT initiatives against **<<include the name of the institution >>**ICT Policy, Strategic Plan and Enterprise Architecture.

## 4. ACRONYMS

| | |
|---|---|
| **CI** | Configuration Item |
| **CMDB** | Configuration Management Database |
| **DRP** | Disaster Recovery Plan |
| **DSL** | Digital Subscriber Line |
| **ICT** | Information and Communication Technology |
| **OLA** | Operational Level Agreement |
| **QA** | Quality Assurance |
| **SLA** | Service Level Agreement |

## 5. RELATED DOCUMENTS

5.1. e-Government Guidelines, 2022

5.2. Standards for Creation of Government ICT Management Documents *(eGA/EXT//00)*

## 6. DOCUMENT CONTROL

| REVISION | NAME | COMMENT | DATE |
|---|---|---|---|
| Rev. 1.0 |  | Creation of Document | March 2022 |

----------------------------*For Government Control Only*----------------------------------

Sample Name: **ICT Management Procedures Sample**
Sample Reference: **eGAZ/EXT/SAM/004**
Sample Version: **1.0**
Sample Effective Date: **March 2022**
Sample Creation: **Zanzibar e-Government Agency**
Sample Changes: **None**

## APPENDIX 1:  CHANGE REQUEST FORM

| Public Institution- CHANGE REQUEST FORM | | | | |
|---|---|---|---|---|
| **TO** | | | | *e.g. By E-mail* |
| **CC** | | | | *e.g. By E-mail* |
| **REQUESTOR** | | | **TEL** | |
| **REQUESTOR DEPARTMENT** | | | **REQUESTOR SECTION** | |
| **SUBJECT** | | | | |
| **DATE** | | | | |

| | | | |
|---|---|---|---|
| **CHANGE REQUEST NUMBER** | | **CHANGE TYPE (PLANNED/EMERGENT)** | |
| **SERVICE AFFECTING (YES/ NO)** | | **CLASSIFICATION (MAJOR/MINOR/ROUTINE)** | |

### PURPOSE

(*What are reasons for change?)*

### GENERAL

*(What will be changed, what are the associated advantages and disadvantages?*

*What are the risks of implementing and not implementing the changes?*

*How will the disruption to the normal services be minimized?*

*What is the potential business and user impact during the implementation of the change?*

*Who will be affected by the change?*

*What is the communication plan and how will those affected by the change be informed?)*

### AFFECTED NETWORK ELEMENTS (SYSTEMS/APPLICATIONS etc.)

### PREPARATORY WORK

*What need to be done before the change implementation? What need to tested, which tools need to be available*

### ACTION - CHANGE REQUEST FORM

*How will the change be implemented and managed? What are the tasks involved?*

### POST JOB ORDER EXECUTION / TEST PLAN

### FALLBACK PLAN

*What will be done if the changes fail?*

### IMPLEMENTATION DATE / TIME AND WORK DURATION

### IMPLEMENTATION OFFICER NAME AND CONTACTS

### CONTROLLING OFFICER NAME AND CONTACTS

### SUPPORT / STANDBY NAMES AND CONTACTS

### COMPLETION CONFIRMATION

### AUTHORISATION (NAME/TITLE/CONTACTS/RECOMMENDATION)

2. *Approved? Not Approved? If not approved state reasons for rejection and way forward.*

3. *Approved? Not Approved? If not approved state reasons for rejection and way forward.*

4. *Approved? Not Approved? If not approved state reasons for rejection and way forward.*

**Etc.**