



Somaliland Government ICT Maintenance Policy and Procedures

ICT Department



DOCUMENT DETAIL

Ministry	Information and Communications Technology		
Author	Director of ICT		
Documentation Status	Working Draft ☐	Consultation Release ☐	Final Version ☒

CONTACT FOR ENQUIRIES AND PROPOSED CHANGES

Feedback and suggestions on the Policy are welcome. It will help in enhancing/ refining the policy further in future versions, thus making them more comprehensive and relevant. Feedback, suggestions, clarifications and queries on this document may be sent to Director of ICT on the address below

Address for Correspondence

Ministry of Information and Communications Technology
Address: 107, Abu Baker Al Siddiq Road, Durya, 26-June,
Hargeisa, 90602
Phone: +25263 4699161
E-mail: sahardid@sldgov.org
Website: <https://mict.govsomaliland.org>

ACKNOWLEDGEMENT

This version of the “Government ICT Maintenance Policy and Procedures” was collectively developed by the Director of ICT under Ministry of Information and Communications Technology (MICT) and also reviewed by internal consultants and external following consultants:

1. Eng.Ali Abdilahi Dahir
2. Eng.Hassan Aw Ali
3. Dr.Mohamed Jama Madar

Feedback for the finalization of these policy was received from both internal and external stakeholders to MICT which was greatly appreciated.

LIST OF ACRONYMS

ICT: Information and Communications Technology

NCC: National Computer Center

MICT: Ministry of Information and Communications Technology

DG: Director General

TABLE OF CONTENTS

Acknowledgement.....	2
List of Acronyms	3
Part One	5
1. Background	5
Part Two	8
2. Legal Framework	8
Part Three	10
3. ICT Infrastructure Maintenance.....	10
Part Four	13
4. Policy Implementation	13
Part Five	16
5.Compliance with Maintenance Policy and Procedures	16
5.1 Compliance Requirements and Obligations Shall Include: -	16
5.2 Non-Compliance	16
5.3 Policy Review	16
Guideline Procedures	17
Appendix A	20
Appendix B	22

PART ONE

1. BACKGROUND

Advancement of ICT has now transformed the way public institutions operate and deliver services to the public. Accelerating and smoothening daily activities of the public institutions have been powered the proper utilization of technology. The ministry of ICT in Somaliland, since its existence, has been disrupted by the fast pace of the current development of ICT, while there have been efforts to adapt the current technology development. As its mandate, the ministry of ICT is responsible for regulating the ICT related industry of the country, though there have been limitations and challenges that slowed down ministry's initiatives towards effectively delivering ICT solutions to the public institutions.

In order to maintain the progress of ICT infrastructure and further improve the current technological capacities, the ministry of ICT has embarked strategies, policies, and regulations designated to manage ICT facilities of the public institutions. The ICT maintenance policy and procedures of the ministry is not only focused on equipment maintenance but also will ensure the proper utilizations of the available ICT facilities at the public institutions.

This maintenance policy is part of a comprehensive management process to minimize disruptions, optimize costs, provide asset stewardship, and bring best practice to the government institutions. Effective maintenance and support of assets provides longer life, higher employee productivity, and increased user satisfaction.

However, this policy document is meant to guide ICT maintenance cross all government institutions in Somaliland, in order to ensure consistency in terms of security, reliability, scalability, and efficiency of Government ICT hardware and software. It provides compliance requirements and should serve as reference for ICT strategic planning, acquisition, deployment, and governance in public institutions.

1.1 Problem Statement

The absence of proper ICT mechanism and policy resulted over use and misuse of the institutional ICT assets. The cost of ICT acquisition has been incremented due to lack of maintenance, and repair, which increased the wastage of usable ICT facilities.

1.2 Purpose

This policy establishes a process for the maintenance and repair of all government-owned ICT facilities (i.e., desktop computers peripheral equipment, printers, scanners, optical drives, network cards, multimedia equipment, Systems and etc.). This policy also obligates to register and monitor ICT equipment that are in service contract and those owned by the government institutions.

Proper maintenance and support of these assets increases usability and lowers the total cost of ownership to the respected institutions. This policy is designated to support preventative and ongoing maintenance of ICT assets.

1.3 Overall Policy Objective

The objective of this policy is to define the roles, responsibilities, and critical elements for the efficient operations and support of ICT systems at each Institution.

1.4 Objectives

1. To ensure that all ICT equipment are available and in good running condition.
2. To provide timely and complete response to requests for ICT maintenance
3. To improve security of all government ICT infrastructures
4. To reduce the cost of government ICT infrastructure comparing to private market
5. To train and certified 5 people for every two months

1.5 Benefits

Adoption of this policy will allow government institutions to:

1. Enable well established and reliable ICT environment;
2. Improve and effective public service provisions;
3. Enhance the scalability and sustainability of ICT infrastructure for the future use;
4. Standardizing and upgrading government ICT infrastructures

1.6 Scope

This policy is expected to be strictly adhere all government institutions, it covers all areas including network infrastructure, hardware and end-user equipment, data and software applications, system administration, ICT security, hardware and software maintenance.

1.7 Guiding Principles

1. All government institutions must protect their ICT assets against the threats of: unauthorized access, theft, loss, or destruction.
2. Where possible, each Institution will take preventive measures to prevent problems from occurring and minimize the impact of incidents that do occur by addressing identified problems as quickly as possible.
3. Government Institutions shall put in place preventive mechanism of high availability and redundant systems and back-up solutions.
4. Problems and incidents with a priority of urgent or high must be reported within two hours of detection to contain the issue, and if possible, prevent any further impact.
5. The use of equipment, applications or technology services must be approved by the Ministry of ICT.
6. All disposing and recycling ICT assets, should be consulted with the Ministry of ICT for approval.
7. Before disposing or recycling ICT assets, each Institution shall ensure all sensitive information is safely removed and recorded.
8. Each Institution shall ensure its ICT infrastructure availability and performance is continuously monitored.
9. Each institution should identify the vulnerabilities of its ICT infrastructures. Specifically, all critical and high vulnerabilities must be reported to the Ministry of ICT within three days.
10. Only authorized software and licensed products must be used and installed.
11. The development of any new applications must follow the Government Project Management Policy (where applicable).
12. User access to ICT infrastructure must follow the ICT Access Control and User Access Management Policy.

PART TWO

2. LEGAL FRAMEWORK

This policy describes how the Ministry of ICT will manage and maintain ICT infrastructure to ensure its best use and to comply with codes of best practice and statutory obligations.

The Policy has the following main points:

1. Promoting the proper utilization of ICT infrastructure.
2. Ensuring the proper maintenance of ICT infrastructure
3. Managing the complete lifecycle of the ICT infrastructure.
4. All government institution's equipment shall be maintained by the national computer center

This policy is to be read in conjunction with government ICT usage Policy and applies to all permanent and temporary employees, contractors, consultants, secondees and others who have access to, create, receive, or store any government institutions information.

2.1 Ownership

All ICT equipment, hardware, software, and data are the property of respective government institution unless there is an agreement to the contrary.

2.2 Monitoring

Ministry of ICT reserves the right to monitor and access any information stored on government ICT infrastructure during the maintenance period, in ways that are consistent with relevant legislation and good institutional governance.

The Ministry of ICT shall undertake such monitoring to:

1. Comply with the regulatory and statutory obligations.
2. Evaluate compliance with Acceptable Use Policy.
3. Maintain effective ICT systems.
4. Prevent and detect unauthorized use or other threats to the government ICT infrastructures.
5. Evaluate ICT staff training need assessment.
6. Monitor ICT infrastructure performance.

2.3 General Guideline

This policy provides uniform guidelines for the maintenance, configuration and management of ICT hardware and software across government institutions in order to:

1. Improve and conform to best ICT maintenance practices and standards.
2. Schedule / Monitor Maintenance Activities.
3. Enable shared infrastructure and services set up.
4. Harmonize and ensure maximum security.
5. Allow real time monitoring, back up, and business continuity.

PART THREE

3. ICT INFRASTRUCTURE MAINTENANCE

Through proper maintenance and management of ICT infrastructure, it should be ensured to achieve the best balance between necessary investments and the operating expenses of ICT systems. Regular upgrades and maintenance of ICT infrastructure have become a necessary, if not required precondition for the reliable and secure operation of ICT systems

ICT Maintenance is distinguished as:

1. **Preventive**, which aims in retaining the systems or hardware capabilities before the occurrence of any problem (e.g., system failure).
2. **Corrective**, which aims in restoring the defective item(s) to the required state.
3. **Adaptive**, which focus in adjusting a hardware or software product to properly interface with a changing environment.
4. **Perfective**, which refers to enhancements to the product in order to either add new capabilities or modify existing functions.

3.1 Procedure

When ICT focal person of any government institution receives a hardware or software problem with one of the ICT infrastructures (e.g., computer, printer, scanner, projector etc.), the following steps can be taken: -

1. An initial request should process via maintenance Platform to National Computer Center (NCC) in the **Appendix A**.
2. if not accessed the platform and the request will be documented by using request form in the NCC.
3. Upon receipt of the service request, National Computer Center (NCC) will respond and make an initial inspection of the equipment or the software.
 - a. If the fault is a minor, the National Computer Center (NCC) will resolve the problem immediately on-Site.
 - b. If the fault is a major and needs more inspection the equipment will be transported to the NCC.

3.2 Off-site maintenance and repairs

The National Computer Center should be well equipped all necessary tools for smooth running of its activities.

National Computer Center shall do the following:

1. Before the equipment transported to the NCC, the necessary sanitization should be taken properly.
2. Developing a schedule of maintenance for the equipment and considering the security of the data stored in the equipment.
3. ICT equipment maintenance shall consider routine/preventive, upgrade, and repair maintenance as may be required.
4. Assigning a qualified technical support staff to inspect the fault of the equipment or system.
5. Qualified technical support staff should prepare complete inspection report regarding the fault and bugs found.
6. If the fault could not be repaired internally, a maintenance support is provided by a third party, nondisclosure statements shall be signed by authorized representatives of the third party before any maintenance support is performed.
7. If the fault is repairable internally, the repairing process will be scheduled.
8. Perform the necessary maintenance and repairing of the equipment
9. Test and check the maintained and repaired parts of the equipment or software
10. Verify the functionality of the equipment after repaired or maintained and should be filled the attached maintenance completion form in the **Appendix B**.
11. Maintain records of all maintenance activities.
12. Hand-over the maintained and repaired equipment to the its institution on timely.

Appendix A: Repair & Maintenance Request Form

1. Maintenance code
2. Date and time of maintenance
3. Institution Name
4. Focal Person Name
5. Telephone /Mobile
6. Schedule date
7. Device Information
8. Area of Repair

3.3 Maintenance Tools

The National Computer Center should be well equipped all necessary tools for smooth running of its activities.

National Computer center shall follow procedure for the use of maintenance tools.

3.4 Timely Maintenance

The maintained equipment must handover on time.

Appendix B: Handover Device Form

1. Refence
2. Date and time
3. Institution Name
4. Maintenance code
5. Focal Person Name
6. Fixed issue description
7. Unfixed issue description
8. List of equipment removed or replaced (including identification numbers, if applicable).

PART FOUR

4. POLICY IMPLEMENTATION

Institutional role and responsibilities are key factors that help the policy to be implemented and institutionalized as the following: -

1. All Government institutions should implement ICT Maintenance policy and procedures whereas the ministry of Information and Communication Technology will be monitoring and leading the implementation of this policy.
2. All the government institutions ICT departments are responsible for ensuring the proper utilization of ICT infrastructures and transferring all affected ICT infrastructures to the National Computer Center.
3. MICT is responsible to maintain and conduct periodic monitoring for the implementation of the policy.
4. The cost of maintenance and repair will be billed to owned government institution.

4.1 MICT Roles and Responsibilities

Stakeholders	Responsibilities
The Minister	Approve and formally support this policy.
The DG	Review and follow up of this policy.
ICT Department	1. Develop and maintain this policy. 2. Review and approve any exceptions to the requirements of this policy. 3. Take proactive steps to reinforce compliance of all Institutions with this policy. 4. Communicate with the other Institution, directly or through ICT department of each institution, in informal or formal communication, to understand the Institution needs and expectations.

	5. Support Institution ICT department in expressing their needs, evaluating and proposing the most efficient solutions, and training users. 6. Manage ICT projects, ICT Service delivery, ICT operations, ICT incidents, and ICT security. 7. Ensure any disruption to the technology is addressed in a timely manner. 8. ICT Department is authorized for ICT infrastructure Type approval. 9. Define the standards and make recommendations on approved development coding standard and libraries. 10. Developing and designed of government institutions domain names and websites. 11. Communicate with the application owners, the application developers, and the hosting service company (where applicable), to ensure that formal procedures for the development, implementation and changes to applications are followed. 12. Report to the DG and the Minister.
--	--

National Computer Center	1. Maintaining and repairing ICT equipment for the government institutions. 2. Repairing and updating of the Government Institution Systems and applications. 3. Regular checking and updating the smooth running of the government ICT infrastructures. 4. Ensure normal operations of the ICT infrastructure (Network, hardware and Software). 5. Ensure normal operations of the data-centers. 6. Ensure security scanning of web applications is performed regularly, and vulnerabilities are addressed in a timely manner. 7. Reporting periodically the status of the government institutions ICT infrastructure.
Institution's ICT Departments	1. Continuous reviewing of ICT infrastructures. 2. Addressing the ICT minor issues and incidents. 3. Communicating to the national ICT maintenance center in cause of major issues and incidents. 4. The major issues and incidents must be repaired and maintained only by National ICT maintenance Center. 5. Regular reporting the status of the ICT infrastructure

PART FIVE

5. COMPLIANCE WITH MAINTAINENCE POLICY AND PROCEDURES

All government Institutions shall comply with the ICT maintenance Policy and Procedures to ensure effective utilization of the ICT infrastructures. Compliance in this Policy is adhering to guidelines, standards, operating procedures and regulations it is also required to comply with the provisions of this policy and procedures. Standards set out in this Policy document that guide the ICT maintenance processes shall be applicable across the government institutions.

5.1 Compliance Requirements and Obligations Shall Include: -

1. Reporting obligations according to agreed formats;
2. Abiding by the principles of the ICT maintenance policy and procedures;
3. Abiding by the ICT maintenance procedures and criteria.
4. Abiding by the agreed quality, quantity, time and standards.

5.2 Non-Compliance

Non-compliance to this Policy shall be managed in accordance with the relevant legal and regulatory provisions.

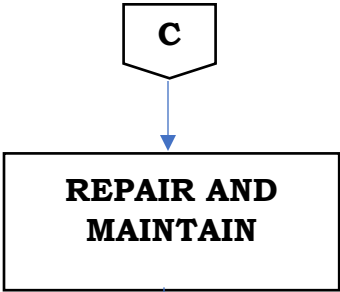
5.3 Policy Review

The policy will be reviewed once in every two years after its implementation if necessary.

Ministry of Information & Communication Technology
National Computer Center

Guideline Procedures

ACTIVITY FLOW	RESPONSIBLE	DETAILS
<pre> graph TD START([START]) --> RECEIVE[RECEIVE HARDWARE REPAIR FORM] </pre>	Government ICT DEPARTMENTS	All requests come from government ICT Directors.
<pre> graph TD DETERMINE[DETERMINE MAINTENANCE SERVICE REQUIRED] </pre>	NCC	Ensuring requests that come for national computer center
<pre> graph TD IDENTIFY{IDENTIFY INCIDENTS LEVEL} IDENTIFY -- NO --> TRANSFER[TRANSFER TO THIRD PARTY] IDENTIFY -- Yes --> TRANSFER TRANSFER --> B{{B}} TRANSFER --> C{{C}} </pre>	NCC	Ensuring the level of incidents which either repairable at center or transferring to the third party
<pre> graph TD TRANSFER[TRANSFER TO THIRD PARTY] --> B{{B}} TRANSFER --> C{{C}} </pre>	NCC	If the incidents required a high technical advisor it will transfer to the third party with contracting

 <pre> graph TD C{{C}} --> RM[REPAIR AND MAINTAIN] </pre>	NCC	NCC must be maintained and repaired.
 <pre> graph TD RM[REPAIR AND MAINTAIN] --> T[Testing] </pre>	NCC	NCC must be tested the repairable equipment.
 <pre> graph TD T[Testing] --> H[Handover] </pre>	NCC	When the end-user accepts the repaired equipment, signs on the Hardware Repair Form and indicates date of acceptance.
 <pre> graph TD H[Handover] --> END([END]) </pre>	NCC	Owner must be handover the repairable equipment.

<pre> graph TD B{{B}} --> Repair[Third-party REPAIR AND MAINTAIN] Repair --> Testing[Testing] Testing --> Handover[Handover] Handover --> Ensuring[Ensuring NCC] Ensuring --> HandoverOwner[Handover to Owner] HandoverOwner --> END([END]) </pre>		
	Third-party	Third-party must be maintained and repaired.
	Third-party	Third-party must be tested.
	NCC	Third-party must be handover the repairable equipment to NCC.
	NCC	NCC must be ensuring the repairable equipment.
	NCC	Owner must be handover the repairable equipment
	NCC	Performance targets achieved.

**Ministry of Information & Communication Technology
National Computer Center**

Appendix A

Repair & Maintenance Request Form

Maintenance Code#: _____

Date: __/__/____

INSTITUTIONS / DEPARTMENT

Institution Name _____

Focal Person Name _____

Telephone/Mobile: _____

Schedule Date: __/__/____

DEVICE INFORMATION

Device Type

Desktop	☐	Laptop	☐	Scanner	☐
Projector	☐	Router	☐	Printer	☐
Switch	☐	Firewall	☐	Monitor	☐
Repeater	☐	Photocopy	☐	Others	_____

Device Model: _____

Serial Number _____

Area of Repair

Touchpad	☐	Keyboard	☐	Fan	☐
System Board	☐	AC Adapter	☐	Ports	☐
CD-ROM	☐	Printer	☐	Application Problem	☐
No Power	☐	Mouse	☐	LCD	☐
Hard Drive	☐	Heat Sink	☐	CPU	☐
RAM Memory	☐	Removable Drive	☐	Network Card	☐
Virus	☐	Won't boot (Hardware)	☐	Won't Boot (Software)	☐

Others _____

Brief description of the problem

Urgent ☐

Institution Employee Signature:

Appendix B

REF: _____

INSTITUTIONS / DEPARTMENT

Focal Person Name _____

[illegible]

Unfixed Issues Description

MICT, Director of ICT Signature:

Date:

MICT, Head of NCC Signature:

Institution Employee Signature

Date:

Date:
