



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT  
OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 1 of 26

## ISSUE HISTORY

ISSUE	DESCRIPTION OF CHANGE	PROCESS OWNER	EFFECTIVE DATE
1	None, no change has been done	Principal ICTO	10 <sup>th</sup> June 2010
2	Changes Done to conform to ISO 9001:2015 standard	Principal ICTO	31 <sup>st</sup> May 2018

## REFERENCED DOCUMENTS

S/NO	REF	TITLE
1	QPM	Quality Policy Manual
2	OPM	Operational Procedure Manual
3	H/S	Hardware & Software Manuals
4	ICTP	ICT Policy
5	SP	Strategic Plan
6	PC	Performance Contract
7	ICTA	ICTA standards
8	FCMA	Forest Conservation and Management Act, 2016
9	ICTS	KFS ICT Strategy

## COPY HOLDERS

1	Chief Conservator of Forests
2	Principal ICTO
3	MCS
4	QMR
5	ICT ISO Representative

## RECORDS/ANNEXES

REC. NO	REC. TITLE
KFS-CSD-ICT-PFC-01	Process Flow Charts
KFS-CSD-ICT-HL-01	Helpdesk logs
KFS-CSD-ICT-SAAR-01	System Access Authorization Request form
KFS-CSD-ICT-H/SM-01	HW and SW Manuals

PREPARED BY: Principal ICTO

APPROVED BY: CCF



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT  
OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 2 of 26

REC. NO	REC. TITLE
KFS-CSD-ICT-NMS-01	Network Uptime/downtime Monitoring schedule
KFS-CSD-ICT-PMS-01	Preventive maintenance schedule and reports
KFS-CSD-ICT-SBL-01	Systems Backup Logs
KFS-CSD-ICT-OBL-01	Offsite Backup Log
KFS-CSD-ICT-PR-01	Purchase Requisition
KFS-CSD-ICT-IN-01	Issuance Note
KFS-CSD-ICT-WU-01	Website Uploads Approval Form
KFS-CSD-ICT-SU-01	security usage acceptance form
KFS-CSD-ICT-BRS-01	Backup restoration sheet
KFS-CSD-ICT-GP-01	Gate Pass
KFS-CSD-ICT-SR-01	ICT Support Request Form

PREPARED BY: Principal ICTO

APPROVED BY: CCF



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT  
OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 3 of 26

## TABLE OF CONTENT

ISSUE HISTORY .....	1
REFERENCED DOCUMENTS .....	1
COPY HOLDERS .....	1
RECORDS/ANNEXES .....	1
1. TERMS AND DEFINITION.....	4
2. SCOPE .....	5
3. PURPOSE.....	5
4. FUNCTIONS OF ICT DEPARTMENT .....	5
5. OBJECTIVE .....	5
6. RESPONSIBILITY AND AUTHORITY .....	6
7. RESOURCES, INPUTS AND OUTPUTS.....	8
8. CRITERIA OF MEASUREMENT .....	9
9. RISK AND OPPORTUNITIES.....	10
10. EVALUATION OF PROCESS.....	10
11. DETAILS OF PROCEDURE .....	10
12. PROCESS FLOW CHART.....	17

**PREPARED BY:** Principal ICTO

**APPROVED BY:** CCF



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT  
OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 4 of 26

## 1. TERMS AND DEFINITION

TERM	DEFINITION(S)
KFS	Kenya Forest Service
ICT	Information Communication Technology
FMS	Financial Management System
CCF	Chief Conservator of Forests
DCCF	Deputy Chief Conservator of Forests
PICTO	Principal Information Communication Technology Officer
ICTO	Information Communication Technology Officer
UPS	Uninterruptable Power Supply
LAN	Local Area Network
WAN	Wide Area Network
RFQ	Request For Quotation
SCM	Supply Chain Management
MS	Microsoft
MCS	Manager Corporate Services
PDF	Portable Document Format
IPPD	Integrated Payroll and Personnel Database
AIE	Authority to Incur Expenditure
PSCMO	Principal Supply Chain Management Officer
HW	Hardware
SW	Software
ICT resources	ICT equipment, Accessories and installed software including Infrastructure such as ICT networks and application systems namely e-mail, ERP (Oracle Financials system), GIS systems, various Microsoft Office packages (Word, Excel, project, Access, PowerPoint), Internet and any other authorized/licensed software in use at the service.
ICT Officer	ICT Officer II/I, Senior ICT Officer, Chief ICT Officer, Principal ICT Officer and any other authorised ICT staff (As approved by PICTO)
Symantec backup exec	Computer backup and recovery software that helps to prepare for and recover from equipment failure or accidental loss of data.

PREPARED BY: Principal ICTO

APPROVED BY: CCF



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 5 of 26

## 2. SCOPE

This procedure covers ICT support, System Management, Change management, website updates, procurement of ICT resources, Inventory of ICT resources, Preventive maintenance, Staff training, Network Management and Backup systems.

## 3. PURPOSE

This is to ensure efficient, effective and secure implementation and support of ICT resources in KFS to facilitate business operations.

## 4. FUNCTIONS OF ICT DEPARTMENT

- 4.1. Development of institutional ICT policies.
- 4.2. Provision of technical expertise on ICT hardware/software and systems to be acquired and implemented.
- 4.3. Provision of support, administration and maintenance for implemented ICT systems (Oracle Financials, e-mail, Internet, IP telephony, in-house developed systems, network infrastructure) including hardware and software among others.
- 4.4. Design and implementation of integrated management information system.
- 4.5. Maintenance of organizations website (KFS & KFC).
- 4.6. Capacity building on ICT.
- 4.7. Ensure that implemented ICT systems are available and secure (including backups, antivirus).
- 4.8. Advise the KFS on emerging technologies.

## 5. OBJECTIVE


To ensure KFS enhances her operational efficiency through automation of processes and systems.

**NB: Refer to the performance contract.**

CSF	KPI	TARGET(S)	DUE

**PREPARED BY:** Principal ICTO

**APPROVED BY:** CCF

	<b>KENYA FOREST SERVICE</b>	<b>DOCUMENT TITLE: ICT OPERATIONS MANUAL</b>	
<b>REF NO: KFS-CSD-003</b>	<b>ISSUE NO: 2</b>	<b>REVISION NO: 1</b>	<b>PAGE: 6 of 26</b>


## 6. RESPONSIBILITY AND AUTHORITY


### 6.1. Chief Conservator of Forests

6.1.1. Provision of necessary resources for Business development and Marketing.

### 6.2. Principal ICTO

- 6.2.1. Formulate, spearhead and implement ICT policies and strategies.
- 6.2.2. Advise on modern trends in ICT and software use.
- 6.2.3. Review and upgrading of ICT systems.
- 6.2.4. Document ICT processes and systems.
- 6.2.5. Develop and initiate linkages with relevant institutions on ICT related issues.
- 6.2.6. Safeguard integrity of data and information generated from the systems.
- 6.2.7. Mount efficient, effective and secure integrated network systems for revenue collection, telecommunication and management support services etc.
- 6.2.8. Oversee procurement and maintenance of surveillance equipment.
- 6.2.9. Set standards for ICT quality control.
- 6.2.10. Oversee the functionality of the organisation's website and other ICT platforms.
- 6.2.11. Provide effective ICT governance systems.
- 6.2.12. Supervise, and draw an ICT master plan for KFS as part of the strategic plan.
- 6.2.13. Disaster recovery; formulate a long term strategy procurement of ICT services and equipment.
- 6.2.14. Ensure ICT inventory is updated.
- 6.2.15. Design ICT systems based on user specifications.
- 6.2.16. Plan and design LAN and WAN.
- 6.2.17. Oversee digitization of information.

<b>PREPARED BY: Principal ICTO</b>	<b>APPROVED BY: CCF</b> 
------------------------------------	---


	<b>KENYA FOREST SERVICE</b>	<b>DOCUMENT TITLE: ICT OPERATIONS MANUAL</b>	
<b>REF NO: KFS-CSD-003</b>	<b>ISSUE NO: 2</b>	<b>REVISION NO: 1</b>	<b>PAGE: 7 of 26</b>

### 6.3. Chief ICT Officer

- 6.3.1. Supervise systems development, implementation and maintenance
- 6.3.2. Coordinate feasibility studies
- 6.3.3. Web design and maintenance.
- 6.3.4. Prepare progress reports of the systems development
- 6.3.5. Evaluate systems and ensure adherence to established ICT standards
- 6.3.6. Plan, monitor and evaluate programmes/activities within an ICT section
- 6.3.7. Configure Local Area Network and Wide Area Network.
- 6.3.8. Carry out systems analysis design and programme specifications in liaison with users
- 6.3.9. Liaise with user departments to ensure effective maintenance of ICT equipment
- 6.3.10. Review and evaluate hardware maintenance feasibility studies and detailed specifications before implementation
- 6.3.11. Carry out system administration.

### 6.4. Senior ICT Officer

- 6.4.1. Carry out systems analysis, design programme specifications
- 6.4.2. Ensure timely implementation and effective maintenance of systems
- 6.4.3. Develop reports and maintain adherence on ICT standards
- 6.4.4. Supervise overall systems documentation
- 6.4.5. Take charge of ICT equipment maintenance and keep records
- 6.4.6. Evaluate and recommend the suitability of ICT equipment
- 6.4.7. Provide ICT support services to end users
- 6.4.8. Maintain software's applications
- 6.4.9. Supervise installation certification
- 6.4.10. Recommend and supervise Hardware/Software specifications for ICT equipment and assist in feasibility studies as assigned.

<b>PREPARED BY: Principal ICTO</b>	<b>APPROVED BY: CCF</b> 
------------------------------------	---



6.4.11. Train and mentor officers working in ICT section.

**6.5. ICT Officer III/II**

- 6.5.1. Install and maintain computer applications
- 6.5.2. Ensure users are connected to the local and wide area network
- 6.5.3. Update application systems
- 6.5.4. Carry out repairs and maintenance of information and technology equipment and associated peripherals
- 6.5.5. Draw up hardware specifications for ICT equipment
- 6.5.6. Verify, validate and certify ICT equipment
- 6.5.7. Oversee the process of configuration of new ICT equipment
- 6.5.8. Log user problems and resolve them
- 6.5.9. Generate user problem statistics
- 6.5.10. Develop statistics of system down time as well as turnaround period in resolving them
- 6.5.11. Initiate remedial measures
- 6.5.12. Draw and schedule preventive maintenance
- 6.5.13. Ensure renewal of applications is in line with the renewal schedule.

**7. RESOURCES, INPUTS AND OUTPUTS**

**7.1. Resources**

- 7.1.1. Finances
- 7.1.2. Personnel
- 7.1.3. Infrastructure

**7.2. Inputs**

- 7.2.1. ICT Support Staff
- 7.2.2. Helpdesk System
- 7.2.3. Tools eg screw drivers

**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**





# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT  
OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 9 of 26

- 7.2.4. Computers
- 7.2.5. Request forms
- 7.2.6. Approvals
- 7.2.7. Specifications
- 7.2.8. PM Schedule
- 7.2.9. Budget Approvals
- 7.2.10. Software e.g. Firewall, Ms. Office
- 7.2.11. Hardware e.g. server, Backup Exec
- 7.2.12. Internet/LAN
- 7.2.13. Telephone

## 7.3. Outputs

- 7.3.1. Logs and reports
- 7.3.2. Sign sheet
- 7.3.3. Confirmation email
- 7.3.4. Updated systems
- 7.3.5. Website uploads
- 7.3.6. Hardware
- 7.3.7. Software
- 7.3.8. Inspection reports
- 7.3.9. Issue Notes
- 7.3.10. Inventory records
- 7.3.11. PM reports
- 7.3.12. Backup sets

## 8. Criteria of Measurement

**NB: Refer to Performance progress reports**

**PREPARED BY:** Principal ICTO

**APPROVED BY:** CCF



**9. Risk and Opportunities**

**NB: Refer to the Service’s Risk register**

**10. Evaluation of Process**

**NB: Refer to the Monitoring and Evaluation Reports**

**11. DETAILS OF PROCEDURE**

**11.1. KFS-CSD-ICT-OP-01: ICT Support/Helpdesk**

- 11.1.1. ICT system users contact help desk through telephone, e-mail or login to help desk system to report a system incident. ICT Officer logs the problem into the helpdesk system and generates a ticket number and assigns relevant ICT staff immediately. The assigned staff receives an email showing the generated ticket number and status of the problem.
- 11.1.2. The assigned ICT staff solves the problem and notifies the user that the incident has been solved or takes the user through the solution.
- 11.1.3. If the user is satisfied, ICT officer documents solution on the helpdesk system and checks incident as resolved by closing it. On weekly basis ICT officer administering helpdesk system circulates helpdesk logs status to all ICT staff.
- 11.1.4. For equipment and software, if the problem cannot be solved internally, ICT Officer escalates the issue to the supervisor. The supervisor reviews the incident, if this is resolved refer to 7.1.2 and 7.1.3
- 11.1.5. If the supervisor is not able to resolve, he/she contacts relevant contracted supplier via email or telephone and document in the helpdesk system.
- 11.1.6. If the equipment/software is on warranty, the supplier of the equipment/software is contacted. For software/systems, refer to 7.2
- 11.1.7. If the equipment requires to be taken to supplier premises, a gate pass is generated from the system to facilitate this movement. Three (3) copies of gate passes are prepared by ICT Officer and approved by PICTO to allow movement of items out of KFS premises.
- 11.1.8. Security checks and signs the approved gate pass before actual movement.

**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**



11.1.9. One copy of the gate pass is filed in the office by the ICT officer and the supplier goes with two copies and leaves one at the security gate.

11.1.10. The suppliers solve the problem and the ICT staff who was assigned the problem documents solution on the helpdesk system and checks incident as resolved. If it's equipment, it is returned to the user.

11.1.11. If there is a replacement of equipment part, the supplier/ICT officer writes a report to PICTO detailing the issue and the proposed parts to be replaced.

11.1.12. PICTO will advise on the way forward before any procurement is initiated.

11.1.13. After incident is solved, ICT officer closes the ticket, email is sent to the user indicating the closure of the ticket and the solution provided.

**11.2. KFS-CSD-ICT-OP-02: Systems Management**

11.2.1. For new system users, user initiates the request by completing ICT Support request form/email and ICT security usage acceptance form

11.2.2. For existing users, initiates the issue by completing ICT support request Form of email detailing the issue.

11.2.3. If PICTO approves the request, the form is forwarded to the ICT officer for action and filing.

11.2.4. If it is a system issue, the ICT officer logs the issue in the helpdesk system and resolves it.

11.2.5. If the ICT officer is not in a position to solve the issue he/she contacts the contracted systems developer detailing the issue via email and logs in the helpdesk system.

11.2.6. The contracted system developers together with ICT Officer address the issue. If the issue requires system change, refer to 7.3. If this is resolved refer to 7.1.2 and 7.1.3.


**11.3. KFS-CSD-ICT-OP-03: Change Management**

11.3.1. User initiates the system change request by completing ICT request form, email or internal memo detailing the change.

11.3.2. ICT officer logs the request to the helpdesk system.

**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**

	<h1>KENYA FOREST SERVICE</h1>	<b>DOCUMENT TITLE: ICT OPERATIONS MANUAL</b>	
<b>REF NO: KFS-CSD-003</b>	<b>ISSUE NO: 2</b>	<b>REVISION NO: 1</b>	<b>PAGE: 12 of 26</b>

11.3.3. ICT officer together with the user review the request to understand and prepare detailed documentation of the issue.

11.3.4. This is forwarded to PICTO for approval.

11.3.5. If approved, for in-house systems, the ICT officer (developer), makes the developments/changes. For outsourced systems refer to 7.2.5.

11.3.6. Upon solutions developed, the contracted system developer/ICT officer (systems developer) together with ICT officer tests the provided solution in test/development environment.

11.3.7. If satisfied, test the same solution with user and have the changes authorised and Refer to 7.1.3

11.3.8. PICTO approves application of changes in production environment.

#### **11.4. KFS-CSD-ICT-OP-04: Website Updates Procedures**

11.4.1. User initiates the website updates by completing website uploads approval form, email or internal memo detailing the request. For cases such as legal documents, sensitive press releases, CCF approval is required.

11.4.2. The user submits the contents to be uploaded which includes the write-up and/or images to accompany the request to the email address [webmaster@kenyaforests-service.org](mailto:webmaster@kenyaforests-service.org).


11.4.3. In some special cases e.g corporate communication and KFC staff are also authorised to upload urgent events, and other important publicity information.

11.4.4. The ICT Officer (web developer) documents the action taken on the website approval form, sends an email to the requestor confirming the action taken and files the form.

#### **11.5. KFS-CSD-ICT-OP-05: Procurement of ICT Resources**

11.5.1. For procurement of all ICT resources, AIE approval is sought by the user department.

11.5.2. Upon approval, same is forwarded to PICTO to provide/attach the technical specifications and the evaluation criteria for the given procurement.

<b>PREPARED BY:</b> Principal ICTO	<b>APPROVED BY:</b> CCF 
------------------------------------	---



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2


REVISION NO: 1

PAGE: 13 of 26

- 11.5.3. SCM forwards the request for tender or quotations (RFQ) to prequalified suppliers with detailed technical specifications and the evaluation criteria as provided by ICT.
- 11.5.4. In evaluation team, ICT representative will be a member.
- 11.5.5. The evaluation team shall forward the evaluation report on completion of evaluation exercise to PSCMO to complete the rest of procurement process
- 11.5.6. Upon goods and services being delivered by the supplier to SCM store, ICT representative will be nominated to join the inspection and acceptance committee as a member. This team will carry out inspection of equipment/item.
- 11.5.7. If the delivered goods meet the specifications, the goods are issued to PICTO by SCM stores, otherwise, the delivered goods and services are rejected and a report forwarded to Supply chain.
- 11.5.8. For new equipment e.g. server, desktop, laptop, upon successful inspection, ICT officers will install appropriate applications in readiness for issue to the user. These applications shall include antivirus, licensed version of Ms Office and configuration of client emails & any other relevant application as approved by PICTO.
- 11.5.9. For other new ICT equipment that do not require applications to be installed, the ICT officer upon successful inspection will setup/configure the equipment in readiness for issue.
- 11.5.10. Fixed assets section shall tag the equipment as per the distribution list.
- 11.5.11. The ICT officer records the equipment into the ICT inventory management system.
- 11.5.12. ICT department shall issue to the user who made the requisition or as per distribution list as provided by supply chain. This is for purposes of maintaining ICT inventory register.
- 11.5.13. The ICT officer shall prepare ICT issuance form and ensure that assigned user signs to confirm acceptance of the equipment.
- 11.5.14. For new systems, user department makes a detailed official request to ICT department on the need to have a new system developed.

**PREPARED BY:** Principal ICTO


**APPROVED BY:** CCF

	<h1>KENYA FOREST SERVICE</h1>	<b>DOCUMENT TITLE: ICT OPERATIONS MANUAL</b>	
<b>REF NO: KFS-CSD-003</b>	<b>ISSUE NO: 2</b>	<b>REVISION NO: 1</b>	<b>PAGE: 14 of 26</b>

- 11.5.15. ICT department evaluates the request and forwards the recommendations to ICT Committee.
- 11.5.16. ICT committee deliberates on the request and gives the final decision. If the committee approves, PICTO further advises on the method of development i.e in-house or outsourcing.
- 11.5.17. If the committee rejects, the user department is notified this decision.
- 11.5.18. If PICTO advises on outsourcing, the SCM department is consulted for procurement of the service. ICT and the requesting departments are actively involved in the development process.
- 11.5.19. If the system is to be developed in-house;
- 11.5.20. System developer analyses the requirements and commences the development upon approval by PICTO. Refer to 7.3.6 – 7.3.8

**11.6. KFS-CSD-ICT-OP-06: Inventory of ICT Resources**

- 11.6.1. All ICT resources have to be captured in the ICT inventory management system.
- 11.6.2. For newly acquired ICT resources, before issuance the same is captured in the ICT inventory management system.
- 11.6.3. ICT officer completes Issuance Form to be signed by the user after PICTO authorised the issuance.
- 11.6.4. For ICT resources to be transferred to field offices, ICT officer prepares three gate passes to be approved by PICTO. Refer to 7.1.9. The details of the receiving field officer are recorded in the ICT inventory system upon receipt of signed issuance form.
- 11.6.5. If the ICT resources are transferred within the same office, details of the receiving and surrendering staff are updated in the ICT inventory system upon signing issuance form.
- 11.6.6. Upon exit of the staff from KFS, clearance is sought from PICTO. For staff issued with ICT resources, PICTO confirms the same has been surrendered and in good condition before clearance and authorises update of ICT inventory system appropriately.

<b>PREPARED BY: Principal ICTO</b>	<b>APPROVED BY: CCF</b> 
------------------------------------	---



# KENYA FOREST SERVICE

DOCUMENT TITLE: ICT OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 15 of 26

11.6.7. On quarterly basis ICT undertakes inventory verification and update any changes upon approval by PICTO.

11.6.8. For obsolete or completely malfunctioned ICT resources, ICT officer extracts a report to be approved by PICTO and updates the ICT inventory system accordingly.

## 11.7. KFS-CSD-ICT-OP-07: Preventive Maintenance

11.7.1. ICT Officer shall prepare a schedule for preventive maintenance for all ICT equipment in all KFS offices which is approved by PICTO. This is performed quarterly

11.7.2. This will be done by contracted service provider in conjunction with ICT staff and service job cards signed by both service provider and KFS user. ICT staff will provide a detailed report on the exercise.

## 11.8. KFS-CSD-ICT-OP-08: Staff Training

11.8.1. ICT training needs assessment (TNA) shall be conducted as defined in HR training policy.

11.8.2. Internal ICT user training targeting users shall be scheduled on a continuous basis

11.8.3. For external training that is not possible within ICT and based on 7.8.1, ICT shall organise for both ICT and other staff.

11.8.4. In cases of new systems, on the job training for ICT staff shall be conducted before project closure.

## 11.9. KFS-CSD-ICT-OP-09: Network Management

11.9.1. ICT Officer (Network administrator) performs a daily check of network activity and data link connectivity on all KFS WAN links.


11.9.2. ICT Officer Record the status of the WAN connectivity links on Network Down time/ Uptime monitoring schedule.

11.9.3. In case of downtime in a particular link, ICT Officer logs the problem on the helpdesk system. The ICT Officer will resolve the problem, otherwise contact the link service provider.

11.9.4. The service provider will raise a ticket and take necessary action and advise when the issue is resolved.

PREPARED BY: Principal ICTO

APPROVED BY: CCF

	<b>KENYA FOREST SERVICE</b>	<b>DOCUMENT TITLE: ICT OPERATIONS MANUAL</b>	
<b>REF NO: KFS-CSD-003</b>	<b>ISSUE NO: 2</b>	<b>REVISION NO: 1</b>	<b>PAGE: 16 of 26</b>

11.9.5. ICT officer will confirm the resolution and will record the solution on the helpdesk system and close the ticket.

11.9.6. ICT officer will monitor weekly the internet bandwidth usage using the installed firewall device.

**11.10. KFS-CSD-ICT-OP-10: Backup Systems**

11.10.1. The ICT officer schedules backup in KFS systems which takes place in the evenings. At the end of backup job, backup log is sent to ICT officer via email.

11.10.2. KFS backup system (Symantec backup exec) scheduled to transfer the system backup files in 7.10.1.

11.10.3. Important official user files are scheduled to back up daily using Symantec backup exec.


11.10.4. ICT officer maintains backup logs which is filled daily and reviewed weekly by PICTO.

11.10.5. Backup restoration and testing are performed quarterly and the results recorded on ICT backup restoration sheet.

11.10.6. Monday to Friday, Incremental system backups are carried out whereas full backups are performed on Saturday and Sunday.

11.10.7. The backup files in 7.10.2 and 7.10.3 are scheduled to be transferred to offsite backup server on daily basis.

11.10.8. ICT officer records the backups in 7.10.7 on ICT Offsite Backup Log

<b>PREPARED BY: Principal ICTO</b>	<b>APPROVED BY: CCF</b> 
------------------------------------	---





**12. PROCESS FLOW CHART**

**12.1. ICT Support/Helpdesk**









Activity	Responsibility
<p>ICT system users contact help desk through telephone, e-mail or login to help desk system to report a system incident. ICT Officer logs the problem into the helpdesk system and generates a ticket number and assigns relevant ICT staff immediately. The assigned staff receives an email showing the generated ticket number and status of the problem.</p>	<p>ICT users</p>
<p>The assigned ICT staff solves the problem and notifies the user that the incident has been solved or takes the user through the solution.</p>	<p>ICTO</p>
<p>If the user is satisfied, ICT officer documents solution on the helpdesk system and checks incident as resolved by closing it. On weekly basis ICT officer administering helpdesk system circulates helpdesk logs status to all ICT staff.</p>	<p>ICT Officer System User</p>
<div style="text-align: center;"> <p>Yes</p> <p>ICT Officer solves the problem</p> <p>No</p> </div>	
<p>If the equipment requires to be taken to supplier premises, a gate pass is generated from the system to facilitate this movement. Three (3) copies of gate passes are prepared by ICT Officer and approved by PICTO to allow movement of items out of KFS premises.</p>	<p>ICT Officer</p>
<p>The suppliers solve the problem and the ICT staff who was assigned the problem documents solution on the helpdesk system and checks incident as resolved. If it's equipment, it is returned to the user.</p>	
<p>After incident is solved, ICT officer closes the ticket, email is sent to the user indicating the closure of the ticket and the solution provided. The suppliers solve the problem and the ICT staff who was assigned the problem documents solution on the helpdesk system and checks incident as resolved. If it's equipment, it is returned to the user.</p>	

**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**



**12.2. System Management**



Activity	Responsibility
	
 <p data-bbox="197 584 1230 696">For new system users, user initiates the request by completing ICT Request form</p>	ICT system users
 <p data-bbox="204 763 1224 846">Support request form/email and ICT security usage acceptance form</p>	ICTO
 <p data-bbox="204 909 1224 1003">If PICTO approves the request, the form is forwarded to the ICT officer for action and filing.</p>	ICT Officer System User
 <p data-bbox="193 1099 1235 1182">If the ICT officer is not in a position to solve the issue he/she contacts the contracted systems developer detailing the issue via email and logs in the helpdesk system.</p>	ICT Officer
 <p data-bbox="193 1256 1114 1350">The contracted system developers together with ICT Officer address the issue if the issue requires system change.</p>	ICT Officer: System Developer
 	

**PREPARED BY:** Principal ICTO

**APPROVED BY:** CCF



**12.3. Change Management**

Activity	Responsibility
	
<p>User initiates the system change request by completing ICT request form, email or internal memo detailing the change.</p>	ICT users
<p>ICT officer logs the request to the helpdesk system</p>	ICTO
<p>ICT officer together with the user review the request to understand and prepare detailed documentation of the issue</p>	ICT Officer System User
<p>This is forwarded to PICTO for approval. If approved, for in-house systems, the ICT officer (developer), makes the developments/changes.</p>	ICT Officer
<p>Upon solutions developed, the contracted system developer/ICT officer (systems developer) together with ICT officer tests the provided solution in test/development,</p>	ICT Officer System Developer
<p>If satisfied, test the same solution with user and have the changes authorised, PICTO approves application of changes in production environment.</p>	ICT Officer
	

**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**



**12.4. Website Updates**

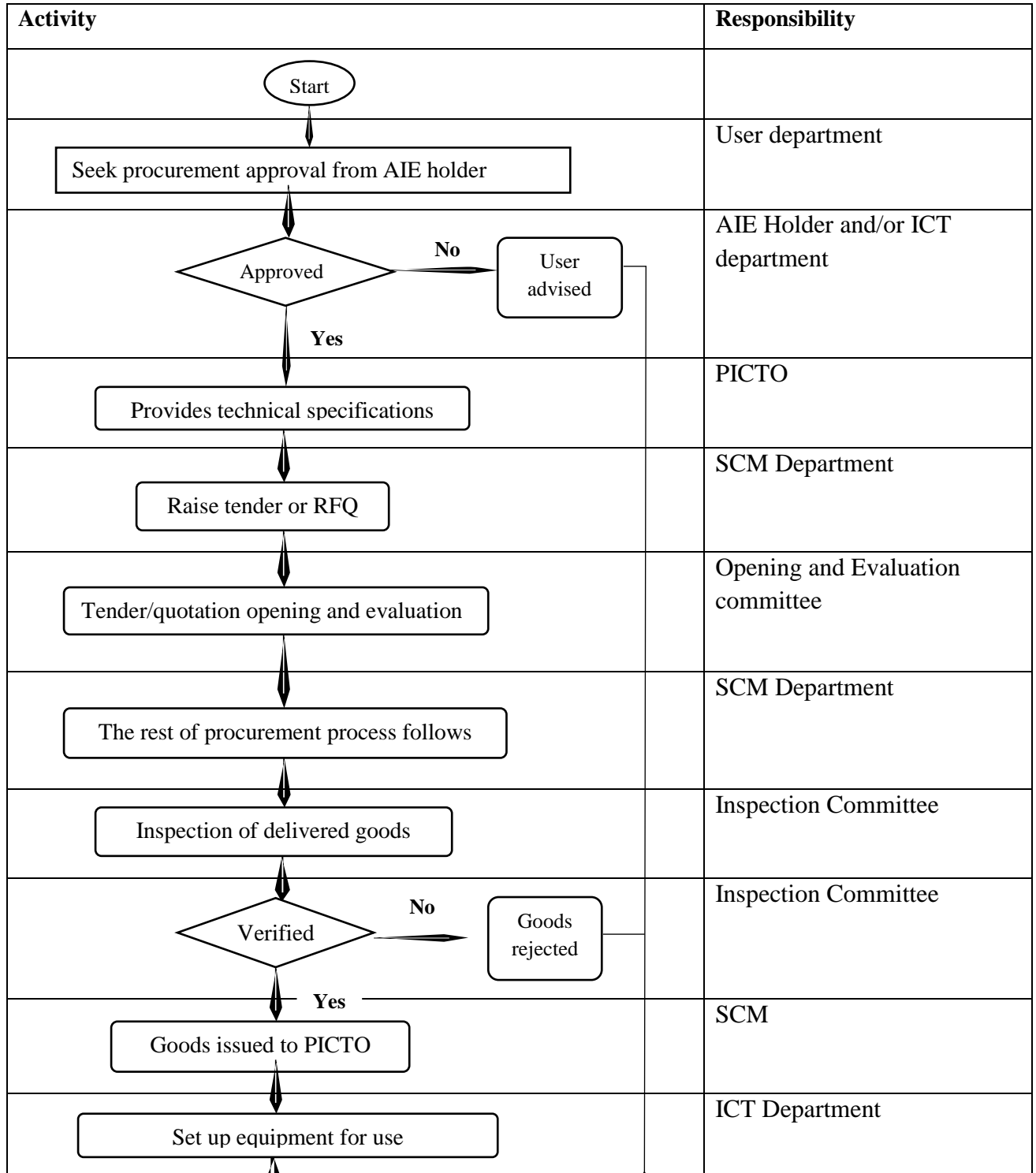
Activity	Responsibility
<p style="text-align: center;">○ Start</p>	
<p style="text-align: center;">↓</p> <p style="text-align: center;">Completes Website uploads approval form</p>	User
<p style="text-align: center;">↓</p> <p style="text-align: center;">Submits web contents to be uploaded to <a href="mailto:webmaster@kenyaforestservice.org">webmaster@kenyaforestservice.org</a> (corporate communication and KFC staff are also authorised to upload urgent events)</p>	User
<p style="text-align: center;">↓</p> <p style="text-align: center;">ICT Officer (web developer) uploads the content and documents in the website approval form</p>	ICT department
<p style="text-align: center;">↓</p> <p style="text-align: center;">Confirms to the user the action taken through an email</p>	ICT department
<p style="text-align: center;">↓</p> <p style="text-align: center;">○ End</p>	

**PREPARED BY:** Principal ICTO

**APPROVED BY:** CCF



**12.5. Procurement of ICT Resources**



**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**





# KENYA FOREST SERVICE

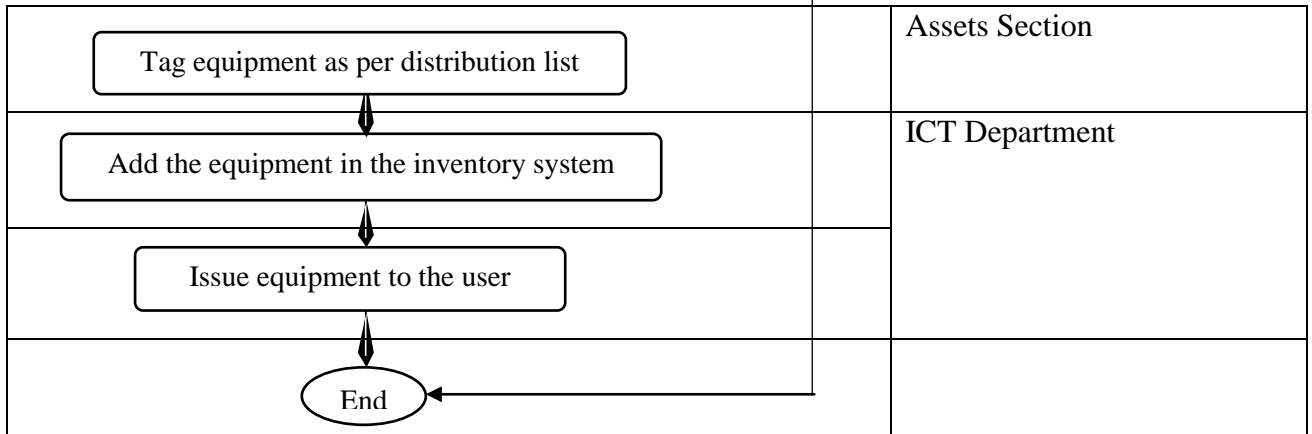
DOCUMENT TITLE: ICT OPERATIONS MANUAL

REF NO: KFS-CSD-003

ISSUE NO: 2

REVISION NO: 1

PAGE: 22 of 26

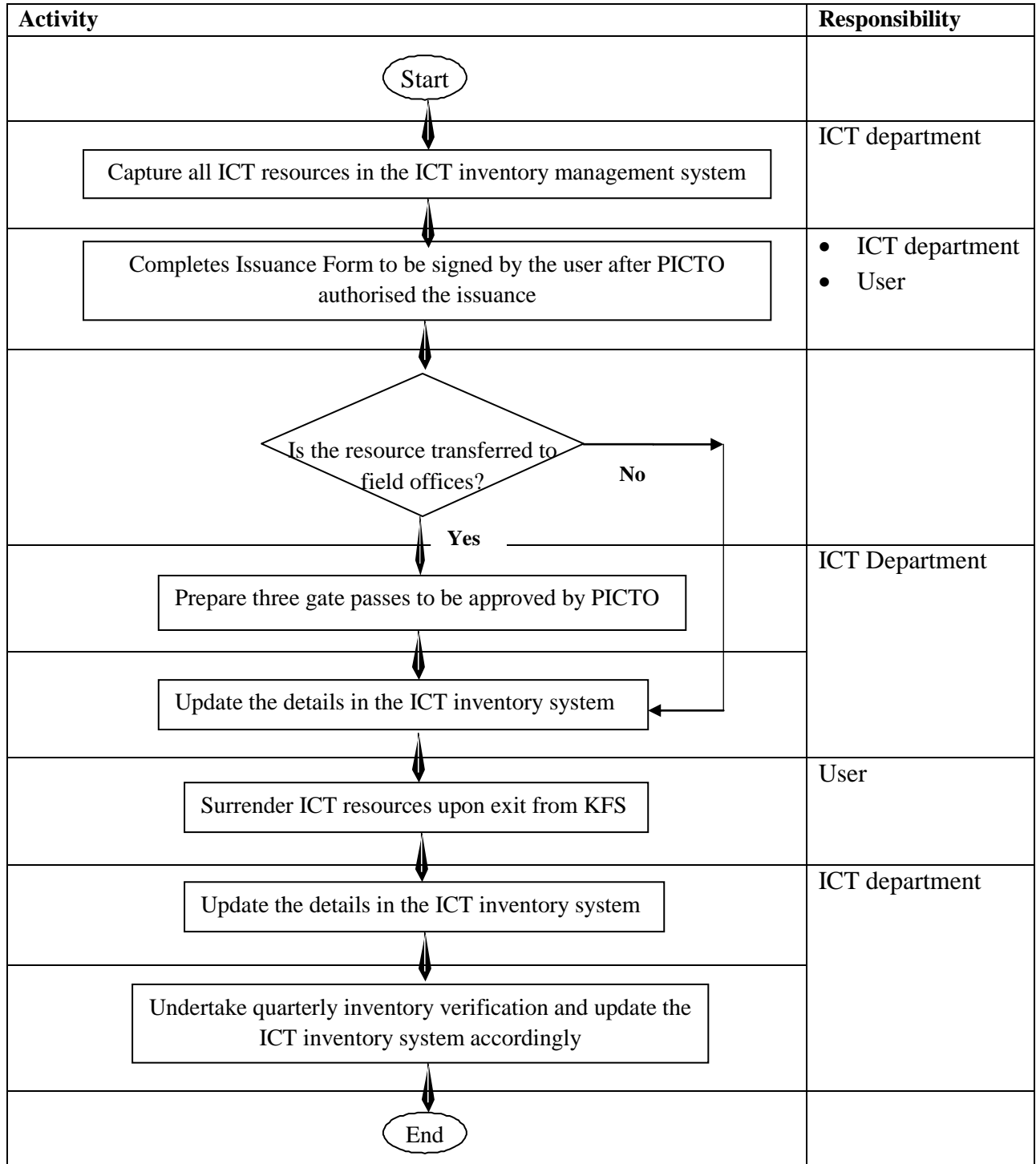


PREPARED BY: Principal ICTO

APPROVED BY: CCF



**12.6. Inventory of ICT Resources**


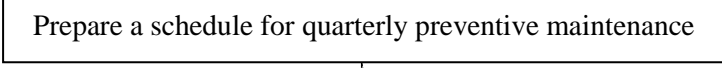
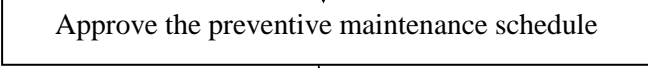
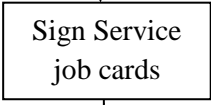
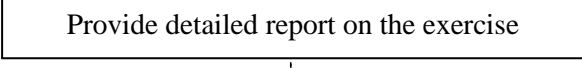



**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**



**12.7. Preventive Maintenance**

Activity	Responsibility
	
	ICT Officer
	PICTO
	<ul style="list-style-type: none"><li>• Contracted service provider.</li><li>• KFS user</li></ul>
	ICT Officer
	

**PREPARED BY:** Principal ICTO

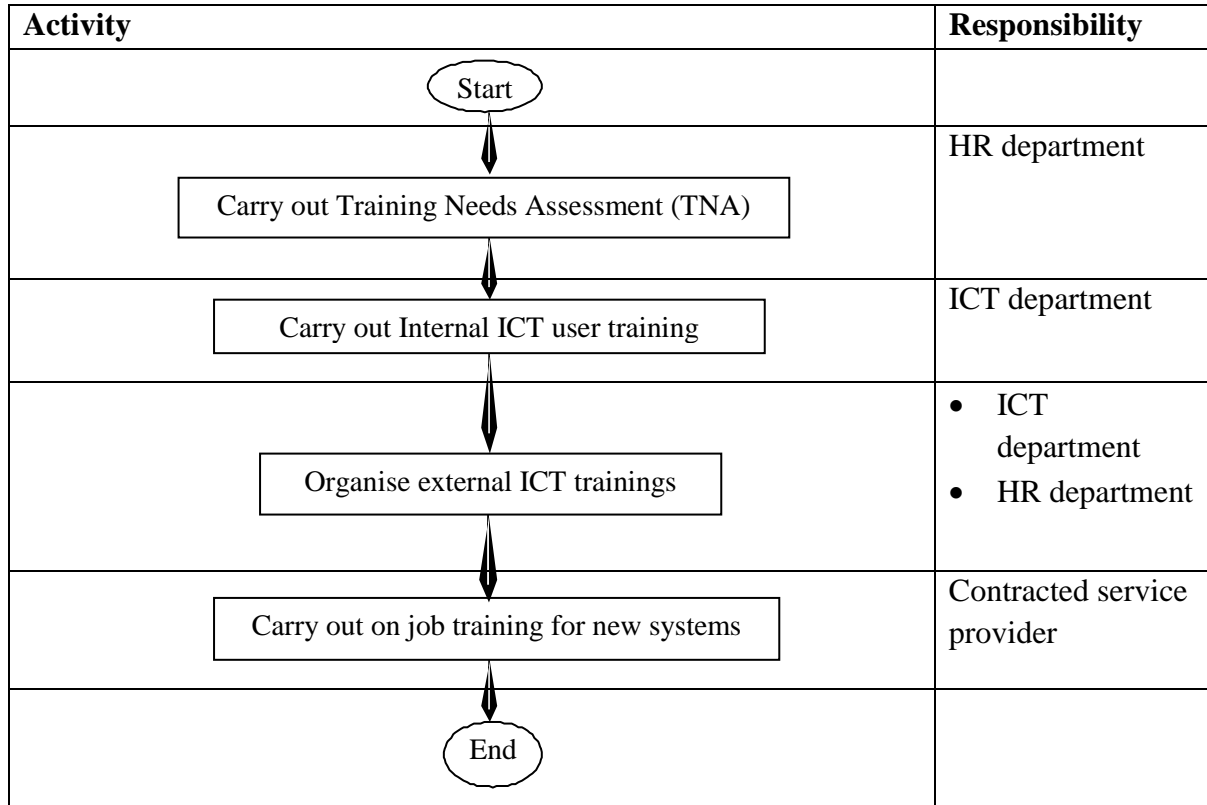
**APPROVED BY:** CCF







**12.8. Staff Training**

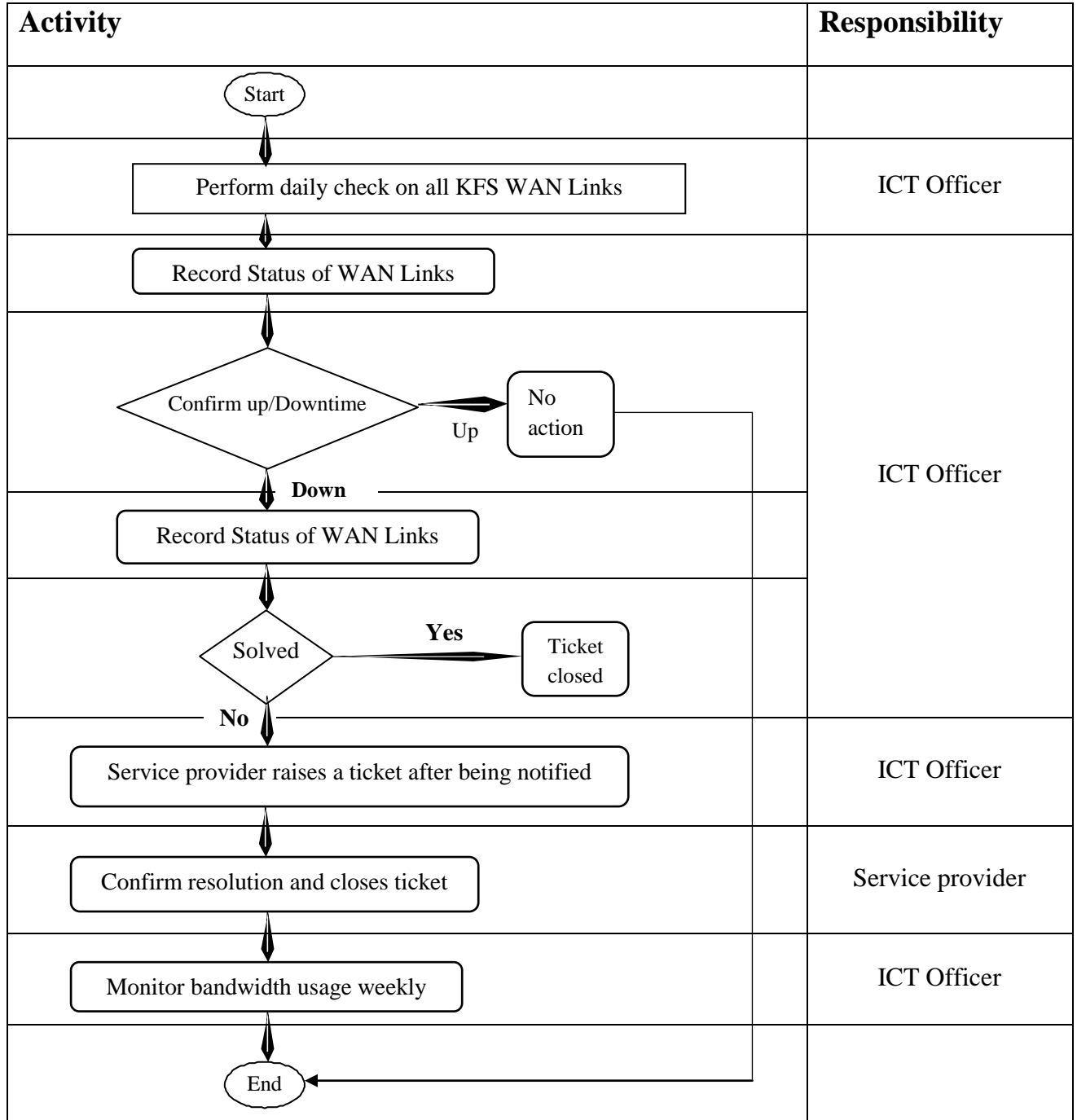


**PREPARED BY:** Principal ICTO

**APPROVED BY:** CCF



**12.9. Network Management**



**PREPARED BY: Principal ICTO**

**APPROVED BY: CCF**

