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INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT REPLACEMENT AND ENHANCEMENT PLAN

MARCH 2026

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Description	This document presents the plan of North West Department of Health on replacement of ICT Equipment.
Coverage	This plan is applicable to all ICT equipment in all health facilities and institutions in North West Department of Health.
Plan number	***ICT25/P02/R29***

Table of Contents

ABBREVIATIONS

CCTV	Closed circuit television
CPU	Central processing unit
Dr. KK	Doctor Kenneth Kaunda
Dr. RSM	Doctor Ruth Segomotsi Mompati
EMRS	Emergency medical response system
ICT	Information and Communications Technology
NMM	Ngaka Modiri Molema
NWDOH	North West Department of Health
PAAB	Patient administration and billing
PC	Personal computer
PHC	Primary health care
RAM	Random access memory
SDLC	System development life cycle
UPS	Uninterruptible power supplier
Wi-fi	Wireless Fidelity

DEFINITIONS

Data Network Infrastructure	refers to the collection of equipment, materials, and software systems needed for the functioning of a large data network within a department. It comprises components such as wires, network switches, routers, fibre optics, copper, and others
Data centre	A Data Centre is a facility that stores, manages, and processes an organization's data. It houses servers, storage, and networking equipment, ensuring data is secure, accessible, and protected. Key functions include data storage, processing, backup, and network connectivity, with strong security measures in place.
Devices	Devices are digital tools used daily to boost productivity and learning, including PCs, laptops, tablets, printers, and audio/visual equipment. They enhance and improve learning experiences.
Equipment Inventory	Equipment Inventory refers to a detailed list or record of all the Information and Communication Technology (ICT) equipment owned or managed by the department. This inventory typically includes items like computers, printers, servers, networking devices, software licenses, and other technology-related assets.
Life cycle management	Life cycle management refers to the process of managing and overseeing the entire life cycle of a product, system, or project, from its inception to its retirement or disposal.
Software life cycle	The software life cycle, also known as the software development life cycle (SDLC), refers to the process and stages involved in developing, deploying, and maintaining software applications or systems. It encompasses the entire life span of a software project, from its initial conception to its retirement and/or replacement

3. PURPOSE

The purpose of this document is to establish an ongoing ICT replacement schedule that will:

I. Achieve operational sustainability with the Department's technology equipment,
II. Improve availability of ICT services
III. Enhance budgeting for replacement of technology equipment, and

Create a "Technology Equipment Replacement and Enhancement Program" to avoid future and further obsolescence.

4. BACKGROUND

The North West Department of Health (NWDoH) operates within a dynamic and evolving healthcare landscape, where digital transformation is increasingly recognized as a critical enabler of efficient, equitable, and high-quality health service delivery. However, much of the department's ICT infrastructure such as servers, workstations, and network devices, has surpassed its intended operational lifespan. This aging infrastructure poses significant risks to service continuity, data security, and overall operational efficiency.

In response to these challenges, the National Digital Health Strategy for South Africa (2019–2024) provides a comprehensive framework for modernizing health systems through digital innovation. The strategy emphasizes the need for an integrated information architecture, robust physical and network infrastructure, and the development of digital health applications that effectively support both patients and healthcare workers. Furthermore, it underscores the importance of strengthened governance, sustainable funding models, and the cultivation of a skilled digital health workforce to drive successful implementation.

Research continues to highlight the persistent digital divide, particularly in rural areas, and the critical need for enhanced communication between government departments and communities. The adoption of mobile technologies, smartphones, and digital platforms such as service delivery apps has been identified as a key strategy to improve service delivery and community engagement.

Recognizing the urgency of aligning with national priorities, including the implementation of the National Health Insurance (NHI) and the broader goals of the

National Development Plan (NDP), the Department is embarking on a strategic ICT replacement initiative. This initiative aims to:

I. Replace obsolete hardware and software systems.
II. Establish secure, interoperable digital health platforms.
III. Expand broadband connectivity across all health facilities.
IV. Enhance data security, patient privacy, and system reliability.

This forward-looking plan not only guides the replacement and modernization of ICT infrastructure within the department but also supports broader national and provincial initiatives, such as:

I. The Presidential Commission on the Fourth Industrial Revolution (4IR) recommendations for healthcare digitization.
II. Provincial cost-containment strategies aimed at reducing reactive maintenance costs and minimizing unplanned downtime.

5. PLAN STATEMENT

The ICT Equipment Replacement Plan is a strategic initiative designed to modernize and optimize the North West Department of Health's technology infrastructure. This plan aims to systematically replace aging and obsolete ICT equipment to ensure reliable, secure, and efficient operations across all health facilities. By aligning with national digital health priorities and embracing sustainable practices, the plan supports improved service delivery, enhanced data protection, and future-readiness. Through structured implementation including assessment, prioritization, budgeting, procurement, and responsible disposal, the Department will reduce operational risks, improve user productivity, and enable the adoption of innovative digital health solutions.

6. OBJECTIVES

An ICT Equipment Replacement Plan ensures that technology infrastructure remains up-to-date, secure, and efficient to support Departmental operations. Below are the key objectives:

a) Ensure System Reliability and Performance

I. Replace outdated or failing hardware/software to minimize downtime.

II. Maintain optimal performance levels for critical Departmental operations.

b) Enhance Security and Compliance

I. Upgrade equipment to meet current cybersecurity standards.

II. Ensure compliance with data protection regulations (e.g., POPIA, GDPR).

c) Improve Cost Efficiency

I. Reduce maintenance costs of aging equipment.

II. Optimize ICT budgets through structured lifecycle management.

d) Support Modern Business Needs

I. Align technology with evolving Departmental requirements (e.g., telemedicine, digital records).

II. Enable adoption of new software and cloud-based solutions.

e) Minimize Environmental Impact

I. Implement eco-friendly disposal/recycling of obsolete equipment.

II. Promote energy-efficient replacements (e.g., low-power servers, LED monitors).

f) Standardize ICT Infrastructure

I. Ensure uniformity in hardware/software for easier maintenance and support.

II. Reduce compatibility issues across the Department.

g) Enhance User Productivity

I. Provide employees with modern, efficient tools to improve workflow.

II. Reduce frustration caused by slow or malfunctioning devices.

h) Future-Proof the Department

I. Plan for scalability to accommodate growth and emerging technologies.

II. Adopt flexible, upgradable systems to extend lifespan.

i) Risk Mitigation

I. Prevent catastrophic failures by proactively replacing aging equipment.

II. Ensure backup and disaster recovery readiness.

j) Improve Patient Service

I. Faster, more reliable systems for service delivery (e.g., e-health platforms).

II. Reduce delays caused by outdated technology.

7. LEGAL FRAMEWORK

I. National Digital Health Strategy for South Africa (2019–2024)

II. Public Service Corporate Governance of ICT Policy Framework (CGICTPF).

III. Protection of Personal Information Act (POPIA)

IV. Electronic Communications Act (No. 36 of 2005).

V. National Data and Cloud Policy (2024)

VI. Public Finance Management Act (PFMA)

VII. Preferential Procurement Policy Framework Act (PPPFA)

VIII. Directive on Public Service Information Security

8. SCOPE AND APPLICATION

This plan applies all ICT equipment in all health facilities and institutions including Provincial office, Hospitals, Clinics, Nursing colleges and District offices.

9. PROCEDURES

This section details procedures for implementing the ICT Equipment Replacement Plan. It addresses the lifecycle of ICT assets, covering acquisition, maintenance, performance optimization, security measures, and disposal to ensure reliability and cost-effectiveness

10. SITUATIONAL ANALYSIS

The Department is constituted by several institutions spread out in four districts. The institutions range from hospitals, clinics, colleges, Central Medical Depot, administrative offices and so forth. All the facilities have some form of ICT equipment deployed or used in them. This equipment could be computing equipment, network equipment, or data centres.

The table below shows the distribution of offices, and health facilities throughout the province. It shows the magnitude of deployed technology equipment throughout the department. The investment that the department has made over time in deploying technology has been relatively huge and require to be appropriately maintained.

Table 1: Number of health facilities, service delivery sites and offices

Facility type	NMM	Dr KK	Dr RSM	Bojanala	Province
Hospitals	6	5	4	4	19
PHC facilities	98	45	63	122	328
Offices	6	4	2	4	16
Colleges	1	2	-	-	3
Forensic pathology services	2	2	1	2	7
Medical Depot	1	-	-	-	1

11. TECHNOLOGY EQUIPMENT AND STANDARDISATION

This plan identifies 3 major categories of technology equipment: Data Network Infrastructure, Data Centre, and Devices.

I. Data Network Infrastructure enables connectivity for various facilities, computers, and numerous devices and systems like Wi-Fi, phones, building management systems, and even heating and air conditioning systems in those facilities.

II. The Data Centre, also referred to as "the server room," serves as the central facility where the Department stores and maintains its data systems, including PAAB, RX Solutions, student information system, email services, network printing, and file storage.

III. Devices are digital tools that enhance productivity and learning experiences.

To ensure interoperability, security, and value for money, all ICT equipment procured under this plan shall adhere to standardised technical specifications. These specifications will be determined and published by the ICT Directorate to meet the performance, security, and supportability requirements of the Department.
These standard specifications will be reviewed annually, and as and when required by significant developments in technology, to ensure they remain current, cost-effective, and aligned with the Department's strategic objectives

12. Equipment Inventory

The purpose of an ICT Equipment Inventory is to keep track of what equipment is available, its location, the person or department responsible for it, its condition, and its maintenance history. This helps the department to manage its assets efficiently, plan for replacements or upgrades, ensure proper use, and comply with any relevant regulations or standards. Annexure A presents the templates that will used for recording the ICT inventory.

13. LIFECYCLE MANAGEMENT

A life cycle is determined by considering the specific needs of the organisation and end-users, advancements in technology, and the financial implications of maintaining the technology. It involves the planning, development, implementation, monitoring, and decommissioning or disposal.

a. Equipment Life Cycle

The life cycle of equipment typically includes the following stages: (1) needs assessment, (2) procurement and acquisition, (3) installation and commissioning, (4) operation and maintenance, (5) upgrades and modernization, and (6) decommissioning and disposal.

I. Needs Assessment – This is the stage where an organisation determines the need for specific equipment in order to meet its operational efficiency. It assists organisations to plan for acquisition of the required equipment.

II. Procurement and acquisition – This is the method of locating, deciding on, and purchasing ICT equipment that satisfies the organization's needs. It entails analysing the technical details of the equipment, the cost, the vendor's track record, and taking into account elements like compatibility, scalability, and anticipated future technological requirements.

III. Installation and commissioning – ICT equipment must be installed, configured, and set up correctly in accordance with organisational requirements and industry standards. This involves tasks such as network setup, software installation, user account provisioning, and ensuring compatibility with existing infrastructure.

IV. Operation and maintenance – Performing regular maintenance activities to ensure ICT equipment operates at peak performance and remains secure. This includes tasks such as applying software updates and patches, conducting hardware inspections, managing equipment warranties, and troubleshooting issues.

V. Upgrades and modernisation – Modernization and upgrades entail making adjustments to the equipment to add new features and interfaces, enhance system functionality, and/or increase system supportability. This is regarded as the cheaper option compared to replacement of technology equipment.

VI. Decommissioning and disposal – Managing the end-of-life phase of ICT equipment, which involves planning for equipment retirement, data sanitization or destruction, and environmentally responsible disposal. Proper disposal procedures ensure data security, compliance with regulations, and minimize environmental impact.

In implementing an effective equipment life cycle management, the Department shall ensure that the following are in place:

I. Asset Tracking and Inventory Management – Maintaining accurate records of equipment details, including specifications, maintenance history, warranties, and locations.

II. Performance Monitoring – Regularly monitoring equipment performance through various metrics, such as uptime, downtime, utilization rates, and energy consumption, to identify potential issues and optimize operations.

III. Risk Assessment and Mitigation – Identifying and mitigating risks associated with equipment failure, safety hazards, regulatory compliance, and obsolescence through proactive maintenance, safety measures, and contingency planning.

IV. Financial Planning and Budgeting – Allocating resources for equipment acquisition, maintenance, and replacement based on projected life cycle costs and financial goals.

By implementing a structured equipment life cycle management approach, the Department can optimize its ICT investments, minimize downtime, reduce costs, ensure regulatory compliance, and maintain operational efficiency throughout the life span of the equipment. Annexure B illustrates the Departmental ICT equipment life cycle.

b. Software Life Cycle

The software life cycle has several implications for ICT equipment replacement:

I. Compatibility – As software evolves through different versions and updates, compatibility with the existing ICT infrastructure can become a concern. Newer software versions may require specific hardware capabilities or configurations that are not supported by the current ICT equipment.

II. Performance and Scalability – Software updates and new versions may introduce increased performance demands or scalability requirements.

III. Resource Utilization – Software upgrades or changes can impact the resource utilization patterns of the ICT equipment. Inadequate resource allocation can lead to performance bottlenecks or system instability.

IV. Security and Compliance – The software life cycle includes the release of security patches, updates, and vulnerability fixes. ICT resources, such as firewalls, intrusion detection systems, and access control mechanisms, plays a vital role in securing the software and data within an organization.

V. End of Life Considerations – The software life cycle often includes phases such as maintenance, support, and end-of-life. As software versions reach their end-of-life or the vendor stops providing support, maintaining the ICT equipment that supports the outdated software becomes challenging. This lack of support can result in compatibility issues, security vulnerabilities, and difficulties in troubleshooting. Annexure C shows the life cycle of operating systems used in the NWDoH environment.

For certain ICT equipment to operate optimally there are certain environmental factors that needs to be adhered to. Annexure D illustrates those factors and their associated lifespan.

14. ICT EQUIPMENT ACQUISITION

When considering ICT equipment acquisition, the Department may consider the option to either buy or lease the equipment. Each approach has its own implications as outlined in the table below

a. Buying vs. leasing ICT Equipment

Table 2: Comparison of leasing and buying

Aspect	Leasing	Buying
Pros		
Lower upfront costs	Leasing typically requires minimal upfront costs, allowing businesses to conserve capital for other investments or operational needs.	Buying ICT equipment usually involves a significant upfront investment, potentially straining cash flow
Technology upgrades	Leasing allows for easier and regular upgrades to the latest technology, ensuring that the	Ownership means the organization is responsible for planning and funding technology

Aspect	Leasing	Buying
Pros		
	organization remains current and competitive.	upgrades, which can be costly.
Predictable budgeting	Lease payments are predictable and can be incorporated into the budget as regular operating expenses, making financial planning more manageable.	Purchased equipment is a capital expense, and maintenance costs may vary, making budgeting less predictable.
Maintenance and support	Leasing often includes maintenance and support services, reducing the burden on businesses to handle repairs and upkeep.	Organizations are responsible for arranging and funding maintenance and support services, which can be an additional cost.
Cons		
Long-term costs	Leasing ICT equipment over an extended period may result in higher overall costs compared to buying, as lease payments accumulate over time.	While the initial investment may be higher, owning ICT equipment eliminates ongoing lease payments, potentially resulting in cost savings over time.
Limited ownership	With leasing, organizations don't own the equipment and must return it at the end of the lease, potentially losing any residual value.	Ownership provides full control and ownership rights, allowing organizations to customize equipment and retain any residual value.
Dependency on lessor	Businesses may face challenges if the leasing company changes terms,	Ownership reduces dependency on external lessors, providing more

Aspect	Leasing	Buying
Pros		
	goes out of business, or fails to meet service expectations.	control over the ICT infrastructure.
Customization	Leasing may limit customization options, as leased equipment must often meet standard specifications outlined in the lease agreement.	Ownership allows for greater customization of ICT infrastructure to meet specific business needs and requirements.
Additional Considerations		
Asset management	Leasing simplifies asset management, as leased equipment is typically managed and maintained by the lessor.	Ownership requires organizations to manage and maintain their ICT assets, which may involve more complex asset management processes.
End-of-lease decisions	At the end of a lease, organizations must decide whether to return, renew, or purchase the leased equipment, which may involve additional costs or commitments	Organizations have full control over end-of-life decisions, such as equipment disposal, upgrades, or resale.
Alignment with strategy	Leasing can provide flexibility to align ICT resources with evolving business strategies and technology needs through regular upgrades.	Ownership requires organizations to plan and execute technology strategies, which may involve longer planning cycles.

b. Security implications

Regardless of whether equipment is bought or leased, security implications are a critical consideration. The following are some key security implications to address 1) data security, 2) vendor security, 3) equipment disposal and 4) compliance.

In summary, both buying and leasing ICT equipment has implications for security. The Department should assess their specific needs, financial considerations, and security requirements to determine the most suitable approach. Regardless of the approach chosen, implementing robust security measures and maintaining security best practices is crucial to protect the equipment, data, and overall ICT infrastructure.

15. REPLACEMENT STRATEGIES AND METHODS

The replacement plan focuses on removing outdated and problematic equipment, replacing it with new technology to enhance operations. New equipment will be deployed where it's most needed, while some functional equipment will be repurposed using a "trickle-down" approach. The plan aims to improve ICT service reliability and prevent a crisis in outdated technology, which could hinder the Department's ability to meet its goals. Key considerations for replacement will include identifying necessary quantities and locations, with input from ICT, facilities, and other stakeholders. The following are areas that the Department will consider and implement in replacing equipment:

a. Prioritisation

When replacing ICT equipment, the department shall prioritize strategic areas that rely heavily on ICT services, such as clinics and hospitals, to ensure uninterrupted service delivery. These facilities will take precedence over administrative departments to minimize disruptions to community services.

Table 3: Prioritization strategy and action(s)

Strategy	Frequency	Action(s)
Replacement of ICT equipment in critical service delivery areas, such as clinics and hospitals.	Annually	a. Assessment of current ICT equipment in priority service delivery points.

	Continuous	a. Identify and list strategic focus areas based on planning documents. b. Prioritize equipment replacement in key service delivery points.

b. Obsolescence

Obsolescence drives equipment replacement due to outdated performance, software incompatibilities, and rising security threats. Computers older than six years are running on operating systems that are no longer supported, thereby not receiving any security updates or support. Replacing these outdated equipment ensures compatibility with newer software which may also require memory upgrades for optimal performance.

Table 4: Obsolescence strategies and actions

Strategy	Frequency	Action(s)
Replace outdated equipment that no longer meet performance requirements due to obsolescence.	Biannual.	a. Assess equipment for compatibility with current software and performance demands.
	Continuous	a. Replace computers older than six years or those that cannot support the latest operating systems or software and required memory upgrades

c. Optimised performance of ICT equipment

Old ICT equipment often struggles with modern software, causing slow performance and crashes. Newer hardware offers better performance, boosting user efficiency and satisfaction. Software updates may require more processing power, bandwidth, and storage, making it necessary to replace or upgrade outdated equipment. Aging equipment is prone to failures and costly repairs, which can hinder productivity. Replacing unreliable hardware improves performance and reduces maintenance costs. To effectively track and achieve optimal performance of ICT equipment, the following guidelines will be followed:

Table 5: Performance strategies and actions

Strategy	Frequency	Action(s)
Regular performance monitoring	Quarterly	a. Assess the performance of all ICT equipment to identify any slowdowns or inefficiencies. b. Document any issues and take corrective actions as needed.
Review software compatibility and updates	Quarterly	a. Review software updates and new versions to ensure they are compatible with existing hardware b. Evaluate the performance requirements of these updates and determine if the current equipment can support them
Enhance hardware reliability	Annually	a. Conduct a thorough assessment of all ICT equipment to identify any signs of aging or increased failure rates.
	Continuous	a. Upgrade equipment indicating signs of aging or increased rates.

Strategy	Frequency	Action(s)
Proactive maintenance	Bi-annually	a. Perform preventive maintenance on ICT equipment to reduce the risk of unexpected failures b. Keep a detailed maintenance log to track the condition of each equipment and schedule timely maintenance.
Equipment specifications review	Annually	a. Review specifications of ICT equipment to ensure that latest equipment which is fit-for-purpose

d. Security

Older equipment may no longer receive security updates and patches, leaving systems vulnerable to cyberattacks and data breaches. Replacing outdated hardware ensures that the Department can maintain a higher level of cybersecurity.

Table 6: Security strategies and actions

Strategy	Frequency	Action(s)
Replace older equipment that no longer receives security updates to maintain high cybersecurity standards.	Quarterly	a. Identify equipment that lacks current security updates. b. Replace outdated hardware to mitigate vulnerabilities and data breach risks.

e. Spares and consumables

As equipment reach their end of life, manufacturers tend to discontinue production of spares and/or support for older hardware, making it challenging to find replacement parts or skilled technicians to perform repairs. This can result in extended downtime or complete shutdown of services when equipment fails. Availability of spares should influence the decision to replace existing equipment. Managing and achieving availability of spares and consumables:

Table 7: Spares and consumable strategies and actions

Strategy	Frequency	Action(s)
Inventory management	Quarterly	a. Maintain a detailed inventory of spares and consumables required for all ICT equipment b. Track the usage and stock levels to ensure that essential parts are readily available when needed
Lifecycle planning	Annually	a. Incorporate spares and consumables availability into the equipment lifecycle planning process. b. Assess the likelihood of spare parts becoming scarce as the equipment approaches end of life
Procurement strategy	Annually	a. Implement a proactive procurement strategy that includes purchasing critical spares and consumables in advance, especially for equipment nearing end of life

Alternative sourcing	Annually	a. Identify and establish relationships with secondary or third-party suppliers who specialize in legacy hardware and discontinued parts
a) Technical expertise b)	Provide training updates annually	a. Ensure that internal ICT staff or contracted technicians are trained to handle repairs and maintenance of older equipment
c) Replacement planning d)	Annually	a. Use the availability of spares as a key factor in deciding when to replace or upgrade equipment. b. Align replacement planning with the annual budget and equipment lifecycle review.
e) Monitoring of Original Equipment Manufacturer's (OEM) warranties and support	Annually	a. monitor OEM's equipment lifespans and support timelines for stopping the procurement of such equipment and proactive replacement of equipment nearing end of life and support

f. Compatibility

ICT infrastructure equipment, such as servers, networking devices, and storage systems, often interact closely with software systems and applications. As software evolves through different versions and updates, compatibility with the existing ICT infrastructure can become a concern. Newer software versions may require specific hardware capabilities or configurations that are not supported by the current ICT infrastructure equipment. In such cases, equipment replacement or upgrades may be necessary to ensure compatibility and seamless operation with the new software.

Strategy	Frequency	Action(s)	Comments
Ensure ICT infrastructure is compatible with newer software by upgrading or replacing equipment as needed	semi-annual	a. - Evaluate existing equipment for compatibility with updated software versions. b. Upgrade or replace equipment that does not meet the requirements for new software.	

g. Scalability

Growing organizations often require more computing power and storage capacity. Replacing old equipment with more scalable solutions allows the Department to accommodate growth without significant disruptions.

When considering the high cost of maintaining ICT equipment, the Department will weigh these factors to determine the optimal time to replace hardware. It's often a strategic decision that balances cost savings, performance improvements, and risk mitigation.

Achieving Scalability in ICT Equipment

Strategy	Frequency	Action(s)	Comments
a) Assess current and future needs	Annually	a. Conduct a comprehensive assessment of the Department's current computing power and storage needs, along with projected growth b. Perform a capacity planning exercise annually, involving key stakeholders from different departments to gather insights into future needs c. Use this data to forecast and plan for scalability	Consider factors such as equipment performance, increased user demand, new applications, and data storage requirements.
b) Implement scalable infrastructure		a. Invest in ICT infrastructure that supports scalability, such as cloud-based solutions, modular hardware, and virtualization technologies.	These solutions can be easily expanded as the Department grows, without requiring a complete overhaul of existing systems.

		b. Transition to cloud services for storage and computing where appropriate, allowing for flexible scaling c. Choose hardware with modular components that can be upgraded or expanded as needed. d. Set up virtual environments to optimize resource usage.	
c) Strategic equipment replacement		a. Replace old equipment with more scalable options as part of a planned upgrade cycle b. Develop a replacement strategy that aligns with the Department's growth plans and budget cycles	Prioritize replacing hardware that is nearing the end of its lifecycle or struggling to meet current performance demands.

h. Support and Warranty

Support and Warranty: Manufacturers provide support and warranties for a limited time after the purchase of new equipment. When this support ends, the Department will be left without assistance for hardware issues. Replacing equipment resets the warranty and support clock.

Strategy	Frequency	Action(s)	Comments
Replace equipment when manufacturer support and warranties expire to ensure continued assistance and reliability	Monitor support and warranty status annually	a. Track equipment support and warranty expiration dates b. Replace equipment nearing the end of its support period to reset the warranty and support clock	

i. Electronic ICT Asset Register

The size of the Department will make it difficult to trace assets lifespan and the current electronic asset register used by the department does not cater for the data and planning requirements of this replacement plan. The department will therefore have to implement an electronic solution that will digitalise implementation of this plan. The solution should at minimum, be web-based and allow for local capturing of data into the system. It should further have functionality to predict expected obsolescence to enable planning.

Configuration of the Electronic

Strategy	Frequency	Action(s)	Comments
Implement a web-based electronic asset register to track ICT assets, manage their lifecycle, and support strategic planning and decision-making.	Continuous, with periodic updates as needed for system improvements.	a. Develop procure a web-based system accessible via secure login. b. Ensure the system supports decentralized data capturing from various departmental institutions. c. Integrate predictive analytics to forecast asset obsolescence and plan replacements d. Provide training for personnel on data entry and system use.	

Asset Lifecycle Management and Predictive Planning	Biannual	a. Utilize the asset register to manage the full lifecycle of ICT assets, from acquisition to disposal, with predictive analytics for obsolescence and budgeting. b. Track maintenance schedules, repair history, and usage data for all ICT assets. c. Generate custom reports for decision-makers, including inventory summaries, budget forecasts, and upcoming asset replacements. d. Monitor system alerts for lifecycle events, ensuring proactive planning for replacements.	
System Reporting and Decision Support	Quarterly	a. Configure the system to generate custom reports, including inventory overviews, cost analysis, and upcoming replacement schedules. b. Ensure leadership and decision-makers have access to predictive analytics for informed ICT investment, budgeting, and replacement decisions.	

16. Budget and Multi-year implementation schedule

Availability of budget is critical to the successful implementation of this plan, ensuring the ICT environment is maintained at acceptable standards and operational risks are mitigated. The data collected through the Electronic ICT Asset Register enables proactive budgeting by forecasting obsolescence and replacement needs well in advance.

A detailed, phased Five-Year Implementation Schedule, outlining specific replacement activities by financial year, priority area, and facility, has been developed and is included as **Annexure E** to this plan. This schedule provides the actionable roadmap for the plan's execution.

17. DEPLOYMENT AND DATA MIGRATION PROCESS

A standardised process will be followed for all deployments to ensure minimal service disruption and data security.

I. Staging: New equipment will be unboxed and asset-tagged.
II. Communication: End-users and facility managers will be notified of the schedule in advance.
III. Data Migration: User data (documents, favourites) will be securely transferred from the old device to the new using automated tools, followed by user verification.
IV. Swap-Out: The new device will be deployed, and the old device will be retrieved simultaneously. A brief user orientation will be provided.
V. Secure Disposal: Retired equipment will be data-wiped using certified software and disposed of via a certified e-waste recycler.

18. ROLES AND RESPONSIBILITIES

The successful implementation of the ICT Equipment Replacement Plan depends on clearly defined roles and responsibilities across all stakeholders. This section

outlines the duties of ICT staff, departmental management, end-users, and procurement teams to ensure effective planning, acquisition, maintenance, replacement, and disposal of ICT assets.

Head of Department

I. Approve strategic direction and budget.

II. Ensure alignment with national health and ICT policies.

III. Champion the initiative across the Department.

ICT Manager / Director

I. Lead the planning and execution of the replacement strategy.

II. Coordinate with procurement and internal teams.

III. Monitor progress and report to leadership Oversee the overall implementation of the ICT Equipment Replacement Plan.

IV. Approve equipment replacement schedules and priorities based on departmental needs.

V. Ensure compliance with organizational ICT policies, cybersecurity standards, and lifecycle management processes.

VI. Prepare and present budget forecasts for equipment replacement to senior management.

VII. Monitor the performance of ICT staff and ensure timely reporting..

Procurement Manager

I. Coordinate the purchase of ICT equipment in line with approved specifications and budget allocations.
II. Liaise with vendors to obtain competitive quotes and ensure compliance with supply chain regulations.
III. Track and manage warranties and service agreements for all procured equipment.
IV. Collaborate with the ICT team to ensure procurement aligns with lifecycle planning and scalability needs.

Finance Manager

I. Allocate and monitor funds for ICT equipment replacement and upgrades.
II. Ensure that cost forecasts are accurate and aligned with organizational financial plans.
III. Provide financial reports to support ICT planning and procurement decisions

IT Support Technicians

I. Maintain accurate and up-to-date asset inventories.
II. Perform regular maintenance, troubleshooting, and performance assessments of ICT equipment.
III. Recommend equipment upgrades or replacements based on performance metrics and obsolescence indicators.
IV. Ensure proper data migration, backup, and secure disposal of outdated equipment.
V. Support end-users with training on new hardware or software systems.

Facility Managers

I. Identify ICT equipment needs within their respective departments.
II. Collaborate with the ICT Manager to prioritize critical areas for replacement or upgrade.
III. Ensure end-users adhere to ICT usage and maintenance guidelines.
IV. Report equipment issues promptly to ICT support.

End-Users (Staff Members)

I. Use ICT equipment responsibly and in line with departmental policies.
II. Report performance issues, faults, or damage to the ICT support team promptly.
III. Participate in training programs to adapt to new technologies.
IV. Support equipment care to maximize its lifespan.

19. IMPLEMENTATION AND MONITORING

Implementation of this plan is reliant on several factors such as budget and an effective electronic asset management solution. The plan will be implemented upon approval. After approval of the plan ICT will develop an electronic asset management solution that will be used specifically for ICT equipment.

20. REVIEW

The plan will be reviewed as and when there is new information or requirement/s but the major review will be done after three years of implementation

21. ATTACHMENTS

The following attachments are enclosed to support effective equipment replacement plan:

Annexure A - Equipment Inventory Template

Annexure B - Departmental ICT equipment life cycle

Annexure C - Software Lifecycle

Annexure D - Environmental Factors for ICT Equipment

Annexure E - Five-Year Phased Implementation Schedule

22. APPROVAL

10/03/2026

Mr. J. De Beer ***Date***

Chief Director: Strategy and Systems

Approved/ not approved

17/03/2026

Mr T. Mokhatla ***Date***

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Annexure A: ICT Equipment Inventory Template

Asset No.	Serial no.	Category	Device type	Brand	Model	User/Department	Location	Purchase Date	Warranty ends date	Condition (1-5)	Replacement year
		Device	Laptop								
		Infrastructure	Server								

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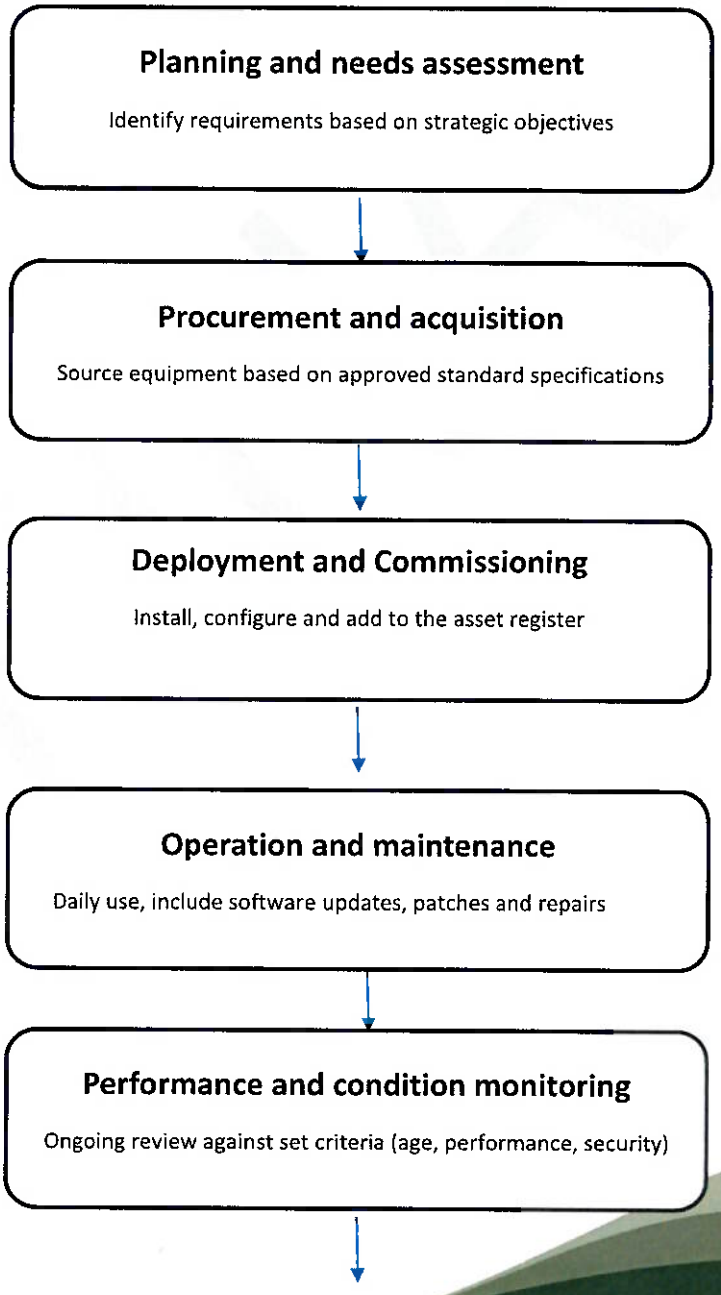
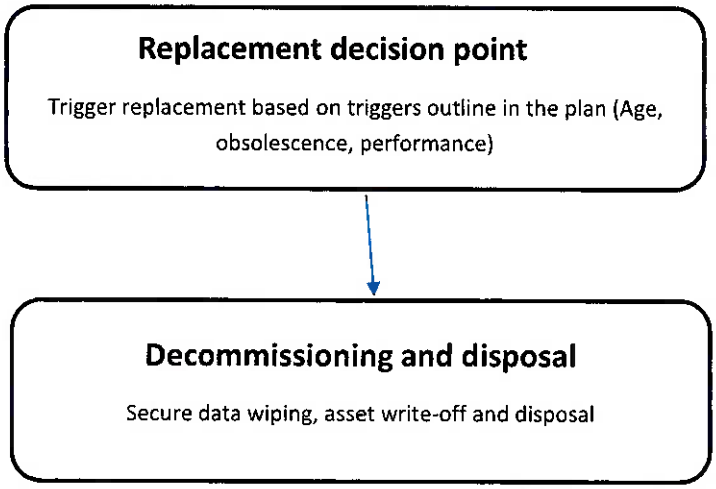
Annexure B: Departmental ICT equipment life cycle




Replacement decision point
Trigger replacement based on triggers outline in the plan (Age, obsolescence, performance)
Decommissioning and disposal
Secure data wiping, asset write-off and disposal

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Annexure C: Software Lifecycle

Operating System	Version	Current Phase	End of Mainstream Support	End of Extended Support	NWDOH Action
Microsoft Windows	10	Extended Support	13 Oct 2023	14 Oct 2025	**PRIORITY REPLACEMENT**
Microsoft Windows	11	Mainstream Support	TBC	TBC	Standard Deployment

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Annexure D: Environmental Factors for ICT Equipment

Environmental Factor	Requirement	Impact on Lifespan if Not Met
Temperature	18°C - 24°C	Overheating, hardware failure, significantly reduced lifespan.
Humidity	40% - 60%	Corrosion, static discharge, component damage.
Power Quality	Stable, clean power with UPS protection	Power surges can cause immediate and irreversible damage.
Dust & Debris	Clean, low-dust environment	Clogged fans, overheating, hardware failure
Physical Security	Secure, access-controlled rooms	Risk of theft, vandalism, and unauthorized access

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Annexure E: Three-Year Phased Implementation Schedule

Financial Year	Priority Area	Asset Type	Specification (from Standards)	Quantity (Est.)	Target Facilities / Districts	Unit Cost (ZAR) Est.	Total Budget (ZAR)	Responsible Manager
2025/26	Critical Patient Systems	Server	2U Rack, Dual CPU, 64GB RAM		Central Data Centre			ICT Manager
		Network Switch	48-port Managed with PoE+		All 19 hospitals			Network Manager
		Laptop	Business-grade, i5, 16GB, 512GB		Clinicians			IT Support Lead
2026/27	Clinical & Admin Scale-Up	Desktop PC			Clinics & Admin (Bojanala, Dr. RSM)			
		Wireless AP	Wi-Fi 6 (AX) Internal		High-patient-volume facilities			
		Tablet	10", 128GB, Protective Casing		Mobile Clinics, Registration Areas			
2027/28	Modernisation & Enhancement	Laptop	Business-grade, i5, 16GB, 512GB		Clinicians & Managers			

		UPS	3kVA Online Double-Conversion		Server Rooms & Critical Sites			
		Electronic Asset Register	Web-based, predictive		Provincial Rollout			