



Government of Malawi
Ministry of Health

DIGITAL HEALTH GOVERNANCE FRAMEWORK FOR MALAWI



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This Framework is the outcome of a highly consultative and collaborative process that reflects the shared commitment of the Ministry, development partners, implementing partners, academic institutions and digital health practitioners working across all levels of the healthcare system. The Ministry sincerely acknowledges the leadership of the Digital Health Division (DHD) for spearheading and coordinating this work end to end.

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The Ministry further acknowledges the Tony Blair Institute for Global Change (TBI), our technical partner, for working hand in hand with the DHD to co-create and facilitate broad-based stakeholder engagement throughout the process. This Framework marks a critical step forward in creating greater clarity, inclusivity and strategic alignment of digital health initiatives with Malawi's broader digital transformation vision.

Special recognition goes to the Digital Health Governance Taskforce for providing strategic direction, policy coherence and deep technical input throughout the development journey. The Ministry also recognises the contributions of the Ministry of Health Directorates, District Health Management Teams (DHMTs), particularly those who actively participated in the regional consultations. Their contextual insights played a key role in grounding the Framework's relevance at the subnational level. The Ministry further appreciates the contributions of the Technical Working Group (TWG) for its role in facilitating reviews and aligning the Framework with national policy priorities and global standards.

This Framework is a collective commitment to strengthen coordination, driving interoperability and delivering equitable, high-quality and resilient digital health services for all Malawians. The Ministry calls on all stakeholders to operationalise their roles as outlined in the Framework and to foster the collaboration and synergy required to bring its ambition to life.

The Ministry remains steadfast in its commitment to stewarding the implementation of this Framework, with a clear focus on ensuring continuity, coherence and impact at this critical juncture in the transformation of Malawi's healthcare system.



Dr. Samson Mndolo
Secretary for Health
June 2025

KEY ACRONYMS

AI	Artificial Intelligence
BI	Business Intelligence
CDHO	Chief Digital Health Officer
CMED	Central Monitoring and Evaluation Division
DHD	Digital Health Division
DPPD	Department of Planning and Policy Development
EMR	Electronic Medical Record
FBOs	Faith-Based Organizations
hCERT	National Health Cybersecurity Emergency Response Team
HSSP III	Health Sector Strategic Plan III
ICT	Information Communication Technology
ICTAM	ICT Association of Malawi
IoT	Internet of Things
ISPs	Internet Service Providers
ITU	International Telecommunication Union
KPIs	Key Performance Indicators
MACRA	Malawi Communications Regulatory Authority
MaHIS	Malawi Healthcare Information System
M&E	Monitoring and Evaluation
mHealth	Mobile Health
MDAs	Ministries, Departments and Agencies
ML	Machine Learning
MoH	Ministry of Health
mwCERT	Malawi Computer Emergency Response Team
NCST	National Commission for Science and Technology
NRIS	National Registration and Identification System
PII	Personally Identifiable Information
PPPs	Public–Private Partnerships
QMD	Quality Management Directorate
SDGs	Sustainable Development Goals
SLAs	Service Level Agreements
SMT	Senior Management Team
SOPs	Standard Operating Procedures
TWG	Technical Working Group
UHC	Universal Health Coverage
UPS	Uninterruptible Power Supply
WHO	World Health Organization
ZTA	Zero-trust Architecture

GLOSSARY OF TERMS

Digital Health	Use of ICT and computer-enabled medical devices in health service delivery.
Digital Health Governance	The framework of policies, guidelines, SoPs, regulations, and mechanisms that guide the development and implementation of digital technologies in healthcare.
Digital Health Implementation:	The process of integrating digital technologies into healthcare systems to improve health service delivery
Digital Health Infrastructure	The foundational systems, technologies, and processes that enable the delivery, management, and optimization of digital health services. It encompasses the interconnected components that support healthcare delivery through digital means, ensuring accessibility, security, and efficiency.
Digital health solutions	ICT interventions aimed at improving health service delivery
Health facility	A location where health services are provided in compliance with requirements set by the Medical Council of Malawi or the Nurses and Midwives Council of Malawi.
MaHIS	Malawi Healthcare Information System. A comprehensive system designed to support all healthcare services. It is contrasted with siloed, disease-specific systems.
Stakeholder	Person or institution implementing or using any digital health initiative or solution
Technical Working Group	Is the Digital Health, Information Systems and Reporting TWG
User	A person or system that interacts with a digital solution

EXECUTIVE SUMMARY

The Digital Health Governance Framework is a pivotal policy instrument designed by the Ministry of Health (MoH) to foster a coherent, scalable and ethically grounded digital health ecosystem in Malawi. Grounded in the Health Sector Strategic Plan III (HSSP III), the National Digital Health Strategy and aligned with global instruments such as the WHO Global Strategy on Digital Health, the DHGF is a product of collective learning and institutional progress dating back to 2004. This evolution has led to transformative milestones such as the rollout of the Malawi Healthcare Information System (MaHIS) and early adoption of telemedicine and Artificial Intelligence (AI) interventions. However, systemic challenges persist—fragmentation, duplication, and over-dependence on external funding continue to impede coherence and long-term sustainability.

This framework seeks to establish a well-orchestrated governance architecture that enables the modernisation of Malawi's health sector through the strategic use of technology. By introducing clarity in stakeholder roles, promoting ethical data practices and supporting inclusive access, the DHGF aims to synchronise national digital health efforts with emerging innovations and global trends. The ultimate ambition is to foster an enabling environment where digital tools are leveraged efficiently for resilient, equitable and quality healthcare delivery in support of Malawi's Vision 2063 and Sustainable Development Goal 3.

The framework is structured around four strategic pillars that serve as the foundation for governance action. First, the infrastructure pillar focuses on ensuring reliable power supply, scalable connectivity and integration with national e-Government platforms. Second, the services and applications pillar emphasise the nationwide scale-up of MaHIS, adoption of AI and telemedicine solutions and adherence to data standards and system interoperability. Third, the data protection pillar underscores alignment with Malawi's Data Protection Act and includes the establishment of a specialised Health Cybersecurity Emergency Response Team (hCERT). Lastly, the workforce development pillar seeks to embed digital literacy into medical education and drive effective change management across the health sector.

To translate these governance pillars into actionable outcomes, the DHGF outlines five strategic objectives. These include the establishment of clear and functional governance structures across all levels of the health system; promotion of multi-sectoral collaboration among government actors, development partners, and the private sector; enforcement of national policies and standards to safeguard data and support system-wide interoperability; prioritization of equity and inclusion to ensure rural, marginalized and underserved populations are not left behind; and the transition to sustainable financing models that reduce donor reliance through increased domestic investment and catalytic Public–Private Partnerships (PPPs).

In achieving these outcomes, the framework does not merely outline a compliance protocol—it activates a coordinated reform agenda that positions Malawi as a forward-looking digital health leader in the region. By cultivating trust, institutional accountability, and innovation, the DHGF paves the way for smarter, more inclusive health systems. Its strategic implementation will catalyse Malawi’s transition towards Universal Health Coverage (UHC), while reinforcing digital sovereignty and national resilience in the health sector.

In this regard, the Ministry of Health reaffirms its commitment to operationalizing the DHGF through active leadership, continuous learning and transparent collaboration. The Ministry calls upon all stakeholders—government entities, regulatory bodies, health professionals, technologists and development partners—to align with this common vision and work collectively in actualizing Malawi’s digital health ambitions. Only through such unity of purpose can the nation deliver digitally empowered, patient-centred healthcare that leaves no one behind.

Chapter 1

Introduction



1. INTRODUCTION

1.1. Contextual Background

Since 2004, Malawi has made notable progress in advancing digital health through the rollout and institutionalisation of key national systems and innovations. The Malawi Healthcare Information System (MaHIS) has become a cornerstone for harmonising fragmented Electronic Medical Record (EMR) systems across the country. The early adoption of telemedicine and Artificial Intelligence (AI)-driven solutions in selected pilot settings has complemented this progress. In totality, these efforts reflect Malawi's growing commitment to leveraging digital technologies to strengthen health service delivery, enhance data use and build a more resilient and responsive health system.

However, despite the positive strides, the country continues to face persistent challenges that hinder the full realisation of the digital health potential. The challenges include infrastructure gaps, limited digital literacy, fragmented systems and a continued heavy reliance on donor funding. Nevertheless, the challenges are not unique to Malawi but are typical in many low-and middle-income countries, underscoring the need for a well-coordinated and sustainable approach to digital health governance. (World Bank, 2024).

Malawi recognises the transformative potential of digital health solutions, including telemedicine, EMRs, mobile health (mHealth) platforms, and Business Intelligence (BI) for health data analytics. The use of these technologies will enhance healthcare delivery, improve disease surveillance, and strengthen health system management. Besides, BI tools are becoming increasingly crucial for extracting actionable insights from vast amounts of health data, ultimately aiding in the optimization of healthcare services and contributing to the achievement of Universal Health Coverage (UHC).

In this context, the Malawian government has developed the Health Sector Strategic Plan (HSSP III) and a Digital Health Policy (2024–2030), which align with international commitments such as the Sustainable Development Goals (SDGs) and the World Health Organization's (WHO) Global Strategy on Digital

Health (2020–2025). These initiatives aim to maximize the impact of digital health technologies while ensuring that their implementation is equitable, ethical, and sustainable.

1.2. Purpose

The purpose of the Digital Health Governance Framework is to provide clarity on the roles and responsibilities of different stakeholders in the digital health ecosystem in Malawi. The clarity provided by the Governance Framework will ensure that stakeholders effectively perform their respective functions and roles in the development and implementation of digital health systems. In this regard, the framework seeks to:

- a) Minimize duplication of efforts among different stakeholders.
- b) Improve alignment and optimize performance by leveraging the efforts of the stakeholders.
- c) Improve stakeholder accountability by leveraging the efforts of stakeholders.

1.3. Objectives

This framework sets out the following core objectives to guide digital health governance in Malawi:

- a) **Establish robust governance structures** for digital health at all levels of the healthcare system.
- b) **Foster multi-sector collaboration** by harmonizing efforts among the Ministry of Health (MoH), district councils, development partners and private sector stakeholders through the creation of processes to strengthen partnerships and ensure coordinated action.
- c) **Strengthen policy oversight by ensuring** that digital health initiatives adhere to key national documents, including the Health Sector Strategic Plan (HSSP III), Digital Health Policy (2024–2030) and the National Health Policy (2018).
- d) **Enhance data governance by adopting** global best practices in data security, patient privacy, and interoperability, while developing local guidelines tailored to the needs of the Malawian context.

- e) **Support sustainable financing for digital health initiatives**, with a focus on long-term government funding and development partner support to ensure the sustainability of digital health solutions.
- f) **Ensure equity and inclusivity in the digital health** space, prioritising access for the marginalised sections of the population, such as rural communities, women, and vulnerable groups, by investing in infrastructure and addressing digital literacy gaps.

1.4. Scope

According to the WHO, digital health refers to the use of Information and Communication Technologies (ICT) to improve the flow and use of health information for better service delivery and system management. As healthcare demands grow, digital solutions are essential for timely, accurate and data-driven decision-making.

This framework covers the governance around the development and implementation of digital health systems across Malawi's health sector. The framework applies to both public and private institutions, aiming to build a cohesive, interoperable and secure digital health infrastructure responsive to the country's evolving health needs. The scope of the framework includes the following key areas:

a) **Government Hospitals**

The framework covers all public healthcare facilities, including hospitals, clinics and health posts under the MoH. It aims to standardise and expand digital health solutions to ensure efficiency, data interoperability and improved patient care in the public health sector.

b) **Faith-Based Organizations (FBOs)**

The framework also covers faith-based institutions that deliver health services across Malawi. These organisations will be supported in adopting digital solutions to enhance healthcare delivery, data management and patient care for the benefit of Malawians.

c) Private Hospitals

The framework also extends to private healthcare providers, ensuring that digital health solutions are accessible and applicable in private hospitals and clinics. This inclusion will ensure a seamless integration between the public and private health service providers, promoting data exchange, interoperability and improved patient services across the healthcare system.

1.5. Alignment with National and Global Priorities

The Digital Health Governance Framework is aligned with several key national and global frameworks, policies, and guidelines, such as:

a) WHO Global Strategy on Digital Health (2020–2025)

The strategy provides global best practices for digital health implementation, incorporating standards, lessons, and recommendations from countries like Kenya and South Africa (World Health Organisation, 2020).

b) Malawi Vision 2063

The vision highlights the importance of ICT and digital interventions in key sectors, including health, as part of Malawi's aspiration to become a world-class digital economy (National Planning Commission, 2020).

c) National Health Policy (2018)

The policy establishes the legal foundation for health service delivery, including the integration of ICT into health systems.

d) Health Sector Strategic Plan III (2023–2030)

The strategic plan focuses on achieving high-quality, integrated, and equitable healthcare delivery, with specific emphasis on governance and leadership improvements at all levels of the health sector.

e) Digital Health Policy (2024–2030)

The policy offers a strategic direction for the development, utilisation, and regulation of digital health solutions in Malawi.

f) Digital Health Strategy (2020-2025)

Outlines a roadmap for harmonised country-led digital health initiatives that support efficient service delivery at all levels of the health system.

Chapter 2

Justification and Rationale



2. JUSTIFICATION AND RATIONALE

2.1. Justification

The Digital Health Governance Framework is essential for addressing systemic gaps that continue to limit the effectiveness, coordination and sustainability of digital health initiatives in Malawi. Despite notable progress, such as the rollout of MaHIS and the growing adoption of digital tools, weak governance has resulted in fragmented implementation, duplication of efforts, and misalignment of mandates across institutions. Challenges such as limited involvement of senior leadership, underutilization of standard operating procedures and unclear roles at national and sub-national levels have undermined strategic direction, progress and accountability for digital health initiatives.

These governance gaps have been highlighted through sector review. The reviews included the HSSP III Joint Annual Review and DHD functional analyses, and this is further reflected in the constrained rollout of critical reforms such as MaHIS and Shared Health Records. As recognised by the WHO and ITU, strong governance is the foundation of resilient digital health systems. Therefore, this framework responds to that imperative by establishing mechanisms to clarify roles, standardise coordination, promote alignment across stakeholders and build the leadership structures necessary to sustain digital transformation in health.

2.2. The Need for a Digital Health Governance Framework.

The need for a comprehensive Digital Health Governance Framework stems from several key factors as follows:

a) Fragmentation of Digital Health Initiatives

Malawi's health system currently relies on a range of disparate digital solutions that are not fully integrated. The fragmentation hinders the effective use of data, reduces the efficiency of health services, and limits the scalability of successful initiatives.

b) Lack of Coordinated Governance

The absence of a unified governance structure has led to overlapping digital health projects with no clear accountability. Inevitably, this lack of coordination leads to inefficiencies, challenges in enforcing policies, and difficulties in standardising operations.

c) **Lack of inclusive and Equitable Digital Health Solutions**

The country's digital health initiatives must prioritise equitable access to health services for all populations, particularly rural communities, women and marginalised groups. Therefore, the framework seeks to ensure that digital health interventions are inclusive and aligned with Malawi's goal of achieving UHC.

2.3. Rationale

The rationale for the framework is based on a three-pronged approach, which addresses the critical governance gaps, leverages evidence-based analysis and enhances the integration and decentralisation of digital health solutions.

The development of the Digital Health Governance Framework is grounded on the need to establish a coherent, accountable, and sustainable approach to managing digital health investments and interventions in Malawi. While the country has registered remarkable progress in adopting digital health technologies, the absence of a unified governance mechanism has contributed to duplication of efforts, limited accountability, and fragmented service delivery.

Therefore, the framework provides a coordinated governance model that aligns digital health initiatives with national priorities, while enabling decentralised implementation that is responsive to local needs. The framework builds on findings from national assessments, including the Health Sector Strategic Plan III (HSSP III), the MoH Functional Review, and the Digital Health Division (DHD) Profile, which all concur on the persistent governance challenges related to system oversight, policy enforcement, and stakeholder coordination.

The rationale of the framework is anchored on three dimensions as follows:

2.3.1. Governance gaps

The existing digital health landscape in Malawi is fragmented, with numerous digital health systems being developed and deployed without centralised oversight. The fragmentation leads to multiple challenges, which include the following:

a) **Lack of clear accountability**

In the absence of well-defined lines of responsibility, policy enforcement becomes inconsistent, resulting in delays or ineffective implementation of digital health interventions.

b) Inconsistent data governance

Currently, health data is siloed across systems, limiting interoperability and hindering evidence-based decision-making at all levels of the health system.

c) Disjointed resource mobilization

Weak governance structures hinder the coordination of investments, leading to inefficient resource utilization and duplication of donor-driven efforts.

As a result, the framework aims to establish clear governance structures at both national and sub-national levels to ensure effective coordination, integration and accountability.

2.3.2. Evidence-based analysis

The HSSP III, the MoH Functional Review and the DHD Profile underscore the importance of a unified approach to digital health governance. These sources highlight the challenges posed by weak institutional linkages, overlapping roles, and fragmented implementation of digital health solutions.

This framework draws from the assessments to design a governance model that is informed by practical implementation realities. The framework prioritizes clarity in stakeholder roles, promotes structured coordination and embeds performance tracking across all levels of governance. Apparently, a unified governance approach will strengthen alignment, reduce inefficiencies and enable consistent enforcement of national standards.

2.3.3. Enhancing integration and decentralisation

A key challenge in Malawi's digital health ecosystem is the weak linkage between national policies and district-level implementation. The Local Government Policy (2024) emphasises the importance of decentralisation,

presenting an opportunity to adapt digital health interventions to local priorities while maintaining national coherence.

The framework supports the integration of digital health within decentralised service delivery by strengthening local ownership, clarifying roles and facilitating structured engagement between national and district health actors. The integration will ensure that digital health initiatives are not only technically sound but also context-specific, scalable and sustainable.

To support this, the framework will promote the establishment of Technical Working Groups (TWGs) that facilitate ongoing dialogue, knowledge exchange and joint planning between national and district-level stakeholders. These groups will ensure that local health needs are reflected in digital investments and that implementation is aligned with Malawi's broader goal of achieving UHC.

Chapter 3

Governance Structures and Key Responsibilities



3. GOVERNANCE STRUCTURES AND KEY RESPONSIBILITIES

Effective digital health governance requires clear roles, defined structures, and accountability mechanisms at both national and sub-national levels. This chapter outlines the governance architecture that will guide the strategic implementation and management of digital health initiatives in Malawi. It ensures the coordination, sustainability, and alignment of all digital health investments with national priorities, while fostering local ownership and multi-sector collaboration

3.1. National Digital Health Governance Structures and Functions

Digital health governance at the national level is anchored on clearly defined structures within the Ministry of Health. The key entities include the Secretary for Health, MoH departments, Central Hospitals and the Department of E-Government as illustrated in Fig 1. All these entities contribute to strategic oversight, operational execution, policy development and quality assurance of digital health interventions.

The Department of E-Government plays a fundamental cross-ministerial role by leading and coordinating ICT development across all levels of government. The mandate of the department includes managing digital infrastructure projects, promoting the development and implementation of e-government services, and providing policy direction on ICT and public information management. Such a mandate ensures that digital health systems are integrated into broader national ICT frameworks, aligned with Malawi's digital transformation agenda and supported by robust infrastructure and service delivery platforms

This multi-institutional approach to digital health governance strengthens accountability and cross-sectoral collaboration and ensures coherence with national development strategies and global digital health standards.

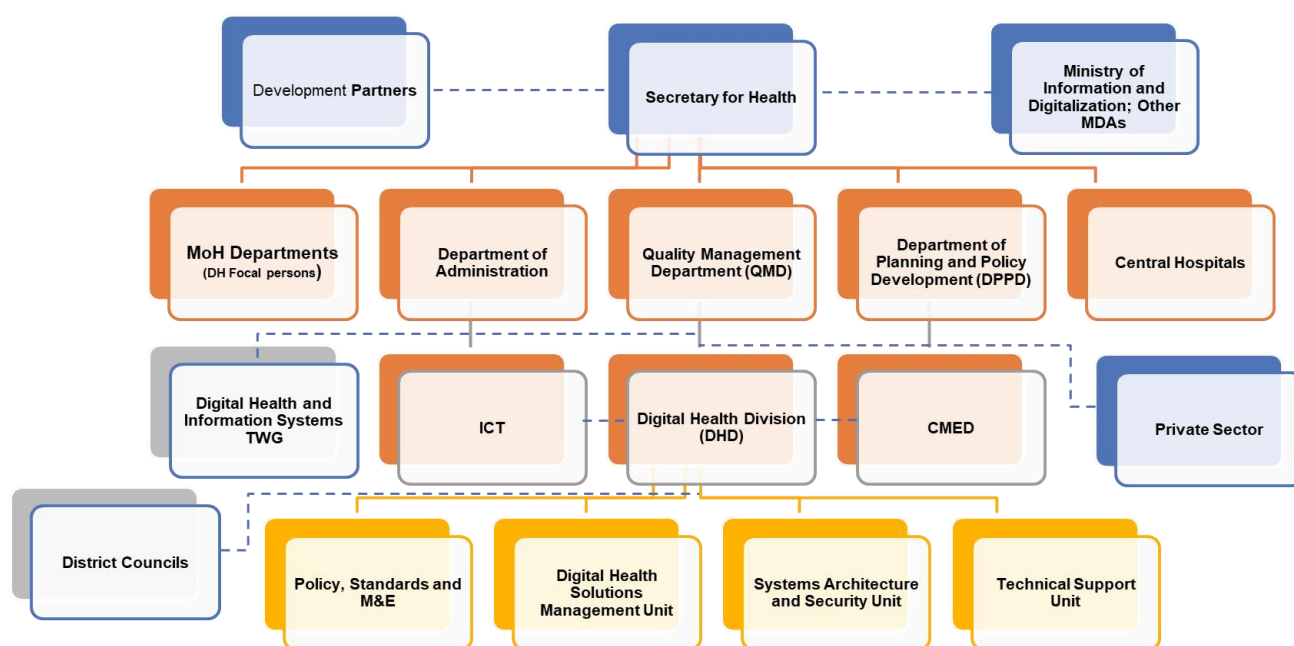


Figure 1: Digital Health Governance Structures and Functions¹

3.1.1. Secretary for Health

The Secretary for Health provides high-level oversight of the Ministry, including strategic leadership, resource mobilisation, and the approval of key policy and planning documents. In the context of digital health, the Secretary ensures alignment of the initiatives with the Ministry's core functions by endorsing digital health policies, facilitating cross-sectoral engagement with relevant MDAs and stakeholders and mobilising high-level support for the implementation of digital health initiatives.

3.1.2. Department of E-Government and other MDAs

The Department of E-Government is a central entity mandated to lead, coordinate and manage ICT development across all levels of government. Within the digital health governance landscape, the Department plays a fundamental role in ensuring that health sector digital systems are aligned with national ICT policies, infrastructure strategies and e-government service frameworks. The mandate of the Department supports the scalability, security and sustainability of digital platforms used in healthcare service delivery, while reinforcing cross-sectoral integration in line with Malawi's broader digital transformation agenda.

¹ Note: Other MDAs refer to Ministries, Departments and Agencies involved in the Digital Health space.

From time to time, other government departments and agencies also contribute to the development and deployment of digital health interventions, especially where health intersects with national digital infrastructure, identity systems and public information management.

Specific responsibilities of the Department include:

- a) Providing strategic ICT leadership and policy direction to ensure digital health systems align with national ICT frameworks and digital governance priorities.
- b) Supporting the Ministry of Health in the development and implementation of secure, interoperable, and scalable infrastructure for digital health systems.
- c) Facilitating the integration of digital health services into national e-government platforms to promote service delivery efficiency and citizen access.
- d) Coordinating with MoH and relevant institutions to ensure digital health systems adhere to established standards for data protection, cybersecurity, and interoperability.
- e) Overseeing infrastructure hosting services, including national data centres, in collaboration with the MoH's System Architecture and Security Unit.
- f) Promoting innovation and sustainability by supporting the adoption of emerging technologies that enhance digital health service delivery across government departments.
- g) Collaborating with other government ministries, departments and agencies that contribute to digital health initiatives, especially those linked to civil registration, digital identity and ICT policy.

3.1.3. MoH Departments

Ministry of Health departments provide strategic oversight, including the development of policies, guidelines, and other strategic documents. They are also responsible for mobilizing resources for health services under their respective mandates.

For digital health, the departments identify, define, and submit their digital health needs through designated digital health focal persons to the Digital Health

Division. They further support the implementation and resource mobilization for digital health interventions.

Specific responsibilities include:

- a) Mainstreaming digital health interventions into sector planning and budgeting.
- b) Identifying and defining digitization needs and submitting requests to the Digital Health Division (DHD).
- c) Providing user functional requirements in line with the “design with the user” principle.
- d) Leading in the implementation of digital health solutions, including:
 - i. End-user support
 - ii. Capacity building
 - iii. Mentorship and supervision
- e) Supporting resource mobilization for digital health solutions.
- f) Promoting the adoption and use of digital health solutions.

3.1.4. Quality Management Directorate (QMD)

The Directorate is responsible for the coordination of all quality management interventions across the health sector. QMD executes its mandate through its divisions including Digital Health Division. The Directorate provides strategic oversight for digital health by ensuring that all digital health initiatives align with national quality standards and ongoing health sector reforms. This oversight ensures that all activities are consistent with the Ministry’s broader quality assurance agenda.

3.1.4.1. Digital Health Division

The mandate of the Digital Health Division (DHD) is to coordinate the development and implementation of health informatics, oversee the management and monitoring of health information systems and ensure adherence to digital health security, privacy and ethical standards. This mandate is operationalized through four specialized units within the Division, each with different responsibilities to support the delivery of a robust and integrated digital health ecosystem.

3.1.4.2. Standards, Policy and M&E

This unit is responsible for the development, review, dissemination and enforcement of digital health policies, standards, and guidelines. It also leads in the monitoring and evaluation of digital health interventions to ensure alignment with national priorities.

Specific responsibilities include:

- a) Facilitating the development, review and adoption of digital health policies, standards and strategies.
- b) Ensuring alignment and enforcement of digital health initiatives with established policies and standards.
- c) Promoting collaboration to enhance the sustainability of digital health solutions.
- d) Leading compliance assessments and evaluations for all digital health artefacts and implementations.
- e) Overseeing the implementation of and dissemination of national digital health standards and guidelines.
- f) Developing and operationalising the digital health monitoring and evaluation framework.
- g) Promoting and coordinating research and innovation of Digital Health Solutions.
- h) Building the capacity of implementing entities in digital health systems monitoring.

3.1.4.3. Digital Health Solutions Management Unit

The unit coordinates and consolidates all digital health initiatives to ensure harmonisation and alignment with Ministry of Health priorities.

Specific responsibilities of the unit include:

- a) Aligning initiatives from MDAs and partners with MoH strategic objectives.
- b) Consolidating all digital health deliverables into a unified operational plan and budget under the One Plan, One Budget, and One Report agenda.

- c) Monitoring implementation timelines and enforcing accountability mechanisms.
- d) Disseminating knowledge and lessons learned from digital health initiatives.
- e) Supporting resource mobilisation for digital health activities.
- f) Facilitating collaboration among stakeholders to leverage resources and infrastructure for digital healthcare among stakeholders.
- g) Reviewing and coordinating stakeholder requests for digital health support.
- h) Facilitating an enabling environment for implementing partners.
- i) Coordinating stakeholder engagement and collaboration.
- j) Consolidating and managing Digital Health Project information and knowledge.
- k) Managing a database of players, including those in PPPs, for easy communication and collaboration.

3.1.4.4. System Architecture and Security Unit

This unit is responsible for designing, developing, and maintaining a secure, scalable, and interoperable digital health enterprise architecture.

Specific responsibilities of the unit include:

- a) Designing and developing a scalable, secure health information systems enterprise architecture.
- b) Ensuring alignment of digital health systems with national interoperability and integration frameworks.
- c) Defining technical boundaries and relationships across digital health solutions.
- d) Integrating approved standards into the design and development of digital health systems.
- e) Reviewing and/or facilitating approval of system upgrades, new features, and infrastructure improvements.
- f) Ensuring compliance and quality assurance in digital health system development.

- g) Enforcing security protocols and adherence to the Data Protection Act.
- h) Conducting regular audits and risk assessments to identify and mitigate system vulnerabilities.

3.1.4.5. Technical Support Unit

This unit ensures the operational stability of digital health systems through maintenance, user support, and capacity building.

Specific responsibilities of the unit include:

- a) Managing infrastructure for digital health systems.
- b) Monitoring system performance and ensuring operational readiness.
- c) Facilitating software quality assurance (testing and validation) before deployment.
- d) Coordinating system updates and change management to minimize service disruptions.
- e) Supporting the decentralization of digital health systems implementation and maintenance.
- f) Leading capacity building for technical teams and user institutions.
- g) Implementing and managing the national digital health help desk.
- h) Overseeing change control processes and disaster recovery mechanisms.
- i) Ensuring system uptime, backup management, and business continuity readiness.

3.1.5. Other Relevant Divisions

The Digital Health Division works very closely with two other divisions within the Ministry of Health, namely: the Central Monitoring and Evaluation Division (CMED) under the Department of Planning and Policy Development, and the Information, Communication and Technology (ICT) under the Department of Administration.

3.1.5.1. Central Monitoring and Evaluation Division (CMED)

The Central Monitoring and Evaluation Division (CMED) under the Department of Planning and Policy Development (DPPD) is responsible for the monitoring and evaluation of health services in Malawi. CMED interacts and collaborates

with the DHD as an entity that makes use of the data and reports generated in the implementation of digital health systems, where such systems are implemented.

3.1.5.2. Information and Communication Technology (ICT)

The Information and Communication Technology (ICT) section of the MoH, under the Administration Department, is responsible for the management and development of ICT services, including infrastructure management and the provision of ICT user support services. The ICT section interacts with the DHD in its efforts to perform the aforementioned functions.

3.1.5.3. Central Hospitals

Central hospitals operate at the national level and serve as referral facilities for secondary-level hospitals, with cross-referrals occurring among them. They are key implementation sites for national digital health solutions such as the Malawi Healthcare Information System (MaHIS) and telemedicine.

Specific responsibilities of central hospitals include:

- a) Identifying and defining digital health needs and submitting requests to the Digital Health Division (DHD).
- b) Implementing digital health solutions at the facility level.
- c) Managing users and providing ongoing user support.
- d) Building capacity for staff in the use of digital health systems.
- e) Providing necessary equipment, including end-user devices.
- f) Mobilising resources to support digital health implementation.
- g) Supporting research and innovation in digital health.

3.2. Sub-National Level Structures and Other Stakeholders

The sub-national level structures and other stakeholders include District Councils, Development and Implementation Partners, TWGs and the Private sector.

3.2.1. District Councils

District Councils have District Health Offices, which are responsible for the delivery of health services at the district level, including the implementation of digital health initiatives. During consultations, it was observed that digital health

staffing structures vary across districts; hence, a standardised digital health structure could not be established. However, key functional areas at the district level are outlined in the next section.

a) Coordination and oversight

- i. Designate officers to manage digital health functions.
- ii. Develop and implement policies on acceptable use of end-user devices and other digital health equipment.
- iii. Provide overall coordination of digital health implementation.
- iv. Ensure linkage with central-level entities for digital health coordination.
- v. Mobilise and/or provide resources to support digital health activities.
- vi. Enforce compliance with digital health security protocols.

b) Technical support, maintenance and infrastructure management

- i. Provide routine maintenance and improvement of digital health systems.
- ii. Support installation, use, and troubleshooting of digital health solutions.
- iii. Manage all digital health infrastructure at the district level.

c) Capacity building and user support

- i. Conduct training and supervision for end-users.
- ii. Manage users of digital health systems.
- iii. Promote adoption and utilisation of digital health tools.

d) Data management and analytics

- i. Support data management, extraction, and analytics for improved decision-making.

3.2.2. Development and Implementing Partners

Development partners provide financial and technical support to strengthen health service delivery, including digital health. Implementing partners collaborate with the Ministry of Health to implement specific interventions aligned with national digital health priorities.

Specific responsibilities of the development and implementing partners include:

- a) Development and deployment of digital health solutions.
- b) Mobilization of financial, material, and technical resources.
- c) Provision of technical assistance to the Ministry of Health.
- d) Participation in the development of digital health policies and strategies.
- e) Conducting research and promoting innovations.
- f) Participating in research and innovation of Digital Health Solutions.

3.2.3. Regulatory Bodies

The different aspects of health services are regulated through the existing national institutions, including the Medical Council of Malawi, the Nurses and Midwives Council of Malawi and the Pharmacy and Medicines Regulatory Authority (PMRA). The ICT space is regulated by the Malawi Communications Regulatory Authority (MACRA). These bodies shall have regulatory oversight in the respective areas of digital solutions; health regulatory bodies over aspects of healthcare supported by the solutions and MACRA.

3.2.4. Technical Working Group (TWG)

The TWG is a national-level platform comprising stakeholders across the digital health ecosystem. Membership is voluntary and guided by agreed Terms of Reference.

Specific key responsibilities of the TWG include:

- a) Providing input to strategic digital health discussions and decision-making processes.
- b) Endorsing digital health policies and strategic documents.
- c) Monitoring implementation progress through review of reports and stakeholder feedback.

3.2.5. Private Sector

The private sector plays a critical complementary role in digital health by supporting service delivery, infrastructure provision, and innovation through both commercial initiatives and corporate social responsibility.

Specific responsibilities of the private sector include:

- a) Complying with digital health standards, guidelines and policies.
- b) Provision of reliable complementary services essential for digital health delivery, such as connectivity and power infrastructure.
- c) Supporting government efforts in advancing digital health innovation through corporate social responsibility initiatives.

Chapter 4

Key Themes in Digital Health Governance



4. KEY THEMES IN DIGITAL HEALTH GOVERNANCE

Digital health governance in Malawi is guided by a set of thematic areas that represent the foundational principles and priority domains for action. These themes serve as a decision-making framework, ensuring coherence, alignment, and accountability among stakeholders. The following sections outline the key thematic pillars and their associated governance mechanisms.

4.1. Infrastructure

This framework establishes clear roles and responsibilities to ensure the development and maintenance of reliable, secure, and sustainable digital health infrastructure. These mechanisms are aligned with national priorities and global standards to support digital health implementation at scale.

4.1.1. Power

Reliable electricity is critical for the uninterrupted operation of digital health systems. The roles and responsibilities in this area include:

- a) The Policy, Standards and M&E Unit facilitate the development and enforcement of infrastructure guidelines, including solar systems, UPS, and grid connections. The unit also monitors power availability across health facilities.
- b) The System Architecture and Security Unit conducts biannual audits on energy capacity and backup systems. It also coordinates installations and prevents duplication of power infrastructure.
- c) The District Councils are responsible for monitoring facility-level power availability.
- d) The MoH engages the Ministry of Energy and partners to prioritise the electrification of health facilities.

4.1.2. End User Devices

End-user devices comprise all pieces of hardware used by individuals to access applications, data and services in the implementation of digital health solutions. To ensure equitable access to secure and functional devices, the following are the roles and responsibilities in this area:

- a) The Policy, Standards and M&E Unit sets specifications and procurement protocols.
- b) The Digital Health Solutions Management Unit maintains a centralised inventory and monitors allocations.
- c) The System Architecture and Security Unit ensures secure device management through access controls and software updates.
- d) The Technical Support Unit monitors training programs to ensure end-user competency.
- e) The sub-national level should enforce appropriate use, accountability and security of the end user devices.

4.1.3.Connectivity

Reliable connectivity underpins effective data exchange. Therefore, the governance roles and responsibilities in this area include the following:

- a) The System Architecture and Security Unit defines and enforces digital health connectivity standards. The Unit also monitors network performance across facilities.
- b) The Digital Health Solutions Management Unit negotiates telecom Service Level Agreements (SLAs).
- c) E-Government supports last-mile connectivity.
- d) MACRA coordinates network coverage expansion and engages with Internet Service Providers (ISPs) on issue resolution.

4.1.4.Central Computation Resources

To maintain scalable and secure hosting environments, the roles and responsibilities in this area include the following:

- a) E-Government provides infrastructure compliant with ISO 27001 and the Data Protection Act.
- b) The System Architecture and Security Unit tracks server performance and collaborates with E-Government on hosting requirements. It also conducts annual security audits and penetration tests.
- c) The Technical Support Unit manages system upgrades and change-control protocols.

4.1.5. Local Infrastructure innovations

To foster sustainability through localised solutions, the roles and responsibilities in this area include the following:

- a) DHD collaborates with innovation hubs, universities, and tech start-ups to incubate local infrastructure solutions.
- b) In partnership with NCST, DHD facilitates innovation competitions addressing power, connectivity, and device gaps.
- c) In partnership with implementing partners, DHD will scale up successful pilots and integrate them into national infrastructure plans.

4.2. Services and Applications

Services and applications comprise all software components and digital artefacts designed to execute specific functions or operate in the background to enable the effective functioning of digital health solutions. This governance framework outlines clear roles, responsibilities, and coordination mechanisms for managing digital health services and applications in Malawi. It places particular emphasis on the Malawi Healthcare Information System (MaHIS) (Ministry of Health, 2023a), emerging technologies, and telemedicine. These governance measures ensure alignment with national health priorities, promote interoperability, and facilitate structured engagement among stakeholders.

4.2.1. Strengthen the Malawi Healthcare Information System

The Malawi Healthcare Information System (MaHIS) is the Ministry of Health's flagship digital platform for managing health information across the country (Ministry of Health, 2023b). To ensure that MaHIS is fully deployed across public and private health facilities, integrated with the National Registration and Identification System (NRIS), and hosted on e-Government data centres, the roles and responsibilities in this area include the following:

- a) The Policy, Standards and M&E Unit shall facilitate the adaptation and adoption of national standards for infrastructure, security, software development, and interoperability.
- b) The Digital Health Division (DHD) shall oversee the expansion and scale-up of MaHIS, ensuring alignment with specialised systems and private providers.

- c) The System Architecture and Security Unit shall ensure MaHIS is deployed on robust, resilient infrastructure with fail-safe mechanisms.
- d) The Digital Health Solutions Management Unit shall maintain a dynamic service tracking matrix detailing integrations and geographical coverage.
- e) The Policy, Standards and M&E Unit shall develop and operationalise a dedicated monitoring matrix for MaHIS.
- f) The System Architecture and Security Unit shall lead stakeholder engagement for system design, development, and deployment.
- g) The Technical Support Unit shall manage MaHIS maintenance and provide continuous user support in coordination with partners.

4.2.2. Emerging Technologies in Health

Emerging technologies—such as Artificial Intelligence (AI), Internet of Things (IoT), Blockchain, Machine Learning (ML), and Virtual Reality (VR)—have transformative potential for health service delivery. To ensure safe, ethical and effective use of the emerging technologies within Malawi’s health ecosystem, the roles and responsibilities in this area include the following:

- a) The Policy, Standards and M&E Unit shall facilitate the development and adoption of guidelines for emerging technologies.
- b) The System Architecture and Security Unit shall ensure compliance with adopted standards, enforcing security and ethical safeguards.
- c) The DHD shall promote the localisation and scale-up of emerging technologies to improve service delivery efficiency.
- d) DHD shall support MoH departments in leveraging predictive analytics, telemedicine, and other technologies to strengthen health services.

4.3. Standards and Interoperability

This framework prioritises the adoption of digital health standards to ensure security, interoperability, and data portability across systems. To achieve this, the roles and responsibilities in this area include the following:

- a) The Policy, Standards and M&E Unit shall coordinate the adoption and enforcement of relevant standards and guidelines.
- b) The System Architecture and Security Unit shall operationalise these standards to ensure system-level integration and interoperability.

- c) The Digital Health Solutions Management Unit shall manage system mergers and integrations in line with implementation priorities.
- d) The DHD shall coordinate the adoption and embedding of the metrics for standards within the national monitoring framework.
- e) Technical Working Groups (TWGs) shall support annual review and endorsement of digital health standards.

4.4. Data Protection and Privacy

This governance framework enforces mechanisms to safeguard digital health data through comprehensive cybersecurity measures, privacy policies, and disaster recovery protocols—ensuring compliance with national legislation and international best practices.

4.4.1. Cybersecurity

To ensure that all digital health platforms have end-to-end encryption, Zero-trust Architecture (ZTA) and regular penetration testing, supported by a National Health Cybersecurity Emergency Response Team (hCERT). The roles and responsibilities in this area include:

- a) DHD shall establish a National Health Cybersecurity Emergency Response Team and collaborate with mwCERT and ICTAM for preventive and corrective cybersecurity measures.
- b) The System Architecture and Security Unit shall implement end-to-end encryption, Zero Trust Architecture and periodic penetration testing.
- c) The Technical Support Unit shall enable automated audit trails for user activity tracking.
- d) The Policy, Standards and M&E Unit shall track cybersecurity compliance through defined metrics.

4.4.2. Data Privacy

Health data must comply with privacy laws, including consent, de-identification of Personally Identifiable Information (PII) and ethical use. The roles and responsibilities in this area include the following:

- i. The Policy and Standards Unit shall develop and enforce data privacy policies and SOPs in alignment with the Malawi Data Protection Act.

- ii. The System Architecture and Security Unit shall implement consent management and de-identification of personally identifiable information.
- iii. The TWG shall support the periodic review and revision of data privacy guidelines.

4.4.3. Disaster Recovery

Mission-critical systems like MaHIS must have disaster recovery mechanisms to ensure data protection and business continuity. To ensure the availability of functional disaster recovery for digital health systems, the roles and responsibilities in this area include the following:

- a) The System Architecture and Security Unit shall coordinate with e-Government to design and test disaster recovery setups for critical systems.
- b) The Technical Support Unit shall manage backup operations and recovery protocols in collaboration with e-Government.
- c) Disaster preparedness and recovery effectiveness shall be tracked by the Policy, Standards and M&E Unit.
- d) The Technical Support Unit shall conduct annual disaster recovery drills to ensure system resilience.

4.5. Human Capital and Workforce

A digitally skilled and inclusive workforce is central to the success of digital health implementation. This framework outlines strategic governance mechanisms to build and sustain human resource capacity across all levels of the health system.

4.5.1. Skilled Workforce

To ensure availability of skilled workforce for the planning, design, development and implementation of digital health solutions, the roles and responsibilities in this area include the following:

- a) The Quality Management Directorate shall ensure DHD staffing is aligned with required technical capacities.
- b) DHD leadership shall allocate responsibilities across units and conduct regular performance evaluations.
- c) The System Architecture and Security Unit shall establish a community of practice for digital health professionals.

- d) The Technical Support Unit shall co-develop training curricula with implementers, conduct master-trainer programs, and oversee tiered user support systems.
- e) The Policy, Standards and M&E Unit shall track indicators related to workforce capacity development and skills utilisation.

4.6. Change Management

Change management is a key process in the adoption of digital health technologies, as they are often received with resistance from implementers and users. To ensure effective change management for optimal adoption of the digital health solutions, the roles and responsibilities in this area include:

- a) The Digital Health Solutions Management Unit shall design and implement change management strategies, including communication and user engagements.
- b) District Councils and Central Hospitals shall implement localised change management initiatives.
- c) The Policy, Standards and M&E Unit shall monitor adoption rates and track the effectiveness of change management.

4.7. Sustainability and Scalability

The long-term success of digital health systems hinges on institutional ownership, financial sustainability, and the capacity to scale up the activities. This framework defines key governance actions to achieve these objectives as follows:

- i. DHD shall lead systems streamlining efforts, ensuring government ownership and reducing duplication.
- ii. The Digital Health Solutions Management Unit shall develop sustainable financing strategies and coordinate stakeholder engagement.
- iii. DHD shall ensure internal technical capacity to support systems beyond project timelines.
- iv. MoH and implementing entities shall allocate government resources to sustain core digital health systems.

4.7.1. Sustainability of Digital Health Systems

To ensure the sustainability of digital health initiatives and continued support of service delivery, the following roles and responsibilities are key to the implementation:

- i. DHD shall lead systems streamlining efforts, ensuring government ownership and reducing duplication.
- ii. The Digital Health Solutions Management Unit shall develop sustainable financing strategies and coordinate stakeholder engagement.
- iii. DHD shall ensure internal technical capacity to support systems beyond project timelines.
- iv. MoH and implementing entities shall allocate government resources to sustain core digital health systems.

4.7.2. Scalability of Digital Health Systems

To ensure that systems and infrastructure are designed to scale with demand, leveraging innovative technologies like telemedicine and AI, the roles and responsibilities in this area are outlined as follows:

- i. The System Architecture and Security Unit shall design scalable digital architectures, including microservices.
- ii. The Digital Health Solutions Management Unit shall pilot scalable technologies such as telemedicine and AI.
- iii. The Technical Support Unit shall develop SOPs for systematic scaling shall be developed by the Technical Support Unit.
- iv. The Policy, Standards and M&E Unit shall monitor scalability metrics and provide data-driven recommendations for improvement.

Chapter 5

Financing and Resource Mobilization



5. FINANCING AND RESOURCE MOBILIZATION

Effective governance of digital health financing requires structured coordination, transparent resource mobilisation processes, and alignment with national development priorities. This framework outlines clear roles and mechanisms at both central and sub-national levels to secure diverse and sustainable funding streams. The overarching objective is to ensure the availability of adequate financial resources to implement, scale and sustain digital health solutions in the long term.

This section outlines the governance structure for securing diverse funding to support digital health initiatives.

5.1. Institutional Roles in Financing and Resource Mobilisation

The roles and responsibilities of each key stakeholder in supporting the financing of digital health are outlined in the next section.

5.1.1. Secretary for Health

The Secretary for Health (SH) provides high-level oversight of the Ministry's functions, including strategic leadership in resource mobilisation for digital health.

The SH is responsible for:

- a) Championing the inclusion of digital health financing in the national budget.
- b) Engaging bilateral donors and development partners to advocate for increased investment in digital health.
- c) Providing leadership in aligning national priorities with digital health financing strategies.

5.1.2. MoH Departments

Ministry of Health departments are responsible for integrating digital health into their planning and budgeting cycles to ensure operational alignment with the broader health sector agenda. The departments are responsible for:

- a) Incorporating digital health activities and costs within departmental budgets.

- b) Liaising with the Digital Health Division (DHD) in the formulation of coordinated digital health budgets.
- c) Engaging development and implementing partners to support departmental digital health priorities.

5.1.3. Quality Management Directorate (QMD)

QMD plays a key role in promoting resource accountability and advocating for adequate financing aligned with quality improvement efforts. QMD is responsible for:

- a) Developing and operationalising clear Public–Private Partnership (PPP) guidelines to foster collaboration, joint investment, and innovation in digital health.
- b) Ensuring alignment of development partner funding and telecommunications sector investments with Malawi's national digital health priorities.

5.1.4. Digital Health Division (DHD)

DHD serves as the central coordination unit for digital health implementation and resource mobilisation across the Ministry. DHD is responsible for:

- a) Leading resource mobilisation efforts for digital health in collaboration with MoH departments and partners.
- b) Coordinating financial planning and resource allocation across digital health programs.
- c) Tracking utilisation of funds in relation to priorities and reporting on financial performance.
- d) Supporting operationalisation of digital health budgets across departments and facilities.

5.1.5. Central Hospitals

Central Hospitals play a strategic role in resourcing and implementing national digital health systems at the referral level. Specific roles and responsibilities for Central Hospitals are as follows:

- a) Mobilising internal and external resources to support digital health interventions.

- b) Collaborating with DHD, MoH departments, and partners in joint resource mobilisation and planning.
- c) Supporting the harmonisation of digital health investments.

5.1.6. District Councils

District Councils are responsible for planning, budgeting, and ensuring accountability for digital health resources at the local level in the following ways:

- a) Integrating digital health activities and associated costs into district implementation plans.
- b) Mobilising resources for district-level digital health initiatives through local and partner support.
- c) Promoting harmonisation, transparency and accountability in the use of digital health funds.
- d) Partnering with development and implementing partners to align support with district priorities.

5.1.7. Development and Implementing Partners

Partners provide technical and financial support for digital health initiatives and are expected to align their contributions with national priorities as follows:

- a) Collaborating with MoH departments and DHD to mobilise and coordinate financial resources.
- b) Aligning funding and in-kind support with national digital health strategies and plans.
- c) Ensuring transparency, efficiency, and accountability in the disbursement and use of digital health resources.
- d) Promoting harmonisation of digital health investments.

5.1.8. Technical Working Group (TWG)

The TWG plays an advisory and coordination role in ensuring digital health financing is aligned with sector needs and priorities through:

- a) Advising on strategic resource acquisition and ensuring value for money in digital health investments.
- b) Coordinating alignment of member contributions with national priorities.
- c) Promoting financial coordination and transparency among stakeholders.

5.1.9. Private Sector

The private sector plays a complementary role in supporting digital health financing and innovation through:

- a) Mobilising financial resources through corporate social responsibility and other private initiatives.
- b) Aligning financial support with DHD-defined digital health priorities.
- c) Coordinating industry-wide contributions towards national digital health initiatives.

Chapter 6

Sustainability



6. SUSTAINABILITY

Ensuring the sustainability of digital health systems requires a deliberate focus on keeping them operational, adaptive and impactful beyond external project timelines. This section outlines the governance mechanisms necessary to sustain functionality through coordinated oversight of human resources, financing, infrastructure adaptability and continuous system improvement.

6.1. Human Resources

The long-term success of digital health depends on a skilled and stable workforce capable of managing, maintaining, and scaling digital systems. Sustainability in human capital shall be governed through the following roles and responsibilities:

- a) The Human Resource Department, Health Service Commission, Civil Service Commission, and Local Government structures shall ensure the recruitment and retention of digital health personnel.
- b) Health training institutions shall incorporate relevant pre-service digital health training into health and ICT-related curricula.
- c) The Digital Health Division (DHD) and partners shall invest in structured, demand-driven in-service training programs.
- d) Training institutions shall collaborate with DHD and partners to develop and align digital health curricula for both pre-service and in-service training needs.

6.2. Finance

Long-term financing is essential for maintaining and expanding digital health systems. Financial sustainability shall be supported through the following roles and responsibilities:

- a) The Department of Planning shall lead in the development of a sustainable financing model for digital health.
- b) The Ministry of Health shall mobilise and allocate domestic resources to ensure continuity of digital health services.
- c) DHD and partners shall explore and implement viable models to monetise digital health innovations, where appropriate.
- d) The Ministry of Health shall leverage Public-Private Partnerships (PPPs) to expand the resource base for digital health.

- e) Development and implementing partners shall provide catalytic funding that aligns with national digital health priorities and ensures country ownership.

6.3. Infrastructure and System Adaptability

Sustainable digital health requires robust, secure, and adaptable infrastructure.

The following roles and responsibilities will guide infrastructure sustainability:

- a) DHD and partners shall prioritise the use of country-owned infrastructure and ensure its optimisation.
- b) DHD, in coordination with the TWG, shall promote and enforce infrastructure standardisation across all digital health investments.
- c) DHD shall coordinate the institutionalisation of preventive maintenance practices to ensure continuity of services
- d) DHD shall coordinate infrastructure procurement planning across MoH departments and partners to avoid duplication of activities and ensure alignment.
- e) DHD shall lead in the development and adoption of national interoperability standards.
- f) DHD shall coordinate the institutionalization of risk identification and mitigation plans across digital health systems.

6.4. Continuous Improvement

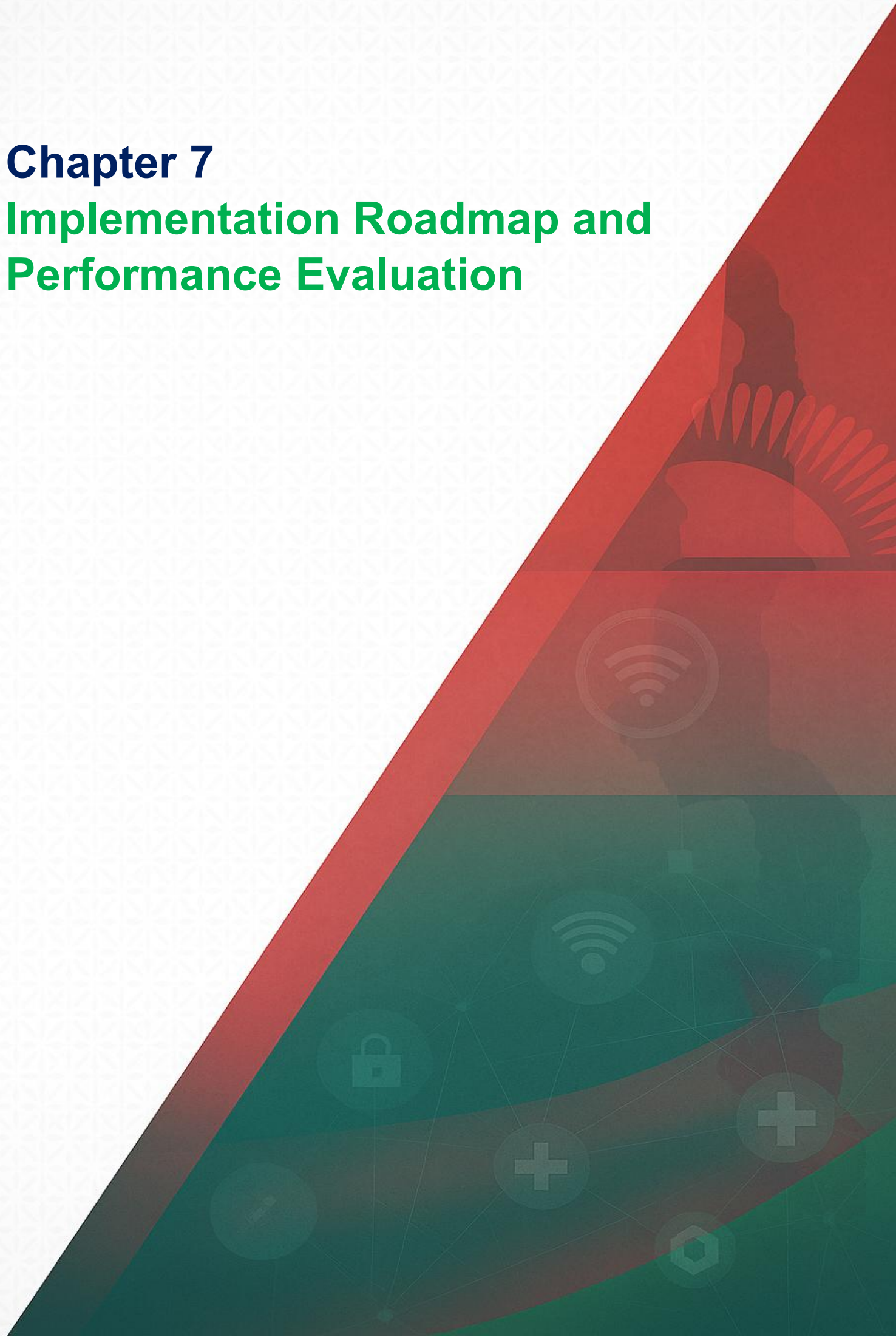
To remain effective and relevant, digital health systems must continuously evolve in response to user feedback, technological advancements, and contextual changes. Continuous improvement shall be supported through the following roles and responsibilities:

- a) DHD shall coordinate infrastructure and software upgrades to ensure digital systems remain up to date and secure.
- b) DHD shall review SOPs, policies, strategies, and work plans to ensure that they are up to date.
- c) DHD, TWG and partners shall ensure responsiveness to emerging technologies and evolving system needs.
- d) DHD shall make sure that user feedback informs system upgrades and infrastructure strengthening efforts.

- e) DHD shall coordinate the implementation of routine audits and performance assessments of digital health systems.
- f) Partners shall support technical mentorship to strengthen national and district-level digital health teams.
- g) DHD and partners shall customize open-source digital health solutions to meet local contexts and operational requirements.

Chapter 7

Implementation Roadmap and Performance Evaluation



7. IMPLEMENTATION ROADMAP AND PERFORMANCE EVALUATION

An implementation roadmap and a robust implementation monitoring are critical to ensuring the systematic rollout and continuous improvement of digital health governance in Malawi. This chapter outlines the staged implementation phases of the framework, accompanied by key performance indicators and timelines to ensure effective monitoring, accountability, and alignment with national health priorities.

7.1. Implementation Roadmap

The implementation of the Digital Health Governance Framework will follow a three-phased approach comprising of short-term, medium-term and long-term:

7.1.1. Short-Term

- a) Dissemination of the framework to national and sub-national stakeholders.
- b) Realignment or establishment of governance structures.
- c) Institutionalization of standards and roles.

7.1.2. Medium-Term

- a) Monitoring adherence to digital health policies, standards and guidelines identified in this framework.
- b) Institutional enforcement of digital health protocols.
- c) Establishment of sustainable financing mechanisms.
- d) Initiation of transition from donor-funded to government-led digital health systems.

7.1.3. Long-Term

- a) Comprehensive performance review of the governance framework.
- b) Development of a successor governance framework based on lessons learned.

7.2. Monitoring and Evaluation (M&E)

A Monitoring and Evaluation process will be used to track the progress, adoption, and effectiveness of the digital health governance framework implementation. The M&E process will focus on the following areas:

- a) Tracking the performance of governance structures on their digital health roles.
- b) Monitoring compliance to digital health policies, standards, and protocols.
- c) Evaluating financial sustainability and domestic resource mobilization.

Table 7.2.1 outlines the key activities, indicators, responsible parties, and timelines:

7.2.1.M&E Activity Matrix

Activity	Key Performance Indicators (KPIs)	Responsible Unit	Timeline
<i>Realignment of governance structures</i>			
Establishment and realignment of structures at National, District and facility levels	Number of governance structures established	Unit lead – Policy, Standards and M&E	Year 1
<i>Dissemination of governance framework</i>			
Conduct dissemination meetings with key stakeholders	Number of dissemination meetings held % of key institutions represented	Unit lead– Policy, Standards and M&E	Year 1
<i>Instituting or revamping governance structures and standards</i>			
Operationalize governance structures	% of operational structures	Unit lead – Policy, Standards and M&E	Year 2 and ongoing
<i>Monitoring adherence to governance framework</i>			
Assess adherence to the governance framework	# of institutions adhering to governance standards # of non-compliant institutions resolved	Unit lead – Policy, Standards and M&E	Ongoing

<i>Establish sustainable resource mobilization mechanisms</i>			
Monitor domestic and external funding for digital health initiatives	# of new funding sources secured # of new partnerships sustained within a timeframe % Digital Health funding from domestic resources % of budget allocated to Digital Health by Ministry of Health % of budget funding utilised	Unit lead – Solutions Management	Ongoing
<i>Transition donor funded projects to government-led funding</i>			
Assess transition of digital health initiatives from donor-dependent funding to government-led	% of donor-funded digital health projects transitioned to government	Unit lead – Solutions Management	Ongoing
<i>Adoption and enforcement of standards</i>			
Enforce compliance with standards and protocols	# of digital health standards adopted # of audits conducted	Unit lead – Policy, Standards and M&E	At baseline and end of every year
<i>Framework Review</i>			
Conduct review of the governance framework	# of reviews conducted	Unit lead – Policy, Standards and M&E	Ongoing

7.3. Compliance with Governance Framework

All stakeholders are expected to comply with this governance framework including associated tools such as SOPs, guidelines, policies and registration to support the implementation of digital health solutions. In this context, compliance is adherence to the set ecosystem for the digital health implementation. Therefore, failure to comply may result in the following consequences:

- a) Suspension of implementation of a particular digital health solution or intervention pending further guidance.
- b) Referral of a particular compliance failure to MoH Senior Management Team (SMT) for a decision.
- c) Referral of a particular compliance failure, through the SMT, to institutional bodies mandated to handle such non-compliance. Such institutions may include the Office of the Attorney General, the Malawi Communications Regulatory Authority, health regulatory bodies, among others.

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9. Annex

9.1. Annexe 1-List of contributing institutions

#	Stakeholder
1	Ministry of Health (MoH)
2	e-Government
3	John Snow Inc (JSI)
4	D-tree International
5	Centre for Disease Control and Prevention (CDC)
6	Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)
7	Clinton Health Access Initiative (CHAI)
8	Global Health Informatics Institute (GHII)
9	Luke International Norway (LIN)
10	NEOTREE
11	World Health Organization (WHO)
12	Quantitative Engineering Design (QED)
13	Health Informatics Association of Malawi (HIAM)
14	Christian Health Association of Malawi (CHAM)
15	Islamic Health Association of Malawi (IHAM)
16	University of Malawi (UNIMA)
17	Malawi University of Business and Applied Sciences (MUBAS)
18	Malawi University of Science and Technology (MUST)
19	Kamuzu University of Health Sciences (KUHeS)
20	Tony Blair Institute for Global Change (TBI)
21	United Nations Development Program (UNDP)
22	NEST 360
23	World Bank
24	Presidents Emergency Plan for AIDS Relief (PEPFAR)
25	United Nations Children's Fund (UNICEF)
26	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
27	Village Reach
28	Partners in Health (PIH)
29	PATH
30	Riders 4 Health (R4H)