ICT GOVERNANCE FRAMEWORK
2022 - 2027

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Abbreviations

No	Abbreviation	Full title
1	ADM	Amathole District Municipality
2	AG	Auditor General
3	Broadband	High-speed internet access
4	CGICT	Corporate Governance of ICT
5	COBIT®	Control Objectives for Information Technology
6	DM	District Municipality
7	EA	Enterprise Architecture
8	ERP	Enterprise Resource Planning
9	ICT	Information and Communications Technology
10	IDP	Integrated Development Plan
11	ISACA®	Information Systems Audit and Control Association
12	ITGI™	Information Technology Governance Institute
13	ITIL	The Information Technology Infrastructure Library
14	LM	Local Municipality
15	King IV	The King IV report and code on Governance for South Africa
16	MLM	Mbhashe Local Municipality
19	mSCOA	Municipal Standard Charter of Accounts
20	NDP	National Development Plan
21	OS	Operating Systems
22	SALGA	South African Local Government Association
23	SDBIP	Service Delivery and Budget Implementation Plan
24	TOGAF®	The Open Group Architecture Framework
25	ZACHMAN	The ZachMan Framework

1. Introduction

The goal of ICT Governance is to ensure that a balanced mix of Mbhashe LM technology investments is aligned with strategic and cross-functional business objectives. ICT Governance activities are usually targeted at understanding business issues and the strategic importance of ICT, enabling the enterprise to sustain its operations, and implementing the strategies required to advance ICT in response to future needs of the municipality. ICT Governance practices aim at ensuring that the expectations for ICT are met and ICT risks are mitigated.

The two main components of governance are:

1. The creation of decision-making mechanisms, whether committees, review boards, or written policies
2. The assignment of decision-making authority and accountability ICT Governance drives decisions in three main areas:

a. ICT strategy
b. ICT project investments
c. ICT architecture

2. Legislative context

This document outlines the ICT Governance Framework of MLM as adapted from the following best practices and tailored for OTP specific context:

- COBIT 5
- ISO/IEC 38500
- ISO/IEC 27001 and 27002
- CGICT Framework
- King IV

3. Objectives for ICT Governance

Good ICT governance is the foundation for delivering strategic ICT to achieve the following objectives:

- **Aligns ICT with Institutional strategy:**
  It provides clear and visible decision making at the appropriate level of senior management, and with ICT embedded across the institution, encourages more responsible and accountable business management, creating focus, understanding and improved delivery against goals. Alignment can deliver cost reductions, improved quality of service delivery, strategies for growth and strategies for diversification

- **Integrates structural requirements:**
  Institutional structures and ICT services are harmonised to allow improved delivery of institutional goals. A less fragmented and more integrated approach to the use of ICT will deliver improved quality of information from the rationalisation and sharing of services.

- **Integrates business and technology for ICT value:**
  Involves professionals, research, administration and ICT, resulting in improved decision making and buy-in for ICT changes.

- **Provides a mechanism for understanding the use and opportunities for ICT:**
  Improved visibility and accountability for ICT allows institutions to learn from their current ICT experience and encourage improvements for the future. Mechanisms for allowing exceptions to strategy ensure a clear argument; value and justification are visible and understood.

- **Improves budgetary control and return on investment:**
  Improved harmonisation between institutional goals and ICT accountability and performance measures improve budgetary control and value. Measures of success are defined as service levels and as evaluation criteria for projects.

- **Improves the selection and use of new technologies:**
  It supports ICT in balancing technological advancement against business priorities and return on investment (ROI).

4. Benefits of ICT Governance

Some of the many benefits expected from effectively and consistently following a governance process include:

- Facilitate executive decision making and aid in ICT strategic planning
- Aid in project and portfolio management, thereby ensuring focused use of municipal resources in support of strategic objectives
- Ensure capacity planning and ICT resource utilization requirements are addressed
- Create a centralized source from which to see all existing ICT assets, initiatives, and potential investment opportunities
- Increase interoperability among and across the municipality's ICT applications
- Improve the ability to share data and services between the municipality's systems
- Provide visibility regarding potential reuse of existing applications

5. ICT Governance integration into municipal governance

ICT Governance must not be viewed as a standalone framework – it is meant to be fully integrated into the strategic and operational planning and governance. To this end, there has to be intentional and decisive management action to ensure that ICT is adopted as a strategic enabler for municipal business.

To establish ICT governance, there has to be clarity on the expectations of the various stakeholders. The Municipal Executive team and ICT Management teams will have to focus on:

- Aligning ICT strategy (Master Plan) with a well-defined business strategy that is supported by clearly documented business processes ICT Governance Charter
- Ensuring that ICT delivers against the strategy through clearly defined expectations and measurement
- Directing ICT strategy to balance investments between systems that support the enterprise as-is, as well as transform ICT capabilities to enable the business to grow and support new programs and/or directives
- Making deliberate decisions about the focus of ICT resources, including personnel, contracted services, hardware and software assets.

To achieve optimal integration, the following principles must be adopted:

5.1 Principles of ICT Governance

Table 1: ICT Governance principles

Principle 1: Political Mandate The Governance of ICT must enable the municipality's political mandate.
The Municipal Council must ensure that Corporate Governance of ICT achieves the service delivery mandate of the municipality.
Principle 2: Strategic Mandate The Governance of ICT must enable the municipality's strategic mandate.
The Municipal Manager must ensure that Corporate Governance of ICT serves as an enabler to the municipality's strategic plans.
Principle 3: Corporate Governance of ICT The Municipal Manager is responsible for the Corporate Governance of ICT.

The Municipal Manager must create an enabling environment in respect of the Corporate Governance of ICT within the applicable legislative and regulatory landscape and information security context.
Principle 4: ICT Strategic Alignment ICT service delivery must be aligned with the strategic goals of the municipality.
Management must ensure that ICT service delivery is aligned with the municipal strategic goals and that the administration accounts for current and future capabilities of ICT. ICT must ensure that ICT is fit for purpose at the correct service levels and quality for both current and future Municipal needs are met.
Principle 5: Significant ICT Expenditure Management must monitor and evaluate significant ICT expenditure.
Management must monitor and evaluate major ICT expenditure, ensure that ICT expenditure is made for valid Municipal enabling reasons and monitor and manage the benefits, opportunities, costs and risks resulting from this expenditure, while ensuring that information assets are adequately managed.
Principle 6: Risk Management and Assurance Management must ensure that ICT risks are managed and that the ICT function is audited.
Management must ensure that ICT risks are managed within the municipal risk management practice. ICT must also ensure that the ICT function is audited as part of the municipal audit plan.
Principle 7: Organizational Behavior Management must ensure that ICT service delivery is sensitive to organizational behavior/culture.
Management must ensure that the use of ICT demonstrates the understanding of and respect for organizational behavior/culture.

5.2 ICT focus areas

In general, the focus areas for the municipality are aligned to the IT Governance domains as depicted below:

Figure 1: IT Governance domains

Table 2: Explaining the governance domains

Function	Description
ICT Strategic Alignment	• Alignment and implementation of business and ICT strategies. • Development and implementation of an ICT strategic plan.
Value delivery	• Ensuring that IT delivers the promised benefits against the strategy, concentrating on optimizing costs & proving the intrinsic value of IT
ICT Resource Management	• Optimisation of ICT assets, resources, and capabilities. • Information assets are effectively managed.
ICT Performance measurement	• Conformance, performance measurement and reporting. • Alignment with the business performance and sustainability objectives.
ICT Value Delivery	• Delivery of ICT programmes delivering benefits, on time, on budget, and meeting requirements and quality standards. • Proper value delivery of ICT.

6. ICT Responsibility matrix

For effective integration of the ICT and municipal IDP, the following stakeholder responsibilities have to be communicated and monitored in the municipality.

Table 3: ICT responsibility matrix

Stakeholder	Practices Description
The Municipal Council	The council must: • Provide political leadership and strategic direction through: • Determining policy and providing oversight; • Take an interest in the governance of ICT to the extent necessary to ensure that a properly established and functioning governance of ICT system is in place in the municipality to leverage ICT as an enabler the municipal IDP; • Assist the Municipal Manager to deal with intergovernmental, political and other ICT-related Municipal issues beyond their direct control and influence; and • Ensure that the municipality's organizational structure makes provision for the governance of ICT

Stakeholder	Practices Description
Municipal Manager	The MM is expected to: • Provide strategic leadership and management of ICT; • Ensure alignment of the ICT strategic plan with the municipal IDP; • Ensure that the Corporate Governance of ICT is placed on the municipality's strategic agenda; • Ensure that the ICT Governance framework, ICT Master Plan and related policies for the institutionalization of the Corporate Governance of ICT are developed and implemented by management; • Determine the delegation of authority, personal responsibilities and accountability to the Management with regards to the governance of ICT; • Ensure the realization of municipality-wide value through ICT service delivery and management of Municipal and ICT-related risks; • Ensure that appropriate ICT capability and capacity are provided and a suitably qualified and experienced Governance Champion is designated; • Ensure that appropriate ICT capacity and capability are provided and that a designated official at a Management level takes accountability for the management of ICT in the municipality; and • Ensure the monitoring and evaluation of the effectiveness of the governance of ICT system e.g. ICT steering committee. • Ensure that the ICT Steering Committee is chaired by an Independent ICT Governance specialist
ICT Steering Chairperson	The ICT Steering Chairperson will be expected to: • Provide quality assurance on the alignment of the ICT strategic plans with the municipal IDP • Provide expertise in steering the 4th Industrial Revolution agenda in the municipality • Ensure that ICT Planning, reporting is done in line with Governance in ICT best practices and trends • Provide guidance to the MM in interpreting ICT Risks, ICT Performance related issues • Oversee the remediation of audit queries raised by internal and external auditors • It is expected that the ICT Steering Committee Chairperson will also sit in the Audit Performance committee to ensure alignment in reporting of ICT related issues
ICT Steering Committee	The ICT Steering Committee is expected to: • To provide oversight and leadership in the implementation of the ICT Governance framework and the ICT Master Plan • To also monitor ICT service strategy • To ensure adherence to best practices, guidelines in financial planning and project prioritization – ensuring that the municipality is prioritizing ICT projects with municipal-wide benefits • To ensure ownership of the ICT responsibility by reviewing performance and compliance to frameworks and standards • To provide the MM and Management team with quality assurance with regards to ICT resource management (human, financial, infrastructure, data and systems) • To provide quality assurances in the planning and execution of strategic projects • Review monthly/ quarterly ICT performance reports
Risk management committee	• Provide risk management oversight on ICT • Manage ICT investments • Fulfil legal, regulatory requirements and ethical obligations concerning the use of ICT organizationally
Audit Committee	• Manage business-related risks • Make recommendation related to mitigating actions • Manage the risks associated with compliance

Stakeholder	Practices Description
	• Make recommendations relating to audit reports
Management Team	The management team is expected to: • Departmental ICT strategic goals are aligned with the municipality's strategic goals and support the municipal processes; and • Municipal-related ICT strategic goals are cascaded throughout the municipality for implementation and are reported on.
ICT Manager	The ICT Manager will provide operational support in the ICT Steering Committee Chairperson and committee as follows: • Monitor projects as directed by the I.T. Steering Committee • Ensure best practices and standards, processes and methodologies are adhered to in the management of projects • Communicate project approvals or rejections to project requestors • Review individual project status reports and compile reports on selected projects for the IT Steering Committee • Escalate urgent situations as needed to the ICT Steering Committee via the Municipal Manager outside of the regularly scheduled meetings

Note: *The outline of the structure of the ICT Steering committee is contained in the ICT Steering Committee terms of reference.*

6.1 Summary of ICT responsibilities (RACI)

The table below depicts the RACI chart for the ICT governance structures within the municipality. For ease of reference, the following abbreviations have been used in the table:

a) ICT Steering Committee – ICT
b) Risk Management Committee – RMC
c) Audit Committee – AC
d) Management Committee - ManCo

Table 4: ICT RACI model

Roles	RMC				ICT				AC				ManCo			
Functions	R	A	C	I	R	A	C	I	R	A	C	I	R	A	C	I
ICT Strategic Alignment	●	●			●						●		●		●	
ICT Resource Management			●		●	●					●		●			
ICT Performance and Conformance	●				●	●					●		●			
ICT Value Delivery	●				●	●					●		●			
Enterprise Architecture			●		●						●		●	●		
Information and Knowledge Management			●		●	●					●		●			
ICT Risk Management	●				●				●	●			●			

ICT Investment management	●				●	●			●				●			
Organisational Change	●				●	●		●	●				●			
Enabling CGICT Environment	●				●	●			●				●			
ICT Compliance	●				●				●	●			●			
ICT Service Management			●		●	●					●		●			

7. Adopted COBIT Processes

The following COBIT processes have been deemed applicable to the Mbhashe municipality – taking into consideration the maturing of planning, ICT performance management and the organizational structure.

By adopting this ICT Governance framework, the municipality will ensure that these processes are measured periodically, and that performance will be reviewed at the ICT Steering Committee and other relevant municipal structures.

Table 5: MLM COBIT processes

Process ID	Processes for Governance of Enterprise IT	Descriptions
		Evaluate, Direct and Monitor
EDM01	Ensure Governance Framework Setting and Maintenance	• Provide a consistent approach integrated and aligned with the enterprise governance approach. IT-related decisions are made in line with the enterprise's strategies and objectives and desired value is realized.
EDM03	Ensure Risk Optimisation	• Ensure that the enterprise's risk appetite and tolerance are understood, articulated and communicated, and that risk to enterprise value related to the use of IT is identified and managed. • Ensure that IT-related enterprise risk does not exceed risk appetite and risk tolerance, the impact of IT risk to enterprise value is identified and managed, and the potential for compliance failures is minimized.
EDM04	Ensure Resource Optimisation	• Ensure that adequate and sufficient IT-related capabilities (people, process and technology) are available to support enterprise objectives effectively at optimal cost. • Ensure that the resource needs of the enterprise are met in the optimal manner, IT costs are optimised, and there is an increased likelihood of benefit realisation and readiness for future change.
EDM05	Ensure Stakeholder Transparency	• Ensure that stakeholders are identified and engaged in the I&T governance system and that enterprise I&T performance and conformance measurement and reporting are transparent, with stakeholders approving the goals and metrics and necessary remedial actions. • Ensure that stakeholders are supportive of the IT strategy and road map, communication to stakeholders is effective and timely, and the basis for reporting is established to increase performance. Identify areas for improvement, and confirm that IT-related objectives and strategies are in line with the enterprise's strategy
		Align, Plan and Organise
APO02	Manage Strategy	• The ICT Strategy of MLM is based on its strategic objectives and focuses on ensuring that the linkage of business and ICT planning exists. • Ensuring that the ICT capability can support current and expected future business requirements to ensure the ongoing sustainability of

Process ID	Processes for Governance of Enterprise IT	Descriptions
		MLM's operations.
APO03	Manage Enterprise Architecture	Enterprise architecture addresses four domains, namely business, application, data and infrastructural.
APO05	Manage Portfolio	Focuses on ensuring that practical and measurable benefits are defined at the onset of an ICT -enabled business case and that the benefits are measured, monitored and reported following implementation. Intangible benefits must be addressed.
APO06	Manage Budget and Costs	Management of the I&T-related financial activities in both the business and IT functions, covering budget, cost and benefit management and prioritization of spending through the use of formal budgeting practices and a fair and equitable system of allocating costs to the enterprise.
APO07	Manage Human Resources	• Ensure that the ICT structure leads to optimal utilization of ICT human resources • Ensures that ICT delivers value per the ICT value proposition and that this can be measured, monitored and reported.
APO08	Manage Relationships	• Business relationship management is the interface between ICT and its customers (Business Units), to facilitate service strategic planning and service design per business needs. • It addresses service level management to monitor the delivery of these services. It includes management with external relationships, such as suppliers, to facilitate effective service delivery.
APO09	Manage Service Agreements	Service management includes all aspects of ICT service delivery and support. In a mature environment, the service strategy component enables the alignment of ICT services to business objectives.
APO10	Manage Suppliers	Focuses on defining strategy, models and due diligence to govern the purchase of goods and services.
APO12	Manage Risk	• ICT risk management is a component of operational risk management, which in turn is part of Enterprise risk management. • The implementation of an ICT Internal Control Framework facilitates the effective management of ICT risks.
APO13	Manage Security	• Keep the impact and occurrence of information security incidents within the enterprise's risk appetite levels. • An Information Security Management System, based on the latest ISO standards is implemented to reduce information security risks to an acceptable level.
Build, Acquire and Implement		
BAI01	Manage Programmes and Projects	• Programme Management offers a mechanism, such as a Programme Office, for grouping complementary projects and monitoring their execution and reporting progress into related portfolios. • At an operational level, Project Management supports the execution of the project mandate to ensure that functionality and value are delivered on time and within the allocated budget.
BAI02	Manage Requirements Definition	Create feasible optimal solutions that meet enterprise needs while minimising risk.
BAI05	Manage Organisational Change Enablement	Focuses on ensuring that ICT-enabled changes introduced into Mbhashe Municipality are supported by organisation-wide change management processes.
BAI09	Manage Assets	Manage I&T assets through their life cycle to make sure that their use delivers value at optimal cost, they remain operational (fit for purpose), and they are accounted for and physically protected. Ensure that those assets that are critical to support service capability are reliable and available
Deliver, Service and Support		
DSS01	Manage Operations	Deliver ICT operational service outcomes as planned by coordinating and executing the activities and operational procedures required to deliver internal and outsourced ICT services, including the execution of pre-defined standard operating procedures and the required monitoring activities.
DSS02	Manage Service Requests and Incidents	Achieve increased productivity and minimise disruptions through a quick resolution of user queries and incidents.

Process ID	Processes for Governance of Enterprise IT	Descriptions
DSS03	Manage Problems	Increase availability, improve service levels, reduce costs, and improve customer convenience and satisfaction by reducing the number of operational problems.
DSS04	Manage Continuity	Business Continuity Management ensures the sustainability of critical business processes in the event of disruptions. At an operational level, it includes ICT Disaster Recovery.
DSS05	Manage Security Services	Keep the impact and occurrence of information security incidents within the enterprise's risk appetite levels. An Information Security Management System, based on the latest ISO standards should be implemented.
DSS06	Manage Business Process Controls	Maintain information integrity and the security of information assets handled within business processes in the enterprise or outsourced.
Monitor, Evaluate and Assess		
MEA01	Monitor, Evaluate and Assess Performance and Conformance	• Addresses the effectiveness of processes that monitor and evaluate compliance with Department policies, processes and standards. • ICT performance management complements the corporate process by focusing on the performance measurement of ICT resources, including people, finances, processes and projects
MEA02	Monitor, Evaluate and Assess the System of Internal Control	Through the combined assurance model, the adequacy and effectiveness of MM's ICT controls are assessed and monitored.

8. ICT Portfolios

Below is an illustration of the ICT portfolios.

Figure 2: ICT portfolios

9. Proposed ICT Organogram

In line with the portfolios outlined above, a new organogram is proposed to align the positions to the reconfigured ways of work in the municipality.

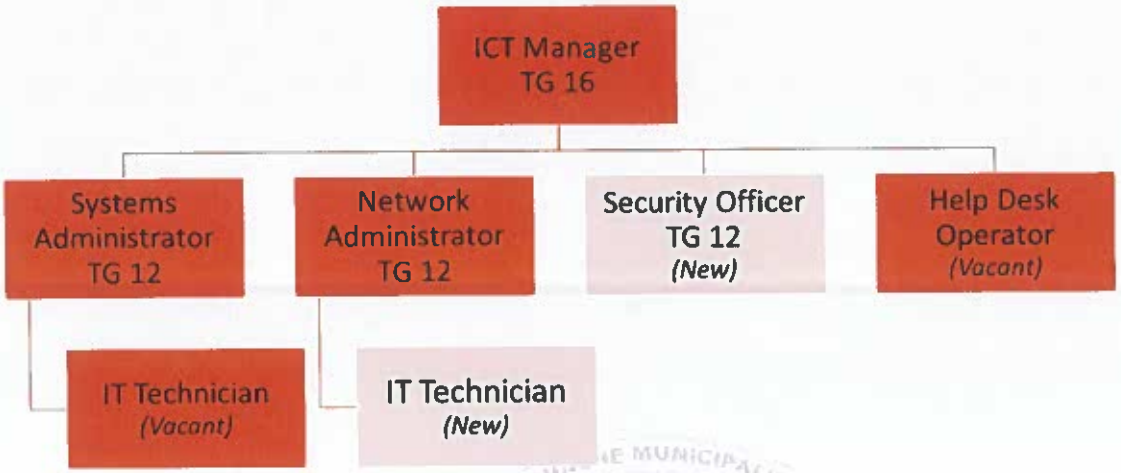


Figure 3: Proposed organogram

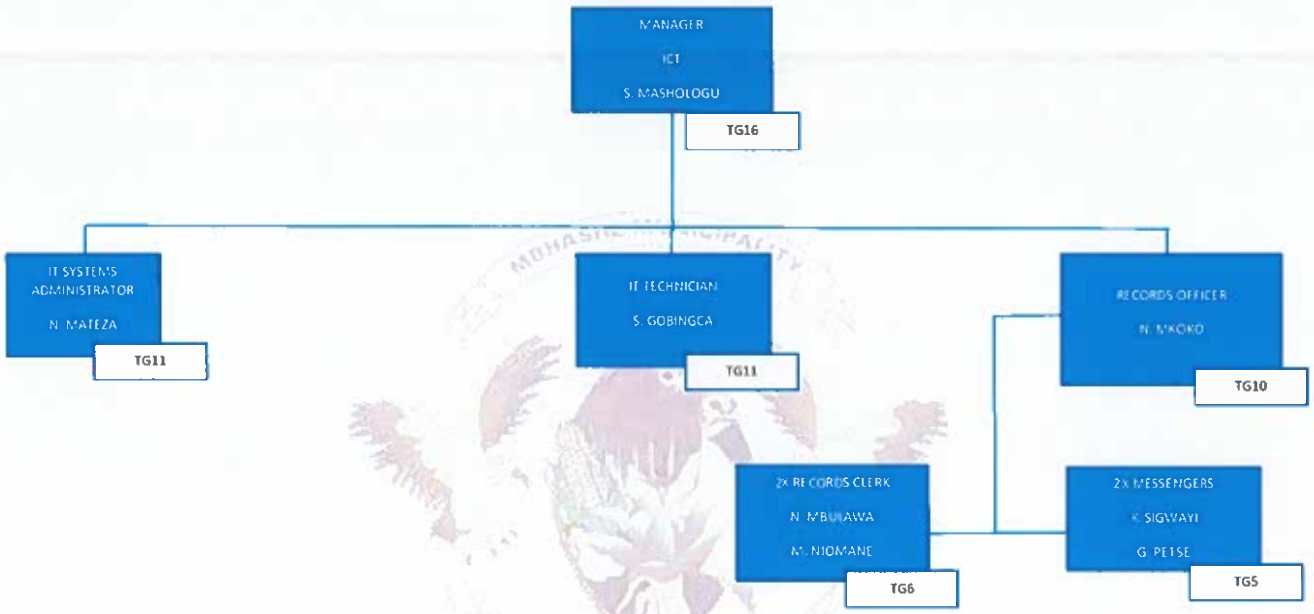
The re-configuration must be interpreted as such:

Table 6: Explaining the proposed organogram

No	Position on the new organogram	Existed in old structure	Additional comments
1	ICT Manager	Yes	To be fully responsible for: • Business analysis • Risk management • Project management in addition to general management
2	Systems Administrator	Yes	To focus on processor related infrastructure, server rooms – to ensure that these are functioning optimally
3	Network administrator	Yes	• The position was titled **IT Technician** in the old structure – • The proposal is for the title to be changed and for the incumbent to focus on network and telecoms related issues
4	Security officer	No	• New position • Establish and enforce security policies to protect an organization's computer infrastructure, networks and data. • Evaluate the effectiveness of existing security measures, such as firewalls, password policies and intrusion-detection systems
5	Help desk operator	Yes	• The position is currently titled End-user support (with 2 vacancies). • The proposal is for 1 of these vacancies to be dedicated to Help desk operations • Also, it is proposed that this position must report directly to the ICT Manager to ensure that performance management of user-related issues is at the appropriate level

No	Position on the new organogram	Existed in old structure	Additional comments
6	IT Technician	Yes	• The position is currently titled End-user support • The proposal is for this position to be converted into a Technician who provides technical support to Network/ Systems and Security administrators
7	IT technician	No	• The proposal is for the municipality to consider having an additional technician to support its user base

10. Approved ICT Organogram



11. ICT Risk and Performance management

As articulated in the portfolios, the ICT manager will be expected to support the Senior Manager in the following risk and performance management issues:

- Design an annual risk register – to be monitored monthly
- Annual review of ICT policies and procedures
- Ensure audit findings are attended to (internal and external audits)
- Create a systematic process of tracking the benefits of IT investments

12. ICT planning processes

The following planning and document review processes have been adopted in the municipality:

No	Document title	Review cycle
1	ICT Master plan	Once annually with the IDP
1a	ICT implementation plan	Annually with the budget review processes

2	ICT Governance framework	Once annually with the IDP
3	ICT service strategy	Once annually with the IDP
4	ICT Charter	Once annually with the IDP
5	ICT Steering Committee ToR	Once annually with the IDP

To enable the municipality to have an effective ICT planning culture the following phases will be consistently be adopted in the planning cycle;

Phase 1: Establish a Corporate Governance of and Governance of ICT environment;
Phase 2: Plan and implement business and ICT strategic alignment; and
Phase 3: Continuously improve Corporate Governance of ICT.

These planning phases are depicted in the figure below.

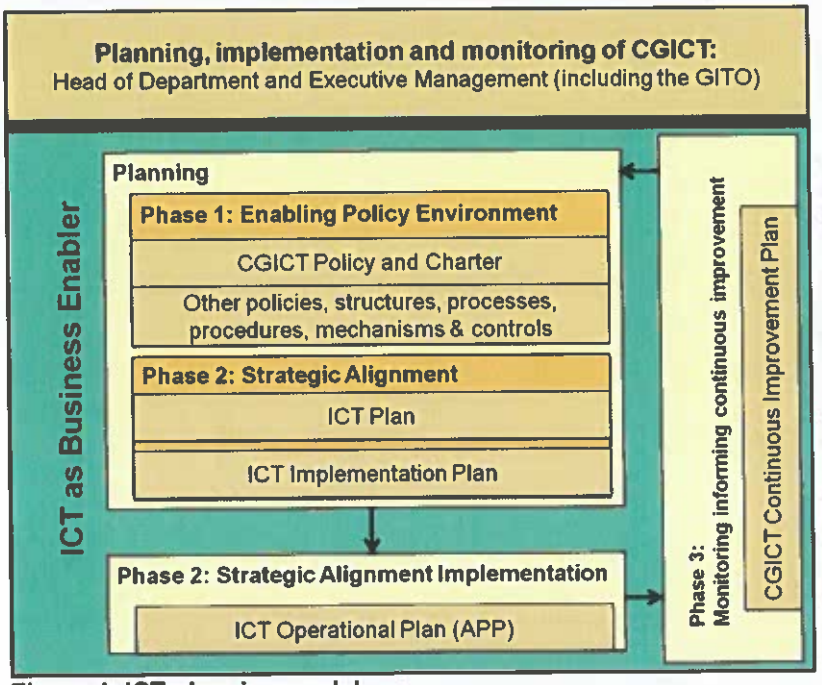


Figure 4: ICT planning model

The 2022/23 ICT Master Plan was developed using the framework above. An implementation plan has been developed with strategic initiatives for 5 years. It is envisaged that the implementation of these initiatives will result in improved ICT Governance in Mbhashe LM.