LEPELLE-NKUMPI LOCAL MUNICIPALITY

INFORMATION COMMUNICATION TECHNOLOGY GOVERNANCE FRAMEWORK

ICT GOVERNANCE, NORMS AND STANDARDS MANAGEMENT

JANUARY 2014

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DOCUMENT CONTROL

Change Control Table

Version	Date	Responsible	Action	Status
0.01	January 2014	Stella Mphahlele	Development	Approved
		Maggy Matshivha	Approval	

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1. TERMS AND DEFINITIONS

1	Accounting Officer	Municipal Manager
2	AG	Auditor General
4	ICT Manager	Information Communication Technology Manager
5	COBIT	Control Objectives for Information Technology
6	Corporate Governance	The set of responsibilities and practices exercised by the Council, Executive Committee and management with the goal of providing a strategic direction, ensuring that objectives are achieved, ascertaining that risks are managed appropriately and verifying that Council's resources are used responsibly.
7	LNM	Lepelle-Nkumpi Municipality
9	DPSA	Department of Public Service and Administration
10	EXCO	Executive Committee
11	Executive Authority	Council / Executive Committee
12	Executive Management	Municipal Manager (MM), Executive Managers (EM), Chief Financial Officer (CFO) and ICT Manager
15	Institution	Municipality/ Municipal Entities
16	CSEM	Corporate Services Executive Manager
17	GICT	Governance of ICT
18	GICTF	Governance of ICT Framework
19	Governance Principles	The vehicle to translate the desired behaviour into practical guidance for day-to-day management
20	ICT	Information and Communications Technology / IT

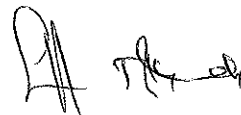|		
21	ICT Governance	The system by which the current and future use of ICT is directed and controlled. It involves evaluating and directing the plans for the use of ICT to support the organization and monitoring this use to achieve plans. It includes the strategy and policies for using ICT within an organization
22	IDP	Integrated Development Plan
23	ISACA	Information Systems Audit and Control Association
24	IT	Information Technology / ICT
25	ITGI	IT Governance Institute
26	King III	The King Code of Corporate Governance for South Africa 2009
27	M&E	Monitoring and Evaluation
28	MFMA	Municipal Finance Management Act
29	MTEF	Medium Term Expenditure Framework
30	PWC	PriceWaterhouse Coopers
31	Risk Appetite	The amount of residual risk that the Institution is willing to accept.
32	Risk Management	A systematic and formalised process to identify assesses, manage and monitor risks.
33	SALGA	South Africa Local Government Association
34	SITA	State Information Technology Agency

2. OVERVIEW

ICT Governance Framework defines the systematic method by which the current and future use of ICT is directed and controlled within Lepelle-Nkumpi Municipality (LNM). It involves evaluating and directing the plans for the use of ICT to enable support the organisation and monitor the use to achieve those plans and ensure that the risks are identified and managed properly. It includes the formulation, implementation and enforcement of the ICT strategy, policies, procedures and standards for using ICT within LNM.

COBIT, ITIL, other ICT governance frameworks and **King III Code** are world class governance benchmarks that lay a foundation for proper ICT Governance and Service Management. ICT Governance of the LNM is guided by these frameworks providing a foundation to ensure that ICT services and its activities are aligned with the municipal IDP objectives, ensure that the investment in ICT is maximised, the risks are correctly managed and all the ICT resources are appropriately utilised.

"King III recognises that Information Technology (IT) has become an integral part of doing business today, as it is fundamental to the support, sustainability and growth of organisations. ICT cuts across all aspects, components and processes in business and is therefore not only an operational enabler for the municipality, but an important strategic asset which can be leveraged to create opportunities and to gain competitive advantage."

ICT Governance is therefore the responsibility of LNM's Council and Executive Management as it is an integral part of municipal governance and leadership.

Cognisance is also taken of SALGA's guide to ICT Governance, its format and structure, that is "A Municipal Guide/ Roadmap to Successful ICT Governance" of 19 June 2012, the MFMA (Municipal Finance Management Act) and the requirements of the office of the Auditor General.

3. PURPOSE

The purpose of LNM ICT Governance Framework is to provide a strategic direction for the ICT Services supported by the ICT Strategy and MSP (Master Systems Plan), to ensure objectives are achieved, the risks are managed appropriately, and ICT resources are used responsibly. In providing strategic direction, ICT Governance Framework ensures that ICT team members are focused towards contributing to the attainment of departmental goals which talks to the entire organisation's IDP. The purpose of ICT Governance as per COBIT Framework is to ensure the following:

- ICT is aligned with the business
- ICT enables the business and maximises benefits
- ICT resources are used responsibly
- ICT risks are managed appropriately

4. BENEFITS

The benefits of implementing ICT Governance for LNM are as follows:

- Council and Executive Management will see the improvement in the quality of ICT services over time.
- There will also be a reduced failure of ICT projects; risk will be minimised and cost saving in delivering ICT services.

5. SCOPE AND APPLICABILITY

The ICT Governance Framework covers all Information Communication Technology assets of the LNM. It also applies to Members of Executive Committee (Political Leadership), Executive Management, all staff, service providers and customers of the municipality that may come to contact with any municipality's information assets.

6. THE KING III CODE OF ICT GOVERNANCE (CHAPTER 5)

The recommendations of Chapter 5 on ICT Governance of the King III report are as follows:

Chapter 5. The governance of Information Technology		
5.1.	The board should be responsible for Information Technology (IT) governance	ICT has an important role to play in many organisations and should be directed and controlled effectively by the board through the establishment of an ICT governance framework. The ICT governance framework supports effective and efficient management and decision making around the utilisation of ICT resources to facilitate the achievement of the company's objectives and the management of ICT-related risk. It includes a charter, policies, decision-making structures, accountability framework, ICT reporting and an ICT internal control framework.
5.2.	ICT should be aligned with the performance and sustainability objectives of the company	ICT should be exploited in a way that most effectively supports and enables the business strategy, delivers value and improves performance. The council should ensure that the ICT strategy is integrated into the company's strategic and business processes and that ICT adds value.

5.3.	The council should delegate to management the responsibility for the implementation of an ICT governance framework	Responsibility for the implementation of ICT governance should be assigned to the ICT Manager, as appointed by the Municipal Manager. The ICT Manager should act as an intermediary between the council, management and staff on ICT-related issues and should be the bridge between ICT and business. ICT should report to council on the performance of the ICT function.
5.4.	Council should monitor and evaluate significant ICT investments and expenditure	Value delivery and return on investment of ICT should be monitored by the council. The board should ensure that the information and intellectual property contained in the Information Systems are protected. Council should require independent assurance over ICT governance controls supporting outsourced ICT services. Council is responsible for ensuring good governance principles are in place for the acquisition and disposal of ICT goods and services. ICT management should ensure good project management principles are applied.
5.5.	ICT should form an integral part of the company's risk management	Council should ensure that ICT risk is considered as part of the municipality's risk management activities.

		ICT risk management should include Disaster Recovery Planning, ICT legal risks, and compliance to laws, rules, codes and standards. Council should evaluate how ICT can be used to aid the company in managing its risk and compliance requirements.
5.6.	Council should ensure that information assets are managed effectively	Council should ensure that processes have been established to ensure a formal information security management system is in place to ensure: • The confidentiality, integrity and availability of information • That company information is adequately protected • That personal and sensitive information has been identified and is protected according to relevant laws and regulations.
5.7.	The Risk Committee and Audit Committee should assist management in carrying out its ICT responsibilities	The Risk Committee should measure and understand the company's overall exposure to IT risks and ensure proper processes are in place to manage these. ICT as it relates to financial reporting and the status of the municipality as an ongoing concern should be the responsibility of the audit committee.

7. THE RACI MODEL / CHART

The organisational structure and the RACI Chart (**RACI** chart *identifies who is Responsible, Accountable, Consulted and/or Informed*) dictates that structures that report to the Executive Committee are the ones that have the delegated authority to make strategic decisions that are coupled with accountability, *"Accountability defined as obligation to answer"*.

Activities	Municipal Manager	Chief Finance Officer	Corporate Services Executive Manager	Information Communications Manager	Business Process Owner	ICT Head Operations	Head Development	Network and IT Administration	Compliance, Audit, Risk and Security
Create and maintain a technology infrastructure plan	C	C	C	R A		C	C	R	I
Create and maintain technology standards	C	C	C	A		C	C	R	C
Publish technology standards		C	C	A	C	R	I	I	I
Monitor technology standards		I	C	R A	C	IR	I	I	C
Define future strategic use of new technology		I	I	R A	I	C	C	R	C

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed on the ICT matters.

8. ICT SERVICES PERFORMANCE MEASUREMENT

The ICT Services shall submit performance reports to the following committees for evaluation:

- Monthly ICT Management internal meetings
- Quarterly Performance Reports to the ICT Steering Committee
- Quarterly ICT Risk Register (matrix) and other risk related reports to the Audit Committee
- Any report as requested by Internal Auditors
- Any report as requested by the Auditor General

9. THE ICT STEERING COMMITTEE CHARTER

COBIT ICT Governance Framework defines the requirements of establishing an ICT Steering Committee. Lepelle-Nkumpi ICT Steering Committee Terms of Reference shall be as follows:

TERMS OF REFERENCE OF THE ICT STEERING COMMITTEE (ICTSC)

The overall objective of the ICT (Information Communication Technology) Steering Committee is to act as a "clearing house" for ICT requests and requirements in order to manage and control ICT Section performance, initiatives, risks, compliance and the related expenditure accordingly. The objectives can further be broken down as follows:-

- *To recommend to Council the strategic information technology plans for the Municipality;*

- *To assess the need for ICT projects in terms of the projects business case and the related risks;*
- *To recommend to Council project commitments;*
- *To approve procedures to ensure that ICT policies are followed;*
- *To ensure that a well defined and understood ICT framework and project methodology is followed;*
- *To monitor and report to Council when necessary on the performance of the ICT division, project planning and implementation;*
- *To monitor and report to Council when necessary, on the performance of ICT projects in the context of the envisaged business case and the related risk of such project;*
- *To ensure that project plans clearly define the involvement of or resulting impact on other projects or phases of projects. This is to ensure that all concerned understand the full extent of projects before approving such projects.*

COMPOSITION

Members

The ICTSC will consist of the following members or those acting on their stead:

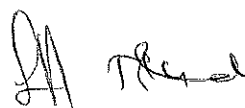*Municipal Manager*

Corporate Services Executive Manager

Information Communication Technology Manager

Chief Financial Officer

Chief Audit Executive

Chief Risk Officer

Network Administrators

The **Chairperson** and **Deputy Chairperson** shall be nominated by the committee at its first sitting.

Officials

Officials from various departments may also form part of the ICTSC as departmental requirements representatives, presenting a report, nominated by the Municipal Manager, providing other administrative or logistical support to the Steering Committee. Officials do not form part of the quorum.

QUORUM
Majority of members of the committee constitute a **quorum**.

RESPONSIBILITIES

General routine day-to-day ICT functions such as support and maintenance will be performed according to a predetermined Service Level Agreement (SLA).

All new requests and all support requests related to ICT needs and services will be handled via a central service desk. Requests that require the attention of the ICTSC will be submitted to the ICT Steering Committee by the ICT Section of the LNM. The ICT Steering Committee will also utilise the statistics contained in the service desk database to manage Service Levels on a monthly basis or on request. All ICT equipment and software procurement for all departments must be done through the ICT Section.

SUB-COMMITTEES

Project Steering Committee

The Project Steering Committee must submit monthly reports to the ICTSC on all projects. The terms of reference must be formulated by the Project Steering Committee and submitted to the ICT Steering Committee for approval. The minutes of the Project Steering Committee must serve at the ICTSC.
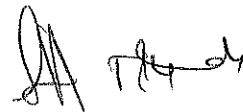
Special Task Teams and User Work Groups

Task teams may be established to deal with specific requirements as delegated by the ICT Steering Committee. The task team will submit recommendations to the ICT Steering Committee for approval.

The need for the establishment of user workgroups will be determined by the ICTSC as and when required.
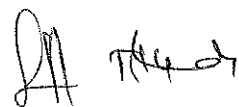
MEETINGS

The ICT Steering Committee will meet on a monthly basis. All requests for items for the next agenda must be forwarded to the Committee Section at least 10 days prior to the meeting. The minutes need to be submitted to the ICTSC for approval.
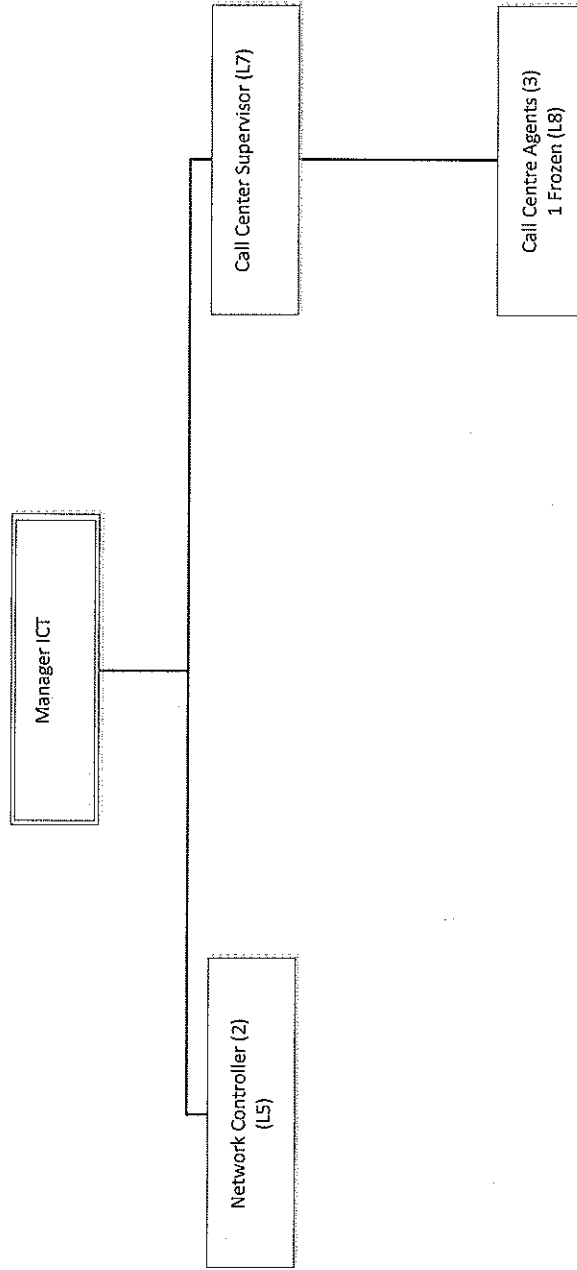
REVIEW

*Until such time as the ICT Steering Committee otherwise determines, the objectives and terms of reference of the **ICT Steering Committee** shall be as set out above.*

11. THE STRUCTURE OF ICT SERVICES

CORPORATE SERVICES

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                    ┌─────────────┐
                    │  Manager ICt │
                    └──────┬──────┘
              ┌────────────┴────────────┐
    ┌─────────────────────┐    ┌──────────────────────────┐
    │ Network Controller (2)│    │ Call Center Supervisor (L7)│
    │         (L5)          │    └────────────┬─────────────┘
    └─────────────────────┘                  │
                                  ┌───────────────────────┐
                                  │  Call Centre Agents (3) │
                                  │     1 Frozen (L8)       │
                                  └───────────────────────┘
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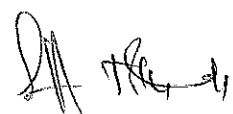
10. ICT MINIMUM GENERAL CONTROLS

The Accounting Officer supported by the ICT Manager must ensure that the municipality use and maintain information systems that are appropriate to facilitate the preparation of financial statements and to support the general day to day operations of the municipality. It is therefore important that the following ICT Minimum General Controls are in place as defined in the SALGA Municipal Guide / Roadmap to successful ICT Governance (2012):

- ICT Governance
- Security Management
- User Account Access Controls
- Change Management
- Data Centre Management
- Facilities and Environmental Controls and
- ICT Service Continuity

10.1. ICT GOVERNANCE

- The ICT Services must ensure that the ICT Governance Framework is developed and adopted.
    - o This framework serves this purpose.
- The municipality must have an ICT strategic plan that supports business requirements.
    - o The municipality must develop and implement ICT Strategy.
- The ICT division must keep an updated ICT Risk Register to serve quarterly at the Audit Committee meetings.
    - o ICT maintains the ICT Risk Register.
- The ICT division must also have a comprehensive report on ICT Critical Issues.

- There must be an organisational structure indicating the roles and responsibilities of the ICT personnel.
- The responsibilities for information security must be formally delegated to a dedicated Information Security Officer.
- The relationship with suppliers must be managed through signed Service Level Agreements (SLAs).
  - ICT maintains an updated ICT contracts register
- ICT performance must be periodically reviewed against targets. Performance reports must be submitted to the ICT Steering Committee and the Audit Committee.
- ICT projects and acquisitions of ICT equipment are approved by the ICT Steering Committee through a formalised process.
- All ICT equipment acquisitions and contractor appointments are done in accordance with the approved LNM Supply Chain Management Policy.

10.2. ICT SECURITY MANAGEMENT

The LNM maintains the following approved ICT policies:

- Computer End User Policy

The above policy is communicated to all staff through organisation induction process, periodic e-mail reminders .This is part of the awareness conducted by ICT.

10.2.1 ICT SECURITY AT EXECUTIVE LEVEL

ICT Security must be taken seriously and be maintained from the highest organisational level in the following manner:-

- The ICT Steering Committee members comprise of the Municipal Manager, the Corporate Services Executive Managers, ICT Manager, CFO, All other Executives from various municipal departments, Risk Officer and Network Administrators.
- The Executive Management that form part of the ICT Steering Committee also serve in the Audit Committee where ICT risks are assessed and discussed.
- The ICT Auditor General Report is presented to Council by AG representatives.

10.2.2 PASSWORD CONTROLS

Password Controls must be maintained by the ICT Services as follows:

- Before a user can be granted a password to any system or the network, a New User Request Form must be signed by both the user and the immediate supervisor of the respective department and submitted to the ICT office.
- Password resets must be done by dedicated ICT personnel and domain administrators as approved by ICT Management.
- Password must be a minimum 7 alpha-numeric characters.
- Password complexity is enabled.
- Periodic (30 days) password changes are mandatory
- Intruder lockout is enabled (3 tries)

10.2.3 FIREWALL IMPLEMENTATION

- The LNM maintains the following Firewall System mentioned below that prevents intruders and any other network attacks:
  - Microsoft Firewall ISA Client Management
- Vulnerability scans are done monthly.

10.2.4 PATCH MANAGEMENT

- Lepelle-Nkumpi municipality maintains a System Centre Configuration Manager Server that downloads and distributes the updates automatically.
- Other system patches that are manually applied go through a formalised change management process.

10.2.5 ANTI-VIRUS SOFTWARE

- Symantec Antivirus is constantly updated automatically on servers and all workstations.
- LNM also has Symantec cloud filtering installed to ensure that e-mails received by the users are legitimate and do not contain any unwanted content that may pose risk to the municipality.

10.2.6 TRACKING OF DATABASE ACTIVITIES

All ICT systems and databases maintain an audit trail to ensure that any activities in the database are traceable. The audit trails are reviewed as and when necessary.

11. USER ACCOUNT ACCESS CONTROL

11.1 ACCESS REQUESTS AND PASSWORD RESETS

- Before a user can be granted a password to any system or the network, the new User Request Form must be signed by both the user and the immediate supervisor of the respective department and submitted to ICT.
- Password resets are only done by ICT Domain Administrators.

11.2. USERS WITH ADMINISTRATOR ACCESS

- Domain Administrators have full rights on Active Directory and also full administrative rights to the financial system (e-Venus), since the municipality does not have the System Administrator.

11.3. MONITORING OF SYSTEM ADMINISTRATORS

- The review of System Administrator activities is carried out as and when necessary for some systems except for the financial system where daily reports are checked and filed at the Finance Department.
- At the end of the month, reconciliations are carried out by the Finance Department to detect any suspicious activity.

11.4 PERIODIC REVIEW OF EMPLOYEE ACCESS RIGHTS

- Passwords are reviewed and renewed after every 30 days.

12. CHANGE MANAGEMENT

- Formal change management request forms are completed and approved by management.
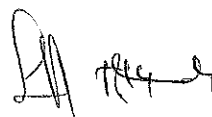- LNM must establish a test environment for some systems where the test environment does not exist.

o The financial system maintains a test environment for simulating changes before they are applied to the live database environment.

13. DATA CENTRE/ SERVER ROOM MANAGEMENT

- Changes to database management software is controlled and managed through the formalised change management process.
- Access to the data centre is restricted through Access Control System. Only authorised personnel gain access.
- Hardware changes and maintenance are scheduled with users through the ICT Office to minimise impact on operations. If there is any planned downtime, it is approved and communicated to users prior to commencement of work.
- Monitoring checklists are in place to check for example the functioning of the cooling system.
- Backup registers are also in place to ensure that those responsible for backups do follow the daily routine and indicate where backups failed or succeeded.

14. FACILITIES AND ENVIRONMENTAL CONTROLS

- The physical access to sensitive areas including ICT area, data centre/ server room, disaster recovery site, UPS room and switch rooms are controlled through biometric access control.
- All visitors to the server room must sign a register that is kept in the server room.
- The server rooms and switch rooms are installed with smoke detectors, fire suppression systems and air-conditioning systems.
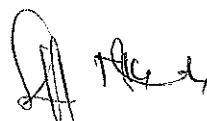
15. ICT DISASTER RECOVERY PLAN

- An ICT Disaster Recovery Plan has been incorporated into the municipal disaster recovery plan.
- A copy of ICT Disaster Recovery Plan is kept offsite at the disaster recover sites
- Backup procedure, schedule and registers are updated; check the Backup and Restore Policy.
- ICT must implement an ICT SCM for critical systems to ensure that the municipality is able to continue operating or can resume its operations immediately after disaster strikes.
- The VMWare Virtual System must be extended to cover all critical systems and moved to the Data Recovery Site.
- The ICT Services must ensure that the backup system is maintained and the daily backup tapes are collected and kept offsite.
- The offsite disaster recovery sites are access controlled and have monitoring, air conditioning equipment, UPS and fire suppression system.

16. APPROVAL AND REPORTING REQUIREMENTS

- The ICT Governance Framework is in force as approved.
- The ICT Governance Framework provides an overall ICT Governance framework for LNM

17. CUSTODIAN OF THE FRAMEWORK

ICT Governance unit is the custodian of this ICT Governance Framework, supported by the ICT Steering Committee.
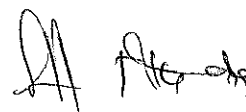
18. REVIEW

No amendments, variations or alterations shall be of any effect unless approved by ICT Steering Committee.

This document shall be reviewed annually and revised as and when required, or if required by changes in legislation or circumstances. All revisions shall be recorded in the Document Control Register and the superseded document hardcopy will be kept for future reference.

The terms of this policy shall take effect on the date of approval by the Lepelle-Nkumpi Municipality Council.

Document Name: **ICT GOVERNANCE FRAMEWORK**

Reviewed By: _____ **Date:** ___01·04·2014___

            ACTING MUNICIPAL MANAGER

Recommended by

Portfolio Committee: Corporate Services

_____**Date:** _____

CHAIRPERSON

Approved by Council: _____**Date:**___01·04·2014___

(Speaker)

RESOLUTION NUMBER: ___7·1·6·02/2014___

ICT GOVERNANCE FRAMEWORK   2014/2015