MANGAUNG
AT THE HEART OF IT ALL

CENTLEC
Reg No. 2003/011612/30

ICT) Information and Communication Technology Strategy Plan 2019-2023

DIRECTORATE: OFFICE OF THE CEO	
SUBJECT: ICT STRATEGY PLAN	POLICY NO:
REV NO: 0- New	REV DATE : 31 MAY 2023
SUB-DIRECTORATE:	BOARD ITEM NO:
SIGNATURE :	
DATE APPROVED:	EFFECTIVE DATE:

1. ABBREVITIONS

1.1	**ICT**	Information and Communication Technology
1.2	**ERP**	Enterprise Resource Planning
1.3	**MIS**	Management Information system
1.4	**LAN**	Local area network
1.5	**WAN**	Wide Area network
1.6	**SCOM**	System Center Operations Manager
1.7	**ISO**	International Organization for Standardization
1.8	**PMBK**	Project Management Body of Knowledge
1.9	**SWOT**	Strengths, Weaknesses, Opportunities, and Threats
1.10	**SQL**	Structured Query Language
1.11	**AMI**	Automated Meter Interface
1.12	**IOT**	Internet of Things
1.13	**ICT**	Information Technology

2. EXECUTIVE SUMMARY

The purpose of the ICT function is to be innovative and provide Information and Communication Technology Support Services that enables Service Delivery and Community upliftment. This ICT Services includes ICT and related services that are perform in Information Management and other functional areas in the Retail Business Unit, which are Trading Services and Systems Engineering. The link between Information Management and the Retail Business Unit ICT functional areas are depict.

3. BACKGROUND

The Information and Communication Technology environment is changing rapidly making service delivery both challenging and dynamic. The change in the strategic

direction of CENTLEC also warrants for the change in the Information and Communication Technology strategic direction. It is imperative for CENTLEC as a strategic partner in business upgrade to the changing technological needs and on time.

The plan outlines all the ICT requirements that best support the course of the CENTLEC in achieving its strategic imperatives - objectives. It encapsulates the strategic vision for the ICT environment that CENTLEC would like to establish within the next three years.

3.1 **Vision**

To be an innovative, reliable and an effective strategic business partner that enables service delivery, social and economic upliftment.

3.2 **Mission**

To provide a comprehensive, integrated and sustainable ICT infrastructure that will enable CENTLEC to meet its objectives through the following:

3.2.1 Linkage of information entities, ICT Systems, processes and business units to CENTLEC goals and objectives.
3.2.2 Establishing an optimized and manageable technical infrastructure.
3.2.3 Enabling integrated business processes to support operational autonomy, ICT Governance and energy solutions.
3.2.4 Achieving shared information across CENTLEC through innovation.
3.2.5 Support service delivery with measurable service levels.
3.2.6 Improve response to changing business needs.
3.2.7 Managing cost.
3.2.8 Demonstrating value for money and return on investment from ICT spending.
3.2.9 Implementation and maintenance of ICT governance across all ICT streams and activities.
3.2.10 Capacity building and develop core ICT competencies.
3.2.11 Participate in local and global ICT structures.

3.3 **Values**

Information and Communication Technology has adopted the CENTLEC values as outlined below:

3.3.1 C - Customer Centric

3.3.2 E - Ethical & Accountable

3.3.3 N - Nurturing Passion for Efficiency

3.3.4 T - Technology & Innovation

3.3.5 L - Leaders in Service Delivery

3.3.6 E - Employee Recognition & Diversity

3.3.7 C - Caring for the Community

3.4 **The documentation of the Plan encompasses the following processes:**

3.4.1 Evaluation of the current Infrastructure and ICT related activities.

3.4.2 Identification of the GAP.

3.4.3 Establish standards and provide a functional description of the envisaged technology infrastructure.

3.4.4 Provide an analysis of the requirements needed to develop, implement and maintain the applications and systems required within CENTLEC.

3.4.5 Cost estimates for the proposed systems, governance and structural changes.

3.4.6 Risk analysis and impact assessment.

3.4.7 A summary that provides a holistic view of the ICT environment.

3.5 **ICT Plan objectives**

3.5.1 Addresses all the Governance concerns as raised by both the Internal and External Auditors.

3.5.2 Addresses the SWOT analysis weaknesses.

3.5.3 Addresses the risk register.

3.5.4 Support the achievement of the strategic imperatives - objectives of CENTLEC.

3.5.5 Intent to Integrate and coordinate the functions of the Corporate Support Services.

3.5.6 Solutions that will bring about effectiveness and efficiencies in CENTLEC.

3.5.7 User friendly, accessible, and flexible solutions.

3.5.8 Provide a Network environment that is capable of the following:

3.5.9 Network reliability and available with minimized interruptions and disruptions.

3.5.10 Network scalability and capacity on demand that will accommodate the growing and changing needs for network services and bandwidth.

3.5.11 Network security, which will protect information and the movement of computers while providing access to open communication.

4. ICT STRATEGIC FUNCTIONS

The ICT Strategic functions areas intend to:

4.1 Manage the ICT infrastructure that which includes hardware, software, networks and associated services.

4.2 Provide support for all ICT and related services.

4.3 Develop ICT Solutions including Programs.

4.4 Manage stakeholder's needs and Service Level Management.

4.5 Develop policies and enforce compliance thereto.

4.6 Provide training to the user Community.

5. ICT OPERATIONS OVERVIED

5.1 Functional operations

5.1.2 Centralise ICT function at Head Office including budget, procurement and human capital management.

5.1.3 Consolidation for all systems and applications should must be on the Sequel (SQL) Database.

5.1.4 Integration of the Enterprise Resource Planning (ERP) solution with the functional business functions systems, viz. Point of Sale system, Maintenance Scheduling System.

5.1.5 ICT Governance

5.1.6 Develop and implement a reporting tool.

5.1.7 Develop and implement a management information system (MIS).

5.1.8 Develop a Disaster Recovery Strategy and operationalize the strategy.

5.1.9 Implement the Systems Center Operations Manager.

5.1.10 Optimize both the Local Area and Wide Area Networks (LAN/WAN).

5.1.11 Resource the ICT structure and provide training.

5.1.12 Centralization of the ICT Function

5.1.13 Incidents and Problems Management

5.1.14 Service Level Management

5.1.15 ICT Human Resource Management

5.2 **Technology focus**

5.2.1 Microsoft Licensing

5.2.2 Network Optimisation

5.2.3 Consolidation of the systems and applications

5.2.4 Enterprise Resource Planning System

5.2.5 Microsoft System Centers implementations

5.2.6 Cyber security Systems implementations

5.2.7 Disaster and Business Continuity for business loss of data using Cloud services.

5.2.8 Vending Systems management for revenue enhancement

5.2.9 SMART technology and innovation for 4IR

5.2.10 SMART metering systems infrastructure with the implementation of the IoT technology

6 STANDARDS AND FRAMEWORKS

COBIT - A Business Framework for the Governance and Management of Enterprise.

The Information Systems Audit and Control Association (ISACA) create control Objectives for Information and Related Technology (COBIT). The recent release is COBIT 5.

COBIT is the only business framework for the governance and management of enterprise IT. This evolutionary version incorporates the latest thinking in enterprise governance and management techniques, and provides globally accepted principles, practices, analytical tools and models to help increase the trust in, and value from, information systems. COBIT 5 builds and expands on COBIT 5 by integrating other major frameworks, standards and resources, including ISACA's Val IT and Risk IT,

Information Technology Infrastructure Library (ITIL) and related standards from the International Organization for Standardization (ISO).

COBIT 5 helps enterprises create optimal value from IT by maintaining a balance between realizing benefits and optimizing risk levels and resource use. The framework addresses both business and IT functional areas across an enterprise and considers the IT-related interests of internal and external stakeholders.

COBIT will help CENTLEC to benefit in:

1. Maintain high-quality information to support business decisions.
2. Achieve strategic goals and realize business benefits through the effective and innovative use of IT.
3. Achieve operational excellence through reliable, efficient application of technology.
4. Maintain IT-related risk at an acceptable level.
5. Optimize the cost of IT services and technology.
6. Support compliance with relevant laws, regulations, contractual agreements and policies.

COBIT 5 based on five key principles for governance and management of enterprise IT:

1. Principle 1: Meeting Stakeholder Needs
2. Principle 2: Covering the Enterprise End-to-End
3. Principle 3: Applying a Single, Integrated Framework
4. Principle 4: Enabling a Holistic Approach
5. Principle 5: Separating Governance from Management

Project Management Body of Knowledge (PMBOK)

PMBOK adopted as the Project Management Framework for all CENTLEC ICT projects. The project management life cycle describes the horizontal process that will be followed from the project is identified to the time that the project is deployed and closed. The project management life cycle identifies five project management process groups as described in the PMBOK namely, Initiation, Planning, Execution, Monitoring, controlling, and closure.

7 SWORT ANALYSIS

The SWOT analysis is outline for the ICT functions, this relate to the Strength, Weaknesses, and Opportunities & Threats in the unit. The aim is to leverage on the strengths, address the weaknesses and mitigate the threats and to take advantage of Opportunities.

Strength (internal attributes and resources that support a successful outcome)

1. Well established Local Area Network (LAN)
2. Well established Wide Area Network (WAN).
3. Stable ICT infrastructure.
4. Capable and dedicated ICT personnel.
5. ICT personnel understanding of technology roadmap.

Weaknesses (internal attributes resources that work against a successful outcome)

1. Customer data requires verification and to be cleaned.
2. Lack of integrated system and reporting.
3. No Enterprise Resource Planning (ERP) solution.

4. Outsourced ICT infrastructure
5. Systematic approach to Incident and Problems resolution.
6. Systems to manage maintenance schedules effectively.
7. Lack of mechanism to monitor electricity losses.

Opportunities (external factors the project can capitalize on or use to its advantage.

1. Internet availability
2. Training and workshops
3. Outsourced services
4. Technological advances

Threats (external factors that could jeopardize the project)

1. Imaging Technology
2. Unreliable customer data
3. Cyber Security
4. Competition on SMART Grid technology
5. NERSA regulations
6. Change in ICT principles and Standard
7. Foreign competitions
8. Stakeholders

8 ICT FUTURE STRATEGIES AND TECHNOLOGIES

The three-year plan outlines all the ICT requirements that best support the course of CENTLEC in achieving its strategic imperatives - objectives. The Plan encapsulates the strategic vision for the ICT environment that CENTLEC would like to establish within the next three years. The Plan is align CENTLEC overall strategy, available resources and the business requirements.

8.1 The ICT Plan encompasses the following:

8.1.1 Evaluation of the Infrastructure.

8.1.1.1 Migration of standalone servers to Virtualised environment

8.1.1.2 Assessment of the infrastructure hardware for improvement

8.1.2 Establish standards and provide a functional description of the envisaged technology infrastructure.

8.1.3 Provide an analysis of the requirements needed to develop, implement and maintain the applications and systems required within CENTLEC.

8.1.4 Risk analysis and impact assessment.

8.1.5 Cost estimates for the proposed systems, governance and structural changes.

8.1.6 A summary that provide a holistic view of the ICT environment.

8.1.7 Cloud Services technology

8.1.7.1 Migration of systems and data to cloud services

8.1.8 Cyber Security Management

8.1.8.1 Implementations of the intrusion prevention systems

8.1.8.2 Network and infrastructure upgrade and maintenance

8.1.8.3 Various network management tools implementations such as firewalls

8.1.9 Website implementation

8.1.9.1 Development of the holistic information workflow website

8.1.10 CENTLEC APP development

8.1.10.1 Holistic and integrated services for customer communications

8.1.11 Converged Communication Call Centre

8.1.12 Wi-Fi implementation

8.1.12.1 Wi-Fi split to mitigate the access risk

8.1.13 SMART Grid technology

8.1.13.1 Address the issues with renewable energy and competitive advantages for CENTLEC

8.1.14 Smart Metering Systems

8.1.14.1 Implementation of vending systems

8.1.14.2 Implementation of AMI revenue system

8.1.15 Microsoft Enterprise resource planning

8.1.15.1 One drive for the users and SharePoint

8.1.16 IOT implementation

8.1.16.1 Cloud services to communicate with remote systems

8.2 **Future orbitational strategy to enable the business**

8.2.1 Enabling environment,

8.2.2 Customer centricity,

8.2.3 Efficiency of operations,

8.2.4 Opportunities

8.1.1 Collaborative leadership

8.2 **Methodology and approach for future technology within CENTLEC**

8.2.1 Participation in Association of Municipal Electricity Utilities (AMEU) seminars

8.2.2 Research on latest technology in the market

8.2.3 Training and capacitation of staff

8.2.4 Collaborate in the new learning technology and Activities

9 CENTLEC' S STAKEHOLDERS MANAGEMENT

Below are the five key stakeholders for the ICT

9.1 Internal Stakeholder

9.1.1 Internal Systems users
9.1.2 Executive Management team

9.2 External Stakeholders

9.2.1 CENTLEC Board
9.2.2 Shareholders Mangaung Metro Municipality (MMM)
9.2.3 CENTLEC Customers
9.2.4 Investors

ICT STRATEGIC PLAN PER PROJECT

#	PROJECT	BUSINESS UNIT	REQUIRTEMENTS AND IMPACT	PRIORITY LEVEL
1	Document and annually review all the all the ICT Policies Procedures and Standards.	ICT	Policies, Procedures and Standards are the basis to manage ICT environment and compliance.	High
2	Renew the Microsoft License Agreement and Premier Support	ICT	The renewal of Microsoft License Agreement is renewal for three years.	High
3	Centralize ICT systems functions	ICT	Systems Integrations and Automation	High
4	Infrastructure Upgrade for communication network	ICT	Replace all old and non-supported hardware.	High
5	Backup and Disaster Recovery	ICT	Develop a Backup and Disaster site for all CENTLEC ICT operations.	High
			Installation of Backup Generators for all critical operations.	High
6	Improved Call Centre Systems	ICT	Upgrade the VOIP including the upgrade of the Call Center.	Medium

#	PROJECT	BUSINESS UNIT	REQUIRTEMENTS AND IMPACT	PRIORITY LEVEL
7	Software upgrade and renewal	ICT	Upgrade all old software for all critical applications.	High
8	Maintenance	ICT	Infrastructure upgrade and hardware maintenance	Medium
9	Workflows applications	ICT	Implementation of the Adobe sign and workflow, signatures	Medium
10	Network Security threats	ICT	Deployment of antivirus and Firewall	High

10	User Training and awareness	All	Security awareness training video and documents	Medium
11	ICT personnel certification and workshops	ICT	ICT training	Medium
12	Cyber Security	ICT	Implement technologies to address cyber security	High
13	Smart Grid	Systems Engineering	Establishment of AMI + Vending systems	High
14	Data Mining	Systems Engineering	Develop solutions to address big data	High
15	Website	ICT	Development of website to engage with the customers	High
16	Centlec APP	ICT	Development of CENTLEC APP	High
17	APN	ICT	Capacitate remote communication	High
18	Printing Services	ICT	Centralizes all printers to optimizes service delivery	High
19	Microsoft Systems Centre	ICT	Central deployment of software and operating systems	High
20	Microsoft Application development	ICT	One drive and SharePoint	High

The amounts or budget is based on the budget preparation for the year based on the project stated on the Plan. The annual review of the budget plan - delivery roadmap may result in different amounts, including inflation adjustments. Budget plaining and project plan should address the implementation plan of the budget.

The CENTLEC will only perform effectively by exploring and utilizing the full benefits of Information and Communication Technology provided by the hardware and software platforms, network facilities and associated services. This also includes centralized information center that provide information through Knowledge and Information Management, a secure network that which will provide end-to-end connectivity, real time reporting that will be offered by the Reporting Tool, standardized infrastructure that will promote inter-operability and ease of maintenance, modern hardware platforms and equipment's for mobile computing.

Once all the efforts are put together, the right qualified personnel are appointed and users are trained accordingly, all the infrastructure inherent attributes will be achieved that which includes, reliability, scalability, flexibility, availability, manageability and maintainability. All these explain the commonality across the entire architecture from user platforms to the infrastructure required to support the mandate of CENTLEC.

10 REVIEW AND APPROVAL

This plan and underlying strategies will be reviewed at least annually, or as necessary, to ensure its continued application and relevance.

Prepared by:

Signed:_____

Acting Executive Manager: Engineering Retail

Date:_____

Supported by:

Signed:_____

Chief Executive Officer

Date:_____

Approved by:

Signed:_____

Chairperson of the IT Governance Committee

Date:_____