Merafong City Local Municipality
Information and Communications Technology
Master Systems Plan
2017 -2022

	Information and Communication Technology Masters Systems Plan			
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1. Executive Summary

Local Government is under pressure to demonstration noticeable improvements in service delivery and achieve clean audits towards Operation Clean Audit 2014 instituted by the Department of Local Government and Traditional Affairs.

Though municipal structures are operating under such immense strain they are still required to afford their constituents with information that is accurate, authentic and reliable they also have to guarantee their constituents with effective and efficient delivery of services.

Information and Communications Technology has matured from being a technology workshop to being a business enabler whereby the strategies of the business could not be achieved by not aligning with ICT strategies. Conventional understanding of government especially local government about ICT is no longer sufficient to manage the ever increasing relationships between the management of information and consumption of that information as constituencies continue to grow and they become intricate.

The privation of timely, accurate information leads to the inability to prompt decision making and failure to delivery of services which may result in anarchy.

1.1. Current state of Information Systems

The Merafong City Local Municipality has implemented a number of paper based and electronic systems in order to manage and consume information.

The most successful of these information systems is the implementation of document management system, which is capable of providing senior levels of the municipality with access to all correspondence within the Municipality.

The municipality has also succeeded in maintaining a stable financial system (BIQ) that is capable of meeting their required financial, legislative and reporting needs.

1.2. Information Management

Despite these successes, the system breaks down in a number of places. Key areas are in feedback to the public on service delivery, flow of information between council and officials, and flow of information to staff not provided with access to computers and/or Sharepoint Portal.

Furthermore, reports requested by other agencies (district, national, provincial) are not readily available, or provided on time.

1.3. ICT Management

There appears to be a lack of attention paid to ICT management in the municipality, with current ICT planning not part of the municipal IDP process, limited funds allocated to ICT, and poor/limited management of ICT assets such as hardware, software etc.

1.4. IT Strategic Management

Key to the effective functioning of the municipality is an alignment between the strategic imperatives, and the operational objectives. This link appears to be missing, resulting in a perception of poor service delivery/and or capabilities. Furthermore, departments appear to operate in vertical silo's, with

limited interaction between them. This severely affects the municipality's ability to respond efficiently to service requests.

1.5. Strategic Business Architecture

The Constitution establishes local government as a distinctive sphere of government, interdependent and interrelated with national and provincial spheres of government. There is fundamental agreement in the country on a vision of democratic and developmental local government in which municipalities fulfil their constitutional obligations. These are determined to ensure sustainable, effective and efficient municipal services; promote social and economic development; encourage a safe and healthy environment and working with communities in creating environments and human settlements in which all our people can lead uplifted and dignified lives.

The MCLM IDP identifies the objectives of the Municipality according to the constitution; the vision, mission, purpose, and values for MCLM, and highlights the municipal context, strategic imperatives, funding, and structures.

1.6. Environmental Challenges

In implementing this vision, the current state assessment has determined a number of environmental challenges that may hinder the achievement of these ideals.

As highlighted before, there is increasing pressure on service delivery that is exacerbated by a lack of resources (Staff & Money) to perform. Delivery is further throttled by having to comply with increasing regulation, and limited use of own initiative.

In the municipality, there is a perception of limited know-how. This results in a lack of trust, poor decision making ability, lack of responsibility, and the emergence of a blame culture.

Some staff exhibits a general lack of motivation or purpose (why), and appears to feel helpless to influence system and/or biding time for retirement/end of their contract.

1.7. Municipal Challenges

With the increasing demands from communities, and decreasing ability to deliver services, the municipality will require the ability to match resources to service needs, and say 'no' to services that cannot be delivered.

This situation is further worsened by poor communication with the citizen, between council and municipality, between business units, and in business units.

1.8. Improvement Opportunities

The IT Steering Committee needs to be reviewed as it is currently not achieving what it was set out to achieve. The IT Steering Committee or IT Governance Committee should be composed of business Executive Directors chaired by the Municipal Manager so that strategic decisions can be made on time. IT Manager will be part of the IT Steering Committee to co-ordinate and advice the committee on all the ICT related strategic and operational issues within the municipality.
It is also vital that the municipality take into consideration the vision 2016 and clarify focus areas (strategy) of municipality towards this vision, and the relationship between MCLM, West Rand District Municipality and all the municipalities that are part of this vision.

Furthermore, to enhance the whole MCLM collaboration, it is recommended that:

- Hold regular formal/informal meetings between council and officials, and amongst departments.
- Make council and management minutes available to all staff (via Microsoft Sharepoint)
- To improve interaction with communities, by using social media like Facebook, a website that promotes e-government services (Electronic Bills, GIS reports, etc) and establishment of Customer Contact Centres closer to MCLM Constituencies.

It should also be noted that funding for the ICT-MSP initiatives identified in this document should come from capital expenditure (CAPEX) or special project funding.

1.9. Expected Benefits

By implementing the Master Systems Plan, MCLM should benefit through improved communication, aligning their ICT with the municipalities strategies, and by putting people first.

1.10. Master Systems Plan Initiatives

As part of the Master Systems Plan, and the future state of development, a number of ICT initiatives have been identified by the IT Section within MCLM. These priority initiatives, together with the management initiatives, need to be prioritised by the ICT steering committee, and further funding/budgets sought or allocated.

Following is a listing of the key Master Systems Plan initiatives:

1.10.1. Strategic Management

Strategic management defines how the municipality manages its key resources in enabling service delivery:

- **Availability of Council and Management minutes –** Availability of the Council and Portfolio committees' minutes to the public is crucial for transparency as they represent constituencies and corporate minutes are crucial to staff so that it can build moral and their contribution towards in service delivery.
- **Clarify key development and service delivery priorities –** based on the IDP process, "It is essential to spend the limited council (municipal) resources on the *key development priorities* of the local community"**.**

1.10.2. E-Governance

E-Governance defines how the municipality does ICT planning and management in the municipality. The following section outlines these ICT management and planning initiatives identified as part of the e-governance recommendations.

- **Establish ICT Steering committee –** ICT management require dedicated attention in the municipality. The MM will chair the ICT steering committee with the ICT Manger as the secretariat, coordinating meetings, minutes, and contact person for all initiatives.
- **Prioritise MSP initiatives -** The ICT Steercom needs to prioritise these MSP initiatives, based on available funding and capability to source funding. These initiatives can be prioritised according to the scoring framework.

- **Develop a transparent ICT procurement process** – To prevent ICT's from being implemented without due consideration for the organisational and functional needs, a transparent process should be implemented based on MCLM Enterprise architecture and requirements.

- **MSP Initiatives funding to come from CAPEX or special project funding –**Funding for MSP initiatives, are over-and-above the capital required for the normal operation of the municipality. Funding should be provided by budgeting for capital expenditure items, and by applying for donor grants.

1.10.3. E-Government Services

E-Government services are effectively normal services provided through e-channels such as internet/email, telephones, and computers. Following are the key e-Government services that MCLM should implement as part of their MSP.

- **Train all relevant users on the Financial System (BIQ)** – in order to improve the adoption of the financial system in the municipality, all relevant users within the municipality that deal with finance should be provided training on BIQ as part of their KPI's.

- **Upgrade Performance Management System Connectivity –** the municipal performance management system should be upgraded in capacity and connectivity. Training of users is necessary

- **Roll out access to sharepoint portal all staff** – Information should be made available via Miscrosoft Sharepoint and a shared PC should be provided for staffs that does not have their own. Minutes, Bylaws, and public notices should be reproduced free of charge from Sharepoint and the website for public access.

- **Implement a central Information contact centre** - Implement a central contact centre integrated for emergency services and service requests/complaints. This should allow for all public calls, information, service request, enquiries, emergencies etc. to be logged and handled. This does not mean that calls are just logged and forwarded. Agents should be able to answer all reasonable municipal queries as a first line contact centre. More complicated requests should be forwarded to the relevant people. All requests should be logged and allocated accordingly.

1.10.4. Platform Services

The following section defines the platform services on which the provisioning of e-government services is dependant.

- **Application Platform (Software)** – The BIQ System running on an IBM AS400 platform is currently being employed by the Municipality and a dedicated technical administrator should be considered. The system can be replaced in the long term should the needs arise towards vision 2016 to standardise the ERP of the municipality.

- **Develop and implement desktop & Server standards** –There is currently no standard for desktop and mobile computer. There is only a standard on the brands to use but no classification of user requirements and the platform to use. Desktop computers have a mixture of Windows XP, Vista and 7 and one standard should be considered and upgraded cross the board. This ensures easier support and updates. Servers should be upgraded to the latest OS.

1.10.5. ICT Infrastructure Services

The following ICT improvement opportunities have been identified:

- **Upgrade Servers** – the server infrastructure should be upgraded to accommodate the increasing amount of resources required by the applications and compliance with the AGSA requirements.

- **Virtualise and Consolidate Servers –** Once the servers have been upgraded, applications should be consolidated, and the number of servers reduced. Vendor applications can all be run off the same servers. The server environment should have a central console where all the servers' infrastructure can be managed and configured with ease.

- **Upgrade ADSL Bandwidth for Internet Access** - The current bandwidth for external connectivity is sufficient for office users and it needs to be upgraded because MCLM will be hosting its own website for ease of access to other Information resources by the public.

1.11. Conclusion

In order to address the strategic importance of ICT in the Merafong City Local Municipality, and change the system to accommodate these new needs, individuals in the organisation will be required to change their paradigms.

Although this is not the purpose of a MSP, it is hoped that the techniques and frameworks established during the development of the MSP will aid the municipality in providing a platform for such change.

2. Context and approach

The modern and different needs of municipalities require new and more innovative responses from information systems, information technology as well as information management. Therefore, when municipality begins to deliver those systems that will enable more effective functioning, it characterises the well-being of municipality in the information age.

This however, places greater emphasis on municipality to accommodate the rapid technological surge. At the same time, we find information technology as a major catalyst for creating change and ease service delivery. The emergence of challenges and advantages that are brought by ICT within the business environment are recognised on the daily basis in the public sector especially within Local Government.

The focus of ICT within Local Government has traditionally been on technology and infrastructure. Software and applications are procured to automate manual processes and the most important automation has been financial accounting, driven by a need for more detailed data on budgeting and expenditures.

Most municipalities may have ICT plans and strategies but they procure software and applications based on the sectional need that is a section can procure an application that specifically suits their needs to perform a certain task. This has risen the challenges within municipalities whereby there are a number of applications and software that are not integratable with each other, creating information silos within the municipality resulting in miscommunications and information inconsistencies hence the insufficiency of understanding the demands of service delivery in the context of a government system, the flows or blockages of information, and collaboration with various stakeholders.

This is a result of the absence of the Enterprise Architecture that outlines all the business processes, how they flow from the business operation and how these process can be automated deploying an Infrastructure and the Resource Planners that are corporate specific and suitable.

The South African Constitution states that municipalities have the responsibility to make sure that all citizens are provided with services to satisfy their basic needs because municipalities are the sphere of government closest to the people, they are elected by citizens to represent them and are responsible to ensure that services are delivered to the community.

Therefore municipality as an ecological system made up of people working in a community, access to information by municipal executive is crucial, and then ICT should deal with the whole environment to help these executives with effective, efficient and credible information for prompt decision making towards service delivery.

For this goal to be achievable a municipality requires of all councillors and officials to build an environment where information systems and information technology are integrated and aligned to the broader processes of service delivery and to deal more effectively with its stakeholders (employees, citizens, funders, other governing bodies).

To achieve this requires commitment and synergy in effort.

2.1 Master Systems Planning

In order to understand the human, information, and functional needs of the municipality, an approach called master systems planning (MSP) is used.

The overall project objective of the ICT MSP is to provide an appropriate and stable platform to:

- Strengthen, effectively manage and implement the Municipality's IDP process.
- Assist with the co-ordination and future planning of the functions, particularly service delivery, of the Municipality.
- Improve revenue collection.
- Improve the effective management of the municipality's assets.
- Improved utilisation of the Municipality's human resources.
- Improve utilisation of the Municipality's Information assets
- Facilitate accurate and timeous statistical and performance management reporting for all levels within the municipality and also reporting required for customers and external stakeholders (e.g. National and Provincial government).
- Facilitate improved access to electronic based data resources and communication systems

2.1.1 Guiding Principles

To achieve the goals and implement the initiatives in this plan, the ten guiding principles below focus on leadership and excellence through quality of service, responsiveness, innovation, professionalism, and teamwork. These principles require commitment not only from MCLM IT, but from all MCLM employees, including the management and the council:

- Drive IT initiatives according to business needs, goals, and objectives, and develop a sound business case before making any new investment.
- Foster interdepartmental cooperation in everything we do.

- View IT from the perspective of the entire municipality and not from the perspective of individual Section.
- Acquire, manage, and use technology resources economically and efficiently through standardised information technology selection and implementation processes.
- Securely hold and manage technology assets to protect private Municipal information.
- Develop mechanisms and processes to share information easily within the municipality and its constituencies.
- Aggregate, where feasible, to reduce duplication, and employ information technology that is flexible and interoperable to respond quickly and efficiently to changing business needs.
- Devise strategies to leverage investments in MCLM existing technology.
- Train the workforce in the skills needed to effectively use IT systems and the information they contain.

2.1.2 Purpose of ICT MSP

Master Systems Plans are a proven, best-practice approach used by many forward-thinking institutions to focus and steer large and complex undertakings. The ICT MSP creates the bridge between business strategies and the information systems that support them. It highlights the business priorities for information technology within the municipality and the initiatives that will be required in future years to execute the plan.
Overall, it identifies a strategic approach to information technology—carefully aligned with business objectives and pragmatic actions, planned or under way, that are needed to achieve the strategic goals.

The ICT MSP is required to provide a long-term vision for information systems and information technology for MCLM that is based on the Municipality's strategies and vision, human and information needs, and regulatory compliance.

The MSP presents a framework and methodology to provide management with the facilities to help them achieve their overall strategic objectives, plan, review, and control information systems projects.

The purpose of the MSP is therefore to:

- ensure that information systems strategic planning is consistent, aligned and fully integrated within the broader strategic business planning processes of the Municipality, the District, and the Province and as a whole at the three levels of business (strategic, tactical and operational).
- Introduce and implement the concept of an integrated e-Government services within MCLM.

The Master Systems Plan is a living document that will be revisited periodically to account for evolving business priorities, technology changes, industry best practices, and other influences on MCLM information technology future.

2.1.3 Expectations

The following expectations and needs were identified when assessments were conducted with most of the MCLM personnel and when the AGSA report was reviewed:

The MSP is to:

- Provide a Comprehensive, Prioritised Plan for Information Systems, incorporating systems support
- Support achievement of strategic objectives thereby ensuring alignment and coordination with information systems
- Integrated Information Systems and Security
- Ensure correct delivery structures
- Access to Timely Information
- Be User Friendly, Accessible, Accurate, Holistic, and Flexible.

2.1.4 Objectives

An enterprise overview of the municipality's business processes, and how the municipality's Information and Communications Technology (ICT) environment interfaces with the business processes to contribute towards the following.

1. Implementation of the Council's IDP process.
2. Improvement in the quality and cost effectiveness of service delivery
3. Improved revenue collection.
4. Improved management of the municipal's assets (Logical and Physical).
5. Improved utilization of the Municipality's human resources.
6. Improve on the security on the Municipality's information Assets.

2.1.5 Output

A fully functional ICT Master Systems Plan developed in consultation with the MCLM officials.

2.1.6 Beneficiaries

The direct beneficiaries of the projects identified in the MSP will be the municipality and its employees/departments that will be capacitated to manage the municipal systems effectively. The constituencies will benefit indirectly as they should receive more efficient and effective delivery of services and improved access to all the relevant MCLM information facilities.

2.2 Key Stakeholders

The MSP is based on review of government policies, standards and guidelines, international best practise documents, AGSA reports and recommendations as well as interviews with officials of the MCLM.

An assessment and interviews were conducted with the key stakeholders that are responsible for the municipality's administration and service delivery.

3. Strategic Business Architecture

The business architecture phase is aimed at agreeing on a general understanding of the strategic activities of the municipality, and how it relates to information and communication technology (ICT) requirements in general.

The following section will review the municipalities key strategies, mission, purpose, values, and challenges in order to provide direction, and a foundation for the Master Systems Plan.

3.1 Objectives of local government

According to the Constitution the objectives of local government are:

- to provide democratic and accountable government for local communities;
- to ensure the provision of services to communities in a sustainable manner;
- to promote social and economic development;
- to promote a safe and healthy environment; and
- to encourage the involvement of communities in the matters of local government.

3.1.1 Developmental duties of municipalities

A municipality must;

- structure and manage its administration, and budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community; and
- participate in national and provincial development programmes.

3.1.2 Municipalities in co-operative government

The national government and provincial government, by legislation must support and strengthen the capacity of municipalities to manage their affairs, to exercise their powers and perform their functions.

National and Provincial legislation that affects the status, institution, powers or functions of local government must be published for public comment before it is introduced to Parliament or Provincial Legislature, in a manner that allows organised local government, municipalities and other interested persons an opportunity to make representation with regards to the draft legislation.

3.1.3 Mandate of Municipalities

Local municipalities are mandated to:

- Pass by-laws - local laws and regulations about any of the functions they are responsible for. These by-laws may not go against any national laws.
- Approve budgets and development plans - every year a municipal budget must be passed that sets down how money will be raised and spent. The municipal Council must also approve the Integrated Development Plan (IDP).
- Impose rates and other taxes, for example property tax.
- Charge service fees for using municipal services like water, electricity, libraries, and so on.
- Impose fines for people who break municipal by-laws, for example traffic fines or littering.

3.1.4 Responsibilities

Local municipalities are responsible for the following services:

- electricity delivery
- water for household use

- sewerage and sanitation
- storm water systems
- refuse removal
- fire fighting services
- municipal health services
- decisions around land use
- local roads
- local public transport
- street trading
- community safety
- parks and recreational areas
- libraries and other community facilities
- local tourism.

3.2 Vision for MCLM Municipality

The stated vision of MCLM municipality is:

A PROSPEROUS, SUSTAINABLE & COMMUNITY-ORIENTED CITY

The most significant facets of this vision are for MCLM to strive to become:

- A peaceful & safe place for all;
- A place were intercultural harmony exists;
- An all-Inclusive Community;
- A focussed Government;
- A municipality where quality of life abounds;
- A place of prosperity and Growth;
- Attractive to local & foreigner Investors.

3.2.1 Mission:

The mission of the Municipality is to:

TO PROVIDE QUALITY SERVICES TO OUR COMMUNITY THROUGH ACCOUNTABLE GOVERNANCE

3.2.2 Purpose

The following are the stated purposes of the municipality.
The municipality's purpose is to:

- *Providing strategic direction for:*
    - Planning and coordinating of activities
    - Drafting of resolutions & action plans
    - Regulating activities
    - To Build unity in the community
    - Implement legislation
- *Service Delivery that:*
    - Uplifts the community
    - Improves living standards
    - Serves Citizens Equally & Fairly
    - Is Transparent, Affordable and of Good Quality

- *Create a Safe and Peaceful Environment to:*
    - Improve the living standards of people
    - Through Provisioning of infrastructure, and by
    - Providing a satisfying working environment

- *Ensure Good Communication by:*
    - Educating people, and being,
    - Accountable to the community.

3.2.3 Core Values

The underlying values guide the behaviour of daily activities and performance of duties. These are stated as:

Integrity, Accountability, Committed, Teamwork, Proactive and service excellence

- Integrity
- Accountability
- Commitment
- Teamwork
- Proactive
- Service excellence

These can be further explained as:
Integrity:
- ✓ We don't lie
- ✓ We don't steal
- ✓ You can trust us

Accountability:
- ✓ I do what I have to
- ✓ The buck stops here
- ✓ I'll fix the problem

Commitment:
- ✓ We treat all interactions as a learning experience.
- ✓ We treat all our clients with respect
- ✓ We strive to keep all client satisfied

Teamwork:
- ✓ Treat everybody with dignity
- ✓ We don't keep secrets
- ✓ We treat our staff with respect

Proactive:
- ✓ Plan, and stick to the plan

Service Excellence:
- ✓ We resolve all issues
- ✓ Try and help everybody

3.3 Municipal Context

The following section highlights the context of the municipality, as outlined in the MCLM IDP

3.3.1 Position

MCLM is situated in the Southern side of Gauteng Province and form a part of West Rand District municipality which consists of four local municipalities namely: Mogale City, Randfontein, Westonaria and Merafong City.

MCLM incorporates the following areas:

• Carletonville • Fochville • Welverdiend • Wedela • Khutsong	• Kokosi • Greenspark • Blybank	• Mining Towns Including: • Blyvoor • Doornfontein • Deelkraal	• Elandsrand • East & West Driefontein • Western Deep Levels

MUNICIPAL CODE:	SIZE OF THE MUNICIPAL AREA:	WARDS:
GT484	1631,7km2	28

The West Rand District Municipality has an estimated population of 816 860. The estimated population of Merafong City Local Municipality is 218 007. (Source: Global Insight 2009).

Merafong City Local Municipality is a Category B municipality with an Executive Mayor Governance system.

The Executive Mayor is supported by 10 full time Mayoral committee members who are responsible for heading their respective portfolios. The Mayoral Committee members chair their respective Section 80 Committees to which specific departments report.

The Speaker is the Chairperson of Council and is responsible for overseeing the functioning of Council and its committees. The office of the Speaker is further responsible for the establishment and functioning of ward committees.

The Chief Whip is responsible for ensuring compliance to the code of conduct by Councillors. MCLM consists of 28 wards in terms of Section 18 (3) of the local government: Municipal Structures Act, 1998 (Act 117 of 1998) which constitutes 28 Ward Councillors and 24 Proportional Representative Councillors.

3.3.2 Services

The Municipality provides the following basic services to its constituencies:

- refuse removal,
- electricity,
- water,
- sewerage service,
- rates collection,

- tourism,
- traffic and parking,
- drainage, and
- building plan approval.

The Municipality also maintains and controls the following public facilities:

- Libraries ,
- Heritage Sites,
- Municipal parks and Recreation facilities,
- Local sport facilities,
- Swimming Pools.

3.4 Strategic Imperatives

The following section reflects on each of the strategic imperatives in terms of their specific, and often shared operational objectives, focus Activities and defined projects and programmes by means of which the imperatives themselves are transformed from higher level ideals and “What To Do” lists into lower level implementation focus areas comprised of on-the-ground programmes, projects and deliverables.

The municipality identified a number of strategic goal and objectives in the IDP as listed below:

- To provide an integrated spatial development framework for sustainable development
    - Land use management
    - Spatial planning
    - Human settlements management
    - Infrastructure master planning
    - Environmental management
    - Rural development planning
- To ensure the provision of basic services
    - Physical infrastructure
    - Municipal services
- To promote local economic and social development
    - Economic development
    - Social development
    - Rural development
- To ensure good governance and public participation
    - Corporate governance
    - Broaden local democracy
    - Local government accountability
- To ensure financial viability and management
    - Financial viability
    - Financial management
- To ensure municipal transformation and organisation development
    - Business management / leadership
        - Strategic positioning (policies, structures, strategic planning, operational planning, focus on core business)

- Organizational culture
- Stakeholder relations management / communication
- Business performance management

- Resource management
  - Human resource management
  - ICT management
  - Record / knowledge management
  - Asset management

3.5 Information Management

This section is based on the operational activities from an information perspective. It addresses issues such as statutory and corporate governance and management requirements (such as GRAP compliance, performance management compliance, human resource management, and document flow management requirements), information security requirements, information integration requirements and planning needs. This section will build up to the development of an information management strategy and operational plan. It examines the function, processes and information management aspects of the respective sections of the MCLM.

3.5.1 Council

The council is comprised of the mayor, the speaker, Chief Whip and the mayoral committees that are made up of a number of councillors. The council is politically elected, and the composition is changed after every election. The current council was appointed in July 2011 after the general municipal elections in May 2011.

The council is required to perform its function in the ambit of the appropriate legislation determining their role and function, while remaining accountable to the community.

To perform its function, the council needs to know 3 key pieces of information:

1. what the council's key strategies are, based on national, provincial, district and municipal objectives and constraints,
2. what the needs of the community are,
3. what resources are available to implement the strategies and service the community needs.

In local government, the political and administrative functions are separated. This means that the council is not involved in the tactical or operational aspects of service delivery.

These functions are provided by the municipality, which is managed by the municipal manager. The council is required to determine (jointly with the Municipality) the allocation of scarce resources (3) to achieve the aforementioned objectives (1 & 2). In order to be able to re-direct efforts based on changing needs, the council require further information such as:

1. Key programmes (status, progress, challenges) implemented by the municipality linked to the strategic objectives and community needs
2. Feedback from communities on the effectiveness of these programs.

Furthermore, the council is required to provide relevant information to:

1. Key strategies and decisions affecting the municipality
2. Utilisation of resources and status of projects to the community
3. Other information as is required by the district, province and national governing bodies.
4. Any lack of the above information flows severely restricts the ability of the council to function effectively.

3.5.2 Integration of Information

The different departments and sections of the municipality do not operate in isolation, and the sharing of information is important for efficient and effective service delivery.

Information needs
The following are the information needs of the municipality:

- Keeping track of customer complaints, applications, emergency calls, council meetings etc.
- Requirement for workflow & a call centre for coordination.
- Reports on number of complaints and complaints attended to,
- Requests presented to council, and via municipality
- Requirement for single instance storage i.e. (Job reference number) to prevent multiple occurrences of the same request, how many requests have been attended to, how many have had an influence on council decisions etc,
- Requirement for an escalation procedure, and allocation to specific office/s

Required at district level

- IDP, Budget, Projects & Programmes, Council Minutes & Decisions

Planning and Project management (Part of IDP system)

- Questions asked are: What is status of roads, projects, programs etc.
  These need to be answered & reported on
- Updates are required from Project consolidate
- Information is required on which budgets are spent

3.6 Municipal Challenges

The following Municipal challenges are evident in the MCLM. Perception of competency of staff as evident in the lack of trust, poor decision making ability, lack of responsibility (“buck stops here”), and the emergence of a blame culture (everyone is blaming everybody else).

Furthermore, the municipality is pressurised by increasing demands on service delivery, compounded by the lack of Resources (Staff & Money) to perform, and compliance with perceived regulation throttling activities.
Staffs appear to feel helpless to influence system, and may be biding time for retirement or resign.

The following communication shortcomings in the municipality have been identified:

- Communication is mostly one way (“when I have spoken, it is so”) and does not consider the receipt of the message, nor the understanding thereof. This has a major impact on cultural sensitivities.
- People may be hiding behind the fact that information was not received or that they have not been communicated with .This could be alleviated via delivery tracking software
- No follow-up of messages, instructions or requests are evident.

4. External Analysis

4.1 National & Provincial standards & initiatives

This section focuses on the external forces shaping the future of Information Systems (IS) in South African municipalities.

The external analysis is divided into the following areas:

- Legislation;
- National standards;
- Provincial standards;
- National, provincial and municipal initiatives;
- Technology;
- Population;
- Economy.

Summaries are provided on the legislation with regards to Information Systems (IS), and how the municipality is affected by the acts and policies that govern the use of IS within the municipality.

4.2 Integrated Development Plan (IDP)

The purpose of the IDP initiative is to initiate and manage the Integrated Development Plan (IDP) in the Municipality, as prescribed by the Municipal Systems Act, 2000, on behalf of the Municipal Manager.
The IDP process refers to what the Constitution demands from the MCLM, and details how the municipality needs to structure and manage its administration, budgeting and planning processes to give priority to the basic needs of the community and to promote the social and economic development. The Municipality needs to become a Developmental Local Government and actively participate in national and provincial development programmes.

4.3 Batho Pele Principles

Batho Pele is the framework for the transformation of public service delivery, and introduces the very real concept of 'putting people first'. Simply put, **Batho Pele** is the initiative to get public servants to become service-oriented, striving for excellence in service delivery, and committing to continuous service delivery improvement. It is the simple, transparent mechanism which allows customers to hold public servants accountable for the type and quality of services they deliver, informed and empowered as they should be by the eight **Batho Pele** principles of *consultation, service standards, access, courtesy, information, openness and transparency, redress* and *value for money.*

4.4 Technology Trends

This is a list, although not exhaustive, of some practices/technologies that could have an impact on the municipalities MSP and are listed to provide some "food for thought" in how these technologies may change the way government operates.

The following practices are evaluated:

Server consolidation and virtualisation – Infrastructure optimisation and server consolidation can help government to reduce costs, increase efficiency, and achieve greater availability, scalability, and value.

Collaboration Consolidation - new collaboration technologies include features such as video and data conferencing, voice over IP (VOIP), instant messaging, streamlined routing protocols, more redundant routing in the organization, and synchronous event sinks

Hardware Standardisation - Standardizing equipment from a vendor that sells several products (from laptop to high-performance servers) allows an organisation to deal with one supplier, negotiate bulk discounts and establish a good working relationship.

Operating System Standardisation - Most of the benefits from hardware standardisation above are applicable to software standardisation with the further benefit of rapid upgrades and rollouts and standardised training for end-users.

Total cost of Ownership - The costs involved after purchase, as is the case for most life-cycle models, normally exceed initial acquisition costs several times over during the useful life of computing hardware. Proper planning for and awareness of recurring or ongoing costs after purchase can actually save an organisation significantly more money in the long run than achieving the lowest possible purchase prices on systems.

Remote IT asset management - Microsoft provides integrated management services that reduce the costs associated with typical administrative tasks.

The following technology enablers have been identified:

Thin clients - Thin-client/server computing provides the power and ease of use of existing desktop and client/server applications, while allowing organisations to regain control of their IT systems and budgets.

Convergence - The convergence of an increasing range of communication technologies and applications is driving demand for new and innovative communications services that supports business growth, communication, technology, and the media

5. ICT Architectures

This section of the MSP will assist MCLM in the development of a future ICT Architecture that comprises a conceptual enterprise architecture framework to support the municipal strategies.

This should enable the municipality to facilitate and enhance the effectiveness and efficiency of the utilisation of the ICT resources in subsequent planning, management and operations of ICT services.

The **ICT Process Landscape** will focus on the key ICT processes and service delivery frameworks, and will provide a baseline for categorising current services as well as provide a framework for identifying future services.

The **ICT Architecture Framework** will identify the ICT mainstay on which future process/technology solutions could be built in order to effectively support the municipal strategies and will focus on architecture Guidelines, Services, Models, Standards and Strategies. These outputs will form a framework on which to base future provincial architectures.

The **ICT Management** improvements will focus on the people responsible for the ICT processes and the ICT maturity of the municipality to support these processes. The improvement opportunities derived from this phase of the project should be included in the IDP and operational plans of the municipality.

5.1 Information and Communication Technologies (ICT)

Since the days of the computer processing bureau, Information Technology (IT) and Information Systems (IS), collectively known as Information and Communication Technologies (ICT), has become a mature discipline with defined processes, roles and responsibilities. ICT can be defined as “providing the ‘engine’ used to drive useful information systems. This includes computers, software, databases, Internet/Intranet, and telecommunications technology”.

From this it is evident that IT provides a technology foundation for IS. Information Systems (IS) can be defined as “an organised systems of *people, policies, procedures* and *technologies* that collects, transforms and disseminates information in an organization”.

This definition clarifies the fact that one cannot ignore the *people, policies* and *procedures* role of information systems and that it is not just about the software and/or hardware. It is often failure to successfully address these people, policy and process issues that result in failed IS deployments.

5.2 Current state of ICT's in MCLM

This section highlights the current state of Information and Communication Technology in the MCLM.

5.2.1 The Server room

The server room infrastructure is not ideally protected. The current server room is cluttered and poorly organised. It is partially used as an extra storage area for some of the ICT assets , this has resulted in the server room being too crowded. The server room is located behind an IT section storage room which is accessible by anyone and there is no access logging system in place for the server room itself.

The size of the room may be small but it was constructed professionally and using best practices as per International Recommendations.

There is no disaster recovery or business continuity plan in place for the protection of information. This puts the organisation at risk in the case of a disaster.

5.2.2 External connectivity

There is a 2 Mbps uncapped ADSL link that connects MCLM to its Internet service provider.

5.2.3 Support

The technology infrastructure is currently managed internally for 1st line and 2nd and 3rd is supported on a break fix basis. There are no formalised processes in place for the daily operational support of the Infrastructure, but there is a Microsoft SMS Server that was implemented for ICT asset management and it has not been used effectively.

Most of the Servers that are running crucial applications are out of warranty. This is not ideal for immediate service delivery.

5.2.4 Operating Systems

The server operating systems are a combination of Microsoft Windows Server 2003 and Server 2008.The ICT section of the municipality has budgeted for the upgrade of the application servers to Microsoft Server 2008.

The desktop computers have a combination of Microsoft Windows Vista and 7.
The standard for the operating system both on the BackOffice and end-user environment is currently in draft and the upgrade project will commence as soon as it is approved.

5.3 Information Systems

This section highlights the current computerised Information systems used in the MCLM.

The standard and mostly used application systems are BIQ (Financial System), MAXIMO and QPR. Other systems in use are ArcGIS, Weighbridge, CAD, Municipal Assistant and prepaid electricity system (Conlog).

5.3.1 Enterprise Resource Management System (BIQ)

This is the financial system for MCLM enables the control of debt collection, documentation and outstanding debts.

A detailed system demonstration was not possible as there is no dedicated systems administration from the IT section of MCLM. Low level support is provided to the Finance department and any technical issues are sent to the service provider.

The following challenges have been highlighted:

- Lack of technical training to the IT section support team
- Only one company is the service provider of the system
- The municipality is also at risk should support for the system be stopped

5.3.2 Infrastructure Asset Management System (MAXIMO)

Maximo is IBM asset management software for all the municipal infrastructure assets and financial assets. It provides insight for all the enterprise assets, their conditions and work processes, for better planning and control. It also provides enterprise asset management software for long and short-term planning, preventive, reactive and condition-based maintenance, schedule management, resource optimisation and key performance indicators

5.3.3 Performance Management System (QPR)

The QPR Business Performance Management System is implemented at MCLM for the Key performance indicators on employees. This supports and helps with allowing MCLM to automate data collection, consolidation, monitoring and reporting, in setting clear and achievable targets and by engaging employees to actively participate in the municipality's business process improvement initiative.

5.3.4 Pre-Paid Services (Pre-paid Electricity)

MCLM has implemented an electricity prepayment system that was implemented by Conlog. This system is a revenue management system where all the prepaid vouchers vending is monitored. The system has helped MCLM with assuring a high percentage on electricity revenue collection and has also empowered the communities to manage their own electricity consumption and usage.

5.3.5 Geo-Database System (ArcGIS Systems)

ArcGIS is a geographic information system (GIS) for working with maps and geographic information. It is used for: creating and using maps; compiling geographic data; analysing mapped information; sharing and discovering geographic information; using maps and geographic information in a range of applications; and managing geographic information in a database.

5.3.6 Weighbridge Systems (Weighbridge)

MCLM has employed weighbridge software to manage all the traffic through the weighbridge for their waste management sites. The customisable tickets are printed and all transactions recorded as they happen. In addition, invoices can be created either at the time or batched at the end of the month or week.

5.4 ICT Management

5.4.1 Environment

The Municipality Management has an open door policy this was the atmosphere that was evident during the interviews.

The levels of authority were very evident whilst the review was completed, as problems or difficult questions are referred to higher levels for answers but where necessary resolution of these queries are delegated within the level of the activity.

5.4.2 Policies and Procedures

Based on the Technology review exercise and the AGSA recommendations the following outcomes are suggested:

- IT Policy development and implementation i.e.
  - Security Policy
  - Disaster Recovery
  - Business Continuity
  - User Access
  - Internet
  - Email
  - etc
- Procedures development and implementation
- IT Operations Strategies
- IT Governance implementation i.e.
  - COBit and ISO/SANS 38500
  - ITIL
  - ISO/SANS 27001 and ISO/SANS 27002
- Enterprise Architecture and implementation plan
- IT outsourcing or in-sourcing policy and implementation i.e.
  - Resource requirements
- Training requirements i.e.
  - Microsoft
  - BIQ

5.5 Future Architectures

The Enterprise Architecture Framework is the blueprint (model) that describes the overall distribution and interconnection of major architecture components - both hardware components and software components. Enterprise Architecture can be defined as “the disciplines of assessment, visioning, design, controlled evolution and improvement with respect to business, applications, information, technology infrastructure and methods and practices”.
There are a number of frameworks that have been endorsed by DPSA and SITA such as Zachman, Togaf 8 and 9 UML just to name a few.

Since government does not require the implementation of the whole Togaf or Zachman frameworks SITA and DPSA have formulated a Government Wide Enterprise Architecture Framework to simplify, enable and standardise government interoperability. The GWEA Framework was formulated from using Zachman, UML, Togaf 8 and 9 frameworks; therefore GWEA still has reference to the best EA practices accepted internationally.

Below is a figure of GWEA as adopted by DPSA and SITA:

Government Wide Enterprise Architecture Framework

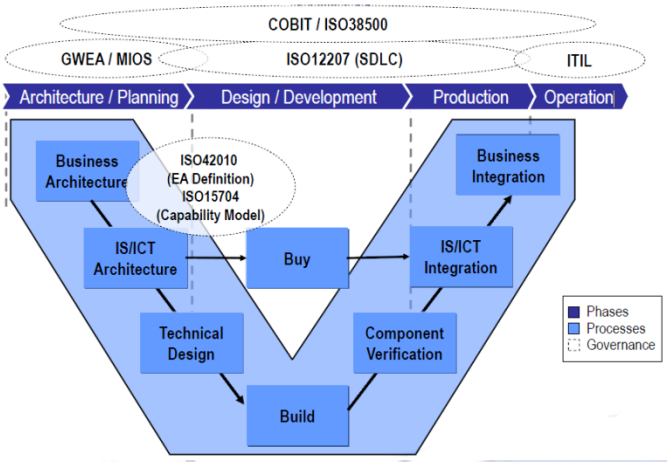

Figure: GWEA

GWEA framework will be used to compile specific architecture to assist the municipality in its mandate of service delivery and direct MCLM towards vision 2016.

Below are the architectures that can be compiled using GWEA to address relevant service delivery issues:

- **E-Government Architecture -** Public Services such as registrations, licensing, payments etc.
- **E-Information Architecture** - vehicle registers information, rates, tax information, MIOS etc.
- **E-Application Architecture** - Applications on which services are delivered e.g. BAS, PERSAL, SAP, Portal, Document Management
- **Technology Architecture** - Physical Technology such as WAN, LAN's, Hardware, Operating Systems, Telecommunications etc.
- **Business Continuity and Security Architecture** - Authentication, Access Control, Policies, MISS etc.
- **Organisational Architecture** - People, structure and governance

The Architecture Framework will identify the ICT "backbone" on which future process/technology solutions could be built in order to effectively support the municipality's strategies and will focus on Architecture Guidelines, Services, Models, Standards, Strategies and Issues.

5.5.1 E - Information Architecture

- **Useful & freely available information** – Access to information, which is easy to obtain and to manipulate, enabling quick decision making.
- **Information availability** – Based on information being freely available, a Document Management system should be able to make information available to all users in the Municipality.
- **Improved collaboration with Local Government** – Improved collaboration will result in clear & definite deliverables required by Local Government including information & reports to be completed.

- **Access to Financial System reporting facility –** Simplified access to Financial System (BIQ) reporting facility for relevant stakeholder will result in enhanced quality & timeous delivery of information to Local Government, other Agencies, Municipal officials/employees and Councillors. This would in turn elevate service delivery to communities as well as general communication between all role players.
- **Enhanced adherence to the IDP –** Ascribing to the IDP as the backbone of the Municipality enables enhances operational capability & accelerated service delivery.
- **Improved IDP push into communities** – Consultative drive of the IDP into the communities.

5.5.2 Communication Architecture

- **Improved communication within the Municipality –** Improved communication between the Council and Municipal officials enhances service delivery to the communities as well as improves inter departmental relationships.

- **Improved communication between the Municipality, Provincial Government and other Agencies –** Improved communication with Local and Provincial Government will improve information required by these institutions.

5.5.3 Technology Architecture

- **Integrated systems** – Integration will be one of the catalysts in eradicating the "Silo effect" as identified in the Current State findings.

- **Enterprise Resource Management (BIQ)**:
    - **Improved BIQ system Development cycle** - An improvement in the development cycle for BIQ would result in improved reporting & information delivery within the MCLM and the Provincial Government.

    - **Improved BIQ integration with other systems –** An improvement of the BIQ integration to the other Municipality systems will alleviate the "Silo effect" by which the various departments operate. i.e. BIQ will not be seen as being "owned" by the Finance department.

5.5.4 e-Government Architecture

- **Enhanced public perception –** Clear & communicated objectives and key focus areas both within the Municipality and to the communities will enhance the limited perception of the Municipality towards service delivery.

- **Planned and staged service delivery –** Enhanced planning service delivery would result in a consistent & sustainable service offering to the communities.

- **Communication of key Municipal focus areas** - Clarifying & communicating the Municipality's key focus areas/initiatives would enhance the limited perception the communities have of the municipality.

- **Citizen focussed –** Implementation of a Municipal "one stop" service desk initiative would enhance & streamline the interaction with communities.

- **Upliftment of living standards and subsistence of communities –** An enhanced & easily implementable standard delivery plan would enable this initiative.

- **Upliftment of Municipal officials' visibility in wards –** On the ground visibility in the wards enhances communication & clear understanding of communities real needs.

5.5.5 Organisational Architecture

- **Enhance initiatives to improve training** - Training enhancement within MCLM will empower municipal employees "take ownership" for the system/s they work with as well as to improve the competency of employees.
- **Establishment of ICT Steering Committee** – This committee enables representation at Council and executive level to enable adequate ICT direction.
- **Establishment of Standard Operating Procedures (SOP's) –** Adherence to SOP's is crucial to ensure adequate ICT Governance.
- **Improved Local Government initiatives** – Improved interaction with Local Government initiatives will enhance "on the ground" service delivery to communities.
- **Enhanced responsibility and ownership for actions** – employee empowerment to take ownership for their actions resulting in improved decision making as well as enhanced trust.
- **Service delivery starts with the "small issues being corrected" –** Enhancing & improving constituency adverse municipal perception by delivering & correcting the "small issues" timeously.
- **Enhanced ethos and work ethic of personnel** - establish a code of conduct that builds public trust and confidence in the municipality. Reduce uncertainty as to what is ethical and unethical behaviour. Establish public service as a profession to be proud of.

5.5.6 Business Continuity and Security Architecture

- Information Risk Management, Access Control, Policies, MISS etc.

6. Master Systems Plan

This MSP describes how each service can be enhanced by MCLM with real products or standards. While it is generally premature to provide specific product configurations and capacities at this stage, it is possible to describe which services, products and standards would best satisfy the architecture models while being consistent with the municipalities' capabilities.

All the identified initiatives will be prioritised based on strategic importance and value. The phase will be concluded with the development of an implementation plan, based on operational priorities and budget constraints.

6.1 Public Services

6.1.1 Strategic Management

- **Improve availability of Council and Management minutes** – To promote transparency of the municipality, minutes of the council and management should be posted on sharepoint portal for all staff and the council minutes on the municipality's website.
- **Improve interaction with communities** – use the ICT infrastructure such as Document Management Systems, Internet and social media, libraries, and info centre to improve the availability of relevant information to the communities.

6.1.2 E-Governance

E-Governance defines how the municipality does ICT planning and management in the municipality. The following section outlines these ICT management and planning initiatives identified as part of the e-governance recommendations.

ICT Management

- **Implement Corporate Governance of ICT –** Cobit is a framework that outlines the guidance in the implementation of the corporate governance of Information and communication technology and ISO/SANS 38500 a standard for the corporate governance of ICT. The Cobit framework and the ISO/SANS standard are inter-related in the implementation of good governance of ICT and they have been both adapted by the AGSA, Treasury Department and highly recommended in the King III report on the corporate governance of ICT.

- **Establish ICT Steering committee –** ICT management require dedicated attention in the municipality. If ICT is not a directorate but a section of Corporate Services then the ICT SteerCom will be composed of all Executive Directors or their representatives with the IT Manager being part of the committee so that decisions can be made promptly. The IT manager will act as the secretariat, coordinating meetings, minutes, and contact person for all initiatives.

- **Define governance for ICT Steercom –** all ICT budgeting and initiatives should be determined and approved by the ICT Steercom.

- **Review ICT management structure –** ICT section should be restructured in such that it becomes a strategic business unit where progressive strategic decisions could be made in line with the strategic decision of the municipality.

- **Align ICT Program Management Standards and Governance with EPMO** -

- **Subscribe to IT & Government periodicals –** in order to stay current with ICT developments in Government, the municipality should subscribe to periodical such as electronic Government, IT Web's iWeek and other relevant publications.

- **Include the MSP as part of the IDP Process –** The MSP initiatives should form part of the IDP, and the planning process should be included.

- **MSP Initiatives funding to come from CAPEX or special project funding –**Funding for MSP initiatives, are over-and-above the capital required for the normal operation of the municipality. Funding should be provided by budgeting for capital expenditure items, and by applying for donor grants.

- **Review IT support model** – MCLM should review its business support and outsourcing model for IT. The ICT outsource contract should not be expected to do strategic ICT and capacity planning. This function should be performed by the ICT Steercom. Service Support catalogues should be compiled by the ICT Steercom in agreement with the EMC on the service levels and implemented by IT.

ICT Planning and prioritisation

- **Prioritise MSP initiatives -** The ICT Steercom needs to prioritise these MSP initiatives, based on available funding and capability to source funding and vendors. These initiatives can be prioritised according to the municipality scoring framework.

- **Develop ICT planning capabilities –**the ICT Steercom members need to develop ICT planning capabilities, in order to cater for support for future IDP initiatives.

- **Develop an ICT Disaster Recovery and Business Continuity Plan** – The ICT Steercom needs to prioritise the development of a DRP/BC plan.

- **Develop an ISMS Programme –** an ISMS programme is very important as Information is crucial for the effective operation of the municipality. This is also crucial for compliance with legislation and good corporate governance.

- **Develop an ITSM Programme –** ITSM programme that outline the actual IT service management strategy on how the investment made in IT by the municipality is realised and performs to enable MCLM to deliver on its mandate.

- **Develop an Electronic Communication Strategy –** a strategy on how electronic communication must be treated is of outmost importance. There needs to be a strategic plan on the implementation ECT act for all electronic communication that happens within and outside the municipality.

ICT Procurement

- **Develop a transparent ICT procurement process** – all the Municipal IT asset budget should be centralised to IT instead of being distributed to avoid any IT assets being procured without IT section's advice and guidance. This will assist the municipality to procure assets based on the approved standards and within the Municipality's Architecture. Procurement of all CAPEX assets needs to be approved by the IT Steercom.

6.1.3 E-Government Services

E-Government services are effectively normal services provided through e-channels such as internet/email, telephones, and computers. Following are the key e-Government services that MCLM should implement as part of their MSP.

Improved Financial Management

- **Train all relevant users on the Financial System (BIQ)** – in order to improve the adoption of the financial system in the municipality, all relevant users within the municipality that deal with finance should be provided training on BIQ as part of their KPI's.
- **Deploy all BIQ modules** - The other modules of the financial system, such as HR, Asset register, procurement, etc. should be made available to all managers to do their own administration.

Implement IDP System

- **Upgrade Performance Management System** – the municipal performance management system should be upgraded and all users be trained.

Effective Communication

- **Roll-out sharepoint portal access to everyone in the municipality** – Information from sharepoint should be made available by providing shared PC's for staff that do not have their own. Minutes, Bylaws, and public notices should be posted on MCLM website so that they are available to the public.

- **Compliance with ECT Act** – All electronic communication in-and-out the municipality should be archived in its original form, just like paper records. In order to aid this, a tool such as Exchange Archiving solution is recommended.

- **Develop and Implement Service Oriented Website** – a website that serves as the face of the municipality should be implemented where information can be shared with all the relevant stakeholders. The website should also be service oriented and service delivery driven where constituencies get any information that is relevant to them.

Services to the citizen

- **Implement a central Information contact centre** - Implement a central contact centre integrated for emergency services and service requests/complaints. This should allow for all public calls, information, service request, enquiries, emergencies etc. to be logged and handled. This does not mean that calls are just logged and forwarded. Agents should be able to answer all reasonable municipal queries as a first line contact centre. More complicated requests should be forwarded to the relevant people.

Library services

- **Establish electronic resources for libraries** - Libraries are a key resource for community development. The municipality should collaborate with Provincial library services to provide PC's, internet access, and support to the libraries in the municipality. The municipality should also partner with a local provider to do training and provide value added services such as CV/Letter writing workshops etc.

6.2 Platform Services

The following section defines the platform services on which the provisioning of e-government services is dependant.

6.2.1 Application Platform (Software)

- **Ensure continued support for ERP System (BIQ)** – In the short term the municipality should consider replacing BIQ or employing an administrator that will be trained on the system for any technical queries that may arise. A maintenance contract that outlines all the Service levels should put together with the service provider. Replacing the system in the long term with the system that is being used by other municipalities in the district will enable a much easier integration of all the systems towards vision 2016. This will ensure continuous system support and easier upgrades, changes and integration.

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- **Enhance Electronic Mail Services** - The mail application (Microsoft Exchange) should be upgraded to the latest version to ensure continued vendor support, improved reliability, and easier management and backups.

- **Implement Electronic Mail Archiving Solution** – EAS allows efficient, searchable archiving of email messages for Microsoft Exchange that assists with the retention, management and control of public information. It further reduces storage requirements by providing single instance storage, and mailbox compression. It also allows recovery of deleted emails. The implementation of an email archiving solution is in line with the ECT act.

- **Improve current Data Backup System –** the current MCLM data backup system is not inclusive of all the systems. A detailed backup plan, processes and procedure needs to be outlined and documented. Align with the ECT act and international best practises.

- **Improve current Geo-Database to an Enterprise Geo-Database -** the current MCLM ArcGIS system needs to be upgraded.

- **Improve the current Infrastructure Management Asset Management System (Maximo) -** the current MCLM Infrastructure management system needs to be upgraded to the latest version for enhanced manipulation of information is not inclusive of all the systems.

6.2.2 Desktop Platform

- **Develop and implement desktop & Server standards** - **The** desktop computers have a mixture of Windows XP, Vista and Windows 7 and one standard should be considered and upgraded across the board. This ensures easier support and updates. Servers should be upgraded to the latest OS.

6.2.3 Operating Systems

- **Develop and implement OS standards** – Operating systems in use should be standardised to Windows 7, and Windows Server 2008, to simplify management and deployment of new applications.

6.3 Infrastructure Services

The following ICT improvement opportunities have been identified:

6.3.1 Technology Infrastructure

- **Procure a Dedicate Enterprise GeoDatabase Platform (ArcGIS) -**
- **Implement rack mounted servers** – the server infrastructure should be upgraded to rack mounted or blade servers, to reduce cost, cable clutter, fire hazard, manageability, and flexibility.
- **Virtualise and Consolidate Servers –** Once the servers have been upgraded, all applications should be consolidated, and the number of servers reduced. Vendor applications servers that are not processor intensive can all be virtualised run off the same servers.
- **ICT Security Enhancement** - Establishes the plans, polices, and procedures required to ensure ICT security and the protection of critical MCLM information.
- **Disaster Recovery / Business Continuity Planning and Preparation** – Formulates and implements the practices, processes, and systems for addressing the MCLM need to effectively recover from disaster and continue to deliver critical utility services to its customers.
- **End-User Computing Enhancements** – Provides the required, on-going upgrades and replacements to the end-user equipment such as desktops, laptops, and printers
- **Core Computing Enhancements** – Provides the required, on-going upgrades and replacements to the MCLM core ICT infrastructure elements that include wide-area networking, local- area networking and server's equipment and environmental controls.

6.3.2 Network Infrastructure

Wide Area Network (WAN)

- **Upgrade Bandwidth for Internet Access** - The current bandwidth for external connectivity is sufficient office users and it needs to be upgraded because the MCLM will be hosting its own website for ease of access to other Information resources by the public.

Local Area Network (LAN)

- **Upgrade LAN equipment** – Local networking equipment within the whole MCLM offices needs to be upgraded to more intelligent switches.

6.4 MSP Initiatives/Implementation Plan

6.4.1 Public Services

Initiative	Priority	Cost	Time
Strategic Management			
Improve availability of Council and Management minutes		Low	Long
Improve interaction with communities		Medium	Long
E-Governance			
Establish ICT Steering committee		Low	Short
Define governance for ICT Steercom		Free	Immediate
Review ICT Structure		Medium	Medium
Subscribe to IT & Government periodicals		Low	Immediate
Include the MSP as part of the IDP Process		Free	Immediate
MSP Initiatives funding to come from CAPEX or special project funding		Astronomical	Long
Review IT support model		Free	Short
ICT Planning and prioritisation			
Prioritise MSP initiatives		Free	Immediate
Develop ICT planning capabilities		Medium	Long
Develop an ICT Disaster Recovery and Business Continuity Plan		Medium	Short
ICT Procurement			
Develop a transparent ICT procurement process		Low	Medium
Improved Financial Management			
Train all users in BIQ system		Medium	Medium
Deploy all BIQ modules		Medium	Long
Implement IDP System			
Updrade Performance Management System		Medium	Medium
Effective Communication			
Roll out access to Sharepoint Portal to everyone in the municipality		Low	Immediate
Compliancy with ECT act		High	Short
Services to the citizen			
Implement a central Information contact centre		Astronomical	Long
Library services			
Establish electronic resources for libraries		High	Immediate
Application Platform (Software)			
Ensure continued support for BIQ		Medium	Short
Upgrade Mail Server application		Medium	Short
Implement Exchange Archiving Solution		High	Short
Upgrade Symantec Backup Exec		Low	Immediate
Test and re-condition UPS		High	Short
Upgrade ArcGIS to ver 10		Medium	Short
Upgrade MAXIMO to 7.5		Medium	Short
Pay Software Licensing Fees		High	Short

Desktop Platform			
Develop and Implement Desktop and Server Standard		Medium	Short
Operating Systems			
Develop and Implement OS Standards		High	Short
Technology Infrastructure			
Procure Dedicate GIS Server		High	Short
Implement Rack Mounted Servers		High	Medium
Virtualise and Consolidate Servers		Medium	Medium
Network Infrastructure			
WAN -Upgrade Bandwidth for Internet Access		Medium	Immediate
LAN - Upgrade LAN Equipment		Medium	Medium

Legend: Cost Free = only personnel cost, Low <R30,000, Medium between R30,000 and R 300,000, and High between R300,000 and R2,000,000, Astronomical = > R2,000,000.

Timeframe: Immediate – as soon as possible, short term (coming year or budgetary cycle), medium term (1-3 years), long term > 3-5 years.

6.5 Prioritisation

In the development of the Master Systems Plan (MSP) the framework below was used for the selection and positioning of the portfolio and initiatives for example:

6.5.1 Initiative Scoring Framework:

Criteria(C)	Weight (W)	10 Very Good	8 Good	6 Medium	4 Poor	2 Very Poor	Rating= W X C
Strategic Fit							
Citizen Focus							
Consistency with Technical Competence							
Strategic Fit Subtotal							
Use of Personnel/ Contractors (Few is good, many is poor)							
Project Cost (Low Cost is good, expensive is poor)							
Compatibility with existing Projects (Compatible is good)							
Cost/Value Subtotal							
Sum Total							

Table 1: Scoring Model – IDP System

The following is a specific assessment of all the initiatives (To be done by ICT Steercom):

6.5.2 Assessment of Initiatives

Priority	Total Rating	Initiative	Strategic Rating	Strategic Focus	Citizen Focus	Consistency with technical Competence	Cost/Value Rating	Staff Requirement	Project Cost	Projected Time	Compatibility with existing Projects

6.6 Implementation Plan

Although MCLM assumes ownership and remains responsible for the implementation and maintenance of the MSP, the requirement exists to supplement the current skills and capacity within the municipality with specific services to facilitate the implementation process of the MSP. The necessary skills and capacity to satisfy the following needs should be established as a temporary measure:

- ***Program Management*** - Monitoring of the execution of projects, which are embarked on in accordance with the requirements of the MSP.
- ***Architecture Support*** - The provision of guidance to the municipality in ensuring that all Business Application initiatives, Data Architectures and Technology Architectures are in accordance with the requirements of the MSP.
- ***Maintaining of the MSP*** - Changes in the Council, IDP, Legislation, Acts, Policies, Objectives and Mandates may require the MSP to be reviewed and updated. Ensuring that all relevant impacts on ICT requirements are taken into account, it is important to facilitate any of these amendments in order to maintain the MSP accordingly. In addition, it is crucial that all impacts to the MSP are continuously being evaluated.
- ***Project Feasibility and Initiation Framework Establishment*** - The development and introduction of a framework to guide and evaluate all MSP projects for the municipality. The purpose of the framework will be to evaluate all new ICT related proposals. This process will include (1) Structure, (2)Review and (3) Reporting System.
- ***Guidance and Support*** - The provision of guidance and support to MCLM in the following areas:
    - In the absence of a ICT Steercom, assist with this vital role in order to ensure the successful rollout of the MSP.
    - Assist with the agenda setting for the ICT Steercom.
    - Provide a developmental role (assisting and coaching) to the ICT Steercom as appropriate and ensure that the necessary skills are transferred during the period of the Maintenance Agreement
- ***Building Council Support*** - Council support is a prerequisite for the successful implementation of the MSP. This function should assist in building Council support, by coordinating and facilitating workshops and presentations where appropriate with the Council, in respect of the MSP. The successful implementation is highly dependent on the support and buy-in from the all the stakeholders for the MSP. The ICT Steercom should therefore ensure that the relevant support and buy-in has been obtained / agreed to by all stakeholders, prior to the MSP implementation.

6.7 Benefits

By implementing the Master Systems Plan, MCLM municipality should benefit through improved communication, aligning their ICT with the municipality's strategies, and by putting people first.

Communication and collaboration will be improved between the municipality and other agencies, between council and the municipality, amongst council, municipality and citizens, and amongst municipal employees.

The municipal strategies will be aligned with citizens/provincial/ national needs, the information systems will be aligned with strategy, and the strategies aligned with the municipality's capabilities. By implementing the recommendations, the municipality affirms its commitment to the Batho Pele principles, thereby putting people first.