



## IT Strategic Plan

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30 June 2016	1	10.3.2
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10 December 2015

Senqu Municipality  
19 Murray Street  
Lady Grey  
9755

Dear Sir/Madam

### **Draft Report: Information Technology Strategic Plan**

We have completed the IT Strategic Plan document for Senqu in terms of our engagement letter and have pleasure in presenting our draft report.

The report has been prepared for the management of Senqu Municipality. The contents of this report will be solely for the use of management and should not be disclosed to any other parties. We do not accept any liability or responsibility towards any third party to whom this report is shown or into whose hands it may fall.

We may have discussions regarding the attached report; however, information or advice provided orally should not be relied upon or attributed to us unless we confirm such information or advice in writing. Any draft report that we may provide will not constitute our definitive opinions and conclusions. These will be contained solely in our final written report.

We would be pleased to provide you with further assistance and request that you do not hesitate to contact Simpiwe Habe with any query on 043 707 9854.

Finally, we would like to express our appreciation to the various members of staff who have assisted us in carrying out our work.

Yours faithfully

XXXX  
Director

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**Resolution: 019/OCM/17**

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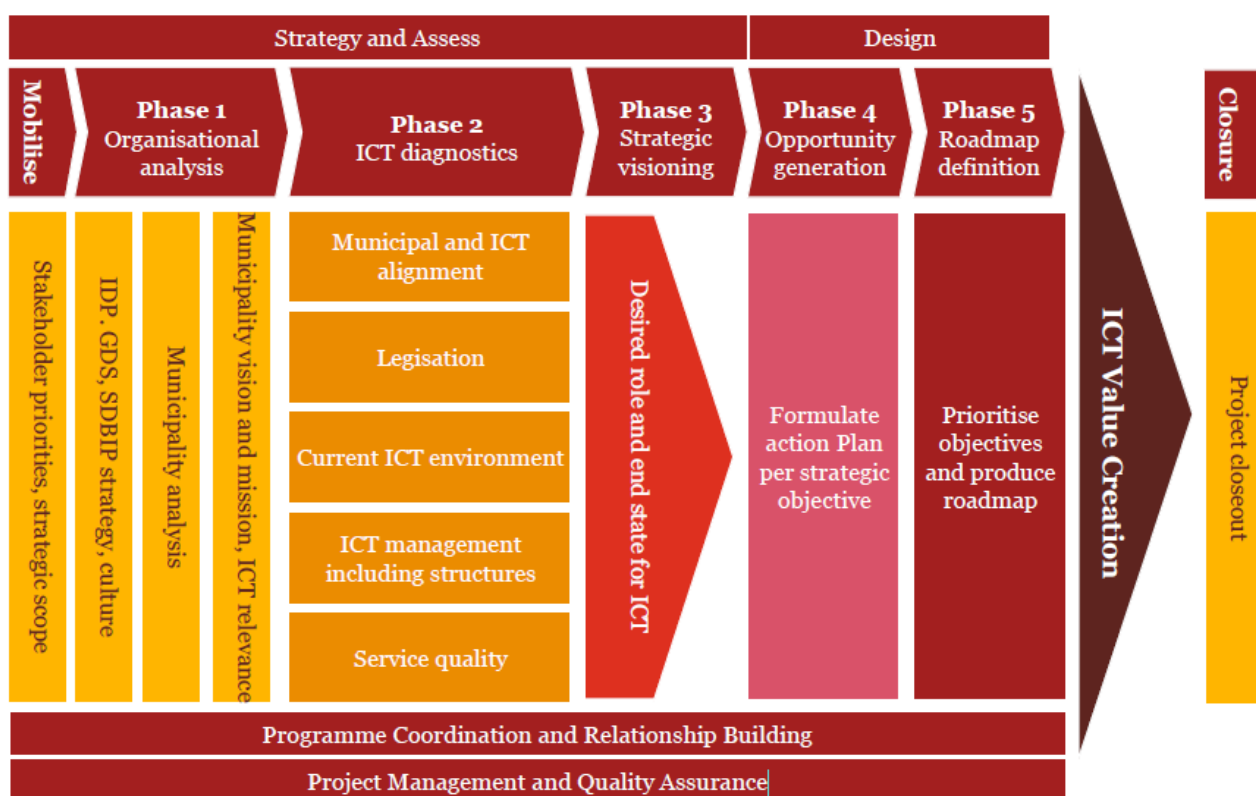
## 1. Introduction

In the modern business world IT has become a strategic imperative without which organisations cannot survive. Due to this and other factors, IT strategic planning has become critical for every organisation.

Senqu Municipality has recognised this fact and embarked on a project to develop an IT Strategy. PwC was engaged to assist with this process and as such has developed the IT Strategic Plan for Senqu Municipality in conjunction with key stakeholders from within the municipality.

## 2. Scope and Approach

Our methodology that was used to develop the IT Strategic Plan for Senqu Municipality is illustrated below and an overview is given for each of the focus areas in the text that follows.



### 2.1. Phase 1 – Organisational Analysis

During this phase we obtained and reviewed various documents to understand the strategic intent of the municipality as well as the ICT drivers for this project. In addition, we also reviewed the IDP to understand what Senqu Municipality's future plans are in terms of strategic objectives. In total, we interviewed 25 members of management and staff during this phase. This enabled us to understand the vision, mission and strategic objectives of Senqu Municipality.

### 2.2. Phase 2 – ICT Diagnostics

During this phase we conducted interviews with key stakeholders to gain an understanding of the business status quo. This included the following:

PwC

- a. IT organisation structure
- b. IT infrastructure environment including the IT facilities
- c. Information systems environment including owners and users for these
- d. Information flows for critical services
- e. IT performance and IT risk
- f. Level of integration / interoperability between the information systems

In addition, we ascertained the views of key stakeholders to determine how IT is or can aid them in their day to day operations.

### **2.3. Phase 3 – Strategic Visioning**

During this phase we engaged with key stakeholders to identify opportunities for improvement and a desired target state to ensure that the way forward being defined is workable for Senqu Municipality taking into account the strategic objectives for the short and long term.

### **2.4. Phase 4 – Opportunity Generation**

The results of the previous phases were used as a basis to establish opportunities for an improved IT service that would effectively and efficiently support the organisational processes of the municipality. These improvements were to be identified for each of the following:

- a. Strategy - what organisational and IT strategies should be in place to effectively support the organisation, and how will the organisation exercise control over IT?
- b. Processes - how should resources be organised, monitored and controlled to deliver IT services and development projects within the organisation?
- c. Technology – which technology trends can be exploited to improve the effectiveness of the technology architecture and how technology is deployed within the organisation?
- d. People - how will IT human resources be managed, how should the IT Department be structured to meet the current and future needs of the business?
- e. Systems - what application systems can be identified to address deficiencies that currently exist in the information and functionality provided by systems?

We conducted IT research (trends, directions, etc), reviewed industry sector benchmarks and had interviews with senior management to identify opportunities for improvement.

### **2.5. Phase 5 – Road map Definition**

During this phase, we prioritised and phased IT projects over a five year period to produce a realistic IT roadmap. In addition, we integrated the results from the previous phases to ensure that the way forward being defined is workable for Senqu Municipality taking into account the strategic objectives for the short and long term.

This last phase is the culmination of the work performed during the previous phases and will outline the IT Strategic Plan for Senqu Municipality for the short to long term (3 to 5 years). This draft report will define a set of IT initiatives which need to be undertaken via sub projects to implement the IT Strategic Plan within the organisation.

### **3. *Key sources of information***

The following are the key sources of information that were utilised for completion of this deliverable:

- a. Interviews with key stakeholders within Senqu Municipality.
- b. PwC benchmarking tools and other knowledge sources.
- c. Gartner research material.

### **4. *Senqu Municipality Vision, Mission and Values***

As part of our review and information gathering we also reviewed the strategic objectives, vision and mission statements of Senqu Municipality for the IT Strategic Plan. The following was noted from Senqu Municipality's Integrated Development Plan:

#### **Vision**

A development oriented municipality that provides appropriate, efficient and economical infrastructure and services for all residents.

#### **Mission**

Committed to provide community services that enhance our valued quality of life through equitable delivery of services; effective stewardship of our unique physical environment; cooperative planning and resources development and fiscal responsibility.

#### **Values**

In addition to the Batho Pele Principles, the municipality commits itself to upholding the following set of values

- |                        |                  |
|------------------------|------------------|
| • Good Governance      | • Integrity      |
| • Accountability       | • Tolerance      |
| • Public Participation | • Honesty        |
| • People Development   | • Responsibility |
| • Teamwork             | • Trust          |

## Senqu Municipality values and how they relate to the IT Strategic Plan

It is essential that the IT Strategic Plan and projects supports the business strategy.

When coming up with the projects suggested in this IT Strategic Plan, we have mapped them back to the values of Senqu Municipality. Detailed initiatives showing how we have addressed these are discussed later on in the document.

Ref	Senqu Municipality Values	Extent To Which Addressed
1	Good Governance	✓
2	Accountability	✓
3	Public Participation	✓
4	People Development	✓
5	Teamwork	✓
6	Integrity	✓
7	Tolerance	X
8	Honesty	X
9	Responsibility	X
10	Trust	X

### Key:

**X** Not addressed/ not relevant to IT  
**3** Fully addressed  
**✓** Partially addressed

## **5. Executive Summary**

### **5.1. Objectives**

The purpose of this IT Strategic Plan is to align Senqu Municipality's IT planning, investment decisions and management with its business requirements. The development of the IT Strategic Plan required an understanding of the current environment, creation of an appropriate vision and an assessment of different strategies for achieving this vision.

It is critical to understand the strategic planning process as it forms the link between the business needs and the use of IT to meet those needs. The Integrated Development Plan should drive the identification of new systems (or enhancements to current systems). The technology infrastructure must facilitate new or existing business processes, as well as new systems that can be rapidly deployed to deliver new products and services. The overall goals of effective IT operations are to reduce time and cost, improve quality, enhance customer satisfaction, and increase the value added by IT.

### **5.2. Results of ICT Diagnostic Phase**

It is clear from the initial assessment that a number of issues at various levels of impact exist within Senqu Municipality that are preventing the municipality from realising the maximum benefit from its IT systems and resources.

During our assessment, we noted that the contributing factors to this was that an IT Manager has not been appointed, the IT budget is de-centralised and numerous manual business processes exist within the Municipality.

### **5.3. Recommended Way Forward**

We have obtained an understanding of Senqu Municipality's objectives and issues from liaising with the different business units in order to complete the IT Strategic Plan and the recommended way forward is based on this understanding. Following our assessment of the issues highlighted during the development of the IT Strategic Plan for Senqu Municipality, we propose the following:

1. Senqu Municipality should ensure that an appropriately skilled individual is appointed to fill the vacant IT Manager position. A skills review for IT staff should be performed and IT staff should receive training where gaps are identified based on their job responsibilities. Training should be provided on a regular basis such that IT staff skills are kept up-to-date.
2. The Municipality should perform an evaluation of the network in order to determine the Municipality's bandwidth requirements. The Municipality should consult with telecommunications providers and use historical data to determine future connectivity requirements. Once the evaluation is complete, the Municipality should consider upgrading the network.
3. There are a number of business processes that are performed manually by staff at the Municipality. The Municipality should consider automating the following business processes:
  - a. Supply Chain Management
  - b. Asset Management
  - c. Records Management
  - d. Contract Management



- e. Risk and Compliance Management
- f. Leave
- g. Inventory Management
- h. Customer Care Management

Senqu Municipality should consider using a phased approach to automate the above business processes.

4. Council should consider centralising the IT budget for the purchasing of hardware and software for all business units and staff. Thereafter, a refresh cycle for computers, servers and networking infrastructure needs to be established by Senqu Municipality.
5. A Business Continuity Plan (BCP) should be developed and approved by Council to cater for changes to the IT systems landscape. The BCP and Disaster Recovery Plan (DRP) should be tested and updated on an annual basis.
6. The Municipality should consider upgrading the server room such that adequate physical security and environmental controls are in place.

## 6. *Issues arising from the ICT Diagnostic phase*

During this phase interviews were conducted with management to understand the business. Based on our discussions with key stakeholders the following points were highlighted as issues that are related to IT. These points were not tested for validity by PwC but came out of the interviews with staff members.

The issues are categorised into Financial, Operational and IT issues.

### 6.1. Financial

Ref	Process/Activity	Issues	Strategic IT Initiative Recommendation
1	IT Budget	<ul style="list-style-type: none"> <li>The IT budget is currently decentralised i.e. each business unit is allocated a budget from which hardware and software is purchased.</li> </ul>	10.7

### 6.2. Operational

Ref	Process/Activity	Issues	Strategic IT Initiative Recommendation
1	IT Procurement	<ul style="list-style-type: none"> <li>Business units are bypassing the IT department when procuring IT goods and services.</li> </ul>	10.7
2	Asset Management	<ul style="list-style-type: none"> <li>Asset management is a manual process as assets are recorded in MS Excel.</li> </ul>	10.2
3	Time and Attendance	<ul style="list-style-type: none"> <li>The time and attendance system does not always register staff members scanning in to the Municipality. This leads to a situation where HR have to manually confirm whether an employee had actually been at work.</li> <li>The Time and Attendance and Payroll systems are not interfaced.</li> </ul>	10.9
4	Leave	<ul style="list-style-type: none"> <li>Employees are making use of manual forms to submit leave.</li> <li>Staff located at the Barkly East and Sterkspruit satellite offices have to drive to Lady Grey to submit leave forms.</li> </ul>	10.2
5	Performance Management	<ul style="list-style-type: none"> <li>Performance Management is a manual process which is MS Excel based.</li> </ul>	10.2
6	Internal Audit	<ul style="list-style-type: none"> <li>Audit Programs are developed using MS Excel.</li> <li>Audit Programs and Reports are stored on user's local drives and are only stored on the network drive on completion of the audit.</li> </ul>	10.2
7	Risk and Compliance Management	<ul style="list-style-type: none"> <li>Risk and Compliance Management are manual processes.</li> <li>The Risk and Compliance registers are MS</li> </ul>	10.2

Ref	Process/Activity	Issues	Strategic IT Initiative Recommendation
		Excel based. <ul style="list-style-type: none"> <li>• Risk and Compliance Registers are stored on the Risk and Compliance Officer's local drive and not stored on the network drive.</li> </ul>	
8	Customer Care	<ul style="list-style-type: none"> <li>• A hotline number exists which customers can use for account queries and fault reporting, however, details of calls received are recorded in MS Excel.</li> <li>• Some customers are bypassing the hotline number and are calling technicians directly to resolve faults.</li> <li>• The call log is stored on a user's local drive.</li> </ul>	10.11
9	Supply Chain Management (SCM)	<ul style="list-style-type: none"> <li>• The entire SCM process is manually performed.</li> <li>• Requisitions are paper based and have to follow a manual process.</li> <li>• SCM documentation is stored on an internal shared folder that is accessible by all employees.</li> <li>• Sebata has a limit on the number of characters that can be entered when creating technical specifications for quotes or tenders. As a result, incorrect items are ordered and cannot be used.</li> </ul>	10.2 10.9
10	Contract Management	<ul style="list-style-type: none"> <li>• Contract Management is a manual process.</li> </ul>	10.2
11	Inventory Management	<ul style="list-style-type: none"> <li>• Inventory management is a manual process and is MS Excel based.</li> <li>• The spreadsheets are stored on a user's local drive.</li> </ul>	10.2
12	Records Management	<ul style="list-style-type: none"> <li>• Records management is a manual process which is paper based.</li> <li>• Records have been misplaced and are difficult to locate.</li> <li>• The Records Management Policy does not cater for the electronic storage of records.</li> </ul>	10.2
13	Infrastructure and Maintenance Management	<ul style="list-style-type: none"> <li>• Infrastructure and maintenance management is a manual process.</li> <li>• Job cards are paper based.</li> </ul>	10.12

### 6.3. Information Technology (IT)

Ref	Process/Activity	Issues	Strategic IT Initiative Recommendation
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Ref	Process/Activity	Issues	Strategic IT Initiative Recommendation
1	IT Staff Training	<ul style="list-style-type: none"> <li>IT staff are heavily reliant on service providers to assist end users with IT related problems.</li> <li>IT staff have not received adequate training to keep skill levels up to date with the latest technology in terms of hardware and software.</li> <li>The lead time in resolving IT issues is extensive and causes frustration within the Municipality</li> </ul>	10.4  10.11
2	Email Limitations	<ul style="list-style-type: none"> <li>Email sending and receiving limits are set between 2mb and 5mb. This limits the ability of staff to send and receive large email attachments.</li> </ul>	10.9
3	IT Helpdesk	<ul style="list-style-type: none"> <li>IT service calls are recorded on manual forms.</li> </ul>	10.11
4	Backup and Storage	<ul style="list-style-type: none"> <li>End users are storing information on local hard drives. In addition, some users are storing information on unencrypted external hard drives.</li> <li>End users local hard drives are not being backed up.</li> <li>Some end users are not utilising the network drive to store information.</li> </ul>	10.3
5	Formalised Refresh Cycle	<ul style="list-style-type: none"> <li>The age of computers vary between 1 - 8 years.</li> <li>A refresh cycle has not been formalised, however, we have noted that servers are being refreshed at least every 4 years.</li> </ul>	10.7
6	Physical Security and Environmental Controls	<ul style="list-style-type: none"> <li>The Municipality is exposed to the following environmental risks due to inadequate setup of the server room: <ul style="list-style-type: none"> <li>The server room walls are insulated with polystyrene.</li> <li>The server room has 2 entrances protected by wooden doors which is accessed by lock and key.</li> <li>There is no temperature monitoring system in place.</li> <li>The smoke detectors are not functioning.</li> <li>The floor is covered by carpets.</li> <li>A water detection system is not in place.</li> <li>There is no fire suppression system in place.</li> <li>Raised flooring is not in place,</li> </ul> </li> <li>The Time and Attendance System is</li> </ul>	10.10

Ref	Process/Activity	Issues	Strategic IT Initiative Recommendation
		<p>housed in an office in the Human Resource Department.</p> <ul style="list-style-type: none"> <li>Some network infrastructure components are housed in cupboards which general staff can access. These cupboards do not have any locking mechanism.</li> </ul>	
7	Business Continuity and Disaster Recovery	<ul style="list-style-type: none"> <li>The Business Continuity Plan does not exist.</li> <li>The Disaster Recovery Plan is not periodically tested and updated.</li> </ul>	10.1
8	Network	<ul style="list-style-type: none"> <li>Data line (Fixed Line) speeds are limited to 64kbps, as a result users experience slow connectivity when accessing Treasury systems.</li> </ul>	10.5
9	IT Governance and IT Security	<ul style="list-style-type: none"> <li>An IT Governance Awareness campaign has not been launched.</li> <li>IT Security Awareness Training has not been provided to staff.</li> <li>Users have the option to access their email from the internet which could result in unauthorised access to sensitive information.</li> <li>Councillors have been provided with laptops by the Municipality, however, these laptops are not being updated with the latest security patches and antivirus updates. As a result, the Municipality is vulnerable to security breaches.</li> <li>Electronic devices and removable media used by the Municipality are not encrypted.</li> </ul>	10.14
10	Social Media	<ul style="list-style-type: none"> <li>Staff are prohibited from using social media platforms.</li> <li>The Municipality does not have a social media presence.</li> </ul>	10.8
11	Printers	<ul style="list-style-type: none"> <li>Most end users have their own printer.</li> <li>There is a limited number of networked printers available to staff.</li> </ul>	10.6
12	Anti-virus	<ul style="list-style-type: none"> <li>Users have indicated that the antivirus solution (Sophos) is not removing all malware from computers and portable storage devices.</li> </ul>	10.9

## 7. Implementation Roadmap

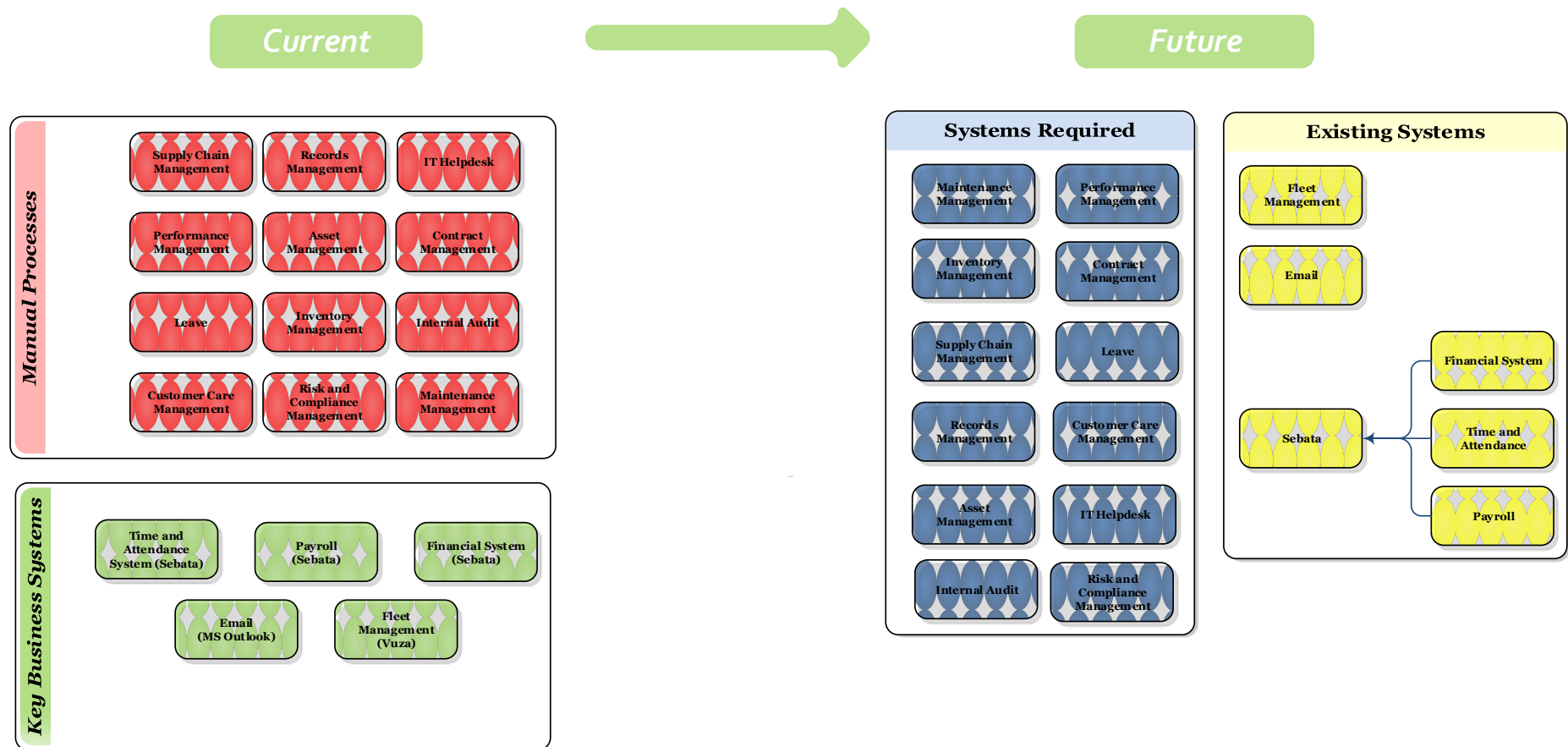
The diagram below is a graphical representation of the IT initiatives that need to be undertaken in order to address the issues mentioned above and the timelines for implementation:

Strategic IT Initiative	2016		2017		2018		2019		2020	
Business Continuity and Disaster Recovery										
Automation of Business Processes										
Automated Network Backup Solution										
IT Staff Training										
Network Connectivity										
Installation of Network Printers										
IT Refresh Cycle and Centralisation of IT Budget										
Social Media										
Improvement to Existing Systems										
Upgrade of the Server Room										
Customer Care and Helpdesk Management										
Maintenance Management										
Establishment of Super Users										
IT Governance and IT Security										

## ***8. IT System Landscape***

We recommend that the number of systems within the IT environment be kept to a minimum to reduce the Total Cost of Ownership. This greatly enhances the integrity of data, reduces time lost due to having to re-capture information or transfer information between systems. The most important feature would be that reporting within the municipality will be enhanced significantly.

The diagram overleaf is based on our understanding of Senqu Municipality's current IT system landscape and our recommendation as to what the future IT system landscape should resemble in the next 5 years.





## **9. Research and Benchmarks**

A number of sources were used when conducting research for Senqu Municipality's IT Strategic Plan document. Some of the sources are as follows:

- a. PwC benchmarking tools and other knowledge sources.
- b. Interviews with Sebata.
- c. Interviews with other municipalities using Sebata.
- d. Other research material from Gartner.

The results from our research from the various knowledge sources were used to influence the Strategic Visioning and Opportunity Generation Phases of the IT Strategy and will be used to demonstrate why we have taken specific decisions in the IT Strategy document.

As stated above we have made use of Gartner research material in this report. This material is included in the report and is subject to the following:

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### **Results of Interviews**

Our interview with Sebata is summarised below:

- a. Sebata version 5.6 is still used at the Municipality.
- b. The Municipality is in the process of implementing a new version of Sebata, version 6.0.
- c. The new version 6.0 will automate most of the manual processes at the Municipality, some examples include SCM, Asset Management, Inventory management, the Electronic Document Management System.
- d. Sebata have met with the business to discuss the business processes and workflows as part of the project plan.
- e. Users are experiencing issues with the current version of Sebata, whereby transactional descriptions have a limited field length. Sebata has indicated that this issue will be resolved in the new version of Sebata.
- f. There was a discussion about the use of hand held devices to be used in place of manual job cards for maintenance jobs. Sebata have indicated that the new version 6 can support the use of mobile devices which can interface with the system.

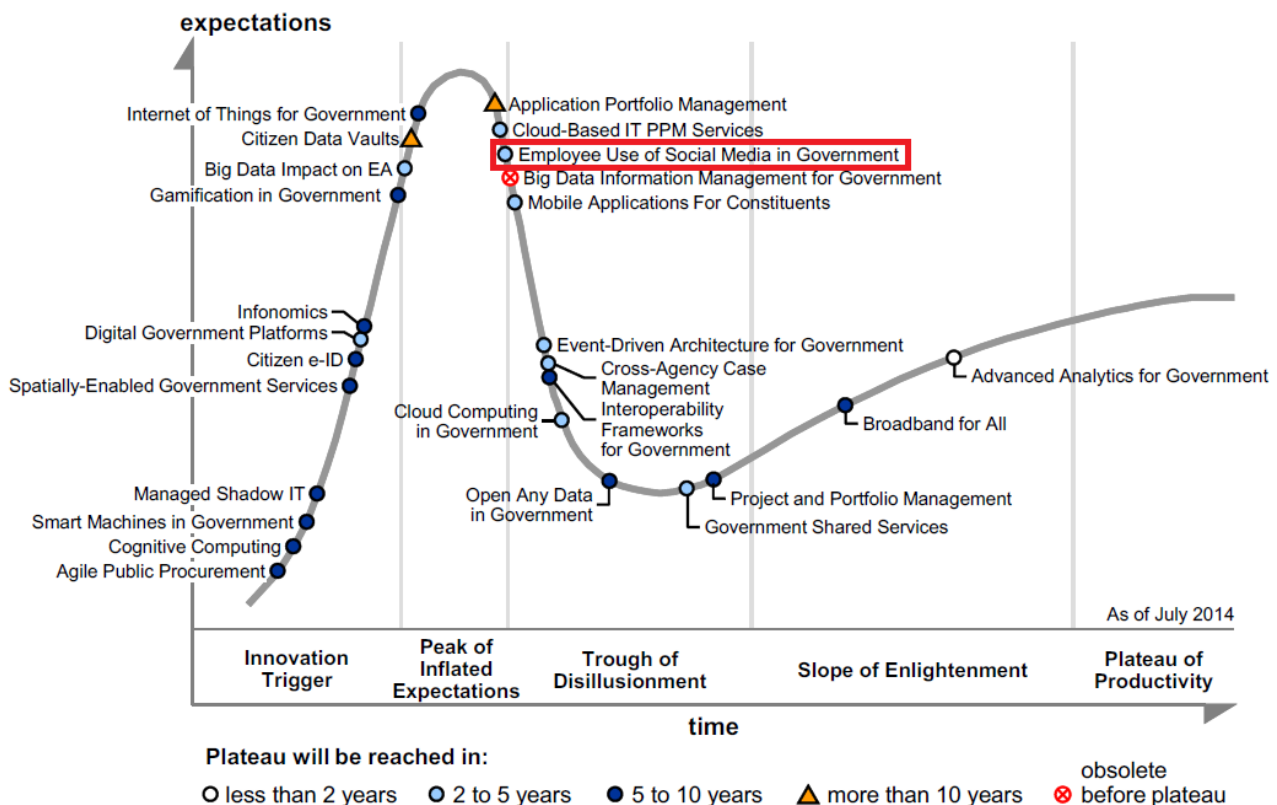
Our interviews with 2 municipalities using Sebata is summarised below:

- a. The municipalities are using version 5.4 and version 5.6 of Sebata.
- b. Both municipalities are only using the finance and payroll modules of Sebata and therefore could not comment on the other modules.
- c. Users interviewed have not experienced any major issues or problems and are satisfied with the capabilities and functionalities of the system.
- d. Both municipalities indicated that the Sebata system is easy to navigate and is user friendly.
- e. One municipality did experience delayed system response times, however this was due to the municipality's aging network infrastructure and not a Sebata related issue.

- f. Sebata is the service provider for both Municipalities and users interviewed are satisfied with the support received from Sebata and did not have any negative comments about the system or the service provider.

## Gartner Hype Cycle

During this phase we also reviewed Gartner's Hype cycle for Digital Government and reviewed this in light of Senqu Municipality's current position and issues being experienced. Below is the hype cycle with a narrative explaining the cycle.



### Hype Cycle for Digital Government, 2014

The diagram is what Gartner terms a 'hype cycle' and represents technology being implemented in Government (as at July 2014).

The hype cycle is a graphical representation of the maturity, implementation and business uses of specific technologies. The cycle is divided in 5 phases:

- Innovation Trigger:** A breakthrough, public demonstration, product launch or other event generates significant press and industry interest.
- Peak of Inflated Expectations:** During this phase of overenthusiasm and unrealistic projections, a flurry of well-publicized activity by technology leader's results in some successes, but more failures, as the technology is pushed to its limits. The only enterprises making money are conference organizers and magazine publishers.
- Trough of Disillusionment:** Because the technology does not live up to its overinflated expectations, it rapidly becomes unfashionable. Media interest wanes, except for a few cautionary tales.

- d. *Slope of Enlightenment*: Focused experimentation and solid hard work by an increasingly diverse range of organizations lead to a true understanding of the technology's applicability, risks and benefits. Commercial off-the-shelf methodologies and tools ease the development process.
- e. *Plateau of Productivity*: The real-world benefits of the technology are demonstrated and accepted. Tools and methodologies are increasingly stable as they enter their second and third generations. Growing numbers of organizations feel comfortable with the reduced level of risk; the rapid growth phase of adoption begins. Approximately 20% of the technology's target audience has adopted or is adopting the technology as it enters this phase.

Applicable research from Gartner that is relevant to Senqu Municipality's IT Strategic Plan is summarised below:

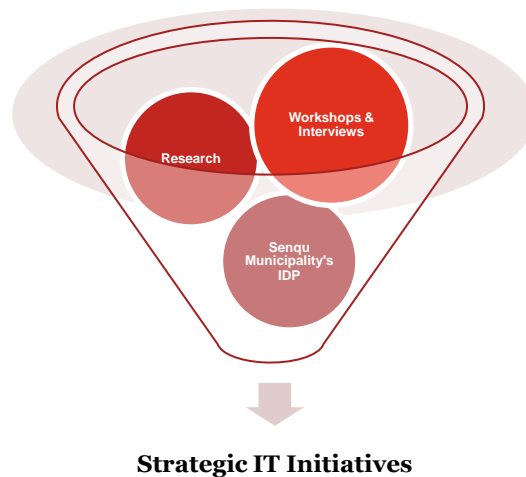
<b>Applicable Gartner Research</b>	<b>Gartner Definition</b>	<b>Strategic Initiative Reference</b>
Employee Use of Social Media in Government	Government employees can choose to use a combination of corporate and consumer social media to improve their effectiveness and efficiency by relying on and sharing internal and external knowledge. Unlike the enterprise use of social media, employees have a choice of the tools they use and the professional purposes they are pursuing.	10.9

## 10. Strategic IT Initiatives

Based on the information gathered and research performed, the following strategic initiatives need to be implemented to assist Senqu Municipality in achieving their business objectives.

10.1	Business Continuity and Disaster Recovery
10.2	Automation of Business Processes
10.3	Automated Network Backup Solution
10.4	IT Staff Training
10.5	Network Connectivity
10.6	Installation of Network Printers
10.7	IT Refresh Cycle and Centralisation of IT Budget
10.8	Social Media
10.9	Improvement to Existing Systems
10.1	Upgrade of the Server Room
10.11	Customer Care and Helpdesk Management
10.12	Maintenance Management
10.13	Establishment of Super Users
10.14	IT Governance and IT Security

The diagram below depicts the inputs used to determine the strategic decisions:



### **10.1. Business Continuity and Disaster Recovery**

**Timeframe:** 2 – 2.5 years

#### **Senqu Municipality Values**

- Good governance
- Accountability

#### **Discussion points highlighted by Management:**

- The Business Continuity Plan does not exist.
- The Disaster Recovery Plan (DRP) is not periodically tested and updated.

#### **Approach:**

##### **Business Continuity**

1. Senqu Municipality should develop and formalise a Business Continuity Plan (BCP). This initiative should be driven out of business and responsibility should be assigned to a business committee or representative from the business.
2. Business impact assessments should be performed on all business systems and applications to ensure that the IT team can recover critical business systems and applications based on business requirements and objectives.
3. The BCP should be approved by Council.
4. The BCP should be tested at least annually.

##### **Disaster Recovery**

5. Management should test the Disaster Recovery Plan (DRP) on an annual basis and should ensure that results of these tests are communicated to Council. If disaster recovery plans are not fully tested i.e. end-to-end including application and infrastructure restores and back-up restores, there is a risk that these plans will not function as and when required.
6. The current DRP should be aligned to the BCP once it is formalised.

#### **Supporting Information**

##### **Business Continuity Plan (BCP)**

Business Continuity Planning is important as it allows Senqu Municipality to prepare for and aid in a disaster recovery. It is an arrangement agreed upon in advance by management and key personnel of the steps that will be taken to help the Municipality recover should any type of disaster occur. These programs prepare for multiple problems. Detailed plans are created that clearly outline the actions that an organisation or particular members of an organisation will take to help recover any of its critical operations that may have been either completely or partially interrupted.

### **Disaster Recovery Plan (DRP):**

Senqu Municipality will use this process to recover access to their software, data, and/or hardware that are needed to resume the performance of normal, critical business functions after the event of either a natural disaster or a disaster caused by humans. Disaster Recovery plans are often focused on bridging the gap where data, software, or hardware have been damaged or lost, it is also important to plan for the unexpected loss of key personnel. In order to be fully effective at disaster recovery, these plans are recommended to be regularly tested.

## **10.2. Automation of Business Processes**

**Timeframe:** 1 year

### **Senqu Municipality Values**

- Good governance

### **Discussion points highlighted by Management:**

- The following processes are performed manually:
  - Asset Management.
  - Performance Management.
  - Audit Management.
  - Risk and Compliance Management.
  - Supply Chain Management.
  - Contract Management.
  - Inventory Management.
  - Records Management.
- Employees are making use of manual forms to submit leave, in addition, Staff located at the Barkly East and Sterkspruit satellite offices have to drive to Lady Grey to submit leave forms.
- The Records Management Policy does not cater for the electronic storage of records. In addition, records have been misplaced and are difficult to locate.

### **Approach:**

1. Senqu Municipality should consider using a phased approach to automate the following business processes:
  - 1.1. Asset Management.
  - 1.2. Performance Management.
  - 1.3. Supply Chain Management.
  - 1.4. Contract Management.
  - 1.5. Inventory Management.
  - 1.6. Records Management.
  - 1.7. Leave.
2. It would be recommended to phase-in one business process at a time as this will minimise the impact on the organisation and staff.
3. Detailed training should be provided to staff once the above business processes have been automated.
4. The training should be in-depth and contain sufficient details in terms of the automated business processes. In addition, training should be instructor led and computer based to ensure that Senqu Municipality staff become familiar with the automated business processes.
5. Once the Document Management System is in place, the Records Management Policy should be updated to cater for the electronic storage of records.
6. Management should conduct an evaluation of the additional modules offered by Sebata to understand which other municipalities are using these modules. From the municipalities who



agreed to be interviewed, as part of our review, we noted that they were only using Sebata for the finance and payroll modules. We would not recommend that Senqu Municipality be the first municipality to trial modules which have not been tested at other entities.

**Supporting Information:**

None

### **10.3. Automated Network Backup Solution**

**Timeframe:** 6 months

#### **Senqu Municipality Values**

- Good governance
- Integrity

#### **Discussion points highlighted by Management:**

- Numerous end users are storing information on local hard drives. In addition, some users are storing information on unencrypted hard drives.
- End users local hard drives are not being backed up.
- Some end users are not utilising the network drive to store information.
- Audit Programs and Reports are stored on user's local drives and are only stored on the network drive on completion of the audit.
- Risk and Compliance Registers are stored on the Risk and Compliance Officer's local drive and not stored on the network drive.
- SCM documentation is stored on a shared folder that is accessible by all staff.
- The Inventory spreadsheets are stored on a user's local drive.

#### **Approach:**

1. As Senqu Municipality is already using Acronis to backup servers, the Municipality should evaluate the Acronis module as well as other automated network backup solutions that are available for backing up end user computers.
2. After evaluating all possible solutions, the Municipality should consider procuring and implementing the best solution available.
3. The Backup and Restore policy should then be updated so that it is aligned to the technology that has been implemented.

#### **Supporting Information:**

An automatic backup solution allows for the recovery of information stored on computers. Automatic backups are necessary in order to back up stored data and to enable data recovery should the system crash. By automating a backup through a regular backup system, the user doesn't have to protect data manually.

Hard drives often fail, which is why automatic backup systems are put in place. Backup systems work in a secondary manner, making a second (or more) set of copies for the purpose of data restoration from data losses that are fully expected.

We have reviewed the Gartner Magic Quadrant for Enterprise Backup Software and Integrated Appliances 2015 and noted that Acronis is one of the recommended backup solutions service providers recommended by Gartner.



## **10.4.IT Staff Training**

**Timeframe:** 1 year

### **Senqu Municipality Values**

- Good governance
- People Development

### **Discussion points highlighted by Management:**

- IT staff are heavily reliant on service providers to assist end user with IT related problems.
- IT staff have not received adequate training to keep skill levels up to date with the latest technology in terms of hardware and software.
- The lead time in resolving IT issues is extensive and causes frustration within the Municipality.

### **Approach:**

1. A skills review for IT staff should be performed and staff should receive training where gaps are identified.
2. IT staff should also be provided with relevant training on a regular basis such that their skills are kept up-to-date.
3. Senqu Municipality should ensure that there is a transfer of skills and expertise from service providers to IT staff when vendors are onsite at the Municipality.
4. Service Level Agreements with IT service providers should contain clauses that cater for the transfer of skills to IT staff.

### **Supporting Information:**

There are a number of IT courses available and a few examples are listed below:

- The municipality has standardised on Microsoft, therefore some of the training offered by Microsoft is as follows:
  - Microsoft Certified Solutions Expert (MCSE): A number of MSCE certifications are available as depicted below.

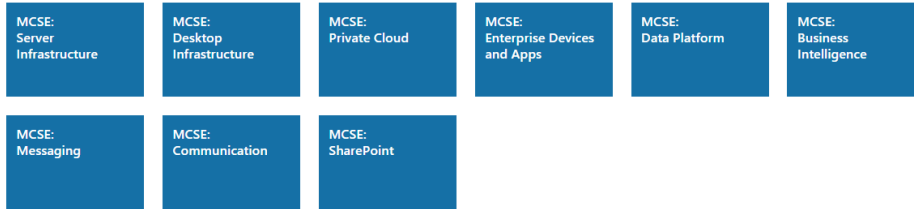


## Microsoft Certified Solutions Expert (MCSE)

The globally recognised standard for IT professionals

Prove your ability to build innovative solutions across multiple technologies, both on-premises and in the cloud.

Choose a certification to view its details and required exams:



- The MCSE: Server Infrastructure certification validates that you have the skills needed to run a highly efficient and modern data centre, with expertise in identity management, systems management, virtualisation, storage and networking. Earning an MCSE: Server Infrastructure certification will qualify you for jobs such as computer support specialist and information security analyst.
- The MCSE: Private Cloud Certification proves your expertise in managing and implementing Microsoft private cloud computing technologies. With Windows Server and System Center, you will build your Microsoft private cloud solution to optimise IT service delivery and gain the automation and flexibility you need for your IT infrastructure, now and in the future. Earning an MCSE: Private Cloud certification will qualify you for jobs such as server administrator, systems programmer and network manager.
- The MCSE: Enterprise Devices and Apps certification validates that you have the skills needed to manage devices in today's bring-your-own-device (BYOD) enterprise. It qualifies you for a career path which can range from traditional desktop support technician to enterprise management of BYOD devices and apps.
- The MCSE: Data Platform Certification demonstrate your broad skill sets in building and administrating enterprise-scale data solutions both on-premises and in cloud environments. Earning an MCSE: Data Platform certification will qualify you for jobs such as database analyst and database designer.
- The MCSE: Business Intelligence certification proves that you have the skills and techniques needed to design, build and deploy solutions that deliver more data to more people across the organisation. Earning an MCSE: Business Intelligence certification will qualify you for a position as a BI and reporting engineer.
- The MCSE: Messaging certification validates your ability to move your company to the cloud, increase user productivity and flexibility, reduce data loss, and improve data security for your organisation. Earning an MCSE: Messaging certification will qualify you for a position in network and computer systems administration.
- The MCSE: Communication certification validates your expertise in creating a consistent communications experience for your organisation and connecting your colleagues to people around the world. Earning an MCSE: Communication certification will qualify you for a position in network and computer systems administration.

Source: [www.microsoft.com](http://www.microsoft.com)

- ISACA offers the following certifications:
  - Certified Information Systems Auditor (CISA) certification is world-renowned as the standard of achievement for those who audit, control, monitor and assess an organization's information technology and business systems.
  - Certified Information Security Manager (CISM) - The management-focused CISM is the globally accepted standard for individuals who design, build and manage enterprise information security programs. CISM is the leading credential for information security managers.
  - Certified in the Governance of Enterprise IT (CGEIT) recognizes a range of professionals for their knowledge and application of enterprise IT governance principles and practices. CGEIT provides you the credibility to discuss critical issues around governance and strategic alignment based on your recognized skills, knowledge and business experience.
  - Certified in Risk and Information Systems Control (CRISC) (pronounced "see-risk") is the only certification that positions IT professionals for future career growth by linking IT risk management to enterprise risk management, and positioning them to become strategic partners to the business.
  - Cybersecurity Nexus – CSX Certificate and CSX-P Certification - As the cyber landscape continues to rapidly evolve, it's not enough to rely solely on knowledge and theory. A performance-based CSX certification is a testament to your real-life skills and experience and proclaims that your commitment, tenacity, and abilities exceed expectations. CSX programs and certifications help individuals demonstrate their skills and prove that they know the most current cyber security standards, and offer employers confidence that their employees are up to demanding tasks.

Source: [www.isaca.org](http://www.isaca.org)

- CompTIA offers vendor neutral training for IT Professionals as listed below:
  - CompTIA A+: A+ is the starting point for a career in IT. The performance-based exams certify foundational IT skills across a variety of devices and operating systems.
  - CompTIA Cloud+: Cloud+ validates the skills and expertise required to securely implement, maintain and utilize cloud technologies.
  - CompTIA Linux+: Linux+ is an internationally recognized credential validating technical competencies required for junior-level Linux administrators.
  - CompTIA Mobility+: Mobility+ certifies the knowledge and skills required to understand and troubleshoot various mobile devices and aspects of wireless technologies.
  - CompTIA Network+: Network+ certifies the essential skills needed to confidently design, configure, manage and troubleshoot any wired and wireless devices.
  - CompTIA Project+: Project+ validates the ability to initiate, manage and complete a project or business initiative on time and within budget.
  - CompTIA Security+: Security+ provides a global benchmark for best practices in IT network and operational security, one of the fastest-growing fields in IT.

- CompTIA Storage+: Storage+ Powered by SNIA certifies knowledge and skills required to configure basic networks to include archive, backup and restoration technologies.
- CompTIA Server+: Server+ demonstrates the technical knowledge and skills required to perform a variety of tasks on server platforms.

Source: [www.comptia.org](http://www.comptia.org)

## **10.5. Network Connectivity**

**Timeframe:** 1 – 1.5 years

### **Senqu Municipality Values**

- Good Governance

### **Discussion points highlighted by Management:**

- Data line (Fixed Line) speeds are limited to 64kbps, as a result users experience slow connectivity when accessing Treasury systems, email and the internet.
- The Municipality also has wireless connectivity which offers greater bandwidth, however, this in conjunction with the Diginet line is still inadequate.

### **Approach:**

1. The Municipality should perform an evaluation of the network in order to determine the Municipality's bandwidth requirements. This should be done in consultation with the telecommunications provider.
2. When performing the evaluation, the Municipality should use historical data to determine connectivity requirements.
3. Once the evaluation is complete, the Municipality should consider upgrading the network. Increased bandwidth will significantly improve the speed at which users connect to Treasury systems and online content or services.
4. The Municipality should also consider re-establishing redundant connectivity between Lady Grey and Sterkspruit. This could be through mediums such as cellular, satellite or radio connectivity depending on recommendations from telecommunications providers.

### **Supporting Information:**

- Based on discussion with FirstWave, the service provider has indicated that the Municipality is moving from fixed lines to a fully integrated wireless network.
- In addition, backup wireless connectivity will also be available through another wireless service provider to cater for redundancy.



## 10.6. Installation of Networked Printers

**Timeframe:** 1 year

### Senqu Municipality Values

- Good governance
- Teamwork

### Discussion points highlighted by Management:

- Most end users have their own printer.
- There is a limited number of networked printers available to staff.

### Approach:

1. Senqu Municipality should consider using multifunction network printers instead of personal printers as this will significantly reduce printing costs.
2. Multifunction network printers have the capability to email, fax, photocopy, print and scan and will assist the Municipality when the Electronic Document Management System is operational.
3. The Municipality should consider using a service provider to maintain and support the multifunction printers once installed.
4. A Service Level Agreement for the maintenance and support of these printers should be in place with the selected service provider.
5. There will be instances where an official requires a personal printer. In such cases, the official should provide business justification and obtain approval from management.

## Supporting Information

### Benefits of networked printing

- ***Its Cost Effective:*** The Municipality will be able to reduce the amount spent on consumables for individual printers. In addition, the Municipality will reduce costs by spending less on support and maintenance for individual printers.
- ***Decrease in maintenance:*** Due to the decrease in devices, maintenance is centralised and is subsequently easier to handle.
- ***Knowledgeable employees:*** With a network printer, the Municipality will only have to train employees on one printer, which will free up employee's time.
- ***Enhanced printing capabilities:*** Network printers are designed to handle more complex and larger tasks with a higher quality than personal printers.
- ***Remote printing capabilities:*** Officials can print when out of the office.

## **10.7. IT Refresh Cycle and Centralisation of IT Budget**

**Timeframe:** 6 months – 3 years

### **Senqu Municipality Values**

- Good governance
- Accountability

### **Discussion points highlighted by Management:**

- The age of computers vary between 1 - 8 years.
- The age of servers vary between 1 - 4 years.
- The IT budget is currently decentralised i.e. each business unit is allocated a budget from which hardware and software is purchased.
- Business units are bypassing the IT department when procuring IT goods and services.

### **Approach:**

#### **Centralisation of IT Budget**

1. Council should consider centralising the IT budget for the purchasing of hardware and software for all business units and staff.
2. Once a decision has been made to centralise the IT budget, the IT department should be made responsible for monitoring and managing the budget for the entire municipality.
3. Senqu Municipality should formalise a process so that all IT related purchases are done through the IT department and approved by the IT Steering Committee.
4. This process then needs to be communicated to all staff and business units within Senqu Municipality.
5. The process should include a section where the needs of the requesting business unit are considered.

#### **Refresh Cycle**

6. The asset register should be used to identify all users with outdated computers.
7. Users with the most outdated computers must be refreshed first.
8. A refresh cycle needs to be established by Senqu Municipality after the IT budget has been centralised. The IT department should take responsibility for developing and implementing the refresh cycle.
9. Networking infrastructure should also be included in the refresh cycle.

10. We would recommend that all laptops and desktops are refreshed every 3 years and all servers are refreshed at least every 5 years.

**Supporting Information:**

**Centralisation of IT Budget**

During our interviews with key stakeholders, we have found that each business unit is allocated a budget from which hardware and software is purchased. Priorities are different for each business unit and as a result the age and specifications of computers varies from business unit to business unit. If the IT budget is centralised, computers and other related IT equipment across business units will be standardised and equipment refresh cycles within Senqu Municipality can be established.

A formalised IT procurement process within Senqu Municipality will yield the following benefits:

- Standardisation of all IT equipment.
- Guarantees on IT equipment.
- Discounts on bulk purchases of IT equipment.

## **10.8. Social Media**

**Timeframe:** 2 years

### **Senqu Municipality Values**

- Public Participation

### **Discussion points highlighted by Management:**

- Staff are prohibited from using social media platforms.
- The Municipality does not have a social media presence.

### **Approach:**

#### **Employee Use of Social Media**

1. Senqu Municipality should develop a Social Media Employee Usage Policy. It is recommended that organisations should engage with HR and legal counsel to update social media use policies.
2. The policy should be approved by Council and communicated to all staff within Senqu Municipality.
3. Senqu Municipality should consider opening-up social media sites before and after business hours as well as during the designated lunch break.
4. A social media training program should be developed to train employees on how to use social media responsibly as well as how to exploit social media as a valuable business tool.

#### **Municipality Use of Social Media**

5. Senqu Municipality should consider using social media platforms for the municipality. A decision must be taken on which social media platforms the municipality endorses.
6. A staff member should be given the responsibility to manage Senqu Municipality's presence on social media sites. The individual should be provided with Public Relations (PR) training to ensure that they respond in a courteous and responsible manner.
7. Senqu Municipality must ensure that responses to users' posts and queries are dealt with timeously should the municipality decide to have a presence on social media platforms.
8. Senqu Municipality should consider specialised social media monitoring tools to assist the organisation with monitoring and responding to posts on social media sites.

### **Supporting Information:**

The most popular social media sites are illustrated below.



The screen prints below show that other municipalities in South Africa have a presence on social media sites such as Facebook and Twitter.



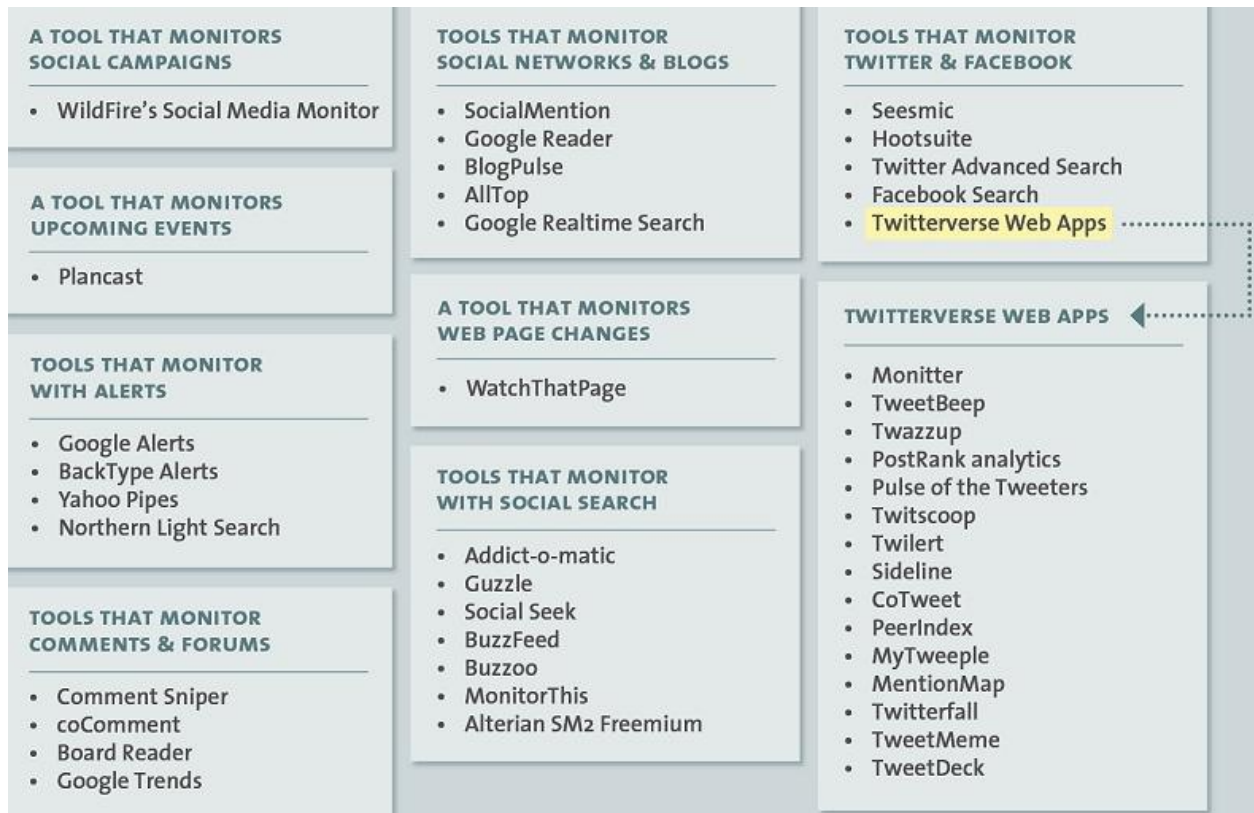




The diagram below illustrates user expectations regarding response times to posts on social media sites.



## Free Social Media Monitoring Tools



## Feedback Response Strategies

How and when you respond to comments is important. A timely response is imperative. Do not let something sit out there for days. Responding quickly demonstrates that you feel what your customers have to say is important. The staff member responding should be trained to use a consistent voice and brand response. Promptly respond to both positive and negative social media feedback.

### Responding To Positive Feedback:

- Be sure to “thank” the customer for their kind words; let them know you appreciate their feedback and look forward to continuing to serve them.
- Consider asking if you may share their feedback in social media or use it as a testimonial on your website and/or marketing materials.

### Responding To Negative Feedback:

- Always remain positive and do not get defensive.
- Respond as quickly as possible, but do not do so out of anger. Cool down first and take a deep breath!
- Reach out and let them now you take their concerns seriously and would like to discuss further via telephone or in person. Sometimes this diffuses the situation and also shows that you do care about how they feel.

- Listen and learn – perhaps the person complaining does have a legitimate reason! This can provide you with valuable insight into your offerings and customer service. If there truly is a weakness, now you know and can address it.
- Make amends – ask the customer what it is you can do to make it right. If their request is reasonable, then do it.

All social media feedback, good and bad, can help you better understand your services. If followers continually compliment or complain about a particular service or employee, use what they say to help guide your business strategy. Think of social media as your own “focus group”. Organisations pay a lot of money to gather insights from traditional focus groups. Social media puts one right in the palm of your hands! Used wisely, social media can become a very powerful marketing tool for your organisation.

Source: [www.maximizesocialbusiness.com](http://www.maximizesocialbusiness.com)



## **10.9. Improvement to Existing Systems**

**Timeframe:** 6 months – 1 year

### **Senqu Municipality Values**

- Good governance
- Accountability

### **Discussion points highlighted by Management:**

- Email sending and receiving limits are set between 2mb and 5mb.
- Users have indicated that the antivirus solution (Sophos) is not removing all malware from computers and portable storage devices.
- Sebata has a limit on the number of characters that can be entered when creating technical specifications for quotes or tenders. As a result, incorrect items are ordered and cannot be used.
- After some employees have scanned in using the biometric fingerprint reader, the time and attendance system records them as absent. Thereafter, HR has to confirm whether these employees were absent from work.
- The Time and Attendance and Payroll systems are not interfaced.

### **Approach:**

1. Senqu Municipality should consider increasing its mail file limit to at least 10mb for all users after increasing network speeds.
2. The Municipality should investigate the issues experienced with Sophos and resolve these issues as a matter of urgency in order to protect the Municipality against malware and virus threats. According to Gartner, Sophos is one of the leaders in terms of antivirus service providers.
3. The limits set on field characters within Sebata should be increased to allow users to enter full length descriptions when creating technical specifications for quotes or tenders.
4. The issues with the Time and attendance system should be investigated and resolved as a matter of urgency with the vendor.
5. The Time and Attendance System and Payroll System should be interfaced to reduce the time spent reconciling the data on the systems. This should only be done once issues with the time and attendance system have been resolved.

### **Supporting Information:**

#### **Antivirus**

We have reviewed the Gartner Magic Quadrant for Endpoint Protection Platforms and noted that Sophos is one of the Leaders in terms of antivirus service providers.



## **10.10. Upgrade of the Server Room**

**Timeframe:** 1 – 3 years

### **Senqu Municipality Values**

- Good governance
- Accountability

### **Discussion points highlighted by Management:**

- The Municipality is exposed to the following environmental risks due to inadequate setup of the server room:
  - The server room walls are insulated with polystyrene.
  - The server room has 2 entrances protected by wooden doors which is accessed by lock and key.
  - There is no temperature monitoring system in place.
  - The smoke detectors are not functioning as per discussion with the IT staff members.
  - The floor is covered by carpets.
  - The server room does not have a raised floor.
  - A water detection system is not in place.
  - There is no fire suppression system in place.
- The time and attendance system is housed in an office in the Human Resource Department.
- Some network infrastructure components are housed in cupboards which general staff can access. These cupboards do not have any locking mechanism.

### **Approach:**

1. The server room should be adequately protected against physical security and environmental threats. As such, Senqu Municipality should consider upgrading the server room whilst ensuring that the following physical security and environmental controls are in place:
  - 1.1. The walls of the server room should be fire-proof.
  - 1.2. A fire-proof door should be installed.
  - 1.3. A biometric finger print reader should be installed to control access to the server room.
  - 1.4. The entrance from the secretary's office should be sealed off with brick and mortar.
  - 1.5. A temperature monitoring system should be installed that will alert the IT Manager if the temperature rises too high or when the smoke detectors are activated.
  - 1.6. The smoke detectors should be repaired and made fully operational.
  - 1.7. A raised floor should be fitted in the server room.
  - 1.8. A water/moisture detection system should be installed in the server room under the raised flooring.
  - 1.9. The carpet flooring should be removed and replaced with anti-static floor finishing.
  - 1.10. Hand held fire extinguishers should be installed both inside and outside of the server room.
  - 1.11. A fire suppression system that is safe for computing systems should be installed.
2. The Municipality should ensure that all IT systems are housed in the server room.
3. Locking mechanisms should be installed in all cupboards containing network infrastructure components.

### **Supporting Information:**

## **Ambient room monitoring**

Ambient room monitoring is the environmental monitoring of the room for its humidity and temperature levels. Temperature and humidity sensors are typically deployed in:

- potential “hot zones” inside the server room or data center
- near air conditioning units to detect failure of such systems.

When multiple air conditioning systems are available in a room, then a failure of one system will initially be compensated by the others before it may lead to a total failure of the cooling system due to overload. As a result temperature / airflow sensors are recommended near each unit to get early failure detection.

Humidity in server rooms should be between 40% and 60% rH. Too dry will result in the build-up of static electricity on the systems. Too humid and corrosion will start slowly damaging your equipment resulting in permanent equipment failures.

Temperature monitoring is of utmost importance as a failing air conditioning unit will have a way faster impact on the systems lifetime and availability (fans stress, CPU overheating) and running a room at higher temperatures may also affect non rack mounted equipment.

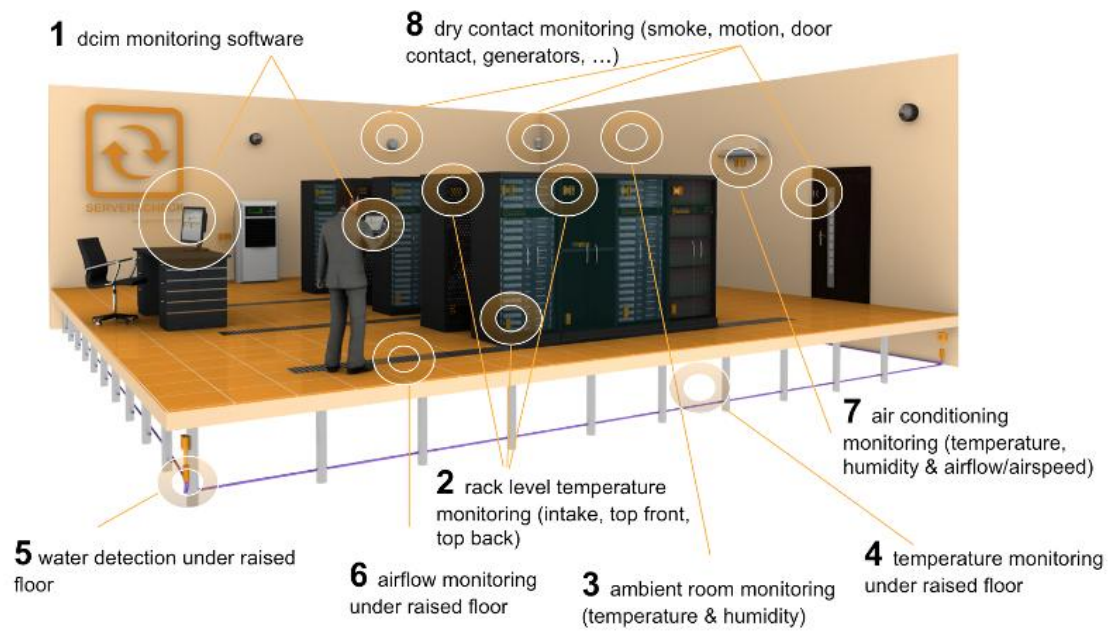
When using hot corridors it is important to monitor temperature across the room to ensure that sufficient cold air gets to each rack. In this case however one can also rely on rack based temperature sensors in addition of temperature and humidity sensors close to each air conditioning unit.

## **Water & Flooding Monitoring**

The four main sources of water in a server room are:

- Leaking air conditioning systems: a water sensor should be placed under each AC unit
- Water leaks in floors or roof above the data center & server room: water sensors should be put around the perimeter of the room at around 50cm/3ft from the outer walls
- Leaks of water pipes running through server rooms: a water sensor should be placed under the raised floors
- Traditional flooding: same as second point for water leaks from roof or above floors applies

The diagram overleaf illustrates best practices for Data Center Infrastructure and Server Room Environmental Monitoring.



Source: [www.serverscheck.com](http://www.serverscheck.com)

## **10.11. Customer Care and Helpdesk Management**

**Timeframe:** 1 year

### **Senqu Municipality Values**

- Good governance
- Accountability
- Public Participation
- Responsibility

### **Discussion points highlighted by Management:**

- A hotline number exists which customers can use for account queries and fault reporting, however, details of calls received are recorded in MS Excel.
- Some customers are bypassing the hotline number and are calling technicians directly to resolve faults.
- The call log is stored on a user's local drive.
- IT service calls are recorded on manual forms.
- The response times from the IT department to resolve IT related problems is inadequate.

### **Approach:**

1. The hotline number should be marketed to all customers. This number should be used by customers to log calls related to billing enquiries and reporting of faults.
2. Senqu Municipality should consider implementing software for logging and tracking customer calls.
3. Customer Care Agents must be able to register the customer's query and provide the customer with a reference number generated by the system.
4. The reference number should be provided to a customer for any unresolved query as it serves as proof of a customer having lodged a query. The reference number should be used to facilitate follow-ups and escalation of the query if it has not been resolved.
5. Senqu Municipality should enforce the use of the hotline number by only accepting queries that are logged using the hotline number.
6. The customer care module should be extended to internal staff for logging and tracking IT service calls. An individual within IT should be assigned the responsibility for monitoring IT service calls.
7. Management should establish metrics to monitor and track IT service calls logged by users.
8. Reports should be drawn from the system to evaluate the performance of IT.

### **Supporting Information:**

The Customer Care Centre should:

- Serve as the conduit for receiving feedback regarding the quality of services.
- Provide information to customers on the costs involved in service provision, the reasons for the payment of service fees and the manner in which monies raised from services are utilised.
- Serve as the point at which queries regarding accounts may be submitted and shall deal with such queries.
- Serve as the point at which complaints may be submitted and shall respond to such complaints.

## **10.12. Maintenance Management**

**Timeframe:** 2-3 years

### **Senqu Municipality Values**

- Public Participation
- Responsibility

### **Discussion points highlighted by Management:**

- Infrastructure and maintenance management is a manual process.
- Job cards are paper based.

### **Approach:**

1. Activities such as maintenance planning, generation of job cards and inventory management should be automated.
2. Senqu Municipality should consider implementing Ingress Protection (IP) rated rugged handheld devices that can be used in conjunction with the maintenance management software to be implemented.
3. Handheld devices will enable field workers to complete job cards electronically whilst out in the field and ensures that field workers complete the necessary documentation immediately. These devices will improve efficiency of field workers as it will provide critical information that field workers require such as the location of pipes, valves and hydrants. Management have indicated that GPS co-ordinates are available on the GIS system for infrastructure in the field.
4. Field workers should receive adequate training on using handheld devices for receiving and completing job cards.
5. Sebata have indicated that they can provide modules to assist with maintenance management, however, we recommend that management consult with other municipalities that have implemented the maintenance management module of Sebata. We would not recommend that Senqu Municipality be the first municipality to implement this new module of Sebata.
6. The municipality should also evaluate other maintenance management systems available before making a final decision.

### **Supporting Information:**

#### **Ingress Protection (IP) Ratings Explained**

- IP65 Enclosure - IP rated as "dust tight" and protected against water projected from a nozzle.
- IP66 Enclosure - IP rated as "dust tight" and protected against heavy seas or powerful jets of water.
- IP 67 Enclosures - IP rated as "dust tight" and protected against immersion.
- IP 68 Enclosures - IP rated as "dust tight" and protected against complete, continuous submersion in water.



### **10.13. Establishment of Super Users**

**Timeframe:** 6 months

#### **Senqu Municipality Values**

- a. Good governance
- b. Teamwork

#### **Discussion points highlighted by Management:**

- a. IT staff are heavily reliant on service providers to assist end user with IT related problems.

#### **Approach:**

- a. Senqu Municipality should identify and train super users within each business unit.
- b. Super users should be responsible for first line support and training for general users on business applications.
- c. Super users should be involved in the implementation process of applications being deployed or upgraded.

#### **Supporting Information:**

Super users have extensive knowledge of systems utilised by their business unit. They are the champions whom users seek advice from for any system related queries and issues. Super users are responsible for providing tips and shortcuts to users, as well as teaching new employees how to navigate the system.

The typical characteristics of super users are as follows:

- a. Have extensive knowledge of business processes.
- b. Are able to learn new concepts quickly.
- c. Are willing to assist others when they encounter issues.
- d. Have been at the organisation for a long time.

## **10.14. IT Governance and IT Security**

**Timeframe:** 1 – 4.5 years

### **Senqu Municipality Values**

- Good governance
- Accountability

### **Discussion points highlighted by Management:**

- An IT Governance Awareness campaign has not been launched.
- IT Security Awareness Training has not been provided to staff.
- Users have the option to access their email from the internet, without the use of VPN, which could result in unauthorised access to sensitive information.
- Councillors have been provided with laptops by the Municipality, however, these laptops are not being updated with the latest security patches and antivirus updates. As a result, the Municipality is vulnerable to security breaches.
- It was further noted that computing devices and removable media are not encrypted.

### **Approach:**

1. An awareness campaign for IT governance and IT security should be developed and launched.
2. The rollout of the awareness campaign should be driven by Council.
3. Metrics should be established to measure the awareness levels across the organisation.
4. Training should be an ongoing effort constantly raising the awareness of IT governance and IT security to staff members.
5. The IT Policies, IT Charter and IT Governance Framework that have been developed should be approved by Council. Once approved, these documents should be implemented, communicated and enforced.
6. In addition to IT policies, IT Procedures should be developed to document “how to” accomplish specific IT tasks or use IT services on a day to day basis.
7. Users should be trained on IT policies and procedures once approved by Council.
8. The functionality whereby users can access email directly through the internet should be disabled. The Municipality should only allow users to access email via the VPN.
9. Service providers should be granted access to systems as and when required. Access should only be granted for a limited period of time. The Municipality should ensure that change management policies and procedures are updated to cater for granting service providers access for a limited period of time.
10. All IT equipment owned by the Municipality should be supported and maintained by the IT department. This will ensure that the Municipality’s IT equipment is up to date with the latest

security patches and anti-virus updates. In addition, all computing devices and removable media should be encrypted.

## Senqu Municipality Approval and Sign-Off

Date of Approval by Council: 28 July 2017

Effective Date: 1 July 2017

Resolution Number: 019/OCM/17

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**MM YAWA**

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**DATE**

**MUNICIPAL MANAGER**

### RECOMMENDATION

That the report be noted,

That the IT Strategy as part of the ICT Corporate Governance Framework be approved by Council.