

R E P O R T

Information Technology Master Plan

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Prior & Prior
Associates Ltd.

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Executive Summary

Introduction

The development of an IT Master Plan provides the opportunity to review how services are delivered and how technology is perceived at the Town. It provides the opportunity to assess what changes are required to re-position both the IT department and prioritize among technology enabling solutions.

The consultants used several techniques to understand the current state of IT at New Tecumseth and identify needs and opportunities for improvement. Interviews were conducted with the IT team and GIS staff, and a technology walkthrough and document review provided the information for the infrastructure and organization assessments.

Stakeholder interviews were conducted with the CAO, GMs, and 10 department heads and their teams. The CEO of the Library and two councillors were also interviewed. An online survey was made available to all staff which yielded 130 responses from a broad spectrum of departments and roles. Existing comparative data was re-used to position New Tecumseth relative to its peers.

Key Observations

Throughout this phase of the project a number of key issues were identified including the following deemed to be critical to the organization:

1. There is pent-up demand for new technology solutions. Many business leaders see opportunity for efficiencies, improved effectiveness and better management practices in technology. Spreadsheets, Access databases and interim GIS-based applications no longer meet their needs
2. There is no formal process for documenting and prioritizing these projects. To date, solutions have been sought by individual departments, often with little awareness of similar needs in other departments
3. IT is acting as a utility provider, but not as a partner in the utilization and optimization of technology. Departments want advice on new technologies, but the IT resource has little time for research and strategizing
4. The focus on low/no cost solutions has created complexity and risk in the technical environment
5. There is need for more complete and formal corporate policies, processes, or procedures to address core operational activities

Strategic Directions

This comprehensive master plan should act as a guiding framework for priority setting and decision making regarding technology. Recommended strategic directions are:

1. **Enable business improvement** – build capability in IT and throughout the organization to support the implementation of technology
2. **Improve technology management** – develop governance, policy, procedures, standards and service definitions
3. **Maximize value from IT investments** –review recent implementations for opportunities to get more value
4. **Invest in New Business Technologies** – help operating departments move to the next level with robust, integrated and sustainable new technologies
5. **Reduce business and information risk** – strengthen the IT foundation with improved practices, better technologies and plans for risk management
6. **Align the IT Service** – Build IT capability and capacity to match the demand. Budget for out-tasking infrequent, technical services and leverage partnerships and shared service offerings.

1. Introduction

1.1 Background

The Town of New Tecumseth was formed on January 1, 1991 through an amalgamation of the Township of Tecumseth, Town of Alliston, and the Villages of Beeton and Tottenham. The Town is growing rapidly, recently surpassing a population of 30,000, in line with a projected population of 60,000 by 2030. The demographics are changing as well, with an influx of younger generations expecting big city services with modern and mobile customer experiences offered on their favourite devices.

The Town recognizes the value of technology in enabling efficient and effective service delivery. Operating departments are keen on acquiring new technology to support modernization and streamlining of their processes, some developing interim applications to improve key parts of processes.

Technology is core to enabling municipal governments to keep up with growth in demand and rising customer expectations. Traditional technologies such as telephones, email, and networked file folders remain important. But as municipalities grow, spreadsheets and single purpose databases that have worked for improving parts of processes in the past offer little opportunity for additional value.

The next level of efficiencies and effectiveness come from comprehensive business solutions that support complete, interdepartmental workflows, eliminate data duplication, improve customer service, and deliver powerful and integrated information for the next level of sophistication in business management. The Town of New Tecumseth is at this stage. The IT unit's capabilities and capacity to plan, lead the implementation, and sustain new solutions need to match.

This Information Technology Master Plan assessed the current state of technology, needs and opportunities as well as the capabilities and capacities of the IT organization. It answers fundamental strategic questions:

- Are we doing the right things with technology?
- Are we making the right technology investments?
- Is our Information Technology environment properly managed, maintained, secured, and able to support the clients?
- Is it cost effective?
- What are our future business needs?
- Is our technology environment equipped to meet current and future business needs?

The plan proposes a vision where the Town of New Tecumseth's IT will be a trusted partner in enabling and sustaining business improvements through technology. The IT organization and the whole organization's use of IT will be focussed on six strategic goals and 22 specific, measurable, action-oriented, realistic and time-bound objectives that are achievable through 28 strategic actions initiatives to be completed over the next 5 years.

1.2 Developing this Strategy

The Town engaged Prior & Prior Associates to develop this strategy beginning in November 2016. Consultants worked with the IT team and representatives from all departments and the Senior

Management Team (SMT) to conduct a current state assessment of the Town's use and management of technology, and to identify future corporate and departmental technology needs. The project was comprised of two phases:

Phase 1: Discovery consisted of a high level review and assessment of the current status of infrastructure, use and management of IT at the Town. This was completed through a review of existing documentation such as budgets, policies and procedures as well as interviews and discussions with management and staff from the IT department, SMT, and representatives from every department including the Library. Two Town councillors also provided insight and strategic positioning. The Manager of IT at Simcoe County was also interviewed for background information and opportunities for partnerships. An online survey was offered to all staff to gather input and feedback about the current service delivery of the IT Department, future requirements, and suggestions for improvements. Detailed technical assessments of the network and storage environments were conducted, alongside an over-arching risk assessment. The findings were consolidated into an interim report which was reviewed by the project team.

Key outputs were:

- Summary of findings (technical and business)
- Comparison of the Town to other organizations
- Results of the Customer Satisfaction Survey
- Emerging opportunities for improvement

Phase 2: Analysis, Opportunities, Recommendations and Implementation Roadmap included more detailed discussions with the IT Department, research on the future of the Microsoft Great Plains financial system, and formulating strategic themes from the many inputs received. Each of the 6 strategic goals yielded a set of 3-5 objectives that prescribe specific steps or enablers of the goals. The goals and objectives were clearly defined and Strategic Actions or projects were conceived to achieve one or more of the objectives. The alignment is illustrated in a strategy map, and linkages are carried through to project descriptions.

Key outputs were:

- IT vision
- Organization Design and Positioning
- Strategic Goals, Objectives and Actions
- Portfolio of Recommended Projects including descriptions and costs
- Implementation Roadmap with Timelines

1.3 Strategic Alignment

The IT Master Plan 2017-2022 has been guided by the aspirations and action statements of the Town's current Strategic Plan. One of the Objectives of *Steps to the Future* is to **provide accountable, responsive governance and excellence in service delivery**. Several of its related Strategic Actions in turn require information and technology.

Staff who were interviewed demonstrated a strong familiarity and commitment to these strategic actions. Many recognized that they operated in silos with little knowledge of what each was planning or doing with technology nor what was possible with service integration. Most mentioned that a richer intranet was required with easy access to frequently used service and policy information. Others suggested collaboration tools and improved document sharing. Almost all said they needed a better internet, with timely information and streamlined, distributed content management. The Town had already planned a web update project, and it is appropriately aligned with the Town Strategy.

The strategic focus on the customer was also evident in the interviews, with IT needs of business departments usually rooted in a desire to improve the efficiency and effectiveness of service provision, or to improve the customer service experience.

New technology is needed to streamline processes, reduce duplicate data entry, and facilitate paperless workflows across departments. We recommend significant investments in robust municipal business systems to deliver more customer value and reduce the cost and time of administration.

Many departments also seek to put some aspect of their businesses online. There may be some opportunity for quick wins with online forms and manual fulfilment, but for the most part, new foundational business software is needed to support e-services. The good news is that e-services and mobile apps are common features of most modern government business applications. The IT Master Plan considers e-services and mobility as key capabilities to seek in new business solutions.

Staff also identified a need to improve timeliness and flexibility of social media communications. They hear citizens expecting to subscribe to various channels and discussions, and expecting the Town to push information in a timely and effective manner and respond to what people are saying and asking. Apart from a few tools for the communicators, the key enablers of a good social media presence are not technology. They are policy, training and resources.

STEPS TO THE FUTURE
TOWN STRATEGY 2013-2018
Strategic Actions

- **Enhance communications**
 - *internet and intranet*
 - *regular communications to the public and staff*
 - *multiple communications channels*
- **Empower customer-focused accountable workforce**
 - *Invest in workforce development and tools*
- **Promote customer service excellence**
 - *customer service best practices*
 - *enhanced internal and external communications*
 - *flexibility to meet customer needs*
- **Pursue joint ventures and partnerships**
 - *harmonious relationships with other levels of government, agencies*

1.4 Enablement of KPMG Service Review Recommendations

The IT Master Plan 2017-2022 is also seen by staff and councillors as an enabler of some of the KPMG Service Delivery Review recommendations. In 2015 KPMG identified 7 focus areas for improvement. Information and technology are key enablers for four of them.

COMMUNICATION

KPMG identified an opportunity for the Town to be more proactive in its communications and strengthen its online social media presence to better reach residents and streamline service requests. The opportunity to improve communications was confirmed in this IT assessment, including external and internal across departments, and particularly about IT. Recommended actions include completing the in-flight web refresh project and using some of its resources to refresh the intranet, and acquiring multi-media tools and social media management. Internal collaboration tools are also recommended for future communication improvement.

ENABLING TECHNOLOGY

KPMG observed that the Town had made efforts to leverage IT to improve its processes and service delivery, but that overall technology was underutilized. This project found many opportunities to use technology to enable streamlining and modernization of processes, customer service interaction and quality, efficiency and effectiveness of service delivery operations. Key projects include reviewing the new Finance system for additional capabilities, upgrading the Work Management system and Land and Development Management system, and implementing a Customer Relationship Management system.

STANDARDIZED OPERATING PROCEDURES AND PRACTICES

KPMG recognized that internal processes are manual and isolated or siloed and vary across departments. This project focussed on IT policies and procedures and recommends a set of core policies and procedures that need to be documented, published and maintained. Matching IT service offerings to client expectations and documenting them through simple agreement documents is also recommended as a first step toward improving the quality of service delivery and client satisfaction. Since formalization and documentation of processes and services was seen by KPMG as needed across most departments, this strategy recommends building a new business analysis capability, with a practice lead in IT to guide and support future process improvement projects.

TRAINING AND SUPPORT

KPMG found the organization's approach to training and development to be ad hoc. There was a consistent theme that the organization's performance was being limited by the inconsistent and ad hoc nature of its training and development. This finding was confirmed in this project, with many stakeholders suggesting that they know there is more capability in their existing technology that they just don't know about or know how to use. Before the Town gets started on a series of new technology implementations, we recommend that training requirement assessment be standardized, training plans be formalized, and projects resourced and scheduled to include higher levels of initial training and follow-up training.

2. The Current Situation

2.1 Business Context

The Town is under pressure to make more and better use of technology. The IT organization is under pressure to make it happen. Key drivers are:

Pressure/Business Driver	
Changing Community	<p>Recent and future population growth (18k-60k by 2030) - triple service demand</p> <p>New customers with big city demands - online services, public network access, social media</p>
Drive for Service Efficiencies and Effectiveness	<p>Departments are eager to get on with making more and better use of information technology as recommended by the KPMG Service Review</p> <p>This has created competing priorities for limited IT and project resources</p>
Rapid change in the IT industry	<p>Proliferation and consumerization of human interfaces and “Internet of Things” (smartphones, tablets, AVL, meters, counters, security)</p> <p>New software and platform provisioning options – public cloud, private cloud</p>
New and expanding risks	<p>Relentless external and internal threats to systems and data from hardware and network failure, software errors, hacking, theft and malice.</p> <p>Business continuity and disaster recovery planning are needed to detail the risks and mitigation strategies – best practice</p>

2.2 Technology and Practices Assessment

2.2.1 OVERVIEW

Figure 1 summarizes our assessment of technology practices, infrastructure and systems currently in place at New Tecumseth. It gives a high level snapshot of where work needs to be done to enable efficiency, effectiveness and quality in municipal service delivery.

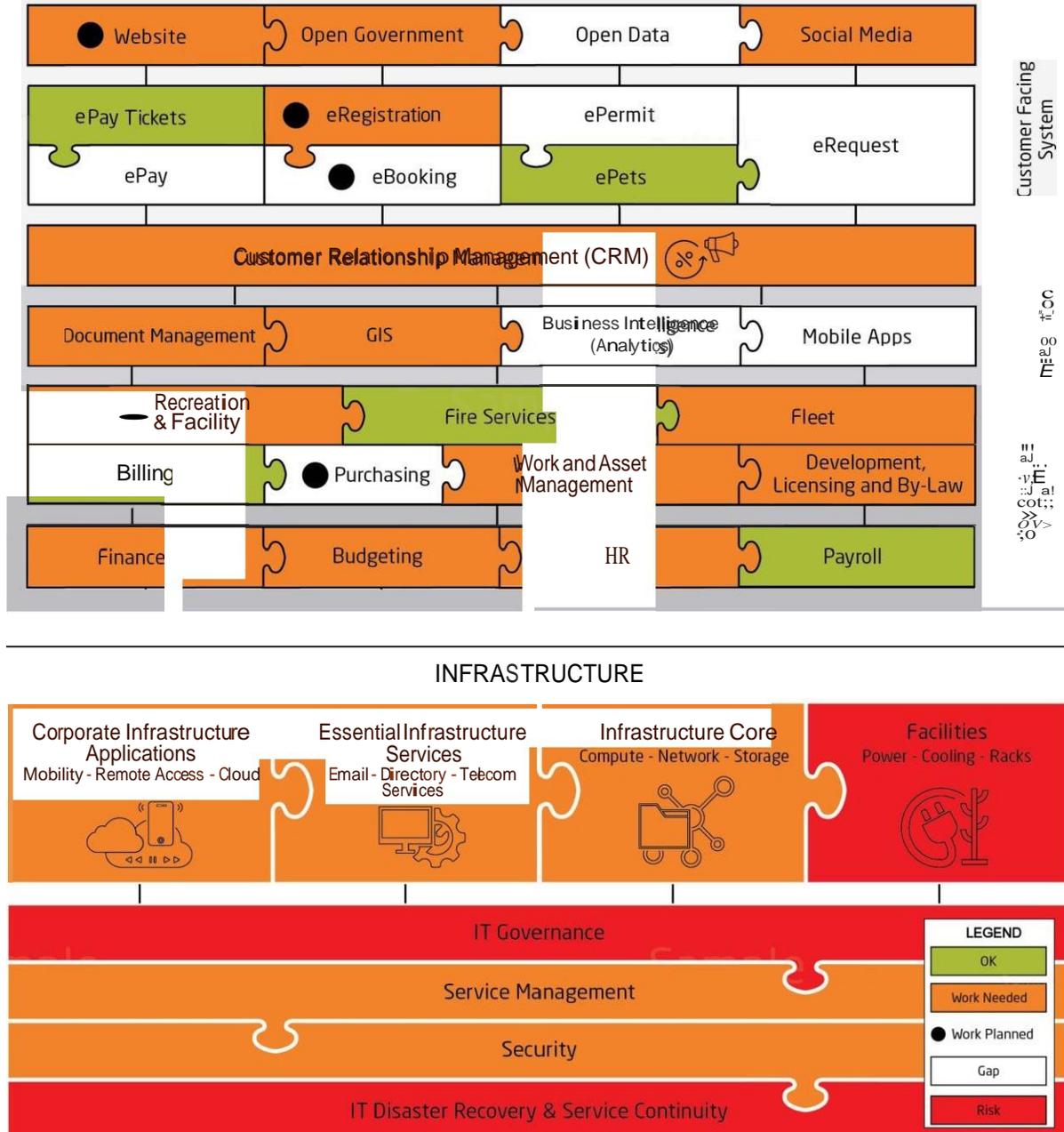


Figure 1: Technology Assessment Summary

The diagram shows key foundational capabilities and technologies commonly found in municipal government. The elements are organized into four layers. Each layer represents distinct areas of technology that are managed in different ways, and which require different technology and human skill sets to manage effectively. The layers are:

- The **Infrastructure** layer is the foundation. It must be robust and reliable as it forms the base on which all other layers are built. If the infrastructure is not robust, the layers built on top of it are at risk
- The **Major Business Systems** layer which forces focus on a small number of rationalized corporate business systems (referred to as ‘the pillars’) in order to simplify systems management, and eliminate process and information silos. These business systems provide the foundations for automated business processes and will enable online services.
- The **Integration** layer coordinates information managed within the business solutions, reducing duplicate data entry and eliminating errors, while also providing insights into the underlying data.
- At the top of the stack are the **Customer Facing Systems** that enable customer interaction with the Town– the website, online services and social media.

The colours indicate the consultants’ high level assessment of the current state of these systems, processes and services at the Town of New Tecumseth. Details and rationales follow.

OK	The systems and processes meet the current and near-term needs of the stakeholders
Work Needed	There are systems and processes in place but they do not meet the level of business enablement needed for efficient, effective and quality service
● Work Planned	The Town has recognized a need and has budgeted or initiated projects to complete needed work.
Gap	There is little or no technology capability in this area. These represent opportunities to implement new core technologies to improve service
Risk	Key elements are missing or outdated, and as foundational infrastructure components, create risk for the entire technology capability.

2.2.2 INFRASTRUCTURE LAYER

Starting at the base of the architecture the assessment indicates that IT has taken many good steps toward building and sustaining the infrastructure and its services. Most of the focus areas such as service management, security, infrastructure applications and core hardware and services are meeting basic needs. The IT unit has made effective use of free and low cost tools and components, however limited functionality and robustness of these solutions creates opportunity for improvement as the organization’s dependence on technology increases.

Three areas within the infrastructure layer are significant risks to the entire technology architecture at New Tecumseth.

- **IT Governance** is ad hoc, with technology acquisitions reviewed and approved only through the budget process. Projects are often developed in siloes, and with little engagement of IT for advice, impact assessment or architectural fit.
- **Disaster Recovery and Service Continuity** are also emerging risks. As customer expectations for timely services increases, the Town needs to understand its business resumption requirements and tailor its infrastructure capabilities to match.
- **IT Technology Facilities** are also at risk, with servers and switches accessible to staff, guests and posers. While there is merit to limiting expenditures on renovations, the risks of theft, theft of private data, manipulation of records and accounts, installation of malware, and physical destruction should not be underestimated.

Infrastructure Layer	
IT Governance	<ul style="list-style-type: none"> • Technology acquisition process – ad hoc, siloed, roles and decision rationales unclear, no prioritization, no policy, procedures. rogue solutions popping up, IT sometimes the last to know • Decision-Making – there is no multi-departmental body to manage the portfolio of IT projects and provide authority and oversight to IT policies and procedures
IT Service Management	<ul style="list-style-type: none"> • Helpdesk – Although a ticketing system is in use (Spiceworks) there is limited issue tracking and performance measurement • Incident Tracking – There are no formal processes in place for incident tracking • IT Asset Management – There is manual tracking of IT assets in a spreadsheet • Knowledgebase – there is currently no formal knowledgebase in place to capture historical ticket resolution

IT Security	<ul style="list-style-type: none"> • Security Standards <ul style="list-style-type: none"> ○ There are currently no formal security standards in place, although some risk mitigation tactics are used ○ Emerging risks include: <ul style="list-style-type: none"> ▪ Software installation ▪ Secure Development ▪ Security Testing • Vulnerability Assessment <ul style="list-style-type: none"> ○ Last conducted in 2007. ○ Numerous vulnerabilities were identified in the report in the areas of Operations and Systems – some outstanding include open server access, information security policy although strong passwords have been required, change control. ○ Hacking is a relentless, complex threat and vulnerabilities need to be updated and addressed • Directory Services - Group Policies appear to be in place with no formal supporting documentation
IT Disaster Recovery & Service Continuity	<ul style="list-style-type: none"> • Backup and Recovery – systems are currently backed up using Backup Exec software with a standard incremental/full backup methodology – recovery testing needed • Data Protection – Near-line Network Attached Storage (NAS) is used to protect files which are then replicated to the Operations Centre NAS for offsite file-level protection. • Disaster Recovery Strategy – there are currently no formal plans in place to address the recovery of IT systems in the event of an outage. • Service Continuity – There are no formal recovery procedures in place for IT systems in the event of a server outage or data storage system failure.

Infrastructure Layer	
Corporate Infrastructure Applications	<ul style="list-style-type: none"> • Mobile - There is no formal mobility strategy <ul style="list-style-type: none"> ○ Limited functionality from free version of Meraki for mobile device management ○ Appears to be a “loose” COPE (Corporate Owned, Personal Enabled) model– personal and business content mixed • Remote Access - Nothing formal in place yet for remote access but a VPN solution is ready to be implemented once management approves the project <ul style="list-style-type: none"> ○ Limited use of Remote control of desktops/servers via RDP/VNC – needs policy • Anti-virus (AVG) on all desktops and servers
Essential Infrastructure Services	<ul style="list-style-type: none"> • Email – recent migration to Microsoft Office 365 Exchange has strengthened this service and provided remote access • Directory Services - Group Policies appear to be in place with no formal supporting documentation • Telecom- recent implementation of Voice over IP phone system has simplified internal calling
Infrastructure Core	<ul style="list-style-type: none"> • Compute - Servers and Desktops <ul style="list-style-type: none"> ○ 185 users ○ 125 desktops, 60 laptops – 5 year sustainment program maturing – long for laptops ○ 55 desktops at the library – not all Tier 1 quality, some more than 7 years old ○ Servers Virtualized with VMware v5.5 – efficiencies realized ○ No sandbox for testing • Network <ul style="list-style-type: none"> ○ Tottenham at 6Mbps is somewhat slow <ul style="list-style-type: none"> ▪ Has grown from 1 PC to 6 all running CLASS, plus public Wi-Fi

	<ul style="list-style-type: none"> ○ Point2Point put up wireless towers <ul style="list-style-type: none"> ▪ Appear to be ok but limited bandwidth due to location of remote sites – under review ○ Currently the Town has Wi-Fi for staff at the Town Office and the JOC as well as other Wi-Fi hotspots at the depots, fire halls and museum <ul style="list-style-type: none"> ▪ These are not managed solutions ▪ Public Wi-Fi at two of the recreation facilities and only one is a managed solution. ○ Complaints are common in regard to the bandwidth and reliability for the public Wi-Fi and the corporate version is hard to manage due in part to it not being a managed solution ● Storage <ul style="list-style-type: none"> ○ IT does not have a firm handle on the current utilization of storage and true capacity requirements ○ There are no data management processes in place to manage data growth ○ Town has a 10TB (RAW) EqualLogic SAN (iSCSI) that connects to an 18TB near-line QNAP NAS. <ul style="list-style-type: none"> ▪ SAN ~60% utilized ○ IT unsure of the age of files – need guidance from data management policy
<p>Facilities</p>	<ul style="list-style-type: none"> ○ The server room is multiuse and is NOT secure ○ Racks have sufficient capacity since virtualization ○ There is no generator to address power outages ○ UPS provides 20-30 minutes (short outages only) ○ Moving to a new building in 2018/2019 so there will be limited \$\$ spent on existing facility – investigate colocation opportunities

2.2.3 MAJOR BUSINESS SYSTEMS LAYER

The next layer of the IT model summarizes the current situation and highlights opportunities to use or improve technology in the business functions most important to municipal government. The Town has made recent investment in the core administrative systems including Finance, Budgeting, HR and Payroll. A little more work needs to be done to maximize the value from these systems and provide a sound business information foundation on which to build operational and customer facing systems. Payroll is working well.

Two other major systems that most municipalities the size of New Tecumseth use are Asset and Work Management, and Development, Licensing and By-Law Administration. Both are integrated suites that support clusters of work: building and maintaining the Town’s assets, and building a great place to live, work and play. They streamline and execute automated workflows for customer facing processes such as service requests and building permits, and provide integrated views of customer and case data to all who need it. The business units are ready and asking for this kind of technology: some have built interim applications for parts of these processes. These should be considered high priority investment opportunities.

The Town has already recognized that it should be achieving efficiencies in its purchasing and requisition processes. A project to implement a purchasing add-on to the Microsoft Dynamics Great Plains is underway. Similarly the Town has a project underway to replace the Class Recreation Management System. This replacement has been necessitated by the discontinuance of the product and support at the end of 2017. Billing and Fire service management systems are working well, while Fleet and Fuel are managed with spreadsheets and complex accounting. Needs are fairly basic and may be met with an integrated module on a work management system.

Major Business Systems Layer		
Finance		<ul style="list-style-type: none"> • Recent implementation of Diamond Municipal Suite including MS Dynamics Great Plains Finance • Implementation delays have created a backlog of outputs, reduced departmental access and value • Reporting is considered limited but there may be untapped potential in the Smart List function • Implementation should be reviewed to identify missed value and validate data structures and configuration before doing more add-ons
Budgeting		<ul style="list-style-type: none"> • Users happy with streamlined budget preparation capabilities • Many noted limited reporting capability – opportunity for more training

<p>Human Resources</p>	<ul style="list-style-type: none"> recently implemented this component to replace InfoHR – some challenges in adoption leading to continued use of legacy system – information risk additional functionality needed - resumes, performance, certification management
<p>Payroll</p>	<ul style="list-style-type: none"> Diamond Payroll and Penny Timesheet add-on Online timesheet submission and approval workflow – meeting needs
<p>Billing</p>	<ul style="list-style-type: none"> Meeting needs Need interface from parking ticket management system
<p>Purchasing</p>	<ul style="list-style-type: none"> Receipting process manual Purchasing not tied to accounts payable (improvements in progress with the implementation of WorkPlace) Contract administration not well supported
<p>Asset and Work Management</p>	<ul style="list-style-type: none"> Work Order Management <ul style="list-style-type: none"> Access- based Request for Service/Work order database – needs enhancements, but no one to do it No integration with asset inventory or customer databases Opportunity to use Customer module for the enterprise Web Works Maintenance Management <ul style="list-style-type: none"> cloud based application used primarily for Water and Waste Water facilities and equipment preventive maintenance – ok but needed in other areas Asset management - spreadsheet, limited lifecycle management information and functionality Capital Project Management – spreadsheet – limited ability to demonstrate that money is spent in right place at the right time
<p>Development, Licensing and By-Law</p>	<ul style="list-style-type: none"> Development Application Tracking – increasing volume make current manual intake processes and workflows unsustainable <ul style="list-style-type: none"> Interim in-house development tracking system based on GIS covering basic needs - require more reporting concurrent reviews and approvals needed

	<ul style="list-style-type: none"> ○ need more frequent updates of GIS data to Fire dispatch ● Licensing – application and approval processes, currently manual ● Building Permits – interim application based on GIS system – described as finicky, payment not integrated ● By-Law-Enforcement – currently deploying interim GIS based system – limited functionality and some usability problems – opportunities for efficiencies with mobile devices limited
<p>Recreation and Facility Booking</p>	<ul style="list-style-type: none"> ● Class Recreation Management System (on premise) <ul style="list-style-type: none"> ○ Provides programming and registration for recreation and leisure opportunities ○ Provides facility booking ○ Provides Point of Sale system for memberships and cash transactions ○ End of support of legacy system at end of 2017 ○ Replacement in progress
<p>Fire Services</p>	<ul style="list-style-type: none"> • Existing Fire House system meets needs for incident, inventory, accountability, prevention and inspection • Has critical requirement for Training Management - purchased own solution – start-up quality meets current needs – consider for enterprise learning management requirements or upgrade this one • Need to better document volunteer responses - mobile app opportunity but unsure of policy
<p>Fleet Management</p>	<ul style="list-style-type: none"> • Need to plan and track fleet maintenance management • Complex use of accounts and cost centres in the GL are used but don't yield good information • Automated Vehicle Location – OK – limited front line staff use of spreader info

2.2.4 INTEGRATION LAYER

The Integration Layer is the place where data from internal systems and customer facing systems can be combined to provide a complete view of the customer value chain. As the Town moves to achieving its strategic goal of increased accountability through performance measurement, key technologies are needed to links costs to processes and outputs and ultimately to customer satisfaction.

Document Management is a vital link between people, processes and systems throughout the Town. Within the Town, staff need to find documents to do their work, groups need to share documents, and other information needs to be routinely published to the public or be at the ready for freedom of information requests. Policies, procedures need to be readily available, and major business systems need to have interfaces to present archived electronic records. The Town has a vacancy in records management and plans to use this resource to review records and electronic document management practice and technologies.

Geographic Information is another vital link between systems in municipal government. The Town has a comprehensive asset inventory in the GIS database which gives a great head start to implementation of fully functional asset and work management systems. The maintenance of these data needs to become formalized as a baseline and a requirement, as people or systems building or maintaining these assets will expect seamless updates.

Business Intelligence and Data Warehousing (BI/DW) will provide the Town with the ability to link data up and down and aggregate it for higher level analysis. It is the source for performance measures for introspection, and open data for public engagement and accountability. It provides dashboards, report cards, and reports. It also provides tools for analyzing the data – drilling down to answer why. The Town has not yet invested in this technology, in part because there is little data to analyze. But there is an opportunity to get started by extracting, cleansing and linking recreation and finance data. Only simple BI/DW technology will be needed over the next 5 years.

Integration Layer	
Document Management	<ul style="list-style-type: none"> • Records Management – existing records management system is based on old technology and has not been kept up –to-date <ul style="list-style-type: none"> ○ Work planned on reviewing records management practice and selecting new technology • Image Server – existing Laserfiche image server used for financial transaction document and engineering drawings. Meets needs, but more value will be garnered from integration with business systems

<p>Geographic Information Services</p>	<ul style="list-style-type: none"> • Desktop GIS – ArcGIS <ul style="list-style-type: none"> ○ Approximately 30 users across multiple departments ○ Various levels of licensing acquired through County • GIS Servers <ul style="list-style-type: none"> ○ public mapping presented on County web map portal ○ Internal portal serves web maps and interim apps including building permits, engineering drawing repository, and road patrol. • GIS Databases – ArcSDE Server <ul style="list-style-type: none"> ○ extensive collection of asset data; need maintenance policies and procedures ○ Most other street, property and boundary data acquired through County ○ Integrated with water modelling software • Plotter – plotter is old and needs frequent repair - replace
<p>Business Intelligence and Analytics</p>	<ul style="list-style-type: none"> • Data Preparation <ul style="list-style-type: none"> ○ No data quality or cleansing tools ○ No extract, transform and load tools to create business objects in a data warehouse • Data Integration <ul style="list-style-type: none"> ○ A few manual interfaces between system and Great Plains ○ No data warehousing system • Reporting and Analytics <ul style="list-style-type: none"> ○ Near universal requests from business for more and better reporting ○ Untapped reporting capabilities in existing systems ○ Need to look at all reporting requirements
<p>Mobile Apps</p>	<ul style="list-style-type: none"> • Limited deployment of smart phones • Need for tablet apps for building inspections, bylaw investigations, work orders, fire house, and recreation attendance and evaluation were identified

2.2.5 CUSTOMER FACING SYSTEMS LAYER

The Town needs a Customer Relationship Management (CRM) System. This will be the central and authoritative record of customer's personal information, interests, and interaction history. The Recreation Management system and each of the two major business systems will have built-in or modular CRM capabilities. For Recreation and Booking, customer information will include basic identity as well as additional personal information about age, gender, family relationships, photos, and record of achievement in the case of swimming lessons. There is a loose tie to property for mail and sometimes qualification for Town-rate fees.

Some of these same customers and others will also be requesting a variety of municipal services. They want to track progress, and may want to complain about it. These interactions are conducted through an **Assets and Work Management** system, which will have its own set of customer information. These customers' requests may or may not be related to their property, but often to municipal assets.

Some of the same customers and others will be interacting with the Town through a **Development, Licensing and By-Law** system. These systems have the usual personal information but feature stronger organization information and accounting capabilities for developer transactions. There is a strong link to property for notifications, by-law complaints and inspections.

To get started creating a unified customer experience, the Town should translate its customer service vision into system requirements and Request for Information on CRM functionality in the three major business systems. Some key functionality is highlighted in the table below.

Another customer facing group of systems are the eServices, or web and mobile electronic services. The Town is already enjoying the success of its DocuPet service, which provides online licensing and payment. It also has online registration with its Class recreation system and should be expected to keep or improve it in the system replacement.

There are several other municipal services citizens are expecting online or on their phone. These include requests, permits, facility bookings and water bill inquiry and payment. These are customer facing functionalities the Town should be looking for in each of the associated major business systems.

While mobile-friendly web and applications will demonstrate the Town's progressiveness, front line staff engagement with citizens is another opportunity to demonstrate effective use of technology. Current use of clipboards and printed forms says the opposite. There are several opportunities to use mobile technology in the field including building permit inspections, by-law enforcement, licensing and recreation.

At the top of the technology stack are those customer facing systems that portray the Town's image on the web through provision of information, transparency and accountability, engagement, and routine disclosure of data that people and organizations want. Social Media is an opportunity to engage more interactively with residents and customers. It enables effective pushing of information to the interested, and is a channel where there are conversations about the Town. The Town should be listening and engaging in these conversations, including investing in social media management tools that enable planned messages and campaigns, approval workflows, and sentiment monitoring.

Customer Facing Systems Layer		
Customer Relationship Management System		<ul style="list-style-type: none"> • Profile Management –customers expect that personal information should not have to be maintained separately for every service. Online maintenance of personal information is convenient and effective. Interfaces are needed to share change information among the major business systems when you get them. • Unified Customer Experience – provide a seamless service and consistent brand. Even if integration is loose, configure systems to share profile info and look similar. • Engagement and Marketing – elicit and manage enrolment in email notifications according to interests and proactively engage your customers. Fill -up empty recreation program spots with interest-targeted emails. • Complaints and Issues Tracking – stay on top of customer requests and complaints from receipt to resolution. Analyze trends to proactively head off issues.
eServices		<ul style="list-style-type: none"> • Epay – online inquiry into accounts and management of payment arrangements • eBooking – online search and book municipal spaces such as meeting rooms, gyms and ball diamonds. Business transformation needed. • ePets – Docupet cloud based application for payment and fulfilment of pet licenses. Working well. • eRequest – online service request and tracking – dependent on asset and work management system • ePermit – online request for various permits and licenses – downloadable forms currently available – in-person submission and payment are very inconvenient for customer • eRegistration – online registration for recreation programs and events. Existing system was fine but is now obsolete. • ePay Tickets – online ticket fine payment service – cloud based

Website	<ul style="list-style-type: none"> • Website content management technology <ul style="list-style-type: none"> ○ Poor performance, restrictive functionality, risky platform ○ IT action required for some content updates
Open Government	<ul style="list-style-type: none"> • Civic Web – online Council and Committee Agenda, Report and Minutes publishing portal – serves internal and external needs • Other important accountability documents provided on web site • No scorecards or updates on progress of strategies – technology is not the blocker
Open Data	<ul style="list-style-type: none"> • Accountability – the Town should make raw data available for the public to do its own analyses and visualizations • Research and Collaboration – the Town should compile or contribute to compilations of demographic, service and outcome indicators • Secondary Value – the Town should provide key asset and service data for secondary municipal or commercial use (eg. Things to do mobile app)
Social Media	<ul style="list-style-type: none"> • The Town has initiated limited and controlled presence on social media and has a policy and short term plan • These new communication channels are rapidly supplanting traditional media and even web as channel of customer choice • The Town needs a strategy to maximize the value of social media which should include social media management software

2.3 Staff Survey Results

The staff survey found high levels of satisfaction with the quality of responses to requests and inquiries as well as the knowledge of the IT team. As Figure 2 shows, there is lower client satisfaction with timeliness of response and timeliness of resolution, indicating there is opportunity for improvement in client service tools and processes. The IT team has implemented an online Help Desk service, but they are getting less than optimal compliance from clients. More formalization of the support processes is needed which will support use of data to improve response and resolution performance.

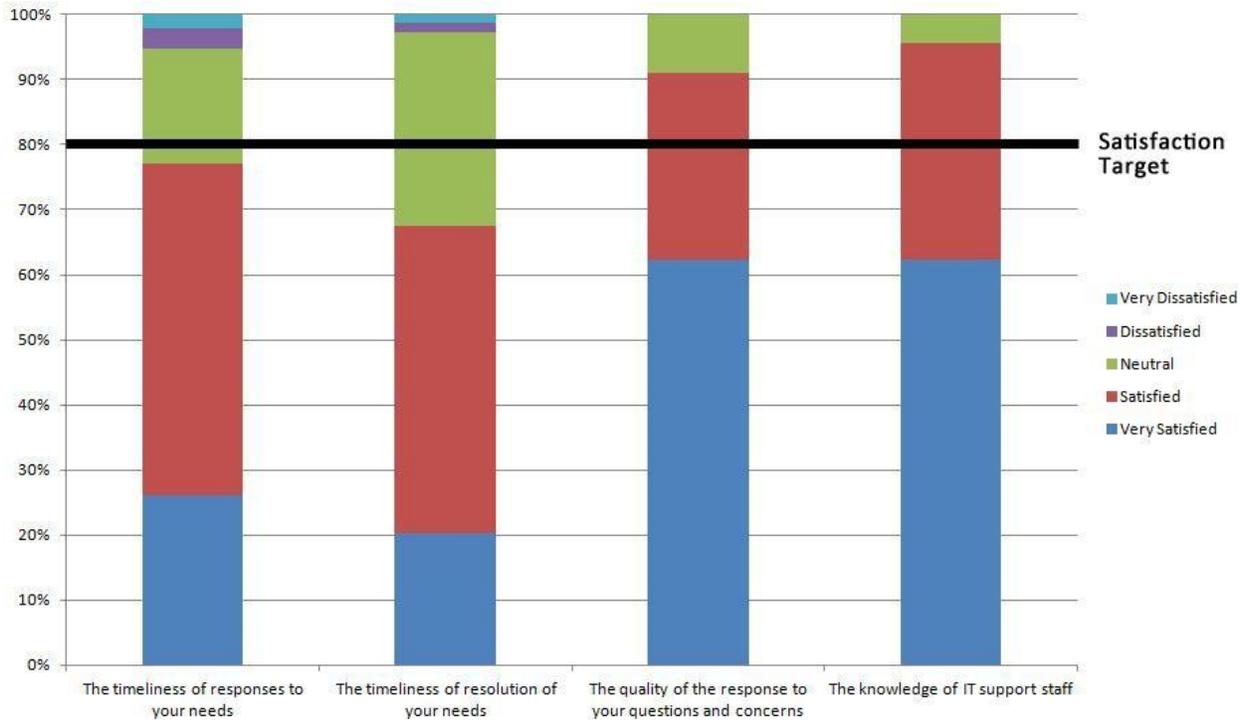


Figure 2: Staff Satisfaction with IT Support

The staff survey also indicated that the IT team is meeting expectations managing several key IT services. As illustrated in Figure 3, satisfaction is high for internet access, file server access, email and calendaring. Other services including network speed, printers, virus protection, mobile device management, PCs and laptops and telephony are not meeting expectations. Many of these were raised in the interviews as well. Most could benefit from formalization of policies and procedures, and upgrade to enterprise-class tools.

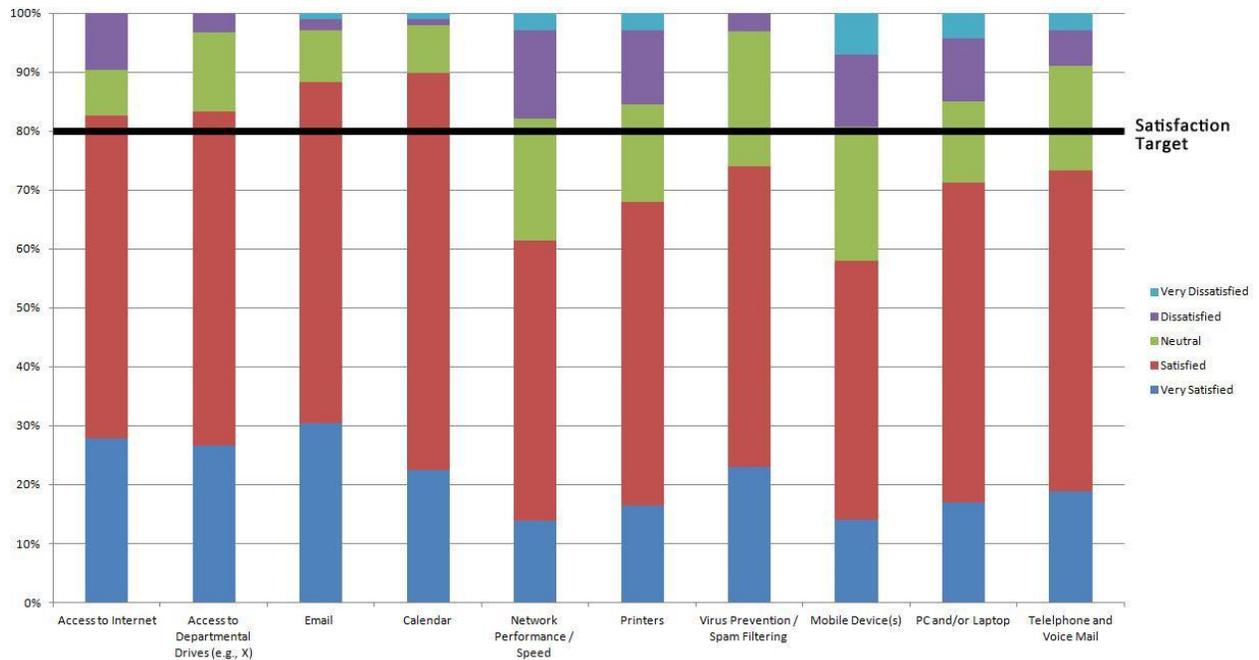


Figure 3: Staff Satisfaction with IT Services

2.4 Current IT Organization

The organization diagram below illustrates the current distribution of technology roles, both IT and GIS. The GIS resources have recently been reassigned from the Engineering Department to the future Manager of Asset Management, a unit created on the recommendation of KPMG Service Review. The IT resources have also been recently re-assigned to report through the Director of Administration/Clerk. This strategy provides an opportunity to consider the benefits of having all of the technical resources working as a team for the entire organization.

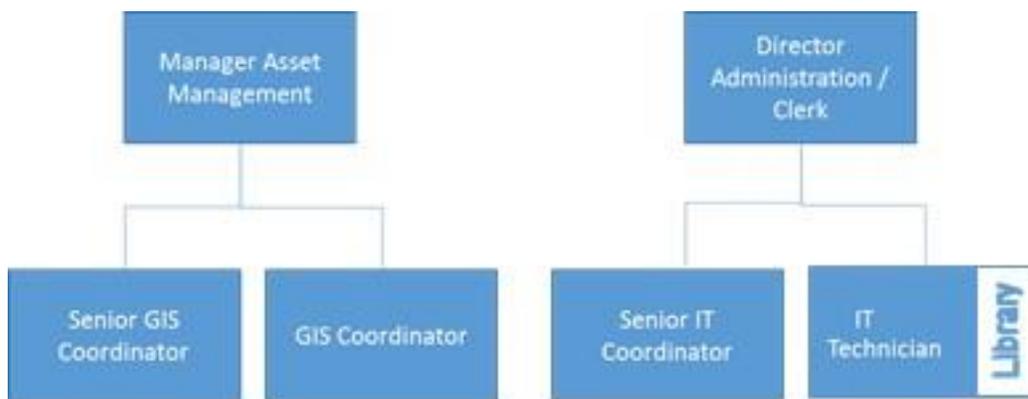


Figure 4: Current IT Organization

The Town IT staff provides support services to the Town's Libraries through an agreement to share 25% of the IT Technician. The time spent on library support has been trending upward, most recently approaching 30%. Although the library staff are very happy with the support service, there appears to be need for more. Root causes of this trend may be use of aging, lower quality and non-standard workstations. Of course distance between locations makes travel time an issue. Careful management of work and trips, and replacing old computers with Tier 1 quality will help in the short term, and out-tasking hands-on work may yield more time savings.

Some of the key discoveries noted with the current organizational arrangement include:

Strengths

- IT staff is very responsive & helpful
- IT staff innovative on best practices on a low budget
- Good partnership with the County for network and GIS
- Strong GIS foundation and capability

Weaknesses

- IT staff time is consumed more and more in operations and support
- Limited capability and capacity for business analysis and project management
- IT policy and standards are not available to support service decisions
- IT services are not clearly defined

In general terms the IT department is seen as a "solid utility" (as illustrated in the diagram below) by staff and management at the Town – responsible for supporting core technologies and keeping the lights on. However, there are several gaps resulting from resourcing challenges. Looking to the future there is significant scope for developing the role of IT, and management has a strong expectation that IT should progress up this scale to become a "partner player".



IT is integral to how we do business: IT organization is expected to closely partner with the business to help identify, plan and deliver significant business transformation initiatives - plus be a trusted supplier.

IT delivers critical functionality and services: IT organization is expected to deliver application projects on time and on budget, based upon the operating units requirements and priorities - plus be a solid utility.

Keep the lights on: The IT organization is expected to provide cost effective-dial tone reliability with transparent costs.

Figure 5: A Maturing IT Organization

2.5 Current State Summary

In summary the technology environment assessment indicates a need for the Town to direct immediate attention to the infrastructure layer.

The Town needs to establish more robust technology foundations by:

- Developing a plan for the build-out of the corporate network
- Reviewing and addressing storage and archiving needs
- Implementing effective security and Disaster Recovery provisions
- Developing formal IT policies and procedures

The assessment also identifies gaps for the Town in addressing issues relating to the major business systems, integration, and customer facing layers – areas in which the Town currently has insufficient resources and skills.

IT organization and management practice reviews suggest that in addressing governance and corporate policy and aligning technology resources, the Town can establish stronger corporate IT leadership, while adding resources to assist departments in the implementation of business solutions.

3. Municipal Comparisons

Six communities were selected from recent IT surveys conducted by Prior and Prior. In addition to some close comparators, the selection provides some contrast in population and density. New Tecumseth fits roughly in the middle of the group on both dimensions.

Municipality	Population	Density Pop/km ²
Oro-Medonte	20,000	34.2
East Gwillimbury	24,000	91.7
Bradford-West Gwillimbury	28,077	139.7
New Tecumseth	32,660	110.3
Innisfil	32,727	115.2
Whitchurch-Stouffville	43,300	222.3
Georgina	49,569	157.8

The following chart plots the number of IT staff and GIS staff and relationship to the size of the municipality. New Tecumseth appears to be lagging its closest peers in number of IT Staff, with Bradford-West Gwillimbury and Innisfil having 3 and 6 respectively. New Tecumseth appears to be relatively well resourced in GIS.

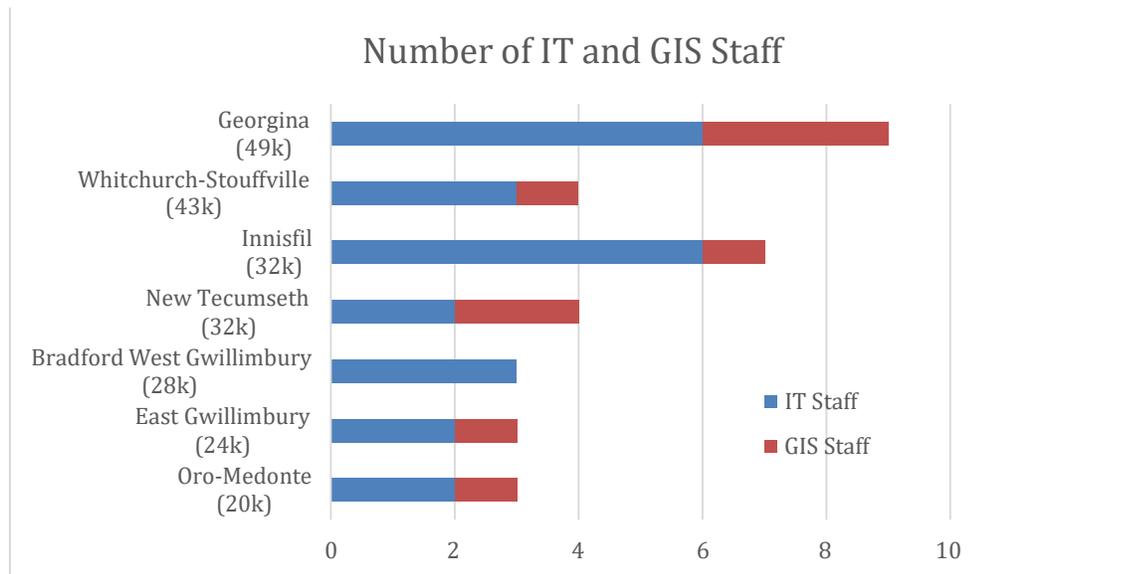


Figure 6: Number of IT and GIS Staff

When expressed as number of IT staff per population, New Tecumseth has the lowest ratio of 0.6, with others ranging from 0.7 to 1.2. Figure 7 also indicates, New Tecumseth also has the lowest number of IT staff as a percentage of all employees at 0.9, with others ranging from 1.7 to 2.9.

The IT staff at New Tecumseth are kept very busy compared to others with workstation and user account support. New Tecumseth IT staff support 232* workstations, with 2 staff for a ratio of 116:1. Staff in most of the other municipalities support about 50 each. Some of the workstation support load in New Tecumseth is driven by services provided for 55 workstations in the libraries.

Another observation from Figure 5 is that New Tecumseth continues to use more cell phones than smart phones, while most others have flipped the ratio over recent years as they find value in basic mobile and phone capabilities such as email and camera and prepare their front line staff for mobile-enabled business applications.

	Oro-Medonte	East Gwillimbury	Bradford West Gwillimbury	New Tecumseth	Innisfil	Whitchurch-Stouffville	Georgina
Population	20,000	24,000	28,077	32,660	32,727	43,300	49,569
IT Leader	Manager	Manager	Manager	Supervisor	Manager	Manager	Manager
IT Staff excluding GIS	2	2	3	2	6	3	6
GIS Staff – Corporate Role	1	1	0	2	1	1	3
Number of IT users / accounts	100	210	200	160	152	256	320
Number of workstations	100	250	135	232*	150	198	315
Number of smart phones	49	60	65	30	50	35	156
Number of cell phones	5	8	21	50	17	58	31
IT Staff as % of total employees	1.4	1.3	2.9	0.9	1.7	2.3	2.5
PC's per IT Staff	49.8	125.0	33.8	116.0	50	49.5	52.5
Number of login accounts per IT Staff	50	105.0	50.0	80.0	30.4	64.0	53.3
Number of IT staff per 10,000 pop	1.0	0.8	1.1	0.6	1.8	0.7	1.2

Figure 7: Relative IT Resourcing

* Includes 55 library which are not counted or supported by other comparators

The comparison also yielded valuable insights into the use of major business systems.

	Oro-Medonte	East Gwillimbury	Bradford West Gwillimbury	New Tecumseth	Innisfil	Whitchurch-Stouffville	Georgina
Finance	Baker	Vadim iCity	Diamond on MS Dynamics GP	Diamond on MS Dynamics GP	MS Dynamics GP	MS Dynamics GP	Vadim iCity
Budget	Baker	Vadim iCity	Questica	Questica	RAC FMW Web In-house for Capital	Questica	Vadim iCity
Human Resources	Baker	ADP	MS Dynamics GP	MS Dynamics GP /InfoHR	MS Dynamics GP, Halogen, Deltek	MS Dynamics GP	Vadim iCity
Asset Management		CityWide	WorkTech Pearl		WorkTech Pearl	Asset Manager (Weave)	WorkTech Pearl
Work Management		CityWide	Service Request Manager (Weave) Replacing with WorkTech	Web Works for Water only	WorkTech Pearl, In-house	Work Manager (Weave)	WorkTech Pearl
Development, License and Bylaw	Baker	CityView	Service Request Manager (Weave) Replacing with CityView	In-house components	MOAR In-house suite	Land Manager (Weave)	
Document Management	Baker		In progress	TOMRMS, Laserfiche	M-Files		
Customer Relationship Management		CityWide	On Master Plan		MOAR In-house suite	Service Request Manager (Weave)	WorkTech Pearl

Figure 8: Major Business Systems

Almost all of the municipalities have asset and work management systems. Most use an integrated asset and work management system. Most of the comparators also use multi-function systems for development tracking, building permits, bylaw enforcement and case management and licensing. Document Management systems are not as common. Four of the five CRM solutions are components of the work management solution; one is a component of the Development, Bylaw and Licensing system.

4. Strategic Directions

4.1 Strategies

The following strategies have been developed from analysis of the current situation, municipal comparisons, and good practice. They reflect the key focus areas the Town should use to guide improvement in the acquisition, support and sustainment of business enabling technology.

Strategies	
Enable business improvement	Develop organizational capability to identify and take advantage of opportunities to improve service delivery through quality processes and technology enablers.
Improve technology management	Implement new governance, policy, procedures, standards, service definitions and performance measures
Maximize value from IT investments	Review existing business applications for opportunities to fill basic gaps such as reporting and training. Look here for quick wins.
Invest in New Business Technologies	Streamline and mobilize services through business transformations enabled by technology. Replace pop-up interim applications with integrated functional suites
Reduce business and information risk	Strengthen the risk management policy and infrastructure, and prepare business continuity plans.
Align the IT Service	Build IT capability and capacity to match the demand. Budget for out-tasking infrequent, technical services and leverage partnerships and shared service offerings.

4.2 Strategic Actions

The following sections explain the approach and identify specific actions for achieving each of the strategies.

ENABLE BUSINESS IMPROVEMENT

The Town needs two new capabilities to prepare for and execute technology implementation projects to enable business improvement.

Business Analysis is needed to prepare business for new processes that use technology. Business Analysts work with business units to prepare detailed business cases, document the current state and new requirements for solution acquisition, work with solution implementers and the business units to detail configuration requirements, document new processes, prepare and execute test plans, and help the business adopt change. Their role spans the entire duration of business transformation projects, and will be critical to New Tecumseth in executing the first steps of this strategy.

Project Management is the second key capability needed for successful planning and execution of technology projects. Project Managers develop and track project plans, making sure the Town's tasks in projects are done on time and budget and meet the expectations of the stakeholders. They also hold external vendor project managers accountable, and keep track of costs and deliverables.

Early investment in these capabilities in the IT unit maximizes the opportunity to seed and strengthen these capabilities throughout the organization. Each of the strategic projects should be treated as an opportunity to give your future leaders experience in these roles, and opportunities to apply project management best practices knowledge acquired just in time. IT should take the lead in developing business analysis and project management capability throughout the organization, by establishing the practice, organizing training, and ensuring learning opportunities in projects are exploited.

For the larger projects, the Town should consider contracting-in project managers experienced in the technology to be implemented. While the general best practices of project management are valuable, experience in applying them in the specific technology will provide key insights into project and business risks and lessons learned from successes and failures.

Project Managers are also key contributors to the governance model we propose, leading new processes for project definition and planning. They will be responsible for Portfolio Management, eliciting, compiling and maintaining the list of all IT projects, administering the submission and review processes, and reporting on the performance of the portfolio.

Since the Town is embarking on an ambitious portfolio of business transformation and technology projects, it would be optimal to establish standards, best practices, tools and templates for both project management and business analysis at the outset. This will increase the likelihood of success of the first project, and provide a baseline practice against which improvements can be made for each subsequent project. Thus we recommend hiring experienced people into these positions as soon as possible.

ENABLE BUSINESS IMPROVEMENT

Objective	Recommended Actions
Strengthen Business Analysis	<ol style="list-style-type: none"> 1. Hire experienced Senior Business Analyst 2. Establish Process analysis standards and repository 3. Teach BA basics to business and collaborate on projects 4. Strengthen requirement, configuration, integration and testing specification requirements

Strengthen Project Management	<ol style="list-style-type: none">1. Hire IT Manager with Project Management experience to lead the development of project management practice throughout the organization2. Establish IT project management standards and practice3. Contract-in PMs with specific technology experience for large projects4. Backfill for key business staff and give them training and project management roles
Strengthen Technology Planning	<ol style="list-style-type: none">1. Strengthen business case development capability2. Introduce Project Portfolio Management capability, starting with a good list, then developing more sophisticated prioritization, scheduling and monitoring capability
Mobilize the Workforce	<ol style="list-style-type: none">1. Update policies for mobile devices and remote access2. Develop a Mobility strategy identifying needs, opportunities and gaps3. Make Mobile functionality a key requirement of new business systems4. Roll out interim mobile apps or functions for bylaws and buildings and other units ready to begin change

IMPROVE TECHNOLOGY MANAGEMENT

With growth of the Town and need for more IT services, the service itself must become more mature to meet expectations. As the staff survey indicated, there are a few areas where improvement is needed to achieve a higher satisfaction level. Some of the issues arise as a result of a lack of clarity or a lack of communication. Some examples from the discovery interviews include:

- Roles – should IT help the departments pick their technologies? Do I need permission?
- Rules – IT sometimes says “No” – are the reasons communicated? understood?
- Service Definition – is there after-hours support? How do I access it?

In addition, an effective approach to resolving these issues is to adopt some of the key elements of IT governance and service management best practice. COBIT5 is an IT governance framework and supporting toolset that provides support for a maturing IT service. With new support for business analysis, project management, and portfolio management, the Senior Technology Coordinator will be able to focus on system and service management, strengthening its capabilities in the COBIT areas as follows:



Additional service improvements can be sought in the Information Technology Infrastructure Library (ITIL v3), a globally recognized collection of best practices for managing IT. These include key capabilities in IT service operation areas:

- Lifecycle planning and management
- Operations and Support
- Change management
- Service Offerings and Agreements

The two frameworks should provide continuous improvement ideas for the IT service for years. For the next 1-3 years, we recommend focus on the areas highlighted below:

IMPROVE TECHNOLOGY MANAGEMENT

Objective	Recommended Actions
Strengthen Governance	<ol style="list-style-type: none"> 1. Implement an IT Steering Committee to prioritize projects and focus resources 2. Implement a broader IT Governance Framework to align the work and responsibilities between the IT unit, stakeholders and working groups.
Improve Policies & Procedures	<p>Develop or enhance key operational policies & procedures including:</p> <ol style="list-style-type: none"> 1. Acceptable use 2. IT Security (passwords, 3rd party access, physical access) 3. Backup, recovery, BC and DR 4. Asset lifecycle management 5. Hosted / cloud solutions 6. Data management (lifecycle, privacy) 7. IT procurement processes 8. Email & voicemail standards (including archiving)
Formalize Service Offerings	<ol style="list-style-type: none"> 1. Identify detailed client service needs 2. Develop and publish simple service level agreements
Improve IT Communication	<ol style="list-style-type: none"> 1. Consider strengthening or redevelopment of the Intranet with a strong IT section on policy, procedure, forms, standards, technologies

MAXIMIZE VALUE FROM IT INVESTMENTS

The Town needs to implement new major business systems. These take time to plan, prepare the business, acquire solutions and implement them. The project finish line and flow of benefits will be 3-5 years out. However the strategy can deliver short term value by making the most out of recent technology investments.

The Town has some good core technology, Diamond Municipal/MS Dynamics Great Plains, Qwestica, Laserfiche, and ARC GIS. However common themes from interviews and surveys were

- Can't find information, searches don't work well
- Think the system can do something, but don't know how
- Can't get any useful reports

These kinds of comments reflect some basic work that still needs to be done to meet the expectations of the end users of these systems. They are some of the last steps in implementation projects – training, reporting, sustainment planning – which when given too little time, budget or energy, block the ability to achieve value from the systems. It is important to correct these issues as soon as possible before users slide from promoters or acceptors to detractors. Scorn for a computer system can become part of the corporate culture, inhibiting process change, and casting doubt on future technology endeavours.

The Diamond Suite including Finance, HR, Qwestica budget and Penny timesheet should be reviewed for opportunities to achieve more value through reporting, training and additional functionality that can be implemented as a second phase of the implementation.

MAXIMIZE VALUE FROM IT INVESTMENTS	
Objective	Recommended Actions
Improve Reporting	<ol style="list-style-type: none"> 1. Develop standard reports from existing systems 2. Develop data warehouse and reporting strategy including assessment of existing platforms 3. Develop Service Desk reports that capture trending for support requests, operational issues and project work
Strengthen Technology Knowledge	<ol style="list-style-type: none"> 1. Improve Technology Training – ensure that all technology projects include adequate time and funding for planning, tools and evaluation 2. Improve Communication about technology – build more general knowledge throughout the Town through proactive, topical, engaging information
Find Unrealized Value	<ol style="list-style-type: none"> 1. Review recent IT projects for achievement of initial objectives

	2. Conduct a series of process reviews to identify waste and quick wins
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INVEST IN NEW BUSINESS TECHNOLOGIES

The Town needs four major business systems to continue providing efficient and effective service in a period of growth. These include Customer Relationship Management, Work and Asset Management, Development, Licensing and By-Law Management and Records and Document Management. These systems should provide online services as part of their value.

These systems should be the highest priority for a Town committed to investment in technology. These systems will make work easier for a large number of staff, they will streamline and automate dozens of workflows and processes, they will generate a large amount of management information, and they will improve customer service. These goals are consistent with the Town’s Strategic Plan and the KPMG Service Review recommendations.

INVEST IN NEW BUSINESS TECHNOLOGIES	
Objective	Recommended Actions
Improve Customer Relationship Management	<ol style="list-style-type: none"> 1. Document detailed enterprise CRM needs 2. Acquire standalone, foundation or module CRM solution 3. Ensure complaint and issue tracking are covered in new solutions
Strengthen Work and Asset Management	<ol style="list-style-type: none"> 1. Develop data maintenance procedures for current asset inventory GIS database 2. Conduct Work and Asset management business readiness project 3. Acquire enterprise Work and Asset management solution –can be separate as long as integrated and GIS enabled
Strengthen Development Licensing and Bylaw Management	<ol style="list-style-type: none"> 1. Document detailed requirements 2. Strengthen interim applications and formalize pilot deployments of building permits and by-law enforcement 3. Acquire integrated solution for development tracking, land use management, building permits and inspection, licensing, bylaw enforcement

Deliver More Online Services	<ol style="list-style-type: none"> 1. Require solutions to have online services such as service request, registration, permits, building permits, complaints, issue tracking
Improve Services for the Public	<ol style="list-style-type: none"> 1. Update the Website and Web Content Management System 2. Enhance public Wi-Fi 3. Strengthen presentation and engagement tools - multi-media, mobile
Strengthen Records and Document Management	<ol style="list-style-type: none"> 1. Conduct a records management inventory and review 2. Document detailed record and electronic document requirements 3. Acquire a new Records and Document Management system

REDUCE BUSINESS AND INFORMATION RISK

As discussed in the technology assessment, the Town needs a strong infrastructure foundation on which to build its major business application layer.

Prior and Prior recommends three foundational pieces of work to get started with a sound business continuity plan that will inform future security requirements.

Business Impact Analysis

The Business Impact Analysis (BIA) and Risk Analysis (RA) are foundational elements of every effective business continuity program (BCP). In order for the Town to develop a formal Disaster Recovery strategy, both a BIA and RA must be performed by a reputable third-party organization.

Prior and Prior defines the BIA as an identification and analysis of business processes/activities (including required resources), with the objective of understanding the impact of downtime, which drives the assignment of recovery objectives and prioritization.

More precisely, business impact analysis will help the Town determine the Maximum Acceptable Outage/Recovery Time Objective, Maximum Data Loss/Recovery Point Objective, required resources and other important information that will help develop the business continuity strategy for each of the Towns activities.

The goal of a BIA is to identify the Town's key products / services. This means: if the Town's main purpose is to deliver services to its customers, the processes relevant to deliver them are more important than others. To determine which services products are the most relevant for the Town, criteria needs to be taken into consideration such as:

- How much revenue is created by the service / product and how big would be the loss in case of malfunction?

- How long can the service fail / malfunction until it becomes a problem for the Town?
- How big would the impact of a malfunction of the service / product be to the reputation of the Town or existing contracts (SLAs)?
- How big would be the impact on the environment / well-being of others?

Risk Analysis & Security Risk Assessment

A **risk analysis** involves identifying the most probable threats to an organization **and** analyzing the related vulnerabilities of the organization to these threats. A **risk assessment** involves evaluating existing security **and** controls **and** assessing their adequacy relative to the potential threats of the organization.

Prior and Prior defines the risk management process as the identification and analysis of business risks that may affect an organization's ability to deliver its most important products and services, with the objective of understanding the effectiveness of existing controls, as well as additional controls to decrease the likelihood or severity of a disruption.

The Town should follow this process by performing a Risk Analysis to identify activities that could negatively impact the assets of the Town (e.g.: fire could harm the hardware in the data center, a pandemic would result in a loss of human resources, the malfunction of a virtual cluster could result in an inability to deliver services).

After the risks are identified, the Town will evaluate the likelihood and possible consequences of each one. The final step of the process would involve a formal Security Risk Assessment to check the risks analysed against the risk appetite of the Town, generating a prioritized list to define which risks to work on (reduce) first.

Disaster Recovery Strategy

Once the Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO) have been defined in the BIA process, Prior and Prior are recommending the development of a formal Disaster Recovery Plan (DRP).

The principal objective of a DRP is to develop and document a **well-structured and easily understood plan** which will help the Town recover as quickly and effectively as possible from an unforeseen disaster or emergency which interrupts information systems and business operations. Additional objectives include the following:

- The need to ensure that all employees fully understand their duties in implementing such a plan;
- The need to ensure that operational policies are adhered to within all planned activities;
- The need to ensure that proposed contingency arrangements are cost-effective;
- The need to consider implications on other company sites and;
- Disaster recovery capabilities as applicable to key customers, vendors and others.

We also recommend attention be paid to the management of data within systems. Data lifecycle policies and plans should be considered at the same time as any overall records management review. New considerations will arise from the use of cloud based applications.

REDUCE BUSINESS AND INFORMATION RISK

Objective	Recommended Actions
Harden Infrastructure Layer	<ol style="list-style-type: none"> 1. Conduct a Business Impact Analysis – tolerance for outage or catastrophe 2. Have a 3rd party perform a Risk Analysis and Security Assessment 3. Develop a Disaster Recovery and Business Continuity Strategy 4. Develop formal security standards and policies 5. Consider interim ways to secure access to the server room 6. Consider replacing QNAP unit with a higher end storage device for backup and archiving of data 7. Build-in standby power-generator at new administration centre
Enhance Networks	<ol style="list-style-type: none"> 1. Have a 3rd party perform a network assessment 2. Develop a public wifi plan and design for it 3. Develop remote access policy and capability
Consider Partnerships	<ol style="list-style-type: none"> 1. Consider County offer to house servers at new data centre – possible solution for physical security issues 2. Review County library support offering 3. Consider out-tasking services when they are highly specialized or involve servicing multiple locations 4. Investigate infrastructure funding opportunities in Ontario Infrastructure Opportunities fund for Asset Management
Improve Data Management	<ol style="list-style-type: none"> 3. Develop a data lifecycle management policy 4. Develop a storage management process 5. Consider archiving inactive data

ALIGN THE IT SERVICE

The Town is at a point where it needs to align IT resourcing and capabilities with its needs. The Town wants to enable business improvements through more use of technology. It needs IT to continue and even improve the way it operates the infrastructure. The Town also needs IT to lead the organization in planning, acquiring, implementing and sustaining new business technologies.

Recommendations for changes to the organization are in the next section. This table provides some other areas of focus and actions that can be taken to support old and new roles.

ALIGN THE IT SERVICE	
Objective	Recommended Actions
Build Capability	<ol style="list-style-type: none"> 1. Hire IT staff to cover new functional needs associated with growth and maturity 2. Develop a formal training plan for IT staff 3. Build a solid external resource base 4. Out-task as needed
Formalize Helpdesk	<ol style="list-style-type: none"> 1. Develop a Helpdesk policy that includes service levels 2. Start tracking all service requests 3. Consider starting over with a better ticketing system with a knowledgebase 4. Develop regular reporting of IT metrics
Optimize Processes	<ol style="list-style-type: none"> 1. Create standard responses for common service request types 2. Improve Access Control and User management tasks 3. Ensure Web Project enables distributed content management 4. Review opportunities for IT self-service
Leverage Partnership Opportunities	<ol style="list-style-type: none"> 1. Leverage knowledge transfers opportunities when out-tasking 2. Review County library support offering 3. Consider using new County data centre (Rogers) 4. Investigate infrastructure funding opportunities in SWIFT

5. IT Organization

5.1 Organizational Design Considerations

This strategic review provides a valuable opportunity to align the form of the organization to its purposes or functions. The following table summarizes considerations for the new organization design arising from new roles for IT.

The New IT Organization Will ...	Considerations
1. Be a key player in technology governance, planning and acquisition	<ul style="list-style-type: none"> • Leader should be manager level • Leader traits: Credible, consensus-builder, strategic, opportunistic
2. Provide leadership and expertise in technology acquisition and implementation practices	<ul style="list-style-type: none"> • The IT organization needs to have a resource experienced in project and portfolio management, business analysis, RFPs and contracts • Resource Traits: credible, organized, good coach
3. Lead the development and support of business transformation capabilities throughout the organization	<ul style="list-style-type: none"> • Strong business analysis capability, strong change leadership, knowledge of quality management
4. Lead the development and support of data analysis, integration and reporting to get more decision-making value out of technology	<ul style="list-style-type: none"> • The IT organization needs to have a resource with knowledge and experience in data science, extraction, manipulation, warehousing, reporting
5. Support a hybrid model of solution delivery	<ul style="list-style-type: none"> • The IT organization has some experience in contracting, configuration, service agreement monitoring – increase capacity for more and more formal external service management
6. Continue to improve quality of client and infrastructure services	<ul style="list-style-type: none"> • The IT organization has a strong client-focussed culture and maturing utility capability - skills of existing resources overlap in key areas to provide surge and backup capability – preserve that but continue to move the service quality forward

5.2 Recommended Organizational Changes

Given the strategic directions outlined above and the major projects facing the Town, the following organizational changes are recommended.

1. Unit report directly to GM, Corporate Services

The IT unit needs to become a trusted partner in the planning and delivery of IT solutions. To do so, it needs to have visibility and decision-maker access. It will need to support the governance process by working closely with departments on submissions, so it needs to be respected. The unit should be led by a Manager reporting directly to the GM, Corporate Services.

2. Hire an IT Manager with Project Management Experience

The IT team should be led by a Manager. The role needs to be focussed on IT strategy and planning, contract\vendor management, business systems, and project delivery. The role needs to be treated as a partner among business leaders, rather than a support staff.

The Town also needs leadership in project management. The Manager should have considerable experience in project management, including proficiency in the body of knowledge as well as experience in multiple municipal system implementation projects. The Manager should establish the project management practice for the entire organization, establishing best practices, common tools and templates and coordinating training and development. The Manager also needs to be the coordinator of the IT project portfolio, and thus needs to have knowledge and experience in portfolio management.

The Town has strong capabilities in IT infrastructure and support services and GIS. The Manager will be able to work collaboratively with the incumbents to develop the next stage of process capability maturity through internal improvement projects.

3. Hire an experienced Business Analyst

Technology projects represent an opportunity to streamline business processes, reduce duplication, make processes more customer friendly/accessible as well as faster and more efficient. However, this is dependent upon conscious effort being applied to rethink business processes before any implementation of technology begins.

We recommend that the IT unit become the leader in the business analysis practice for the corporation, establishing standards, tools, templates, procedures and a repository. The BA will need to provide traditional IT development and implementation services such as project definition and business case development, requirements gathering, RFP writing, test planning and execution, and change leadership. The Business Analyst role also brings the skills of process analysis and process improvement, which can be put to use on more broad corporate and departmental projects that do not necessarily involve technology.

4. Integrate GIS resources into IT

While there are merits to managing the corporate GIS resources from within an Asset Management unit, the Town can achieve more value by including them in the IT unit. GIS will need to be engaged in almost all new processes and solutions. It will work closely with a broad range of business stakeholders, and collaborate frequently with other IT resources. All new applications including work and asset management, land development and buildings, customer relationship management must have GIS

enablement. GIS project work and timelines must be fully aligned with the IT strategic plan projects and effort.

The Town’s GIS resources also have strong technical skills, and thus can supplement the IT team on data analysis, prototyping and integration. They should also be governed by good IT practices, which they can learn and follow under others who are moving toward more formal capabilities.

5. Transition junior GIS resource to Data Analyst

The Town needs an IT resource to extract, manipulate and integrate data. It needs to develop data objects that can be understood and readily used by end users reporting systems. This resource could lead requirements gathering for a Reporting Strategy to deliver more value from existing systems.

One way to achieve this capability is to transition the junior GIS resource to a more generic data analyst role, retaining some capacity to support GIS where necessary, but with a new focus on all corporate and business system data. GIS analysts have the technical skills and experience working with databases. Your analyst has been working closely with several departments on interim applications, and has developed a broad understanding of the entire business. With a small investment in training and new tools, the organization could achieve the necessary new capability in data analysis.

5.3 Recommended Organizational Structure

For New Tecumseth, the following organization structure will provide the new capabilities and enterprise leadership to the Town in Project Management, Business Analysis, Data Analysis while building on its strong foundation in Infrastructure, Support and GIS services.

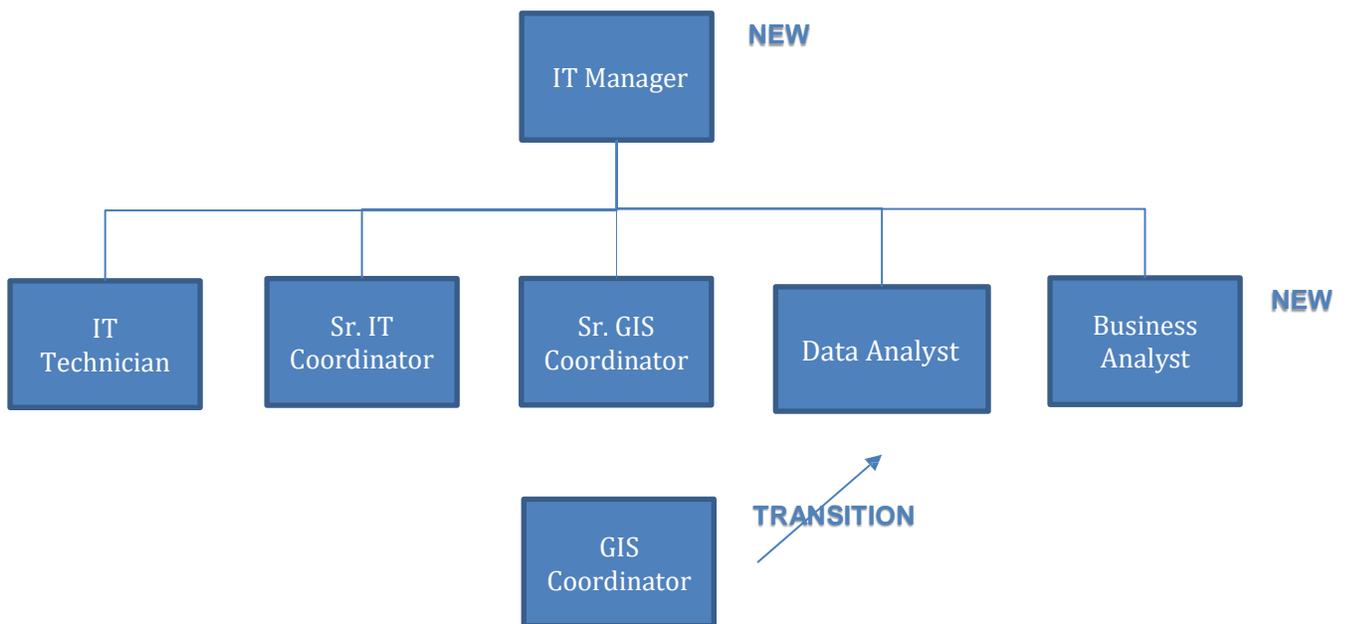


Figure 9: Recommended Organization Structure

5.4 Resource Technology Projects Appropriately

One of the key reasons that projects fail is simply due to the lack of resources allocated during implementation. Major corporate projects such as those the Town is now considering (e.g. Document Management, Work and Asset Management) are complex, business transformation solutions, and typically need far more resources to successfully implement them than initially expected. The current list of demands to implement new solutions and improve existing solutions far outstrip the IT (and departmental) resources of the Town.

It is clear from experience that projects face particular challenges in securing the level of staffing needed for effective project management, configuration, implementation and training. The resource constraints impact both IT and the departments. It is particularly important to secure departmental buy-in as part of the planning process to ensure that the need for appropriate subject matter experts is acknowledged and supported.

Some key suggestions in terms of resourcing projects and initiatives include:

- For major projects, resources must be dedicated (projects cannot be in addition to existing day-to-day responsibilities); in future backfilling resources should be considered as part of original project funding requests (and should be funded through capital budget).
- Where appropriate, specific skills needed for a defined period of time should be secured externally.
- Projects should not commence until the right level of resources can be committed, which should be enforced by IT Steering Committee.
- All projects that implement a solution will have ongoing operational impacts (maintenance, licensing and operational support costs) therefore future operating funds must be considered and included in the budget at the time of purchase.
- One approach that many other municipalities have embraced is utilizing more external resources and funding these resources through capital project funding. When new staff cannot be hired, external resources can be used to support both operational and project initiatives – to relieve internal staff to focus on value added services.
- External resources can be in the form of:
 - a consultant on a term and task basis,
 - an in-house contractor (short term 1-2 year contracts on a project basis),
 - a service provider.
- Backfill departmental resources to ensure dedicated project availability. For example, if the Town plans to implement a new financial system it should look to backfill (with a short term resource) a member of the Finance team to work/lead the project. This person will return to their permanent job at the end of the project thus ensuring that key knowledge is retained.

6. IT Decision Making: IT Governance

6.1 What is IT governance?

IT Governance encompasses the processes and structures that inform, direct, manage, and monitor how the organization makes the best and most effective use of technology. The goal of establishing IT governance is to ensure that the right people are making the right decisions about technology, armed with the right information, at the right time and for the right reasons.

Organizations often view such decisions about technology as complicated, technical and “best left to the experts in IT”. However, in many cases, decisions about technology have ramifications, well beyond the technology itself:

- How do we want to use technology in our business?
- What technology do we want our people to use, and how do we want them to use it?
- How much should we spend on technology?
- Which of our business processes should we direct our IT dollars towards?
- What do we need to tackle first?
- Should we do this now, or later?
- How secure do we need to be?

These are not decisions for technologists alone; they are fundamental business issues that should be addressed by Town’s leadership. In the case of purely technical decisions, the right IT staff (with the appropriate skillsets) may lead the decision-making – but in most cases IT experts should be advising and providing recommendations to business leaders for them to evaluate and approve. Strategic decisions will be made by an IT Steering Committee, project and policy decisions by project teams and standing groups.

6.2 IT Governance Model

The following diagram depicts a typical governance model:

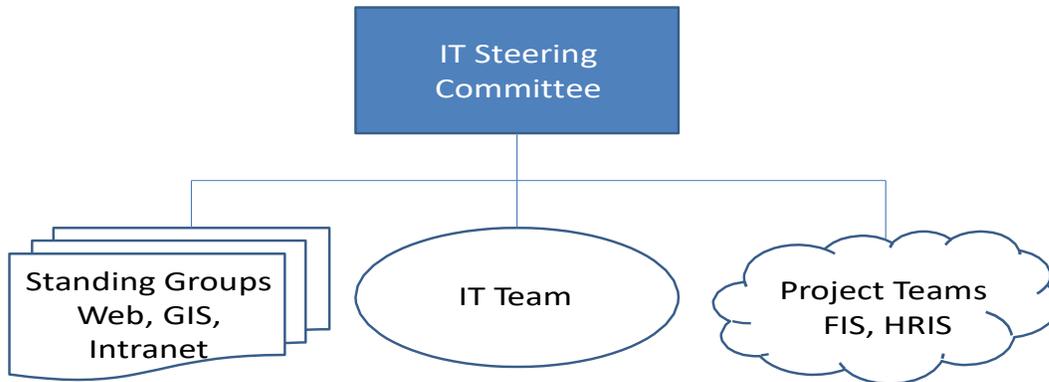


Figure 10: Recommended IT Governance Model

THE IT STEERING COMMITTEE

The primary body is the ITSC through which all of the key technology decisions will be considered. Other teams and staff will do the detailed hands on project and planning work – and the ITSC will provide the strategic oversight and direction.

STANDING GROUPS

Some business solutions are not projects, but ongoing programs of work. The Town’s website, for example, is an ongoing (and ever changing) core business solution that requires co-ordination across all departments. In areas that cross departmental boundaries such as Web, Intranet and GIS, the Town may consider establishing Standing Groups, with departmental representation that meets 4 to 6 times a year to discuss current and new initiatives, and to identify and agree on priorities. These groups will also report into ITSC – providing updates on strategies, roadmaps and major decisions.

IT TEAM

The IT Team remains responsible for delivery of IT services and for operational IT matters. The IT governance arrangements are designed to assist the IT Manager in strategic decision-making – not take over operational responsibilities. The IT Manager is responsible for sharing the insights about IT operations (e.g. IT resource availability, emerging risks) that are necessary to assist the IT Steering Committee in strategic decision-making.

In terms of project work, while IT staff will lead technology infrastructure projects, for business systems, integration and customer facing projects, the IT team will be a strategic business partner with the business lead for the initiative. In these cases it is not IT who will project manage the initiative, a business leader should lead this work. The IT Manager will be the communication conduit for project status updates.

PROJECT TEAMS

Successful implementation of new solutions (e.g. a work management solution) requires involvement and participation from key stakeholders throughout the project lifecycle. The Town will need to establish project teams to carry out key initiatives. Project leads will report on project progress to the IT Steering Committee. Key decision points may also be referred to the ITSC for consideration. These teams will be decommissioned once a project is complete, or when the group is deemed to no longer be required.

6.3 IT Policies and Standards

IT POLICIES

Policies and standards establish the parameters within which the Town uses technology, creating clear expectations for those that use and manage technology. In keeping with the commentary throughout this section, many of the decisions related to technology are business or management decisions. These are not decisions to be made by IT on behalf of the corporation. For example;

- Which employees get smartphones
- Who is authorized to register a web domain for the Town
- Which websites staff can access, and whether that activity should be tracked
- What content is saved when an employee retires
- How much space does an employee have in email

For each of these decisions a number of factors need to be weighed, including business impacts, employee impacts and importantly, cost impacts.

A standard IT policy framework typically addresses the following areas.

- Acceptable use
- IT Security (passwords, 3rd party access, physical access) *
- Backup, recovery, BC and DR *
- Asset lifecycle management *
- Hosted / cloud solutions *
- Data management (lifecycle, privacy) *
- IT procurement processes *
- Email & voicemail standards (including archiving)

The IT team should review, revise and augment the corporate IT policy framework in the context of this roadmap, to ensure that it accurately reflects how the Town wishes to use and manage technology. The items flagged with an * should be of particular focus for the Town of New Tecumseth.

IT STANDARDS

Documentation of IT technical standards are important internal documents to help the IT team deliver its mandate and comply with policy directives. Published standards make it clear to clients the boundaries of choice in technologies that fit within the Town's architecture. Clients will accept and search for standards when they have been engaged in their development.

7. Implementation Plan and Costs

7.1 Approach

The table below lists 30 key initiatives and actions that should be tackled over the course of the strategy execution.

The Website development and intranet development projects are already funded for 2017. The strategy projects for social media, online services, mobilizing the workforce and reporting should also be done as soon as possible, as their discoveries and strategies will inform the other projects.

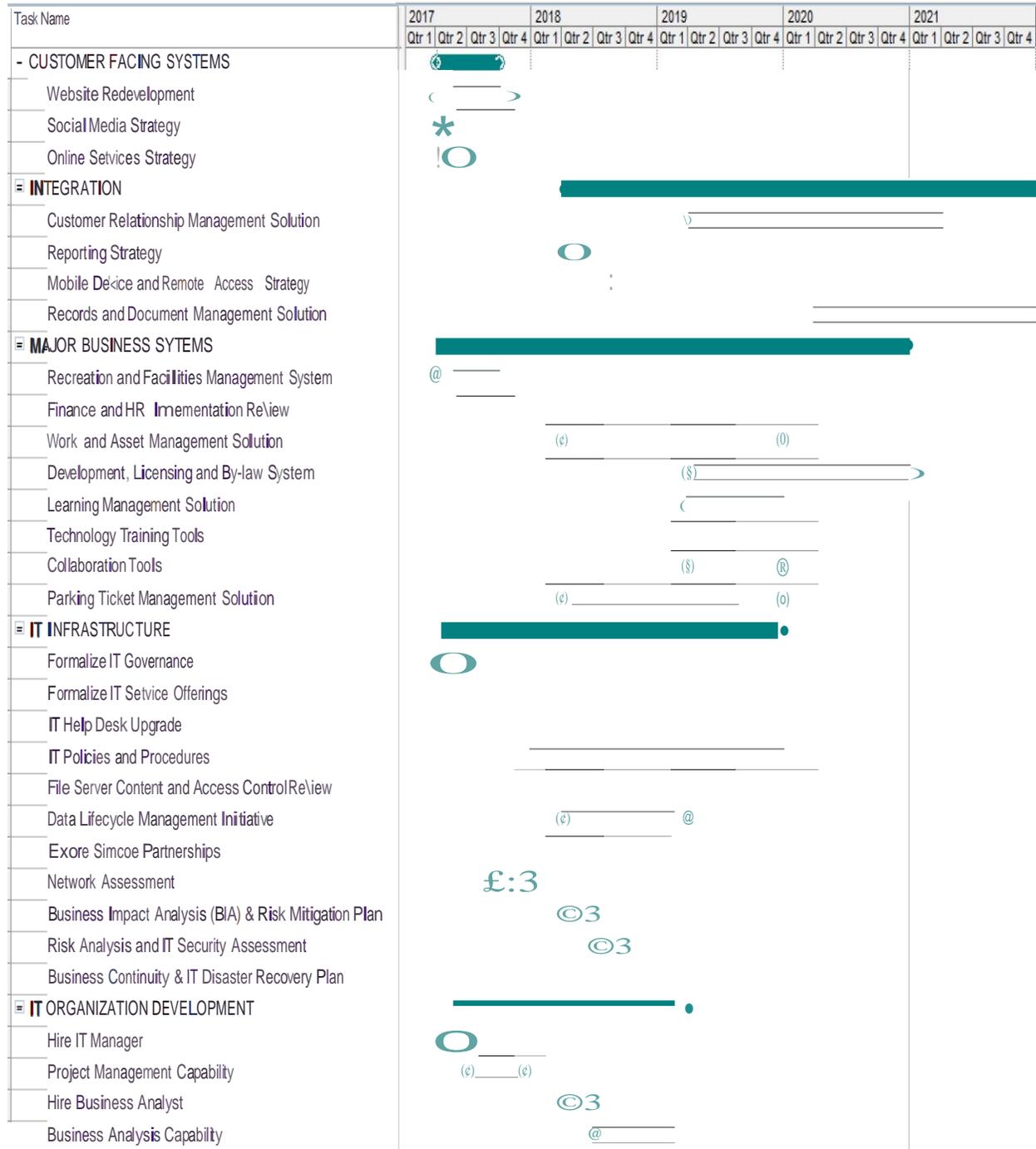
The list includes 4 projects that are large business enablement initiatives and require engagement of multiple corporate or operating departments. The Recreation Management solution project is already in flight. The others need to be spread out over the five year horizon since they will use some of the same IT and other resources. They are also most dependent on an established business analysis and project management capability, and thus are scheduled to follow.

It is also important to establish the business and technical architecture for Customer Service early on. Several of the proposed systems have built-in Customer Relationship Management capabilities, one of which may meet all the needs. Alternatively, if the Town discovers that a centralized customer service call centre is sought, then integration requirements may become important for the business solutions. We recommend doing that discovery and analysis work in 2017.

IT organization initiatives, service improvements and infrastructure upgrades should be defined and prepared for action. The project management and business analysis capabilities are necessary as soon as possible. Service management projects should be started as soon as practicable. Once the frameworks are established, the formalization and documentation and implementation of quality processes and tools can proceed as a series of continuous improvement projects.

7.2 Implementation Roadmap

The following chart provides a high level outline of the recommended projects and their scheduling over the next 5 years. Details about each of these projects can be found in Appendix A.



7.3 Recommended Investments

PROJECT	TOTAL CAPITAL	ANNUAL OPERATING	2017	2018	2019	2020	2021
CUSTOMER FACING SYSTEMS							
Website Redevelopment	70,000	5,000	70,000				
Social Media Strategy	8,000	2,500	8,000				
Online Services Strategy	10,000	0	10,000				
INTEGRATION							
Customer Relationship Management Solution	75,000	20,000			75,000		
Reporting Strategy	15,000	0		15,000			
Mobile Device and Remote Access Strategy	4,000	1,000		4,000			
Records and Document Management Solution	300,000	50,000				150,000	150,000
MAJOR BUSINESS SYSTEMS							
Recreation and Facilities Management System	100,000	25,000	100,000				
Finance and HR Implementation Review	10,000	0	10,000				
Work and Asset Management Solution	250,000	50,000		150,000	100,000		
Development, Licensing and By-law System	100,000	25,000			50,000	50,000	
Learning Management Solution	25,000	5,000			25,000		
Technology Training Tools	6,000	2,500		6,000			
Collaboration Tools	10,000	2,000			10,000		
Parking Ticket Management Solution	50,000	7,000		20,000	30,000		
IT INFRASTRUCTURE							
Formalize IT Governance	0	0					
Formalize IT Service Offerings	0	0					
IT Help Desk Upgrade	2,000	2,000	2,000				
IT Policies and Procedures	0	0					
File Server Content and Access Control Review	0	0					
Data Lifecycle Management Initiative	5,000	0		5,000			
Explore Simcoe Partnerships	0	0					
Network Assessment	12,000		12,000				
Business Impact Analysis & Risk Mitigation Plan	0						
Risk Analysis and IT Security Assessment	12,000			12,000			
Business Continuity & IT Disaster Recovery Plan	12,000	12,000		12,000			
IT ORGANIZATION DEVELOPMENT							
Hire IT Manager	0	120,000					
Project Management Capability	10,000	2,000	10,000				
Hire Business Analyst	0	100,000					
Business Analysis Capability	0	1,000					
TOTAL COSTS	1,086,000	432,000	222,000	224,000	290,000	200,000	150,000

8. Why invest in IT? Why invest in this Master Plan?

To implement the IT Master Plan requires increased investment in IT, both capital and operating.

The plan maintains that this investment is warranted, as it will build the foundation for delivering service excellence, efficient and effective government and for meeting customer's expectations.

8.1 Invest to Save

IT should be seen as an investment – a long-term investment in increased productivity and improved customer service. The investment is in building a platform, the digital foundations for delivering efficient services. This is investment that will keep delivering benefits year over year by enabling corporate flexibility, releasing capacity to grow and add new services, without adding new administrative staff and hence new costs.

Investment in IT should be seen as “investing to save.” The Town makes investments upfront in technologies and expects to receive pay back, year over year on an ongoing basis. But, technology projects should be considered in the longer term on their ability to transform services, achieving future cost avoidance, not just immediate cost savings. A pay back of three to five years is a reasonable time frame for IT investments; some deliver much faster payback.

Many of the solutions that the Town plans to implement over the course of the plan are expected will deliver a range of benefits. Some deliver tangible returns on investment such as time savings. The Land and Development Management solution will save considerable time in streamlined transactions and work flows for building permits, and development application tracking. An improved record management solution will save staff time spent looking for records, as well as support improved records management practices.

In other cases, the new systems will create new work – data entry work to be done by front line staff that will support performance measurement, decision-making and transparency. Work Management is a good example. In these cases, the technology will help make doing that work faster and easier.

So, many of the investments in technology, specifically in business systems, are designed to simplify processes, eliminate data duplication and reduce errors, saving time for staff and customers alike.

8.2 Build foundations to support the Town's growth

The Town is poised to grow over the coming years. The pace and volume of development and building is expected to accelerate, new facilities and new infrastructure are expected to be added to the Town's responsibilities. This growth will place pressures on existing service delivery avenues, as volumes of service requests, applications for permits and licenses and customer expectations for services grow.

As the Town grows, ‘systems’ are required to ensure that it is operating effectively. So, the focus should be upon ensuring that its business process and technology foundations are well established now. Building these efficient business processes and supporting systems now, will ensure that as the Town can contain its costs as it grows, as it can minimize the number of staff that it needs to hire to support these business functions.

8.3 Managing better starts with the right information

“If you can’t measure it, you can’t manage it”.

Experience has shown that if service managers can access the right data they can use the data to identify the best and most efficient ways of delivering services.

More effective information management, tracking and analysis as to the work that staff do and how staff time is spent will lead to many opportunities to streamline operations and reduce costs. For example, one City found by analyzing their own data that nearly 33 percent of the wastewater department’s effort was spent resolving problems at just 1.4 percent of customer sites. With this information, the city developed and implemented a repair plan that resolved these ongoing issues and ultimately reduced costs. It’s these types of insights, driven by information, that help organizations save money and deliver better value.

Access to data and information in real time helps Directors and Managers monitor and manage their programs, and direct staff to ensure that services are running smoothly. Changes can happen in real time, resulting in immediate improvements to service quality and effectiveness. Cities, such as Waterloo, that have implemented real time management dashboards for the Building Department, have made significant improvements in customer satisfaction and staff efficiency. The knowledgeable access to data also builds the foundation towards future service delivery options such as open data. Open data is a program being adopted by municipalities as a means of improving transparency and accountability but also because it provides access to hundreds of app developers who will create apps that can be shared by all. These apps are key to improving citizen engagement, providing new opportunities to push information out, as well as to receive valuable feedback.

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Appendix A – Detailed Project Portfolio

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Customer Facing Systems

Project Name	Website Redevelopment
Project Type	Technology Enhancement
Description	The current internet website does not meet business need for effective communication with target audiences. Existing content management processes are inefficient and not timely. Content needs to be streamlined and reorganized to allow users to find the information they need quickly and easily. Tools and processes for managing content need to be updated. New technology will enable new information management processes. Extend value of the new content contributor team to a revised intranet.
Approach	Review web content needs and re-architect information, navigation and user experience. Acquire and implement a new web content management solution. Implement distributed content management model.
Stakeholders	All Departments
Benefits and Outcomes	<ul style="list-style-type: none"> * Web content refreshed and streamlined for more effective and enjoyable user experience * Content management processes more efficient and timely * IT workload distributed to content owners * Improved security, performance and functionality of new technology
Strategic Alignment	<ul style="list-style-type: none"> * Invest in New Business Technologies> Improve Services for the Public * Align the IT Service>Optimize processes
Project Sponsor	CAO
Project Cost	70,000
Operating Cost	5,000
Timing	2017

Project Name	Social Media Strategy
Project Type	Strategy
Description	The Town is under pressure to inform and engage customers through multiple social media channels. Current communication resource levels are limiting the quantity and timeliness of engagement resulting in unmet customer expectations, missed opportunity to understand the customer, and fall back to less efficient customer service inquiry methods.
Approach	Develop a 3-year social media strategy with vision, goal and objectives, resource, policy and procedure enablers, and short term scope and schedule.
Stakeholders	All departments
Benefits and Outcomes	<ul style="list-style-type: none"> * stakeholder agreement on vision, roadmap and policies * timely and effective communication with younger segment * efficient information dissemination
Strategic Alignment	* Invest in New Business Technologies> Improve Services for the Public
Project Sponsor	CAO
Project Cost	8,000
Operating Cost	2,500
Timing	2017

Project Name	Online Services Strategy
Project Type	Strategy
Description	The Town is in the process of updating the technology, content, information architecture and user experience of its web site. It also needs to start building its suite of eservice applications
Approach	Gather customer expectations for e-services as part of the web revitalization project. Conduct e-service jurisdictional scan of bigger or advanced municipalities and assess business requirements and readiness.
Stakeholders	Customer Service, Engineering, Planning and Development, Clerk, Parks and Recreation, Accounting
Benefits and Outcomes	* improved customer service - online booking, family and profile management * improved efficiency - reduce account management
Strategic Alignment	* Invest in New Business Technologies> Improve Services for the Public
Project Sponsor	CAO
Project Cost	10,000
Operating Cost	0
Timing	2017

Project Name	Customer Relationship Management Solution
Project Type	New Technology
Description	The Town does not have adequate systems and processes for recording and managing customer service interactions. The current collection of paper forms, Access and GIS databases does not provide an integrated customer record across processes such as complaint, inquiry, service request, account inquiry, billing etc. Customers' personal and property information is collected in different ways, over and over, creating inefficiencies and customer inconvenience. The Town needs a central Customer Relationship Management system to serve as the hub and give a unified view of the customer across apps and departments
Approach	Collect CRM requirements across all customer facing services in the short term for use as configuration and integration inputs for the big 3 new solutions - WMS, Development and Property, and Recreation. You should also identify public expectations for eservices, self-service and personalization of the web experience. This could be done as a sidebar on the WMS project, or could be the first phase of technology enablement of a future customer service review. These requirements will inform the data integration architecture for a central corporate customer service application and e-services. After digesting the requirements, acquire an off-the-shelf or cloud based CRM solution to meet the need
Stakeholders	Clerks/Customer Service; Public Works, Parks and Recreation, Planning and Development, By-Law
Benefits and Outcomes	<ul style="list-style-type: none"> • improved customer service - relationship, tracking, notification • improved efficiency - reduce duplicate collection of data, electronic notification • improved accuracy and completeness of data
Strategic Alignment	* Invest in New Business Technologies> Improve Customer Relationship Management
Project Sponsor	GM, Development Services; Clerk
Project Cost	75,000 (cloud) or 100,000 (on premise license and hardware)
Operating Cost	20,000 (cloud) or 10,000 (maintenance)
Timing	2017 (requirement and architecture), 2019

Integration Layer

Project Name	Reporting Strategy
Project Type	Strategy
Description	The Town has not realized the full potential of its technologies as sources of information for driving operational excellence, accountability, planning and analysis. An integrated view of data is not available. The Town needs to get more information out its systems and make it available to all who need it.
Approach	We recommend having the Business Analyst lead the development of developing a strategy to improve this capability over the next five years, starting by maximizing the value of reporting capabilities in existing systems (eg. SmartLists and SmartList Report Builder), then addressing need for integrated data and more sophisticated presentation and analysis tools. The strategy should detail the current needs and capabilities, identify quick wins through training, development of missing standard reports and development of prefabricated data objects accessible to trained end users, as well as assess the need for an integrated business intelligence platform and capability.
Stakeholders	All Departments, all Front Line managers, Directors, Senior managers, Researchers, Policy makers
Benefits and Outcomes	* Quick Win projects to get value out of existing capabilities * Strategy for moving to the next level of information delivery
Strategic Alignment	Maximize Value from IT Investments>Improve Reporting
Project Sponsor	GM, Corporate Services
Project Cost	15,000
Operating Cost	0
Timing	2018

Project Name	Mobile Device and Remote Access Strategy
Project Type	Strategy
Description	Managing the security and support of mobile devices has become a problem for IT. The variety and number of mobile devices has burgeoned and clients may not be getting and using the best devices for their needs. The Town needs to identify all needs and opportunities for business enablement through mobile devices and remote access, and update policies, procedures, standards and management of same. Device management technology needs to be enhanced to cover all types.
Approach	Review existing mobile deployments with frontline users of the services to identify strengths, weaknesses and lessons learned for existing deployments. Identify all areas to benefit from mobile; re-set mobile strategy and develop rollout and extension plan.
Stakeholders	All departments needing mobile devices and remote access, IT Client Services
Benefits and Outcomes	<ul style="list-style-type: none"> * Policies, procedures and standards to reduce current frustrations with mobile device choices and remote access tools and privileges * Proactive identification of all near term needs and a rational plan to meet them * Increased adoption of technologies to improve operational efficiency and information quality
Strategic Alignment	Enable Business Improvement> Mobilize the Workforce
Project Sponsor	GM, Corporate Services
Project Cost	4,000
Operating Cost	1,000
Timing	2018

Project Name	Records and Document Management Solution
Project Type	Technology Enhancement
Description	The Town's current corporate record management system based on the Ontario Record Management System (TOMRMS) is very old and has not been sustained with platform and software updates. There is also a Laserfiche image repository which meets some needs, but several operating departments indicated they need better electronic filing, storage, search and retrieval of a wide variety of document types. The Town needs to understand and document all of these needs and select a new technology.
Approach	The new Records Management Coordinator, with the help of a Business Analyst, should conduct a detailed assessment of the current situation and needs for records and document management. The current TOMRMS solution should be reviewed for short term risks and patched where necessary. A new solution should be selected and implemented, and in the meantime, develop enabling policies, procedures, forms and standards to initiate the business change. Look at business system data retention as well.
Stakeholders	All Departments
Benefits and Outcomes	<ul style="list-style-type: none"> • demonstrable compliance with Federal and Provincial records management, accessibility and privacy regulations and standards • increased efficiency in finding and retrieving important records • increased accessibility
Strategic Alignment	Invest in new Business Technologies>Strengthen Records and Document Management
Project Sponsor	Clerk
Project Cost	300,000
Operating Cost	50,000
Timing	2020-2021

Major Business Systems

Project Name	Recreation and Facilities Management System
Project Type	Technology Enhancement
Description	The Town is in the process of replacing its Class Recreation Management and Facility booking solution. This system supports the development and delivery of recreation and leisure programming, memberships and rental of facilities. It needs to be replaced as soon as possible to minimize risk for the end of software support at the end of 2107.
Approach	Acquire an on-premise off-the-shelf or cloud-based recreation management and facility booking solution
Stakeholders	Parks and Recreation, Finance, Communications
Benefits and Outcomes	* improved customer service - online booking, family and profile management * improved efficiency - reduce account management
Strategic Alignment	Invest in New Business Technologies> Strengthen Customer Relationship Management
Project Sponsor	Director, Parks and Recreation
Project Cost	100,000 (cloud)
Operating Cost	25,000 (cloud)
Timing	2017

Project Name	Finance and HR Implementation Review
Project Type	Assessment and Planning
Description	Diamond Municipal Solutions and Microsoft Dynamics GP are the foundation of a core set of corporate applications including HR, Questica budget management, Penny payroll and Workplace purchasing. Before additional investment and integration efforts are expended, the Town needs to review the configuration, processes, data and outputs of the solution to identify any undelivered functionality, optimize data structures and to understand system capabilities for future needs. The GP project should also be reviewed for outcome achievement and lessons learned.
Approach	We recommend a third party audit of the solution and implementation project, not the original implementer. The Project Manager should collaborate closely on standards.
Stakeholders	GM, Corporate Services
Benefits and Outcomes	<ul style="list-style-type: none"> * List of pain points to fix * Thorough understanding of out of the box capabilities * high level integration and requirements * lessons learned for project management excellence
Strategic Alignment	Maximize Value of IT Investments>Find Unrealized Value
Project Sponsor	GM, Corporate Services
Project Cost	10,000
Operating Cost	0
Timing	2017

Project Name	Work and Asset Management Solution
Project Type	New Technology
Description	The Town does not have appropriate systems and processes for planning and managing infrastructure services and asset maintenance work. To achieve operational efficiencies you need to measure what you do using a work management solution. To do the right work, you need an asset management system. The Town is off to a good start with a GIS-based asset inventory. Pop-up solutions based on GIS demonstrate the demand for a solution, however they are meeting only basic needs and are not sustainable. The Town needs an integrated work and asset management solution, with GIS enablement.
Approach	A project like this should proceed in phases, spread over 2-3 years. In Phase 1, detail the current situation and business needs and opportunities. Assess business readiness for change, as these projects have major impacts on workers. In Phase 2, conduct process pilots, getting front line managers and workers used to key aspects of the new processes with paper or interim apps. You need to find and settle on a balance between management value and front line effort and change - basically, how much detail to collect. In Phase 3, implement a full technology solution to show workers how the technology makes those processes easier. Roll it out by department.
Stakeholders	Public Works, Engineering, Parks and Recreation, Capital Asset Management
Benefits and Outcomes	<ul style="list-style-type: none"> • more cost, time and materials information to <ul style="list-style-type: none"> ▪ improve work scheduling and resource planning ▪ improved accountability and effectiveness for asset management • improved customer service through online and streamlined service request management processes • improved efficiency in work management processes
Strategic Alignment	Invest in New Business Technologies> Improve Asset and Work Management
Project Sponsor	GM, Development Services
Project Cost	250,000
Operating Cost	50,000
Timing	2018-2019

Project Name	Development, Licensing and By-law System
Project Type	New Technology
Description	The Town does not have adequate systems and processes for recording and managing transactions associated with property. These include development tracking, engineering, bylaw enforcement, permits, and licenses. Current processes will be unsustainable with continued growth. The Town needs technology to enable more efficient and effective management of processes and information, with tight GIS integration for all.
Approach	Acquire an on-premise off-the-shelf or cloud-based municipal planning and compliance solution.
Stakeholders	Engineering, Planning and Development, By-Law and Building, Public works, Clerk
Benefits and Outcomes	<ul style="list-style-type: none"> • improved customer service - e-submission, tracking, notification • improved efficiency - enable electronic workflows & document management for faster approvals • improved accuracy and integration of property-related of data
Strategic Alignment	* Invest in New Business Technologies> Strengthen Development Licensing and Bylaw Management
Project Sponsor	Deputy CAO
Project Cost	100,000 (cloud) or 150,000 (on premise license and hardware)
Operating Cost	25,000 (cloud) or 20,000 (maintenance)
Timing	2019-2020

Project Name	Learning Management Solution
Project Type	Technology Enhancement
Description	The Town does not have a robust technology for online delivery and management of training. Emergency Services has implemented a custom built tool for tracking firefighter training however training needs to be better planned, delivered, and managed for all employees of the Town. Online, self-paced courses are an effective and efficient choice for many policy, procedure, safety and technology training for broad, dispersed audiences. Solutions deliver online training and track both online and other training experiences.
Approach	A business analyst should detail the Town's short and medium-term training requirements and acquire a cloud-based learning management platform. Once selected and architected for both corporate and departmental needs, this platform can be implemented in phases, starting with Fire, Public Works and IT. Use the fire service system in the meantime.
Stakeholders	Fire Services, IT, Parks and Recreation, Operations, All new solution owners and users
Benefits and Outcomes	<ul style="list-style-type: none"> * more accessible training of all types - more knowledge * support for competency development, succession planning * accurate and timely tracking of mandatory health and safety training * easy compliance with documentation requirements
Strategic Alignment	Maximize Value from IT Investments>Strengthen Technology Knowledge
Project Sponsor	Director, HR
Project Cost	25,000
Operating Cost	5,000
Timing	2019

Project Name	Technology Training Tools
Project Type	Capability and Capacity
Description	The Town has not maximized the value from recent technology investments because end users have not completed sufficient training. For example, many users of Diamond/ MS Dynamics GP complained that reporting was limited, while the SmartList functionality contains hundreds of easily accessible standard reports. As the Town makes significant investment in new technology over the next 5 years, it needs to ensure that users fully understand the capabilities and procedures of the new systems.
Approach	The HR Trainer should be supported in creating a learning culture, adopting IT training best practices such as planning and assessment, and the train-the-trainer model. A permanent training room is needed, but a small set of dedicated but portable training room components will suffice until space issues are resolved. Select and support a web-conference service for web- based interactive training and purchase access to self-directed modules for each new solution for knowledge reinforcement. Plan to spend capital money on multifaceted training for all new solutions.
Stakeholders	All new solution owners and users
Benefits and Outcomes	* increased efficiencies and effectiveness from technology investments * increased acceptance of new processes and supporting technologies
Strategic Alignment	Maximize Value from IT Investments>Strengthen Technology Knowledge
Project Sponsor	Director, HR
Project Cost	6,000
Operating Cost	2,500
Timing	2018

Project Name	Collaboration Tools
Project Type	New Technology
Description	Several stakeholders, including senior managers, noted that the departments operate in silos, often unaware of what each other is doing and thus missing opportunities for collaboration, process integration and efficiencies. Key documents are often locked inside file server structures, invisible or inaccessible to innovators. Internal communications platforms are needed to provide alternative sharing and discussion opportunities for groups based on project, position or areas of interest.
Approach	Acquire or subscribe to basic collaboration tools for use in all new technology projects (eg. MS Yammer is free, Atlassian Confluence is inexpensive but can also serve as an intranet home). Develop a formal pilot project including training then measure the value. If successful, encourage other groups to use the technology.
Stakeholders	Senior Management
Benefits and Outcomes	<ul style="list-style-type: none"> • greater team engagement and user acceptance and satisfaction with new technology and processes • broader knowledge and understanding of the business across departments • efficient and effective project task and document management
Strategic Alignment	Maximize Value from IT Investments>Strengthen Technology Knowledge
Project Sponsor	CAO
Project Cost	10,000
Operating Cost	2,000
Timing	2019

Project Name	Parking Ticket Management Solution
Project Type	New Technology
Description	The Town does not have a robust or efficient parking tag management system. It needs new technology to streamline and integrate data entry for managing cases and payment.
Approach	Document this requirement and look for opportunity to piggy-back on the Permitting and Licensing solution or a Customer Relationship Management solution. Assess the suitability of current handheld devices for supported integration with common management and payment solutions
Stakeholders	Clerk
Benefits and Outcomes	<ul style="list-style-type: none"> • Improved accuracy of tickets and successful prosecution of offences • Improved efficiency in case management • Eliminate duplicate data entry
Strategic Alignment	* Invest in New Business Technologies> Improve Services for the Public
Project Sponsor	Clerk
Project Cost	50,000
Operating Cost	7,000
Timing	2019

IT Infrastructure Layer

Project Name	Formalize IT Governance
Project Type	Policy and Procedure
Description	This strategic plan recommends strategic investment in a significant list of projects. The organization needs a governing body that will execute the strategy by planning and monitoring the portfolio of projects, ensuring that policy enablers are in place, approving and supporting standards, and ensuring a corporate-wide view of technology is cultivated. The strategy and implementation priorities need to be reviewed annually to accommodate new needs, halt or re-cast failing projects, and take advantage of new opportunities.
Approach	Strike a formal IT Steering committee of senior managers and department heads (supported by the IT Manager). Assign a workgroup to develop Terms of Reference and meeting schedule in Q2 and meet quarterly thereafter.
Stakeholders	Senior Managers, Department Heads
Benefits and Outcomes	<ul style="list-style-type: none"> * flexible technology plan * policy enablers for project success * authoritative IT policies and standards * inter-divisional engagement, understanding and ownership of IT as a corporate resource
Strategic Alignment	Improve IT Management> Strengthen Governance
Project Sponsor	GM, Corporate Services
Project Cost	0
Operating Cost	0
Timing	2017

Project Name	Formalize IT Service Offerings
Project Type	Capability and Capacity
Description	As the Town and technology use have grown, so too have the challenges of meeting client expectations. IT cannot be everything to everyone, but when staff assert this reality, the result is often dissatisfaction and decline in trust. The IT section needs to build this trust and increase client satisfaction, while at the same time providing great services focussed on delivering customer value
Approach	The IT team should engage its clients in identifying their service and support needs and propose simple but formal service offerings and levels. These should be documented, approved by the IT Steering Committee and posted on the IT intranet. As you mature, start developing formal Service Level Agreements (SLAs) and service uptake and performance measures.
Stakeholders	All technology users
Benefits and Outcomes	<ul style="list-style-type: none"> * clear understanding of client needs and expectations * clear articulation of IT services * increased client satisfaction
Strategic Alignment	Improve IT Management> Formalize Service Offerings
Project Sponsor	GM, Corporate Services
Project Cost	0
Operating Cost	0
Timing	2017

Project Name	IT Help Desk Upgrade
Project Type	Technology Enhancement
Description	The Town currently uses a freeware, Spiceworks, to log and track IT service requests and trouble tickets. Garnering end user compliance in the new process has been challenging, and reports are limited. To measure and improve IT service management, the Town needs to invest in a more robust solution providing web based issue logging and tracking for end users, knowledge base development, and performance reporting. These capabilities may be met through one of the Customer Relationship Management modules to be acquired for other services.
Approach	Make this a task for the enhanced IT team to select and configure together.
Stakeholders	GM, Corporate Services, IT Staff, IT support users
Benefits and Outcomes	<ul style="list-style-type: none"> • Improved efficiency in logging and managing requests • Increased compliance with best practice issue management processes • More timely and consistent response to recurring issues • More reporting for operational analysis and performance measurement
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	GM, Corporate Services
Project Cost	2,000
Operating Cost	2,000
Timing	2017

Project Name	IT Policies and Procedures
Project Type	Policy and Procedure
Description	<p>There are currently limited formal policy/process/procedure documents at the Town. There are several critical documents that need to be developed immediately to support this plan. Development of additional policies should be developed through related projects and governed as needed (eg. remote access).</p> <ol style="list-style-type: none"> 1. Acceptable use 2. IT Security (passwords, 3rd party access, physical access) 3. Backup, recovery, BC and DR 4. Asset lifecycle management 5. Hosted / cloud solutions 6. Data management (lifecycle, privacy) 7. IT procurement processes 8. Email & voicemail standards (including archiving)
Approach	These should be developed as IT Governance projects led by the IT Manager and documented, published and maintained in accordance with a quality documentation standard.
Stakeholders	All IT Clients
Benefits and Outcomes	<ul style="list-style-type: none"> • improved client understanding and acceptance of policies and rationales • improved client satisfaction with IT decisions • critical guidance and enablement of solution choices for this plan • demonstrated effectiveness of a documentation standard and repository
Strategic Alignment	Improve IT Management> Improve Policies and Procedures
Project Sponsor	GM Corporate Services
Project Cost	0
Operating Cost	0
Timing	2018

Project Name	File Server Content and Access Control Review
Project Type	Assessment and Planning
Description	Many business users in the Town have difficulty accessing information stored in electronic files - can't find, can't access. This creates delays in operations and analysis, especially where project or business documents are stored in personal directories. The Town needs to review and reorganize its file structures and teach end users best practices in file management.
Approach	Adopt policies, classifications, and best practice file structure then get every user to go through their files and get rid of Redundant, Obsolete and Temporary files and put files that should be accessible to others in shared folders.
Stakeholders	Clerk, IT Manager, All Departments
Benefits and Outcomes	<ul style="list-style-type: none"> • Improved accessibility to shareable files • Reduced transmittal and storage of files on email • Reduced data volumes and attendant savings in backup time • Reduced IT Support calls related to Access Control
Strategic Alignment	Reduce Business and Information Risk> Improve Information Management
Project Sponsor	Clerk
Project Cost	0
Operating Cost	0
Timing	2018

Project Name	Data Lifecycle Management Initiative
Project Type	Policy and Procedure
Description	There are no formal data management policies in place within the Town, resulting in insufficient controls and management of data storage and increased data management costs. The Town needs to identify and classify data to determine the best approach to data management such as archiving and tiering of data.
Approach	Hire a consultant to assess needs and recommend policies and treatment of all data classes.
Stakeholders	All Business system owners
Benefits and Outcomes	<ul style="list-style-type: none"> • Demonstrable compliance with privacy and records management regulations • Ability to identify and move inactive data off of production storage for faster transaction processing • Improve efficiency of data management • Lower costs of backup and data replication services
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	GM, Corporate Services
Project Cost	5,000
Operating Cost	0
Timing	2018

Project Name	Explore Simcoe Partnerships
Project Type	Assessment and Planning
Description	<p>Our interview with Simcoe County IT identified four opportunities for shared services:</p> <ol style="list-style-type: none"> 1. New Snow Plough operation reporting tool 2. Library desktop support services 3. Rogers datacentre server colocation 4. Web hosting <p>The Town needs to assess all opportunities for free, cheaper or more robust technology services where appropriate.</p>
Approach	Review each of these opportunities
Stakeholders	Library, IT Manager, Roads and Fleet Manager
Benefits and Outcomes	<ul style="list-style-type: none"> • Enhanced snow plough information • Increased library support capacity • Possible solution to server room security issue • Possible cost savings on web hosting
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	CEO, Library
Project Cost	0
Operating Cost	
Timing	2018

Project Name	Network Assessment
Project Type	Assessment and Planning
Description	The current network is not meeting demand in the Tottenham Recreation Centre. The current contract is up for renewal. IT staff are having to manage through capacity limits by throttling public access. In addition, there are some wireless dead zones that will inhibit effective future use of mobile technology. New business systems are going to need reliable, high speed, and high capacity network services.
Approach	Hire a 3rd party consultant to review the current network and identify needs for the next 5 years. Assess the customer value and clarify your service offering for public WiFi. Identify costs, options and opportunities for partnerships with the County vis-a-vis the SWIFT federal infrastructure fund.
Stakeholders	Public Works, Parks and Recreation, IT
Benefits and Outcomes	<ul style="list-style-type: none"> * a plan for network development to support emerging business needs * a project or list of projects suitable for quick submission to infrastructure funding programs * a rational public WiFi service offering and level
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	GM, Corporate Services
Project Cost	12,000
Operating Cost	TBA
Timing	2017

Project Name	Business Impact Analysis and Risk Mitigation
Project Type	Assessment and Planning
Description	The Town does not currently have a formal Disaster Recovery strategy and requires a formal BIA to identify business system requirements along with a risk mitigation plan.
Approach	It's recommended that the BIA occur in parallel to the Risk Analysis (RA) activities. This process will evaluate the business impact of the risks identified in the RA phase. Have the Business Analyst interview business stakeholders to identify impacts of system disruption and risk mitigation options.
Stakeholders	Led by IT but must include all Business system owners
Benefits and Outcomes	<ul style="list-style-type: none"> • Provide foundation for a formal Business Continuity Plan (BCP) • IT Disaster Recovery requirements • identification of the business impact of risks identified in the RA • quantification of business impact • the development mitigation strategies in line with the business impact
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	GM, Corporate Services
Project Cost	0
Operating Cost	0
Timing	2018

Project Name	Risk Analysis and IT Security Assessment
Project Type	Assessment and Planning
Description	An audit needs to be performed in order to identify vulnerabilities and threats within the Town along with the assessment of IT security as part of the Risk Analysis process.
Approach	Hire a 3rd party consultant to assist the Town in identifying corporate assets and all associated vulnerabilities and threats that could affect the integrity, availability, or confidentiality requirements. It's recommended that the BIA occur in parallel to the Risk Analysis (RA) activities. This process will evaluate the business impact of the risks identified in the RA phase.
Stakeholders	Led by IT but needs to include all Business Units
Benefits and Outcomes	<ul style="list-style-type: none"> * identification of all vulnerabilities and threats * a strategy to mitigate security risks * the development of an ongoing Risk Management program * Initial steps in the development of a formal Business Continuity Program
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	GM, Corporate Services
Project Cost	12,000
Operating Cost	TBA
Timing	2018

Project Name	Business Continuity & IT Disaster Recovery Plan
Project Type	Strategy
Description	After the completion of the Business Impact Analysis project, the Town should create the first element of a full Business Continuity Plan, a formal IT Disaster Recovery Strategy.
Approach	Hire a consultant to develop a formal DR strategy utilizing Disaster Recovery as a Service (DRaaS) from a 3rd party provider.
Stakeholders	All Business system owners
Benefits and Outcomes	<ul style="list-style-type: none"> • The Town will have a formal DR strategy protecting all systems defined in the plan • Sandbox services will be available to the Town for future application testing requirements without the need to procure in-house hardware or software. • Cost avoidance in the procurement and support of an in-house DR program.
Strategic Alignment	Reduce Business and Information Risk> Harden Infrastructure
Project Sponsor	GM, Corporate Services
Project Cost	12,000
Operating Cost	12,000
Timing	2018

Project Name	Project Management Capability
Project Type	Capability and Capacity
Description	The Town has limited capability in defining, prioritizing and executing business improvement and technology implementation projects. It needs policies, procedures, templates, technology and methodologies to define and execute projects.
Approach	Select an IT Manager with considerable knowledge and experience in project and portfolio management to become the practice lead. Establish best practices and tools then take small, incremental steps toward developing capability and capacity throughout the organization through training and mentorship from consulting project managers on this portfolio of projects.
Stakeholders	Project sponsors. IT Steering Committee
Benefits and Outcomes	<ul style="list-style-type: none"> * improved project alignment, prioritization and accountability * improved project success * widespread knowledge of basic project management practice
Strategic Alignment	Enable Business Improvement>Strengthen Project Management
Project Sponsor	GM, Corporate Services
Project Cost	10,000
Operating Cost	2,000
Timing	2017

Project Name	Business Analysis Capability
Project Type	Capability and Capacity
Description	The Town does not have a repository of policies, procedures and process documentation. A good collection of these artifacts provides the foundation and drivers for quality service delivery, continuous improvement, performance measurement and technology enablement. They are considered key first steps in ISO, Excellence Canada and Lean Six Sigma quality management programmes. To maximize value from the projects in this portfolio you need to establish standards, tools, methodologies and a place to store these artifacts before you get started.
Approach	Hire a Business Analyst with knowledge and expertise in process analysis to become the practice lead. Establish best practices and tools then develop capability and capacity throughout the organization through training and practice on the processes to be improved by this portfolio of projects. As capability matures, use departmental capacity to complete improvement of other processes, regardless of the need for technology.
Stakeholders	All Departments
Benefits and Outcomes	<ul style="list-style-type: none"> * comprehensive and consistent policy and procedure documentation * improved preparedness for technology implementations * process performance measures * support for continuous improvement
Strategic Alignment	Enable Business Improvement>Strengthen Business Analysis
Project Sponsor	GM Corporate Services
Project Cost	0
Operating Cost	1,000
Timing	2017

Appendix B – Survey Results



Town of New Tecumseth - Information Technology Master Plan

December 2016
info@newtec.com



108

Total Responses

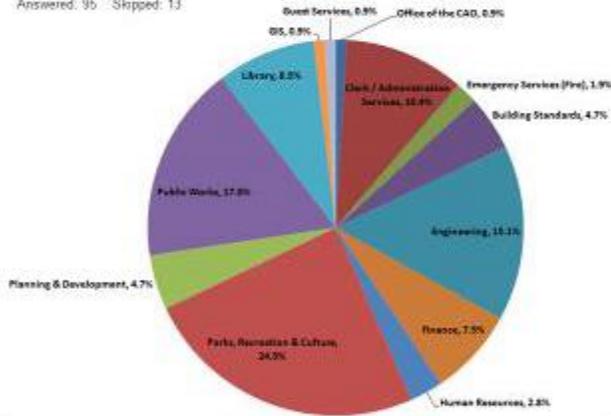
Date Created: Monday, November 14, 2016

Complete Responses: 91

Q1: Which department do you work in?



Answered: 95 Skipped: 13

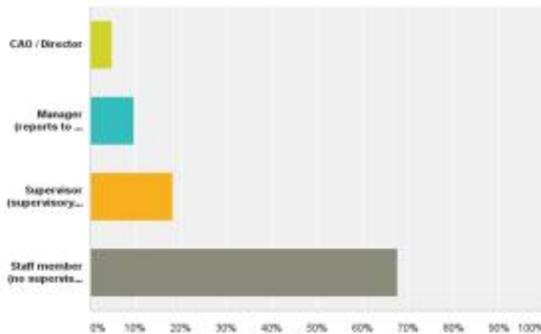


The Town of New Tecumseth has 13 different departments. This is a larger number of departments than other towns and counties that have been surveyed by Prior and Prior.

Q2: What is your position at the Town of New Tecumseth?



Answered: 106 Skipped: 3

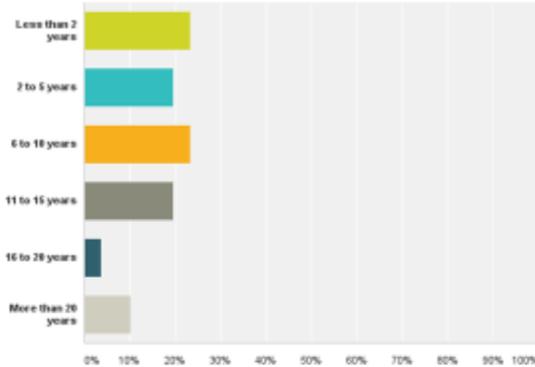


- The greatest percentage of respondents were staff (68%), supervisors (18%), and managers, directors and CAO making up the remaining (14%).
- Good distribution of responses across positions.
- The goal of the survey was to engage the broader staff population, which appears to have been achieved.

Q3: How long have you been working at the Town of New Tecumseth?



Answered: 107 Skipped: 1

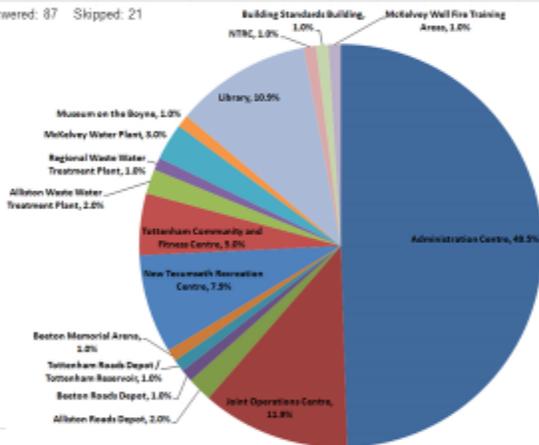


- There is a good distribution of experience within the Town.

Q4: Which location do you typically work out of



Answered: 87 Skipped: 21

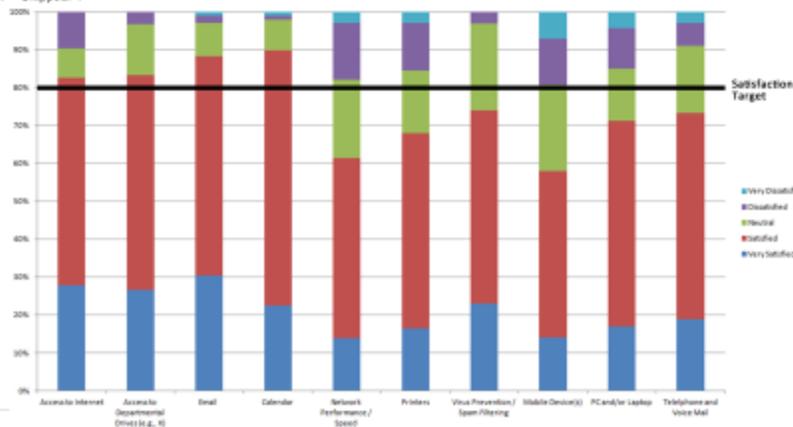


- The greatest percentage of respondents work out of the **Administration Centre**.
- The locations not represented were: Alliston, Beeton and Tottenham Fire Stations, Alliston Memorial Arena, Tottenham Waste Water Treatment, Parsons Water Plant, Tottenham OPP, Outdoor Pool, and the Tottenham Conservation Area.

Q5: Please rate the following services



Answered: 104 Skipped: 4



Q6: Rate the core business systems that you use. Please only rate the systems that you personally use.



Answered: 99 Skipped: 9

CivicWeb Allow Training Great Plains
 Software Staff Civic By-law Service Request
 Penny Program GIS

The only core business system that meets that satisfaction target is Microsoft Office 2016. Overall, respondents were **very neutral** about the systems that they utilize.

Training:

A number of respondents commented that they would like training on the different business systems that are available:

"Challenges with new software upgrades is training. Although there is training available, it becomes challenging to attend any offsite courses that are offered based on workload and time availability. CAD/Civil 3D, for example is a comprehensive software, although most have a general sense of basic functions to draft a simple drawing, the full suite of its abilities, is out of reach to utilize its full potential beneficial to our department. "

Q6: Rate the core business systems that you use. Please only rate the systems that you personally use.



Answered: 99 Skipped: 9

The Poor Usability of Civic Web:

"Civic web is not very user friendly for the creation and formatting of reports. Acknowledge it is not a word processor, however, using the software for the creation of reports is difficult, and there are often differences in the way the information is presented in the software when compared to the PDF output (formatting, tables, attachments)."

The Poor Usability of Penny:

"The frustrating aspect with Penny is the support aspect. We cannot contact them directly with a concern as we have to go through GP support first. Sometimes the response time from GP is slow which then delays the support from Joe Software (Penny). Because Penny is used for payroll purposes, I generally need assistance immediately as I am trying to meet the payroll deadlines. Any customizations that have come through Penny have also taken months to be implemented. It is also inconvenient that the Penny software is not app based as many staff who are approving time are on work phones more than their PCs."

Q7&8: Identify and rate other business systems that you use regularly that are not listed



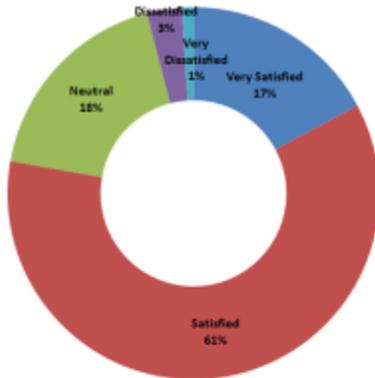
Answered: 23 Skipped: 85

1. Request for Services Database (satisfied)
2. GIS Online (dissatisfied)
3. ArcMap (neutral)
4. Fleet Centre – GPS Tracking (dissatisfied)
5. PC Reservation (very satisfied)
6. When to Work Scheduling (dissatisfied)
7. Civil 3D (dissatisfied)
8. AVL Webtech – Fleet Centre (satisfied)
9. Dressing Room Display Boards in Recreation Facilities (very dissatisfied)
10. Great Plains (dissatisfied)
11. Microsoft Dynamics (satisfied)
12. CivicWeb Report Writing (neutral)

Q9: Please rate your satisfaction with the reliability of technology



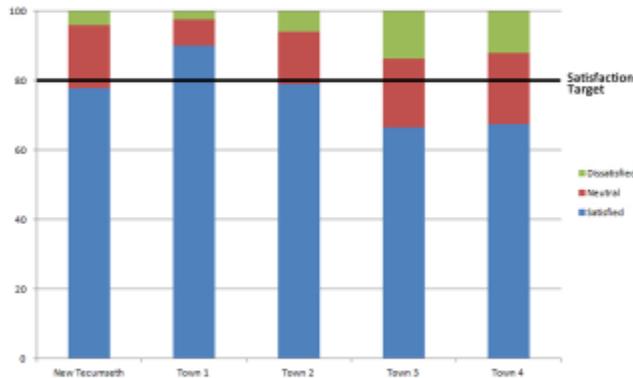
Answered: 99 Skipped: 9



78% of respondents said that they were "satisfied" or "very satisfied" with the reliability of the technology that they use.

Looking at this in context of questions 5 and 6, the technologies and services have low satisfaction ratings; however, respondents see them as reliable.

Q9: Please rate your satisfaction with the reliability of technology

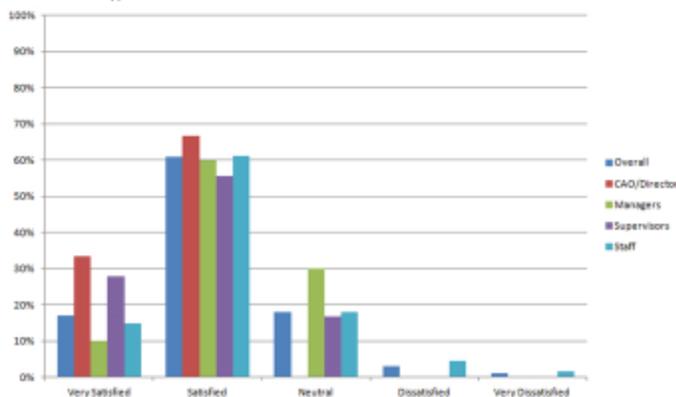


This graph shows how well New Tecumseth is doing in relation to other towns and counties of similar size that Prior and Prior has previously surveyed (data is no more than 3 years old).

Q9: Please rate your satisfaction with the reliability of technology



Answered: 99 Skipped: 9

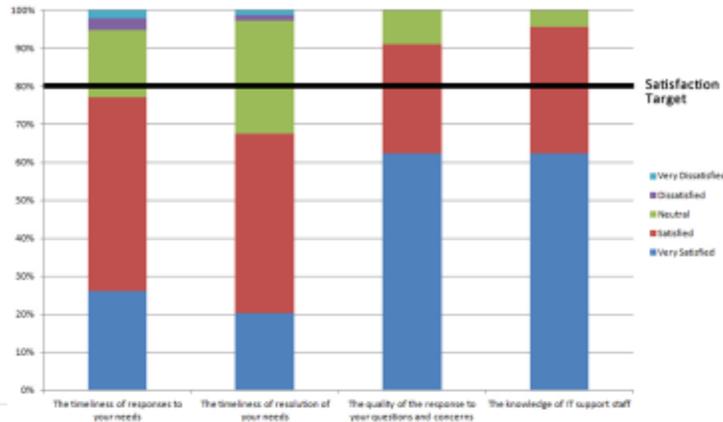


Staff were the only respondents who felt "dissatisfied" or "very dissatisfied" with the reliability of the technologies they use.

Q10: Please rate your satisfaction with the IT Department's service to you



Answered: 98 Skipped: 10



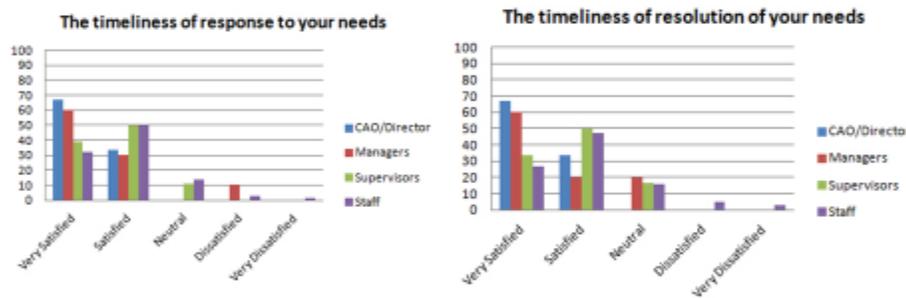
The satisfaction target was met with the "quality of response" and "knowledge of IT staff".

Opportunities for improvement exist with the timeliness of response and resolution.

Q10: Please rate your satisfaction with the IT Department's service to you



Answered: 98 Skipped: 10

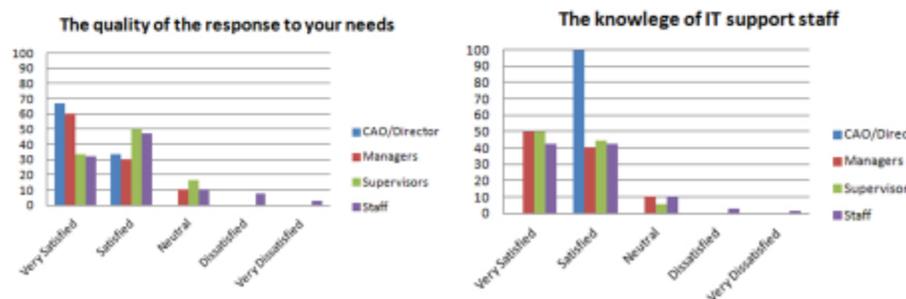


The CAO/Director and Managers are most satisfied with the services from IT, with staff being the least satisfied.

Q10: Please rate your satisfaction with the IT Department's service to you



Answered: 98 Skipped: 10



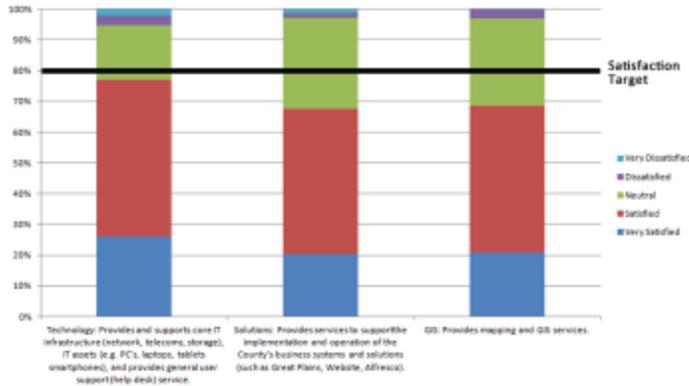
Respondents commented on the possibility that there **wasn't enough staff in IT**.

"... for a community this large it is challenging for two people to cover the areas of concern. Also as much as IT assists the departments some departments are not run 8:30 to 4:30 daily and evening and weekend service is needed in some cases."

Q11: Please rate your satisfaction with the following IT service areas



Answered: 98 Skipped: 10

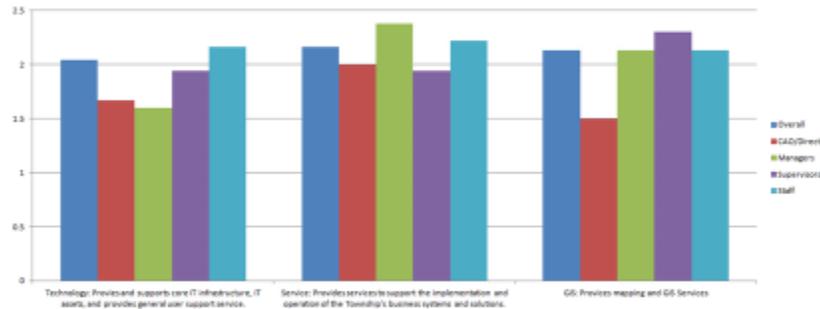


The **satisfaction target was not met** in all three areas of technology (provide and support core IT infrastructure), solutions (implementation and operation of business systems), and GIS (mapping services).

Q11: Please rate your satisfaction with the following IT service areas



Answered: 98 Skipped: 10



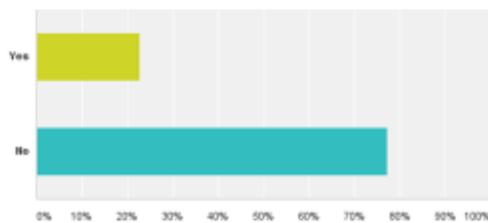
GIS Improvements, System Integration, and Remote Access:

"The technology we have today meets most of my needs, however I think there are opportunities for improvements, particularly respecting collaborative/cloud-based documents, remote access, and expanding our GIS."

Q12: Do you have regular need for IT support outside of regular business hours (8:30 – 4:30 Monday to Friday)?



Answered: 97 Skipped: 11



IT support is needed in areas such as the **Libraries, Parks and Recreation, and Fitness Centres** have hours that extend into the evenings and weekends.

"The internet at offsite depots at times can go down after hours, no way of repairing."

"It would be great to have IT support evening and weekends, even if it was just a rotating on call person."

Q13: If it's relevant to the business area you are in, describe your needs and expectations of IT services beyond 8:00 – 4:30 Monday to Friday.



Answered: 14 Skipped: 94

"Open to the public so if we have a problem during those hours that IT is not available we are unable to provide services required."

"Perhaps someone should be on-call during the non-traditional business hours during which time town facilities are open, so that we can continue to deliver excellent customer service to our patrons, even during extended hours."

"Public works, Fire and parks and rec often have staff that work outside regular hours who contact IT. Also managers and some staff occasionally work outside these hours as well."

"The registration system may crash, or close down. Power outages occur and the system goes down. Wifi is always in need in rec facilities and is a constant complaint from parties coming to the centres."

"All systems need to be available and operational. Includes codes and system access potentially. A EOC and system support maybe required for extended non-core hour[s]..."

Q14: Are there IT systems, technologies, or tools, not currently in place, that the Town of New Tecumseth should make available for staff?



Answered: 44 Skipped: 64

1. Remote Access and Mobile Technologies

- Access to drives and software in the field (e.g., work order requisitions)
- Access to tablets and other mobile devices
- "Public works phones are not reliable, are not "smart" phones and limit staff accesses to information on site. Maintenance staff in particular lack mobile internet for accessing manuals, maintenance software and troubleshooting information. Furthermore the cameras on the existing phones are of poor quality for documenting repairs."

2. Internal Communication Tools

- Intranet (for the Library), Instant Messaging
- "There needs to be a town wide program that allows staff to record any resident inquiries so that all staff can be aware of any assistance being given to a resident so services are not duplicated."

Q14: Are there IT systems, technologies, or tools, not currently in place, that the Town of New Tecumseth should make available for staff?



Answered: 44 Skipped: 64

3. Software

- Amanda, Spark
- Work order, assets, and records management systems (cloud-based document sharing)
- Integrate existing systems with GIS to optimize work flow

4. Expanded WiFi

- "Why are some employees in the Admin centre provided with the wi fi password and other not.... should this not be available to all staff?"

5. Improved Network

- Stronger and more reliable network for software and tools (e.g., Skype).

Q15: Are there new IT Services that the IT Department should provide for the Town of New Tecumseth?



Answered: 22 Skipped: 66

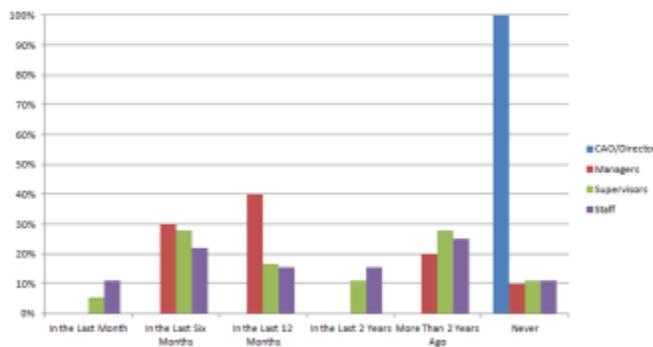
1. The need for **more training** was most frequently commented by the respondents. The following are some comments made:
 - "Helping the "older guys" with computer training. Maybe make it mandatory."
 - "Training for the programs that are offered in house instead of going to Simcoe."
 - "Training staff to update our individual pages on the website."

2. "Adding the **Virtual City Hall (VCH) website** offered by Diamond (GP) would allow residents to access information relating to their water and tax accounts without having to contact a staff member. This would alleviate the burden on Revenue Staff as well as being able to provide a higher level customer support, which supports one of the strategic objectives of the Town."

Q16: When did you last receive formal technology training?



Answered: 97 Skipped: 11



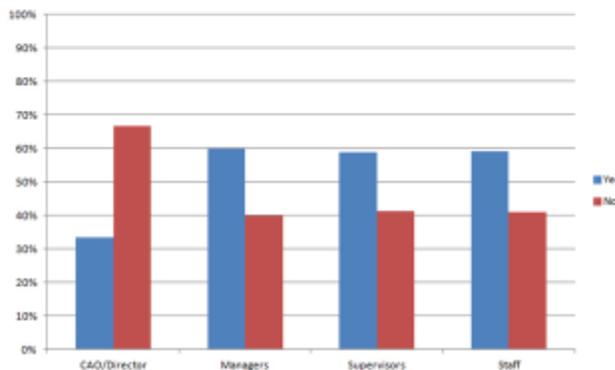
All CAO/Director respondents said that they have never received technology training.

A significant number of respondents have not received training in over a year or more.

Q17: Do you feel that you have been adequately trained to use all of the technologies available to you?



Answered: 98 Skipped: 10



CAO/Director respondents said that they do not feel adequately trained to use the technologies available to them.

40% of managers, supervisors and staff all feel that they have not been adequately trained to use technology.

Q18: Identify the top 5 areas where you'd personally like to receive more training

Answered: 56 Skipped: 52

Training: 1st priority

1. Microsoft Office 2016
2. ESRI GIS Suite
3. Microsoft Great Plains Financial System
4. Civicweb – Agenda Creation

Training: 2nd priority

1. Questica – Budgeting Software
2. Microsoft Office 365 – Email (web based version)
3. ActiveNet Class – Parks & Recreation

Training: 3rd priority

1. Laserfiche – Digital Records Management

