



# IT Master Plan (ITMP)

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[www.perrygroupconsulting.ca](http://www.perrygroupconsulting.ca)  
647-669-9540

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## 1.0 Executive Summary

The Township of Tiny has an amazing opportunity to recalibrate the IT function under changed leadership to better align with business needs, improve service delivery and meet (or exceed) existing corporate goals designed to serve customers better. The municipality has done well over the past several years to build technology foundations and implement key solutions that will continue to grow and evolve alongside the Township's desire to digitally transform the organization.

The growth and complexity of service delivery and mounting public expectations around digital have led to the current state predicament where there simply is not enough capacity or skills within IT to help guide the organization. Partnerships with third parties have been a wise investment to this point and have helped to fill some of these gaps, however, the current situation requires more proficiency to be developed in-house in order to truly maximize these contractual agreements. IT needs to become a 'broker' for the municipality, ensuring that the right contracts are in place and that vendors are held to their commitments around implementation projects and managed services.

Aside from building compacity and skillsets within IT, the Township also needs to assume a corporate approach to technology decision-making. The current decentralized approach where departments are making decisions around their business needs unilaterally is the current reality, however long term, this will lead to redundancy, further technological debt, as well as underutilization of solutions and tools. In short, maintaining the current state approach will lead to an environment where it becomes challenging (if not impossible) to successfully remediate.

Further maturity with technology governance, strategic planning, policy and process development, technology training, project management and prioritization will create a platform and better insights for the Township to make sure investments are made to support the highest needs of the organization. Leadership at all levels is the key to unlocking the most value from technology investments, and this goes beyond just IT. It requires coordination from the top and ownership on the part of the business.

The risks within technology environments are becoming more prominent as cybersecurity threats directed against municipalities continue to be commonplace. Ensuring the custody and control of private information is an important component in maintaining trust in the community and across the organization. Further, data represents one of the biggest untapped resources in the Township with which to make better decisions, tell stories and improve workflows. Staff want to know that IT (and various partners) have their back when it comes to protecting civic data as well as supporting their needs around the best possible utilization of technology.

This Information Technology Master Plan (ITMP) is intended to be a roadmap to help guide the Township down the right path. If implemented, it will greatly extend capabilities to be able to manage the evolution of the technology environment more skillfully and ensure that decisions made are sustainable over the long-term.

The ITMP provides for a high-level synopsis of the current state (more detailed reporting on this is available via the Discovery Report submitted under separate cover), and identifies recommended actions under three programs of work:

- [Governance, Leadership and Training](#)
- [Infrastructure and Operations](#)
- [Service Transformation and Business Solutions](#)

Nearly 60 recommendations have been categorized under these programs of work and are described in detail in this plan.

Additionally, an Information Technology Master Plan (ITMP) Work Plan has been developed (see [Section 4 – Work Plan](#)) which includes a suggested sequencing of the actions based on interdependencies and capacity to support them. Approximations regarding funding requirements and scale of the initiatives along with suggested leadership for each action has also been proposed.

The appendices provide for various templates, job descriptions, guides and requirements that will help Tiny land some quick wins in order to demonstrate value that can continue to be delivered through larger, more complex projects.

The ITMP is doable. It's scaled to the size and capabilities of Tiny Township as it continues to scale out by following the various recommendations included herein. Prudent funding and investment decisions *will* need to be made along the way – both with respect to adding new roles to the IT team but also in relation to contracts with third parties. Skilling up within IT will give the Township a better opportunity to ensure they can leverage these contracts to the greatest possible degree. The ITMP will also develop rudiments to make technology decision-making easier and better support the business in meeting their many service delivery aspirations.

The key to success with the ITMP is to start small. Build and improve on the technology foundations that exist first. Then tackle the more complex actions when the competences are in place to fully support them. Ensure that the organization is better aligned around technology decision-making and that priorities, as well as roles and responsibilities, are clearly defined. Make a commitment but be mindful that concessions need to be made along the way.

Technology work will always outweigh the ability of the Township to respond. Prioritization and careful strategic planning must be undertaken to ensure that goals of the ITMP are met. If carried out successfully, this Plan will allow the Township of Tiny to take a gigantic leap forward in supporting Council's vision to put customer's first and ensure staff have the technology tools and training to do so.

## 1.1 Introduction

The Township of Tiny (the "Township") has made some significant organizational strides over the past few years by recruiting a new CAO and other senior leaders in order to support the evolving needs of business and the community. Much has been done (and in a relatively short time) to enhance customer experiences and improve service delivery.

The Township is now looking farther ahead and has commissioned Perry Group Consulting (Perry Group) to develop an ITMP to provide a "guiding document" to help fully leverage technology investments to meet the current and future strategic goals of the organization.

The key attributes for a such a Plan are to:

- Assess current and future technology needs (infrastructure, network, security, business solutions, etc.) and provide recommendations along with a sequenced Work Plan to optimize continuous improvement.
- Determine what IT model and service level is most optimal for the organization and define an accountability model to ensure that everyone fully understands their role.
- Develop a framework to sustain change and facilitate greater collaboration across departmental lines and with external partners to support corporate decision-making and tracking of technology projects.

Perry Group consultants worked on the project with these key outcomes as the ultimate goals for the Township. The recommendations were developed to align with these outcomes in the long run.

## 1.2 Opportunities

Technology has changed the way we do business. Today, it plays a major role in efficiently connecting separate parts of the organization, customers, councillors, staff and partners, whether across departments, or from customer service representatives to Roads and Parks crews.

Using common, integrated systems ensures that inquiries flow from front counters to departments and to appropriate field staff for resolution in the quickest and most effective manner possible. Good technology enables

the cost-effective delivery of these services, automating workflows and freeing up staff to instead focus on higher value initiatives such as continuous improvement and strategic planning and coordination.

In short, good technology connects people and makes work easier.



Figure 1: Connecting People through Good Technology

Good technology also facilitates a better experience for customers who are now familiar with a myriad of day-to-day services that are performed online, from anywhere, at any time. Services that required face-to-face interactions in the past are now done remotely, often from the comfort of one's own home. This trend has been building for more than a decade now and has been even further entrenched through the COVID-19 pandemic.

Today, over 92% of Ontarians are online and 88% of people across Canada bank online ([via Statistics Canada](#)). This is a valuable indicator – if this many people are willing to bank online, it is reasonable to expect that they are also willing to transact with their municipality in the same way.

During the pandemic, the use of online services surged, and the Township and other municipalities were forced to be agile and adapt to the change. The learning and insight during this time has led to a huge opportunity for Tiny. Now is the right time to introduce more digital and modern service delivery options, to make work easier for staff and provide a better experience for customers.

The opportunity for the Township lies in modernizing the services through digitization and process improvement. Technology alone is not the answer. Successful technology modernization requires the right people and processes behind it. As a result, the Township must establish the necessary foundations with which to ideate, invest, plan, strategize, deliver and learn from technology projects.

By focusing on the opportunities at hand through a “people, process *then* technology” lens, the Township will deliver more expeditiously and provide far greater value when doing so.



## 2.0 Discovery Process

Over several months, Perry Group undertook a detailed review of the Township’s various strategies, policies, procedures and other corporate artifacts and also met with every department and the existing Managed Service Provider (CompuSolve) in order to ascertain the current state.

An internal survey was conducted – to which approximately 50% of staff responded – providing opinion with respect to the provision of IT services, the performance of business systems and the architecture supporting them, data and geographic information system (GIS) services, communication relating to IT services and projects, technology training and new requirements to support continuous improvement efforts. Municipal-specific reference models (developed by Perry Group) were also used to evaluate the provision of IT services and the Township’s overall technology environment, in relation to web and digital service delivery.

A detailed report on the current state was delivered to SMT on May 9, 2022. This group validated that the depiction was accurate and could be used to identify gaps and strategic development moving forward.

## 2.1 Current State Assessment

Before looking forward, it was important to understand where the Township was at – in terms of its technology environment, the provision of IT services as well as how the organization was structured – to make decisions about digital modernization.

This section of the Report provides a high-level overview of the current state assessed through use of a staff survey, as well as the Perry Group Municipal Technology Model (MTM) and Municipal Online Services Assessment (MOSA).

This information, along with that gathered through multiple interviews with staff and with the Township’s Municipal Service Provider (MSP), can be found in detail as part of the Discovery Report (disclosed under separate cover).

## 2.2 Staff Survey

There were many insights taken from the staff survey. In total, there were 32 responses submitted with a 91% completion rate from March 28 to April 8, 2022. Some of the most notable findings were as follows:

- The current provision of IT service was found to be satisfactory, in fact, no dissatisfaction was noted at all. That said, many respondents indicated that the current IT complement simply couldn’t keep up with the

demand for support. There were many comments indicating that IT staff regularly will go “above and beyond” to resolve issues, however, given the obvious resource constraints in the area, some respondents were unsure about who to contact and/or would avoid contacting anyone for help given how busy the unit is.

- Coordination and communication around technology initiatives is lacking, with many staff suggesting that they were unsure of the status of technology projects and did not have a sense of “the big picture” behind certain implementations.
- The current business systems also rated relatively satisfactorily, with the most common request noting the need for more training. In general, staff feel that the tools are more or less adequate (especially with Citywide coming online which will address a number of current gaps and provide an ideal system to consolidate around) but feel that use is limited as there is not enough information and education available to fully leverage the tools’ capabilities. Many comments also noted that integration between systems would be hugely beneficial as data often has to be entered into multiple systems and there were no real “single sources of truth” to ensure that staff were confident in the data they were accessing.
- Nominal dissatisfaction was expressed regarding PerfectMind/Xplor Recreation, SharePoint and Marmak LIS (Land Information System). The former two are new to the Township, and based on earlier comments, are likely identified because staff requires more training to use them adequately. Dissatisfaction with LIS (Marmak), however, seems to relate to the current state of the system which is lacking in functionality and contains poor quality data. LIS is a heavily-customized solution that has not kept pace with current business processes or needs and is challenging / time and resource intensive to customize further. Some staff suggest that LIS has simply “become a point of data entry for us” with no real value aside from capturing data.
- Staff felt that GIS tools and services are well utilized but further modernization in this area would have huge impacts in the way the tools support mobile operations and could serve to provide a much better experience for customers.
- Bandwidth, internet connectivity, network performance and speed are areas that staff are most concerned about (especially those who do not work within the Town Hall location).

One of the most critical insights from this survey (later validated through interviews), was the frequency with which staff contact IT for support.

On average, staff are contacting IT approximately 100 times per month (for various reasons). Although there was no IT Service Management (ITSM) system or time tracking data in place at the time of writing to quantify this, this approximate average represents a full workload for 1 FTE (full time equivalent).

With only two resources currently in IT, this means that one resource (the current GIS/IT Technician) is at full capacity simply responding, and attempting to resolve, support requests for the Township. At the time of writing, a contract IT Technician has been onboarded to share some of the work and has helped to better accommodate some of this demand for support. The current compliment, however, is unsustainable and already leading to issues such as staff burnout as well as the inability for IT to play a more prominent role in strategic development, project management, implementation support and delivery.

The vacancy of the current IT Administrator role has left sizeable gap to address but elevating this role into an [IT Coordinator](#) and filling it accordingly will greatly assist in raising the maturity of the Township to centralize the IT function in order to better plan and respond to its highest order technology needs.

## 2.3 Municipal Technology Model (MTM)

Perry Group reviewed the Township's technology against the Municipal Technology Model (MTM). The MTM – developed by Perry Group over the last decade of working with municipalities in Canada – identifies all the technologies that a municipality such as Tiny should have in place and is expressed through four layers – Infrastructure, Business Solutions, Integrations and Data and Customer-Facing.

While not exhaustive (in terms of capturing all the elements of technology in use) the MTM (shown below) provides good illustration (through a stop light grading system) that can help identify areas that are of risk to the Township, those that need work, as well as those that are in relatively good shape.

For instance, colour coding depicts the level of maturity for the different parts of the technology framework, with expression of "Good Shape", "Some Work Needed", "Major Work Needed", "Risk / Replace" and "Gap".

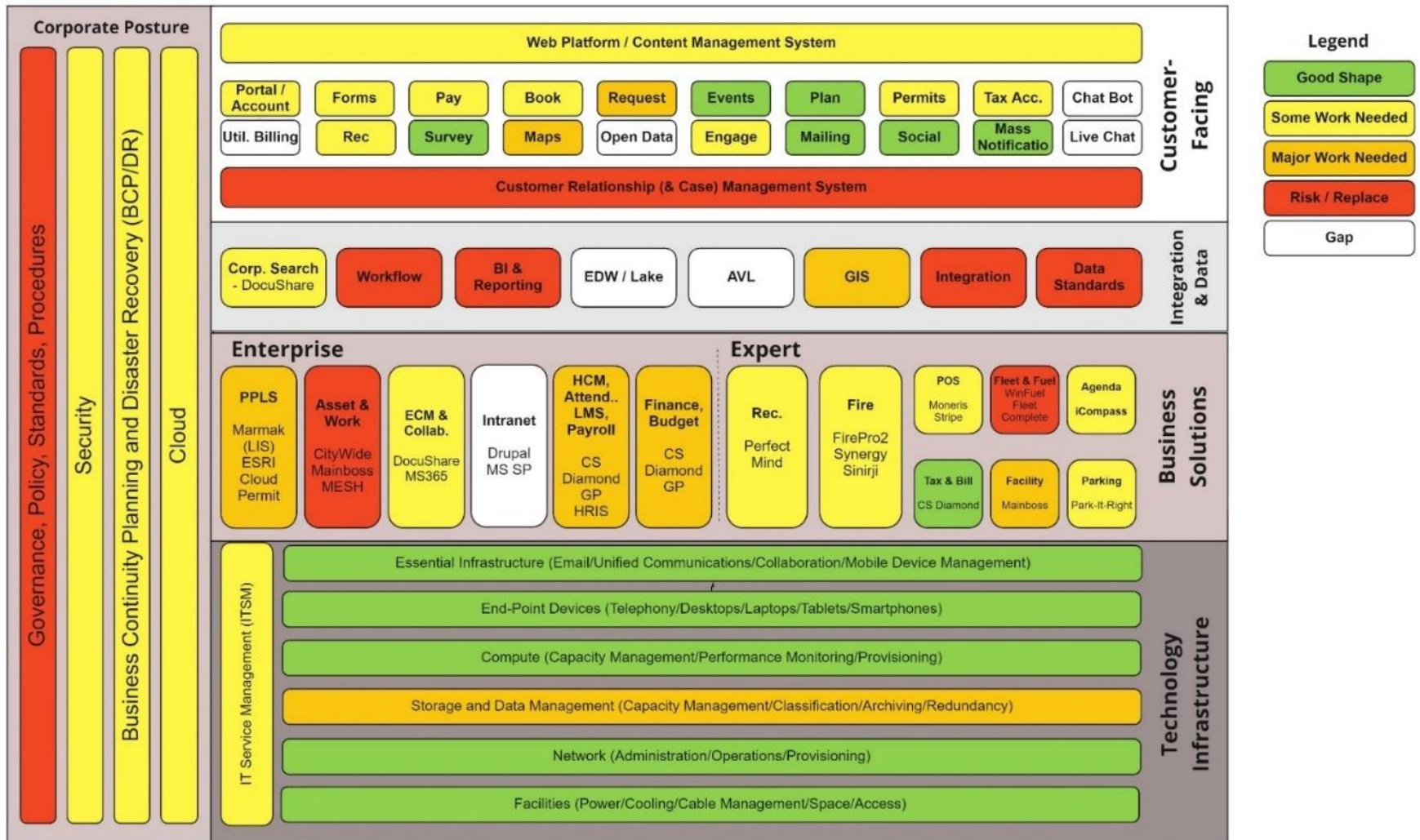


Figure 2: Tiny Township's MTM Assessment

Following are the key messages the MTM assessment provides.

### ***Infrastructure Layer***

The Township's Infrastructure Layer is in relatively good shape with sound technology and nothing significant requiring replacement due to end of life (EOL) or functionality limitations. However, there are no formal data capacity management processes in place within the storage system and, by extension, no overarching Data Management Strategy.

This presents a risk to the organization pertaining to stale/inactive data and missed opportunities around lower cost storage (e.g., data archiving).

### ***Corporate Posture***

The Township's corporate posture around things like Security, BCP/DR, Cloud, Governance, etc. requires some work with the latter being a deficit as well as a current risk to the organization.

### ***Business Solutions Layer***

In general, the Township has core applications in place to support municipal operations. Commonly, however, many of these applications are underutilized with little training and support in place to help better leverage them.

There is also no planning in place to support continuous improvement of these systems or to providing staff with the necessary training to which would help evolve both the staff and systems' use.

This being said, much hard work has occurred over the pandemic period to leverage the Microsoft Great Plains (MS GP) / Diamond implementation, replacing the legacy USTI JP Hanes system which was out-of-date and unsupported.

While issues still remain with CentralSquare's provision of support for GP Diamond, the on-premise implementation has already automated various facets of the general ledger including A/R, taxation and time and attendance / payroll and provided a good platform for further modernization.

The Township is also in the process of working with Public Sector Digest (PSD) to implement Citywide to automate asset management and associated workflows. Citywide (like MS GP), is a municipal platform that provides the opportunity to further consolidate in the areas of case management, budgeting and capital planning as well as permitting and is a key project for the Township to deliver on moving forward.

## *Integration and Data*

There are very few integrations between systems which has led to redundancy in data, poor quality information and overuse of exporting data to manually manipulate reporting.

The Township's current organizational model and the demands placed on IT has prohibited their involvement in key projects to ensure data and integration elements are in place to fully leverage solutions and retire the litany of manual, paper-based processes that still exist.

MS GP and the current Citywide implementation are driven primarily by departments which obfuscates corporate technology requirements to ensure that key systems "talk to each other".

Aside from integrating solutions with the Township's Enterprise Resource Planning (ERP) to ensure the GL is current, the lack of attention with respect to GIS and data integrations could be a major risk factor moving forward (particularly with the Citywide implementation).

## *Customer-Facing*

The Township has also done well to modernize its corporate website around the Drupal platform (in partnership with an external vendor, Upanup). The website is easy-to-use, mobile responsive and has a good number of eForms and fillable PDFs (20+).

Although, end-to-end digital and data collection processes are not in place to connect these front-end online forms with back-office systems, the customer experience has been greatly enhanced by their utilization.

There are various online payments in place (through use of Moneris and Stripe) to support several online services that are available to customers. Web portals offering self-service for customers also exist by way of Tiny Connect, Tiny Online Portal (PerfectMind/Xplor Recreation), Cloudpermit, Civic Web and ArcGIS. While these portals provide an excellent user experience, distinction between them could be confusing for some users in terms of having to register for multiple IDs.

There are some areas that can be remediated to better standardize on elements of "good digital service" such as providing clearer instructions (and noting expectations) regarding services, normalizing processes to support "service patterns" (book, pay, register, request, etc.) and ensuring user interface/user experience (UI/UX) commonality across web assets.

Case management is also something that is lacking with respect to current online services, however, some elements of this “CRM-type functionality” could be deployed through further development of the Drupal platform as well as potentially through Citywide and further consolidation around MS GP.

## 2.4 Municipal Online Services Assessment (MOSA)

To further evaluate customer-facing digital services, Perry Group’s standardized MOSA was utilized to articulate a target state for digital experiences that the Township could/should deliver to citizens based on industry best practices.

This tool allows for a quick assessment that generates a scored value that can then be compared against other municipalities that have also been assessed and serve as a baseline to track progress.

As noted previously, the results (shown below) were impressive when measured against similar municipal comparators. The overall score (64 of 123 services are digitized = 52%) serves to demonstrate that Tiny has had a deliberate focus on improving the online experience for its customers.

The following services were found to be online/digitized:

- Easy to use website, mobile website, single account, responsive web/app, online bid management, paying an invoice, paying a parking ticket/infraction, parking permits/exemptions, online rec program booking, renting a facility, applying for a building permit, submitting digital plans, submitting and tracking development applications, fire/fireworks permits, pet licensing, events calendar, Council/Committee web streaming and online agendas/minutes.

These services are considered to be partially digitized – meaning they have some form of automation (like an online form) but are not yet fully digitized (e.g., the back-office process is still manual):

- Personalization, customer knowledge base, eForms, employment search and applications, filming permits, Council delegation request and marriage licensing.

Finally, services not yet digitized or automated are:

- Submitting or tracking a service request, online chatting with a customer service agent, tweeting for help, paying taxes online, Open Data, tax account management, tax certificates, booking a building inspection, sign permits, road closures, snow clearance status, business licenses and digital signatures.


 <b>Tiny</b> <small>TOWNSHIP OF GANTON DE</small>	
Easy to use website	Y
Mobile website	Y
Personalization	Partial
Single Account	Y
Submit a service request	N
Track a service request	N
Responsive Web / App	Y
Customer knowledge base	Partial
Online chat with CSR	N
Tweet for help	N
Online bid management	Y
Pay Taxes Online	N
Pay an invoice	Y
Parking / infraction ticket payment	Y
Parking permits / exemptions	Y
Recreation program online booking	Y
Rent a facility	Y
eForms	Partial
Open Data	N
Transit planning	N/A
Tax account management	N
Tax certificates	N
Building permit application	Y
Book a building inspection	N
Submit digital plans	Y
Submit development application	Y
Track development application	Y
Employment search and applications	Partial
Sign permits	N
Fire / Fireworks permit	Y
Pet licence	Y
Theatre Tickets	N/A
Road closures	N
Snow clearance status	N
Events calendar	Y
Filming permits	Partial
Business licences	N
Council / committee web streaming	Y
Online Agendas / Minutes	Y
Grants programs	N/A
Council delegation request	Partial
Site suitability / selector / vacant land	N/A
Marriage Licence	Partial
Digital Signatures	N
<b>Tiny Township MOSA Score: 64 / 123 = 52%</b>	

Figure 3: Tiny Township’s MOSA



## 2.5 IT Organizational Structure, Function and Skills

When reviewing the current IT organization structure, function and skillset, it is clear that this area has largely been managed as a “cost centre”, charged to provide the most basic elements of IT support and service to the Township.

With the inception point of IT growing organically out of necessity (versus a strategic needs assessment), it’s worthwhile to note that this team has done very well to ensure that the foundations of technology infrastructure are in place to support some use of technology. With the guidance of the previous IT Administrator, this team has built rudiments around lifecycle management, ITSM, telephony, IT process, networking, web and online as well as solution support. Strategically planned or not, the Township has constructed a solid technology foundation to stand on in order to take the next step forward.

Over the past several years, due to the growth and furthering complexity of the organization, however, this team ([Current State IT Model](#)) has largely been relegated to providing technical support within a break-fix environment.

Aside from a few key implementations (e.g., DocuShare, LIS), departments have largely been left on their own to build their own requirements and procure/implement their own solutions/tools along with managing vendors and running technology projects. Staff have expressed concerns about this, in that they want IT to take a more active role in supporting major projects, however, the capacity (and skills) are currently not in place for the IT team to do this.

In 2017, the Township saw a need to recruit an additional IT resource to enhance its ability to deliver improvements in the use of GIS and data as well as to strengthen an ability to provide in-house technical support.

The GIS/IT Technician was recruited and has helped to bolster the in-house technical support, unfortunately, due to the demand (created by introducing new technology tools and solutions), this position is almost entirely focused on just that. GIS and data have not received the attention originally hoped for and remain a large opportunity for the Township to pursue.

Tiny’s longstanding partnership with CompuSolve has been a valuable relationship to help fill in some of the gaps where certain skills were not available within Tiny’s IT complement. At this point, CompuSolve has been a critical support for the Township’s ability to develop a solid foundation to make the progress it has. That said, enhanced knowledge in-house – with a skillset around vendor management, ITSM and technology infrastructure – would hugely benefit the organization in accurately scaling the partnership contract to ensure Tiny and its IT team are truly getting what they need (and pay for).

## 2.6 Financial Analysis

In terms of expenditures relating to technology, the Township falls on the low scale of Perry Group's suggested range. As shown in the example below, Perry Group's suggested range for IT Operating Expenditures is in the range from 2.5% to 4.5%; Ontario municipalities generally fall in the 1% to 3.5% range. Tiny's operating expenditures fall at 2.6% which is close to the low end of the recommended range.

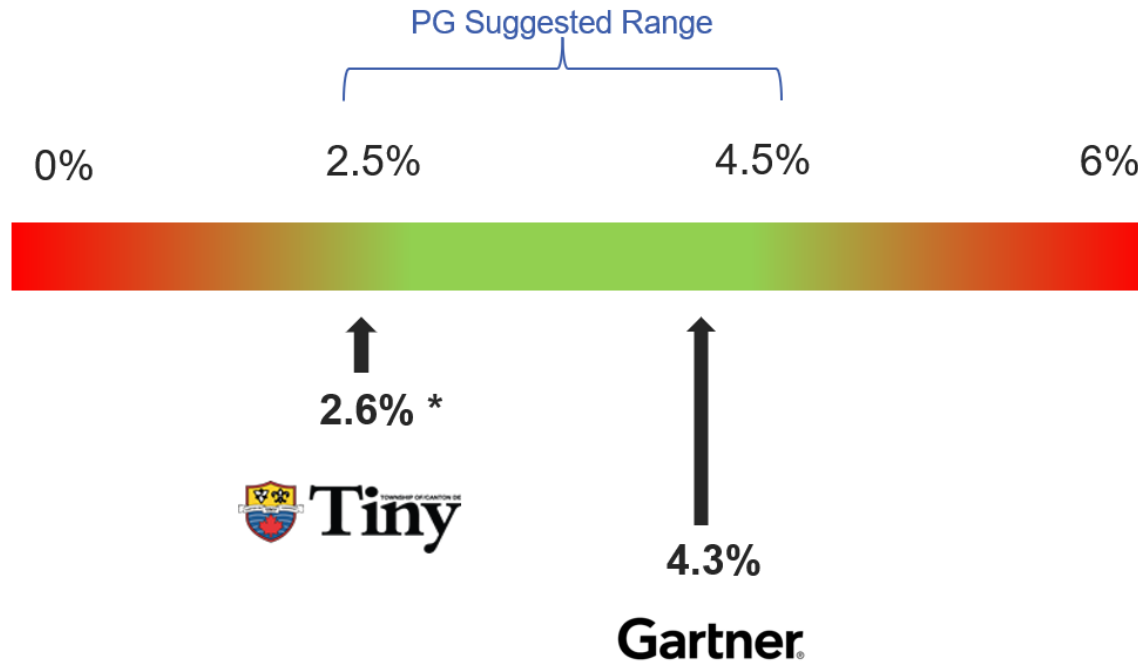


Figure 4: Tiny IT Operating Expenditures

Nearly 30% of this spend relates to the existing contract with CompuSolve. To ensure that this contract is favouring the organization's highest needs, further evaluation is required. Again, the ability to support a more precise vendor management approach to partners would help evaluate better value when contracting with external partners.

Nearly all IT-related expenditures fall within IT's budget with clear budget lines and a departmental chargeback model in place. There are annualized funding streams to support the hardware replacement lifecycle and some to support the evolution of software solutions. This is an area that will likely need to be increased over time as growth requires more tools and continuous improvement of business solutions and tools.

Capital spending is roughly 1.33% of the overall capital spend of the organization which is relatively on point given the growing reliance on contracted IT services and Cloud solutions.

The most prominent outlier in terms of technology funding, relates to training and education. Currently, the Township budgets \$1,500 / year for various technology training. Given the huge demand for more and the growth (and reliance) on solutions and tools, this needs to be re-evaluated.

Through the survey and our discussions with staff, they commonly noted that they could make better use of the solutions they had, if there was more information and training available on how to use them.

## 2.7 Infrastructure and Data Risk

The Township does not have a formalized Data Management Strategy and therefore minimal visibility into the costs and risks associated with stale/inactive data residing on production storage, and the potential of any sensitive data vulnerabilities to a data breach.

There are no tools currently being utilized to assess production data, data back-ups, and replication of data for disaster recovery purposes. There are several costs associated with the storage, back-up, and replication of unstructured data that may, in fact, be avoided or reduced with a proper Data Management Strategy.

## 3.0 ITMP Programs of Work

As noted in the previous sections of this Report, the Township of Tiny has done well to build some solid technology groundwork that can be used to take the next step forward.

An important driver for this is rooted in the Township of Tiny Strategic Plan: 2020-2025 where it's noted that the organization is "*committed to improving technology for our clients through collaboration with our municipal partners and exploring opportunities for expanded service*". Council also identified a number of their top priorities under the banner of delivering "*extraordinary municipal services to our residents*". By implementing the proposed ITMP Work Plan, we feel that Tiny can certainly meet this goal.

The following sections in this Report outline a list of **actions** under the following **programs of work**. Each action is also listed in a proposed sequential order via the [Work Plan](#) below.



## Governance, Leadership and Training

Dedicated leadership and governance to support corporate prioritization and decision making with respect to technology projects. Drive strategy, make investments, approve policy, cascade information throughout the organization and ensure staff is aware and trained on tools available to them.



## Infrastructure and Operations

Technology as the solid utility, providing access and connectivity to business solutions and civic information. Delivering against a well-defined architecture “Big Picture” which includes focus on cybersecurity, business continuity and data loss prevention.



## Service Transformation and Business Solutions

Employing a people, process *then* technology lens in order to optimize business processes, configure business solutions based on needs and enhance digital service for customers.

Figure 5: ITMP Programs of Work

## 3.1 Governance, Leadership and Training

A key to success for the Township with respect to technology is ensuring centralized and sound decision-making that works across the organization to ensure that value for money is being delivered on all fronts.

This includes the prioritization of IT projects, resourcing and funding approvals, contract and vendor management, standards and policies development, training and education as well as the many other facets of strategic technology planning.

Technology governance is a mainstay of successful organizations who understand that the strategic alignment of, and coordination between, business leaders and IT professionals will undoubtedly lead to better outcomes for everyone.

There are key areas of focus that should be considered through technology governance, namely those that seek strategic alignment, value delivery, risk management, capacity/resource management and performance management/delivery.

Leadership forms both the business as well as IT and has become a central tenet for accountability. Clarifying roles and responsibilities will facilitate better planning as well as custodianship (of business solutions, data, workflows, etc.) across the municipality. It will also help to promote transparency and communication, ensuring that everyone within the organization is on the same page.

Lastly, the need for training to support the use of technology cannot be overstated. One of the most prominent concerns expressed by Township staff throughout this engagement was that they weren't sure which tools were available to them and they were unclear on how best to use the ones they had. To date, the Township has used a "test and learn" approach with respect to technology delivery and implementation. The next step will be to increase transparency and share these learnings across departmental lines to validate comprehension and ensure shared value.

Collaboration beyond municipal silos is always a challenge, however, the Township has some significant experience in doing so. Further maturity brought forward by delivering on this program of work will help to formalize and mature processes to better support governance, leadership and training.

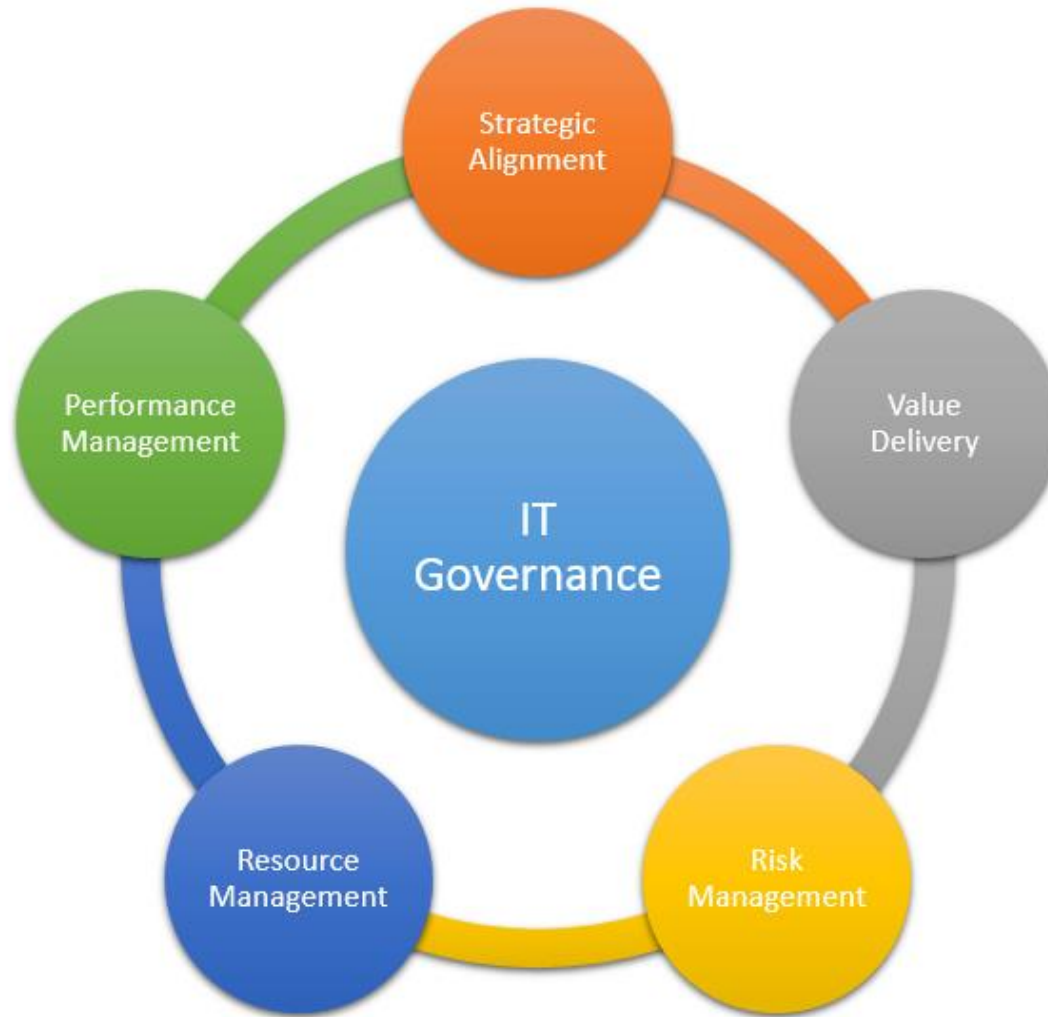


Figure 6: IT Governance Focus Areas

### 3.1.1 Adopt IT Organizational Model

As part of this engagement, Perry Group developed a number of potential options with respect to IT models for Tiny Township.

A needs assessment was undertaken through Discovery to identify the key skills and competencies that will be required to take the organization to the next level in terms of how it's leveraging technology investments.

Throughout the Discovery process, it became clear that leadership is the key to ensuring that the IT team can elevate beyond their current "cost center" and support function to become a better partner to the business.

An elevated IT team will work alongside business leaders and service owners and in conjunction with IT Governance Committee (ITGC) to build Work Plans that achieve business goals and ensure that the decisions made are truly sustainable over time.

A current deficit with respect to technology planning in Tiny has been that each department is largely implementing on their own. IT capacity, as it stands, does not permit the IT team to work alongside business staff in order to ideate, plan, budget and manage the wide array of third-party vendors who are implementing solutions.

A corporate approach to vendor management, led by IT, will provide more scrutiny and oversight in this area and ensure that contracts reflect current constraints and opportunities and that ongoing commitments are being met.

The IT team cannot deliver on every front required by the Township. Third-party implementors, contractors and service providers are critical partnerships that need to be optimally leveraged in order to deliver on technology Work Plans. As such, IT needs to build capacity in order to coordinate and broker use of external partners. IT *should* be able to do so from ideation to requirements gathering to contract negotiations, right through to the product delivery phase (and beyond via ITGC).

The proposed IT expansion models noted in the diagrams below take these requisites into account by elevating job descriptions and creating new roles ([Appendix 3 – Job Descriptions](#)) that will better position IT as a broker of technology for the Township.

The following describes each proposed model, along with the suggested sequence for adoption. Understanding that municipal budgeting is in no way easy and that certain concessions must be made, expansion is proposed through four phases.

Included in each model is an account of the associated pros and cons.



## Current State

Within the current state, the IT Administrator role reports to the Director of Finance/Treasurer. This role grew organically and was rooted in the Health and Safety area.

This role's priority was to ensure that the core foundations were in place and that technical support was available. Second to this, was to help sponsor and lead corporate technology projects (e.g., DocuShare, website, LIS, etc.). The key relationship this role managed was with the Township's Managed Service Provider (MSP), which has largely been CompuSolve over the past 10-15 years. This partnership has been relatively productive and helped the Township progress technologically.

A GIS/IT Technician role is also in place. When first conceived, it was hoped that this position would split time between GIS and technical support. GIS and data are a large opportunity area for Tiny. Staff want enhanced reporting, better GIS layer development, BI/analytics, operational/performance dashboards etc. In short, they want to leverage data as an asset to make better decisions and improve the way they deliver information to the public. Unfortunately, out of necessity, the GIS/IT Technician role has been almost entirely dedicated to providing technical support to the organization. As a result, GIS and data maturity has been slow.

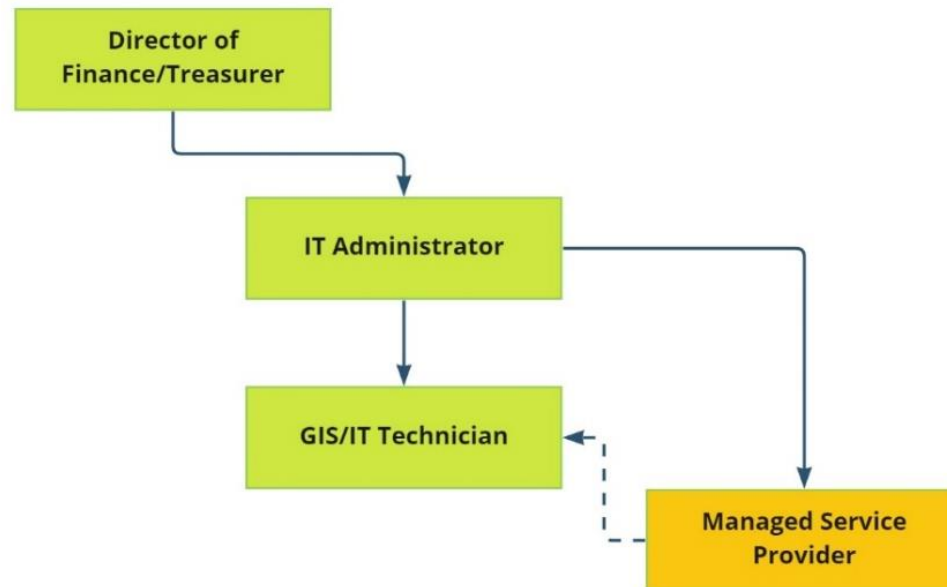


Figure 7: Current State IT Model

### Expand IT Organizational Model: Phase 1 (2022)

The first phase of expansion focuses on retiring the IT Administrator role (currently vacant) and creating a new IT Coordinator for the Township. This shift will help elevate the IT function to work across the organization to be a trusted 'broker' of technology for departments. This new role is being introduced to create capacity and facilitate a better interaction between IT, business leaders and end users.

The IT Coordinator role should be filled by a candidate that has experience and skills in project management, vendor/contract management, governance, strategic technology planning etc. (a proposed job description for this position is available in [Appendix 3 – Job Descriptions](#)).

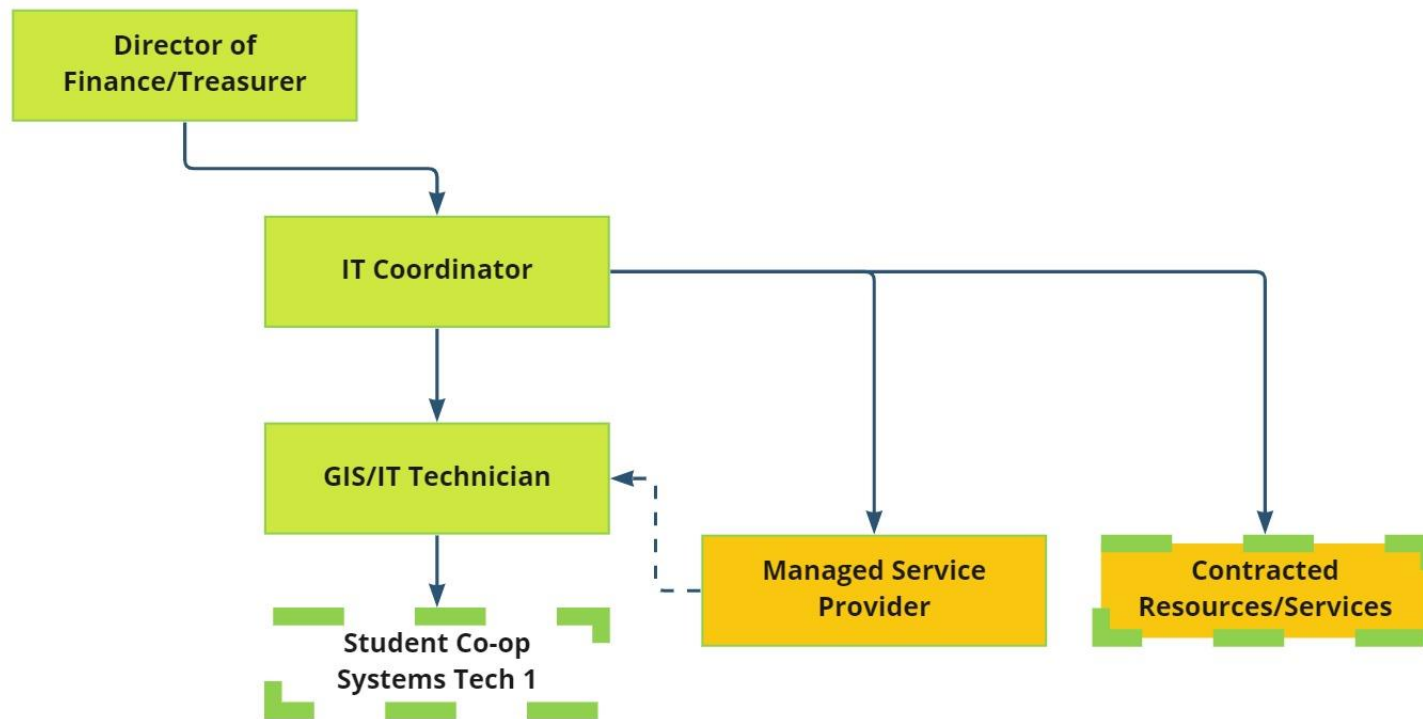


Figure 8: Phase 1 IT Model Expansion

Phase one also introduces the potential to hire co-op students from nearby academic institutions. This is an excellent opportunity for the Township to shore up its ability to deliver in-house technical support while also developing young talent.

The costs associated with co-op programs are heavily subsidized, making them far more affordable than creating FTEs or contracting temporary resources. Utilizing co-op opportunities is included in all proposed models.

Phase one also creates a linkage from the IT Coordinator to other “Contracted Resources/Services”. This is an important distinction to illustrate that the IT Coordinator will need to work with a variety of third-party partners in order to deliver on technology Work Plans and corporate commitments.

The pros and cons of this model are outlined below.

Pros	Cons
Modular in design; brings in contracted resources when needed (ideally develop external rosters that learn about your organization and technology environment).	Onboarding contracted resources can be challenging each time. It will take time to curate an external roster.
IT Coordinator to be recruited to fill major skills gaps (Vendor/Relationship/Risk Management, project manager (PM), Strategic Development, etc.).	Will be challenging to recruit due to the breadth of skills and experience required. An HR evaluation of the position will also likely increase the salary range for this position.
GIS and data projects delivered through contracted resources. GIS/IT Technician can support work when time is available.	Even with modified roles and responsibilities with the MSP, the GIS/IT Technician will not have sufficient time to truly support GIS work.
Student Co-op position/program is a low-cost investment (\$15 - \$25/hour) to bring in support for the IT Technician.	Managing the co-op program with proper training and development does burn cycles.
Lowest cost option but still adding ongoing operating expense budget to support co-op program and Contracted Resources.	Contracted Resources/Services can be similar in cost to FTEs but for some things, not as effective due to availability, onboarding, personnel, etc.

***Expand IT Organizational Model: Phase 2 (2023)***

Phase 2 expansion recommends creating a new role within the IT team, the IT Operations Support Specialist. This job description focuses on the operational side of IT, introducing competencies such as technology infrastructure/architecture planning, ITSM and technical support delivery, networking, security, and various other back-end IT requirements (a proposed job description for this position is available in [Appendix 3](#)). This position is

intended to bring stability to the foundations of IT which is necessary to support extended and enhanced use of systems.

The IT Operations Support Specialist will work directly with the Township’s MSP and other partners. Moreover, they will possess a skillset that currently does not exist within the IT team. This infrastructure competency will help keep the MSP and third-party partners accountable for the recommendations and services they provide.

Not having the internal skills to evaluate and audit IT service requirements vis-a-vis third-party contracts (especially in relation to infrastructure/network planning and security) is a current risk for the organization.

Control in this area as well as an expanded co-op program will better align IT service in relation to prioritized needs. The IT Operations Support Specialist position is also introduced to support the growth of GIS and data and to better leverage technology investments in this regard through the (renamed GIS and Data Specialist).

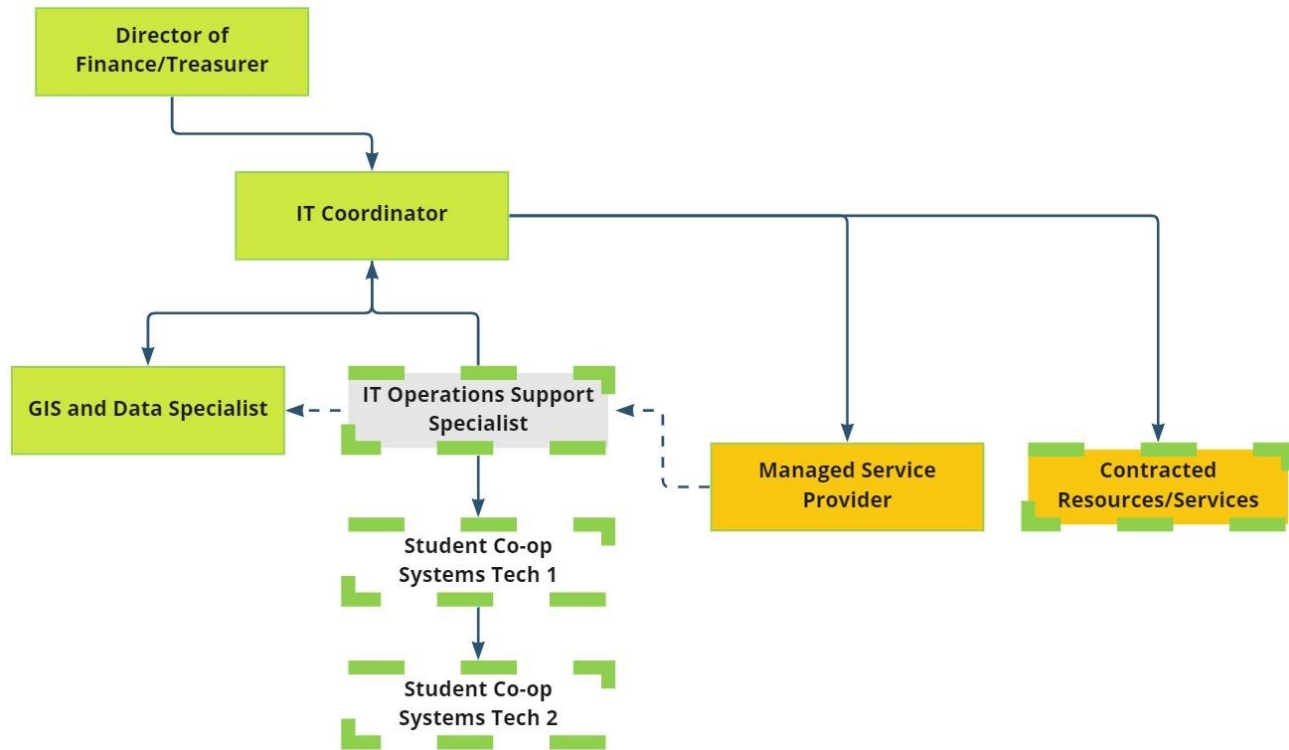


Figure 9: Phase 2 IT Model Expansion

The pros and cons of this model are outlined below.

Pros	Cons
<p>IT Operations Support Specialist will enhance an ability to support IT operations and better plan infrastructure elements (ITSM, Network/Infrastructure, Security, etc.). Can broaden co-op program to manage more Tier 1 support through students while focusing more on balancing needs with MSP and ensuring value for money contracts.</p>	<p>Cost to create the position. Recruitment will also be a challenge.</p>
<p>Splitting the GIS and Data Specialist from the current incumbent's focus on providing technical support creates room for this role to focus on leadership of the GIS/data disciplines as well as building out the capabilities provided for through business systems.</p>	<p>Similar to current state, where the existing position is split between too many areas of focus, this position will also be drawn into BA-type work in support of evolving business systems as it's currently a gap (that will continue to grow over time).</p>
<p>Develops two sides of IT, one focused on strategy and the evolution of tools, the other focused on working with the MSP to support the IT solid utility function (keeping the lights on).</p>	<p>Same as above.</p>

***Expand IT Organizational Model: Phase 3 (2024)***

Phase 3 expansion introduces a new role for IT in the Business Solutions Specialist. The job description for this position is intended to create two logical divisions within IT – Operations & Support and Business Solutions (a proposed job description for this position is available in [Appendix 3](#)).

These two sides to IT are commonly represented within municipal models as separation best facilitates modernization of software alongside the infrastructure necessary to do so.

This model also creates more freedom for the GIS and Data Specialist to work as a member of the IT team and to focus 100% on leveraging the infrastructure and business solutions to deliver better reporting, dashboard development, BI/analytics as well as evolve the GIS program to meet the needs of the organization.

GIS is now a major catalyst for supporting asset management programs as well as delivering better information services. Visualizations, mapping and storytelling are all using geo-tagged data to deliver value (e.g., municipal GeoHubs are an excellent reference point illustrating the power of GIS and data – [Brampton](#), [Kitchener](#), [Cambridge](#), [Huntsville](#)).

Freeing up this position from occasionally supporting business analyst work, will also expedite architecture planning, software integration planning, data management and digital service delivery.

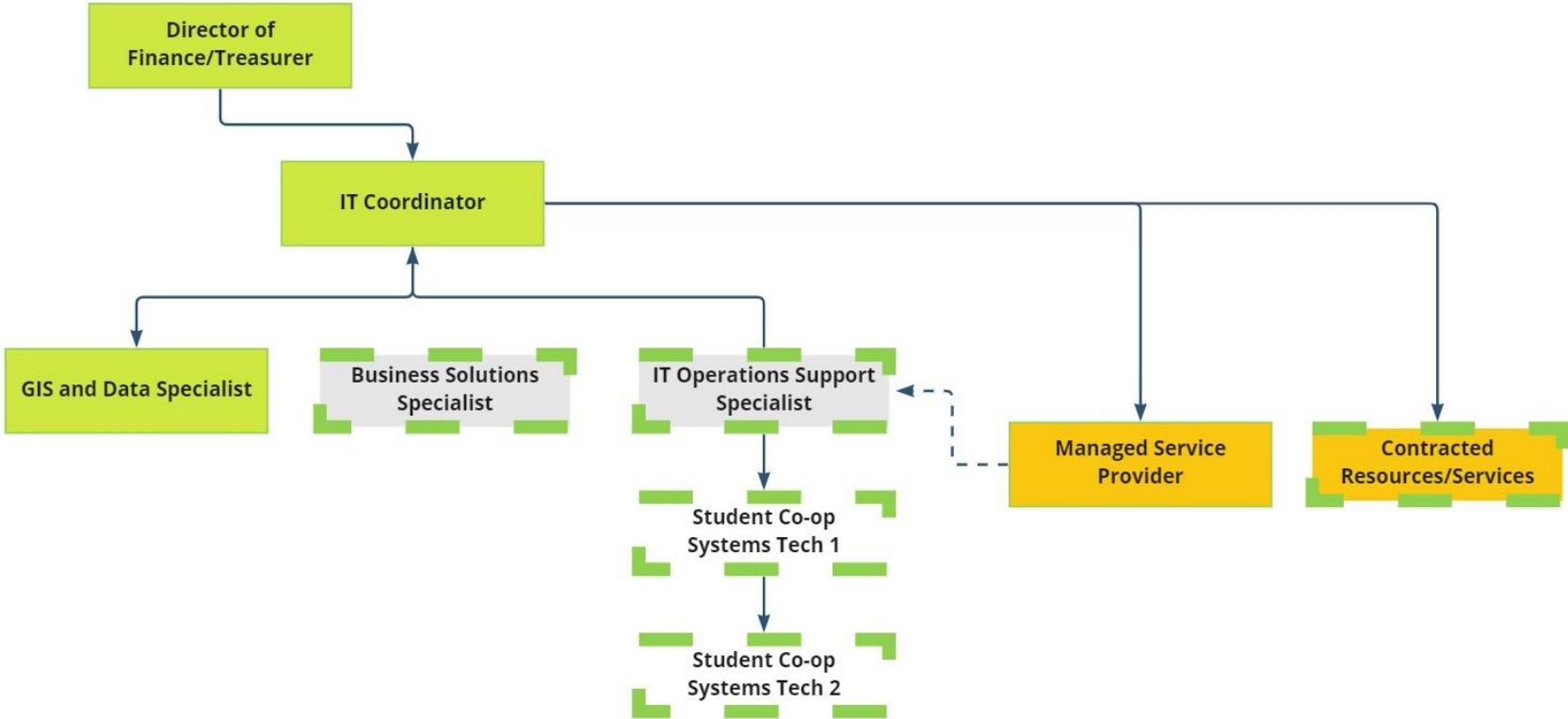


Figure 10: Phase 3 IT Model Expansion

The pros and cons of this model are outlined below.

Pros	Cons
<p>Freeing up the GIS and Data Specialist from playing a BA role in support of business solutions provides room for that position to focus on strategic development, pilots and leadership of GIS/data across projects. These disciplines working in conjunction with the Business Solutions Specialist will enhance GIS and data by using existing technology, supporting integrations and mitigating current risks associated with data management.</p>	<p>Cost to create position. Recruitment will also be a challenge.</p>
<p>Develops two sides of IT, one focused on strategy and the evolution of tools, the other focused on working with the MSP to support the IT solid utility function (keeping the lights on). The addition of a Business Solutions Specialist provides on demand help to evolve platforms and systems.</p>	<p>Same as above.</p>

***Consider Further Expansion and Repositioning of the IT Organizational Model: Phase 4 (2026)***

Understanding that, at the time of writing, the Township is also undertaking an Organizational Review supported by [Blackline Consulting](#). The Phase 4 proposed model is conceptual in nature.

The key to this iteration requires repositioning the IT team as well as other disciplines such as HR (currently a standalone role reporting to the CAO), Communications (a split position currently held by the Communications/Committee Coordinator) and Project Management (no existing roles) under a newly formed Strategic Initiatives department.

Clearly, this is a huge change for the Township and includes the creation of 4.5 new FTEs. When factoring the costs associated with a model such as this, the organization will likely need to prioritize these positions and reconcile adoption along with other needs coming out of the Organizational Review.

It may be determined that expansion to this degree is not warranted, however, the model has been introduced to provide a useful reference point to illustrate how strategic resources may be better aligned to fill competency gaps that would expedite technology projects. It also repositions current burgeoning disciplines within the Township (HR and Communications) which may be better served by centralized leadership.

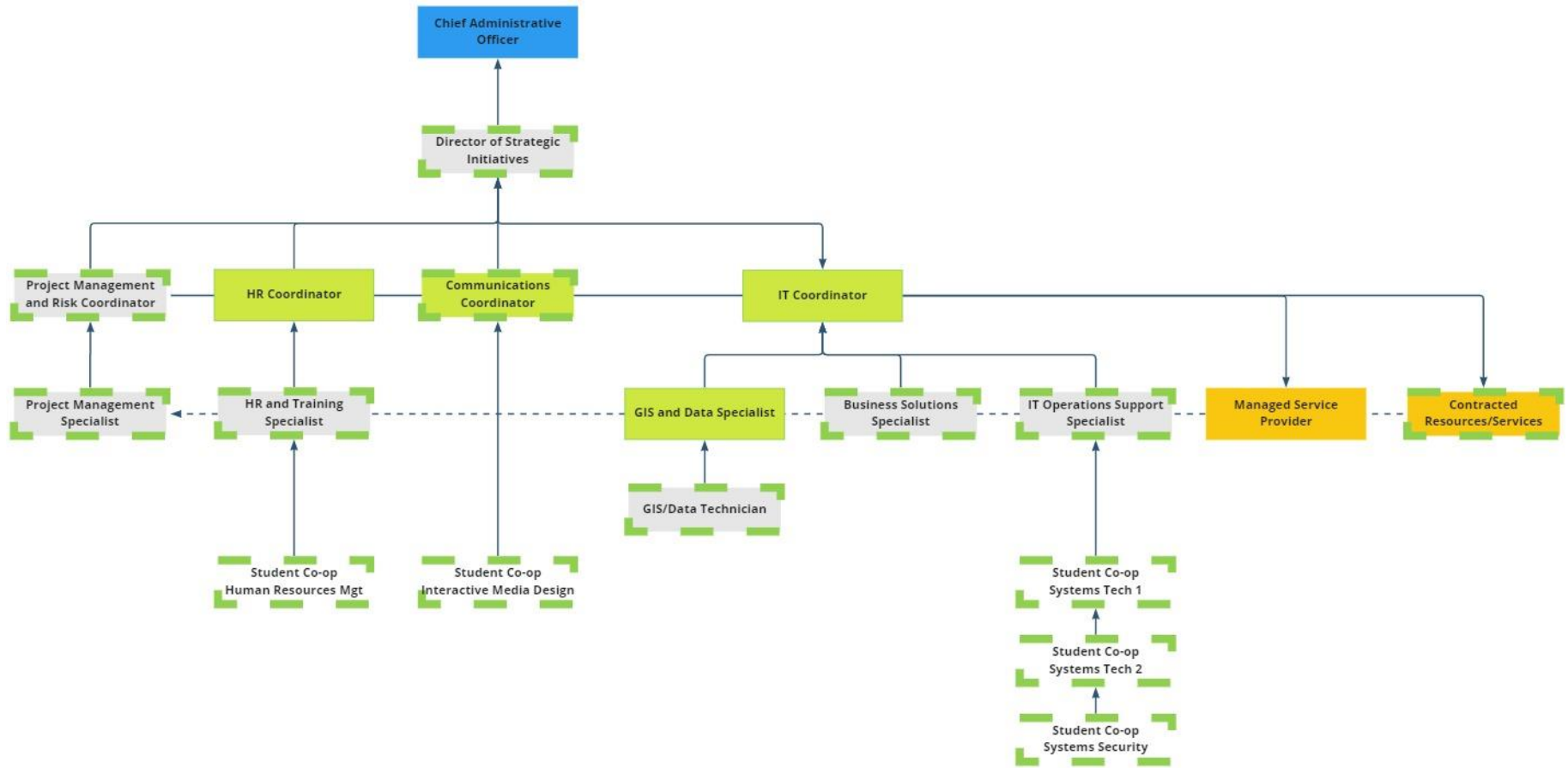


Figure 11: Phase 4 Conceptual Model – Strategic Initiatives Department



The pros and cons of this model are outlined below.

Pros	Cons
<p>Build from 1/2 FTE in Clerks to align a full FTE and Communications division with the Strategic Initiatives department. This provides the ability for greater exposure to corporate projects and could play a more centralized role in supporting digital communications and engagement on behalf of the business areas. Develops corporate standards and tools for departmental use.</p>	<p>Cost and recruitment. Communications could help centralize support, however, things like content management would still need to be supported by departments.</p>
<p>Add a GIS/Data Technician to further leverage data as an asset. This position could work well by being embedded into projects or departments for the purpose of running pilots, working on systems/integrations, building operational dashboards, enhancing reports/BI, designing analytics around performance/services, supporting field work/AVL/mobility pilots, etc. This position would also be a natural partner with the RMS Coordinator in Clerks vis-a-vis managing the Information Management Program.</p>	<p>Cost and recruitment.</p>
<p>Add HR Specialist to support internal customers and manage training needs across the organization as well as create a Project Management and Risk division that can be established as a centre of excellence, either directly supporting project management or providing standards, tools and support for staff who are doing so.</p>	<p>Cost and recruitment.</p>

### 3.1.2 Constitute ITGC and Governance Framework

To date, the Township has made major technology decisions in a decentralized manner. Although leadership in these areas is largely accountable for these projects, there is very little coordination between technology projects to determine shared value and overall sustainability over time.

If continuing this approach, the Township will create an environment where there are no clear single sources of truth – redundancy between systems. This solution sprawl is what leads to the technical debt issues faced by many municipalities today.

Tiny is not at that point yet. With the implementation of an ERP (GP / Diamond) and the ongoing preparation to implement a Work and Asset Management System (Citywide), there is still an opportunity to govern the growth of these solutions in conjunction with other core systems (LIS, Cloudpermit, PerfectMind/Xplor Recreation, ESRI, etc.) to ensure the Township builds a prudent and interoperable technology environment.

The key will be to shift the approach in how technology projects are created, approved, prioritized and delivered. The introduction of standards, training and tools will help staff develop ideas into projects, however, the oversight and governance of this process will ensure that technology investments are tied to corporate priorities.

Having a corporate lens on issues and projects ensures that the best decision is being made for the organization. Issues such as the proliferation of Cloud solutions, bandwidth and connectivity, cybersecurity, data and information management – these are all considerations when prioritizing projects. A senior level understanding and commitment on these matters is more important than ever before.

Organizations often view decisions about technology as complicated, technical and “best left to the experts in IT”, however, decisions about technology often have ramifications well beyond the technology itself. Some questions that can be asked to reinforce this notion are:

- 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?
- Are our technology partners (e.g., Simcoe, vendors, service providers, etc.) delivering on commitments?
- How do we leverage data across systems to get better insight into operations?
- Which of our business processes should we direct our IT dollars toward?
- What do we need to tackle first? Should we do this now or later?
- How secure do we want / need to be?
- What should be available first in the event of a data centre outage or a disaster event?

These are not decisions for the technologists in IT alone – they are important business decisions that the leaders of the organization must address.

### ***Governance as a Discipline***

Technology governance is a discipline that must evolve over time. It must be flexible to the new requirements of the Township.

The key to implementing governance is to keep it simple – to not get overburdened by process and procedure. Initially, the conversations are what are most valuable. The governance framework will take shape as the various groups adapt to their mandates and begin developing and reporting on Work Plans.

As noted earlier, the most important aspect of governance is to have conversations about technology as well as make decisions to navigate the various risks and opportunities that technology presents for the Township. To do this, there must be agency given to a subset of senior business leaders and technology professionals to have representative discussions on behalf of SMT.

The following section lays out a proposed model for technology governance at the Township – the ITGC. Similar to the proposed IT models above, the constitution of various groups that make up the ITGC can be phased in over a number of years. This suggested sequence is provided for in the [Work Plan](#) section below.

### ***Constitute ITGC (2022)***

Working through SMT, the Township should formally constitute the ITGC and the proposed governance framework as the Township's technology governance model.

Terms of Reference – along with a full understanding of the roles and responsibilities – should be discussed, revised, and adopted.

A mandate and term of reference for each layer of governance can be found in [Appendix 4 - Suggested ITGC Terms of Reference](#) below. These also include suggested agenda topics, meeting commitments and reporting to ensure connection between ITGC and SMT. These have been tailored to a recommended approach for Tiny.

That said, it is critical that ITGC be sustainable over time, so SMT should consider adopting this model in areas where it makes sense to do so.

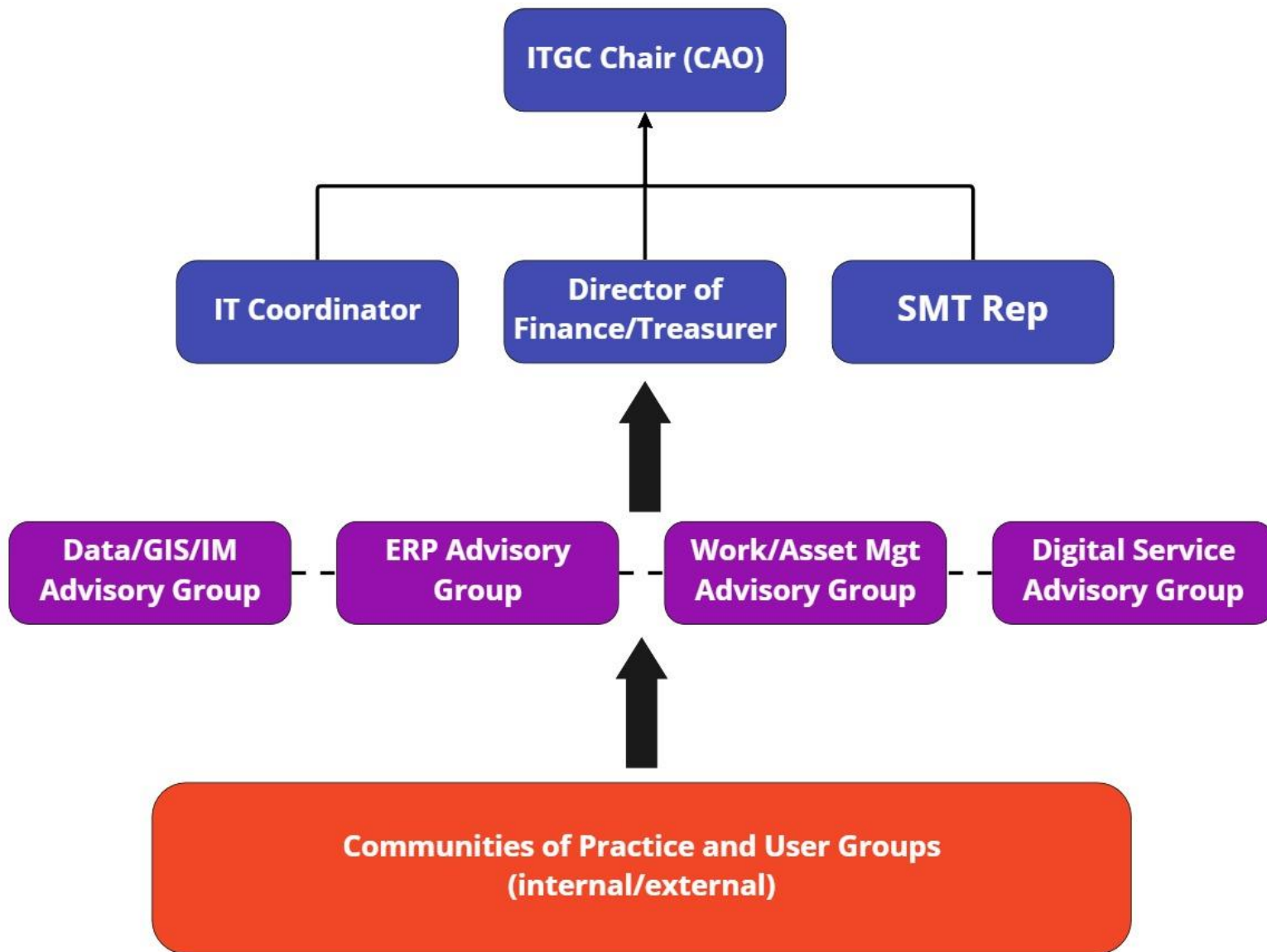


Figure 12: Proposed ITGC Model

Guiding principles for this group should largely be focused on the following:

- Approve corporate standards for architecture, data, procurement, etc. that will facilitate better decision-making to ensure that technology investments can be improved and sustained over time.
- Distribute technology decision-making deeper into the organization and empower project and product teams to move faster.
- Establish improved collaboration and partnership working across departmental silos, engaging executives, service owners and technology professionals.
- Improve alignment between service delivery and technology delivery.
- Improve decisiveness and speed decision-making for priorities and to mitigate risk.
- Expand and share learning about technology and digital utilization more broadly across the organization so staff understand what tools are available and know how to use them.
- Coordinate and tackle large scale corporate / cross-functional initiatives and challenges.

The following is the proposed model for the Township's ITGC.

ITGC (as noted in the next to top layer within the proposed ITGC model) includes the CAO as the Chair, the IT Coordinator position (currently vacant), the Director/Finance Treasurer and one other SMT representative. Based on the scale of the municipality, this lightweight governance model is ideal – especially early on.

After the first year, SMT may decide to expand representation. The initial focus is to establish and use the model to facilitate technology discussion, learning and decision-making. Refinement and efficiency in these deliberations will come with practice.

ITGC meetings should include the attendance of other leaders and staff (where appropriate) to provide contextual details that will help the group make decisions. The suggested group above should be approved through SMT along with recommendations to adapt the model over time.

### ***Constitute ITGC Advisory Groups***

Advisory Groups (as noted in the third layer within the proposed [ITGC model](#), Figure 12 above) are enacted to build and manage a Work Plan to support viable product development. Once business solutions are implemented, there needs to be a roadmap developed to sustain and improve them over time. These Work Plans are a key focus for ITGC Advisory Groups.

Membership should be considered based on each mandate. Ensuring the right representation is at the table is a decision that should be made by ITGC (and likely approved by SMT). These groups should be cross-discipline/departmental and are required to have both business-side and IT professionals onboard.

Advisory Groups should operate in much the same way as ITGC, however, the distinction is that they would regularly report up to ITGC to seek input and escalate decision-making. Annual Work Plans, budgets and capacity commitments are types of things that should be considered by Advisory Groups and recommended to ITGC for approval.

The Township already has various informal and quasi-formal project groups in place (Asset Management Group, GIS User Group, Broadband Committee, etc.). These groups that have definite cross-over with technology should be subsumed into the ITGC framework and standardized as such. This will ensure that there are common approaches used and that associated technology decisions are centralized through ITGC/SMT.

### ***Reconstitute Asset Management Advisory Committee + Establish / Validate Citywide Work Plan (2022)***

Priority should be given to reconstitute an Asset Management Advisory Committee.

Given that there is already a project group forming around Citywide implementation, subsuming the existing members into ITGC should be relatively simple. Further membership could be discussed as the first matter of this group as it's understood that additional representation is required to be at the table.

ITGC should adopt a term of reference for this ITGC Advisory Committee with a mandate to create, coordinate and execute on a Work Plan to continually support and modernize Citywide as well as assess other Asset Management Systems (e.g., MESH, MainBoss, etc.).

Aside from ensuring the correct membership is in place and that the existing Work Plan is broad enough to support product development of Citywide, members need to determine whether current bandwidth limitations will affect use of the application in the short- and medium-term.

A [Connectivity Assessment and Cloud Planning initiative](#) is currently targeted for 2023, however, AMAC will need to determine whether this initiative may need to be moved up to fully understand the current limitations. From this, project particulars and a proposed approach should be introduced to ITGC for approval.

### ***Constitute Enterprise Resource Planning Advisory Committee + Establish ERP Work Plan (2023)***

Finance has led the way to implement GP / Diamond as the Township's ERP. This has helped automate certain workflows (e.g., time and attendance, taxation, A/R, etc.), however, there is still more product development work to undertake (e.g., budget management, operational dashboards, enhanced reporting, etc.).

ITGC should adopt a term of reference for the ERP Advisory Committee with a mandate to create, coordinate and execute on a Work Plan to continually support and modernize GP / Diamond and HRIS (future requirement).

This Group should be responsible for inception planning around supporting the new HR function with the technology to automate workflows, better manage people and generate corporate reporting. Future consideration should be extended to support learning management, recruitment and applicant tracking tools, performance management, etc.

### ***Constitute GIS, Data and RIM Advisory Committee + Establish Work Plan (2023)***

There are many converging disciplines related to information management these days. As a result, the Township needs to create a forum to make decisions on data standards, privacy protection, data lost prevention, BI/analytics, GIS, records management, retention, storage and so on.

These decisions are currently being made at a project level which is diluting the Township's ability to derive shared value and continuously improve. Modernizing GIS, better safeguarding information and aligning data and hard copy records management are all key initiatives that should appear on a consolidated Work Plan.

Consideration was given to the alignment of this Advisory Group and the proposed elevated role of the GIS and Data Specialist. This position will be the delivery agent for the Advisory Group, developing standards, running pilots, and working directly with business-side staff to understand how data management, enhanced reporting and GIS can improve business operations.

Consideration was also given to ensure that the Director of Legislative Services/Clerk plays a prominent role in this group to force alignment between records management and data management functions. The relationship between IT and the Clerk's office must be strong, especially considering that Communications is a responsibility of this area in conjunction with records management and information privacy.

The ITGC should adopt a term of reference to formally constitute a GIS/Data/RIM Advisory Committee with a mandate to create, coordinate and execute on a Work Plan to continually support and modernize use of GIS, data management, BI/analytics (dashboard development within GP, PowerBI pilots, etc.) as well as Records and Information Management.

### ***Constitute Digital Service Advisory Committee + Establish Work Plan (2024)***

Digitized customer service has now become a mainstream deliverable for municipalities. Citizens now expect to be able to utilize digital services to transact with municipalities, apply and register, request information, etc.

Through the recently-implemented website and use of various web portals and online payment services, the Township has already made some good progress. Further refinement and centralization around digital service standards will ensure that

The ITGC should adopt a term of reference to constitute a Digital Service Advisory Group with a mandate to create, coordinate and execute on a Work Plan to continually improve the Township's website, intranet, Tiny Connect, social media and digital customer service offerings. Membership could be formed around former members of the Website Content Committee which only recently disbanded.

### ***Curate and Subsume Communities of Practice and User Groups into ITGC***

Communities of Practice (COP) are informal and/or loosely defined groups and networks of people that can be critical in supporting emergent corporate disciplines such as data, systems, tools and the application of technology across the organization.

Many exist without formal terms of reference and, instead, focus on directly managing and sharing knowledge in a key area. This knowledge can be created, organized, revised, and shared. Such knowledge will be extremely valuable to help inform ITGC because it is generated and revised by people who are well-attuned to “how things are currently done”. COPs and user groups help to give technology practitioners a voice.

Over time, the Township should establish several COPs designed to better engage staff in the growth of technology tools and processes. COPs can empower frontline staff by identifying improvements that would directly make their jobs easier and improve the overall service or process they are managing on behalf of the Township.

Employing these communities directly helps to legitimize a new process or discipline (e.g., Project Management, system user testing, etc.) because they provide an opportunity for those involved to discuss how their participation contributes to real change.

These entities can report through Advisory Groups or to ITGC directly. An evaluation in each case should be made to determine what is most practical. There are already several loose partnerships and formal advocacy bodies that could be officially subsumed within, or linked to, the ITGC model. These may be internal or external in nature.



Just as the Township is reliant on external vendors and contractors to help implement and support technology, participation in third-party user groups and COPs can be extremely helpful to understand how others are tackling the same challenges as the Township. If intra-County, COPs could also be an ideal opportunity to discuss how shared services and resources could support local municipalities (see the [Shared Services Review: Technology Resources](#) section).

A few opportunities to link existing COPs and user groups are as follows:

- [Broadband Committee](#) (internal, with external relationships).
- [MS Great Plains / Diamond User Group](#) (external).
- [ESRI GIS COP](#) (external).
- [PerfectMind/Xplor Recreation User Group](#) (external).
- [OpenNorth COP](#) (external).
- [MISA Membership Communities](#) (external).
- Simcoe County GIS User Group (potential external group to coordinate GIS across County municipalities).
- Intranet COP (potential internal group that can help build out the Township's intranet).

### 3.1.3 Corporate Technology Work Planning

Currently, there is no centralized corporate technology work planning done. Initiatives are managed at the project level only and reported independently to SMT.

This approach can be used to effectively manage projects, but the Township is missing any opportunity to review some critical requirements for these projects which need to consider the enterprise at large (e.g., interoperability, integrations, data management, maintenance and support, capacity planning, etc.). Continuing down this path will create overlap between systems, segment an approach to developing standards that need to be in place to sustain the technology environment as a whole and lead to data management problems due to data entities that are duplicated and managed divergently between solutions.

A Corporate Technology Work Plan is required. Such a tool would assist the knowledge required for ITGC to have oversight of multiple technology projects, determine priorities, and approve course corrections which may impact corporate resources and budget.

The IT Coordinator (or interim delegate until the role is filled) should be responsible for building this Work Plan along with Directors and their staff to understand what technology projects are currently underway and planned. The ITGC then needs to reconcile the overall capacity to deliver on existing commitments and modify the sequencing of initiatives when it makes sense to do so.

Prioritization should be given to support the Citywide implementation as it is a core system implementation already underway. Landing this large project will be the key to unlocking a number of features for staff, not only in respect to asset management and maintenance, but also the prospect of automating case management, [budget](#), customer service and so on. Work Plans should largely be built through a collaboration of departments and ITGC Advisory Groups. Where possible, large projects should utilize the [Project Intake](#) and Business Case Development process (see the [Project Prioritization](#) section) explained below.

### 3.1.4 Establish Project Intake and Business Case Development Process

A formal project intake and business case process will help staff develop ideas into viable projects for consideration as part of the Corporate Technology Work Plan by ITGC.

Having this defined process will assist in asking the right questions, at the right times to help decide on how to proceed (or at all).

In short, there needs to be a filtering process to help stage gate the entire process from project inception to execution. Such a process will bring greater clarity to decision-making with respect to developing Work Plans and making technology investments.

The diagram below illustrates that, filtering and decision points occur with respect to each process. The screening process looks to filter ideas, opportunities and needs from the business into worthy concepts that could be considered for conversion into full projects. The screening process and project management will overlap depending on what is needed to take an initiative from concept through to planning and execution. This diagram helps to illustrate that it can be extremely helpful to use a three-stage process in order to develop ideas into projects. This allows for more detail to be developed in response to questions asked by the business, IT and (potentially) ITGC and cumulate over time as warranted. This helps to save a lot of front end work around developing a business case that may not be the best fit according to priorities or the overall work plan.

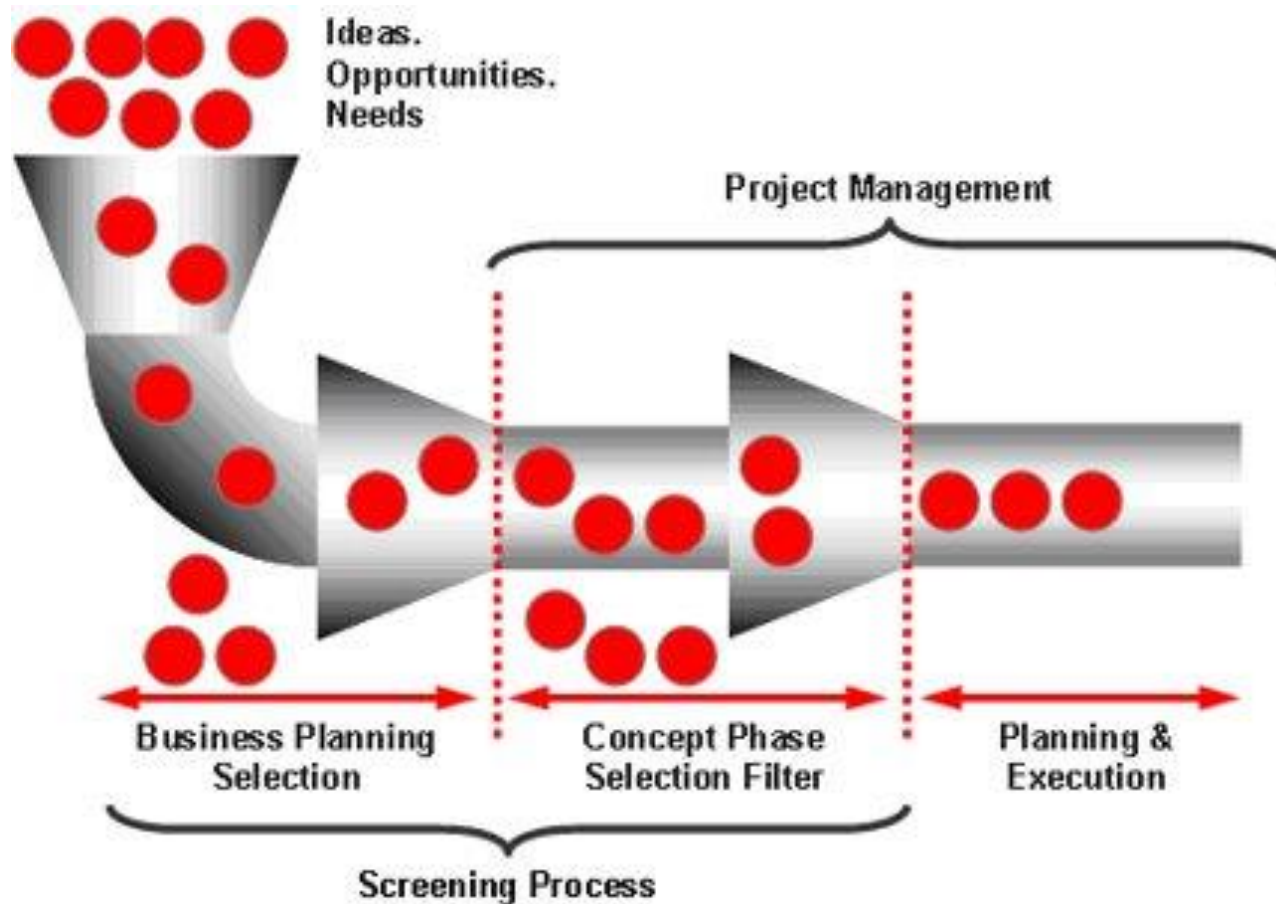


Figure 13: Idea-Project Filtering Process

Some business case processes are detailed and include multiple levels of assessment. Although segmentation of staged reviews should take place commensurate to the stage of development, documentation around this can be simplified and still effective.

A simple one-page document can help define problems and opportunities as well as help facilitate a more diligent approach to providing oversight and clarifying roles and expectations related to initiatives as they are being developed.

To further clarify actions, a Delegated Authority model should be established to allocate responsibility for managing work based on the overall cost and scale of a project. A Delegated Authority model for the Township will help smaller projects (which have been proven to be viable and affordable) move forward more expeditiously through a simple change request process.

Project Size	Threshold	Responsible	Documentation
Change Requests	Up to 10 days or < \$5k	IT Coordinator + business lead	Change Request Process
Small	Up to \$20k or Up to 50 days	IT Coordinator + business lead	Idea Capture Form Project Proposal Form
Medium	Between \$20k - \$50k or 50 - 200 days	ITGC	Idea Capture Form Project Proposal Form Business Case Form
Large	> \$50k or > 200 days	ITGC	Idea Capture Form Project Proposal Form Business Case Form

The Township (through ITGC) should adopt a project intake and business case process that uses documentation to support the process of ideation through to defining project particulars. Ideally, this process is led by business leaders and service owners but facilitated by the IT Coordinator. Accountability should be determined at the outset of ideation.

This process can start with the adoption of an Idea Form that departments can use to capture elements of problems or opportunities in their areas that may be improved through use of technology. These documents can be co-developed between the business and IT, which would help avoid too much work being done on a project prior to understanding whether it is actually feasible (or affordable).

The Idea Form, a sample of which is shown below, would also establish accountability for the idea (people + departments) as well as define the next steps that need to be accomplished. Collaboration is a key consideration for technology projects as resource impacts often extend beyond the originating department and IT.

In fact, given that the current state is almost entirely decentralized when it comes to managing technology projects, this is an area that the Township needs to remediate first.

More consideration needs to be given to problems and opportunities in terms of how they could potentially impact the organization at large and whether others will be impacted once implemented (e.g., ongoing budget requirements, user guides, training, and education, change management, ongoing feedback, etc.).

Idea Form			
Idea:	Dept/Div:	Business Owner:	Date:
 <b>Problem Opportunity</b>		 <b>Desired Business Outcome</b>	
<ul style="list-style-type: none"> <li>• Explain the business problem / opportunity that needs to be solved in one sentence</li> </ul>		<ul style="list-style-type: none"> <li>• What are your desired business outcomes?</li> </ul>	
 <b>Next Steps</b>			
<ul style="list-style-type: none"> <li>• What are the next steps?</li> <li>• Effort / duration to next steps?</li> <li>• Are there any known time constraints</li> </ul>			

Figure 14: Sample Technology Business Case Idea Form

Once an understanding has been reached, then further development can be done to build a conceptual model to further assess feasibility and determine how effective the idea would be at bridging the gap between current state and the future state.

Use of a Concept Form (sample shown below) can help to document this distinction and ensure that the people and process are being considered along with the technology layer.








Concept Form			
Concept:	Dept/Div:	Business Owner:	Date:
 <b>Problem Opportunity</b>		 <b>Desired Business Outcome</b>	
<ul style="list-style-type: none"> <li>Explain the business problem / opportunity that needs to be solved in one sentence</li> </ul>		<ul style="list-style-type: none"> <li>What are your desired business outcomes?</li> </ul>	
 <b>Current State / Context</b>		 <b>Future State</b>	
<ul style="list-style-type: none"> <li>Explain the current state in which problem / opportunity exists</li> <li>Provide evidence to support the business problem / opportunity</li> </ul>		<ul style="list-style-type: none"> <li>Describe the future state in terms of business capabilities required</li> </ul>	
 <b>Root Cause</b>		 <b>Next Steps</b>	
<ul style="list-style-type: none"> <li>Why does the problem or opportunity exist?</li> </ul>		<ul style="list-style-type: none"> <li>What are the next steps?</li> <li>Effort / duration to next steps?</li> <li>Are there any known time constraints</li> </ul>	
 <b>Commissioner Sign Off</b>			

Figure 15: Sample Technology Business Case Concept Form

If moving forward from the concept stage, staff could then work through Advisory Groups (if applicable) to provide further scope to form a project proposal (a sample Project Proposal Form is shown below). Proposals should be signed off by the respective business leader to formalize their commitment to providing resources and budget necessary to execute on the project.

At this point, there should be enough information surrounding a project that it would help ITGC prioritize and rank prospective projects. The ability to do this in a standardized way across all technology project proposals would help determine what can be accomplished and when.

Project Proposal Form				
Project:	Dept/Div:	Business Owner:	Date:	Type: Run / Grow / Transform
<b>Problem Opportunity</b>		<b>Desired Business Outcome</b>		
<ul style="list-style-type: none"> <li>Explain the business problem / opportunity that needs to be solved in one sentence</li> </ul>		<ul style="list-style-type: none"> <li>What are your desired business outcomes?</li> </ul>		
<b>Current State / Context</b>		<b>Future State</b>		
<ul style="list-style-type: none"> <li>Explain the current state in which problem / opportunity exists</li> <li>Provide evidence to support the business problem / opportunity</li> </ul>		<ul style="list-style-type: none"> <li>Describe the future state in terms of business capabilities required</li> </ul>		
<b>Proposed Solution(s)</b>		<b>Budget Impact</b>		
<ul style="list-style-type: none"> <li>What is the proposed solution approach?</li> </ul>		Capital	Operating	
<b>Options</b>		<b>Benefits and Measures</b>		
<ul style="list-style-type: none"> <li>What options were considered?</li> </ul>		<ul style="list-style-type: none"> <li>What business benefits will be achieved?</li> <li>How will they be measured?</li> </ul>		
<b>Resource Impacts</b>		<b>Proposal Rating / Ranking</b>		
Business Unit	IT	Importance	Urgency	Total
<b>Commissioner Sign Off</b>				

Figure 16: Sample Technology Business Project Proposal Form

Even if projects are deferred through a [prioritization process](#), the Project Proposal Form will remain a useful reference point to better understand problems and opportunities that could be re-initiated when resources are made available.

As such, proposals could be included as part of the [Corporate Technology Work Plan](#) if only for tracking and reference purposes.

### 3.1.5 Establish a Project Prioritization Process

There will always be more technology work than can be accomplished by the Township. Even with optimal use of internal and external resources, prioritization is the key to ensuring that both funding and (organizational) capacity are in place to support the Corporate Technology Work Plan.

Currently, SMT is overloaded with individual requests to support projects but has no way to assess which are most important to the overarching goals of the municipality. As such a [project prioritization process](#) should be established to help guide ITGC and SMT in making these decisions.

There is a myriad of options to consider when developing prioritization criterion, including the use of allocating scoring to project proposals. That said, it may be wise to start with a more simplified approach and mature what works best over time.

The following template (shown below) could be used to group projects into four quadrants to help assess level of risk, cost, value, and effort (RCVE). Although these scoring factors are high-level, they can still help to populate projects categorically, further indicating whether they should be avoided, considered, investigated, or prioritized.

Once each initiative is evaluated, ranked and placed on the RCVE it should help to make decisions about which to implement and where it should be positioned on the work plan:

- **Quadrant 1:** these issues should be **avoided** since they have high risk and cost, plus low value.
- **Quadrant 2:** these issues you may want to **consider** in the future as other more important ones are implemented first. Consider these a second phase since they may be low level enablers for other more important things to get done.
- **Quadrant 3:** these issues should be **prioritized** to get implemented since they have high value and effort but low cost and risk.
- **Quadrant 4:** these issues are high in all four decision criteria but should be **investigated** since the payback in time and effort maybe substantial to the organization.



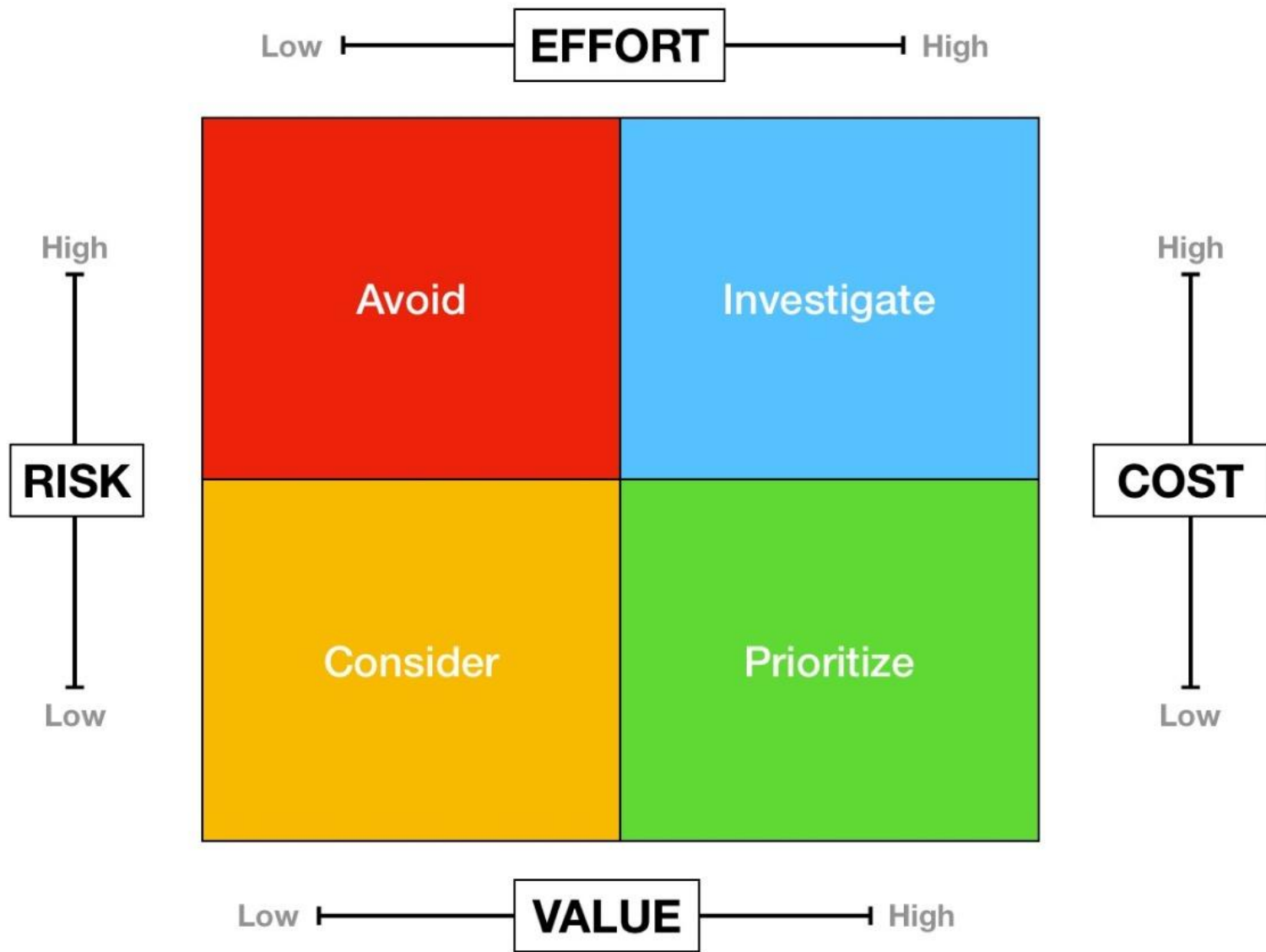


Figure 17: Sample RCVE Prioritization Model

Again, prioritization tools range from the most simplistic to highly complex. What will be important for the ITGC initially, will be to utilize some criterion to both quantitatively and qualitatively assess which projects should be approved and where they should be sequenced on the Corporate Technology Work Plan.

### 3.1.6 Develop Project Management Fundamentals for Technology Projects

The discipline of project management is not well rooted within the Township. Staff frequently assume PM roles, however, they have little to no training, standards, or tools to help them manage work.

The Township should provide training opportunities for staff on how to successfully manage projects. This does not need to be in relation to use of certain tools (e.g., MS Project), but rather to provide the fundamentals of good practices for project management. This will help project sponsors across the organization to better coordinate and sequence work as well as report up through a portfolio of projects.

The Township should ensure that a PM is assigned for every medium-large technology project (as well as some smaller projects where there are deemed to be learning and development opportunities). Where necessary, external resources should be budgeted to play this role for the Township on a temporary basis (e.g., Asset Management Coordinator supporting implementation of Citywide).

PMs may not be the organizational roles that are ultimately accountable for the technology or service being implemented, however, they facilitate the work by coordinating tasks among a project group or team.

Some key duties of a PM are as follows:

- Assisting in establishing a Project Management Office (PMO).
- Liaising with stakeholders such as team members, vendors, and end-users regarding project requirements.
- Outlining, defining, and initiating the project.
- Implementing document control policies and documentation templates.
- Monitoring project progress and implementing changes where necessary.
- Monitoring expenditures in accordance with the budget.
- Ensuring compliance with objectives, organizational policies, procedures, and standards.
- Compiling project reports and informing ITGC regarding problems (feed into portfolio reporting).

The Township should then pilot technology (e.g., Monday, Asana, Eclipse, etc.) or use existing tools (e.g., MS Excel) to develop and manage a portfolio of projects that can be regularly monitored and reported through to ITGC.

The technology is not the most important factor here. Focus should, instead, be on determining the level of reporting required by ITGC to make optimal decisions, remove barriers and provide funding. Using adequate technology, however, will make it easier to report on aggregate data to demonstrate overall progress on the portfolio.

The IT Coordinator should lead portfolio reporting on behalf of business PMs, however, the latter should be invited to attend ITGC to communicate particulars (alongside IT) about projects that require attention or support.

Project Name	% Completion	Target Finish	Project Key Performance Indicators					
			Priority	Overall Status	Budget	Resources	Schedule	Scope
PRM Phase 1	100%	30/06/2018	High	●	On Track	Sufficient	On Track	On Track
Maximo evolution phase 1	50%	30/12/2017	High	●	On Track	Sufficient	On Track	On Track
ActiveNet implementation	90%	30/09/2017	Medium	●	On Track	Sufficient	On Track	Off Track
eScribe Implementation	20%	14/11/2017	High	●	On Track	Insufficient	At Risk	On Track
Develop a GIS strategy	80%	21/03/2018	High	●	On Track	Sufficient	On Track	On Track
Primary systems integrations	80%	21/12/2019	Low	●	On Track	Sufficient	On Track	On Track
Establish Master Data Management strategy	60%	03/03/2018	Low	●	On Track	Sufficient	On Track	On Track
Develop IT Risk Management Framework	20%	25/05/2018	Medium	●	On Track	Sufficient	On Track	On Track
POS strategy & systems replacement	60%	30/10/2017	Low	●	At Risk	Sufficient	On Track	On Track
Future Asset Management systems strategy	10%	30/03/2018	High	●	Over Budget	Sufficient	On Track	On Track
Primary systems integrations	0%	21/12/2019	Low	●	On Track	Sufficient	On Track	On Track
Establish Master Data Management strategy	0%	03/03/2018	Low	●	On Track	Sufficient	On Track	On Track
Develop IT Risk Management Framework	20%	25/05/2018	Medium	●	On Track	Sufficient	On Track	On Track
POS strategy & systems replacement	49%	30/10/2017	Low	●	At Risk	Sufficient	On Track	On Track
Future Asset Management systems strategy	10%	30/03/2018	High	●	Over budget	Sufficient	On Track	On Track
Enterprise Content Management (ECM) Strategy	0%	01/05/2018	High	●	On Track	Sufficient	On Track	On Track

Figure 18: Sample Technology Project Portfolio MS Excel

### 3.1.7 Policy Development

To support the direction setting, a policy framework that guides decision-making and technology is important.

While policy is designed to set the rules, it also makes it simpler to make decisions because important decisions are codified in policy.

Consistent 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 alone on behalf of the corporation. For example:

- Which employees are assigned smartphones?
- Who is authorized to register a web domain for the Township?
- Which websites can staff access, and should their activity be tracked?
- What content is saved when an employee retires?
- How much space does an employee have to store email?
- In the event of a disaster, which systems need to be up and running first?
- How secure do we need to be?

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

Ideally, IT recommendations around policy should flow from IT, through ITGC with final approval being made by SMT. This allows for the most sufficient vetting of policy tools designed to dictate acceptable behaviour as well as clarify accountabilities. Policy development should be an iterative process that ensures the current state is reflected (to the greatest possible degree). As a result, annual reviews should be undertaken with any material changes approved via ITGC.

#### *IT Policy Framework*

A standard IT Policy Framework typically addresses the areas noted below. The most critical policies to have in place are noted along with a subset of others that could be considered to further refine the framework:

## Policies that are in Place

- **Acceptable Use of Technology:** Provides the parameters, obligations and responsibilities associated with access to and use of municipal technology. The Township currently has this in place via Procedure TU-G-001. This policy has been in place since 2008 and has received regular revisions to support changes within the technology environment. Vetting (and seeking approval) of future revisions through ITGC (and SMT) will strengthen use and help to cascade the information through to staff.
  - Mobility Policy
  - BYOD
- **Data Management:** Ensures that the corporation can effectively manage its data assets, while complying with required legislation. The Township currently has a (recently updated) Electronic Data Security and Protection Policy in place as Policy IT-P-04. The policy delineates responsibilities regarding safeguarding and managing data and is tied to the Township's Retention Schedule By-law 009-14. Further refinement of this policy should include more detail around [data classification](#) to ensure staff are aware of what constitutes "sensitive data/information". Further refinement of the RIM discipline would also lead to greater comprehension around data management needs apart from the current records lens applied to managing data/information in accordance with MFIPPA and other legislation. Synergy between records management and data management are critical for the Township. Exploration of this area should be supported by the proposed Data/GIS/Records and Information Management (RIM) Advisory Group and ITGC. Additionally, stale/inactive, unstructured data should be moved to a lower cost archive tier (e.g., Cloud).
  - Data Classification Policy
  - Data Sharing Policy
  - Data Retention Policy
  - Data Storage Policy

## Policies Where Work is Needed

- **IT Security:** Defines how the Township operates a secure and reliable technology environment, with adequate controls to protect the Township’s information assets. As noted above, an Electronic Data Security and Protection Policy is in place via Policy IT-P-04 which covers some elements of data security. There is also a Password Policy provided for through Policy IT-P-02. These are excellent baseline policies, however, there are various elements relating to IT Security missing in these policies (infrastructure/network security, data classification, encryption, Cloud, passwords, access/ID management, etc.). Security is a large and ever-evolving area and given the current (and projected) future state of the IT model, the Township should look to strengthen this area as a priority.
  - Change Management Policy
  - Physical Security Policy
  - Software Installation Policy
- **Business Continuity and Disaster Recovery:** Defines the back-up and recovery plans for computer systems that store municipal data. This policy is also designed to prevent the loss of municipal data and systems in the event of an equipment failure or destruction. Recently, the Township’s Information Technology Continuity Plan via Plan WS-PLAN-02 was updated to provide more detail with respect to these areas, however, more work is needed to define recovery time objectives (RTO) for core business services and processes.

This would typically involve a Business Impact Analysis (BIA) coupled with an IT Risk Assessment (RA) to define risks and vulnerabilities that could have a negative impact on the Township. Key initiatives should include:

- Initiate a BIA – define critical services and RTO
- Perform an IT Risk Assessment – identify threats and vulnerabilities that present a risk to the delivery of critical services
- Define a Crisis Management Team (CMT) coupled with the development of a Disaster Recovery Plan (DRP)
- Ensure that third-party DR services reflect the requirements outlined in the DRP
- Schedule tabletop exercises to test all business continuity and disaster recovery plans (annually)

## Policies that are Missing

- **Asset Lifecycle Management:** Ensures effective procurement, maintenance and operation, and replacement of IT assets to ensure delivery of consistent, efficient, reliable, timely and cost-effective services for employees and the community. Currently, there is no lifecycle policy in place. There is in place, however, a detailed tracking document (Excel) designed to track everything from software to mobile devices to telephony. This has been in place for more than a decade and certainly has helped to manage/operationalize lifecycle tracking along with some information from CompuSolve.
  - Encryption Policy (databases, mobile devices, etc.)
  - Disposition of Technology Policy
  - Technology Equipment Loan Acknowledgement Procedure
  - System Maintenance Policy
- **Hosted and Cloud Solutions:** Defines the Township’s position regarding Cloud computing and due diligence steps required before procurement of Cloud solutions. This policy would help to standardize an approach to procuring Cloud solutions and tools. Such standards would consider things like the ability to integrate within the existing technology environment, the need to understand how the proposed scale may be supported due to some bandwidth limitations as well as considerations regarding data security, access migration, etc.
  - Cloud Framework Policy
  - Remote Access Policy (staff + third parties)
- **IT Governance:** Defines roles and responsibilities and processes to be followed to best support decision-making around technology. The proposed ITGC model for the Township should be codified through a corporate policy that defines the model itself (in terms of what it is and how it is to be used), respective roles and responsibilities of the group (in connection with SMT) along with Advisory Groups and COPs, project intake, prioritization, and reporting, as well as communication and issues tracking. This policy should reflect the process as it exists and be modified along with any changes made to the governing model and associated processes.
  - IT Procurement Policy and Procedures
  - Project Management Policy and Procedures
  - Third-party Risk Policy

- Vendor Management Policy
- Training Policy
- HR/Recruitment Policy + Onboarding/Offboarding Procedure (Finance + HR + IT)

The IT Coordinator – with the input of staff, stakeholders and leadership – should review, revise and augment the Corporate IT Policy Framework in the context of this review, to ensure that it accurately reflects how the Township wishes to use and manage technology. It is recommended that a review of all existing IT policies be undertaken with new drafts developed and vetted through ITGC with ultimate approval coming from SMT.

The proposed Policy and Procedure Development Process is broken down into three phases to address high priority policies first, with others iteratively created in conjunction with further maturity in those respective areas. It is critical that policies and procedures adhere to the way that staff should (and in some cases, **want**) to work. True reflections of behaviour encoded by corporately-sanctioned policies and procedures will decrease the probability of people short circuiting processes and finding their own unique workarounds. Further, it is important that staff are made aware of the spirit and intent of the policy framework in order to give them a better sense around why they are being asked to conform to specific ways of work.

### 3.1.8 Develop a Mobile Strategy

Mobile working is a major opportunity for the Township, however, current state connectivity to cellular networks does present a challenge. Regardless, it is hoped that with the persistence of local advocacy groups and release of grant and subsidy programs this will improve over time. If slower than currently anticipated, there are a number of options that may not provide “always on” connectivity but do provide opportunities to “sync and go”. Some of these are currently being utilized by the Township (e.g., By-law, GIS collector apps, MESH, etc.).

In short, digitizing fieldwork to the greatest degree possible, creates major efficiencies and should continue to be prepared and planned for. This is further important as the current Citywide implementation will create a wide range of mobile-enabled services that could be enabled.

A strategic approach is required to assessing mobility with success and is dependent upon various factors:

- **Requirements:** Informed by frontline staff, the real users of the systems (not managers as proxy).
- **Business Processes:** Clear, well-understood business processes, journey mapped and re-designed for a mobile-enabled workforce.



- **Business Solutions:** Solutions designed to be used in the field, by mobile workers, enabling digital, real-time workflows, access to information needed.
- **Security:** Realistic, easy-to-use ability to have a secure, reliable connection (e.g., robust mobile-VPN, single sign on).
- **Devices:** Suitable devices to work in the environments staff are actually working in (e.g., temp ranges, glove-wearing, sun-glare, battery life, usability, business solutions available on the platform).
- **Support:** Defined model for mobile support (e.g., spares for swap out, availability when support is needed, such as before and after regular hours).
- **Management:** Commitment to effective change management.
- **Education and training:** Building capabilities and ensuring people use the tools in the correct way.
- **Compliance:** Monitoring and assistance from management to ensure that team members are using the solutions as designed.
- **Enforcement:** Business management must hold staff accountable for using the solutions.

Mobility also relates to the solution required to manage remote devices. A Mobile Device Management (MDM) solution is a definite need to more efficiently support the various mobility tools deployed currently, but most importantly safeguard potential data loss (see the [Procure a Mobile Device](#) section for more detail).

IT should create a project to assess mobility requirements and develop a Corporate Mobility Strategy. This Strategy should document the current state and anticipate mobility requirements over the following 3-5 years.

An assessment should be a collaborative effort working with all departments to understand how field work could be enhanced through mobile connectivity to corporate applications and other Cloud tools. Consideration should also be given to centralizing procurement and management of mobility within IT and use of an MDM solution.

ITGC approval of the Strategy and required funding is required. Third-party consultants could be engaged to support this process if required.

### 3.1.9 Review Corporate IT Budget and Funding Streams

Annual improvements have been made with respect to the annual IT budget, however, this review should look more broadly across the organization to understand all elements of technology spending.

This review should lead to an evaluation as to whether to centralize all IT spending or to maintain decentralization. Departmental chargebacks are currently being used in some areas, however, further reflection should be given as to which model works best for the Township. With fiscal oversight of technology spending routed through ITGC, a more centralized approach may make sense.

Consideration should also be given to establish an annualized funding stream that will permit IT to contract third-party resources to support unforeseen remediation initiatives or mid-year priorities that require additional capacity or skillsets beyond those of current IT staff.

The review should also work to better understand training and education needs associated with technology. Staff were very vocal about not having enough support in either configuring or using the solutions made available to them. There are various training models available (e.g., in-person, vendor led, train-the-trainer, online, Learning Management System (LMS)) and each should be considered (see the [Corporate Technology Training Development Plan](#) section). There are cost-effective solutions on the market that are not out of the reach for the Township to pursue.

At minimum, when employees are onboarded, they should receive training on corporate systems and through refresher training that can be coordinated periodically to align with demand. Training should also be budgeted as part of any project that introduces new technology tools and solutions.

### 3.1.10 Create a GIS Strategy

Simcoe County has an ESRI Enterprise License Agreement (ELA), which provides a shared usage agreement for local municipalities. The County's primary focus with their own GIS offering is on [opengis.simcoe.ca](http://opengis.simcoe.ca) which provides online mapping and raw data extracts for users.

Various features are available via a secure login for Simcoe municipalities. The shared use agreement provides the Township with excellent value for use of this tool, however, the largest obstacle is that there is insufficient capacity at the Township to fully utilize the solution's features. Such capacity was sought when hiring a GIS/IT Technician in 2017, however, as discussed earlier, this role has almost entirely been focused on technical support versus GIS work.

The Township has done some GIS work in relation to creating collector and portal maps, some of which are utilized by existing field staff. They also have an experienced incumbent in the current GIS/IT Technician role. If the recommendations to [expand the IT model](#) are carried out, this should create some space for the newly-created GIS and Data Specialist to become fully emersed in the ESRI tool to leverage the value for money received through the County's ELA.

Not only would moving forward with the proposed IT model expansion create more time for the GIS and Data Specialist to work on GIS, it would also allow this position to assume a leadership role that can help drive the continuous improvement of GIS offerings across the County.

The ESRI platform provides opportunities to develop GeoHubs (e.g., [Brampton](#), [Kitchener](#), [Cambridge](#), [Huntsville](#)), better integrate business solutions used by the Township (a key one for Tiny will be Citywide), improve critical data (between municipalities and the public), develop more GIS mapping tools for staff, create dashboards and maps for staff and so on.

Working collaboratively, the GIS and Data Technician can help curate a GIS network within the County that can learn and develop capabilities together, along with potentially rationalizing resources to work on products that would be useful across municipalities. Third-party consulting resources could be engaged to support this process (ideally in conjunction with all Simcoe municipalities) if determined to be required.

### 3.1.11 Corporate Technology Training Development Plan + Learning Management System

Lack of training around technology solutions is currently a huge risk for the Township. Throughout our engagement, staff have raised concerns that they are unaware of technologies available to them and that there is a lack of education on how best to use the technologies.

If users are untrained on optimal use of systems, it will undoubtedly lead to data accuracy concerns, poor reporting and a lack of utilizing key features. Training should be budgeted as a component of technology implementation projects, to ensure that net new software is used correctly from the onset. This creates good behaviours on the part of users and makes subsequent training much easier to deliver.

Technology training should also be delivered when onboarding new staff as well as through regular refresher courses to ensure that good user behaviours continue. Technology training is a corporate need that has too often been diluted by being coordinated through IT budgets. The Township would be well served in aligning this training with the corporate budget funding model to ensure that it is prioritized along with other offerings.

Funding for this program could follow a departmental chargeback model, however, more and more frequently organizational training plans are subsuming IT-specific training plans to ensure that they are being delivered with an eye on meeting corporate goals and objectives.

The Township should create a plan to deliver technology training to staff. A hybrid approach to training should be followed, where system-specific training is delivered to new employees as well as regular refresher training at least once per year. Training could be provided internally by IT staff (capacity review required), through external partners / solution vendors or through self-directed learning and use of an LMS. LMS platforms differ widely, both in terms of cost and available functionality. Many offer pre-loaded content that can be used immediately along with an opportunity to customize and record Township-specific training modules to staff.

Collaboration is the key to understanding organizational requirements surrounding training. Consideration of the program should be coordinated through ITGC with an LMS considered through the Web and Digital Advisory Committee.

Initial consideration should be given to Fire's use of virtual training during the pandemic, HR's pilots around using freeware LMS options to test and learn as well as the potential to centralize the tracking of legislative and regulatory training across the Township (which is currently decentralized and unmanaged corporately creating some risk in terms of compliance).

### 3.1.12 Develop Fire/Enterprise Mobility and Security (EMS) Technology Strategy

The current Fire/EMS department largely uses FirePro2 and Synergy (along with some other smaller tools like [what3words.com](http://what3words.com)) to support operations. FirePro2 is not fully implemented, with utilization restricted to functions like incident management, inventory management, training, and inspections. Time and attendance is also managed through FirePro rather than through use of HRIS (deployed recently).

The largest obstacle for Fire currently is access to connectivity, both within fire stations and in the field. The installation of a radio system designed to improve connectivity was a major capital expenditure for the Township that has helped somewhat, however, further integration with other networks (like Simcoe County) would lead to expanded coverage.

Fire is an area where technological advances can really help improve response times and overall outcomes. In larger urban municipalities, use of drones for surveillance, GIS for routing / dispatch and Computerized Maintenance Management Systems (CMMS) to manage critical infrastructure are not uncommon. Clearly, budgetary constraints are in play for the Township, however, several recommendations within this ITMP could be directly related to help improve operations in this area.

The Township should work in collaboration with Fire and their municipal partners to develop a Fire/EMS Technology Strategy that addresses infrastructure and connectivity needs as well as the need to support workflows and operations with suitable technology.

This review should look at opportunities to consolidate on corporate applications to support corporate functions like time and attendance (HRIS), budgeting (TBD), asset management (Citywide) as well as training (TBD). Fire has demonstrated leadership on the training side with virtual training being provided to staff during the pandemic.

### 3.1.13 Initiate Data Management Activities

The proliferation of unstructured data remains a challenge for organizations of all sizes.

The Township has limited visibility into data residing on production storage and, by extension, system back-ups and data replicated and stored on the MSP's offsite facility for the purpose of disaster recovery. All these activities are costly and require a proper Data Management Strategy. In the simplest terms, data governance establishes policies and procedures around data, while data management enacts those policies and procedures to compile and use that data for decision-making.

Data governance is a key component of data management – the practice of controlling how managed data is processed throughout an organization. A Data Governance Strategy for the Township will help answer questions like:

- Who has ownership of the data?
- Who can access what data?
- What security measures are in place to protect data and privacy?
- How much of our data is compliant with new regulations?
- Which data sources are approved to use?

However, IT looks at data from a *tactical* perspective, and the *management* of data typically falls within its purview.

The recommended approach is to initiate data management activities as follows:

- Perform a scan on production storage to identify stale/inactive and sensitive data as part of a capacity management exercise and continue to monitor storage growth (Note: stale/inactive data is typically data that has not been accessed in 1+ years but should be defined accordingly for the Township).

- Develop an Archiving Strategy to move stale/inactive data to a low-cost offsite archive (Cloud). This process will lower the costs associated with production storage, data back-ups, and offsite replication (DR).
- Develop a Data Governance policy – this policy will define the overriding framework for data management.
- Develop a [Data Classification Standard](#)

### 3.1.14 Adopt a Digital Vision

Once some progress with ITMP takes shape, more thought should be given to establishing a focused vision around **digital** – a commitment to fully leverage technology to make work easier for staff and deliver better value to the customer.

The UK Ministry for Housing, Communities and Local Government (MHCLG) along with the Government Digital Service and a collection of local authorities and sector bodies established a [Digital Declaration](#). This co-authored document provides for many of the notions expressed above and, to date, over 200 municipalities have adopted and signed it. It serves as a catalyst and guide for these organizations to continue expressing their beliefs and commitment to radically improving customer service and workforce productivity.

Through ITGC, the Township should consider adopting their own vision that establishes a standard across the organization, making clear the overall goals for technology and digital transformation.

Although establishing a Digital Vision seems like it should be a task that leads off the ITMP Work Plan, it was intentionally sequenced as a 2024 action to align with the expansion of the IT model and further learnings through key implementations (GP, Citywide and others recommended here). Consideration as to the timing of this action should be considered further by ITGC.

## 3.2 Infrastructure and Operations

The Township needs a sustainable operating model with a strong reliance on good partnerships, contracted resources and managed services to support the IT needs of the organization.

The Cloud presents the greatest opportunity to modernize operations, however, the municipality will need to balance this progression along with the available bandwidth to do so.

Aside from key implementations surrounding telephony and mobility, the Township also needs to utilize a vendor management approach to ensure it is getting value for money with respect to third-party vendors and contracted service providers. These managed resources – along with recruiting new skills into the IT team – will support

baseline assessments that will allow IT to better understand how data is being managed and safeguarded, how IT support is provided (based on needs) and what measures are in place to support business continuity in the event of major incidents.

### 3.2.1 Phone System Replacement

Currently, the Township of Tiny is utilizing a 14-year-old Toshiba CIX 670 Analogue/Digital system. While the system is functioning well, the lack of features to streamline communications for a more efficient workplace is limiting, especially as so many staff are mobile at least some of the time. The Toshiba system cannot take advantage of cellular and landline integrations that allow for seamless connectivity to personnel.

The existing system is plagued with busy signals. This is partially due to the lack of lines, but equally due to the inefficiencies of communication. Each voice message retrieved from outside the office is using a line requiring more active line usage to retrieve messages while the system is transferring calls and taking messages. Staff have noted concerns in not being able to access a line (resulting in a busy signal) in order to check voicemail.

Toshiba stopped making the CIX 670 years ago and also vacated the telecom field over 5 years ago creating risk in maintaining the system and providing for break-fix replacements.

A new phone system should incorporate the ability to transmit signals using IP as well as traditional phone services until the Township has greater bandwidth than it currently does. A new system should allow mobile connectivity and the transmission of voicemail to email to reduce calling in for messages. This will, at the same time, provide a higher level of first-time connectivity.

Consideration of a Cloud solution is not recommended at this time due to constraints of bandwidth and overall operational costs versus the one-time purchase cost of an onsite server with lower ongoing operational costs. A hybrid system will save on the cost and disruption of re-cabling existing desk set locations with Cat6 cable and infrastructure. Currently, Cat3 is being used and is adequate for analogue and digital.

A high-level overview of telecom objectives to tender for a new phone system has been developed for the Township (see the [Telephone System Replacement System](#) appendix). Additional staff surveying is required to pinpoint specific feature needs to individuals and departments, but this is a fairly detailed account of the system and necessary features required to vastly improve organizational telephony capabilities.

Given that budget is already in place to procure a replacement and there is certainly a need to do so, this should be considered a quick win for the Township. Ideally, this project could be one of the first to be supported through the

proposed ITGC governance model (see the [Constitute ITGC and Governance Framework](#) section) to be enacted later this year (2022).

Validate terms of reference by working with departments to validate feature sets and specs. Ideally:

- Present to ITGC and approve the project
- Procure a partner to support implementation and testing.
- Implement and provide training to staff.
- Get approved funding in place.

### 3.2.2 Connectivity Assessment and Cloud Planning

To continue its Cloud journey, the Township needs to have a clear understanding of its internet connectivity posture, including current bandwidth utilization trends and the ability to upgrade bandwidth connectivity in the future as the demand for high-speed connectivity continues to grow year-over-year.

Without visibility into these metrics, current plans to migrate workloads to the Cloud will present a significant risk to the organization. The recommended approach for the Township includes:

- Procure the services of a third-party firm with expertise to analyze the network and provide current utilization rates and the ability for the Township to support the continued migration of workloads to the Cloud over the next 1-3 years.
- Develop a Cloud Computing Framework as a strategic artifact providing direction for a holistic view of Cloud adoption at the Township helping to define:
  - Township roles/responsibilities.
  - Cloud principles and procurement requirements.
  - When the Cloud may be suitable or not suitable (i.e., Cloud triggers).
  - Cloud security (e.g., data, third-party access, etc.).

Although Perry Group supports the move to Cloud, continuing the move without performing the above activities will present an unnecessary risk to current and future Cloud migration projects within the Township.



### 3.2.3 Determine Required IT Service Levels

Currently, the Township provides IT service to departments along with help from CompuSolve. This largely works well, however, IT staff are near full capacity in supporting level 1 (basic helpdesk support). This is leading to a sizeable gap (and risk) in relation to the proper management and coordination of all necessary IT functions across the organization.

Departments require more support with business solutions to ensure these investments are serving their businesses as intended. IT systems are a large investment for the Township and currently they are being vastly underutilized.

Level 1 (and in, some cases, Level 2) technical support calls should be addressed by technicians. Many municipalities decide to fully out-task the provision of IT support to service providers or through contracted resources (like student co-op programs – see the [Develop Co-op Program for IT Technicians](#) section). These matters are typically resolved on the first or second call and can be managed through scripts and protocols developed by the service providers. The Township is likely better served doing this to free up internal resources who can then focus on higher-value tasks and planning.

Creation of the IT Operations Support Specialist as part of the proposed [Phase 3 IT model expansion](#) will provide greater capacity for the Township to manage what is important to keep in-house and what can be managed using a hybrid third-party model for technical support. While this balance can be complicated, this position will be critical in ascertaining that the most efficient and cost-effective service is brokered for the Township.

Under the leadership of the IT Operations Support Specialist, an assessment of the organization should be undertaken to create a service level standard for the provision of IT service to the Township by reconciling the roles and responsibilities of IT staff, external partners / service providers and Simcoe County.

Assessment should extend to use of the existing current ITSM tool (ConnectWise). Given the recent nature of adoption, it is suggested that this solution continue to be used for ITSM so that staff can continue to learn about related system features and coordinating technical support alongside a third-party (CompuSolve).

### 3.2.4 Develop Co-op Program for IT Technicians

The use of co-op technicians is common practice in the municipal world because such programs help support modern recruitment efforts. Students are looking for opportunities to get practical experience in their fields and municipalities are looking to onboard new and savvy skillsets – this is very much a perfect fit.

The Township has an opportunity to work with Georgian College and other academic institutions to facilitate the development of a co-op program to help bolster the provision of technical support across the organization.

Under the direction of the IT Operations Support Specialist, a program should be established to support a regular rotation of students who should initially be hired as Student Co-op Systems Techs. These technicians can provide Level 1 (and in some cases Level 2) support as members of the Township's IT team. Further consideration can be given to extending co-ops to support other disciplines across the Township (e.g., communications, HR, project management, etc.)

Although these relationships are temporary, it is quite common for municipalities to promote co-ops to fill in newly created positions or future leaves. The value proposition for municipal co-ops is also due to the myriad of grants, cost-sharing agreements and subsidies available to employers. This is highly attractive for the Township especially given that there have been noted challenges in recruiting skilled people. Co-ops can provide a valuable highly skilled resource at a very affordable cost for the Township and it is recommended that such a program be developed.

### 3.2.5 Review Contracted Support Services

The Township's contract with CompuSolve as its MSP has helped establish many foundations that continue to serve the Township well today. Recent iterations of this agreement have been secured, however, a more detailed review of the services provided would be prudent. With the onboarding of the proposed IT Operations Support Specialist, there will be capacity to enable a closer (and more affordable) alignment with the required IT service levels (see the [Determine Required IT Service Levels](#) section).

Aside from ITSM, an MSP will need to deliver on many fronts for the municipality, inclusive of supporting network, infrastructure, security, data storage/management, business system support, Cloud migration and so on. In some cases, multiple service providers may be necessary to ensure that the needs of the Township are delivered in the most efficient, economical and (sometimes) specialized way.

This is a fine balance and will need to continually change along with new solutions, standards and strategies introduced. Having an in-house resource – like the IT Operations Support Specialist – maintain this equilibrium will go a long way to ensuring that the highest needs are met at the lowest possible cost.

### 3.2.6 Develop Technology Contractor Index + Formalize Vendor Management Approach

Given that IT has not historically had the capacity to directly support solution implementations, it will be vital for IT to have visibility into all system implementations and upgrades, including requirements for:

- **Compute/Storage:** servers, operating systems, compute, data storage.
- **Network:** bandwidth requirements (internal/external).
- **Security:** system requirements and user access (internal and third-party).
- **Third-Party Support:** vendors assisting with the implementation and steady-state support of the system(s).

The proposed IT Coordinator position will be ultimately responsible for providing vendor management for technology on behalf of departments. This function can (and should) be delegated to both the 'IT Operations Support Specialist' and 'IT Business Solutions Specialist' with centralized reporting and problem resolution managed by the IT Coordinator.

This role will liaise with all technology vendors including MSPs, business solution vendors and contractors to advocate on the part of the business and ensure that negotiated agreements are being met. Once established, new contracts should be aligned with these needs as well as in relation to architectural and technology standards (see the [Architecture 'Big Picture' Planning](#) section).

Vendor management is a discipline that focuses on centralizing contractual arrangements with third parties and service providers. Having IT manage this process in conjunction with departments will help the Township avoid buying systems with duplicated functionality and/or those that will be problematic to maintain and integrate within the environment. Currently, there is very little work done to assess these conditions prior to procuring new solutions and tools. Continuing with the current state will undoubtedly lead to more technical debt, a complicated integration environment and low levels of system utilization.

The discipline itself can better determine economies of scale (e.g., opportunities that could be collectively procured with other County municipalities), create standards with which to assess vendor performance, mitigate risk, expedite onboarding of external resources, reduce operating costs, and improve relationships with key partners.

Having IT involved at the onset of the Idea and Concept stages (see the [Establish Project Intake and Business Case Process](#) section), will lead to securing better vendors who have experience delivering the specific value sought by the organization.

With vendor management at the hub, there are various spokes that support the discipline.

To measure and report - there are metrics and dashboards. To establish discipline - there is governance/policy and roles/organization structure. To acquire and divest vendors - there must be evaluation and negotiation (mostly through procurement, although, at times, may be informally with vendors/service providers). To manage vendor outcomes - staff must invest quality time to develop relationships/contracts and as well as to monitor performance and risk. These activities will lead to better assessments and related technology improvements.

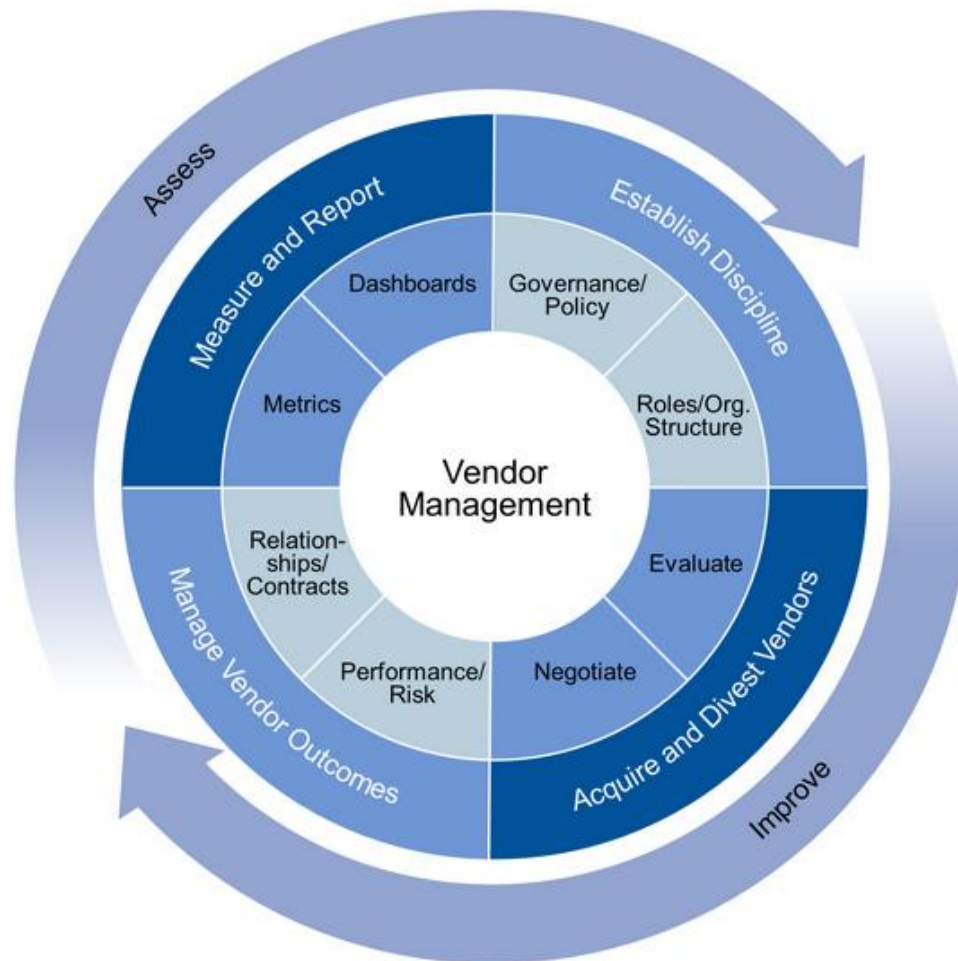


Figure 19: Vendor Management Framework

Vendors typically claim that implementations are easy and will immediately deliver value, however, this is rarely the case. A vendor manager can assist by leading the due diligence required to validate that the sales pitch matches the actual prospective value of the solution.

The Township should first create an index of external technology partners, contractors and service providers (e.g., CompuSolve, PerfectMind/Xplor Recreation, Citywide, CentralSquare, iCompass, etc.).

This should be followed by a careful review of these contracts. IT should be positioned alongside business leaders (as well as Finance) to ensure vendors are delivering on their commitments. Assessing and improving these relationships is absolutely critical in delivering the intended value of technology projects.

Performance reporting with respect to vendors should be documented and communicated through ITGC (as part of regular project portfolio reviews) along with recommendations from IT and the business in relation to respective mitigation tactics.

### 3.2.7 Procure a Mobile Device Management (MDM) Solution and Centralize Function

An MDM solution will provide the Township with improved data security and reduced Admin and IT in respect to managing mobility tools. It will help to secure data on mobile devices and will allow for partitioning Township data which can be remotely wiped.

The solution should also allow IT to enforce user passcodes, coordinate push applications, control and monitor usage and data consumption as well as provide conformity to a standardized design in support of mobile deployment. Leveraging an MDM could vastly reduce the current time spent by IT in support of mobility procurement, deployment, and tech support.

A review should be undertaken to gather requirements in support of procuring an MDM solution. It may be advisable for this work to be coordinated along with developing a Mobile Strategy (see the [Develop a Mobile Strategy](#) section), however, we would consider an MDM a baseline requirement for the Township given that they currently have 100+ mobile tools deployed so some initial consideration (and testing) could begin sooner.

In terms of requirements for an MDM, the Township will want to ensure that the solution does not require a high degree of technical skill to administer. The ideal solution would make managing mobile devices an administrative task with some self-service options for business staff as well.

There are several options the Township can explore with respect to MDM solutions. The following are some options that could be considered:

- **Bell**: Bell’s MDM solution has a fairly broad feature set and is certainly worth exploring as it will be an add-on to the Township’s current mobility account. That said, it is offered via a third-party, so consideration should be given to the support model in place. Bell’s MDM is available via the Cloud and on-premise.
- **Citrix Endpoint**: The MDM offered by Citrix provides a layer of options dictating end user licensing fees. These may tend to be on the higher priced side depending on features required, so specificity on this front is recommended.
- **Miradore**: Miradore offers a free version providing for very basic features that would allow the Township to try the solution to better ascertain actual needs. Most other providers offer a 30-day free period, then onto full subscription. Miradore is probably one the lowest cost (per user) of any options provided here.
- **Microsoft Intune**: This MDM solution is native to the M365 enterprise license (which the Township has). It has good basic general business features and could be a good option in conjunction with the Township’s intended further evolution of the M365 platform (see the [Develop M365 Roadmap](#) section). Varieties of these solutions (built on the M365 platform) are also available from a number of Microsoft partners.
- **Blackberry**: A longstanding player in the MDM business and really the solution that helped to make mobile management a requirement for organizations. The company’s redirection years ago has narrowed their focus on opening their MDM software for use with multiple end point devices. Blackberry’s option does offer both Cloud and on-premise (BES) options.

### 3.2.8 Architecture “Big Picture” Planning + Standards Development

Technology architecture needs to be planned in concert with the development of new tools and business solutions. Development of one without the other will create roadblocks leading to delayed projects and failed implementations. The Township also needs big picture planning done to illustrate the roadmap ahead. Currently, there is not anything that can be used as a reference model or guide to evolve both the back-end and front-end of technology in a holistic way.

The big picture will not only help in strategic planning and Work Plan development, but it can also be used to tell a story to help the Township understand how the “whole is greater than the sum of its parts”. Even a high-level illustration of the Township’s technology architecture would provide better insight into the tools and solutions used as well as key integrations. It would also present a current state, with an overlay used to track progress over time.

Similarly, architectural standards clarify technology constraints and opportunities on the back-end. With such standards in place, the Township would be able to speed up technology projects as these considerations are currently being revisited (and revised) to support individual projects.

Standards such as authentication, integration methods, encryption, UI design, naming standards and information classification (see the [Initiate Data Management Activities](#) section) can all be established using what the Township knows today. That said, we would encourage IT to work with an MSP or outside consultant to help assess (or at least validate) that the correct standards are in place.

Normalizing use of these standards to assess project requirements is optimal, but it may also reveal that certain solutions won't be a good fit for the Township. But it's better to know in advance prior to procurement, or better still, to live with the sunk cost of an implementation that burns too many cycles to support and will never be fully integrated or fully utilized.

### 3.2.9 Shared Services Review: Technology Resources

A service delivery review was undertaken for the Municipalities of North Simcoe with the [final report](#) being published on March 1, 2021. The review was an evaluation of how the municipalities currently provided services and offered various recommendations for the County partners, as a whole, to consider.

The service review ranged from corporate services, protective and development services, and operations. In respect to IT services, the review noted that there were many commonalities across the various organizations (e.g., systems, services, security) and that specialized technology services could not commonly be addressed in-house, so a reliance on third-party support was necessary. Generally, satisfaction with these third parties was noted to be high. That said, many may be in the same position as Tiny, where the lack of internal skills and a more stringent vendor management approach may not be ensuring that they are addressing their highest priority needs.

The review made four recommendations around technology:

**Recommendation IT1:** Align Delivery Model for IT.

- Different IT service delivery models employed by the municipalities result in little to no collaboration, sharing of resources or best practices.

**Recommendation IT2:** Standardize Online Service Offerings.

- While some progress has been made in moving some services online, online service offerings across the Municipalities of North Simcoe are very limited.

**Recommendation IT3:** New IT Support Systems.

- There are limited back-end IT technology solutions in place to support efficiency, effectiveness and reduce burden on existing staff.

**Recommendation IT4:** Develop an IT Strategy.

- There is a lack of formalized strategies surrounding IT, digital or customer experience to guide decision-making.

In our estimation, these recommendations are extremely worthwhile to consider. If follow-through occurred, these recommendations could lead to some significant cost savings, stronger relationships between municipalities in Simcoe and access to technology skillsets that may be entirely unavailable to each municipality working alone.

Like departments working alone, Simcoe municipalities are losing valuable opportunities to standardize on similar platforms to share the cost and normalize user experiences across the County.

These recommendations have been considered and there are some ongoing discussions with respect to actions of the service review as a whole. The Township (through the CAO and IT Coordinator) should actively work on further sponsoring these recommendations to gain consensus from partner municipalities.

The knowledge sharing on common platforms and services alone is worth considering a regular ongoing task force designed to look at critical areas for Tiny (e.g., HR and IT). This will take time to pursue, however, connecting and aligning networks between municipalities is the starting point in determining where shared value may be the highest.

### 3.2.10 Create a Data Classification Standard

The proliferation of unstructured data has presented a challenge for the Township which is in custody of sensitive information in the form of emails, spreadsheets and documents housed within various business solutions and file shares.

This data is quite often moved to the Cloud prior to setting policies (and automated controls) to formally identify and categorize information to ensure it is handled appropriately. This struggle with data lifecycle often results in the storing of sensitive data long after it's useful, creating an unnecessary exposure to risk.

As data is created and archived on various platforms (either on-prem or in the Cloud) on a daily basis, much of it can be forgotten and simply stored in perpetuity without adequate controls in place.



Having information classified makes it easier to inform the configuration of technology systems to protect an organization's most sensitive data. It also makes it easier to establish standards, access privileges and rules to support staff in collecting and distributing civic information.

Under the leadership of the IT Coordinator and GIS and Data Specialist and managed through the GIS/Data/RIM Advisory Group, the Township should establish a Data Classification Standard to better define the sensitivity of information regularly managed throughout (and beyond) the organization.

This classification exercise does not need to be complicated. It could begin with a half day, simply by brainstorming and using standard corporate reporting materials as reference tools to understand and set sensitivity thresholds.

Sample categories for data/documentation classification are illustrated in the diagram below.

- **Category 1 – Public:** Data that may be freely disclosed to the public.
- **Category 2 – Internal Only:** Internal data not meant for public disclosure.
- **Category 3 – Confidential:** Sensitive data that, if compromised, could negatively affect operations.
- **Category 4 – Restricted:** Highly sensitive corporate data that, if compromised, could put the organization at financial risk or legal risk.

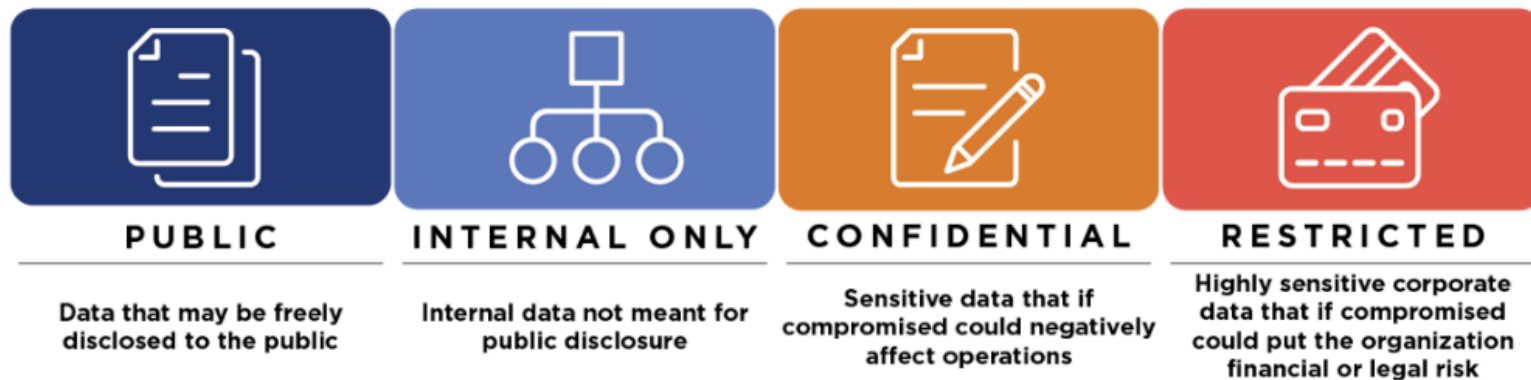


Figure 20: Sample Information Security Classification Framework

While this standard does not replace the need for a functional classification model (e.g., [TOMRMS](#)) it will guide the Township in making better decisions to protect unauthorized access to sensitive data and safeguarding personal information collected from residents.

For example, this model could be used as a lens with which to review terms and conditions related to data management when contracting with Cloud service providers. Classification will also help to facilitate [data assessment and capacity planning](#).

This initiative should be tackled by the Clerk and forthcoming IT Coordinator with regular reporting and approvals secured through the IT Steering Committee. This will ensure that corporate standards and objectives with respect to IM are fully considered and addressed.

Next to people, information is Tiny’s most critical asset. The investment required to develop a high-level data standard is a worthwhile first step to start managing civic data in a better (and safer) way.

### 3.3 Service Transformation and Business Solutions

Technology transformation requires a “people, process *then* technology” lens in order to take shape. Layering technology over poor processes or without the resources in place will not deliver value or be sustainable over time.

Failed implementations create conditions where staff avoid use of new systems and tools or develop workarounds to use them in non-standardized ways. This leads to inefficiencies, inaccurate data / reporting and, in many cases, will be entirely antithetical to the goals of technology automation and enablement.

The Township has done well over the pandemic to leverage their ERP (GP / Diamond) and begin implementation of a Work and Asset Management System (Citywide). These solutions represent huge opportunities to align people and process behind technology with a goal to automate administrative tasks, generate useful information to support operational improvements and improve the current state condition for users. That said, further oversight, coordination and strategic evolution of these systems will make adoption and strategic planning much easier.

Agility is also a key concept within the technology project management discipline that can help break work into smaller segments that give staff the necessary time to support testing and implementation. In addition, small-scale test and learn pilots can help build an understanding within IT of how things will work in the future state, as well as give users minimum viable products (MVPs) with which they can use to learn as well.

#### 3.3.1 Establish ERP Work Plan Priorities

Finance has led the implementation of Microsoft Great Plains / Diamond (GP / Diamond), the Township’s ERP. This project has been successful in that it has helped automate various facets of GL management (e.g., eBilling, HRIS, A/R and Management Reporter). There is still more to be done, however, and the Township will need to employ a product management mindset and approach to ensure that priority features continue to be released.

Through the ERP Advisory Committee, the Township should undertake a review to build a product roadmap. Although further discussions on this are required, short-term objectives to be considered are:

- Onboard the HR function to leverage GP functionality and use as the Township's employee database.
- Plan to procure a budget system that integrates with GP (or continue use of GP's budget module).
- Continue to improve reporting capabilities of the current deployment (through Management Reporter, PowerBI, etc.).
- Conduct final integration planning with e-commerce payment services, Citywide (and new budget system if needed).
- Implement end-to-end digitization of the taxation process (i.e. implement a system which automates the entire taxation process from back-office to customer inputs/requests, such as the 'Virtual City Hall' module of GP).

Funding requirements should be assessed and requested through subsequent budget processes and follow the [business case development process](#).

Development and vetting should be done via the ERP Advisory Committee which should ultimately present the roadmap for ITGC approval. This Work Plan will span multiple years and should be regularly monitored and revised when needed in order to ensure that both financial and human resources (IT + business + third parties) are in place to support the work. Further evolution of the Township's ERP is a huge opportunity to streamline and automate Finance and HR processes, making it easier for staff to manage the associated work.

It is also important to note that there are many staff complaints noted with respect to the Township's GP vendor (CentralSquare). This vendor has **not** historically been responsive to the needs of Tiny (as well as other municipalities) with respect to their on-premise GP ERP product. There have been large gaps in service with calls for support going unanswered at times. This is **not** an acceptable level of service and should be a consideration for the Township when deciding on whether or not to procure new services from CentralSquare.

The Township is currently working with other municipalities as part of a collective to apply pressure on the CentralSquare vendor to improve customer service for GP. This work needs to continue, as united voices on this front will help. Furthermore, centralizing and applying a vendor management approach to leverage this support more proactively from the vendor may also improve the current state (see the [Develop Technology Contractor Index + Formalize Vendor Management Approach](#) section).

### 3.3.2 Procure and Implement Budgeting Software Solution

Implementation of a budgeting software solution should be a priority for the Township as part of the [ERP Work Plan](#). Currently, this process is far more challenging than it should be with every department developing (and submitting) their own financial templates to Finance. This represents a significant amount of work for Finance and departments and commonly results in a lot of back and forth to ensure that the information collected is accurate and aligned to budget requirements.

A budgeting solution will help standardize controls and automate this process, creating self-service opportunities for staff to not only develop their annual budgets but also manage them throughout the year.

### 3.3.3 Continue to Implement Citywide + Establish Roadmap

Citywide represents a massive opportunity for the Township. Not only with respect to meeting the 2017 legislated mandate ([O. Reg. 588/17](#)), but also in relation to streamlining / automating work order and maintenance management.

Historically, the Township has explored use of various tools designed to improve this area of work (e.g., MainBoss, MESH, etc.). This learning is important and should be used to help assess and improve the Citywide solution over time to ensure that departmental needs will be met with the deployment.

The Township should continue work with Citywide to refine and develop the Citywide solution for optimal use as an asset management and CMMS. An implementation Work Plan is already in place, however, there should also be a roadmap and Work Plan in place to continue to phase in further features of the application. This Work Plan should be developed by the ITGC Work/Asset Management Advisory Committee to help alignment across the municipality. This tool can be developed to become a core utility for many areas (aside from just Public Works) and, as a result, a corporate approach should be applied to support its continued improvement.

Although the current system implementation is the main priority for the Township, the Work Plan should include the prospect of further consolidation around the system to potentially deploy features / modules that help automate case management, budgeting, permitting, CMMS and so on. Various factors must be considered which would dictate further use such as bandwidth availability (as it is a Cloud solution), integration requirements, reporting, training, support and ongoing configuration to meet business needs.

The Township currently has funding in place to hire a contract Asset Management Coordinator position. This is a key role to onboard now in order to support the current implementation and ensure that the technology will be optimally configured for both workflows and users.

### 3.3.4 Establish Technology Showcase Days / GIS Day

One of the issues facing the Township is that there is currently insufficient knowledge across departments with respect to the existing and planned use of technology. Staff are largely unaware of technology projects managed outside of their departments and, as a result, do not have insight into how other projects might relate to their own and/or how other systems could apply to their work areas.

The Township should plan for at least one day a year to hold an in-person Technology Showcase Day which allows staff to drop in and learn how technology is enabling business across the organization. Tapping into the annually recognized [GIS Day](#) is a worthwhile starting point. The intent of these days is to educate, inform and inspire staff to think further about how GIS, data (+ RIM) and technology in general can be leveraged to automate and improve work. Coordination and planning of these events should be facilitated through ITGC Data/GIS/IM Advisory Group.

The GIS Day model can also be used to showcase other technology enablement across the organization. These can be large or small initiatives that are deserving of attention and recognition. Knowledge mobilization is the key focus for these events, however, this can often lead to the expansion of use cases for existing technologies resulting in further consolidation around key systems. Showcase Days can also be coupled with training and education programs with respect to areas like RIM, cybersecurity, data sharing and so on.

### 3.3.5 Run Technology Pilots

The importance of pilots to test and learn areas for future development cannot be understated. These mini projects can be run to gain more insight into a problem or opportunity by presenting staff with an opportunity to tangibly use prospective technology before deciding to invest.

Pilots can also help to refine requirements that will be essential when looking to move forward with a more fulsome procurement or implementation. Vendors will often lend trial versions of modules or features to municipalities to let them experiment and determine whether they would work to enhance current deployments. This would allow IT to kick the tires on products but would also add to their overall understanding about how such projects might fit into the Township's technology environment.

Data and GIS are also areas that are currently well-suited for technology pilots. The need to build capacity in this area is a priority for staff, especially given the implementation of new systems which, in most cases, are underutilized in terms of their data and reporting features.

Aside from leveraging ESRI tools, use of MS PowerBI, CS Management Reporter, and other native reporting features within existing applications (GP, Citywide, PerfectMind/Xplor Recreation, DocuShare, Streetlogix, etc.) should be leveraged to investigate whether there would be value in scaling out use further. The GIS and Data Specialist is ideally suited to developing pilot projects along with departmental areas. Although pilots should follow the [business case development process](#), they should not move forward into a full project until they can prove / validate that further value is achievable by scaling out.

Regular reporting and storytelling should occur via ITGC and [Technology Showcase Days](#). The intent of pilots should be to inform and inspire staff on how technology can enable their business. A worthwhile by-product, however, is the potential to create building blocks and templates that could be easily refined and adopted in various areas. Reporting and dashboard development using PowerBI is an excellent case in point.

### 3.3.6 Revitalize Use of DocuShare

The Xerox product DocuShare has been utilized by the Township for several years now as a RIM solution. This solution is aligned with use of The Ontario Municipal Records Management System (TOMRMS) classification system which is relatively well-adopted throughout the organization with some departments in full compliance and others somewhat lagging.

RIM is a challenging area for municipalities to manage, however, the Township was wise to use the tool that they had to begin this journey. IT and Clerk's have worked well to support this initiative. Moving forward, this is a key relationship to help continue to coordinate information and data management practices across the organization.

As in other areas (and likely impacted by the pandemic), training and education is not sufficient for optimal use of the system or RIM-related processes. Through the [staff survey](#), 76% of respondents noted that they need more training on DocuShare. This was the highest need for training expressed by staff (followed by MS Teams at 68%). Failure to comply with optimal use of DocuShare will not only jeopardize future adoption and use of the tool, but it could also lead to issues of non-compliance with respect to privacy and information regulations.

The GIS/Data/RIM Advisory Committee will be the ideal group to consider improvements to use of DocuShare, but also to develop a much broader training plan with respect to policies, procedures and technology used to support RIM activities. The primary focus, however, will be to ensure that staff know how to optimally use DocuShare in support of TOMRMS and the [data classification standard](#). Future work planning can also delve into naming conventions, privacy, GIS and data pilots, business continuity and so on.

Representatives of this Advisory Committee should help lead and carry these discussions within their departments, serving as RIM liaisons for their respective areas. Consideration should also be given to scaling this out more fully to ensure that every department has a RIM liaison and is represented on the Advisory Committee.

This model will ensure that there is a centre of excellence in relation to RIM for the Township which can provide the necessary support and guidance on best practices. Centralizing these roles will better assist the Township Clerk and the IT Coordinator in regularly connecting with departments to reconcile business needs with corporate RIM requirements.

### 3.3.7 Assess Use of Fleet Complete + MainBoss + MESH

The Township currently uses Fleet Complete as a solution to manage the corporate fleet of vehicles. For several reasons, staff are not happy with the deployment noting poor support levels from the vendor as well as data issues relating to vehicles not reporting in. Users indicated that they simply do not trust the data within the system and noted that the UI was cumbersome and difficult to manage via a mobile device.

A deeper dive into the application may identify the detail surrounding these issues as well as some opportunities to mitigate. Further consideration needs to be given to the ongoing Citywide implementation and how the respective features may be able to replace the need for Fleet Complete. Through Citywide's CMMS solution, there is an ability to automate some aspects of fleet management, however, business requirements must first be gathered to determine whether the existing processes and workflows might need to be adjusted for optimal use.

Use of Citywide to manage fleet activities would likely avoid the need to develop an integration between systems. Further consolidation on the Citywide tool will help staff by providing less technology to learn and a common interface for all asset / maintenance management work.

The Water department has been piloting the use of MESH, a web-based asset tracking solution designed for the public sector. The pilot has led to many learnings and has been a worthwhile exercise. MainBoss, used by Public Works, is yet another CMMS being used. The Township should consider also decommissioning these solutions and replacing them with use of Citywide. That said, this will take time to assess. Staging these assessments should be done via Work Plan development through the Work/Asset Management Advisory Group.

### 3.3.8 Undertake LIS Assessment

Currently, the Township uses Marmak LIS as the corporate land management solution. The system has been highly customized to process, however, and has failed to keep up with workflow changes and necessary updates. Some staff have suggested that LIS has simply become "a point of data entry for us" noting various data accuracy

and reporting issues. LIS is utilized by several departments (e.g., Public Works, By-law, Planning, etc.), all of which seem to indicate similar challenges with it.

Due to the high degree of customization, it has been challenging to ensure that the technology keeps pace with process changes and business needs. The Township is better served by utilizing vanilla (or native) features of a system and instead making concessions on the business process side as they are often easier to align with system features. That said, a strict adherence to use of a system at the cost of necessary business functionality can also present a number of challenges.

Given that LIS has been utilized for more than a decade, it is time to undertake an assessment to determine if LIS can be modernized (or re-deployed) to meet current business needs and to create a more native approach for use in conjunction with modifying process workflows.

It would be prudent, at this time, to also look to the market to better understand whether there is a better fit solution for the Township. This review should also look at Cloudpermit and ESRI ArcGIS as opportunities to consolidate some activities currently managed by LIS.

This is not to suggest that these two applications could replace LIS, however, the review may determine that some functionality could be supported by these solutions. This Work Plan action needs to be coordinated through ITGC and should utilize the [business case development process](#).

Furthermore, it is essential that the Township identify a single source of truth for property information (which is at the heart of many municipal operational and regulatory activities). Identifying which system will become the default property management repository will ensure integration plans are in place to avoid duplication of property information which is not normalized or aligned between systems. Many municipalities are now leveraging ArcGIS as their single source of truth for property-related information.

Due to the proposed [expansion of the IT model](#) in Tiny (which frees up resources to better manage data and GIS) this should be strongly considered as an approach for the Township.

### 3.3.9 Develop an M365 Roadmap

The Township has moved email into the cloud with Microsoft x365 (M365) and currently subscribes to the O365 Business Premium licensing model. This is a common entry point for organizations leveraging Microsoft's suite of business productivity Cloud offerings, i.e., email first, followed by MSOffice (Word, Excel, PowerPoint, etc.).

IT has also deployed MS Teams to support virtual collaboration for staff, however, many staff have noted that they do not have sufficient training to utilize the tool properly on a day-to-day basis.



The next step for the Township should be an assessment to identify additional M365 services that will support the ITMP and, by extension, support business objectives over the next 1-5 years. Consolidating on this platform will provide a number of benefits including cost savings (and avoidance), a consistent user experience, reduced complexity to manage the back-end (which currently exists with the on-premises deployment) as well as more robust information security tools.

Microsoft released Microsoft 365 in 2017 as an enhanced bundle that combines the features of O365 with EMS. Some key capabilities that should be explored in this regard are:

- **Microsoft Intune:** A Cloud-based enterprise mobility management service that would help the Township [manage mobile devices and applications](#).
- **Identity and Threat Protection:** Detect potential vulnerabilities affecting the Township's identities, configure automated responses to detected suspicious actions.
- **Integration with On-Premises Active Directory (Single Sign On):** The single sign on (SSO) feature adds extra value to the Azure AD authentication process and provides a better experience for users by eliminating the need to enter passwords or usernames whenever Township staff need to authenticate to the network (Cloud or on-premise).
- **SharePoint/OneDrive** – Microsoft Cloud storage products with common characteristics; there are some key differences between the two which decipher how and when one or the other should be used, however, the Township will have opportunities to leverage both services.

It is important to note that these features do not represent an exhaustive list but are considered to be core capabilities of the M365 platform that should be explored by the Township by way of developing an M365 roadmap.

A more detailed assessment should be undertaken (ideally with the support of a third-party partner) to ascertain the highest needs of the organization and a logical Work Plan sequence for implementation that would align with the capacity to do so.

Like other software, any M365 deployment should be supported by a staff training program. This training is a critical component to ensuring ROI and should be coordinated through the [Corporate Technology Training Development Plan](#).

### 3.3.10 Customer Service Inventory Planning + Digitization Maturity

Digital service provided by the Township through its recent Drupal website implementation as well as through its various online portals (Tiny Connect, Tiny Online Portal, Cloudpermit, PerfectMind/Xplor Recreation, Civic Web, etc.) represents a good overall offering to customers.

Largely, this work has been decentralized, with departments either leveraging the tools they have to publish digital services, creating online forms and/or connecting front-end digital services to an online payment service (currently Moneris and Stripe). IT has some involvement, but there is currently no centralized management or prioritization for which services are launched and when.

The Township should be commended for how far it's come with very little corporate oversight. This, along with staff comments, suggest that digital service is top of mind for departments. This has created a great opportunity to continue maturing digitized customer service offerings through strategic planning and centralized oversight.

A Customer Service Inventory should be developed by the Digital Service Advisory Group that should be a collaboration between IT, Communications, and business areas. The inventory can simply be a collection of all the service offerings by the Township, with an indication of which are digitized and to what extent.

Ideally, digital services will tie directly into systems to fully digitize the end-to-end service. This provides for the greatest efficiency as automation removes the need to manually intervene and/or transpose information between systems. Currently, some of these end-to-end digitized examples exist in relation to PerfectMind/Xplor Recreation, Civic Web and Cloudpermit, however, there are currently a myriad of online forms that are simply received through email and transposed into back-office systems. These half-measures are ideal opportunities to assess whether full digitization could be achieved by better leveraging existing technologies.

This Customer Service Inventory can be used to track and plan annual improvements each year. Progress should be reported to ITGC through the Web and Digital Advisory Committee. Work Plan forecasting should be used to determine budget requirements for the following year (if any) and should follow the [business case development process](#). Use of the [MOSA tool](#) used to baseline the maturity of online services provided by the Township could be used by the Advisory Committee to regularly to chart progress.

### 3.3.11 Conduct Assessment for an Applicant Recruitment and Tracking Solution

As the Human Resources function is relatively new to the Township, there are several opportunities to support with technology, the processes being developed.

The initial focus should be onboarding the Human Resources Specialist onto the [GP platform ERP](#), mainly to provide automation and control with respect to an employee database for the organization. This likely should be the number one priority on the ERP Work Plan followed by developing a formal [corporate technology training plan](#) with potential implementation of an LMS.

Once these initiatives are implemented and fall within a continuous improvement (modernization) cycle, the Township should consider procuring / implementing an Applicant Recruitment and Tracking Solution (ATS). Such systems work to manage the end-to-end recruitment process.

Currently, this process is entirely manual with each department employing their own approach. The creation of HR standards for the organization and the continued use of tools to automate workflows will help to streamline this process and meet recruitment and applicant tracking goals for the organization.

With HR being a nascent discipline, initial focus will be to establish process and clarify roles and responsibilities around the function. Once assessed and established (ideally with optimal workflows and capacity commitments mapped out), the Township should then proceed to review the feasibility of onboarding technology to help automate the various processes.

### 3.3.12 Internal Shared Services Review: Onboarding / Offboarding

Another key area to review is onboarding and offboarding staff. The current process is divided into three segments, each being managed by Finance, HR and IT, respectively. By assessing this process from an internal shared services perspective, the Township will be able to determine how best to streamline the process to reduce duplication and make onboarding easier for staff and new recruits.

These three departments should work together and collaborate on how best to optimize the process by utilizing the ERP and other solutions. A by-product of this work will lead to better, more consolidated use of the ERP as well as strengthen the relationships between these important corporate service entities. This initial project could help to sponsor similar reviews between these departments which would help to align and normalize corporate service functions, consolidate / streamline the use of existing technology, and deliver more self-service options to staff.

### 3.3.13 Undertake ERP Assessment

The Township implemented GP as the corporate ERP in 2019/2020. The system has already been successful in automating various processes (e.g., eBilling, HRIS, A/R, Management Reporter, etc.). The system was implemented as an on-premise solution which was a prudent approach considering existing bandwidth concerns. That said, it is hoped that by 2025, these will have been remediated, both through a more proactive approach to

managing bandwidth utilization and also through advocacy efforts for the industry to provide better connectivity in the County.

The current climate is such that ERP and enterprise solution vendors are moving away from their on-premise software programs in favour of SaaS and Cloud offerings.

The subscription model is financially advantageous for vendors but also well-suited for the those in the municipal market who are all looking to reduce their infrastructure footprints and software maintenance contracts. Cloud services save the complexity of IT while also providing access to the “latest and greatest” a solution has to offer.

In 2025, the Township will have had five years of experience with their current ERP, along continuous improvements coordinated through the ERP Work Plan. At this point, it would be wise for the Township to undertake a detailed assessment as to whether the current deployment of GP can continue to deliver the value required by the organization. Aside from looking at the system and features themselves, consideration should also extend to potentially migrating to CentralSquare’s GP Cloud offering.

The focus of the CentralSquare [Finance Enterprise](#) module of Suite Pro is largely the same as the existing GP variant currently used by the Township, however, it will be much simpler to configure to help leverage enhanced reporting (e.g., configurable user dashboards for staff, online tax statements for citizens) and workflow automation. It would also provide all the other previously noted benefits that come from furthering Cloud investments.

We believe that by transitioning from the GP ERP to CentralSquare Finance Enterprise, the Township will spend less time on learning how to create value within a system and more time simply configuring for it. Finance staff are currently overwhelmed by operations – there is very little time to invest in optimizing technology. A Cloud-based ERP would focus that investment more on internal services itself rather than the application and infrastructure supporting it.

All that being said, CentralSquare has **not** historically been responsive to the needs of the Township or its customers as a whole with respect to the GP ERP product. The previously noted gaps in customer service are not acceptable and consideration should be given to this. Again, a centralized vendor management approach may help in this regard, but vendor support of Cloud solutions is as critical to get right as the technology itself, so Tiny will need to ensure that it feels confident that vendor support will be available to help with implementation, but more importantly, to expand use of the tool over time.

### 3.3.14 Undertake CRM Assessment

Throughout our engagement, many staff referenced a desire to procure a CRM solution to improve customer service to residents. CRMs are becoming more commonplace within municipal settings as they do provide a number of beneficial features such as service requests, a customer service knowledge base, customer tracking, ID profile management, automated notification lists, digital service portal, etc.

While CRMs are becoming more mainstream, they also require a sizeable investment to not only purchase but to operate and sustain as well. Larger municipalities that have centralized customer service functions and call centres are ideally suited to supporting CRMs.

In our estimation, the Township would not get enough value for money out of a CRM solution at this time. The Township's existing customer service model is decentralized, there is no call centre, and the Township has done well in offering digital services and payments through its existing website and online portals. We feel that the Township should continue to leverage these tools (and investigate opportunities to leverage case management features in Citywide) in order to modernize the front-end of service offerings and utilize existing relationships with online payment providers to enhance online customer service.

After five years of testing and learning about CRM functionality through use of existing technology, the Township should undertake a full feasibility assessment for a CRM platform. At this point, it may be determined that existing solutions do not provide enough functionality to support online customer service requirements.

A CRM is typically a large investment, particularly for an organization the size of Tiny. That said, the marketplace continues to evolve with various lightweight options that could be explored, now and in the future.

To be clear, we believe that CRMs are a powerful tool for municipalities to improve customer service and they can provide an ideal singular utility to support nearly all aspects of the customer service function – but because they come at such a cost, in Tiny's case, we feel that at least one, full-time position would be required to support a CRM deployment and set about the change required to really leverage its feature set (at least for the first year or two).

As Tiny continues to grow and the organization continues to modernize its processes and Cloud acumen, looking into a CRM solution is a definite conversation for the future. In the meantime, however, we feel that the Township can continue to evolve its digital service to citizens by further leveraging existing platforms.

## 4.0 Work Plan

The following is a proposed workplan to implement the ITMP. A sequence has been proposed along with each action in each of the following five years in order to accommodate for interdependencies, budget and overall capacity to deliver. Aside from the action name and description, a proposed lead(s) for each action has been suggested along with the overall scale of the project (**S**mall: up to 50 days, **M**edium: 50 to 200 days, **L**arge: more than 200 days). Indication as to whether the action is deemed a ‘quick win’ has also been provided (this is based on available budget and resources as well as the overall scale of the proposed action). Approximations regarding budget have also been included, however, these require a more detailed assessment of the action in question.

ITMP #	Work Plan Action	Action Description	Lead	Scale (S, M, L)	Quick Win?	Approx. CAPEX Impact	Approx. OPEX Impact
<b>Year One: 2022</b>							
<a href="#">3.1.2</a>	Constitute ITGC and Governance Framework	Formally constitute ITGC as the Township's technology governance model. Adopt terms of reference and a mandate to provide oversight of technology spending, approval of the annual (corporate) IT budget, review of technology projects. This group is a 'decision-making' entity which will consider recommendations from Advisory Committees, prioritize projects and monitor the technology portfolio of projects. ITGC should report through to SMT on a regular basis and utilize SMT as a decision escalation point if required.	Director of Finance/Treasurer	S	✓	N/A	N/A
<a href="#">3.1.1</a>	Expand IT Organizational Model: Phase 1	HR/SMT org approval of clarified roles and responsibilities (job descriptions / postings) with respect to the IT Coordinator, GIS and Data Specialist and the IT Operations Support Specialist.	Director of Finance/Treasurer	S		N/A	N/A

<a href="#">3.1.1</a>	Recruit and Onboard IT Coordinator Position	Validate job description, evaluate position salary range, recruit, onboard.	Director of Finance/Treasurer	M		\$5K	\$20K (in addition to current IT Admin salary)
<a href="#">3.1.3</a>	Corporate Technology Work Planning	Collaborate with Directors and their staff to understand what technology projects are underway / planned. Reconcile capacity to deliver on existing commitments and modify sequencing of initiatives through ITGC. Prioritization should be given to GP and Citywide as key corporate deliverables.	IT Coordinator + GIS/IT Technician + ITGC Advisory Groups	M		N/A	N/A
<a href="#">3.1.2</a>	Reconstitute Asset Mgt. Advisory Committee + Establish / Validate Citywide work plan	Establish a term of reference for this ITGC Advisory Committee with a mandate to create, coordinate and execute on a work plan to continually support and modernize citywide as well as other asset management systems.	Director of Public Works + GIS/IT Technician	S	✓	N/A	N/A
<a href="#">3.1.7</a>	Policy Development: Phase 1	ITGC should consider and adopt a phased approach to policy development. Phase 1 should strictly focus on IT Governance along with establishing regular review periods and assigning responsibility for 'policy owners'. Core policies should be reviewed annually, however, varying thresholds can be set in accordance to overall needs.	IT Coordinator	S	✓	N/A	N/A
<a href="#">3.2.1</a>	Phone System Replacement	Validate terms of reference by working with departments to validate feature set and specs. Ideally, present to ITGC and approve project. Procure partner to support implementation and testing. Implement and provide training to staff. Approved funding in place.	GIS/IT Technician	M	✓	\$55K	\$10K

**Year Two: 2023**

<a href="#">3.1.1</a>	Expand IT Organization Model: Phase 2	Validate job description, evaluate position salary range, recruit, onboard IT Operations Support Specialist.	IT Coordinator + Director of Finance/Treasurer	M	✓	\$5K	\$70K
<a href="#">3.2.2</a>	Connectivity Assessment and Cloud Planning	Develop a Cloud Computing Framework as a strategic artifact providing direction for a holistic view of Cloud adoption at the Township.	IT Coordinator + IT Operations Specialist	M		N/A	N/A
<a href="#">3.2.3</a>	Determine Required IT Service Levels	Collaborate across the organization to create a service level standard for the provision of IT service to the Township by reconciling the roles and responsibilities of IT staff, external partners / service providers and Simcoe County. Assess current ITSM tool (ConnectWISE) against an ability to provide support consistent with agreed upon service levels.	IT Coordinator + IT Operations Specialist	M		N/A	N/A
<a href="#">3.1.4</a>	Establish Project Intake and Business Case Process	As outlined in the strategy, develop a business case process to capture Ideas, Concepts and Projects' to be used in solidifying and sequencing work plans as well as corporate resource planning (IT + business).	IT Coordinator	S		N/A	N/A
<a href="#">3.1.5</a>	Establish a Project Prioritization Process	As outlined in the strategy, facilitate ITGC approval of a corporate technology project intake and prioritization process.	IT Coordinator	M		N/A	N/A



3.1.6	Develop Project Management Fundamentals for Technology Projects	Adopt technology (Monday, Asana, Eclipse etc.) or use existing tools (Excel) to develop and manage a portfolio of projects that can be regularly monitored and reported through to ITGC. PM's should be established for every technology project. Where necessary, external resources should be budgeted to play this role for the Township on a temporary basis (ex. Asset Management Coordinator supporting implementation of City Wide). The IT Coordinator should lead portfolio reporting on behalf of business PMs, however, the latter should be invited to attend ITGC to communicate particulars (alongside IT) about projects that require attention or support.	IT Coordinator	M		N/A	\$5K
3.2.4	Develop Co-op Program for IT Technicians	The Township has an opportunity to work with Georgian College and other academic institutions to facilitate the development of a Co-op program to help bolster the provision of technical support across the organization. Under the direction of the 'IT Operations Specialist', a program should be established to support a regular rotation of students which initially should be hired as 'Student Co-op Systems Techs'. These technicians can provide Level 1 (and in some cases Level 2) support as members of the Township's IT team. Further consideration can be given to extending Co-ops to support other disciplines across the Township (e.g. communications, HR, project management etc.)	IT Coordinator + IT Operations Specialist	M		N/A	N/A
3.1.2	Constitute ERP Advisory Committee + Establish ERP Work Plan	Establish a term of reference for this ITGC Advisory Committee with a mandate to create, coordinate and execute on a work plan to continually support and modernize GP / Diamond and HR information systems (future). This group should be responsible for inception planning around supporting the new HR function with the technology to automate workflows and generate corporate reporting. Future consideration should be extended to support learning management, recruitment and applicant tracking tools, performance management etc.	IT Coordinator + GIS and Data Specialist + Director of Finance/Treasurer	S	✓	N/A	N/A

3.3.1	Establish ERP Work Plan Priorities	The primary considerations to review for implementation (through the ERP Advisory Committee) are to: 1) onboard HR function to leverage GP for HRIS functionality and as the Township's employee DB, 2) plan to procure a budget system that integrates with (or is part of) GP, 3) improve reporting capabilities of the current deployment (through Mgt. Reporter, PowerBI), 4) integration planning with e-commerce payment services, Citywide (and new budget system if needed). Development and vetting should be done via the ERP Advisory Committee and seek ITGC approval. This work plan will span multiple years.	Director of Finance/Treasurer + IT Coordinator + GIS and Data Specialist	L		N/A	N/A
3.3.2	Procure and Implement Budgeting Software Solution	Replace current manual process with a software solution that automates the budget management process. Requirements which should be included are self-service for staff to input and monitor their respective budgets. Consolidation would eliminate current use of divergent systems and manual processes as well as provide improved financial standards and controls.	IT Coordinator + Director of Finance/Treasurer	L		\$30K	N/A
3.3.3	Continue to Implement Citywide + Establish Roadmap	Continue to work with Citywide to refine and develop the Citywide solution. A work plan is in place to support the current implementation, however, there should also be a roadmap and work plan in place to continue to phase in further features of the application (e.g. case management, budgeting, permitting, CMMS etc.).					
3.1.2	Constitute GIS, Data and RIM Advisory Committee + Establish Work Plan	Establish a term of reference for this ITGC Advisory Committee with a mandate to create, coordinate and execute on a work plan to continually support and modernize use of GIS, data management, BI and analytics (dashboards, enhanced reporting etc.) as well as records and information management.	IT Coordinator + GIS and Data Specialist + Director of Legislative Services/Clerk	S		N/A	N/A

<a href="#">3.3.4</a>	Establish Technology Showcase Days / GIS Day	Plan for at least one day a year to hold an in person 'Technology Showcase Day' which allows staff to drop in and learn how technology is enabling business across the organization. Tapping into the annually recognized GIS Day is a worthwhile starting point. The intent of these days is to educate, inform and inspire staff to think further about how GIS, data (+ RIM) and technology in general can be leveraged to automate and improve work. Coordination and planning of these events should be facilitated through ITGC Advisory Committees.	IT Coordinator + GIS and Data Specialist	S	✓	N/A	N/A
<a href="#">3.3.5</a>	Run Technology Pilots	Identify 2-4 pilots per year where IT can work with departmental staff to leverage GIS and business solution functionality to enhance reporting elements, build new geographic new, create visualizations, implement BI / dashboards etc. These pilots are meant to 'test and learn' capabilities which could be reproduced to support other departmental or corporate needs. Aside from leveraging ESRI tools, use of MS PowerBI, CS Management Reporter and other native reporting features within existing applications (GP, Citywide, PerfectMind/Xplor Recreation, DocuShare, StreetLogix etc.) should be assessed. Regular reporting and storing telling should occur through ITGC and through showcase days.	IT Coordinator + GIS and Data Specialist	M	✓	N/A	N/A
<a href="#">3.1.7</a>	Policy Development: Phase 2	ITGC should consider and adopt a phased approach to policy development. Phase 2 should likely focus on IT Security, Hosted and Cloud Solutions as well as Asset Lifecycle Management.	IT Coordinator	S	✓	N/A	N/A

<a href="#">3.2.5</a>	Review Contracted Support Services	Audit and review existing support service contract with CompuSolve to ensure alignment with approved IT service level needs (inclusive of supporting network, infrastructure, security, data storage/management, business system support, cloud migration etc.). Modify IT service level requirements based on resource and funding capacity.	IT Coordinator + IT Operations Specialist	S		N/A	\$15K
<a href="#">3.2.6</a>	Develop Technology Contractor Index + Formalize Vendor Management Approach	Create an index of external technology partners / service providers (ex. CompuSolve, PerfectMind/Xplor Recreation, Citywide, Central Square, iCompass etc.) currently working independently with departments. Review contracts, create a centralized list of partners, work alongside business SMEs to ensure vendors are delivering based on agreements. Performance reporting with respect to vendors should be communicated through ITGC and future evaluation of contracts should be based on agreed upon architectural and technology standards.	IT Coordinator + IT Operations Specialist	M		N/A	N/A
<a href="#">3.3.6</a>	Revitalize use of DocuShare	Working through the GIS, Data and RIM Advisory Committee develop a program to revitalize / standardize use of DocuShare. Develop training materials and deliver education to staff when onboarding and at regular intervals. Optimally, this can be linked to RIM and MFIPPA training delivered by the Clerk's Office.	Director of Legislative Services/Clerk + GIS and Data Specialist	M		N/A	\$10K

Year Three: 2024

<p><a href="#">3.3.7</a></p>	<p>Assess use of Fleet Complete + MainBoss + MESH</p>	<p>Undertake an assessment with respect to use of Fleet Complete, MainBoss and MESH. This review should undertake requirements gathering and a review of existing processes in order to determine whether the Township can further consolidate on the Citywide solution.</p>	<p>Director of Public Works + IT Coordinator</p>	<p>M</p>		<p>\$10K</p>	<p>\$15K</p>
<p><a href="#">3.1.8</a></p>	<p>Develop a Mobile Strategy</p>	<p>Conduct a corporate review in order to document current state and anticipate mobility requirements over the following 3-5 years. An assessment should be a collaborative effort working with all departments to understand how field work could be enhanced through mobile connectivity to corporate applications and other cloud tools. Consideration should also be given to centralizing procurement and management of mobility within IT and use of an MDM solution. ITGC approval of the strategy and required funding is required. Third-party consultants could be engaged to support this process if required.</p>	<p>IT Coordinator</p>	<p>L</p>		<p>N/A</p>	<p>\$20K</p>
<p><a href="#">3.2.7</a></p>	<p>Procure a Mobile Device Management (MDM) Solution and Centralize Function</p>	<p>Subject to confirmation of Mobility Strategy, an MDM solution should be procured to better manage standard use across mobile devices (corporate and BYOD), safeguard against data loss prevention and improve lifecycle / asset tracking of all mobile devices. With more than a 100+ devices currently deployed, it is nearly impossible to ensure that there is standardized (and sanctioned) use of corporate applications as well as controls with respect to risk management (protecting sensitive civic information, remote wiping etc.). Centralization with respect to MDM is likely best managed by IT with an applicable charge back model from departments.</p>	<p>IT Coordinator + Operations Specialist</p>	<p>M</p>		<p>\$35K</p>	<p>N/A</p>

3.3.8	Undertake LIS Assessment	Undertake an assessment with respect to use of LIS in order to determine if consolidation around one system could take place (e.g. ESRI GIS, Cloudpermit). Consideration should be given to ongoing maintenance requirements as well as features available to support current operations. Consideration should also be given to establishing a 'single source of truth' within the organization related to land/property information.	IT Coordinator + Chief Bylaw Enforcement Officer	M		N/A	\$15K
3.1.1	Expand IT Organizational Model: Phase 3	HR/SMT org approval of clarified roles and responsibilities (job descriptions / postings) with respect to the Business Solutions Specialist.	Director of Finance/Treasurer + IT Coordinator	M	✓	\$5K	\$70K
3.1.9	Review Corporate IT Budget and Funding Streams	This review should lead to an evaluation as to whether to centralize all IT spending or to maintain decentralization with some form of charge back model that supports IT's ability to continually support and modernize the Township's technology environment. Consideration should also be given to establish an annualized funding stream that will permit IT to contract third party resources to support unforeseen remediation initiatives or mid-year priorities which require additional capacity or skillsets beyond those of current IT staff.	Director of Finance/Treasurer + IT Coordinator	S	✓	\$25K	\$25K
3.3.9	Develop M365 Roadmap	The next step for the Township should be an assessment to identify additional M365 services that will support the ITMP and, by extension, support business objectives over the next 1-5 years. Consolidating on this platform will provide a number of benefits including cost savings (and avoidance), a consistent user experience, reduced complexity to manage the back-end (which currently exists with the on premises deployment) as well as more robust information security tools. A third party should be secured to help the Township manage this process.	IT Coordinator	L			\$15K

3.1.10	Create GIS Strategy	Collaborate across the organization to develop a GIS strategy which looks to improve use of GIS across the organization. Consideration should be given to use of shared services from County of Simcoe versus an overall ability to develop modern GIS tools and services (ex. asset layers, self service map builder, integrations with other solutions and cloud-based data, geoHUB, open data, story boards, dashboards, AI etc.). Third-party resources could be engaged to support this process if required. Ideally, this is a project that should be coordinated along with the County's involvement. Strong consideration should be given to shared investment to develop a 'County-wide' GIS Strategy.	IT Coordinator + GIS and Data Specialist	L		N/A	\$20K
3.1.2	Constitute Digital and Customer Service Advisory Committee + Establish Work Plan	Establish a term of reference for this ITGC Advisory Committee with a mandate to create, coordinate and execute on a work plan to continually improve the Township's website, intranet, Tiny Connect, social media and digital customer service offerings. Membership could be formed around former members of the 'Website Content Committee'.	IT Coordinator + GIS and Data Specialist + Director of Legislative Services/Clerk	S	✓	N/A	N/A
3.2.8	Architecture 'Big Picture' Planning + Standards Development	Develop a 'big picture' to help illustrate the current and desired state for the Township's technology environment. This mapping should be used to make decisions regarding system procurement, integrations and standards compliance but should also be used to support education of the Township with respect to the proposed evolution of the overall technology environment.	IT Coordinator + IT Operations Specialist	L		N/A	N/A

<a href="#">3.3.10</a>	Customer Service Inventory Planning + Digitization Maturity	Curate a list of customer services offerings noting which (and to what level) each is digitized. Notation should also be made as to which platform is being used to deliver the service (if already fully or partially digitized). The index of services can be used to track and plan annual improvements each year and should be managed through the Web and Digital Advisory Committee. Work plan forecasting should be used to determine budget requirements for the following year (if any) and can follow the business case development process.	IT Coordinator + GIS and Data Specialist	S	✓	N/A	N/A
<a href="#">3.1.2</a>	Reconstitute Broadband Advisory Committee	Reconstitute existing Broadband Advisory Group to include representation from, and formal relationship with, ITGC.	IT Coordinator + CAO	S	✓	N/A	N/A
<a href="#">3.2.9</a>	Shared Services Review: Technology Resources	Working from the Municipalities of North Simcoe Service Delivery Review recommendations, investigate opportunities to share services and resources amongst municipal peers and Simcoe County. The review should not only look at technology capacity but also the potential to share technology resources (people) across the County as well as partnering on related procurement initiatives.	IT Coordinator + CAO	M		N/A	N/A
<a href="#">3.1.7</a>	Policy Development: Phase 3	ITGC should consider and adopt a phased approach to policy development. Phase 2 should strictly focus on BC and DR.	IT Coordinator	S	✓	N/A	N/A
<a href="#">3.1.11</a>	Corporate Technology Training Development Plan + Learning Management System	Create a plan to deliver technology training to staff. A hybrid approach to training should be followed, where system specific training is delivered to new employees as well as regular refresher training at least once per year. Training could be provided internally by IT staff (capacity review required), through external partners / solution vendors or through self-directed learning and use of an LMS (consideration of an LMS should be coordinated through the Web and Digital Advisory Committee).	IT Coordinator + HR Specialist	M		N/A	\$25K



3.2.11	Create a Data Classification Standard	Establish a Data Classification Standard to better define the sensitivity of information regularly managed throughout (and beyond) the organization	IT Coordinator + GIS and Data Specialist + IT Operations Specialist	M		N/A	N/A
<a href="#">3.1.12</a>	Develop Fire/Enterprise Mobility and Security (EMS) Technology Strategy	Work with Fire to understand current operating requirements and utilization of FirePro2 and Synergy. Assess bandwidth availability and connectivity planning improvements for all stations. Review potential of further leveraging Citywide to manage and track specialized assets.	IT Coordinator + GIS and Data Specialist + Fire Chief	L		N/A	N/A
<a href="#">3.1.14</a>	Adopt a Digital Vision	Through ITGC, the Township should consider adopting their own vision that establishes a standard across the organization, making clear the overall goals for technology and digital transformation.	IT Coordinator + CAO	S		N/A	N/A

**Year Four: 2025**

<a href="#">3.1.13</a>	Initiate Data Management Activities	Undertake various data management activities to help better understand the current state, future requirements and to better safeguard an approach to managing data as an asset.	IT Coordinator + IT Operations Specialist	L		N/A	N/A
<a href="#">3.3.11</a>	Conduct Assessment for an Applicant Recruitment and Tracking Solution	Undertake a needs assessment with respect to procuring a digital recruitment and Tracking Solution.	IT Coordinator + HR Specialist	L		N/A	\$25K
<a href="#">3.3.12</a>	Internal Shared Services Review: Onboarding/ Offboarding	Review and improve current process to determine how to streamline the onboarding/offboarding process by leveraging ERP and other systems required to manage the process. Priorities for review include self-service for staff, the elimination of duplicated processes and integrations requirement to ensure that all aspects of onboarding and offboarding are automated through use of business solutions.	IT Coordinator + IT Operations Specialist + Director of Finance/Treasurer + HR Specialist	M		N/A	N/A
<a href="#">3.1.7</a>	Policy Development: Phase 4	ITGC should consider and adopt a phased approach to policy development. Phase 4 should look in detail at the policy environment, evaluate missing policies and procedures and plan to develop them over subsequent phases.	IT Coordinator	S	✓	N/A	N/A

Year Five: 2026

<a href="#">3.1.1</a>	Consider Further Expansion and Repositioning of the IT Organizational Model: Phase 4	Undertake a review of the current IT organizational model along with the corporate structure and needs analysis. Consideration should be given to a corporate realignment of resources to develop a Strategic Initiatives area which could include HR, Communications, IT and Project Management staff.	CAO	M		\$25K	\$250K
<a href="#">3.3.13</a>	Undertake ERP Assessment	With the help of a third party, conduct an assessment review of the current deployment of ERP in order to determine overall utility to both Finance and the organization. Assessment criterion should be used to understand where improvements are needed and to determine whether GP is still the correct product for the Township moving forward. Evaluation of migrating the application to the cloud should also be considered at this time. Budget requirements should be managed through ITGC and through forthcoming budget processes.	IT Coordinator + GIS and Data Specialist + IT Operations Specialist	L		N/A	N/A
<a href="#">3.3.14</a>	Undertake CRM Assessment	Undertake a needs analysis around the potential onboarding of a CRM system to further automate case management, a centralized customer service knowledge base, digital service platform (one stop shop for online services) and associated reporting. Budget requirements should be managed through ITGC and through forthcoming budget processes.	IT Coordinator + GIS and Data Specialist	L		N/A	N/A

## Appendix 1 – Glossary of Terms

Term	Explanation
Agile	An iterative approach to project management and solution development
AI	Artificial Intelligence – A systems capability to learn and react to data inputs based on algorithms and machine learning
AODA	Accessibility for Ontarians with Disabilities Act – A law that sets out a process for developing and enforcing accessibility standards.
AP	Accounts Payable – Invoice processing and payment
AR	Accounts Receivable – Invoice issuance and payment processing
ArcGIS	A family of client software, server software and online GIS services developed and maintained by ESRI, used to make maps, analyze data, and share and collaborate.
BA	Business Analyst – A person who analyzes and documents the market environment or business processes or systems
Back-Office	An office or department where work is carried out to support the business of an organization, rather than being customer-facing
BCP	Business Continuity Plan – A document that outlines how a business will continue operating during an unplanned disruption in service
BI	Business Intelligence – Refers to technologies, applications and practices for the collection, integration, analysis and reporting of business information, and is designed to support better business decision-making
Cloud	A term used for IT infrastructure and services located outside of the corporate network and accessed over the Internet
CMMS	Computerized Maintenance Management System – Work Management System

Term	Explanation
CMS	Content Management System – A content management system supports personalization, manifests the user experience, handles management of web content, and provides search and site navigation features.
CoP	Community of Practice – A group of people who share a common concern, a set of problems, or an interest in a topic and who come together to fulfill both individual and group goals
COTS	Commercial Off-the-Shelf – A product that is used “as-is”; designed to be easily installed and to interoperate with existing system components
CRM	Customer Relationship Management – A generic system for case management that can be used for handling customer enquiries. <i>Note that the C in CRM is used differently in many municipalities – Citizen, Client, Customer, and Constituent</i>
CTS	Cloud Telephony Services – The service works with an existing telephone service or replaces it outright and can be used with mobile phones, VoIP phones and landlines
Customer	Refers to users of the municipality’s technology and digital services, including residents, businesses, visitors, Mayor and Council, the workforce and our partners
Data	Information in an electronic form that can be stored and used by a compute, typically collected to be examined and considered and used to inform and help decision-making
Digital	Refers to a mindset, mode of operating, and delivery of services that takes advantage of modern technologies (web, app, social, mobile, data). These deliver improved experiences, business efficiencies and insights
Digitized	The automation of manual and paper-based processes, enabled by the digitization of information and workflows, moving from an analogue (often paper-based) process to a computerized process
DR	Disaster Recovery – A set of policies, procedures and practices that are designed to assist an organization recover from a significant IT failure

Term	Explanation
EA	Enterprise Architecture – A design/blueprint, processes, and associated standards for the technology environment
ECM	Enterprise Content Management – A system designed to provide enterprise-wide document and records management capabilities
ERP	Enterprise Resource Planning – A system that is designed to address business requirements across the whole organization
ESRI	International supplier of geographic information system software, web GIS and geodatabase management applications
FTE	Full Time Equivalent
FOI	Freedom of Information – Freedom of a person or people to publish and consume information. Access to information is the ability for an individual to seek, receive and impart information effectively
GIS	Geographical Information Systems – Systems designed to capture and report on all types of geographical data, including spatial data
GL	General Ledger
GP	Great Plains – A commonly used Finance and HR system
HCM	Human Capital Management – A corporate-wide system for managing the workforce and workforce management processes such as employee records, payroll, etc.
HR	Human Resources
HRIS	Human Resource Information System – Corporate wide system for managing the human resource management processes such as employee records, training certifications, etc.
IM	Information Management

Term	Explanation
IoT	Internet of Things – Broad term used to describe internet (or network) connected devices, sensors, and controls
IT	Information Technology
IT Service Catalogue	A comprehensive list of IT services that an organization offers to its employees and/or customers
ITGC	Information and Technology Governance Committee – Corporate governance committee for information and technology decision-making
ITIL	Information Technology Infrastructure Library – A set of detailed practices for delivering IT services
ITSM	Information Technology Service Management – The standards and processes used to define how IT delivers services
KB	Knowledge Base – A repository of knowledge articles that can have various staff and public audiences (multi-partition capabilities) based on criteria
KPI	Key Performance Indicator
LAN	Local Area Network – Internal private connectivity between municipal facilities and devices
LIS	Land Information System (e.g. Marmak)
LMS	Learning Management System – A digital learning environment that manages all aspects of a company's various training efforts
LPMS	Land and Property Management System – A land, planning, permitting, and licensing system (e.g. CityView)
M365 (formerly Office 365 or O365)	Microsoft Cloud-based office productivity suite which includes email and calendar, messaging, collaboration, and office suite

Term	Explanation
MDM	Master Data Management – A technology-enabled discipline in which business and IT work together to ensure the uniformity, accuracy, stewardship, consistency, and accountability of an organization’s official shared master data assets
MFIPPA	Municipal Freedom of Information and Protection of Privacy Act
MHCLG	UK Ministry for Housing, Communities and Local Government
MOSA	Municipal Online Services Assessment – Perry Group’s generalized assessment to articulate a target state for the digital experiences that municipalities could, and arguably should, deliver to citizens based on industry best practices
MSP	Managed Service Provider – IT outsource provider
MTM	Municipal Technology Model – Perry Group’s generalized architecture used for assessing municipal technology environments
MVP	Minimum Viable Product – The simplest, smallest solution that can be delivered to start to address the business requirement
PM	Project Manager – Someone who has responsibility for planning, procuring and executing a project, in any undertaking that has a defined scope, defined start and defined finish
PowerBI	Connecting and visualizing data using a unified platform.
PSAB	Public Sector Accounting Board
PSD	Public Sector Digest
PSTN	Public switched telephone network (PSTN)



Term	Explanation
RFP	Request for Proposal – A business document that announces a project, describes it and solicits bids from qualified contractors to complete it
RMS	Recruitment Management System
ROI	Return on Investment – A performance measure used to evaluate the efficiency or profitability of an investment
RPO	Recovery Point Objective – Refers to the amount of data at risk (that could be lost) after a failure or disaster occurs; the maximum amount of lost data – measured in time – from a failure occurrence to the last valid back-up
RTO	Recovery Time Objective – The maximum tolerable length of time that a computer, system, network, or application can be down after a failure or disaster occurs (i.e., how long it takes to restore to normal operations)
SaaS	Software as a Service – A way of delivering applications over the Internet – as a service, instead of installing and maintaining software
Scorecard	A statistical method of measuring achievement or progress toward a particular goal
SIP	Session Initiation Protocol trunking is a service offered by communications service providers that uses the protocol to provision voice over IP (VoIP) connectivity between an on-premise phone system and the public switched telephone network (PSTN)
SLA	Service Level Agreement – Documented target levels of service (e.g., response and resolution timelines for incidents)
SMT	Senior Management Team
SOP	Standard Operating Procedure – Guidelines as to how to complete a procedure
SSO	Single Sign On – A session and user authentication service that permits a user to use one set of login credentials

Term	Explanation
Technology	A short form for Information Technology (IT), it is the use of computers and computing systems to store, retrieve, transmit, process and manipulate data or information
TCO	Total Cost of Ownership
TOMRMS	The Ontario Municipal Records Management System
UI	User Interface
UX	User Experience – Encompasses all aspects of the end user's interaction with the company, its services, and its products
VOR	Vendor of Record – A procurement arrangement, typically established through an RFP, which authorizes one or more qualified vendors to provide goods/services to one or more organizations for a defined period on terms and conditions, including pricing, as set out in the VOR agreement
WAM	Work and Asset Management System
WAN	Wide Area Network – A collection of local area networks (LANs) or other networks that communicate with one another. A WAN is essentially a network of networks, with the Internet the world's largest WAN
WFH	Work from Home
WMS	Work Management System – The system used for managing an organization's work orders

## Appendix 2 – Digital Declaration

### *Introduction*

This Declaration affirms the Township of Tiny’s collective ambition for services in the internet age and our commitments to realizing it. It commits us working on a new scale to:

- Deliver to citizens better value for money.
- Design digital services that best meet the needs of citizens.
- Protect citizens’ privacy and security.

### *The Opportunity*

Never has it been possible to collaborate so effectively, to deliver services across departmental and jurisdictional boundaries, to use our data so insightfully, to realize efficiencies and to reshape services for the benefit of all using technology and data.

Some work has already been done to transform our services using digital tools and technology but there is a huge opportunity to do more.

### *Our Ambition*

We want to create the conditions for the next generation of Township services, where technology is an enabler rather than a barrier to service improvements and services are a delight for citizens and officials to use.

We know that one size doesn’t fit all, but by developing common building blocks, the Township will be able to build services more quickly, flexibly and effectively. Our ambition requires both a culture shift and a technology shift and we’ve agreed to the following four principles to help us do it:

- **Be customer/user-centric:** We will re-design our services around the needs of the people using them. This means continuing to prioritize citizen and user needs above professional, organizational, and technological silos.
- **Lead on digital:** We will demonstrate digital leadership, creating the conditions for genuine organizational transformation to happen and challenging all those we work with to embrace this Digital Declaration.

- **Be data obsessed:** We will design safe, secure, and useful ways of sharing information to build trust among our partners and citizens, to better support vulnerable members of our communities and to target our resources more effectively.
- **Work in the open:** We will embed an open culture that values, incentivizes and expects digital ways of working from every member of our workforce. This means working in the open wherever we can, sharing our plans and experience, working collaboratively with other organizations, and re-using good practice.

## *Our Beliefs*

As we build new products and services, we have opinions and preferences about what and how we should build. To fully embrace digital, we must be devoted to our customers, our staff and to the expectations they have for our organization.

We know and understand the latent potential behind end-to-end digital transformations and, as a result, hold the following opinions:

- We prefer digital over paper.
- We prefer data over documents and drawings.
- We prefer auditable workflow over email and messages.
- We prefer real-time over post-facto tracking.
- We prefer cheaper channels over more expensive ones.
- We prefer it if our customers don't have to come in to get stuff done.
- We prefer to re-use over buying new; when we need to buy new, we will be deliberate.
- We prefer self-service over gatekeepers.
- We prefer incremental projects over “big bang”.
- We prefer agile over waterfall.
- We prefer open (by default) over closed and proprietary.
- We prefer product evolution over projects.
- We prefer structured APIs over less modern integration options.

## **Our Commitments**

Digital is the way forward and it will not be easy, but the returns and value are already being demonstrated by organizations who have focused on digital as an engine of growth and improvement.

Digital and service are no longer mutually exclusive – they must be considered one and the same. We strive to consider digital **anytime** we design or improve a service.

This is a call-to-arms – for all staff to do their part in making digital a priority in all that they do. As a signatory to this Declaration, you will commit to the following:

### **Our Leaders, Staff and Council Members Will:**

- Make sure that digital perspectives and expertise are central to decision-making and that all technology decisions are suitably evaluated by the appropriate people. This will ensure that we are using our collective power to stimulate a speedy move toward change.
- Be visible, accessible leaders throughout the organization, championing our Digital Vision and always be willing to share data across program areas (unless explicitly prevented from doing so by legislation).
- Support our workforce to share ideas and engage in the identification of digital opportunities by providing the space and time for this to happen.
- Publish and commit to our plans, share lessons learned, celebrate successes, and talk publicly about things that could have gone better. These are opportunities to learn and grow and are deserving of our constructive attention.
- Try new things and look for opportunities to try new things in collaboration with other organizations, the community, and external partners.
- Never be satisfied with the status quo – there is always opportunity to improve the way the Township delivers services.

## Our Workforce Will:

- Be open to process and technology change.
- Proactively share our service plans and goals with IT to ensure they understand the problems we are trying to solve, giving them an opportunity to provide advice on how technology might help with people and processes.
- Keep our customers and users top-of-mind, doing the hard work behind the scenes to ensure that customer and staff experiences are simple and easy.
- Identify and share opportunities for improvement with peers and managers – converge on ideas that have maximum value for the organization.
- Not attempt to boil the ocean but instead, start small, experiment in low-risk situations, iterate based on data and testing and continue to scale out accordingly.
- Learn from the success of other organizations (public and private) and challenge the status quo to continually explore opportunities to incrementally grow and improve.
- Have the “difficult” conversations that may arise when challenging others, using this Digital Declaration to reaffirm the organization’s commitment.

## Our Technology Team Will:

- Share knowledge about digital projects where there is an opportunity for potential re-use or collaboration with others.
- Proactively engage and collaborate with service areas, ensure that every new technology or digital solution procured fits into our architecture, is secure and puts us in control of our data.
- Work together to establish the frameworks we need to safely analyze and share personal data.
- This will allow us to better serve our shared customers and reduce the need to ask citizens for the same information multiple times.

- Always consider the user first by highlighting the importance of self-serve functionality, user transparency and continuous feedback.
- Take inspiration and ideas from a wide range of sources and participate individually in COPs and interest outside the organization.

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Signature

## Appendix 3 – Job Descriptions

The following are job descriptions which have been tailored to the proposed expansion of the IT model for the Township. These should be modified according to need and approved by ITGC prior recruitment.

### IT Coordinator

#### Description

The IT Coordinator is responsible for providing vision and leadership for the development and implementation of information technology initiatives. This is a new position for the Township responsible for the supervision of IT staff and will work alongside third-party technology vendors and service providers as a single point of contact to support the technology needs of the Township. The IT Coordinator will work closely with business leaders to understand their requirements and help 'broker' solutions from the IT team and outside contractors. Reporting to the Director of Finance/Treasurer, this position is responsible for the overall provision of IT support to the organization along with the strategic management of the technology environment - both in terms of network and computing infrastructure, as well as in relation to business solutions and end-point tools. The IT Coordinator will facilitate and support technology governance at the Township (ITGC) as well as execute on the approved five-year Information Technology Master Plan (ITMP). This position will play an integral role in developing the capabilities of the IT team, centralizing the overall function as well as managing relationships in order to continuously improve the way staff utilize technology to make their jobs easier and to achieve better outcomes for the organization and community.

#### Responsibilities

- Supervise, provide direction, and schedule work to all IT staff in the day-to-day management and operations of the IT Department
- Accountable for overseeing the deployment and maintenance of business solutions
- Responsible for managing relationships with third-party solution providers, vendors and other contracted resources to support and optimize the Township's technology environment (e.g. infrastructure architecture, network and telephony, integrations and data, business solutions and tools etc.)
- Analyze the costs, value and risks of technology investments and make appropriate recommendations
- Develop IT policies, procedures and best practices to minimize risk and best leverage technology investments



- Work through the ITGC governance framework to set objectives and strategies for the IT department and align technology work objectives to meet corporate strategies and business goals
- Attend and provide leadership for ITGC, ensuring that the corporation is set up to make corporate decisions around technology properly and with the best information possible
- Work with departments and business units to understand their business operations and make technology recommendations to help optimize strategic benefits and business value
- Manage delivery and execution from all external technology vendors and service providers to meet the prioritized needs of the Township
- Responsible for managing the full lifecycle of technology hardware and software for the Township
- Work through ITGC, develop the necessary policies and procedures to better facilitate decision making around technology and ensure that the technology environment is built to be sustainable over time
- Act as a linkage and 'broker' for end users, helping them to identify possible technology solutions and options, including scaling out/better utilizing existing tools and employing security best practices
- Responsible for monitoring, auditing and troubleshooting network performance, data utilization and cybersecurity (alongside internal and external resources) and reporting this information broadly to help apply strategic planning when developing technology work plans and projects
- Directly work through ITGC and alongside business leaders to ensure that technology solutions continue to keep pace with changing needs and business processes
- Prepare, present, monitor and evaluate annual capital and operating budgets for all corporate technology and telephony via ITGC, SMT and Council
- Establish service level goals and monitor against approved financial targets, report through ITGC
- Manage capital projects/programs including work assigned to others (contracts, etc.)
- Keep current with trends, issues and opportunities in the municipal IT industry, working with municipal partners, the County of Simcoe and others to create shared value partnerships
- Ensure compliance with all regulations, standards and municipal policies related to information technology and work to mobilize knowledge in these areas across the Township
- Be accountability for health and safety responsibilities of IT staff
- With the assistance of HR develop staff including; recruitment, training, certifications, performance management, career development etc.
- Other duties as assigned to support the organization

## **Suggested Qualifications and Experience**

- Post-secondary degree in Computer Science, Computer Engineering, Information Systems, Business Management or related discipline with an IT focus
- Five years or more experience within a municipal IT environment, preferably with a managerial role
- An action-oriented team builder, coach and mentor who is supportive of colleagues and embraces a collaborative approach to challenges
- Sound planning, project/time management, partnership development, analytical, budget and financial resource management
- Strong interpersonal and communication skills (written, oral, report writing, presentations, electronic, web based, social etc.) to serve as the Township's technology ambassador
- Analytical problem-solving and decision making, organizational and strategic planning skills;
- Demonstrated ability to plan strategically, direct and translate complex technology concepts to align the organization around central goals and objectives

## **IT Operations Support Specialist**

### **Description**

Reporting to the IT Coordinator, and working alongside third-party service providers, the IT Operations Support Specialist is responsible for supporting the technology operational environment inclusive of network and server infrastructure (cloud and on premises), bandwidth and connectivity, technology asset management (devices and equipment), cybersecurity, telephony/telecommunications as well as ITSM. The IT Operations Support Specialist will greatly assist the Township in ensuring that there is an optimal mix of skills and capabilities available in-house as well as through third-party resources – reconciling need with value for money. This position will develop structure and maturity of the back office by implementing the various recommendations of the approved five-year Information Technology Master Plan (ITMP). The IT Operations Support Specialist will also work with the GIS and Data Specialist in order to develop standards, policies and procedures that help to guide and align technology investment decisions towards the ability of the Township to sustain and scale them out over time. Lastly, this role will develop and support a Co-operative work model with nearby academic institutions in order regularly onboard and train students to serve as System Technicians for the Township.

## Responsibilities

- Act as the main contact point, receiving requests for support through the helpdesk
- Manages response to a broad range of service requests for support by reconciling which fulfillment requests should be dealt with internally and which should be covered off by an external service provider
- Controls IT assets in one or more significant areas, ensuring that administration of the acquisition, storage, distribution, movement and disposal of assets is carried out (ie. manage lifecycle)
- Work with external support to produce outline system designs and specifications, and overall architectures, topologies, configuration databases and documentation of networking technology for both datacenter and cloud infrastructure
- Assesses associated risks and specifies recovery routines and contingency procedures
- Uses network management software and tools to investigate and diagnose network problems, collect performance statistics and create reports, working with users, other staff and suppliers as appropriate
- Maintains the network support process and checks that all requests for support are dealt with according to agreed procedures
- Undertakes routine installations and de-installations of items of hardware and/or software, conducting tests of hardware/software using supplied test procedures and diagnostic tools
- Documents details of all hardware/software items that have been installed and removed so that configuration management records can be updated
- Develops installation procedures and standards, and schedules installation work
- Implements and contributes to the development of a continuity management plan by coordinating the assessment of risks to the availability, integrity and confidentiality of systems that support critical business processes
- Identifies operational problems and contributes to their resolution, checking that they are managed in accordance with agreed standards and procedures
- Provides technical expertise to enable the correct application of operational procedures
- Uses infrastructure management tools to determine load and performance statistics
- Contributes to the planning and implementation of maintenance and installation work, including building and configuration of infrastructure components in virtualized environments
- Provides guidance and expertise in cloud migration strategies with a focus on providing a roadmap to utilize more cloud options as additional bandwidth capacity is made available to the Township

## Suggested Qualifications and Experience

- Post-secondary degree in Computer Science, Computer Engineering, Information Systems, Business Management or related discipline with an IT focus
- Three to five years or more experience within a municipal IT environment, preferably within an IT operational area that managed the various responsibilities noted above
- Proven analytical and decision-making skills to examine problems and develop solutions
- Excellent change management and relationship management skills
- The following would be considered an asset:
  - Experience with M365, MS Exchange, Active Directory, VMware, VPN, VDI, A/P's, MDM, Telephony, and Enterprise Backups
  - Microsoft Certified Systems Engineer (MCSE) or MCSA
  - Cisco CCNA or CCNP certification
  - MCP and MTA certification
  - A+ hardware certification
  - ITIL Foundations certification
  - A valid Ontario Class G driver's license

## IT Business Solutions Specialist

### Description

Under the direction of the IT Business Solutions Specialist, works in a team environment with other IT staff to maintain and support business solutions. Addresses problems with business solutions and provides resolutions, using their own skills and experience and working with business solution vendors and other third parties. Responsible for the installation and decommissioning of business solutions, and for the design of systems integration components and interfaces. The Business Solutions Specialist will work with a variety of different departments to identify opportunities, develop plans of action, and implement processes that will best leverage technology investments in order to deliver the desired service outcomes. This position will manage multiple vendor relationships by overseeing quality control measures, negotiating contracts and pricing terms and ensuring that all parties are meeting the expected obligations.

## **Responsibilities**

- Drafts and maintains procedures and documentation for applications support
- Manages application enhancements to improve business performance
- Provides advice, recommendations and support to the business (and through the Township's technology governance model – ITGC) with respect to software procurement in support business needs
- Work with IT Operations Support Specialist and other parties to identify application security, licensing, upgrades, backups, and disaster recovery needs
- Identifies and resolves issues with applications, ensuring that all requests for support are dealt with according to set standards and procedures with optimal feedback to the impacted business area
- Undertakes routine installations and de-installations of software
- Conducts tests of hardware and/or software using supplied test procedures and diagnostic tools
- Works with business to best leverage solutions to align with business process and to ensure that applications are utilized fully
- Work with the Data and GIS Specialist (and through pilots) to ensure that sound data management practices are in place to support BI/analytics, enhanced reporting, dashboard development etc.
- Build a knowledge base around key corporate systems lending support to the development of a corporate-wide technology training plan
- Conduct post-project evaluation, ensuring that learnings are captured and can be referenced in the future

## **Suggested Qualifications and Experience**

- Post-secondary degree in Computer Science, Computer Engineering, Information Systems, Business Management or related discipline with an IT focus
- Three to five years or more experience within a municipal IT environment, preferably within an IT solutions (or computer applications) environment
- Experience in working with municipal IT systems such as ERP, land and information management, asset management, ECM and collaboration tools, productivity (M365), online and digital service portals etc.
- An understanding of data management principles and integration environments
- Experience working as a relationship or experience manager to support the end-to-end process to mold ideation into feasible technology solution projects

## Appendix 4 – Suggested ITGC Terms of Reference

### ITGC – Information Technology Governance Committee

#### Mandate

The ITGC is responsible for defining strategic directions for corporate technology based on corporate and Council priorities. A member of SMT that is part of the ITGC will chair the Committee.

The Committee will guide IT funding and evaluation and make decisions regarding large scale investments within the context of the enterprise IT applications and infrastructure services portfolio.

The Committee is designed to promote a collaborative and transparent approach to delivering on the ITMP, recognizing the shared responsibility for successfully leveraging technology.

The Committee will be responsible for setting expectations and monitoring IT service delivery regarding its role in supporting the City's Corporate Strategic Plan and Departmental Business Plans.

#### Duties and Responsibilities

- Owns and manages Corporate technology strategy.
- Agrees and endorses the criteria for evaluation of technology projects.
- Develops annual IT capital priorities and budget.
- Provides oversight for the IT Portfolio (projects, assets, resources).
- Approves IT annual Work Plan and approves significant changes to the Work Plan throughout the year.
- Approves new IT investments.
- Conducts IT policy review, approval and endorsement.
- Conducts technical standards review and ratification.

- Approves of multi-year strategic work programs from advisory committees.
- Monitors strategic IT KPIs.

## Meetings

1.5-hour meetings up to eight times per year.

## Suggested Agenda for Meetings

1. Welcome / Intros / Regrets.
2. Review / Approve Previous Meeting Minutes.
3. Review / Update Action List.
4. Portfolio Review (by exception).
5. New Initiatives / Priority Changes.
6. Management Action Items.
7. Policy Updates.
8. Training, Education and Learning.
9. Review Performance Metrics & KPIs.
10. Other Business.

## Membership

SLT must approve membership and changes to the membership of the ITGC, and may determine that membership changes are required, from time to time, in order to ensure adequate representation.

Proposed membership to commence with ITGC is as follows:

1. CAO, Chair.
2. IT Coordinator.
3. Director/Finance Treasurer.
4. SMT Rep.

## Logistical Notes

- Meetings should be pre-scheduled into a regular time slot and booked in members calendars for the year.
- A quorum should be established when at least three members can be present.
- Agendas and supporting meeting materials should be circulated three business days ahead of the meeting.
- Meeting minutes will be recorded and distributed no less than three business days after the meeting.
- Meeting agendas and minutes will be posted and accessible to ALL City staff (posted on the Intranet).
- Previous meeting minutes will be reviewed at the subsequent meeting.
- An action list will be maintained for review at each subsequent meeting.
- ITGC Chair + IT Director will provide an update to SMT/ELT up to four times per year.



# Advisory Groups

## Mandate

The ITGC may establish Advisory Groups. They may be long-standing groups (to oversee the evolution of core business systems) or may be created with a limited life span to address particular initiatives or a program of work (e.g., implementing a City Teleworking Strategy) and may be dissolved once the work program is concluded.

These collaborative groups are established to operate strategically, to develop corporately-agreed approaches to strategic areas to ensure that all corporate effort is aligned, that solutions meet wider corporate objectives, and that benefit can be widely shared.

The initial Advisory Groups that are required to support the ITMP are:

- ERP Advisory Group\*.
- Work and Asset Management Advisory Group\*.
- Data/GIS/IM Advisory Group.
- HRIS Advisory Group.
- Web and Digital Advisory Group.

*\*Good candidates for immediate start-up.*

Not all of these committees must be created immediately. The relevant committees can be constituted as work planning for major activities currently underway.

These groups are not intended to be application user groups; separate groups may be established for this function (if so desired). They are also not to be directly involved in the day-to-day operation of services. The goal is to manage and evolve their respective products and programs, to unite those across the organization that have a vested interest but are driven to meet the strategic commitments of the organization. Centralized decision-making around technology is the goal.

## General Duties for Advisory Groups

- Develop multi-year strategy, roadmaps, and Work Plans to deliver on business requirements related to business solutions or technology-related programs of work.
- Collaboratively prioritize initiatives across departments – identifying collaborative opportunities.
- Oversee and participate in the delivery of projects or assume leadership for programs of work.
- Monitor progress against projects and plans.
- Evangelize the program or application, to ensure that opportunities are aligned with wider programs or application objectives.

## Meetings

As required, meeting frequency will be determined by the activity associated with the group, but meetings should not be fewer than 6 per year for each.

## Suggested Meeting Agenda

1. Review / Update Action List.
2. Project Portfolio Review (by exception).
3. New Initiatives / Priority Changes.
4. Management Action Items.
5. Training, Education and Learning.
6. Review Performance Metrics & KPIs.
7. Other Business.

## Membership

Membership or changes of membership of Advisory Groups are to be approved by the ITGC.

Each Advisory Committee will be chaired by the business leader or champion driving use of the respective technology or program area. Suggested leadership is as follows:

- ERP Advisory Group chaired by the Director of Finance/Treasurer.
- Work and Asset Management Advisory Group chaired by the Director of Public Works.
- Data/GIS/IM Advisory Group joint chaired by the Director of Legislative Services/Clerk and the GIS and Data Specialist.
- HRIS Advisory Group joint chaired by the IT Coordinator and Human Resource Specialist.
- Web and Digital Advisory Group chaired by the IT Coordinator.

Other membership representatives should be selected by proposed chairs along with ITGC.

Groups should not exceed six people and should work to be representative of those who have a vested interest in the respective business system or program area.

## Communities of Practice (COPs) (and User Groups)

COPs and user groups may be established to facilitate two-way communication between those that manage and support the systems and those that use the systems day-to-day.

They may also be struck to facilitate collaboration and coordination with external stakeholder groups like other municipal partners, the County and private/academic sector entities (e.g., Broadband Committee, GP User Group, ESRI Municipal User Group, etc.).

### Duties and Responsibilities

COPs and user groups will be used to:

- Communicate information about systems use (tips, tricks, new capabilities, etc.).
- Share updates on current and planned projects and initiatives.
- Share information about new tools and software capabilities.
- Identify and discuss shared issues and problems with technology, data and digital.
- Seek input on new system requirements and features by learning how others use technology.
- Communicate and collaborate in relation to technology standards, policies, and good practices.
- Align objectives and review opportunities for shared services, collaborative procurement, and alignment of strategic priorities between organizations.

### Meetings

As required.

### Membership

As required.

## Appendix 5 – Telephone System Replacement Project

### Document Objectives

This document is intended to provide a high-level overview of telecom objectives for the Township to procure a new phone system. Additional staff surveying is required to pinpoint specific feature needs to individuals and departments.

The capabilities in the descriptions below have been tailored for Tiny to take advantage of the necessary features and functions that will improve the efficiency of communications and reduce year-over-year operating costs. A synopsis of the current state is available in the [action description above](#).

### Proposed System Features of Replacement Phone System

The new system should be a hardware server-based IP/system with analogue/digital interface with concepts of design as outlined below.

### Provisions for Analogue Trunking Interface for 12 Lines Plus the SIP Trunks (12)

The Township is currently under contract for the existing Bell lines, utilizing existing lines until contract termination will eliminate cancellation fees but, more importantly at this time, it is unlikely that present IP bandwidth will provide a quality-of-service level sufficient to switch all of Tiny's voice traffic to Session Initiation Protocol (SIP) trunks.

There is probably sufficient bandwidth to accommodate some additional SIP trunks as needed instead of adding more non-contracted analogue trunking at high rates.

### Phone Types and Cabling

Digital phone sets should be provided for the existing 63 analogue sets. Using digital sets will eliminate the need to re-cable phone locations. For future renovations station additions, IP sets or mobile-only connections can be used.

## System Traffic Logging

System stats will be very important moving forward to determine where resources need to be allocated.

Without statistics, you are only able to add to the whole enterprise to alleviate bottlenecks or service level complaints. *With* statistics you can more readily pinpoint the exact issue – perhaps resources won't be the answer but instead, changes to how processes can be improved.

## Server Bridging Capability

Server bridging Capability is distributed telephony to allow sub-systems in potential offsite locations like Public Works. The servers would be interconnected by IP to facilitate usage of the voice messaging and trunking. There are several variations for consideration.

The sub-system can also have its own trunking or utilize trunking from the main office. Some civic applications use this as an emergency back-up location in the event of a main office situation. Trunks can automatically roll over to the sub-system location. In addition, one of the benefits of this is that all internal calls are handled locally to reduce stress on bandwidth between buildings.

The proper configuration or determination of this as a necessary component needs further survey of traffic and usage. The alternative and least costly option to this is simply to add IP sets to the off-premise locations.

## IP-Ready Station Licenses

A minimum of 8 IP station licenses should be added in addition to any number of off-premise sets. This is to allow for work from home (WFH) scenarios, expansion of system and perhaps to provide interconnection to fire halls for business communications and voice messaging.

## Provisions for Analogue Devices

There should be provision for a minimum of four analogue-only devices such as fax machines, mail machines, debit devices or modems if used.

Interfacing your fax machines enables you to use those lines as part of your group. The current trend with faxes is lower and lower volume. Having dedicated telecom lines for a dwindling resource can be better utilized for your voice needs without sacrificing fax services.

## Ability for Door Stations

Most public facilities now have restricted areas for the public and do allow access – these include restricted areas, shipping receiving, even reception from main entrance (lockdown scenario).

Having an audio door station provides quick access to departments and the ability to unlock a door (requires door strike), if needed.

## Voicemail – Eight Ports with Unified Messaging

One of the main contributors to your recent busy signal issue is how your voice processor is working. Each retrieval ties up a port in the voicemail system and calling from outside the office ties up a phone line.

Unified Messaging allows you to have voice messages delivered by email eliminating the need to call in. This also consumes less time to retrieve messages. You no longer have to call in to play back messages. Instead, they are permanently stored in your email, another reduced load on the phone line and voice processor.

A back-up supporting 120 minutes should be ensured for your phones and voicemail system, as well as some protection for brownouts and surges that can cause corruption issues, especially on the voice processor.

## Transition From Key to PBX Operation

Tiny's current set up is based online appearances and transfer or paging to pick up line XX. As lines increase appearances, this becomes more awkward, requiring phones with more buttons.

The trend for some time now has been to move to PBX-style operation. This method provides 2-line appearances on your phone with access to all lines (according to your Class of Service). Callers transfer to extensions, as normal. If hold and page is needed, there is a "Park" button that is used to park the call that can then be picked up at any extension.

This method is also extremely line efficient and can help reduce the number of lines required in the system. For example, the system is programmed to select lines in a specific order as available, thereby leaving the first three or four lines for incoming calls open but not restricting them for use.

As well, this is true for fax lines. You decide if the fax line is used as an outgoing line before your last incoming line is used.

## Mobile Workstation

This is an important feature to have in the system as Tiny has a high number of mobile staff.

Some staff may be mostly mobile and the need for a desk set is not required. Some staff are highly mobile but at a workstation the majority of the time.

The system should provide mobile workstation licensing (quantity TBD) for these individuals. Mobile workstations should have the same abilities as a desk set in terms of utilizing system trunking/lines, hold, transfer and conference.

## Some Other Features Worth Noting

- Call forwarding all types – follow me, no answer, busy.
- Conferencing up to four parties.
- Do Not Disturb (DND) with Class of Service override.
- Common and private speed dial table.
- Set name display.
- Set-to-set messaging (optional on most systems and allows the user to display their status to internal callers or to just request a callback without going to voicemail).
- User programming of keys to allow users to customize feature selection for their best usage without involving IT.



- Call queuing on incoming calls with announcement (this is a great feature for select users, usually those dealing with the public to improve connectivity and reduce phone tag).
- Universal Call Distribution where calls ring into departments as a group and you can select an order of who rings first and sequence on busy or no answer. You can also have users log in to the group when available and out when occupied. This is a great feature for back-up positions, especially if not in the same area as the prime position. It is used as well to distribute call types to individuals who can respond. For example, a service issue can be sent to a prime service taker > that person is busy > the system will look for the next best location > no answer or busy > it continues as programmed and can loop back to a call sequencing message or continue hunting.

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