



Information Technology Systems Review and IT Strategy

Final Report

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Table of Contents

1.0	Executive Summary	5
1.1.	Background.....	5
1.2.	The Importance of Technology to Municipalities	5
1.3.	Current State Summary	7
1.4.	High-Level Recommendations	9
1.5.	Supporting the Implementation of the IT Strategy Recommendations	12
1.6.	Key Outcomes	13
1.7.	Benefits	14
2.0	Introduction	19
2.1.	Key Outcomes	19
2.2.	Importance of Technology to Municipalities	19
2.3.	Responding to Changed Customer Expectations	19
2.4.	Service Delivery in Multiple Ways	20
2.5.	Pressure on Core Services	21
2.6.	Return on Technology Investments	23
3.0	Project Approach	24
4.0	Current State Assessment.....	27
4.1.	Key Positives – What’s Working Well?	27
4.2.	Municipal Technology Model (MTM)	29
4.3.	Municipal Online Services Assessment (MOSA)	38
4.4.	Staff Survey Results	40
4.5.	IT Organizational Structure, Function and Skills	41
4.6.	Technology Governance	42

4.7.	IT Service Management.....	43
4.8.	IT Environment Risk and Vulnerability Assessment.....	43
4.9.	Financial Analysis	45
4.10.	Current State Summary	47
5.0	Recommendations.....	51
5.1.	IT Leadership Governance, and Training.....	52
5.2.	Infrastructure, Operations and Support.....	54
5.3.	Service Transformation and Business Solutions.....	62
5.4.	Mobilizing the Recommendations	81
6.0	Work Plan	85
6.1.	Timelines.....	91
7.0	Appendices	96
7.1.	Appendix 1 – Tables and Figures	96
7.2.	Appendix 2 – Role of the IT Steering Committee (ITSC)	97
7.3.	Appendix 3 – Service Patterns.....	98

Executive Summary

1.0 Executive Summary

1.1. Background

The Township of Brock (the “Township”) hired Perry Group Consulting (“Perry Group”) to perform an Information Technology Systems Review and IT Strategy. Brock required assistance to conduct a review of people, process and technology and develop a Corporate IT Strategic Plan that will allow the Township to:

- Digitize manual processes, where possible, to improve customer service and streamline accessibility.
- Optimize operational efficiencies by minimizing data entry, process duplication and hard copy documentation.
- Identify and address hardware, software and data sharing gaps by implementing realistic and best practice solutions.
- Identify and implement security measures to protect its data, technology infrastructure and business continuity.
- Maintain long-term cost sustainability.

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 and with the Townships Corporate Strategic Priorities.

The Township requested that a practical IT Strategy be developed that matches its size and financial capabilities, and the consultants have carefully considered this as recommendations were developed.

1.2. The Importance of Technology to Municipalities

Why is technology, and thus this IT Strategy, important to Brock?

Technology is central to the Township’s ability to deliver services as diverse as collecting taxes, parking and bylaw enforcement, dispatching Fire crews, handling customer inquiries, and managing recreation program registrations.

All of these services today rely on technology to operate effectively and efficiently and make no mistake, would be significantly more costly to deliver without technology.

Imagine, for a moment, running the tax billing process without systems and online payment options, or managing recreation program registration without the ability for customers to register online.

In each case, without technology, the customer experience would be significantly poorer with long line ups at customer service counters and limited service options with customers needing to come to a municipal facility during working hours to make a payment or register. What’s more, each of these services would require more staff to process bills and bookings and to serve customers at the counter.

Good technology supports and enables great customer service, but it also supports the cost effective delivery of municipal services. Technology also plays a major role in efficiently connecting separate parts of the organization, customers, Councilors, staff and partners – whether across departments, or from customer service representatives to field workers.



Figure 1: Connecting People Through Common Technology Systems

During the pandemic, the use of and demand for online services has surged. This is an opportunity for Brock. This is the right time to introduce more digital and modern service delivery to its staff and residents. By putting the correct foundations in place, Brock will be in a better position to save valuable time and money as well as improve the overall service delivery model.

1.3. Current State Summary

Brock wanted to answer the following questions:

Q1. Is the Township making the right technology investments?

- The level of technology investment in Brock is lower than typically recommended.
- The Township has invested in an updated data centre which may not be the best approach with Cloud technologies becoming ubiquitous.
- The Township has implemented a few industry-recognized business systems such as CityWide and Great Plains

Q2. Is an effective IT Governance model in place?

- There is limited IT Governance in place.
- There is a draft IT Policy in progress.

Q3. Are the Township's software solutions cost effective?

- The cost of the software solutions in use is on par with the value the solutions have produced.
- There are opportunities to expand the use of some of the systems to achieve increased value.
- There are opportunities to reduce the number of overlapping and duplicate systems through consolidation.
- There are areas with gaps where no software solutions have been implemented.

Q4. What are the Township's future business needs?

- The Township should integrate some of its core business systems.
- More end-to-end digitized business processes should be put in place.
- More online services for the public are required.
- A more holistic and corporate view of business solutions and data sharing is needed across departments.
- Staff and management should have access to data analytics for informed and effective decision-making.
- A reduction in paper taking up office space and staff working from home to save office space.

Q5. Do staff have the fundamental IT knowledge to move digital initiatives forward?

- There are no internal IT staff, which is a key gap identified during the assessment.
- The current IT support function is managed by the Deputy Fire Chief with great effort. It is not sustainable for this role to support IT on a part-time basis.

Q6. Which business processes will yield the greatest return on investment as a result of re-engineering/optimization?

- The Permitting, Bylaw and Licensing processes could benefit from a property-centric process automation system.
- The asset and work management processes are not automated. A business solution that digitizes these end-to-end processes could benefit the Township.

Q7. Does the Township have a solid and secure IT environment?

- Some basic security requirements are in place, and regular vulnerability scans are run, but many things could be done to improve overall security.
- The infrastructure is relatively stable and performs adequately in most areas, however, some remote areas have limited connectivity.
- Storage (disk) is an issue as there is a small amount of space left. This could cause a major issue if not addressed.

Q8. Is IT effectively delivering IT services to its clients?

- IT is delivering services to the point that the business can operate, however, there are no metrics or other methods in place to establish which services are effective and which require improvement.
- IT Service Management functions are lacking, including knowledge management and incident tracking.

1.4. High-Level Recommendations

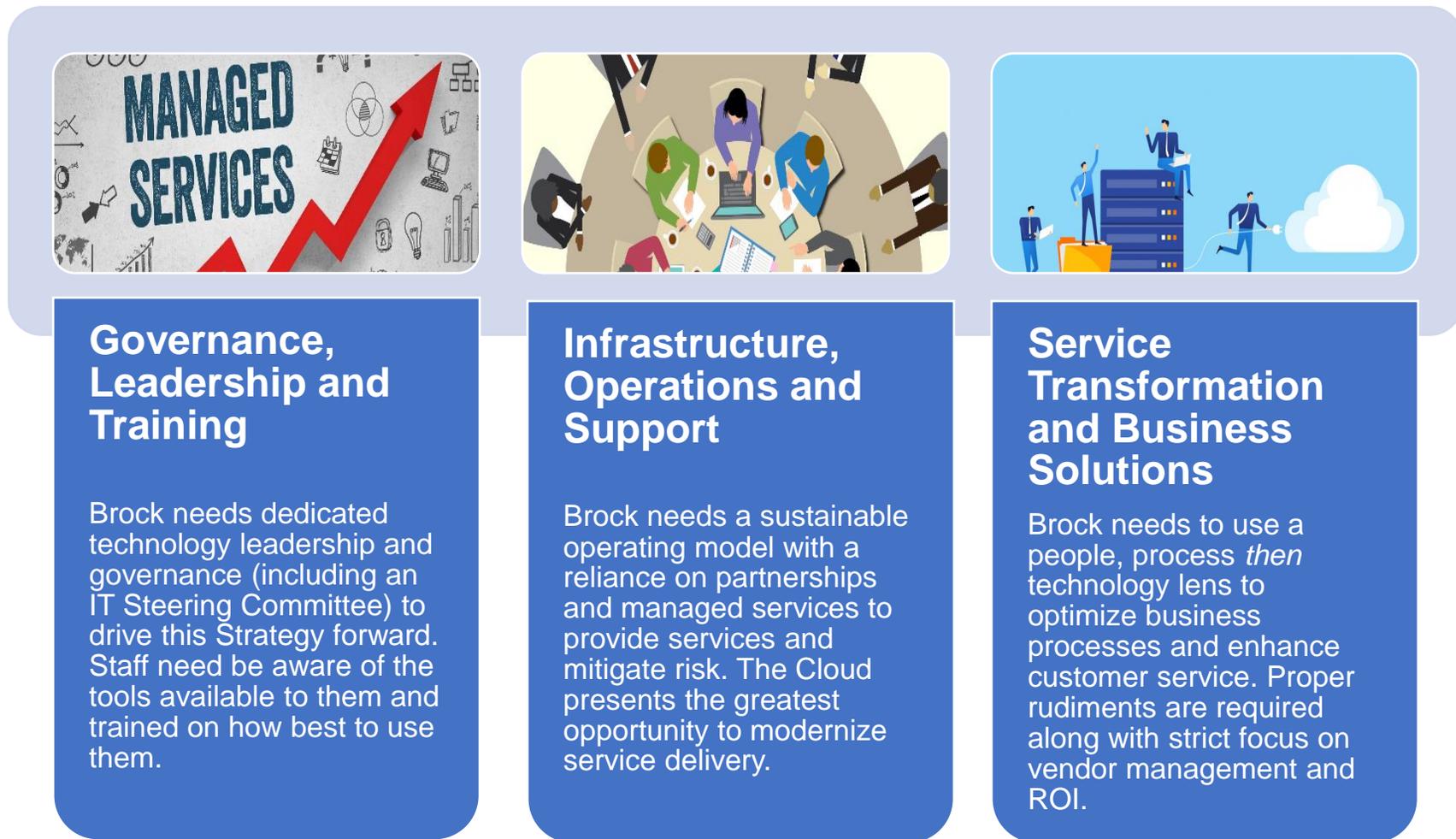


Figure 2: Brock IT Strategy Focus Areas

The key recommendations of this IT Strategy are designed with improving technology leadership, defining a sustainable operating model, improving workflow through automation and enhancing public service delivery.

The following are high-level descriptions of the various areas where we recommend changes that will bring about improvements. More details are provided in the main report.

1.4.1. Governance, Leadership and Training

Technology Governance – Brock should implement a governance structure – including an IT Steering Committee – to drive the Strategy forward. It is recommended that the Senior Management Team (SMT) be the IT Steering Committee.

IT Governance is the set of processes, policies and rules that ensure that all IT activities are aligned with Brock’s corporate objectives. Studies have shown that organizations with effective IT Governance are far more productive than those without.

The IT Steering Committee (SMT) will oversee all major IT initiatives, providing a holistic view of IT, rather than each department doing its own thing.

Leadership – The Township currently has a part-time IT function which does not allow the incumbent to do either this job or their own job to optimum levels. To allow Brock to carry out many of the recommendations in this report, and to maintain the upward trend in delivering IT service excellence, it is necessary to hire a full-time IT resource that will assist the IT Steering Committee by defining departmental and organizational business requirements, working with solutions vendors, developing roadmaps, and coordinating all IT-related activities.

This will allow the Township to grow its IT service delivery capabilities, ensure business solutions are utilized effectively and allow management – who are currently administrating IT – to focus fully on their own jobs

1.4.2. Infrastructure, Operations and Support

Improve Technology Infrastructure and Security: Multiple infrastructure and security improvements have been recommended. Some of the highlights are to develop a Disaster Recovery Plan, ensure backup processes are working effectively and to develop a security program that addresses weaknesses discovered in the Township’s networks and information systems.

A good backup system and process is paramount to facilitate a recovery of systems and data should an IT service interruption occur. It is too late to wait until an incident occurs to see if the process is working. Testing of the process is crucial to ensure Brock is able to recover from an incident should it occur.

A Disaster Recovery Plan takes this one step further by ensuring the organization understands its requirements when it comes to critical services, and which should be restored first after an incident. It also establishes how long each service can be down before critical impact levels are reached, allowing the Township to develop effective and comprehensive business continuity plans.

A Security Program takes all security gaps and weaknesses, prioritizes them and then sets out a plan to address them all over a period of time.

It is called a program because it is not a one-time event, but rather an ongoing set of processes and tasks that address immediate issues and mitigates the risk of further issues being discovered and exploited.

1.4.3. Service Transformation and Business Solutions

Business Solutions – It is recommended that the Township look toward using Cloud solutions wherever possible. Investing in on-premises hardware is inefficient and requires resources to maintain. Additionally, there is duplication of functionality across business solutions and consolidation is required.

Maintaining a data centre is time consuming and costly and requires a particular set of skills that Brock does not have. While most of it is outsourced, using the Cloud for applications and data storage is a cost effective way of reducing effort from internal staff and facilitating vendor system upgrades rather than Brock staff doing them.

The Township already has the majority of its business solutions in the Cloud, and so it will not be a major change to take the remaining ones and migrate them. An example of this is Great Plains, where the vendor has a Cloud option that provides better integration, functionality and service levels.

Another example is Cloud Permits, which will reduce the manual effort required by Brock staff and allow residents and businesses to apply for and receive a permit online rather than coming to the Township building.

Current use of the on-premise deployment of the Great Plains ERP is being severely bottlenecked by poor vendor performance and a lack of internal capacity and training. The level of utilization of the existing solution is very low – in fact, the tool is being used more as a record of information and data store for financial information rather than a utility to help automate and simplify the Township's various financial management processes.

The current climate is such that ERP and enterprise solution vendors are moving away from their on-premise software programs in favour of SaaS (Software as a Service) and Cloud offerings. The subscription model is financially advantageous for vendors but also well suited for 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.

CentralSquare (GP vendor) has released a suite of Cloud offerings that include functionality around asset management, human capital management as well as several other municipal services. Given other recommendations within this report with respect to moving to [HRISMyWay](#) (for time, attendance and payroll) and [CityWide](#) (work and asset management), the Township will need to explore what CentralSquare offerings make the most sense with a focus on *not* creating redundancy with existing or planned solutions.

Online Self-Service – Implement online services to citizens via the corporate website. The focus should be to offer over-the-counter services to the web channel as well. In order to provide online services, the back-office processes should be automated with appropriate business systems.

Brock compares favourably with similar municipalities when it comes to online service delivery. However, the demand to be able to do things online rather than in person is increasing all the time, and other services could be expanded to have an online delivery channel. Building applications and permits are examples of this.

Process Improvement – A true process improvement is realized through the end-to-end digitization of an optimized process. Business processes should be reviewed and optimized prior to automation.

It is important to understand the concept of end-to-end business processes. A public-facing business process starts with a customer request and includes all steps within the Township as well as the participation from external parties to the point where the customer is provided with what they requested. The Township could develop the necessary skills to perform business process optimization exercises, or it could engage with external consultants to assist with this.

It is recommended that, when expanding service delivery to include online, the Township look at the related business processes to ensure they are effective and can facilitate online service delivery.

1.5. Supporting the Implementation of the IT Strategy Recommendations

1.5.1. IT Funding

In order to implement the recommended Strategy, the Township will need to increase its technology investment. The current Brock IT spend is approximately 1.5% of its total operating budget, which falls below recommendations from both Gartner and Perry Group.

Municipalities who spend between 2.5% – 4.5% of their annual operating budget on technology are more progressive in their customer services and internal efficiencies. A gradual increase of technology funding is recommended as a key success factor for the implementation of the recommendations.

1.5.2. IT Resourcing

The consultants also propose that an internal IT resource be hired to manage and lead the technology implementations in the Township. This role is most suited to the title of IT Coordinator. The role's primary responsibilities would be vendor management, (e.g., Cloud vendors, managed services providers) business solutions roadmaps, and project management. The role would work closely with the business to understand requirements and then help to determine the key avenues to meet these requirements.

This role will also be responsible for working directly with external service providers such as those who manage infrastructure, security and Cloud services. It will ensure performance levels are maintained and that issues are dealt with in a timely manner. It will facilitate the security posture improvement at Brock by closely monitoring security gaps and vulnerabilities and ensuring they are addressed in a timely manner.

This role is paramount to the future success of Brock in executing the recommendations in this report. A progressive municipality such as Brock requires a dedicated IT resource to achieve the optimum value from its business solutions.

1.5.3. Third-Party IT Support

The rate at which municipalities want to move application workloads to the Cloud is exceeding the abilities of their internal IT teams; therefore, in order to augment the internal IT services required to support the Township, a third-party IT service provider that specializes in hybrid IT support – on-premises infrastructure and Cloud – is recommended.

The Township should follow its standard procurement process by building a list of requirements in the form of an RFQ/RFP and invite the Region an opportunity to bid on the services with our qualified vendors.

1.6. Key Outcomes

Following the recommendations in this report will result in the following key outcomes:

Reduction in Siloed Thinking – The addition of an IT resource that can take a corporate view of business solutions and the oversight of the IT Steering Committee will result in systems and projects being procured or undertaken that have value to the organization as a whole and not just an individual department.

Consolidation and Expansion of Business Solutions – There are a number of solutions in place where there is duplication of functionality. This is particularly evident with Fire systems, although this is not the only area. Eliminating solutions and moving that functionality to the most appropriate solution will eliminate system maintenance and vendor management. There are also opportunities to expand the use of existing business solutions to reduce the number of gaps in municipal systems functions.

Delivery of Key Online Systems – While the Township currently has a good array of online services, it is missing key components such as online permits and some licensing. The procurement of an online permit system (in progress) and additional recommendations in this report will result in improved services to residents and businesses in Brock.

Improved Security – There are a number of low-cost recommendations in the report that can considerably improve the security posture of the Township. In these days of ransomware and other malicious software, it is imperative that Brock does everything possible to mitigate the risks of a successful attack on its information assets.

Improved Internal Services – IT services are currently delivered by a combination of part-time internal staff and two third-party service providers. Staff surveys and interviews have revealed that this has not resulted in optimum service. Our recommendations will facilitate a single service provider that can manage infrastructure, security and Cloud transition for on-premise systems. A clear Service Level Agreement between Brock and the service provider will result in a more strategic set of services and a single service provider who can be held accountable for levels of service.

1.7. Benefits

This Strategy directly supports the Township's Corporate Strategic Priorities identified in the Corporate Strategy.

Service Excellence

Recommendations that relate to service excellence include:

- Additional online services that result in an alternative channel for residents to conduct business with the Township.
- Improved business processes that provide efficiencies and cost effectiveness resulting in time savings to staff and greater value to residents.

Connect with Others (Partnerships)

Recommendations relating to Partnerships include:

- Further collaboration with the Region of Durham.
- Potential collaboration with geographically close and similar municipalities.

Using Technology to Advantage

Recommendations relating to Technology are numerous and include:

- Taking advantage of Cloud technologies resulting in less hardware and maintenance for staff.
- Using tools to improve collaboration among staff such as working on documents simultaneously.
- Expanding the use of Geographical Information Systems technologies to provide up-to-date property information across the Township.
- Utilizing self-service technologies for staff to allow them to perform tasks they would normally have to request of others.

1.7.1. Understanding Benefit Types

It is important to understand that benefits from technology investments typically fall into several categories:

Cashable benefits – Cashable benefits are changes that result in the municipality having more money to spend, either through savings or through additional revenues.

Non-cashable benefits – Non-cashable benefits are changes that do not lead to an immediate cashable benefit but save money in future budgeting periods by avoiding adding staff or avoiding future procurement costs.

Wider economic benefits – These offer benefits for your customers outside your organization and include things like:

- Saving users' time or improving their experience.
- Reducing private sector costs (e.g., time costs associated with waiting for a building permit).

Some projects will deliver all three of these benefit types, however, the typical benefit that we see with the types of technology proposed in this Strategy will result in a combination of non-cashable savings and wider economic benefits.

This means that the benefits are achieved with staff working less on repetitive activities that are suited to computers and more on higher value activities; with inspectors and crews getting more done; with applications and licenses processed faster, and these kinds of things.

The benefits may manifest themselves in cost avoidances and higher service delivery standards.

Beyond this, investing in technology also provides multiple benefits to the Township, including:

- **Enables excellent customer service** – Digital channel provides convenience to residents – anytime, anywhere.
- **Reduces the service delivery cost** – Online service cost is lower than over-the-counter or over-the-phone.
- **Improves customer engagement** – Social media, online surveys, virtual meetings, etc.
- **Improves the service delivery timelines** – Shorter turnaround times due to automation; less duplicate data entry due to integrated systems.
- **Addresses resident concerns in a timely manner** – Automated status updates to applications, concerns, complaints.
- **Helps the environment** – Paperless processing reduces the amount of paper (e.g. tax bills).
- **Creates capacity** – Automation reduces the need for manual processing by staff.
- **Increases transparency** – Digitization allows the Township to collect and share data with public, Council and management.
- **Reduces the number of complaints received by Council** – Digital business processes can provide automated status updates to customers (e.g., Planning applications, property complaints, snow issues).
- **Helps make informed decisions** – Data analytics allow Council and management to make decisions informed by evidence, data and trends.

Increases the accessibility and availability of services – Driving to a municipal office is not required; out-of-town/seasonal workers/residents/visitors are served.

1.7.2. Digital Transformation in Action

There are numerous examples of municipalities achieving cashable and non-cashable benefits through the implementation of technology, some of which are highlighted in the examples below.

- The City of Mississauga moved its recreation guide fully online, replacing its paper-based version and saving \$230,000 per year in printing and distribution costs.
- The City of London implemented iPads for Fire inspectors. Mobile inspections are now 25% more efficient.
- The City of Hamilton saved an estimated \$360,000 per year by implementing mobile inspection tools for its 37 building inspectors.
- Corpus Christi, TX implemented mobile work management for its field crews and saw the average number of work orders closed per day increase from 11 to 18, an increase in productivity of 63%.
- The City of Guelph conducted an efficiency review of its mostly manual time and attendance processes. The process consumed an estimated 54,000 person hours each year at a cost of \$2.5 million. Digitization is anticipated to halve the cost of running the process.
- The City of Cambridge has used its Asset and Work Management system to systematically increase the roads rated “good” by 50% over a 3-year period. This is expected to eliminate over \$71 million in repair backlogs.
- The City of Brampton implemented an online Request to Park On Street Overnight. The solution handled over 100,000 requests online per year, which equated to a reduction of 2 FTEs taking calls at the contact centre.

In addition to these examples, Perry Group has a team of business process consultants who work with municipalities to optimize processes. The team has been busy with municipal modernization projects funded by the province and, over the last two years, has completed over 200 business process optimization reviews with municipalities across Ontario. In each case, optimization involves streamlining and simplifying processes and applying process digitization and digital service concepts to re-design services.

Quantifiable efficiencies identified have ranged from \$20,000 – \$900,000 per year, with an average of \$80,000 per high-volume process/service. We think that Brock can realize similar efficiencies by optimizing its various processes prior to implementing technology solutions. We feel that asset management and the building approvals process are good starting points to consider.

1.7.3. Summary

The Township of Brock has been steadily improving its use of technologies over the last few years. This report and the associated recommendations contained within it, will assist the Township to continue this improvement and take it to the next level.

By moving to more modern technology platforms such as the Cloud, improving the Township's security posture, optimizing business processes and expanding the use and functionality of business solutions, Brock and its citizens can expect a significant increase in service levels across the Township.

Additionally, investing in a dedicated IT Coordinator and establishing oversight of the IT Program using governance, Brock will be able to deliver these improvements effectively and efficiently.

Introduction

2.0 Introduction

The Township of Brock hired Perry Group Consulting to perform an IT Strategy with a review of information systems. The Township has recognized the value of technology and was looking for an experienced municipal IT consulting company to develop the IT Strategy.

Perry Group has conducted similar work for more than 130 Canadian municipalities. All of our consultants are also former senior municipal IT leaders.

2.1. Key Outcomes

The Town identified the following key outcomes for the development of this Corporate IT Strategic Plan:

- Identify where manual processes can be digitized to improve customer service and streamline accessibility.
- Optimize operational efficiencies by minimizing data entry, process duplication and hard copy documentation.
- Identify and address hardware, software, and data sharing gaps by implementing realistic and best practice solutions.
- Identify and implement security measures to protect its data, technology infrastructure and business continuity.
- Maintain long-term cost sustainability.

The consultants have designed the IT Strategy with the outcomes of the Township front and centre.

2.2. Importance of Technology to Municipalities

Municipalities are faced with significant challenges to stretch resources to deliver high-quality customer service that meets the expectations of the modern citizen, to manage and sustain new and aging assets and effectively engage citizens in decisions related to the building of the community.

Municipalities face several pressures as they embark on digital and modernization strategies to meet their communities' needs and requirements.

2.3. Responding to Changed Customer Expectations

Many municipalities are rightly considering moving services online because customer expectations have changed. Not only has COVID reduced the desire for personal interactions and shown how offering services digitally can work, but the reality is also that many citizens today rely on their devices as a way of life.

We have all moved from the situation 25 years ago – where booking a flight was so complex, you needed a travel agent to do it for you – to a world in which you can book your own flight with a few taps on your smartphone from anywhere and at any time.

Think of some of the service industries and about how technology/digital has changed them:

- Finance – Online and smartphone banking, online trading.
- Retail – Amazon, Indigo, beer and wine direct, Skip the Dishes.
- Education – Online school, remote tutoring.
- Health – Telehealth, virtual medical appointments, online therapies.

Unquestionably, we are in the *smartphone and internet era*, and this has changed customers' expectations about what service looks like today. Delivering online has become *the way* that services are delivered in the 21st century.

Governments too are responding to these changed expectations and are rapidly moving services online. Think about the online services that ServiceOntario offers, for example, allowing customers to renew health cards or driver's licenses, get their vehicle sticker or fishing license, all while in your PJs using a tablet on the sofa on a Saturday night.

Today, over 92% of Ontarians have access to the internet at home, 88% of Canadians bank online, 76% have smartphones. So, introducing online services is not for the minority – it is for the majority.

It is important to note that, even when the Township does introduce online services, this does not mean it should stop offering services via existing methods or channels. Customers should still be able to call or drop into municipal offices to carry out a transaction, to seek advice, submit an application or pay a bill. The introduction of digital services can be offered as an additional option that customers can choose – and one we are certain many will choose because of its convenience and ease of use.

2.4. Service Delivery in Multiple Ways

The Township should continue to offer all services across all channels – face-to-face, phone and digital – so those who don't wish to use digital channels, won't be forced to. Nonetheless, it is worth noting that the most recent information available from Statistics Canada for internet penetration in Ontario (from 2018) identified that 92% of households in Ontario had access to the internet. 71% of seniors were using the internet in 2018 compared to 48% in 2012.

It is reasonable to assume that today, in 2021, these numbers are higher. In addition to home-based internet (according to the Canadian Radio and Telecommunications Committee, CRTC) over 73% of Canadians had a smartphone in 2015. According to a Media Technology Monitor Report in 2016, "74 per cent of people aged 65 and older were using the internet regularly". So, the vast majority of citizens have access, and likely a willingness, to use digital channels offered by the Township.

Channel	Cost per Transaction (Service Canada)
Web / Online	\$0.10
Phone	\$4.00
Face-to-Face	\$6.50

Table 1: Transaction Cost Comparison Across Service Channels

For Brock, there is a real cost imperative to encouraging the adoption of digital channels. Although there has been limited research in this area in Canada, some studies have examined municipal transaction costs across the primary customer service channels. The table below indicates average costs of local government service delivery modes taken from research in the UK, Norway and Canada.

[Reference](#): Anywhere, Anytime, Any Device: Innovations in Public Sector Self-Service Delivery Research Report by Kenneth Kernaghan Brock University 2012

The results are consistent in their message: online transactions cost a fraction of phone or face-to-face transactions. Notably, from one study in the UK, postal-based transactions (that the Township uses for some of its services) are the most expensive transactions.

Thus, implementing online services and encouraging their adoption is an important way for the Township to reduce staff time processing requests and overall transaction costs.

2.5. Pressure on Core Services

All departments are reliant on core corporate functions but financial processes in particular, are critical business processes in discharging their responsibilities and impacting others.

Many manual processes inhibit the Township’s departments’ ability to move at the speed they need, while balancing corporate controls. These core functions, used by all Township departments, must be efficient, effective and operate in real-time if the Township is to be successful.

Increasingly, municipalities across the world and here in Ontario are turning to technology as a means of addressing these challenges and seeing positive results.

Threats and opportunities include:

Delivering customer service that meets expectations.

- With further restrictions from COVID-19, there is a need to ensure that customers can transact with the Township through online services. This means the Township must change the way it is delivering service to meet the needs of its residents who, especially now, use online services as part of their day-to-day routine.

Stretching scarce resources.

- Resources are scarce in municipalities, as is funding. It has been proven that municipalities that utilize integrated systems – rather than manually keying in data – are able to utilize staff more efficiently to work on more value-added activities. The value of integrating systems is that there is “one version of the truth”. In other words, there is only one place data is entered and the system does the linkages between programs. Having good data is valuable to any organization, especially municipalities that manage many lines of business.

Doing more with less.

- Enabling mobility is a valuable step in moving toward modernization. By deploying, for example, mobile building inspections software and enabling online inspection booking, the Township would see increased productivity of inspectors. Other municipalities have seen cost savings each year by enabling mobility in areas such as Building, Fire and Asset Management. Organizations that have implemented work management systems with mobile capabilities have seen a significant increase in productivity, in some cases seeing crews resolving up to 60% more work orders through supporting technologies.

Using data to optimize services.

- Municipalities are seeing savings using route optimizing technologies (as used by UPS and FedEx) to optimize patrols, inspections, and garbage collection routes. Integration of systems is a key component in being able to optimize services through data.

COVID-19 and other infectious viruses.

- Municipalities are working remotely and streaming Council meetings rather than having face-to-face interactions due to the changes thrust on them by COVID-19. Some municipalities are adopting this model as a permanent way of doing business, and this requires availability to broadband services that allow residents and staff to interact effectively and seamlessly. There will be more pressure on municipalities to implement solutions quickly and offer online services.

These are some examples, but new technology opportunities appear daily, and the speed at which new innovations arrive is accelerating. Municipalities need to be well positioned to evaluate and implement those innovations that can add value.

Being an organization that can react and embrace new technologies as they become available, to deliver improved and evermore cost effective services, is advantageous. Adaptation should become a core competency for any high-functioning municipal organization.

2.6. Return on Technology Investments

Investments in technology – *when done right* – can deliver tremendous efficiency gains and radically improved customer experiences. When technology solutions are implemented poorly or not fully implemented, the detriments are easily discernible. Brock has a number of key systems in place, but they are vastly underutilized. This leads to frustration, reduced staff morale, and too much attention being paid to administrative issues rather than the more human elements of public service.

It is imperative, therefore, to be positioned so that the organization can truly maximize the value it receives from technology investments. This will not only improve life for staff, but also the residents of the municipality.

3.0 Project Approach

The following chart shows the basic steps in the approach taken by Perry Group.

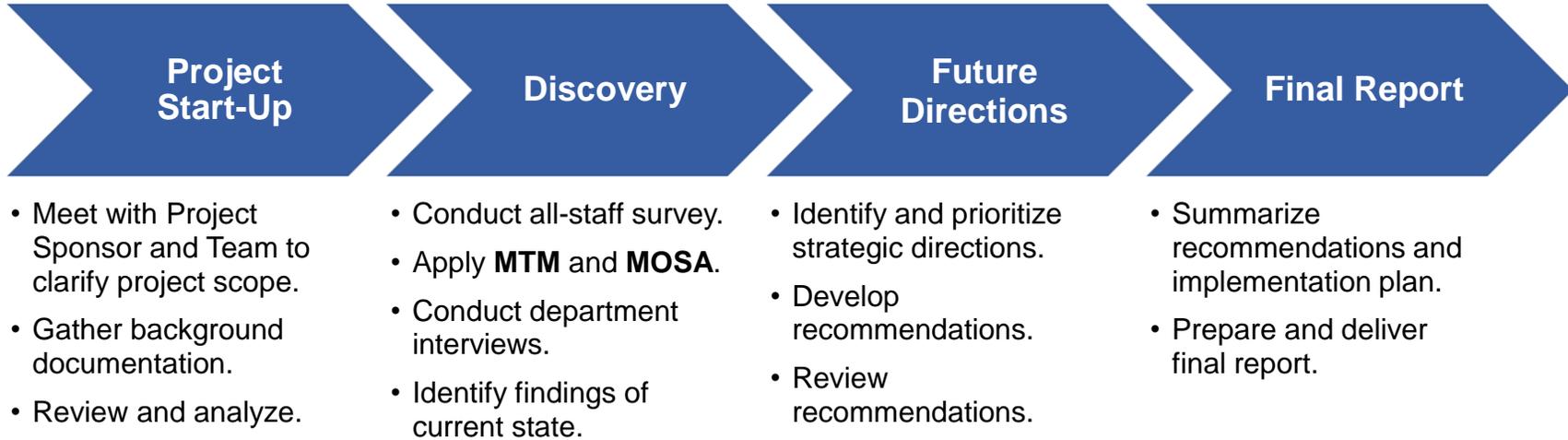


Figure 3: Perry Group’s Project Approach with Brock

The majority of time was spent with staff during the Discovery Phase to understand the current status. Feedback was collected directly from staff through a variety of methods.

An online survey was distributed to all staff providing the means for feedback, comments, and staff assessment. Key findings from the survey were used to inform the current state assessment and the future needs recommendations. Further details on the survey results can be found in the [Staff Survey Results](#) section.

Individual meetings were conducted with the Brock IT team (Deputy Fire Chief) in order to understand the technology environment. The external service provider (the Region) was also consulted.

Departmental interviews were conducted with the Chief Administrative Office (CAO), and representatives from Clerks, Building, Fire, Public Works, Treasury, and Recreation. We also met with the Mayor and most of the Councilors. An interview guide was provided ahead of time providing the opportunity for discussion among the teams as well as a facilitated discussion with the consultants. These discussions provided much of the information contained in this report.

The consultants used the MOSA (Municipal Online Services Assessment) and the MTM (Municipal Technology Model) – both developed by Perry Group over the last decade with over 100 municipalities – to assess the current online services and to review the technologies deployed at the Township. See further details about the [MOSA](#) and [MTM](#) assessments later in this document.

A financial analysis was conducted to understand the investment in technology compared to total expenditure of the Township. The budget numbers were compared with industry benchmarks. Details of the financial assessment are available in the [Financial Analysis](#) section.

The consultants also conducted an IT Skills Assessment followed by an assessment of the Township's IT Governance and IT Service Management practices. The 3rd party service provider was interviewed, and their services were reviewed as well. The consultants then performed an IT Risk and Vulnerability Assessment to identify any potential security-related risks of the technology environment.

Based on the inputs from all sources above, the consultants prepared a high-level current state assessment and set of recommendations.

The high-level information was shared with the Brock senior management. After the review of current state, the consultants collaboratively developed a set of strategic priorities with key stakeholders at the Township, and then proceeded to prepare a draft of this report.

Current State Assessment

4.0 Current State Assessment

Before developing any future looking strategy, it is important to take stock of the current situation.

This section describes the current state of the Township's technology systems, and the Township's current approach to managing its technology.

It summarizes the consulting team's assessment and observations.

4.1. Key Positives – What's Working Well?

4.1.1. Doing Well with the Available Budget

The Township's IT budget is comparatively low balanced against other similar organizations.

Details of the financial analysis is available in the [Financial Analysis](#) section. The Township has implemented a reasonable IT environment with the low budget, therefore, the Township is receiving the value for the current IT investment. This is a positive situation.

This does not mean, however, that Brock can continue with the same approach.

4.1.2. Open for Shared Services, Shared Resources and Out-Sourcing

There are multiple examples within Brock that show the willingness of the Township to share services and staff with other organizations to reduce the financial burden. The Township has also hired a third-party service provider for some of the IT services.

These are opportunities available in the industry, especially for small municipalities to optimize the use of limited resources.

4.1.3. Comprehension of Internal Business Process and Priorities

There is a clear understanding of business requirements within each department. This is often the first thing that needs to be tackled. Next, is to translate these business requirements into process improvements that can be automated and optimized through the use of technology.

4.1.4. Leadership is Committed to Leveraging Technology

Leadership – in all areas – understands the impact that digital can have on their respective business. Freeing up internal staff resources through better use of technology and serving customers better are key goals. Further work needs to be done to address and scale these needs across the entire organization in order to identify and invest wisely on top corporate priorities.

4.1.5. Cloud is the Predominant Platform for Business Solutions

Approximately 65% of Brock's central business solutions are already Cloud-based. SaaS and the Cloud are optimal ways to modernize services and Brock is already well on its way to embracing what will be a future standard for municipalities.

4.1.6. Server Virtualization Supported by Leading Technology (VMware)

As is indicated by the [MOSA](#) below, Brock has done well to provide its citizens with digital service and online payment options. This has been accomplished through individual departmental efforts though, and not coordinated across the organization. Further progress would clearly be made if managed in a more centralized manner.

4.1.7. Server Virtualization Supported by Leading Technology (VMware)

The production server farm has been provisioned using virtualization technology developed by an industry leader (VMware). This has allowed for flexibility and hardware savings specific to on-premise production servers.

4.1.8. Understand the Benefits of Offsite Data Protection and System Recovery

Although the Township has had challenges with some service providers, Brock understands the benefits and requirement to implement these types of services.

4.2. Municipal Technology Model (MTM)

Perry Group’s standardized Municipal Technology Model (MTM), shown below, was the basis for evaluating the Township’s technology environment.

The MTM provides a framework for the consulting team to assess a Township’s technology environment and is also a guideline to assist municipalities in targeting their needs and priority work areas, as well as tracking progress.

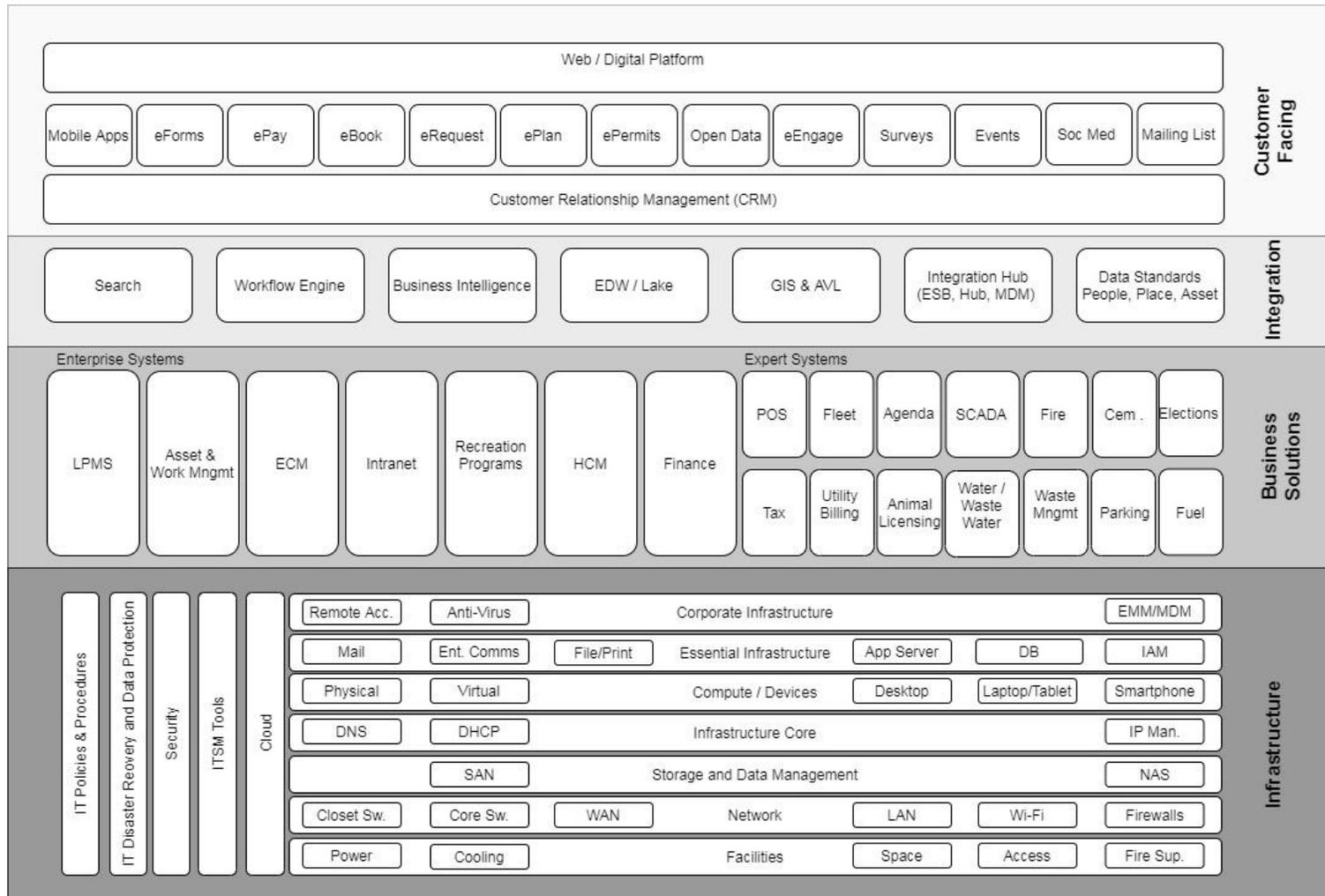


Figure 4: Municipal Technology Model

4.2.1. Four Technology Layers

There are four main technology layers – Infrastructure, Business Solutions, Integration, and Customer-Facing Technologies. Within each layer, there are specific technologies or solutions. For example, in the Business Solutions Layer, items include:

- A Finance system (such as Great Plains).
- A Payroll system (such as Meridian).
- A Fire Incident Management system (such as FirePro), and
- A Work Management system (such as Pearl).

Each layer requires discrete IT skill sets to be managed effectively. For instance, while technology infrastructure management is deeply technical, business solutions projects require project and process management, change management and people skills. Web projects need development and User Experience (UX) expertise.

The Layers Explained

An IT organization needs a breadth of skills across the various layers to effectively manage the complete environment.

The table below provides a detailed description of each layer.

Infrastructure	Business Solutions	Integration	Customer-Facing
This is the foundation for the entire technology environment – all other layers – so must be robust and reliable.	Limit the number of corporate business solution platforms to minimize process and information silos.	Well-integrated business solutions allow data to be automatically passed between systems, reducing data duplication and errors, and ensuring auditability, while enabling data analysis and visualization using GIS.	This layer is what the customer experiences – the web content management platform for online services, eForms, ePayments, the ability to submit and track service, permit and planning requests, to subscribe to notifications or to watch video recordings of Council meetings.

Infrastructure	Business Solutions	Integration	Customer-Facing
<p>Unreliable infrastructure undermines all the technology that sits above it.</p>	<p>Core systems should be commercial off-the-shelf (COTS) solutions configured to support business processes (payroll, finance, tax, HR, recreation programming, etc.).</p>		<p>Customer-facing digital solutions should allow customers to easily find information, to conduct transactions with the municipality (e.g., submitting requests and applications, making payments) to engage with the municipality to provide input on important decisions.</p>
<p>Policies, security, data protection and Disaster Recovery provisions should be in place to protect information assets and meet legal compliance obligations.</p>	<p>Customization should be avoided.</p>		<p>Systems must be integrated into back-office business solutions.</p>

Infrastructure	Business Solutions	Integration	Customer-Facing
Tools are required to help manage the IT environment and tasks simply and efficiently (e.g., a helpdesk request tracking system, systems management solutions, and automation tools such as remote support, patch management, mobile device management), to increase IT staff productivity and enable employee self-service (e.g., password resets).	These systems or platforms provide the foundation for automated and streamlined business processes and gather data to drive analytics capabilities and underpin the effective delivery of online services.		If processes are not digitized in the back-office, they cannot effectively be offered online.

Table 2: Descriptions of the Four Technology Layers

4.2.1. Technology Assessment – Build from the Bottom Up

The IT architecture should build from the bottom up – Infrastructure first, then Business Solutions, and so on. It is impossible to offer (for example) online building permitting services, if the back-office uses Excel and paper files.

These are some of the basic tenets that underpin a well-designed technology environment and under which a complete municipal technology environment should operate.

The figure below is a summarized version of Perry Group’s MTM. The diagram reflects that all of the layers are interconnected:

- Without a stable, secure, Infrastructure Layer, reliable business applications cannot support efficient and effective service delivery.
- Without these back-end applications, delivery of integrated end-to-end online services cannot be achieved.
- And without the Integration Layer, information remains locked within individual application silos.

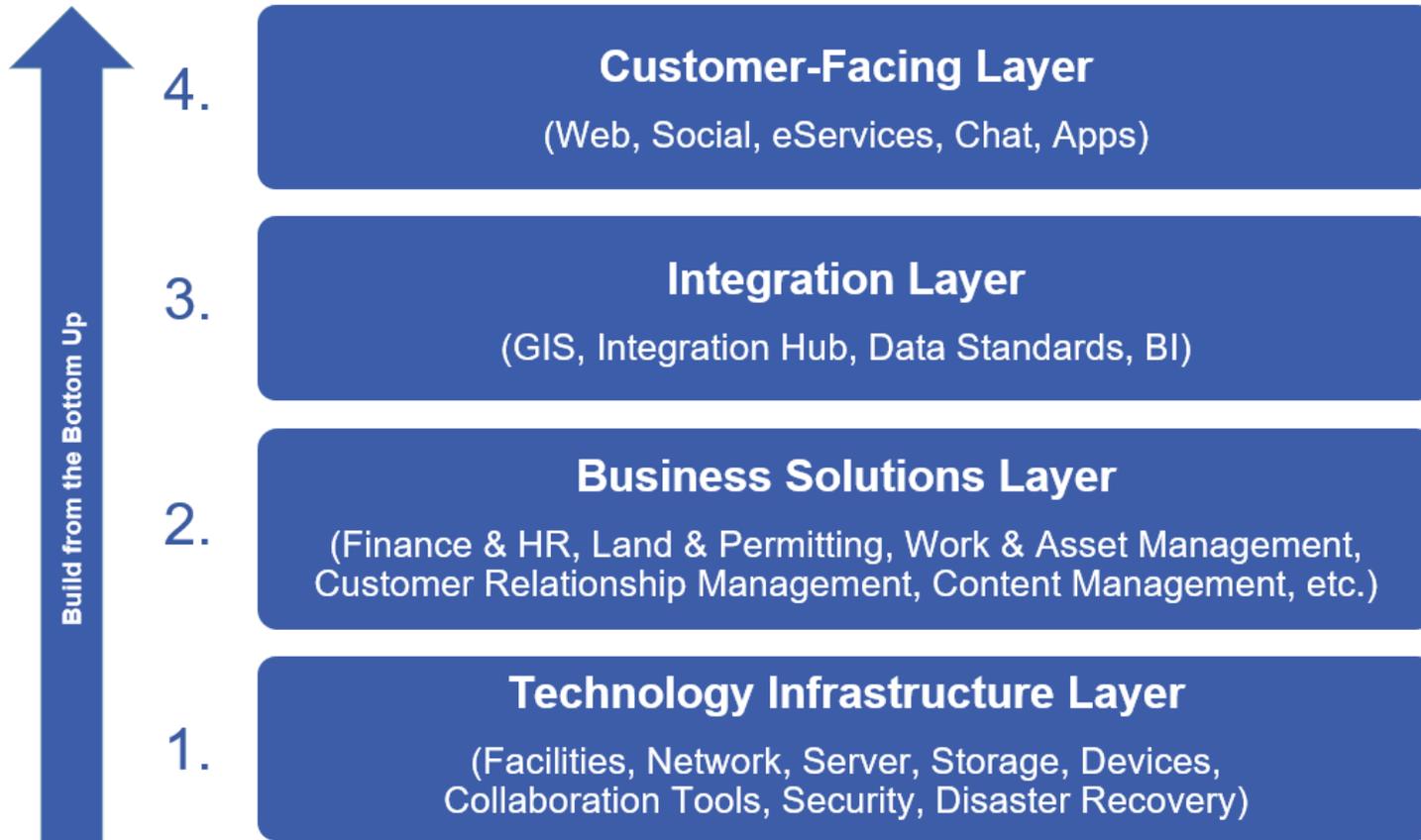


Figure 5: Visualization of Technology Architecture Layers

4.2.2. Assessment Results and Key Takeaways

Perry Group reviewed Brock’s technology against the MTM. The MTM diagram shown below colour codes the results of the review, identifying areas that are “OK”, where gaps exist, where there is risk associated, where an existing solution needs to be replaced and where there is an existing solution but work against it is needed.

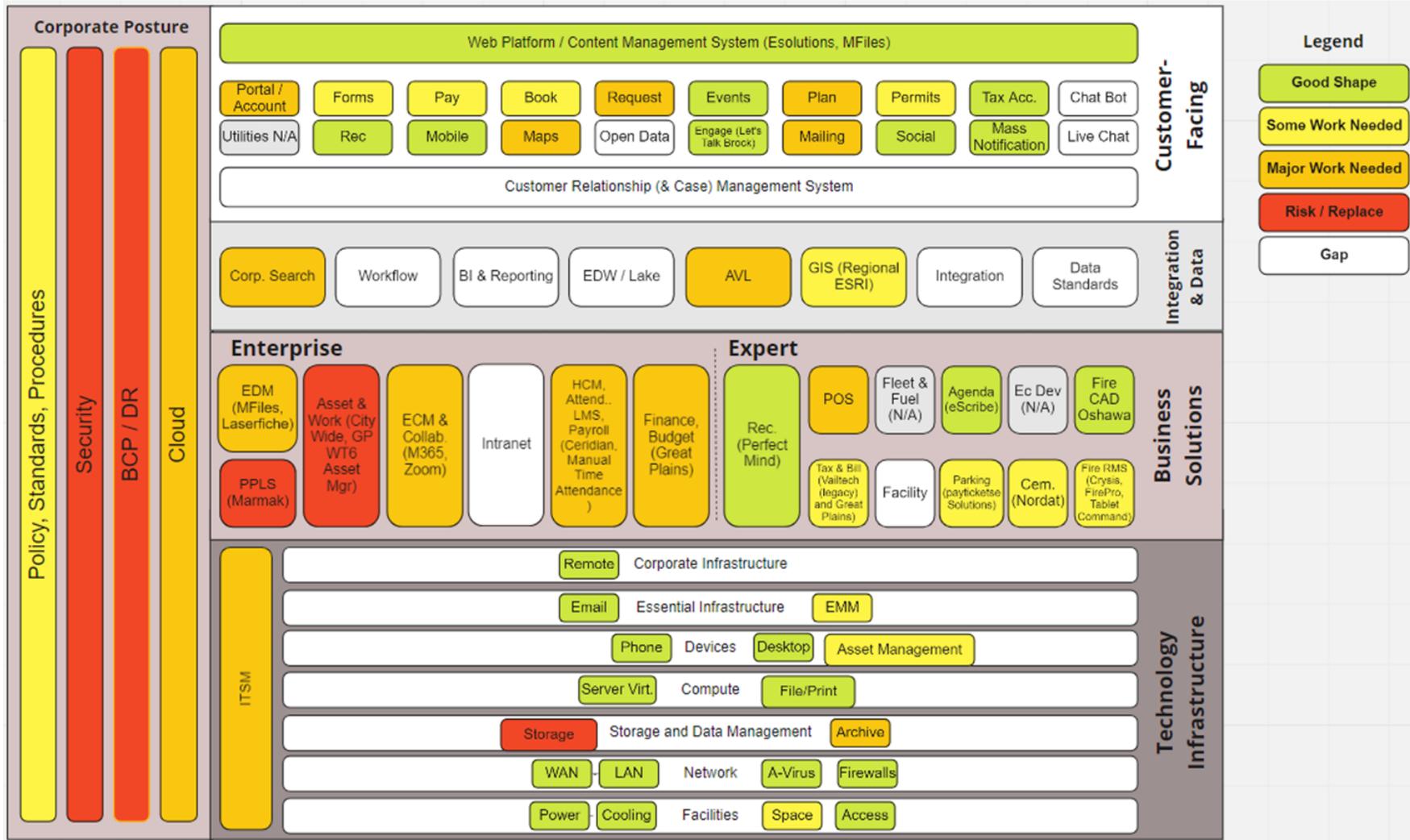


Figure 6: Brock MTM Assessment Results Visualization

4.2.3. Key Takeaways from the MTM

The following section highlights key points in each layer of the MTM – positive aspects as well as key issues to consider.

Infrastructure

Infrastructure	
Positive Aspects	<ul style="list-style-type: none">• The Township utilizes a third-party service provider to augment internal IT capabilities.• Some security tools and practices are evident.
Key Issues	<ul style="list-style-type: none">• Storage capacity is dangerously low.• Backup services should be tested regularly.• Lack of corporate governance.• Lack of Security Incident Response and Disaster Recovery Plans.

Business Solutions

Business Solutions	
Positive Aspects	<ul style="list-style-type: none">• Key business solutions and civic platforms are in place: Great Plains (ERP), Citywide (WAM+), eSolutions (web / customer-facing), Marmak, ESRI, etc.• Roughly 65% of all business systems are already Cloud-based (PerfectMind, M365, eScribe, etc.).
Key Issues	<ul style="list-style-type: none">• System functionality is heavily underutilized in GP ERP, Citywide and GP WT6 – too many manual, paper-based processes are in place where further utilization of these systems would automate workflows.• There are no onsite guidance or roadmaps in place to help evolve technology solutions. There are major gaps that exist because processes have changed, however, the systems have not (e.g., not leveraging other modules in Marmak to support the various permit and licensing processes).• Technology solutions are managed as projects rather than products which need ongoing configuration and support to automate workflows most optimally.• There is limited funding available to modernize solutions and no governance in place to help identify corporate priorities and mobilize knowledge.• Training opportunities for business systems either do not exist in some cases or are not taken advantage of• There is redundancy in functionality provided by various underutilized systems (namely in the Fire area, for work and asset management as well as records and Information Management).

Integration

Integration	
Positive Aspects	<ul style="list-style-type: none">• There are a limited number of systems in place and so integration will not be as difficult as it would be in a municipality with more business solutions.
Key Issues	<ul style="list-style-type: none">• There is very little systems integration in place, although this has been identified as a future objective.

Customer-Facing

Customer-Facing	
Positive Aspects	<ul style="list-style-type: none">• Easy to use, mobile responsive website with a good number of eForms / fillable PDFs.• Online payments and ID profile management are offered for some services (tax, animal licenses, tickets, etc.).• Ahead of many peer municipalities with respect to customer-facing digital services.
Key Issues	<ul style="list-style-type: none">• Absence of key strategies or roadmaps to drive service delivery or provide online alternatives (e.g., improving linkages between “Let’s Talk Brock” and website).• Lack of standardization with respect to online forms / applications.• “Good Service” principles are lacking (e.g., easy-to-find, provide user instructions, ensure no dead ends, etc.).

4.3. Municipal Online Services Assessment (MOSA)

Perry Group’s standardized Municipal Online Services Assessment is designed to articulate a target state for digital experiences that municipalities could/should deliver to citizens based on industry best practices.

The simplicity of the tool allows for a quick assessment that generates a scored value that can then be compared against other municipalities who have also been assessed and serve as a baseline to track progress. Brock’s MOSA results are available below. The results are actually quite positive and demonstrate a forward trend toward modernizing online services.

			
Easy to use website	Y	Building permit application	Partial
Mobile website	Y	Book a building inspection	N
Personalization	N	Submit digital plans	N
Single Account	N	Submit development application	N
Submit a service request	Partial	Track development application	N
Track a service request	N	Employment search and applications	Y
Responsive Web / App	Y	Sign permits	N
Customer knowledge base	N	Fire / Fireworks permit	Y
Online chat with CSR	N	Pet licence	Y
Tweet for help	N	Theatre Tickets	N/A
Online bid management	N	Road closures	Y
Pay Taxes Online	Y	Snow clearance status	N
Pay an invoice	Partial	Events calendar	Y
Parking / infraction ticket payment	Y	Filming permits	N
Parking permits / exemptions	Y	Business licences	Partial
Recreation program online booking	Y	Council / committee web streaming	Y
Rent a facility	Y	Online Agendas / Minutes	Y
eForms	Y	Grants programs	N
Open Data	N	Council delegation request	Y
Transit planning	N/A	Site suitability / selector / vacant land	N
Tax account management	Y	Marriage Licence	Y
Tax certificates	Y	Digital Signatures	N
townshipofbrock.ca score: 62 / 130 = 48%			

Figure 7: Brock MOSA Results

In terms of comparisons, Brock scored favourably among other municipalities, many of which are much larger in size and have greater capacity to deliver. Deployment of SaaS and Cloud-based services have really contributed to this over the past several years. Leveraging proprietary solutions (e.g., PerfectMind) and configurable platforms (e.g., eSolutions) to deliver the customer portion of a Brock process goes a long way to move digital services closer to the expectations of customers.

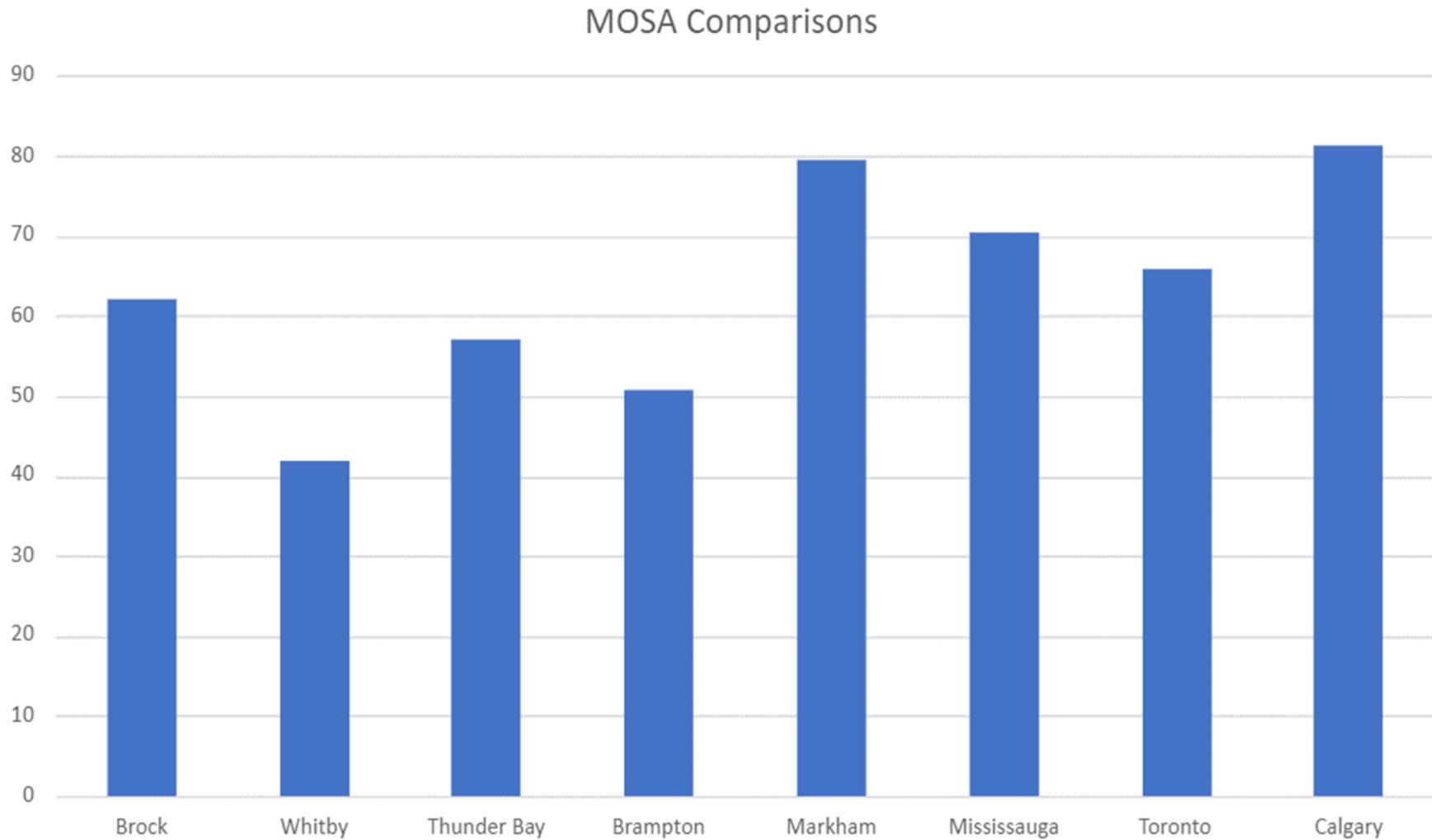


Figure 8: Brock's Digital Experience Assessment Results

4.4. Staff Survey Results

The consultants received staff inputs through an anonymous online survey. The purpose of the survey was to receive direct feedback from the staff related to the use of technology in the Township. Twenty-two staff members participated in the survey. (44% of those invited to participate).

Following are a few key insights from the staff survey.

4.4.1. Key Positives

- There is an acceptable level of satisfaction with most IT services.
- Reliability of technologies is mostly satisfactory.
- Half of all respondents identify as having advanced technological skills.
- There is a willingness to utilize GIS more.
- There is a belief that IT can effectively provide services in the future.
- There is little to no requirement for after-hours IT support.
- For the most part, IT communications with the organization is satisfactory.
- Current work is ongoing to create dedicated IT budget lines.

4.4.2. Key Observations

- There is some dissatisfaction with mobile devices.
- There is a desire for more mobile systems in the field.
- FirePro has a much higher satisfaction rating than CriSys.
- Marmak (Lisa) used for Land Information has a low level of satisfaction.
- There is no corporate Intranet and some would like one.
- There is a desire for a CRM, a permitting system, a corporate file-sharing system and a central property database.
- There may be some performance issues with the network – we suspect that these are largely outside the main Township building.
- IT response time and resolution time has some level of dissatisfaction – it is not completely clear if this is the Region or internal and may be both.

- There may be some confusion as to who to call with an issue – this may be because of having two support mechanisms (Region and internal).
- Staff are a little more doubtful than management as to how well IT can meet future technology needs.
- While management feels they are adequately trained on technologies, supervisors and staff do not feel the same.
- The overall feedback from the staff shows that the Township’s use of technology is “neutral” in most areas.

4.5. IT Organizational Structure, Function and Skills

Brock has no dedicated IT staff and relies on the Region and other service providers under the direction of the Deputy Fire Chief (Interim Manager of IT). It is understood that IT responsibilities will move under Treasury in 2022.

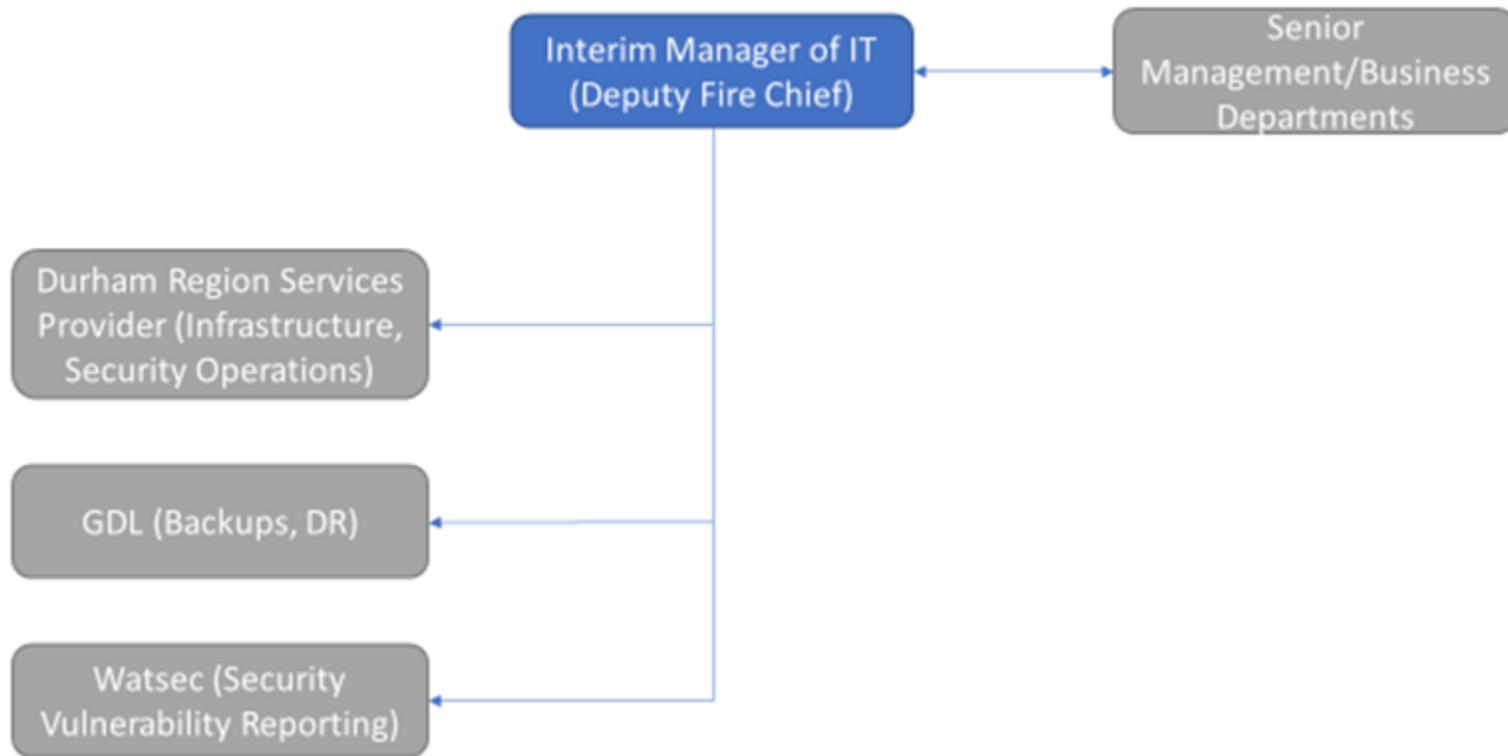


Figure 9: Chart Depicting the Township's IT Support Structure

While some services are adequate, others are not acceptable or below expectations. The Township should ensure that service providers are testing the effectiveness of services such as backups.

Additionally, some of the services provided by the Region are considered below expectations. An example of this is an inability to make firewall changes in time for major system upgrades.

4.5.1. IT Functions and Skills Assessment

Perry Group examined thirty (30) key functions that facilitate the minimum service levels that a municipal IT department should provide. We evaluated the performance by internal staff working on IT and the third-party service provider:

- 6 functions are deemed to be at a satisfactory level.
- 18 functions are deemed to be partially in place (meaning the required services are being partially delivered).
- 6 functions are deemed to be non-existent or at very low levels of service delivery.

The key functions – those that should be addressed as soon as possible – are related to governance and service management.

An IT department – even in the case where it is a hybrid of staff and third parties – needs to understand how well it is meeting the requirements of the organization so it can improve service levels, where appropriate.

4.6. Technology Governance

The lack of formal IT Governance in any organization can lead to situations where there is no common set of goals or objectives for management and staff to work towards collectively.

IT Governance is not a set of rules and policies; it can be defined as “*The processes that ensure that IT activities align with corporate objectives, and that derive value from the investment in information technology.*”

It has been demonstrated through various studies that IT Governance can improve efficiencies and performance throughout an organization.

A study by Cognizant has shown that organizations with IT Governance in place are more effective than organizations without it. The following are overall findings from the study:

- Improved strategic alignment, resulting in increased business partner satisfaction in the order of 15% to 20%.
- Enhanced value delivery, driven by improved project prioritization, leading to reduction of IT budget by 8% to 10%.
- Improved performance and resource management, lowering the total cost of IT ownership by 10% to 15%.
- Better quality of IT output resulting in a reduction in IT control issues by 50%.

4.7. IT Service Management

IT Service Management (ITSM) is how IT teams manage the delivery of IT services to their clients.

Think of how a large company such as Amazon delivers services, and how it tracks customer satisfaction levels. They will know how often a desired item is out of stock. They will know how long it takes to deliver each item. These and other metrics help Amazon to understand where they could improve their service levels, and potentially drive more business.

While the Township is not necessarily trying to drive more business, it still needs to understand what IT services are being delivered, how well they are being delivered and how to improve these services and their delivery.

This is accomplished by collecting statistics and developing metrics; for example, the number of outstanding calls over 48 hours, and the average time taken to resolve IT requests.

Another aspect of ITSM is Knowledge Management. This is the process of gathering information about previous incidents and projects and collecting it in a single repository called a knowledge base. This knowledge base is maintained by adding new information or updating existing information as required after each incident or project.

By maintaining this knowledge base, IT staff can access valuable information from previous events and potentially save many hours of problem investigation as the same issue may have occurred before and the solution is contained in the knowledge base.

Taking it a step further, this knowledge base could also be made available to staff, meaning they may be able to resolve many of their own IT issues, resulting in fewer calls to the Service Desk and greater productivity.

4.8. IT Environment Risk and Vulnerability Assessment

A Risk and Vulnerability Assessment was performed using questionnaires, interviews and a review of the Township's current practices and processes. A number of issues were discovered – some of them significant and some of them less so.

The assessment was performed based on the National Institute for Technology and Standards (NIST) Cybersecurity Framework – Identify, Protect, Detect, Respond, Recover. This Framework is commonly used and provides a reference against which an organization can be measured for a recognized standard.

4.8.1. Security Incident Response and Disaster Recovery

Brock does not have any formal Incident Response or Disaster Recovery Plans. In today's world, where cyber-attacks (including ransomware) are becoming commonplace, it is paramount that municipalities understand what they will do and how they will respond to a significant disruption of IT services.

Brock has indicated that it relies heavily on IT services to deliver its own services, both internally and to its constituents. It is important that the organization understands what it has to do in the event it loses these IT services for a significant period of time.

For Incident Response, much of the work can and should be done before an incident occurs. For example, if a ransom is demanded, are you going to pay it? The answer to this question should not wait for the incident to occur, as the decision will likely have to be made by Senior Management, Council or both.

Other pre-incident tasks include determining roles and responsibilities and when to call in third parties such as the cyber insurance provider, law enforcement and others. These should all be pre-determined so that valuable time and effort is not wasted during the incident.

For Disaster Recovery, simply having a backup is not a sufficient plan (although good backups are part of that plan). Do you understand which of your services are the most critical, and so where the effort should be placed in protection and restoration? Do you understand how much data you can afford to lose in terms of number of days or weeks? What is your ability to recover and what do you need to do before you can even think of restoring from backup?

The above are a mere few of the items that go into Security Incident Response and Disaster Recovery planning.

4.8.2. Information Security Awareness Training

While having plans to address incidents is very important, it should be the objective of the organization to mitigate the risk of an incident actually occurring. Having security tools – such as firewalls and anti-virus – are of course necessary, but no matter how much technology you put in place, the weakest link will always be the human one.

Most successful cyber-attacks are facilitated by a staff member clicking on an attachment, clicking on a link inside an email or browsing websites that are unsafe and contain malware. Educating Council, management and staff on how to recognize malware and what *not* to do is one of the most effective means of mitigating the risk of compromise to the Township's networks and information assets.

Brock has an ongoing security awareness training program. This program should be continued, and should be mandatory for all personnel, Council and third-party vendors with access to the Township's networks.

4.8.3. Risk Management

There is no formal risk management program, either for internal items or for assessing third parties. Most organizations understand risk management. It is not about eliminating risk, although that would be optimum. Rather, it is about doing what you can to mitigate risk.

For internal risks, there should be a program that identifies all IT risks, assesses each risk for probability and impact, and assigns a specific individual or role to address each risk. This is called a Risk Register and should be developed and maintained.

For third parties, especially those who are or may be providing significant services to the Township, due diligence (including a risk assessment) should be performed. This should include determining levels of security that the service provider maintains, if they subcontract or otherwise distribute the Township's data to any other party, and if they have the resources to be able to effectively deliver the services required by Brock.

4.8.4. Other Matters Requiring Attention

Other issues that require action include:

- The lack of encryption of mobile devices such as laptops.
- The practice of privileged account holders not using regular accounts when privileges are not required.
- The lack of a formal Data Destruction Policy.

4.9. Financial Analysis

Brock's annual IT budget is comparatively low.

Using multiple metrics, the consultants compared public sector IT spending with Brock's, and all measurements have shown that Brock's IT funding levels are very low compared to other municipalities.

The table below shows the budget data used for the financial analysis:

- 2020 overall operating budget: \$12.6 million.
- 2020 IT operating budget: \$189,000. (We note that the 2022 IT budget will show an increase of approximately 40%)
- 2020 number of full-time employees: 50.

Description	2020 Budget Amount
Total IT Operating Budget	\$189,000
Total Municipal Operating Budget	\$12,600,000
IT Budget as a Percentage of Total Operating Budget	1.5%

Figure 10: Brock Financial Analysis

The IT budget as a percentage of the total Township’s budget is 1.5%. This is well below the recommended range of technology investments in the municipal sector.

The municipalities who are using technology effectively, are investing between 2.5% - 4.5% of their operating budget in technology. This recommended range is derived based on years of data and over 100 municipal engagements by Perry Group Consulting.

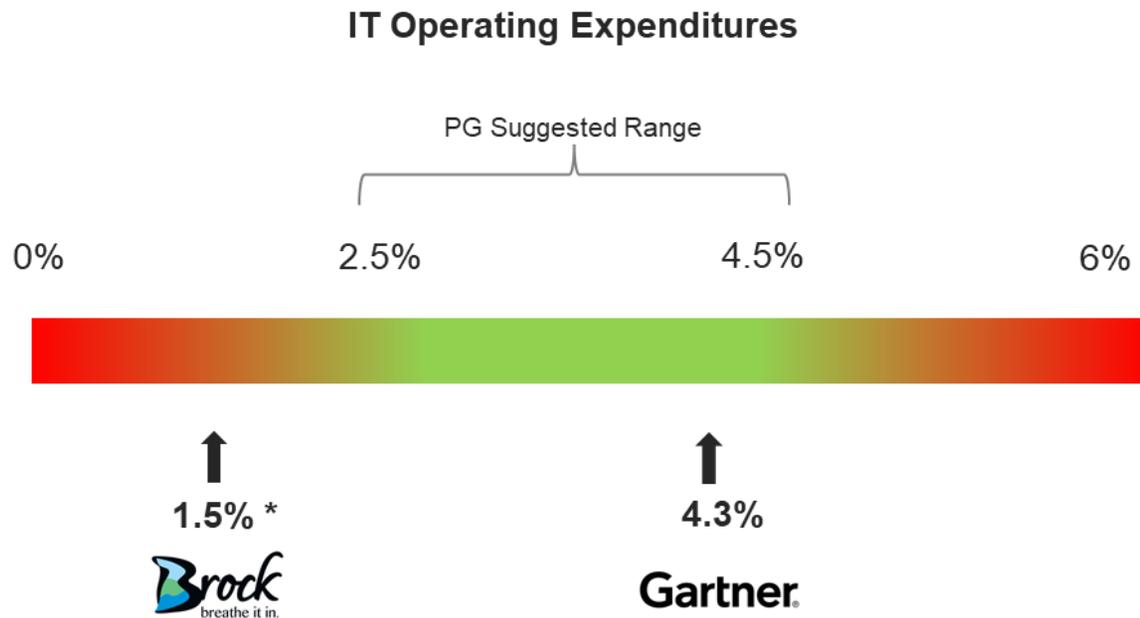


Figure 11: Brock IT Operating Expenditures

According to the IT Key Metrics Data 2019 by Gartner Research, public sector organizations in North America spent an average of 4.3% of their total budget in technology.

The Perry Group recommended range for IT spending in Canadian municipalities is between 2.5% and 4.5%.

To reach higher levels of customer satisfaction and internal efficiencies, Brock has an opportunity to increase its technology funding to reach the Perry Group recommended minimum level. Additional operating funding could allow the Township to reach the Perry Group suggested minimum level of 2.5%.

Historically, municipalities that spend more in IT are able to move ahead with more digital services and achieve more savings compared to those who don't.

An example to compare – the Town of Innisfil's IT budget in 2020 was 3.1% of the Town's total budget. Innisfil is a leader in technology use, among smaller municipalities.

The Gartner study shows that the trend in IT spending in government agencies over the past 6 years has increased year-over-year. Government organizations have been increasing their IT budgets consistently over the years and that trend will continue with more and more business processes moving to digital and online.

The Township has been increasing its technology budget in the past years, but as illustrated above, there is still a gap to be filled.

In summary, the Township's technology spending is very low compared to other municipalities in North America.

4.10. Current State Summary

The Township was looking to answer the following questions through this project.

Q1. Is the Township making the right technology investments?

- The level of technology investment in Brock is lower than typically recommended.
- The Township has invested in an updated data centre which may not be the best approach with Cloud technologies becoming ubiquitous.
- The Township has implemented a few industry recognized business systems.

Q2. Is an effective IT Governance model in place?

- There is limited IT Governance in place.
- There is a draft IT Policy in progress.

Q3. Are the Township's software solutions cost effective?

- The cost of the software solutions in use is on par with the value the solutions have produced.
- There are opportunities to expand the use of some of the systems to achieve increased value.
- There are opportunities to consolidate some of the systems.
- There are areas with gaps where no software solutions have been implemented.

Q4. What are the Township's future business needs?

- The Township should integrate some of its business systems.
- More end-to-end digitized business processes should be put in place.
- More online services for the public are required.
- A more holistic and corporate view of business solutions and data sharing across departments.
- Staff and management should have access to data analytics for informed and effective decision-making.
- A reduction in paper taking up office space and staff working from home to save office space.

Q5. Do staff have the fundamental IT knowledge to move digital initiatives forward?

- There are no internal IT staff, which is a key gap identified during the assessment.
- The current IT support function is managed by the Deputy Fire Chief with great effort. It is not sustainable for this role to support IT on a part-time basis.

Q6. Which business processes will yield the greatest return on investment as a result of re-engineering/optimization?

- The Permitting, Bylaw and Licensing processes could benefit from a property-centric process automation system.
- The asset and work management processes are not automated. A business solution that digitizes these end-to-end processes could benefit the Township.

Q7. Does the Township have a solid and secure IT environment?

- Some basic security requirements are in place, and regular vulnerability scans are run, but many things could be done to improve overall security.
- The infrastructure is relatively stable and performs adequately in most areas, however, some remote areas have limited connectivity.

- Storage (disk) is an issue as there is a small amount of space left. This could cause a major issue if not addressed.

Q8. Is IT effectively delivering IT services to its clients?

- IT is delivering services to the point that the business can operate, however, there are no metrics or other methods in place to establish which services are effective and which require improvement.
- IT Service Management functions are lacking, including knowledge management and incident tracking.

Recommendations

5.0 Recommendations

For the Township to improve use of technology, there is a need to align thinking across the organization and commit to solving the most critical problems first.

These are the areas of opportunity that are currently holding the Township back in modernization efforts, increasing exposure to risk and creating bottlenecks with respect to internal workflows and customer service. These are the areas of opportunity that, once solved, will lead to greater efficiency, cost savings and happier staff and customers.

To plot the road forward, three **Focus Areas** have been developed which represent the major programs of work that the Township should prioritize.



Figure 12: Brock IT Strategy Focus Areas

Various actions are identified within each Focus Area and are later sequenced through a proposed [Work Plan](#). The following sections provide more detail regarding each focus area as well as the proposed actions for each.

5.1. IT Leadership Governance, and Training

5.1.1. IT Leadership

With respect to technology projects, Brock has traditionally operated in a very siloed manner. Technology is reviewed and delivered by departments with little regard to the needs of others. This is not something deliberate, rather it exists because there has not been adequate IT support and leadership that can cross departmental lines and advocate for the highest needs of the organization.

This is one of reasons we are recommending a dedicated IT resource (IT Coordinator) be hired. This resource can take a holistic view of business solutions and develop roadmaps to meet business requirements.

Managing the strategic directions and recommendations in this report will be a significant amount of work over the next 3 - 5 years. To manage the various strategic priorities, projects, and vendors will require considerable effort and will be far more effective if a full-time resource is in place.

The IT Coordinator will be responsible for:

IT Program – the role will manage the program which will consist of projects, initiatives and activities as directed by the IT Steering Committee.

Vendor Management – the role will liaise with all technology vendors including managed services providers, business solutions vendors and other third parties such as Cloud services providers. It will be responsible for ensuring these vendors provide service levels that are agreed upon and for developing business solutions roadmaps in use at Brock.

Project Management – the role will manage all technology-related projects, reporting on progress, risks and constraints to the IT Steering Committee.

Business Requirements – the role will be responsible for understanding the business technology requirements and proposing solutions including business process optimization.

Reporting – the role will report on a regular basis to the IT Steering Committee on proposed initiatives, current activities and other matters pertaining to the IT Program. It will also take any urgent issues to the IT Steering Committee and request special meetings if required

5.1.2. Implement Enterprise IT Governance

IT Governance is the broad term given to the groups, processes and methods that are used to make effective technology decisions, and to ensure that IT activities align with corporate objectives.

Effective IT Governance is essential if an organization is to control, coordinate and ultimately derive the best value from its investments in technology.

An enterprise IT Governance framework should be developed and implemented including:

- An IT Steering Committee (SMT can perform this role).
 - This Committee will monitor the IT Strategy to align with Corporate Strategy and guide major decisions on IT systems and processes.
- Project Intake and Prioritization (SMT can perform this role).
 - Any organization only has a certain capacity to take on new projects on top of existing workloads, and so each request must be considered carefully. This would include value, risk, costs, and resources.
 - This group will review major project requests such as system upgrades, new system purchases and other projects that would take considerable time and resources. The IT Steering Committee should perform this evaluation with input from IT and the appropriate stakeholders from affected business units. There will be some tough decisions to make at times, but this formal process will allow for more effective project delivery and should provide the best possible value for Brock.

How might this work in practice?

- The IT Coordinator would establish 4-6 meetings per year with the IT Steering Committee (SMT), separate and apart from regular SMT meetings. The role of SMT would be to provide oversight of the IT Program – helping determine priorities and focus areas for the program (based on recommendations from the IT Coordinator), monitoring delivery projects and initiatives and ensuring that the program is meeting the needs of the organization.
- The IT Coordinator would be responsible for managing the IT service but with continuous oversight to ensure that resources and effort are directed to the right priorities.
- At the meetings, the IT Coordinator would bring forward proposals, recommendations and reports to provide insight into the progress and operation of the IT Program. It is the responsibility of the IT Steering Committee to adjust and align the IT Program to meet the organization’s needs and priorities.
- Annually, a proposed Work Plan for the next year would be brought forward, refined and agreed upon. Progress updates against the Work Plan would be reported at each of the meetings.

5.1.3. Communication, Collaboration and Engagement

There are a number of options available to Brock to improve communication, collaboration, and engagement both internally and externally.

The Township has an existing solution called “Bang the Table” which is used for resident surveys and engagement. This solution can also be used to survey internal staff when looking for input from all personnel or groups of personnel.

While Perry Group does not normally recommend specific solutions, we do advocate that utilizing an existing asset makes sense rather than investing in new technologies. To this point, since Brock is entering into an agreement with the Region regarding the licensing and use of M365, it would be strategically prudent to utilize the various modules and features in this solution. Examples include Teams, SharePoint, and OneDrive.

These functions can facilitate improved departmental collaboration and information-sharing by allowing documents to be shared and worked on simultaneously with version control and other features that allow various personnel to collaborate on cross-department projects and initiatives.

5.1.4. Skills and Training

Training

One of the key items that came out of the staff survey and interviews was the lack of understanding of what existing business solutions can do, and the subsequent under-utilization of these existing solutions.

Most vendors are happy to put on sessions that explain the various functions of their solutions and can also provide more specialized training if required. They will also be able to talk about their future plans and roadmaps for their particular solutions. This is an area where the proposed IT resource can coordinate by defining business training needs and arranging this with the vendors.

Skills

The strategic directions proposed in this report are intended to take IT infrastructure out of Brock and move it to the Cloud and managed services. However, certain skills must be maintained within the Township. These include Governance (Oversight, Service Level Agreements, Policies); Strategizing (IT Planning, Program and Portfolio Management); Risk and Compliance Management (Service Provider Risk Assessments, MFIPPA Compliance); Vendor Management (Performance Management, Contracts).

These skills don't belong to a single individual, but rather to the organization as a whole. The proposed IT Coordinator can assist with many of these functions, but the IT Steering Committee should oversee all of them.

5.2. Infrastructure, Operations and Support

As outlined in the [Assessment Results and Key Takeaways](#) section, the Infrastructure Layer underpins the delivery of digital services, providing the technology and operational processes and procedures required to support the business.

As illustrated below, the current state infrastructure presents several key risks/concerns. This section outlines recommendations addressing these risks/concerns while supporting the Township's continued Cloud journey.

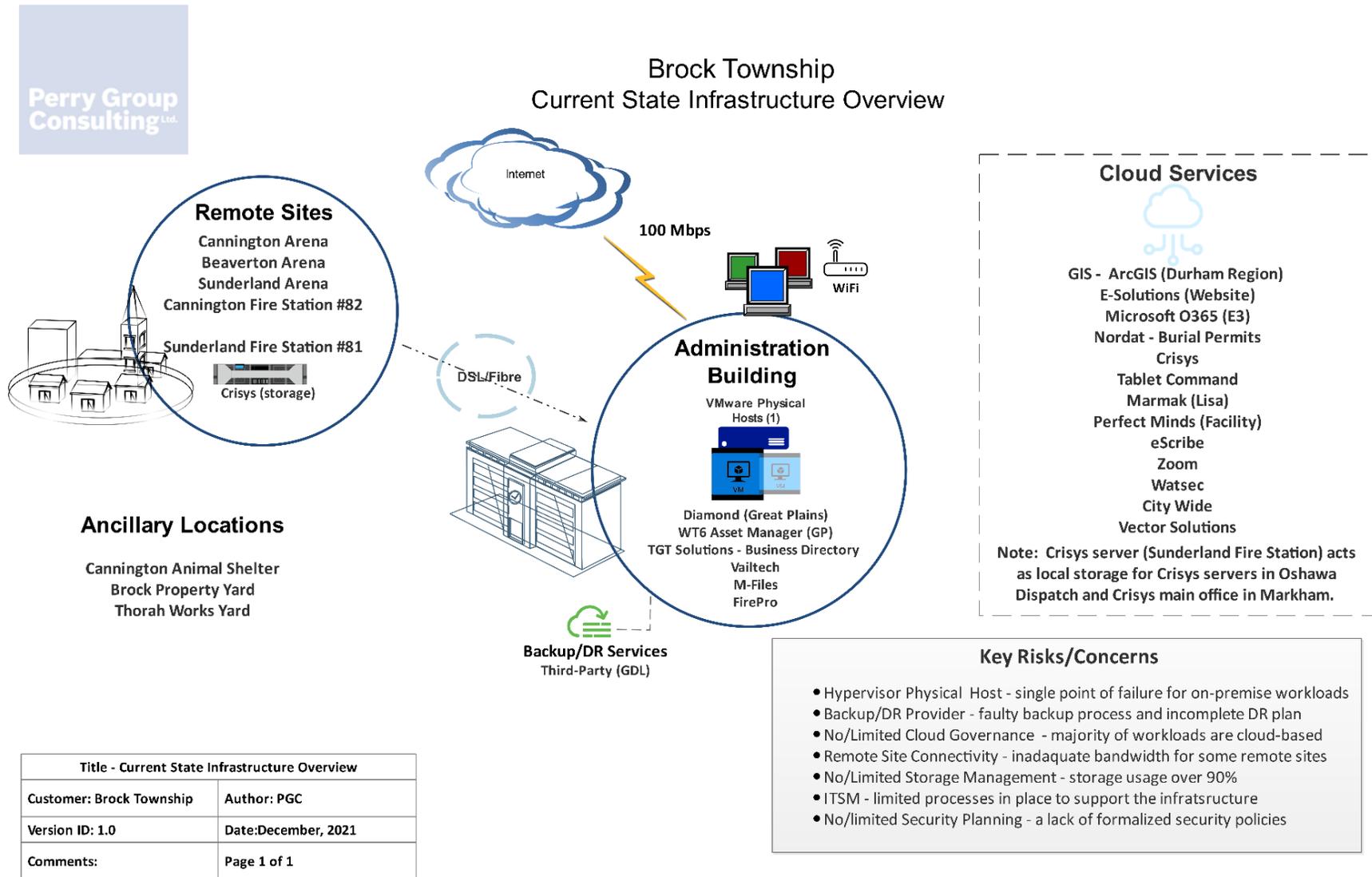


Figure 13: Current State Infrastructure Overview

5.2.1. External Managed Service Partner (Next Generation IT)

The pressure on organizations to deliver higher IT service levels and new IT-enabled capabilities is unrelenting.

IT is expected to help accelerate application delivery and do so while managing costs. Next generation IT infrastructures built on Cloud technologies provide an automated platform for the delivery of IT services. This model allows smaller municipalities such as the Township, to leverage Cloud-provider technology achieving hardware and software efficiencies.

Currently, the Region provides ad hoc IT services “as required” by the Township; however, this arrangement is not bound by a formal Service Level Agreement that includes a catalogue of IT services, response time requirements, metrics, etc.

It is with this mindset that the Township should explore a more structured agreement with a vendor specializing in Cloud expertise to support the internal IT resource. The third-party should specialize in the implementation, support, and development of Cloud services. This would include services such as: cybersecurity, Cloud architecture, Cloud integration. The ideal provider would have the ability to assist the Township in developing a formal Cloud migration plan supporting the recommendations in this report coupled with expertise in ITSM disciplines. This model could present opportunities to leverage a partner’s ticketing system.

The Region should be provided an opportunity to bid on this work along with other qualified providers.

5.2.2. Introduce IT Service Management (ITSM)

IT Service Management helps an IT organization understand the levels of service it delivers to its clients, where service needs to be improved and what should be done to make the improvements. The challenge for a small organization is “right-sizing” ITSM for their environment. This recommendation should be executed in collaboration with the third-party service provider the Township selects.

At a minimum, the following three ITSM processes should be implemented with assistance from the external managed service provider as described above in the [External Managed Service Partner \(Next Generation IT\)](#) section:

1. Develop IT **Performance Metrics** to establish service level satisfaction.
 - This allows the organization to determine focus areas for improving service.
2. Develop and implement a **Change Control** Process.
 - The Change Control Process helps to ensure that changes are not disruptive to the organization by evaluating value and risk of the change, communicating the change, and ensuring there is a fallback position if the change causes a malfunction.

3. Develop and implement an **IT Knowledge Base**.

- A knowledge base of issues, incidents and resolutions not only helps IT staff resolve issues faster, but it can also allow other personnel to examine the knowledge base themselves to see if they can fix their own problem. This results in more efficient IT operations and can also improve performance of non-IT personnel due to faster issue resolution times.
- As outlined in the [IT Leadership](#) section leveraging a third-party IT service provider with ITSM capabilities will accelerate the adoption of core ITSM processes.

5.2.3. **Cloud Governance**

The goal of Cloud Governance is to enhance data security, manage risk, and enable the smooth operation of Cloud systems.

Cloud policies are the guidelines under which companies operate in the Cloud. These policies can also be used for financial management, cost optimization, performance management, and network security. In considering the Township's current posture with respect to Cloud services, a policy must be developed to address current and future Cloud deployments.

5.2.4. **Cloud Services**

The majority of Township applications are delivered by third-party Cloud providers resulting in a reduction of on-premises infrastructure and support requirements. The recommended approach is to continue with this strategy by migrating existing applications considered to be "low hanging fruit" while embracing a Cloud-smart approach to future software procurements.

As a whole, local governments have adopted the Cloud as a quick and economical solution to implement new systems. The turnaround time, cost of maintaining infrastructure and the cost of securing the owned infrastructure are outsourced to the Cloud service provider. This approach will allow the Township to concentrate on business process optimizations and service improvements using the existing systems, rather than spending resources on maintaining hardware.

5.2.5. **Improve the Security Posture of the Organization**

The requirement to implement sound security practices is not a reflection on the size of the organization.

Recent cyber-attacks on small municipalities have resulted in significant service disruptions and, in some cases, a substantial cost to recover data (e.g., ransomware attacks). A single staff member with a virus on their computer could be unproductive for hours while the malware is removed, and everything restored. If that virus propagates throughout the network, then all personnel would likely be affected, resulting in significant service disruptions within the organization and to the Township's constituents.

Recommendations to mitigate the risk of such incidents include:

- Develop a Security Program to address risks and vulnerabilities highlighted in this report and the Watsec report.
 - A Security Program is not a one-time event. Rather, it is an ongoing program that first addresses the risks and vulnerabilities already discovered, and then introduces practices that mitigate the risk of these issues recurring.
- Develop and implement an IT Policy that includes security standards and practices (currently in progress).
 - The draft policies being developed (IT and email) are both concise documents – which is good – however, they require more content in some areas and some clarity in others.
- Ensure that all mobile devices are encrypted.
 - Encrypting mobile devices ensures that if a device is lost or stolen, the data on the device cannot be revealed or compromised.
- Implement 2-Factor Authentication.
 - 2-Factor Authentication (2FA) introduces a second layer of security access making it more difficult for an attacker to penetrate the Township’s network.
- Develop and implement a Disaster Recovery Plan and a Security Incident Response Plan.
 - A Disaster Recovery Plan is not just having a backup. The organization needs to understand which services are critical and where prioritized recovery efforts should be focused, in the event of an incident.
 - A Security Incident Response Plan facilitates the preparation for a security incident and describes the roles, responsibilities and tasks involved should an incident occur.

5.2.6. [Develop a Business Continuity Plan \(BCP\)](#)

The Township does not have a business continuity plan (BCP) that includes the recovery of technology in the event of a disruption in services (i.e., Disaster Recovery Plan). An agreement is in place with a third-party vendor to provide DR and backup services, however, upon review, this agreement lacks the components required for an acceptable strategy¹ (e.g., recovery time objectives, recovery point objectives, tabletop exercise testing, risk management).

¹ This is the opinion of PGC based on fundamental best practices outlined by the Disaster Recovery Institute International: DRII.ORG

It was also noted that the provider has not regularly tested the backups process. This presented a high-level of risk to the Township and may have been a breach of the Service Level Agreement (SLA).

The recommendation is to perform a formal Business Impact Analysis (BIA) to define recovery time objectives (RTO). Once these activities have been completed, a procurement process should be initiated to select a Cloud-based DR solution delivered by an experienced provider.

5.2.7. Storage Capacity Planning

The Township lacks storage management processes which has resulted in a major risk with the current storage capacity limitations: There is ~130GB of available storage space which is dangerously low and presents a high risk of disruption in storage availability and, by extension, the ability to access files.

As a first step the Township needs to run a storage analysis to identify “stale” unstructured data; data that has not been accessed in >1-year. Typically, a first-time storage assessment can expect to identify ~60% of unstructured data as a good candidate for offsite archiving (i.e., “stale data”). This process should support the opportunities identified in below section [Microsoft x365 Roadmap](#).

5.2.8. Microsoft x365 Roadmap

The Township has moved email into the Microsoft x365 Cloud and currently subscribes to the O365 E3 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 Office (Word, Excel, PowerPoint, etc.).

The next step for the Township should be an assessment to identify additional services that will support the IT Strategic Plan and by extension support business objectives over the next 1-5 years.

Microsoft released Microsoft 365 (M365) in 2017 as an enhanced bundle that combines the features of O365 with Enterprise Mobility and Security (Enterprise Mobility and Security “EMS”).

Some key capabilities that should be explored as part of an assessment should be:

- **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 feature adds extra value to the Azure AD authentication process and provides a better experience for your 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.

Note: 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.

5.2.9. Summary

The infrastructure recommendations in this report fall into the following key activities (see the Current State Infrastructure Overview diagram above):

- Develop a BCP/DR Strategy that includes data backup – a BIA must be performed as the initial step.
- Procure a Cloud-partner (Microsoft certified preferred) – this partner can assist with the Cloud journey and provide DRaaS (DR as a Service), backup, security, ITSM services.

Note: multiple partners can be used “as required”.

- Develop a Cloud Governance Framework – Cloud Governance will underpin data security, manage risk, and enable the smooth operation of Cloud systems as the Township continues its Cloud journey.
- Implement/move/integrate the following workloads to the Cloud:
 - SharePoint/M-Files – leverage the capabilities of SharePoint within the Microsoft x365 subscription service and integrate with M-Files (SaaS²); this will introduce collaboration capabilities to the Township.
 - Diamond (GP) – migrate to the CentralSquare Cloud offering (Pro Suite).
 - Continue with the plan to implement HRISMyWay (SaaS).
- Start the infrastructure decommissioning process of legacy systems (e.g., Vailtech, TGT Solutions).
- Continue the Cloud journey with a “Cloud-smart”³ philosophy.

² SaaS: Software as a Service – a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted.

³ Cloud-Smart: interdisciplinary approach to IT modernization in order to provide improved return on investments, enhanced security, and higher quality services.

Brock Township Future State Infrastructure Overview

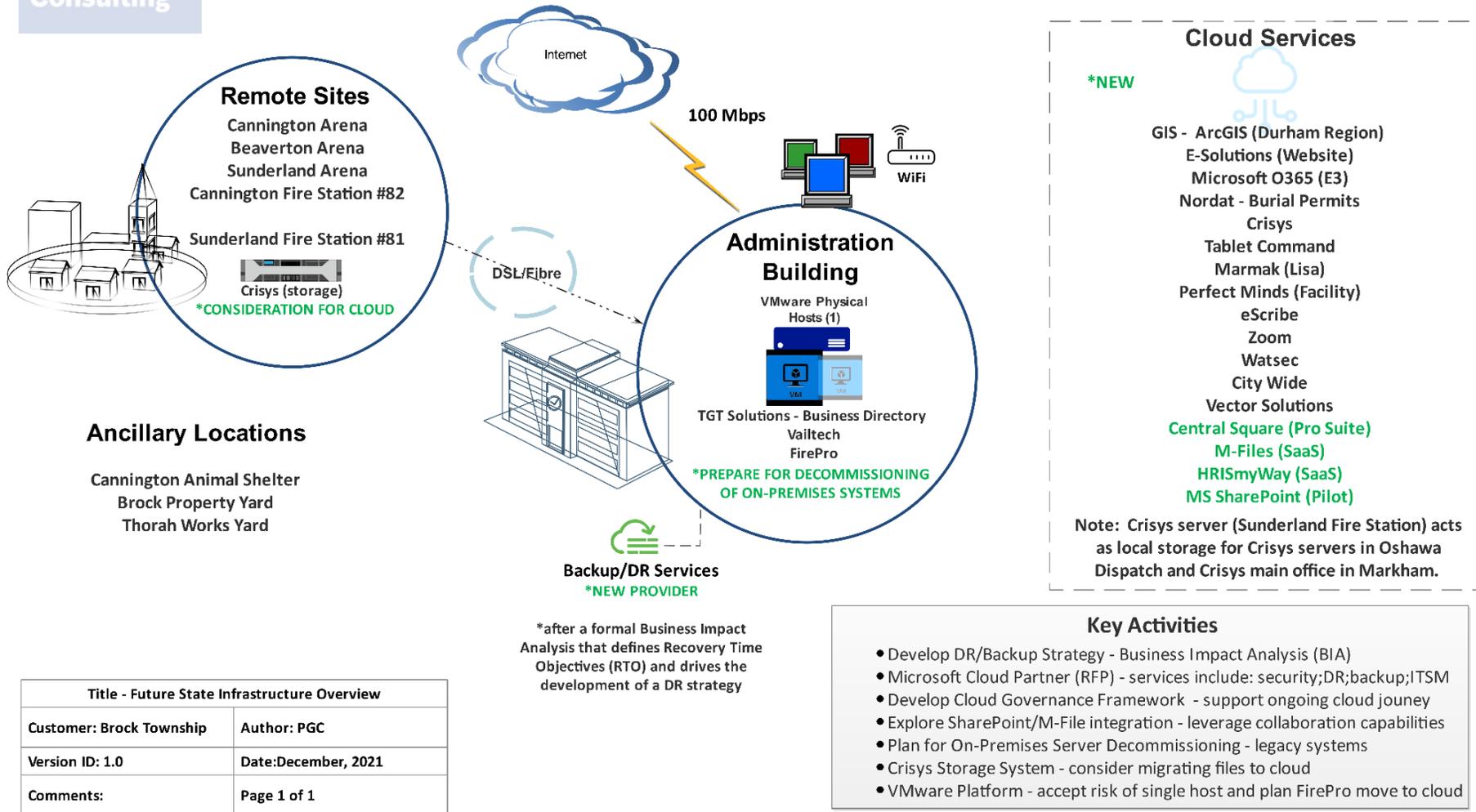


Figure 14: Future State Infrastructure Overview

5.3. Service Transformation and Business Solutions

Well-designed, standardized and digitized processes / services are the foundation of a well-run organization. Business solutions enable the operation of these digitized processes. Ideally, workflows are designed to take advantage of modern capabilities but, in order to do so, it is important to ensure that they are well-designed, actually in place and understood by all.

Technology-based business solutions enable processes to be digitized and automated which enables staff to better deliver their work at an adequate scale.

When processes are digitized into robust business solutions, all necessary transaction processing can be carried out digitally and occur anywhere. Offline steps (manual interventions such as checking a paper file or getting a physical signature) are largely reduced to the point of elimination.

The best run organizations – those that fully realize an Return on Investment (ROI) from their technology investments – are those that rely on a combination of **people, processes then technology** working together in a synchronized fashion to manage operations and deliver exceptional services. This mindset and approach must be top of mind for Brock when planning and delivering technology projects.

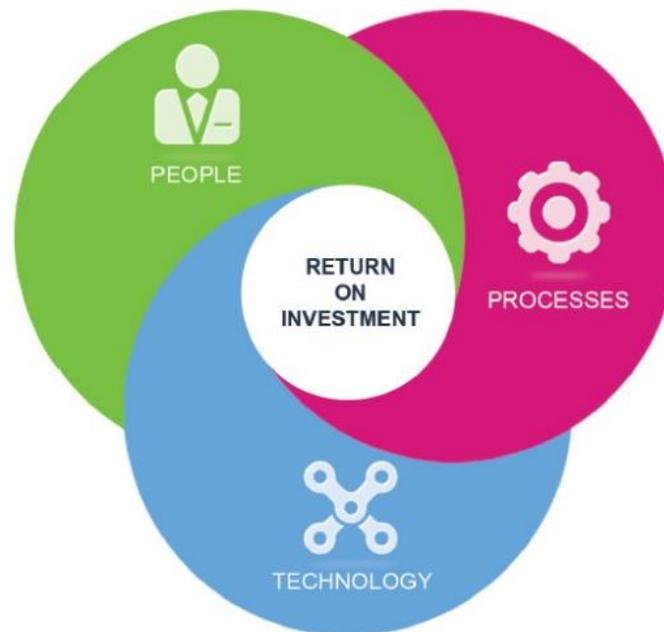


Figure 15: People, Process then Technology = ROI

5.3.1. Business Process Optimization

No one should digitize a “bad process”. Manual processes that are inefficient today will not automatically improve if automated by technology. There is far more to it than that – a full end-to-end review of the associated process is required.

Like many municipalities, the Township has business solutions that have the potential to automate processes end-to-end but instead, are only being used to store data or automate very specific actions *within* processes.

The Town needs to automate and deliver self-service opportunities for staff. Internal digital services will help to convert the high-volume, repetitive transactions and processes that staff must currently carry out into smooth, simple, self-serve digital transactions, reducing friction, speeding up processes and minimizing administrative overhead.

Activities that could be done better by a business system should be automated. Leveraging the (currently unused) functionality of platforms like Great Plains, Citywide and M365 has the potential to completely transform how work is done in Brock. Saving staff time to instead focus on the more important (and complex) aspects of municipal service delivery.

Business Process Optimization (BPO) is an exercise that can help refine the myriad of processes running through an organization by collaborating with those who manage and interact with them.

BPO develops an “as-is” process as well as a “desired future state” which allows an organization to target areas to make the process more efficient through elimination of steps, better use of technology, out-tasking, etc. As noted previously, it is critical that the entire end-to-end process is reviewed when looking at a functional area. For example, a building application process would begin when the Township receives the application from the customer and concludes when they are advised of the result.

BPO work can be complicated (at first) and there are various professional certifications that address this space. As a result, there are many service providers that could be engaged to take Brock staff through a few examples of a BPO review in order to help root the discipline (and mindset) within the Township.

Objectives such as reducing paper within a particular process, further enabling remote work, or making the budget process easier to manage are all examples that could drive a BPO project. The decision on what to review is ideally made at a corporate level.

It is recommended that the IT Steering Committee prioritize and target 2-3 current processes for a BPO review and retain professional services to lead the exercise. Work and asset management processes (and potentially expanded use of Citywide) as well as the building approvals process are good opportunity areas to begin this work.

The typical steps in a business process optimization effort are:

- Scoping and Planning.
- As-Is Analysis.
- To-Be Design.

- Transition Planning.
- Continuous Improvement.

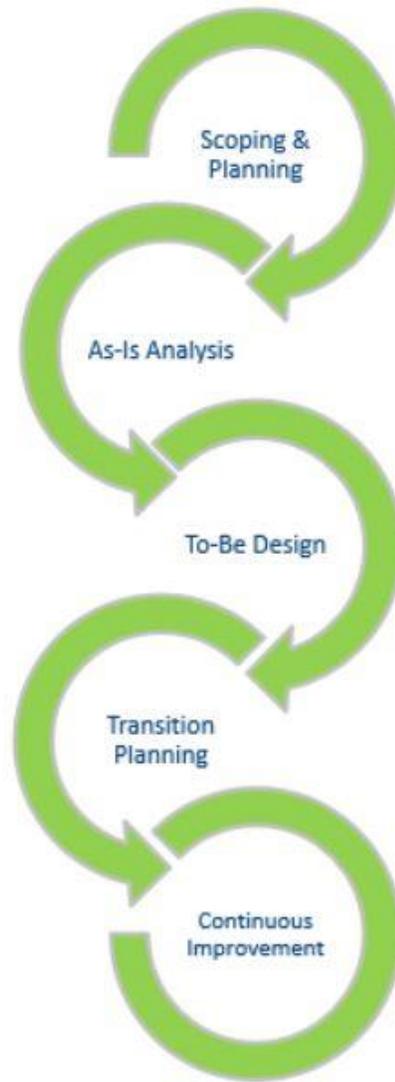


Figure 16: BPO Process

5.3.2. Consolidate and Rationalize Business Systems

An application rationalization and consolidation initiative would help reduce complexity, increase the value and feature sets of critical systems and, over time, reduce the total cost of ownership. Decisions made to consolidate or rationalize systems is ideally approved by the IT Steering Committee.

Eliminating redundancy in functionality is the key objective. This further reduces the complexity of managing business solutions, data, and security implications.

Efforts to consolidate and rationalize are not easy – concessions must always be made. There is no system that can do everything well for Brock – it *must* rely on a number of solutions to support operations. That said, evaluation of these systems needs to take a minimum viable compliance perspective – meaning, sometimes “good enough” should trump a “perfect fit” if it means reducing the number of solutions required to support a business process.

When evaluating systems, organizations will often score them against two categories:

Business Value

Business value represents the inherent importance of an application to achieve the goals of a business team or organization. Evaluation of business value should focus on the following factors:

- Solves a business need.
- Provides operational efficiencies.
- Provides critical function.
- Utilization.
- User experience.
- Revenue generation / cost savings.

Technical Health

Technical health seeks to capture the technical integrity of the application and its impact to the technical burden of the organization. Evaluation of IT quality should focus on the following factors:

- Support.
- Data accuracy.
- Source code availability and quality.
- Reliability / security.

- Response time / ease of change.
- Technology.

Scoring the Business Value and Technical Health can utilize a simple “stop light approach”, indicating whether the overall health is represented as either high, medium, or low. Other factors – such as the number of users, the investment involved to date, maintenance, and support costs as the external support requirements necessary to maintain the solution – should all be documented. An evaluation of these factors upon completion should allow the Town to determine whether to tolerate, invest further or migrate away from each solution.

Brock currently has some solutions in place that do provide redundancy and could be rationalized. The following provides some recommendations, but further evaluation needs to take place and should be approved by the IT Steering Committee.

Fire

Consideration should be given to decommissioning use of Tablet Command, Burn Permits and Vector in lieu of further utilizing FirePro and Crisys. Although the latter system does not provide the same experience or features as the former, it is a required component of the current dispatch agreement. If, at any time in the future, this agreement changes, then FirePro may be an ideal solution to replace it. It is recognized that the Township has chosen ‘best of breed’ solutions in many cases as the solution is the one best suited for a specific purpose. This can be effective in terms of efficiencies and ease of working. However, there are increased costs of procurement and ongoing maintenance. There may also be a greater risk of errors through duplication of data. Brock should consider each solution on its merits, particularly when an agreement comes up for renewal, to see if one of the other platforms could accommodate its needs.

Work and Asset Management

Currently, there are elements of work and asset management that are supported by Marmak, ESRI, Citywide, GP WT6 (to be decommissioned) as well as various manual and MS Excel-based processes. Given that the Township’s asset management program is at an inception point, now is the ideal time to consider and designate a “single source of truth” for data relating to Brock’s various assets.

A much more detailed assessment should be conducted, however, further leveraging Citywide (with GIS integration) as the Township’s EAM solution will likely be the best path forward.

Records and Information Management

As noted below, the Township will need to implement RIM Foundations prior to adopting an ECM system. Without the foundations (process) and resources (people) in place, the technology will not help.

There is a lot of municipal evidence to support this. That said, further exploration of M-Files along with SharePoint and Laserfiche will help develop an understanding of what will ultimately work best for Brock. It is important to note that this is a

massive program of work and should be something that is strategically implemented over a number of years. The foundations (policy development plus corporate education) need to come first and that should be the focus of the Township for the next 1-2 years alongside some technology pilots.

5.3.3. Transition from Great Plains ERP (On-Prem) to CentralSquare Pro Suite (Cloud)

This recommendation is an important one for Brock to consider. Current use of the on-premise deployment of the Great Plains ERP is being severely bottlenecked by poor vendor performance and a lack of internal capacity and training. The level of utilization of the existing solution is very low – in fact, the tool is being used more as a record of information and data store for financial information rather than a utility to help automate and simplify the Township’s various financial management processes.

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 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.

CentralSquare (GP vendor) has released a suite of Cloud offerings that include functionality around asset management, human capital management as well as several other municipal services. Given other recommendations within this report with respect to moving to [HRISMyWay](#) (for time, attendance and payroll) and [CityWide](#) (work and asset management), the Township will need to explore what CentralSquare offerings make the most sense with a focus on not creating redundancy with existing or planned solutions. The vendor will help the Township explore these options, however, these should also be built into the procurement considerations when going out to RFP. Finance Enterprise, CentralSquare’s Finance, HR and Payroll module is the dedicated offering similar to what Brock has today, however, as noted, still provides some redundancy if the Township decides to move to [HRISMyWay](#).

The focus of the CentralSquare [Finance Enterprise](#) module of Pro Suite is largely the same as the existing GP variant currently used by the Town, however, it will be much simpler to configure in order 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. Staff are currently overwhelmed by operations; there is very little time to invest in optimizing technology. A Cloud-based ERP will 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 Brock with respect to the GP ERP. 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 to procure new services from CentralSquare.

We do feel that the market shift to Cloud is likely a principal factor here. CentralSquare, like most other software providers, is dedicating more time and resources to Cloud which will evidently trickle down by way of better support to Cloud customers. We have had several conversations with municipalities who have shifted from the on-prem ERP to the CentralSquare Cloud equivalent, and they have noted a solid improvement in the level of support they received.

We know that Brock will need to plan and procure a Cloud-based ERP at some point in the future – the current situation is not sustainable over the short- or long-term. Moving to CentralSquare Finance Enterprise in the near-term will eliminate some of the challenges the Township is currently managing in relation to modernizing the GP ERP to automate workflows. This transition is being recommended because it should help to free up staff time as soon as possible in order to focus on other priorities. Further rationale for making this jump now is that there is familiarity with the existing ERP capabilities (which are nearly identical to the Cloud product and the costing should be relatively in line with what the Township is already paying for the on-premise solution).

The Township can view this shift as an interim measure as, at some point over the next three years, the organization may want to develop formal requirements for an ERP in order to “test the market” through a procurement vehicle to see if there is value in moving to a more robust ERP. This will be a decision that should be made through the IT Steering Committee and aligned with the overall ability to procure, implement and evolve another product around the ever-changing needs of the organization. Net new ERP implementations can commonly run in excess of the \$250K - \$1M range (just for the initial implementation) and often require years of change management to ensure they are being adopted and optimally leveraged by staff.

What will be important to support both the near and latter term approach, is that there is a business leader (ideally the Treasurer) who has the capacity to actively sponsor the change and who can work with the forthcoming IT Coordinator to champion the project.

Regular reporting and project approvals should be managed through the IT Steering Committee. Without leadership and the proper upfront engagement across the corporation, a change project such as this (both the short-term transition to the CentralSquare Cloud solution or the eventual migration to another product) can lead to an implementation of technology which does not provide for adequate ROI. Treasury will clearly have a major stake in what the final ERP solution needs to provide, but requirements from across all departments are necessary to ensure that workflow automation is possible and will be adopted by staff. In this case, a longer-term project with engagement throughout is better than a shorter-term one without enough.

5.3.4. Evolve Use of Citywide for Asset Management and CMMS

As noted, Brock needs to modernize and digitize its work flows to enable greater efficiency, especially for field workers. A platform such as Citywide can manage and track assets, facilitate remote access through a mobile application and automate various aspects of workflows reducing the need for manual interventions. In short, Citywide (like many Work and Asset Management systems) can help to modernize the back-office, provide tools to simplify work as well as improve data and reporting.

At the time this report was written, Brock was exploring various opportunities to leverage the forthcoming Cloudpermit tool with neighbouring municipalities. Online permitting is also provided by Citywide, however, Brock will likely be better served to continue investigating ways to utilize Cloudpermit in this area as it will likely lead to better support of the system by way of the partnership with Durham Region, Scugog and Uxbridge.

Brock should continue to plan to evolve use of the Citywide platform, particularly in the areas of asset management and CMMS as currently there are no default solutions in place that would adequately support these functions. Employing a vendor management approach, the Township should develop a project-based approach that assesses current state (perhaps focusing on Public Works first), builds some requirements and identifies what will need to be in place to support further adoption.

This work will likely require a project sponsor and an administrative liaison (ideally, a vendor manager) representing IT (TBD) who can be dedicated to the project. The staff lead will ultimately need to work with a number of staff across the organization to not only gather requirements needed for implementation but also ensure they are prepared for the changes that will occur when moving workflows into the system.

There is a myriad of considerations when looking at expanding use of Citywide – most notably current state process maturity (don't automate a bad process), integration requirements (ESRI GIS, Marmak, GP, etc.), PSAB and financial regulatory compliance, mobile technology as well as data and reporting. Paid secondments with backfilled positions provide the most optimal and expeditious way of implementing a project of this scale. The IT Steering Committee should also be involved in decision-making as this project would have wide-ranging corporate impacts.

5.3.5. Procure an HRIS and Prioritize Staff Self-Service

The Township has recently applied for funding in order to procure the CentralSquare HRISMyWay solution. Currently, Ceridian is being used to manage this process, however, the functionality to provide self-service to staff in order to manage and track time and attendance has not been deployed. While we do not have a preference between vendors, automating the time and attendance process would be a massive improvement for the Township and would expedite the entire payroll process. Currently, there is far too much time being spent on the part of departments who all seem to manage the process differently which creates regular bottlenecks in the Treasury department as they process payroll.

Regardless of the HRIS solution Brock decides on, consideration should be given to that which will provide the easiest self-service to staff. This includes automated time and attendance (through online forms and tracking, etc.) but also reporting and analytics. Departmental leaders require employee information and needs will vary greatly between departments with more complex staffing arrangements and operating models (e.g., unionized workers, 24-hour shifts, etc.). Given that there is no dedicated HR support within the organization, allowing staff to help themselves in order to get at this information should be a very highly prioritized need when procuring a new HRIS solution.

CentralSquare also offers an automated payroll service as part of their [Finance Enterprise](#) suite so it will be important to review this closely to ensure optimal alignment between Cloud solutions. Typically, the more you can [consolidate around one platform](#), the better and easier it will be to bring new services online.

Integrations between Cloud solutions is achievable but doesn't always look the same – some may even need costly development work in order to accomplish. It is critical, when procuring point solutions, that strict attention be paid to whether it will be able to fully integrate with other solutions used today. Vendors commonly have an ability to integrate out from their solution (and will sell on that point) but they can't fully commit this is possible without knowing what solutions they need to integrate with.

5.3.6. [Prepare for Cloudpermit \(Building Permit Approval Process\)](#)

The Township is planning to utilize funding to procure the Cloudpermit solution in order to automate the building permitting processes for applicants, builders and staff.

Cloudpermit provides capabilities to not only issue permits quicker than the current manual process in place, but also better track and disseminate related information to stakeholders. In order to prepare for the onboarding process, the Township should undertake a [BPO Assessment](#) in order to maximize the potential of leveraging the technology.

Cloudpermit is a good tool, but to simply attempt to layer it on top of the existing process would be arduous and ineffective. The end-to-end workflow related to building approvals needs to be optimized and improved – the decision to procure Cloudpermit simply expedites the need to do this work as it should be completed prior to implementation.

5.3.7. [Procure a Bylaw Enforcement and Licensing Solution](#)

In large part, the Bylaw Enforcement area operates using manual workflows while also leveraging FirePro and eSolutions to help automate aspects (document management, complaint submissions).

Replacing the current state with a full end-to-end digital solution to facilitate bylaw enforcement would be hugely beneficial in coordinating investigations and inspections, field enforcement (remote ticketing) as well as automating notices and reminders. Licensing is another area that could be vastly improved if managed through a centralized solution that digitizes the underlying process. Both areas are managed by the Clerks department which should lead an initiative to review options to procure a Bylaw Enforcement and Licensing solution for the Township.

Marmak (Brock's current Land Management system) provides Bylaw and Licensing modules which should be explored. Consolidating further on Marmak would be optimal as it would integrate seamlessly with property information already being maintained within the system.

That said, further review is necessary to determine whether these modules would be sufficient to automate the associated end-to-end workflows (e.g., from complaint to resolution).

eSolutions provides ample opportunity to digitize the front-end through eForms, so the review should instead focus on whether a solution can automate the entire process rather than simply components of it. Cloudpermit may also be a solution to evaluate given that the Township is already moving toward it for digital building approvals.

5.3.8. Expand Use of GIS

Brock has been utilizing GIS services through Durham Region backed by the ESRI ArcGIS platform for several years now.

A service contract is currently in place, and the Township does not pay the Region to access the solution. More can certainly be done to expand use of GIS, however, the Township will need to ensure that proper leadership is in place in order to manage the program of work.

Municipal Addressing

GIS systems, like ESRI, are quickly becoming a “single source of truth” for municipalities to use in order to manage their asset and property address information. The lifecycle associated with municipal addressing – from site creation to demolition – is dynamic and ever-changing. Normalizing this data becomes nearly impossible if duplicated within various information systems (e.g., Marmak, Citywide, PerfectMind, Cloudpermit, etc.).

By leveraging ESRI as a centralized hub for municipal addressing in Brock, it would only require an address change to be made *once* as ESRI would then push that change through to other solutions by way of integrations with them.

There are very few (if any) system-to-system integrations managed by Brock currently and they can add complexity when procuring and configuring systems. That said, the efficiencies created by accurate data being available to everyone – from back-office worker to field staff – is something that can help reduce confusion, avoid duplication, and enhance customer service.

Field Maps and Collector Tools

ArcGIS Field Maps are another area that many municipalities are using to assist with remote data collection.

Developed on the ESRI platform, these mobile apps allow remote workers to interact with maps in order to navigate workflows, report their location and collect data from the field. Currently, many Brock field-based inspectors must manually collect this information (usually using paper forms), drive back to Town Hall and populate a system or physical file with the findings. With a Field Map, this can all be done while the worker is onsite, creating data that is immediately accessible by anyone who needs it (e.g., back-office, approver, customer, etc.).

GeoHub and Open Data

[Durham Region's open data portal / GeoHub](#) is built on the ESRI ArcGIS platform. This service provides access to some maps and information regarding things like community trails, ongoing Public Works projects, transit schedules and routing, and so on.

Currently, Brock's [ward boundaries map](#) and [2016 Census data](#) are available via the GeoHub, but so much more can be done to expose information and engage residents through this platform. For example, the City of Brampton has published a number of dynamic [performance dashboards](#), [story maps](#) and [personas](#) that help visitors navigate to the information they want. In many ways, data and GIS portals are becoming another way in which residents can access information from the municipality.

The Township could certainly consider building its own GeoHub (like [Whitby](#) did), however, should first curate a more active partnership with Durham Region to explore ways in which shared value could be delivered through the Region's existing GeoHub.

Brock would need to identify someone within the organization to help manage this relationship and lead the work. At first, this could simply be locating Brock-specific information which can be released through the Region's GeoHub as an open dataset or map. Next could be building a budget dashboard or story map. What will be key is the partnership with Durham Region and an understanding of how each municipality can collaborate to enhance the overall experience for citizens.

Multiple Databases

Brock currently has two modes of managing GIS Data and two GIS databases that are not always synchronized. There is an internal system and there is a viewer system from the Region. It is recommended that a single database be used so that there is only one source of data.

GIS Roadmap

The previous examples are all good opportunities for Brock to consider in expanding use of GIS, but there must be corporate agreement in place before moving forward with anything.

Most municipalities will develop a GIS Strategy or roadmap that helps sequence work in accordance with organizational needs as well as its ability to deliver. The IT Steering Committee should explore the potential of creating a GIS roadmap at some point in the next 2-3 years. Having this in place would clarify the overall intent of the work, designate leadership behind it and help guide budget and process optimization decisions. An external consultant can be retained to help support this work for the Township.

5.3.9. Build a Corporate Information Management Framework

Records and Information Management is a large, multi-faceted, and complex corporate program of work that cannot be completed in short order.

Municipal leaders in this area have spent decades trying to implement best practices in concert with technology and priorities that are consistently changing. In brief, it's not really a curve you can get ahead of, so it's better to start small and scale out when it makes sense to do so.

As denoted by [ARMA](#)'s Information Governance Framework diagram below, there are various concepts that, when put together, form a corporate Information Management (IM) program. This varies from organization to organization and manifests according to the corporation's overall objectives and capacity to deliver.

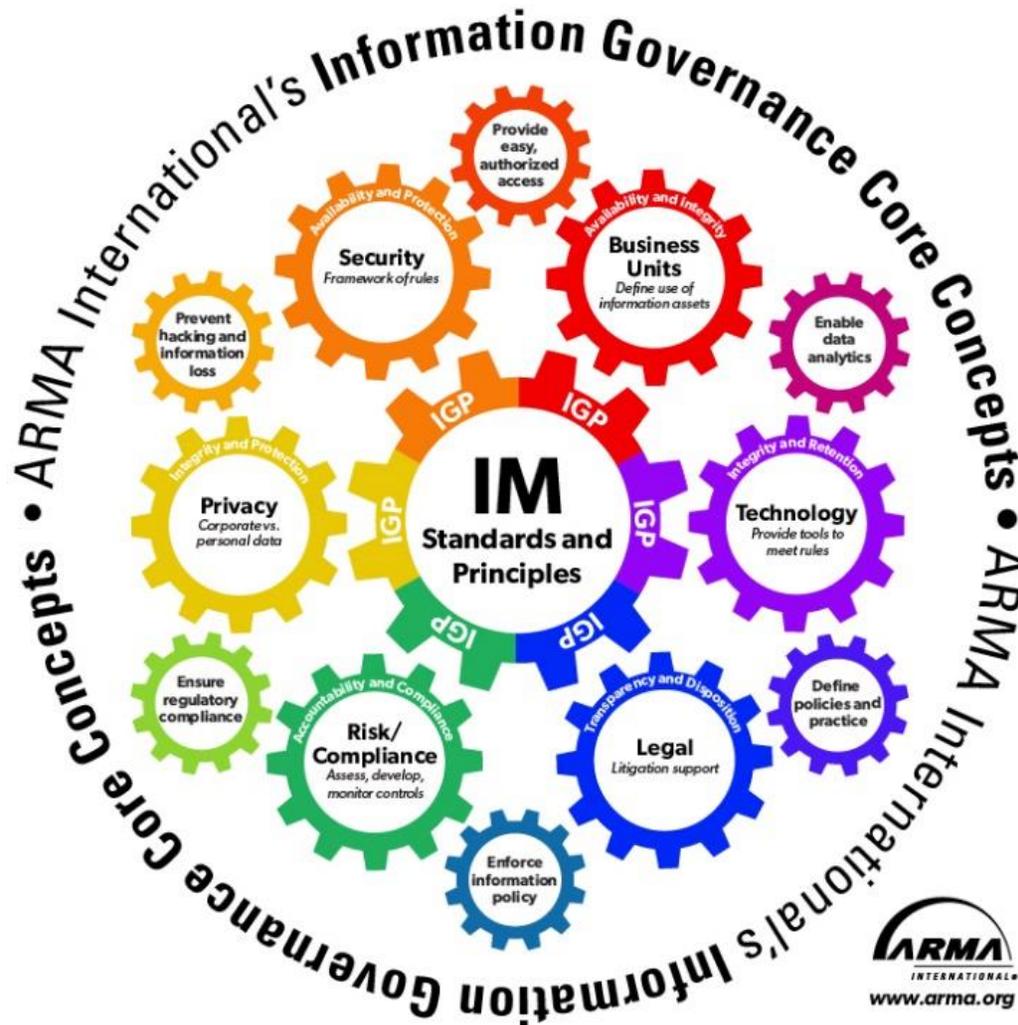


Figure 17: ARMA Information Governance Framework – Core Concepts

Leadership

As multiple skills and perspectives are required to manage in these areas, IM is often driven through a collaborative effort tied to the IT Governance process. In many cases, this is managed by way of a separate advisory committee that reports through to the IT Steering Committee. An early iteration of this could be to dedicate time at IT Steering Committee meetings to learn more about IM and how to coordinate a more strategic approach to it.

Ideally, IM is championed within municipal organizations by way of a partnership between Clerks and IT. This is the model we are proposing for Brock.

The Clerks department is a logical choice given the relationship with records management and having been delegated responsibility for the FOI process. The IT Coordinator (in Brock's case) will have familiarity with business solutions as well as the various operational requirements around data management (e.g., data access provision, storage, and backups, etc.).

These two perspectives are crucial in managing corporate IM and the main reason we suggest waiting until the IT Coordinator is hired in order to develop a Corporate IM Framework. External resources can be brought in to support the Township with this work, if required.

Vision and Goals

It is important to have a vision and goals driving the development of an IM program. It needs to be an honest depiction of where the Township needs to go and why it's important to get there.

The vision for the Township should be on reducing manual processes and use of paper to support workflows. It is possible to assert that Brock will strive to eliminate paper and become a fully digital workplace. We recommend developing a vision statement along these lines and establishing a model that can help guide the work through an IM Framework. This should be aspirational but also acknowledge that it will take multiple years.

IM Framework

There are a variety of frameworks and reference models that can be used to develop a "made in Brock" approach to IM, however, the Township should begin by developing a **Corporate Information Management Framework**.

An IM Framework will help to establish the early foundations of an IM program for Brock and provide an overarching structure that will help staff manage and control information assets on a more consistent and standardized basis. The initiative does not need to be overly onerous as various models are available for reference and/or adoption (e.g., [Alberta](#), [Toronto](#), [NSW](#), [Gartner](#) etc.). This should, however, be an exercise where everyone within the organization has a voice.

The intent is to develop a framework that speaks to things like the overall vision, governance and organizational roles associated with the information lifecycle. When in place, an IM Framework can help to guide decision-making to develop policy and procedures as well as procure and configure solutions.

Again, the idea is not to get over encumbered by this process; it is simply meant to facilitate conversations in order to contextualize what IM means to Brock.

The Framework can be very concise at the beginning and evolve over time – it should reflect the current state of the program, yet also be aspirational in terms of goal setting. In many ways, this Framework can become the Township’s “IM Strategy” until such time that the organization is ready to delve deeper and conduct a more detailed strategic development process.

5.3.10. [Develop an Information Classification Schema](#)

The proliferation of unstructured data has presented a challenge for Brock who 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 in order 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.

Given that Brock is currently utilizing a myriad of Cloud services, this data accumulation is not only happening within the onsite data centre, but also in the Cloud as well. As data is created and archived on various platforms on a daily basis, much of it can be forgotten and simply stored in perpetuity without adequate controls in place.

In conjunction with developing a Corporate IM Framework, Brock needs to prioritize the development of an **Information Classification Schema** that can help define the sensitivity of information regularly managed throughout (and beyond) the organization. This classification exercise does not need to be complicated. Some municipal organizations have simply adopted a Framework (such as the Information Security Classification Framework sample below) and completed a rough, [high-level classification](#) of their information in half a day, simply by brainstorming and using standard corporate reporting materials as reference tools.

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

Similar to the IM Framework, 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.

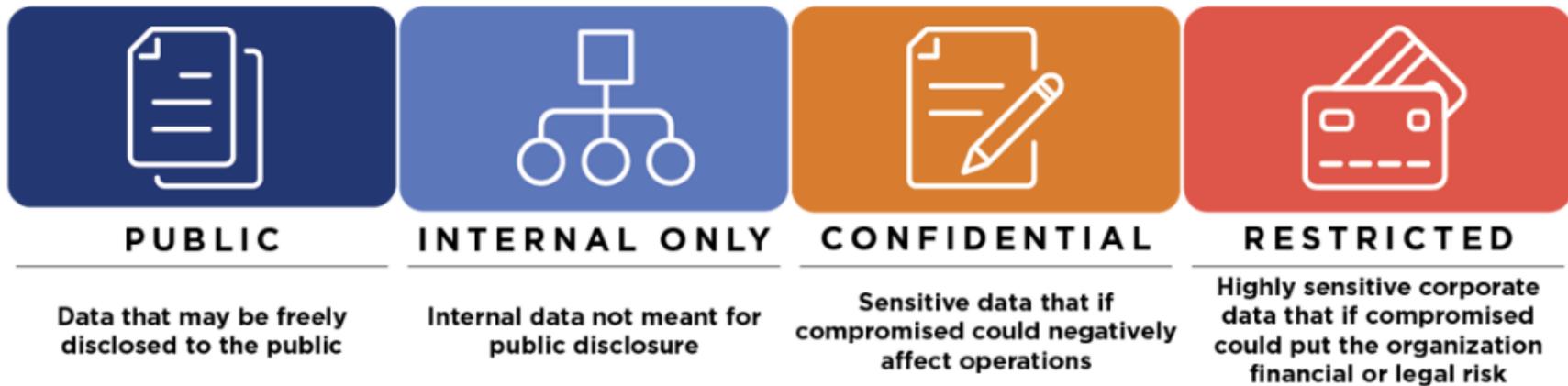


Figure 18: Information Security Classification Framework Sample

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.

Next to people, information is Brock’s most critical asset. The investment of time required to develop a schema and undertake an information classification exercise is a worthwhile first step for the Township to take.

5.3.11. [Develop Requirements for Brock’s Future Electronic Document Management Solution \(EDMS\)](#)

While developing an IM Framework and approach, Brock can also “test and learn” by piloting some of its existing solutions to manage specific aspects of IM. Often, small-scale pilots can help draw out larger questions to consider. Pilots will give staff some hands-on experience as they explore and “kick the tires” on existing solutions. Practically speaking, these pilot experiences will help to build a basic understanding (and document) of what will be needed in a future **Electronic Document Management Solution (EDMS)**.

There are various considerations, given the tools already in place at Brock. The Township has already purchased upwards of 25 user licenses for the M-Files solution, however, at the time of this report, only four are in use. The experiences of the four users should be reviewed and assessed prior to any further pilots being undertaken with this solution.

Laserfiche is also in place as a records management solution for the Township. The current utilization seems to focus on physical records management, although it is also being used to manage some electronic documents/records. Considering that additional modules are available through Laserfiche, both of these solutions could serve to be the Township’s future EDMS.

That said, Microsoft SharePoint is another option that should be explored. Brock will have access to SharePoint Online through the M365 licensing arrangement completed in conjunction with the Region. As of 2020, SharePoint Online now has the [capabilities](#) to fully manage both electronic and physical records within a municipal environment. Given that Brock is already on the way to standardizing on M365 and already has access to SharePoint Online, the solution itself might be ideally suited for the organization. Careful exploration of SharePoint Online as the Township's future EDMS is also supported by our recommendations to develop an [M365 Roadmap](#) as well as [consolidate and rationalize](#) Brock's technology footprint.

As the IM foundations are being established, the Township needs to also develop requirements for a corporate EDMS. This will include components of the IM Framework along with lessons learned through the pilots. It is important for Brock to take a careful and pragmatic approach in developing these requirements as well as ensure that the foundations are in place (people and process) to support an additional technology layer.

Within the municipal space alone, introducing technology without the necessary rudiments is the downfall of most EDMS projects. This is certainly an area where the Township should walk first, *before* racing toward a final technology solution.

5.3.12. [Build a Service Inventory](#)

The Township should create a service inventory that will help in tracking the progress of its digital services. Call volume data, website traffic and resourcing factors could help to inform development of this list and establish priorities where digitization work could occur.

Developing a service inventory will allow the Township to prioritize and plan the deployment of new digital services as well as identify Service Patterns or tools that could be replicated and re-used to develop other similar services. At minimum, it would be a way to expose which platforms the Township is currently using to manage web and online services (e.g., payments, registration, requests, etc.)

Such a list does not have to be overly complex – the following section lists an example developed by one of our other clients to help focus their efforts on publishing eForms for all of their services.

5.3.13. [Launch a PDF to eForms Conversion Program](#)

The Township has done well with evolving digital service options for customers. In order to further standardize the approach built on the eSolutions platform, the Township should launch a formal "PDF to eForms" conversion program. The benefits of eForms over static or fillable PDFs have been proven as eForms:

- Create opportunities for further automation, improved customer data and back-office integration.
- Provide a more consistent user experience (style wise, usability, branding, etc.).
- Provide better security (custody and control) of personal information.

- Utilize auto-complete features built into modern browsers making it easier for customers to complete.
- Make it easier to modify and re-design if collection requirements change.
- Provide mouse over instructions to assist customers.

Using the service inventory as a guide, services that currently require customers to populate and submit PDFs should be identified and marked for changeover. The service inventory should expand over time – the Township should continue to work through and prioritize services to convert using the eSolutions platform.

Other platforms could be considered here, however, there are already a number of eSolutions forms available on the website so it would be most efficient to continue using this platform for the time being.

It should be noted that it will always be optimal for services to be digitized end-to-end, however, in Brock's case, this will simply take time and a prioritized focus. Digitizing the customer-facing portion of a process is a good starting point that will compliment the ongoing service transformation work.

Concurrently with this work, an eForms conversion program should still be initiated. It's manageable and familiar to staff and will provide immediate benefits to customers. By undertaking a program like this, Brock could build a service inventory and create the ability to track the progress of digital services being offered, as illustrated in the sample tracking diagram below.

Service		Service Ownership		Service Patterns									
Service Name	E-form	Dept	Group	Apply	Be Notified	Book	Check	Get Info	Internal w-flow	Pay	Register	Request	Tell
Snow Clearing	Yes	Public Works	Operations Services					Y	Y				Y
Boulevard Maintenance	Yes	Public Works	Operations Services					Y	Y				Y
Sidewalk Snow Clearing	Yes	Public Works	Operations Services					Y	Y				Y
Short Term On-Street Parking	Yes	Legal and Enforcement	Parking Services	Y				Y	Y				
Parking Services Complaint	Yes	Legal and Enforcement	Parking Services						Y				Y
Pay a Parking Ticket	Yes	Legal and Enforcement	Parking Services							Y			
Driveway Widening & Curb Cuts		Public Works	Engineering and Infrastructure	Y				Y	Y	Y			Y
Curbside Garbage & Recycling	Yes	Public Works	Operations Services					Y					
Dispute a Parking Ticket		Legal and Enforcement	Parking Services			Y			Y			Y	
Permanent Sign Application		Legal and Enforcement	Engineering and Infrastructure	Y				Y	Y	Y			
Request a Tax Certificate		Finance Services	AP/R					Y	Y	Y		Y	
Pay Property Taxes		Finance Services	AP/R						Y	Y			
Manage Property Tax Billing		Finance Services	AP/R	Y	Y			Y	Y				
Freedom of Info Request	Yes	Office of CAO	Town Clerk					Y		Y		Y	
Tax Rebate & Relief Programs		Finance Services	AP/R	Y			Y	Y	Y		Y	Y	
Cat and Dog Licenses	Yes	Legal and Enforcement	Animal Services	Y				Y	Y	Y			
Marriage Licences	Yes	Office of CAO	Town Clerk	Y		Y		Y	Y	Y			

Figure 19: Sample Municipal Services Inventory Tracking List

5.3.14. Deliver CRM Features with Existing Solutions

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 and 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 operate as well. Larger municipalities that have a centralized customer service function and call centre are ideally suited to 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 Brock has done well in offering digital services and payments through its existing eSolutions website. We feel that the Township should continue to leverage eSolutions to modernize the front-end of service offerings (eForms conversion) and utilize existing relationships with online payment providers to enhance online customer service.

It would be worthwhile to explore other offerings within the eSolutions ecosystem. Over the past several years, this solution has grown to become a more robust web services platform for municipalities offering a number of modules that can complement the base web content management system (CMS). Given the various staff comments throughout our engagement, it would be advantageous for the Township to implement the "bids&tenders" module that has already been purchased. Improving this service will provide an enormous value for potential service providers as well as the internal procurement process in general. It is also advisable to explore use of [CityWide](#) to assist in managing customer service requests as it will help to bring in automation and better familiarize staff with the solution itself.

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 they come at a cost. In Brock's case, we feel that at least one, full-time position would be required (at minimum) 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 Brock continues to grow and the organization continues to modernize its processes and Cloud acumen, looking into a CRM solution might be a 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 the eSolutions and Citywide platforms to deliver on customer service improvements.

5.3.15. Expand Use of "Let's Talk Brock" (Bang the Table)

Bang the Table is a great platform to help extend citizen engagement into the digital space. Citizen engagement platforms have only grown in popularity and, for many organizations, have become the *de facto* manner in which public input is sought. Throughout the pandemic, municipalities have heavily relied on these platforms to complement online Council meetings and virtual public input sessions.

The real value in engagement platforms such as this is that they provide 24-hour access to citizens and can also create a 2-way conversation between the Township and users. This “real-time” interaction is something that also occurs by way of social media, however, dedicated engagement platforms have the tools and capabilities to structure input in a much more focused way.

With surveys, budget simulators, video media, idea maps, whiteboards, etc., engagement platforms have now become a powerful collaboration tool for municipalities. They also have helped to support the notion of open government as it becomes another channel to increase transparency and civic participation.

Brock’s current content and utilization of Bang the Table is fair, however, further consideration should be given to the following in order to build capacity to use the tool in a more prominent way:

- Use the tool for internal staff surveys and ideation to increase staff’s familiarity with it.
- Empower more staff to use the tool and become “active listeners” on the site (2-way conversational value).
- Create opportunities to allow citizens to profile neighbourhood and community driven initiatives (currently, Brock University hosts a [community podcast on YouTube](#) – this is an excellent way to profile community work and involve citizens).
- Facilitate “open engagement” activities to help inform pre-planning (seeking input at the “idea stage” can be a huge draw for citizens who often feel that a brief delegation at Council is sometimes already too late in the process).
- Identify / record skills within the community that may be inclined to volunteer with the Township or other citizen groups.
- Give sanctioned civic action groups a virtual space to convene, coordinate and communicate on their activities.

Use the public input collected by providing (aggregate) citations within staff reports and public communications.

5.4. Mobilizing the Recommendations

This section addresses how the Township should prepare for the implementation of the IT Strategy recommendations. There are a handful of important changes required in order to help achieve a true transformation.

5.4.1. IT Staffing

The Township is not able to optimize the current technology investment due to lack of support for business systems and process automation.

It is not practical for the senior Fire staff to play a part-time role in supporting the IT needs of the Township. Although they have been providing a good service so far, it is not sustainable for the future.

Perry Group is recommending that an internal IT Coordinator be hired to fill this important position. The new role will coordinate all technology-related activities and also play a support role for business systems.

The new IT Coordinator role should not replace the existing external service provider. The external services should continue with a focus on IT infrastructure and network, directly reporting to the new role.

The IT Coordinator role will include the following responsibilities:

IT Program – the role will manage the program which will consist of projects, initiatives and activities as directed by the IT Steering Committee.

Vendor Management – the role will liaise with all technology vendors including managed services providers, business solutions vendors and other third parties such as Cloud services providers. It will be responsible for ensuring these vendors provide service levels that are agreed upon and for developing business solutions roadmaps in use at Brock.

Project Management – the role will manage all technology-related projects, reporting on progress, risks and constraints to the IT Steering Committee.

Business Requirements – the role will be responsible for understanding the business technology requirements and proposing solutions including business process optimization.

Reporting – the role will report on a regular basis to the IT Steering Committee on proposed initiatives, current activities and other matters pertaining to the IT Program. It will also take any urgent issues to the IT Steering Committee and request special meetings if required.

Position in Organization

The IT Coordinator will report to the Municipal Treasurer but will be a corporate resource.

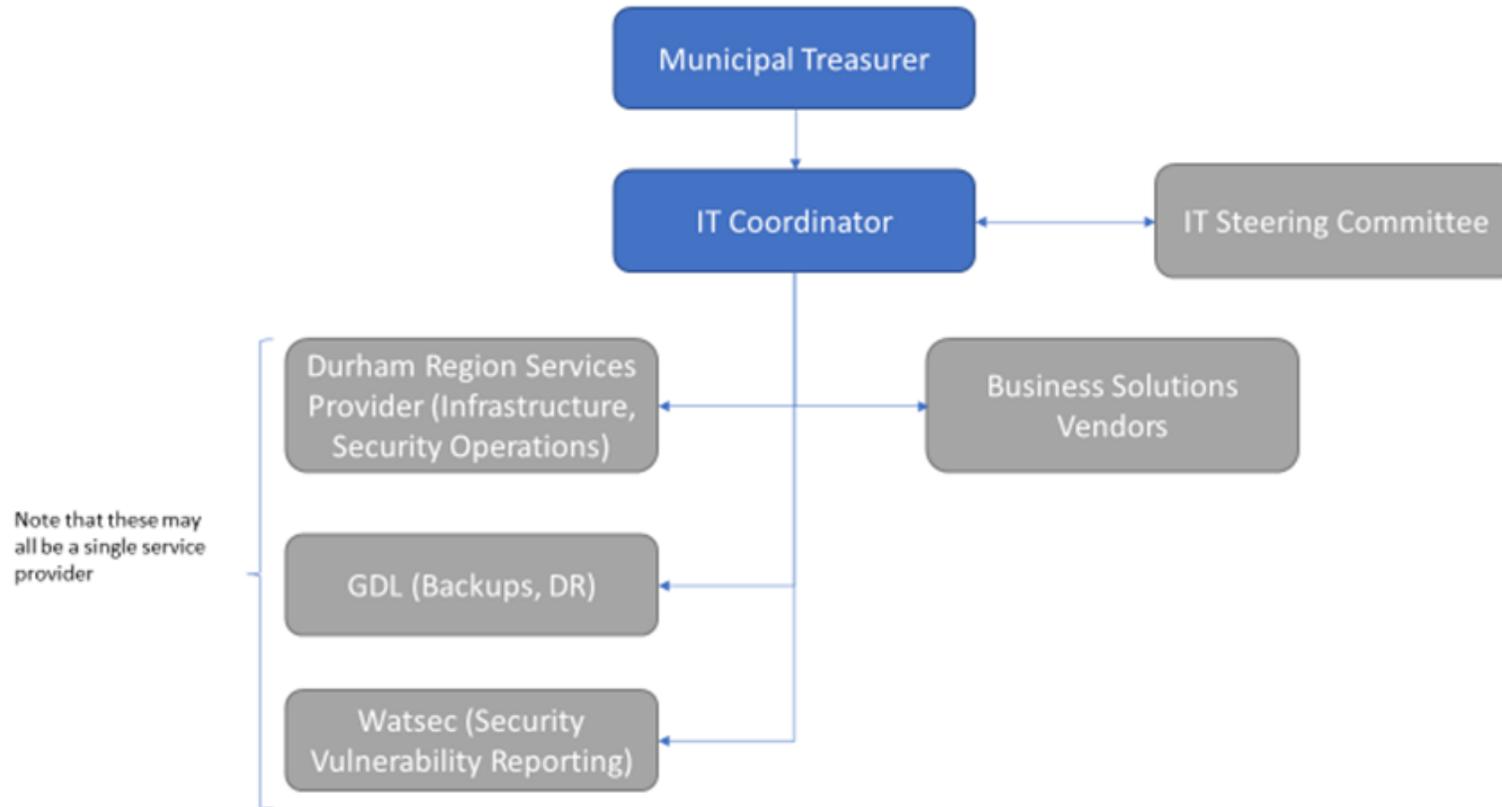


Figure 20: Sample Org Chart with IT Coordinator

5.4.2. IT Funding

In order to implement the recommendations of this project, the Township must fix the funding shortfall.

Some of this can be achieved through capital funded projects but there must be an operating budget increase to ensure that the Township keeps up with technology and is able to take advantage of it.

This is an investment for the future of Brock.

Work Plan

6.0 Work Plan

The following table identifies specific digital initiatives with their related cost estimates.

The Proposed Priority column indicates the priority set by the consultants based on the needs of the Township and the knowledge of the municipal industry and its customers. The IT Steering Committee may re-prioritize the Work Plan, if required.

Infrastructure, Operations & Support ■ Governance & Leadership ■ Service Transformation & Business Solutions ■

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
Year 1 – 2022					
1	High	Develop process to increase IT funding to implement the recommendations in this report	TBD	TBD	Will facilitate the implementation of the report recommendations
2	High	Ensure backups are working by testing backup and restore functionality and effectiveness	N/A	N/A	To ensure the Township can have confidence in the backups
3	High	Address the low SAN storage issue by archiving or otherwise reducing the amount of data stored on the SAN	TBD	N/A	Mitigate the risk of a SAN “crash” caused by running out of the minimum storage space required
4	High	Create the IT Steering Committee, develop the Terms of Reference and meeting schedule and implement	N/A	N/A	Will allow a corporate overview of IT solutions and initiatives
5	High	Develop and implement the Project Intake and Prioritization process	N/A	N/A	Allows Brock to take on projects based on organizational value

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
6	High	Develop IT Managed Services requirements	N/A	N/A	Pre-RFP work
7	High	Go to market to determine what is available for third-party infrastructure and security services, as well as a Cloud services partner. Ensure clear Service Level Agreements are put in place	TBD	TBD	Enable Brock to have a single qualified provider of key services
8	Medium	Finalize X365 agreement with the Region and expand the usage of X365 as described in this report	TBD	TBD	Allows Brock to take advantage of Region agreements
9	High	Develop a Security Program to address the risks and vulnerabilities highlighted in this report	\$65k	\$15k	Addresses all gaps and vulnerabilities identified in security assessments
10	High	Hire an internal IT resource (IT Coordinator)	\$5k	\$120k	Allows a dedicated resource to manage the IT Program, solutions vendors, and service providers
11	High	Ensure all staff are aware of the functionality of major systems and provide specialized training where required	TBD	TBD	Facilitates decision-making for business solutions

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
12	High	Develop and implement Cloud Governance	N/A	N/A	Enhance data security, manage risk, and enable the smooth operation of Cloud systems
13	High	Implement Cloudpermit solution	N/A	N/A	Deliver online permitting services to residents
14	High	Implement HRIS Solution	N/A (submitted for funding)	N/A (submitted for funding)	Allows Brock to begin the process of a full HRIS system that integrates with other solutions
15	High	Transition from Great Plains to CentralSquare Cloud	N/A	+\$5k – \$10k (licensing)	Improved functionality and services
16	High	Expand use of Citywide to include Customer Request Management	N/A	\$5k – \$15k (consulting)	Allows Brock to accept and track resident and business requests in a digital system
Yer 2 – 2023					
17	Medium	Develop and implement an IT Policy that includes security standards and practices (in progress)	N/A	N/A	Ensures everyone understands what is allowed and not allowed
18	Medium	Review current storage strategy, establish future strategy, archiving old/stale content where possible	N/A	N/A	Reduces SAN storage space and backup times and costs; improves performance

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
19	Medium	Develop and implement employee self-service on HRIS	N/A	N/A	Allows personnel to do many of their own tasks and saves time
20	High	Ensure all mobile devices are encrypted	N/A	N/A	Protects lost or stolen devices
21	High	Develop and implement a Disaster Recovery and Business Continuity Plan	\$35k	TBD	Ensures Brock can recover from a significant IT incident
22	Medium	Build Information Management foundations	N/A	\$15k – \$30k	Sets the stage for EDRM
23	High	Identify key business processes to improve and digitize; building permits are a key place to start	N/A	\$10k – \$15k (consulting)	Improves efficiencies and service delivery
24	Medium	Develop X365 Strategy	N/A	N/A	Pre-migration and usage plan
25	Medium	Migrate to X365 – using partner to assist in deployment – including Teams, SharePoint, OneDrive, etc.	TBD	TBD	Single collaborative platform for documents, communications
26	Medium	Integrate M-Files with SharePoint Online for document and records management – implementing Information Classification	TBD	TBD	Facilitates Records Management in M-Files
27	Medium	Consolidate and rationalize current business solutions	N/A	N/A	Reduces number of systems, costs

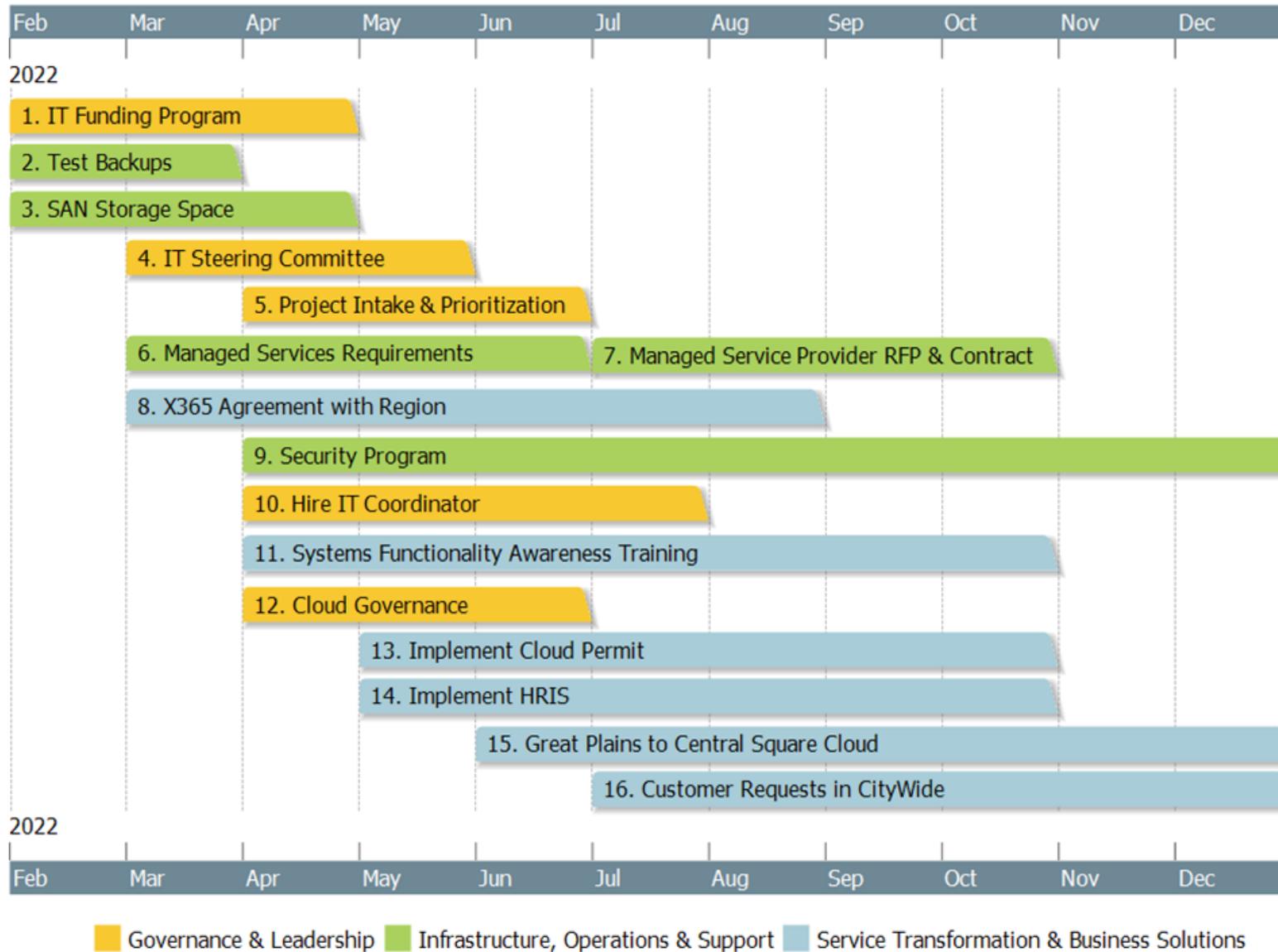
ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
28	High	Implement 2-Factor Authentication	\$2k	\$1k	Improved security
29	Medium	Begin program to digitize PDF forms	N/A	N/A	Improved service delivery
30	Medium	Expand use of Citywide to include Asset Management	\$12k	\$30k (consulting)	Facilitates a full asset management program
Year 3 – 2024					
31	Medium	Implement Bylaw and Licensing Management solution	\$15k – \$20k	\$12k	Delivers online services to residents
32	Medium	Develop and implement a Security Incident Response Plan	N/A	N/A	Allows Brock to respond quickly and effectively to a security incident
33	Medium	Develop/implement a Change Control process	N/A	N/A	Reduces risk of disruptions when major system changes occur
34	Low	Expand use of Bang the Table	N/A	N/A	Internal surveys and other uses
35	Medium	Develop and implement an IT knowledge base	N/A	N/A	Allows personnel to search for resolution to issues; saves time
36	Low	Develop IT performance metrics to establish service level satisfaction	N/A	N/A	Helps Brock to understand which services require improvement
37	Low	Develop and build a Service Inventory	N/A	N/A	Allows the Township to know which services are digitized

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
Year 4 – 2025					
38	High	Develop ERP requirements parameters and future needs	N/A	N/A	Lets Brock know what existing and new functionality is required
39	High	Review CentralSquare ERP performance and functionality and measure against requirements parameters and future needs to ensure it is meeting organizational requirements	N/A	N/A	Allows the Township to know if CentralSquare can meet their requirements
40	TBD	If ERP is not meeting requirements, go to market to discover other ERP systems with integration of required modules	N/A	N/A	Lets Brock know what other solutions are available to meet their requirements
41	TBD	If ERP is meeting requirements, continue with expansion and integration where appropriate	N/A	N/A	Allows for further expansion of existing solution

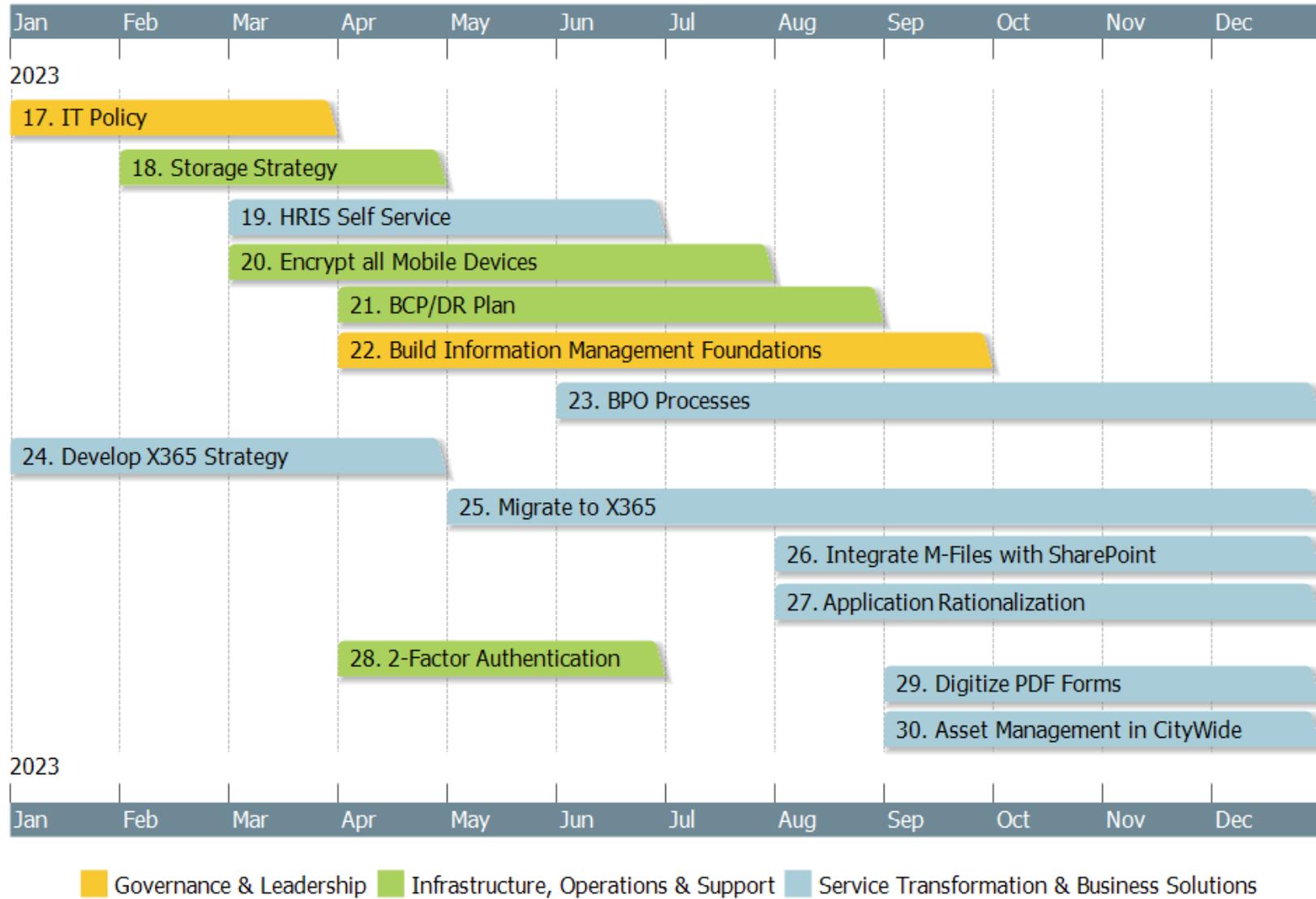
Table 3: IT Strategy Work Plan

6.1. Timelines

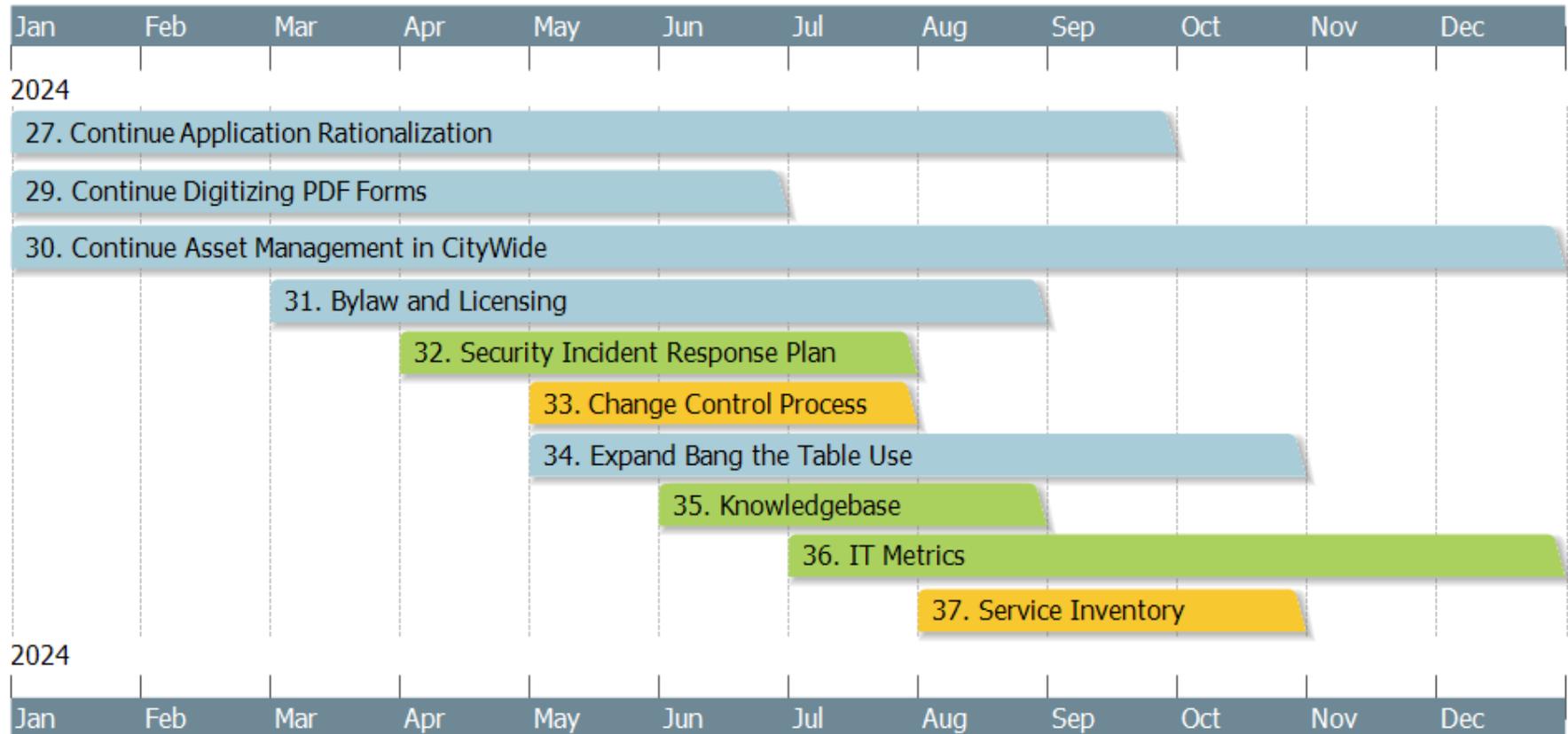
6.1.1. Year 1 – 2022



6.1.2. Year 2 – 2023

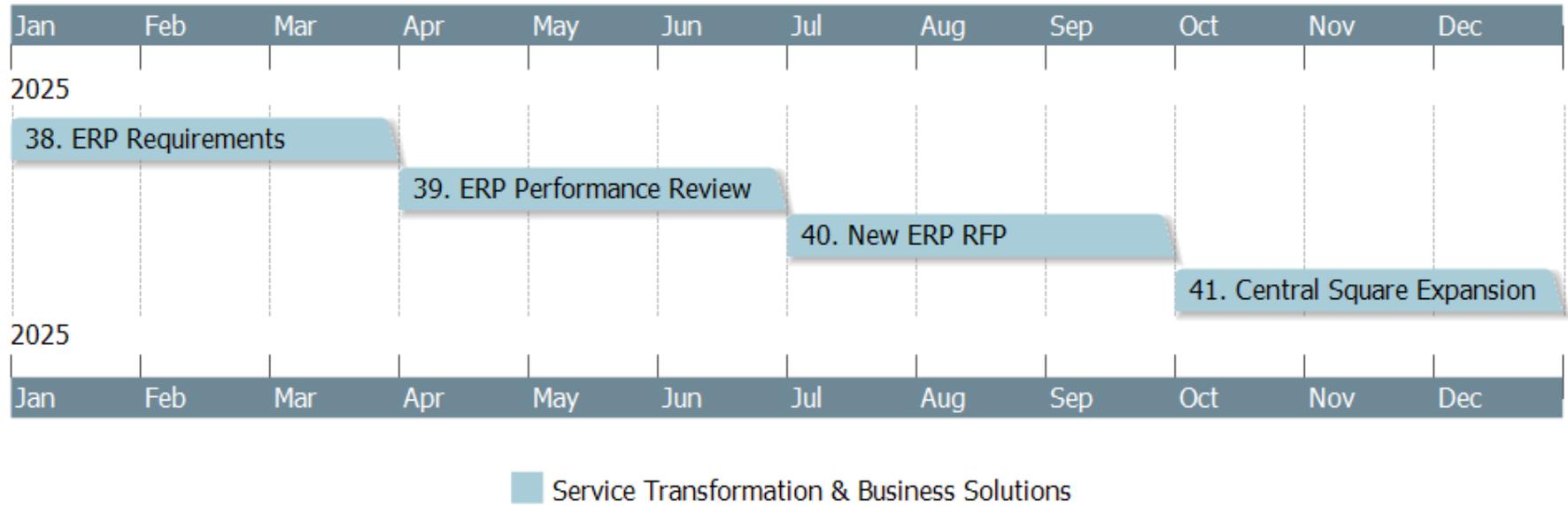


6.1.3. Year 3 – 2024



■ Governance & Leadership
 ■ Infrastructure, Operations & Support
 ■ Service Transformation & Business Solutions

6.1.4. Year 4 – 2025



Appendices

7.0 Appendices

7.1. Appendix 1 – Tables and Figures

- Figure 1: Connecting People Through Common Technology Systems 6
- Figure 2: Brock IT Strategy Focus Areas 9
- Figure 3: Perry Group’s Project Approach with Brock..... 24
- Figure 4: Municipal Technology Model 29
- Figure 5: Visualization of Technology Architecture Layers 33
- Figure 6: Brock MTM Assessment Results Visualization 34
- Figure 7: Brock MOSA Results 38
- Figure 8: Brock’s Digital Experience Assessment Results..... 39
- Figure 9: Chart Depicting the Township's IT Support Structure 41
- Figure 10: Brock Financial Analysis 46
- Figure 11: Brock IT Operating Expenditures 46
- Figure 12: Brock IT Strategy Focus Areas 51
- Figure 13: Current State Infrastructure Overview 55
- Figure 14: Future State Infrastructure Overview 61
- Figure 15: People, Process then Technology = ROI 62
- Figure 16: BPO Process 64
- Figure 17: ARMA Information Governance Framework - Core Concepts 73
- Figure 18: Information Security Classification Framework Sample 76
- Figure 19: Sample Municipal Services Inventory Tracking List..... 79
- Figure 20: Sample Org Chart with IT Coordinator..... 83

- Table 1: Transaction Cost Comparison Across Service Channels..... 21

Table 2: Descriptions of the Four Technology Layers.....	32
Table 3: IT Strategy Work Plan.....	90

7.2. Appendix 2 – Role of the IT Steering Committee (ITSC)

7.2.1. Introduction

An ITSC can take many different forms. For Brock, it is recommended that the Senior Leadership Team take on this role as there will be important business decisions that the leaders of the organization must address.

With this new vision and plan, there is the opportunity to enhance the organizational understanding about what it takes to deliver successful technology solutions.

By having the leadership team make the critical decisions, they can be sure that all technology projects align with corporate goals and solutions can be fully leveraged by multiple departments, reducing the need for many department-only solutions. Furthermore, the Township will work to ensure that selected initiatives are delivered successfully – using industry best practices around project management, business process design, and change management frameworks.

The ITSC should be responsible for three core functions:

- Priority setting, resource allocation, policy development and review, and approval of recommendations for key initiatives and strategic decisions.
- Holding IT and the business departments accountable for service delivery, both operationally and for projects.
- Annual review of the IT Strategy, IT Program and assessment of value delivered to the organization.

Terms of Reference (TOR) should be developed by the Committee as one of its first tasks.

7.2.2. More Specific ITSC Responsibilities

- IT Policy and IT standards review, approval, exceptions and enforcement.
- Expenditure review and trends analysis.
- Approval of major initiatives.
- Major project updates (top five projects) at defined milestones.
- Approval of any project change above 25% (time, money, resources).
- Review the progress of the IT Strategy and make necessary adjustments based on organizational priorities.

7.2.3. ITSC Mandate

- The Committee shall meet at least 4-6 times per year.
- The Committee shall review all proposals for IT investments with projected costs over \$10,000.
- The Committee shall also review proposals that significantly affect multiple departments.
- All proposals must be pre-reviewed by IT for technological merit.
- All proposals must be complete, according to the standard business case/project charter, to include clear definitions of business measures and benchmarks of progress. This will include cost/benefit analysis and clear calculation of ROI.
- All proposals must align with the ITSD recommendations.
- ITSC has the authority to reject or defer any proposal which it deems not to have made a sufficient business case or which does not significantly contribute to the strategic goals of the Township.
- At each meeting, the Committee will receive progress reports on all approved proposals. The Committee can recommend the termination of any project that is not meeting its projected goals.

Each year the Committee will provide the CAO and Council with a report that will review project progress of the previous fiscal year and set a priority list of projects for the coming fiscal year.

7.3. Appendix 3 – Service Patterns

This is being provided for the Township’s information as it is a good reference model to use when developing or converting to online services. By breaking down services into their component parts, you can identify common interactions and tasks across stages of services – things like reporting a problem, applying for something or checking eligibility.

These are what is called “service patterns”.

Service patterns are a generalization that help us look at a service in a conceptual, high-level manner, before getting too bogged down in details. Identifying service patterns allows us to break down services into their component parts, to build out guidelines and best practices that we can apply to the components. They help us identify how they can be designed consistently to meet user needs – even in relation to something as simple as an online form or payment process. And they also help us consider broader topics like ways of working, uses of underlying technologies and how services are supported by capabilities and processes inside organizations.

The table below identifies each of the service patterns and their related descriptions.

Pattern Name	Pattern Description
Apply For Something	Enables the user to complete an application process. In most cases, this pattern is linked with a “Check” pattern to assess the eligibility (e.g., is the user being asked to submit a type of application to complete a task?).
Book Something	Enables the user to book things such as a course, appointment, a room, an item, or a person’s time. In most cases, a specific date and time need to be selected.
Check Something	Enables a person who needs to understand if it applies to them or helps them find something (e.g., the status of something, the closest location, or their eligibility for a service).
Consent or Authorize	Enables the user to provide consent to something (such as sharing data within the organization, with a 3rd party, or with the CRA), provide approval or acknowledgement on the use of personal information and acceptance of the process.
Get Information	Find information (read text on website, access a knowledge base article, watch a video, listen to audio, download a document or a guide) about services or a service, when to use, how to use, requirements to use, communicate expectations of use.
Get Notified	Receive an alert / notification about something.
Internal Workflow	Enables staff (including municipal staff, contractor, partners) to handle requests, cases, manage processes and workflows and secure approvals and sign-offs.
Pay for Something	Enables the user to complete a monetary transaction toward the municipality.
Register for Something	Enables the user to complete a process (like booking something). By registering, users will create an account with personal and sensitive data that they can return to.
Request Something	Enables the user to ask for something specific in order to get to some tangible outcomes (e.g., a copy of a certificate, a pass, or a digitized record).

Pattern Name	Pattern Description
Tell us Something	Enables the user to give some information to the municipality, like a referral or to report something.

Table 4: Service Patterns and Descriptions

Recognizing and using service patterns helps us:

- Provide a common starting point that focuses our attention on commonalities over differences.
- Avoids reinventing the wheel each time by focusing on interaction designs and patterns that work.
- Delivers consistency of service at scale (we want to deliver new digital services fast but they need to be consistent experiences, re-using our learning, experiences and technologies, where possible).
- Promote the re-use of common technology components and capabilities – speeding implementation, saving money and reducing complexity.
- Apply shared values and practices.

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