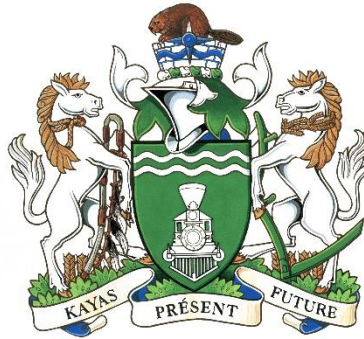CITY OF NORTH BATTLEFORD

PLANNING COMMITTEE AGENDA

Tuesday, February 22, 2022
5:15 P.M.

PLANNING COMMITTEE MEETING
TO BE HELD VIA ZOOM
TUESDAY, FEBRUARY 22ND, 2022 COMMENCING AT 5:15 P.M.

AGENDA

AGENDA	:	Approval
MINUTES	:	Planning Committee Minutes – November 15, 2021 Special Planning Committee Minutes – November 18, 2021 Special Planning Committee Minutes – December 8, 2021
DELEGATION	:	PERRY GROUP CONSULTING Re: City of North Battleford IT Master Plan TOM HAUBOLT, BRETT WILSON FOUNDATION Re: Asset Mapping in the Battlefords
UNFINISHED BUSINESS	:	
NEW BUSINESS	:	DIRECTOR OF FINANCE Re: Investment Policy Update
CORRESPONDENCE	:	
REPORTS	:	
INQUIRIES	:	
NEXT MEETING DATE	:	Monday, March 21st, 2022 @ 5:15 p.m. via Zoom
FREEDOM OF INFORMATION & PROTECTION OF PRIVACY ACT	:	**Part III Exemptions**
ADJOURNMENT	:	

PLANNING COMMITTEE MEETING NO. 08/21

Minutes of the City of North Battleford Planning Committee Meeting No. 08/21 held Monday, November 15th, 2021. Meeting was held via electronic means utilizing Zoom and commenced at 5:15 p.m.

MEMBERS PRESENT:		Mayor	D. Gillan
		Councillors	K. Hawtin
			T. Ironstand
			G. Lightfoot
			K. Lindgren
			R. MacAngus
			L. Taylor

ADMINISTRATION PRESENT: Assistant Dir. Corporate Services/City Planner
City Clerk
City Manager
Director of Corporate Services
Director of Finance
Director of Operations
Director of Parks & Recreation
Director of Protective Services

Deputy Mayor Hawtin called the meeting to order at 5:14 p.m.

AGENDA

39)   BE IT RESOLVED That Agenda No. 08/21 for November 15th, 2021, be approved.

> Moved by Councillor Taylor
> CARRIED

MINUTES

40)   BE IT RESOLVED That the Minutes of Planning Committee Meeting No. 07/21 held September 21st, 2021, be adopted.

> Moved by Councillor MacAngus
> CARRIED

DELEGATIONS – None

CORRESPONDENCE – None

REPORTS – None

UNFINISHED BUSINESS – None

NEW BUSINESS

DIRECTOR OF FINANCE
Re: City Investment Accounts Update

The Director of Finance provided an update with respect to the City's investment accounts noting that since the investments inception of a yearly return in the short-term investment account has been approximately 1% with the 2021 year to date rate of return being 0.29%, the long-term investment portfolio has ranged from -6% to 13% with the 2021 year to date rate of return being 8.34%.

Discussion was held regarding the need to establish a policy surrounding the use of any investment returns to ensure the long-term sustainability of the fund and the benefit a contracted study that could assist in the future management of reserves and investment capital.

General Budget Overview

The City Manager provided a general overview of the proposed 2022 budget advising of a proposed 7.48% increase and note that a significant portion of the City's budget goes to RCMP and protective services and that RCMP costs are expected to increase by approximately $1,000,000 in 2022 as a result of the RCMP increases negotiated between the Federal Government and the RCMP.

Departmental Budget Review

A review and discussions were held regarding the General Government Services, Police Services, Planning and Development Services including the Underground Pipe and Asphalt Program, Public Works Services and Protective Services proposed operational and capital budgets.

Discussion was also held regarding the current RCMP staffing complement, roadway patching, sidewalk replacement and reconstruction, forthcoming 2022 developments to include the intersection at 100th and Territorial Drive, a remote-control lawnmower, and a hydro vac truck.

Planning Committee requested that the following information be brought back to the November 18th Budget Meeting for clarification:

- *Legal costs for the City;*
- *Council remuneration;*
- *RCMP Admin/Steno staff costs;*
- *Patching within service contracts;*
- *Planning & Development permit revenue;*
- *Projects included in Operations – Professional Contracted Services; and,*
- *Hoists in the Operations – Maintenance, Materials and Supplies.*

INQUIRIES –

NEXT MEETING DATE

The Special Planning Committee Meeting is scheduled for Thursday, November 18th, 2021, to commence at 5:15 p.m. for further budget discussions.

IN CAMERA

41)   BE IT RESOLVED That pursuant to Section 94 of the *Cities Act*, Part III of the *Local Government Freedom of Information and Protection of Privacy Act*, and as outlined in the Procedure Bylaw No. 2108, Schedule "A", that the meeting move In Camera at 8:30 p.m.

Moved by Councillor Lightfoot
CARRIED

ADJOURNMENT

42)   BE IT RESOLVED That the meeting adjourn at 8:57 p.m.

Moved by Councillor Taylor
CARRIED

_____
CHAIR

_____
SECRETARY

SPECIAL PLANNING COMMITTEE MEETING NO. 01/21

Minutes of the City of North Battleford Special Planning Committee Meeting No. 01/21 held Thursday, November 18th, 2021. Meeting was held via electronic means utilizing Zoom and commenced at 5:15 p.m.

MEMBERS PRESENT: Mayor   D. Gillan

                                        Councillors   K. Hawtin
                                                       T. Ironstand
                                                       G. Lightfoot
                                                       K. Lindgren
                                                       R. MacAngus
                                                       L. Taylor

ADMINISTRATION PRESENT: City Clerk
                                        City Manager
                                        Director of Finance
                                        Director of Operations
                                        Director of Parks & Recreation
                                        Director of Protective Services
                                        All Parks & Recreation Managers

Deputy Mayor Hawtin called the meeting to order at 5:17 p.m.

AGENDA

01)   BE IT RESOLVED That Agenda No. 01/21 for Special Planning Committee Meeting November 18th, 2021, be approved.

                         Moved by Councillor Taylor
                         CARRIED

NEW BUSINESS

DIRECTOR OF FINANCE
Re: Council Information Requests for 2022 Budget and Additional Items

The Director of Finance provided an update with respect to Council's requests for additional information regarding the following:

- Legal costs for the City;
- Council remuneration;
- RCMP Admin/Steno staff costs;

- ▪ Patching within service contracts;
- ▪ Planning & Development permit revenue;
- ▪ Projects included in Operations – Professional Contracted Services; and,
- ▪ Hoists in Operations – Maintenance, Materials and Supplies.

Discussion was held regarding the proposed changes and the following was noted:

- ▪ That the River Valley Board Agreement is established on a year-to-year basis and due for renewal;
- ▪ That $800,000 in appreciation from the City's investment account could be allocated to sidewalks at $600,000 and the Water Tower decorative lights at $200,000; and,
- ▪ That inflation has increased the cost of capital projects such as sidewalk replacement significantly over the years.

Recreation & Parks Department

A review of the proposed Recreation and Parks Department operational and capital budgets was conducted and discussion was held regarding the potential option of tiered recreation facility user rates or for cost sharing among regional partners.

Councillor Taylor left the meeting at 6:44 p.m.

Council expressed concern regarding the impact of the proposed tax increase on ratepayers and discussion was also held regarding the impact of future inflationary pressures on capital and operational costs.

The Committee recommended that Administration conduct a review of a two-tiered user system for recreation facilities and bring forward options prior to the establishment of mill rates.

The Committee also recommended the 2022 Budget to the December 13th, 2021, regular Council Meeting for discussion.

ADJOURNMENT

02)   BE IT RESOLVED That the meeting adjourn at 7:52 p.m.

                              Moved by Councillor Taylor
                               CARRIED

                                                  _____
                                                  CHAIR

                                                  _____
                                                  SECRETARY

SPECIAL PLANNING COMMITTEE MEETING NO. 02/21

Minutes of the City of North Battleford Special Planning Committee Meeting No. 02/21 held Wednesday, December 8th, 2021. Meeting was held via electronic means utilizing Zoom and commenced at 5:15 p.m.

MEMBERS PRESENT:	Mayor	D. Gillan
	Councillors	T. Ironstand
		G. Lightfoot
		K. Lindgren
		R. MacAngus
		L. Taylor
REGRETS:	Councillor	K. Hawtin
ADMINISTRATION PRESENT:	City Clerk	
	City Manager	
	Director of Corporate Services	
	Director of Finance	
	Director of Operations	
	Director of Parks & Recreation	
	Director of Protective Services	
	Fleet and Maintenance Manager	
	Public & Intergovernmental Relations Coord	

Acting Deputy Mayor Lindgren called the meeting to order at 5:16 p.m.

AGENDA

03) BE IT RESOLVED That Agenda No. 02/21 for Special Planning Committee Meeting December 8th, 2021, be approved.

Moved by Councillor MacAngus
CARRIED

NEW BUSINESS

DIRECTOR OF FINANCE
Re: Council Information Requests for 2022 Budget and Additional Items

The City Manager provided an update and noted that the original proposed general tax increase for 2022 was 7.48% and that Administration was able to lower the proposed rate to 5.11%, reflecting a 3.77% increase for the RCMP portion and a 1.34% increase for the operations portion of the budget.

Discussion was held regarding the following additional items to be paid for by reserves:

- An additional $600,000 to be allocated to sidewalk repairs and reconstruction;
- The replacement of water tower decorative lights up to a maximum of $200,000 if a doner cannot be established; and,
- A $20,000 increase for tree planting, to be earmarked in the capital reserve, subject to the establishment of a Tree Planting and Replacement Plan to be discussed at a future meeting during the summer of 2022.

Discussion was also held regarding a proposed increase to water and sewer utility rates from 3% to 5.5%.

The Committee recommended that Administration bring forward additional information during the December 13th, 2021, Regular Council Meeting regarding the impact on an average household with respect to a 5.11% general tax increase, and the projected impact for water and sewer utility increases in the range of 3%, 4.5% and 5.5%.

The Committee recommended that the 2022 Budget, reflective of a 5.11% general tax increase including the addition of $600,000 for sidewalk repair and reconstruction and $200,000 for the water tower decorative lights to be paid for by reserves for; and further that, and additional $20,000 be earmarked in the capital reserve fund to accommodate tree planting and replacement subject to the establishment of a Tree Planting and Replacement Plan.

ADJOURNMENT

04)   BE IT RESOLVED That the meeting adjourn at 6:26 p.m.

                         Moved by Councillor Lightfoot
                         CARRIED

                                        _____
                                        CHAIR

                                        _____
                                        SECRETARY

IT Master Plan

Final Report – Draft

January 2022

www.perrygroupconsulting.ca
647-669-9540

Table of Contents

Executive Summary

1.0   Executive Summary

1.1.   Background

The City of North Battleford (the "City" or "CNB") engaged Perry Group Consulting ("Perry Group") to develop an Information Technology Master Plan (ITMP). The City's objectives for this initiative are to develop a 5-year Information ITMP that allows it to:

- Leverage current and optimize future technology investments.

- Achieve improved quality of internal and external customer service.

- Implement realistic actionable recommendations according to a defined roadmap that outlines a technology environment that supports optimal speed, connectivity, and security.

- Audit systems and security controls with regards to IT Governance.

- Be responsible, transparent, and responsive to business requirements and restrictions while evolving as a progressive, modern, and innovative organization.

- Establish simple, clear, unambiguous, and all-encompassing protocols that define the actions required to restore IT services in the event of a critical incident.

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

1.2.   The Importance of Technology to Municipalities

Why is technology, and thus this IT Master Plan, important to North Battleford?

Technology is central to the City'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, 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.

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 North Battleford. 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, the City 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

North Battleford was looking to answer the following questions through this project. Our findings are included below.

Is the City making the right technology investments?
The City has implemented some industry recognized business systems but not in a strategic manner.
The level of technology investment in North Battleford is low.
The City is struggling to make the most of its current technology investments.
Software technologies are selected and purchased at the department or business unit level, resulting in significant overlap and duplication of features and lack of support by the IT Department.
Corporate-wide view of technology investment is not prevalent.

Is an effective IT Governance model in place?
There is an IT budget approval process.
There is no IT Governance in place for IT oversight such as an IT Steering Committee.
There is no project evaluation and prioritization process.

Are the City's software solutions cost effective?
There are opportunities to expand the use of some of the systems.

Perry Group Consulting Ltd.

Are the City's software solutions cost effective?

There are opportunities to consolidate some of the systems.

There are municipal functions with gaps where no software solutions have been implemented.

What are the City's future business needs?

The City should integrate the various business systems by going to market for a single record ERP (Enterprise Resource Planning) system.

More end-to-end digitized business processes should be put in place.

More online services for the public are required.

More stable technology infrastructure and security should be in place.

Municipal staff and management should have access to data analytics for informed and effective decision-making.

Municipal GIS and digital mapping is not currently available to the staff and public.

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

Yes, in general, the IT staff and management have the knowledge to take the City forward.

Some skills and functions may need to be upgraded for future technologies such as Cloud and Data Analytics.

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

The planning, permitting, bylaw and licensing processes could benefit from a property-centric process automation system. The City is using Vadim iCity at the moment to track some of the transactions.

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

The Asset and Work Management processes are collected and managed by 9+ custom and purchased applications. A business solution that digitizes these end-to-end processes could benefit the City.

Does the City have a solid and secure IT environment?

Some basic security requirements are in place, but other things could be done to improve overall security.

The infrastructure is stable, but there are many departmental reports of poor performance. There are concerns that it may not be able to handle the increased security and information needs of the future.

The City is not in a strong position to be able to respond to and recover from a significant incident that may cause a disruption in IT services.

Is IT effectively delivering IT services to its clients?

IT is delivering services effectively within the parameters that have been set to the point that the business can function, however, there are no metrics or other methods in place to establish which services are effective and which require improvement.

IT Service Management (ITSM) functions are lacking, including knowledge management and change management.

1.4.   Opportunities

Technology has changed the way we do business. Our customers are familiar with many day-to-day services that are performed online, from anywhere at any time. Services that required face-to-face interactions in the past are now done from the comfort of home, at any time of the day. Booking a vacation, depositing a cheque, renewing a license plate or watching a movie are common services that our customers do online today.

Today, 88% of people across Canada bank online. This is a valuable indicator – if this many people are willing to bank online, it is reasonable to expect that they are also willing to transact with their municipality in the same way.

Municipalities are also looking more toward integration of systems, rather than point solutions for each department. For example, a service request from a citizen about a pothole could be received, acknowledged and a work order created to repair it, all within an integrated system.

With the latest rise in ransomware attacks on municipalities, cybersecurity and Disaster Recovery are on the minds of CAOs and senior managers. Improving cybersecurity and the ability to recover from a significant incident is a valuable investment for North Battleford, to protect the information assets of the City and its constituents.

1.5. High-Level Recommendations

The key recommendations of this ITMP are aligned with improving operational efficiencies and customer service, while considering all other key objectives of the project.

Business Systems – It is recommended that the City look for an integrated Municipal ERP system that is capable of automating multiple key business areas – e.g., Finance, Tax, Permitting, Asset and Work Management, all in one system – that also includes online service components with a common customer record. Business systems should be purchased through a formal bid process with a corporate view / all business stakeholders at the review and evaluation table.

Technology Governance – North Battleford should implement a governance structure – including an IT Steering Committee – to drive all recommendations 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 North Battleford'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

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

North Battleford does not compare favourably with similar municipalities when it comes to online service delivery. The demand to be able to do things online rather than in person is increasing all the time, and 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 City as well as the participation from external parties to the point where the customer is provided with what they requested. The City should develop the necessary skills to perform business process optimization exercises.

Improve Technology Infrastructure and Security – Multiple infrastructure and security improvements have been recommended. Some of the highlights are to develop a formal Disaster Recovery (DR) Plan, develop an ongoing cybersecurity program that continually improves security posture, and implement an organization-wide annual information security awareness training program.

1.6. Supporting the Implementation of the ITMP Recommendations

1.6.1. IT Funding

In order to implement the recommended ITMP, the City will need to increase its technology investment.

The current North Battleford IT spend is 1.35% 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.

1.6.2. IT Resources

The consultants also propose that an internal IT resource be hired to manage and lead the replacement ERP system. This role is most suited to the title of Business Support Analyst. The role's primary responsibilities would be to manage the ERP replacement program and to support the solution once it is in place. 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 business solutions providers including vendors of other business solutions. It will also look at integration potential between solutions, and business process improvements.

This role is paramount to the future success of North Battleford in executing the recommendations in this Report. A progressive municipality such as the City requires a dedicated Business Support Analyst to achieve the optimum value from its business solutions.

1.7.   Key Outcomes

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

Reduction in Siloed Thinking – The change in title/role for the IT Coordinator, and the addition of a Business Support Analyst who can take a corporate view of business solutions, along with 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.

Increased Functionality of Business Solutions – The new ERP solution will result in less manual process due to internal module integrations. Additionally, existing business solutions will be reviewed for potential integrations and improved business processes.

Delivery of Key Online Systems – While the City currently has an array of online services, it is missing key components such as business licenses and online registration for recreational programs. The procurement of online systems and additional recommendations in this Report will result in improved services to residents and businesses in North Battleford.

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

Improved Internal Services – IT services are currently delivered by internal staff and augmented by a third-party service provider. The recommendation of an additional IT resource will fill a gap that exists where there is little business solutions expertise in IT, resulting in staff having to support their own solutions.

1.8.   Benefits

The recommendations in this Report also directly or indirectly support the Corporate Strategic Priorities identified in the Corporate Strategy:

- Organizational excellence.
- Improve services to residents and staff through appropriate investments in software and technology.
- Ensure City operations are efficient.
- Excellence in Governance and Citizen-Focused Services.
- Develop Council-approved service levels for all departments.

1.8.1. 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 improve things 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 ITMP 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 licences 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 City, including:

- Enables excellent customer service – The digital channel provides convenience to residents – anytime, anywhere.
- Reduces the service delivery cost – Online service cost is significantly lower than over-the-counter or over-the-phone.
- Improves customer engagement – Social media, online surveys, virtual meetings, etc.
- Improves the service delivery timelines – Better 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 process reduces the amount of paper (e.g., tax bills). Reducing customer visits to City Hall reduces fuel consumption.
- Creates capacity – Automation reduces the need for manual processing by staff. Staff are able to perform higher value customer service and root issue analysis.

- Increases transparency – Digitization allows the City to collect and share data with the 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 based on 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.

1.8.2.   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 Canada. 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 believe that North Battleford can realize similar efficiencies by optimizing its various processes prior to implementing technology solutions.

1.9.   Summary

The City has invested in technologies over the years, but not always from a corporate viewpoint. Siloed thinking and lack of technology governance has resulted in individual departments procuring their own systems.

Moving to a single ERP solution for many of the City's municipal functions will address gaps, produce efficiencies and allow for departmental collaboration in many areas.

The addition of the proposed Business Support Analyst will also help to facilitate a better understanding of solutions capabilities and match business requirements to these capabilities.

Constituents in today's world do not always want to come to City Hall to do business, and so delivery of more services online will provide increased value to the City and its residents.

The City has a number of good security practices in place, but should a significant incident occur, there are no response plans, and the Disaster Recovery process is undocumented. A number of recommendations have been proposed that will address these gaps.

In summary, the ITMP recommendations will allow North Battleford to maximize the use of technology, improve service and the customer experience, improve security and increase internal efficiencies in a sustainable manner.

Introduction

2.0   Introduction

The City of North Battleford hired Perry Group Consulting to develop an ITMP. The City has recognized the value of technology and was looking for an experienced municipal IT consulting company to develop this ITMP.

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

2.1.   Acknowledgements

Perry Group would like to acknowledge the participation of the City's internal departments, IT Coordinator and selected third-party service providers in providing essential data that helped shape this Report.

2.2.   Key Objectives

The City has identified the following key objectives for the ITMP:

- Leverage current and optimize future technology investments.
- Achieve improved quality of internal and external customer service.
- Implement realistic actionable recommendations according to a defined roadmap that outlines a technology environment that supports optimal speed, connectivity, and security.
- Audit systems and security controls with regards to IT Governance.
- Be responsible, transparent, and responsive to business requirements and restrictions while evolving as a progressive, modern, and innovative organization.
- Establish simple, clear, unambiguous, and all-encompassing protocols that define the actions required to restore IT services in the event of a critical incident.

The review and ITMP was conducted and developed with the above objectives in mind. The consultants have aligned the ITMP recommendations with the above required outcomes of the City and also some key strategic priorities for the City as a whole.

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

2.3. 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.

2.4. 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. Today, over 92% of Canadians 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 City 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.

2.5.   Service Delivery in Multiple Ways

The City 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. We believe that statistics from Saskatchewan will be similar.

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 City.

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

For North Battleford, 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 above 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 are the most expensive transactions.

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

2.6. 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 City's departments' ability to move at the speed they need, while balancing corporate controls. These core functions, used by all City departments, must be efficient, effective and operate in real-time if the City 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 City through online services. This means the City 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 routines.

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 City 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.

2.7.   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. North Battleford has a number of key systems in place, but they are mostly 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

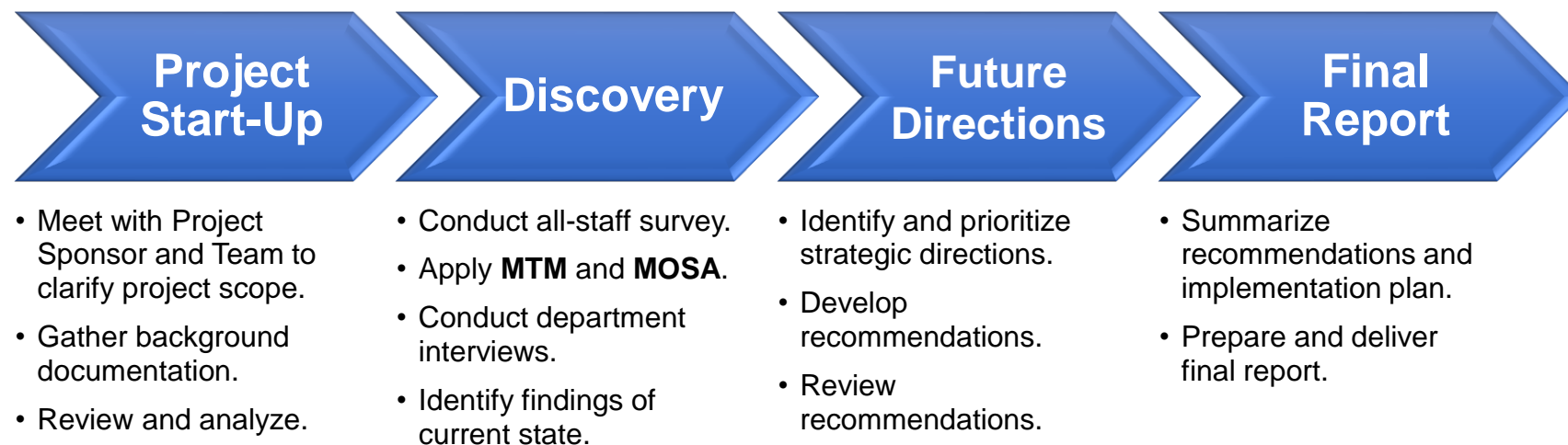The following chart shows the basic steps in the approach taken by Perry Group.

Project Start-Up	**Discovery**	**Future Directions**	**Final Report**
• Meet with Project Sponsor and Team to clarify project scope. • Gather background documentation. • Review and analyze.	• Conduct all-staff survey. • Apply **MTM** and **MOSA**. • Conduct department interviews. • Identify findings of current state.	• Identify and prioritize strategic directions. • Develop recommendations. • Review recommendations.	• Summarize recommendations and implementation plan. • Prepare and deliver final report.

Figure 1: Perry Group's Project Approach with North Battleford

Note: MTM = Municipal Technology Model; **MOSA** = Municipal Online Services Assessment.

Time was spent with staff 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 North Battleford IT Coordinator in order to understand the technology environment. The external service provider was also interviewed.

Departmental interviews were conducted with the Chief Administrative Office (CAO), and representatives from Legislative Services (Clerks, Records Management, Public Relations), Corporate Services (HR, Engineering, IT, Planning and Development), Fire & Enforcement, Operations (Water / Waste Water, Landfill, Building and Equipment Maintenance, Utilities), Finance, and Leisure Services, Recreation Services, Parks, Arenas and Cemeteries. 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.

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The consultants used the Municipal Online Services Assessment (MOSA) and the Municipal Technology Model (MTM) – both developed by Perry Group over the last decade with over 100 municipalities – to assess the current online services and the technology maturity levels. 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 City. 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 Organizational Structure assessment followed by an assessment of the IT Governance and ITSM. The third-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 high-level recommendations.

The high-level information was shared with the project sponsor (CAO), and the SMT. After the review of high-level current state, the consultants collaboratively developed a set of recommendations with key stakeholders at the City followed by a presentation to SMT, and then proceeded to prepare a draft of this Report.

The draft Report was shared with the project team for review and input. Based on the review feedback, the final ITMP recommendations were prepared and shared with the City's SMT.

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 City's technology systems, and the City'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 City's IT budget is comparatively low balanced against other similar organizations.

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

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

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

The City has hired third-party service providers for some of the IT services such as Internet Service Provider (ISP) provisioning, security services and vulnerability assessments.

There are other opportunities available in the industry for municipalities to optimize the use of limited resources by utilizing shared or managed services.

4.1.3.   Comprehension of Internal Business Processes 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 technology 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.

4.2.   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.

North Battleford's MOSA results are available in the figure below. It is clear from the results that there are many opportunities for the City to modernize and digitize its various service offerings by moving the services to self-serve online.

The Digital Experiences Assessment results, also shown in a figure below, indicate that North Battleford is lagging behind some of its counterpart municipalities in offering digitized services and is a good distance behind the world-wide leaders.

North Battleford – Modern Customer/Digital Experiences

Modern Customer Experiences	
Customer / Experiences	North Battleford cityofnb.ca
Easy to use website	Y
Mobile website	Y
Personalization	N
Single Account	N
Submit a service request	Y
Track a service request	N
City App	N
Customer knowledge base	N
Online chat with CSR	N
Tweet for help	N
Online bid management	Y
Pay Taxes Online	Y
Pay an invoice	Partial
Parking / infraction ticket payment	Y
Parking permits / exemptions	N
Recreation program online booking	N
Rent a facility	N
eForms	N
Open Data	N
Transit planning	N
Tax account management	Y
Tax certificates	Y

Customer / Experience	
Building permit application	Y
Book a building inspection	N
Submit digital plans	N
Submit development application	N
Track development application	N
Employment search and applications	Y
Sign permits	N
Fire / Fireworks permit/Open Air	Y
Pet licence	N
Theatre Tickets	N
Road closures	N
Snow clearance status	N
Events calendar	Y
Filming permits	N
Business licences	N
Council / committee web streaming	Y
Online Agendas / Minutes	Y
Grants programs	Y
Council delegation request	N
Site suitability / selector / vacant land	N
Marriage Licence	N
Digital Signatures	N

- Digital customer service (self-service) is a key goal and demand is there from customers.

- We reviewed ~approx. 130 services that municipalities typically offer online.

- **46 / 132 = ~ 35%**

Figure 2: North Battleford MOSA Results

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Municipality	Scoring Values (Y=3, Partial = 1)	Potential Score	Overall Score as a Percentage	
North Battleford, SK	**46**	**132**	**35.0%**	
Central Huron	41	132	31.1%	
South Huron	44	132	33.3%	
Orillia	50	138	36.2%	
Oshawa	76	141	53.9%	
Brampton	73	141	51.8%	
Markham	93	117	79.5%	
Mississauga	80	117	68.4%	
Toronto	75	117	64.1%	
Calgary	90	114	78.9%	Leading Canadian
Boston MA	82	114	71.9%	Leading US Digital Org
Louisville KY	70	114	61.4%	Leading US Digital Org
Brimingham UK	76	105	72.4%	Leading UK
Melbourne AUS	69	111	62.2%	Leading Australian

Modern Customer/Digital Experiences

(the potential for digital opportunities exists but systems need to be in place first)

12/8/2021

Figure 3: North Battleford's Digital Experience Assessment Results

As evident above, North Battleford's online service score is at 35%. This shows that there is potential to increase the number of online services to residents.

4.3. Municipal Technology Model (MTM)

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

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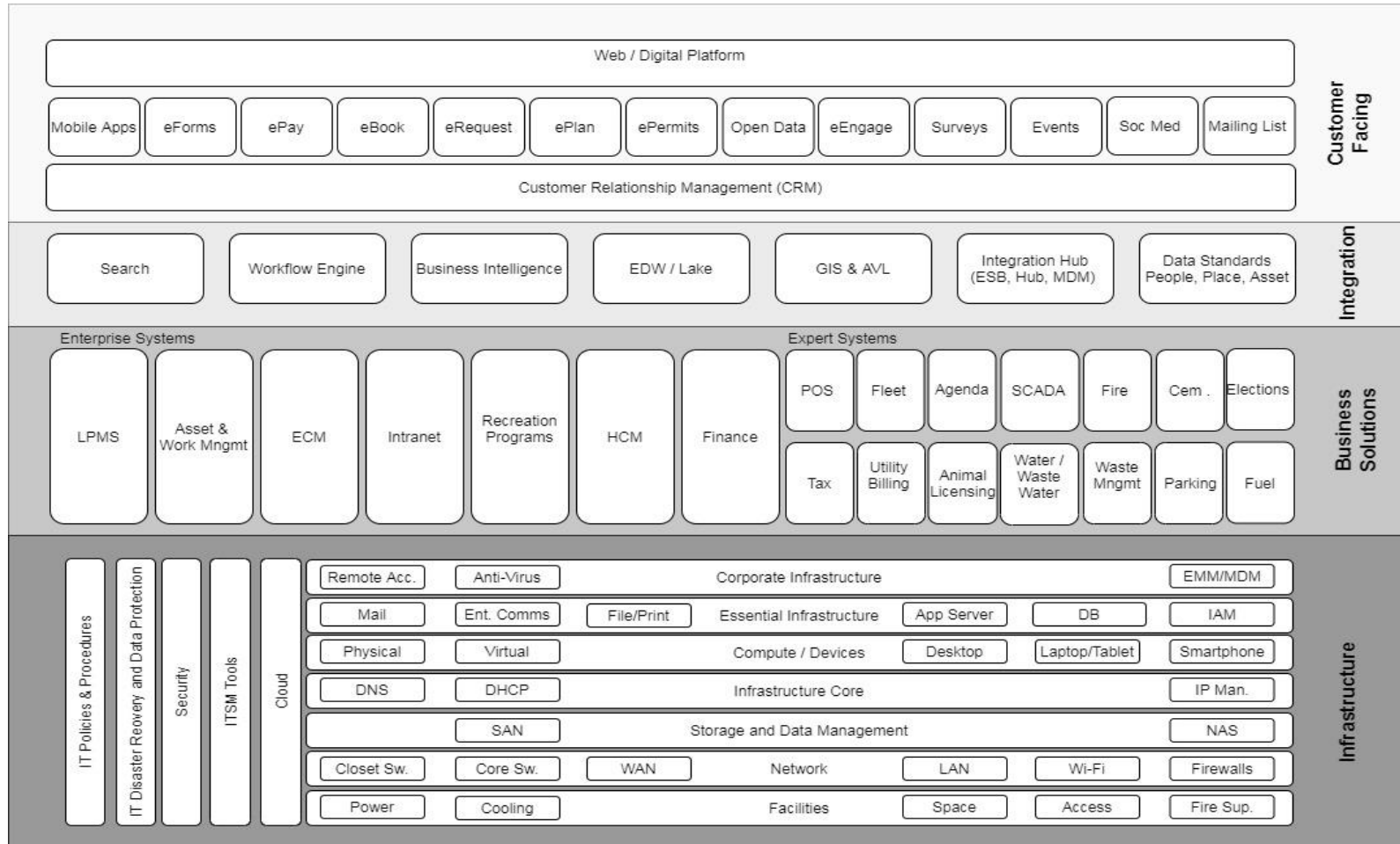

Figure 4: Municipal Technology Maturity Model

4.3.1. 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 may include:

- A Finance system (such as Vadim iCity, TownSuite, JD Edwards, SAP).

- A Payroll system (such as Vadim iCity, Royal Bank Payroll services, ADP, etc.).

- A Fire Incident Management system (such as FirePro, FDM, Fire House), and

- A Work Management system (such as Facility Dude, Hansen, Vadim iCity).

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.
Unreliable infrastructure undermines all the technology that sits above it.	Core systems should be commercial off-the-shelf (COTS) solutions configured to support business processes (Payroll, Finance, Tax, HR, Recreation Programming, etc.).		Customer-facing digital solutions should allow customers to easily find information, to conduct transactions with the City (e.g., submitting requests and applications, making payments) to engage with the City to provide input on important decisions.

Infrastructure	Business Solutions	Integration	Customer-Facing
Policies, security, data protection and Disaster Recovery provisions should be in place to protect information assets and meet legal compliance obligations.	Customization should be avoided.		Systems must be integrated into back-office business solutions.
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.

Figure 5: Descriptions of the Four Technology Layers

4.3.1. 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.
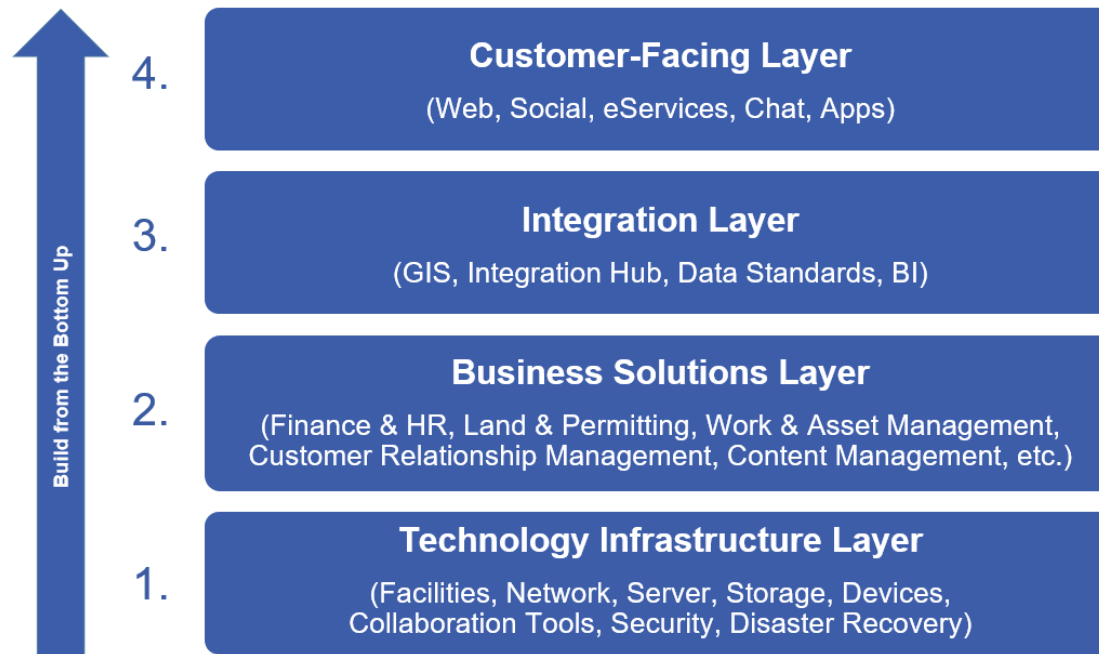

Figure 6: Visualization of Technology Architecture

4.3.2. Assessment Results and Key Takeaways

Perry Group reviewed North Battleford'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. A summary of the results is outlined in detail below.
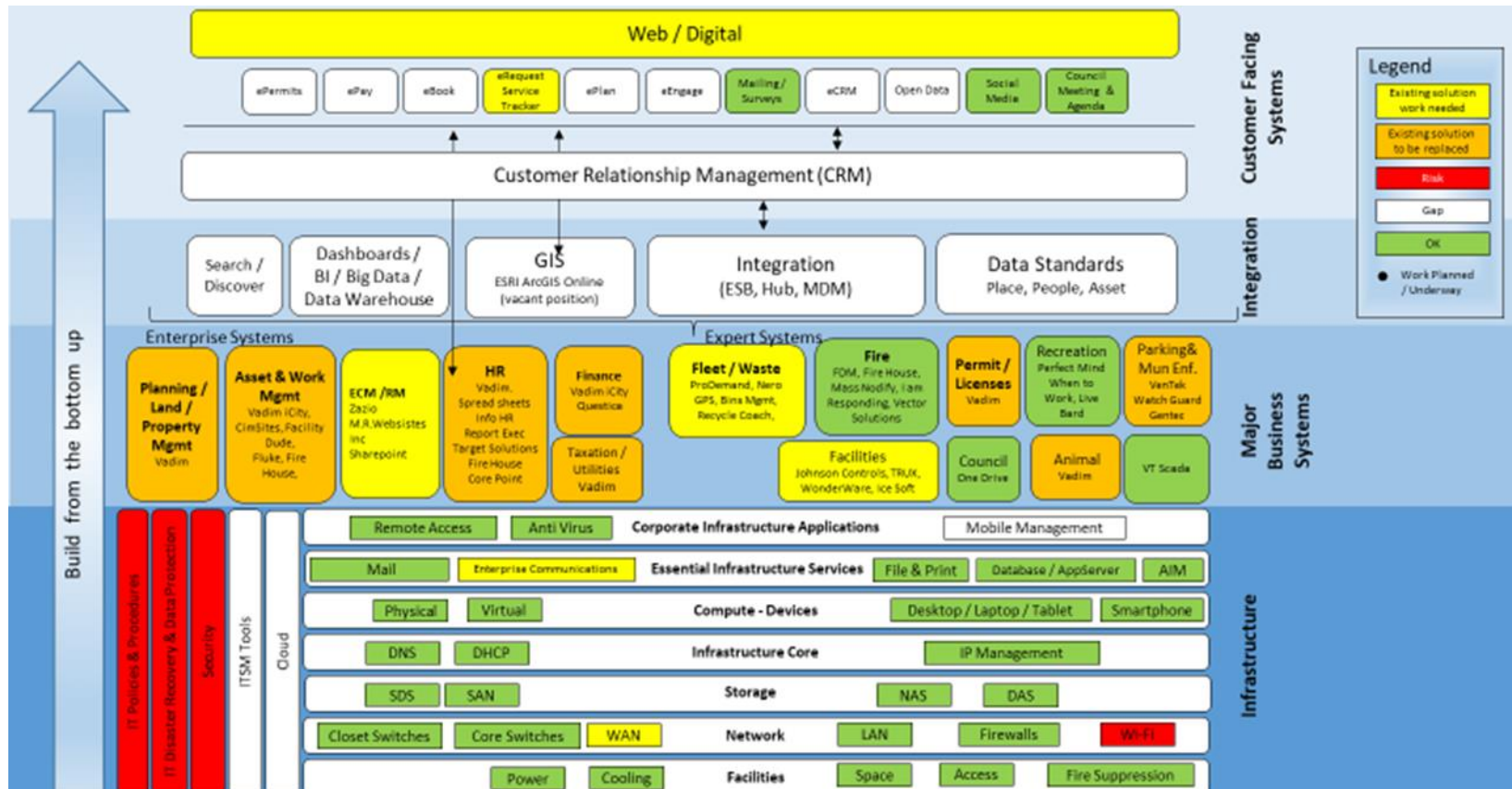

Figure 7: North Battleford MTM Assessment Results Visualization

4.3.3.   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	Description
Positive Aspects	- The primary network is in good shape. - Some security tools and practices are evident.
Key Issues	- Lack of corporate governance. - Lack of Security Incident Response and Disaster Recovery Plans. - Concerns that building-to-building network communications infrastructure will not be able to scale for future business and security needs.

Business Solutions	Description
Positive Aspects	• Some industry-recognized business systems are being used: PerfectMind, FDM, Firehouse, Sensus Smart Meters and Genetec Security Centre.
Key Issues	• Vadim iCity does not have a roadmap for future improvements and is poorly supported. CNB is reluctant to upgrade the platform, increase reliance on system and integrate downstream systems into it due to the underlying past implementation issues and fragility of the system. • Due to weakness of the Vadim ERP, many third-party asset management, work order and time management products have been implemented in the individual departments. Purchasing decisions for IT products are largely made at the departmental level which significantly increases the number of applications needed to be supported and the proliferation of siloed data stores. • Multiple key business areas lack suitable business solutions: Planning, Permitting, Licensing and Bylaw, Asset and Work Management, internal collaboration (Intranet). • CNB provides very few online services due to concerns with back-end systems capabilities.

Integration

Integration	Description
Positive Aspects	• A couple of point-to-point integrations have been implemented, e.g., Facility Dude.
Key Issues	• W/O and Payroll Time & Attendance Transactions are managed and tracked in downstream systems and then need to be re-entered into Vadim ERP. Very time intensive for re-entry and data verification. • Payroll department spends significant time every week re-entering pay details, reconciling pay, and logging attendance information.

Customer-Facing

Customer-Facing	Description
Positive Aspects	• CNB uses a third-party provider (mrwebsites.ca) to manage and host their website. • The web has some fillable forms. • A project is underway to issue a Request for Proposal (RFP) to select a new industry standard Web Content Management System and a new host for the website.
Key Issues	• Online forms are created and updated by the Web Content vendor. CNB considers form creation and modifications to be expensive. • Absence of implementation of online service capabilities although some back-end systems have capabilities for online services. • Lack of a centralized customer record and a robust ERP is the key constraint in CNB proposing the implementation of online services.

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 City. 41 staff members participated in the survey. The following are a few key insights from the staff survey.

Key Observations	Description
Reliability	Most of the respondents were satisfied with the reliability of technologies in use.
Network Performance	Some technologies received satisfactory scores.
Internet Access	This is deemed to be generally slow and inadequate.
Telephones	There is some dissatisfaction with the phone system in general.
Corporate Intranet	Almost 50% of respondents are unhappy with the Intranet.
Personal Device Use	Personnel are using their personal devices for work. This presents security challenges.
Core Business Systems	There is a relatively high rate of dissatisfaction with Core Business Systems.
Business Systems Procurement	Some systems were procured without appropriate consultation with key stakeholders.
Training/Awareness	There may be a lack of awareness of the capabilities of current business solutions.
GIS	There appears to be potential for expanding the use of GIS systems.
SharePoint	Microsoft products overall were rated highly, but SharePoint has a low level of satisfaction.
IT Support	A significant portion of staff do not know who to contact in IT when they have an issue.

Key Observations	Description
Issue Resolution	There is some dissatisfaction with the time it takes (sometimes) to resolve reported issues.
IT Service	There is a high degree of satisfaction with the service provided by IT.

The overall feedback from the staff shows that the City's use of technology is "Neutral" in most areas.

4.5.   IT Organization, Functions and Skills Assessment

4.5.1.   IT Organization

The current IT organization consists of an IT Coordinator, and an Information Technologist. The IT Department reports into the Director of Corporate Services.

The IT Coordinator is responsible for all things IT but, in general, it is a functional role and non-strategic in nature.
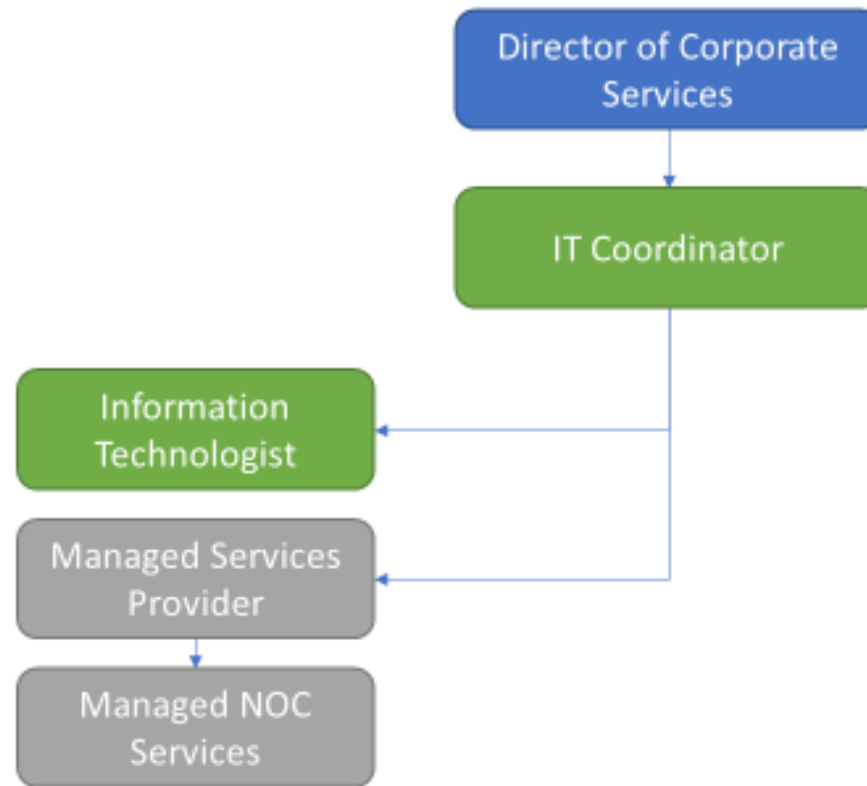
Figure 8: Chart Depicting the City's IT Support Structure

4.5.2.   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 in IT and the third-party service provider.

- 11 functions are deemed to be at a satisfactory level.

- 18 functions are deemed to be partially in place (meaning they are partially delivering the required services).

- 1 function is 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 IT Strategy and Planning, IT Governance, Information Security and ITSM.

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.

The table below lists the basic functions that the various roles of an IT team should be providing.

Role	Function
Management	- IT Strategy and Planning - ITSM - IT Financial Management - Business Relationship Management - IT Governance - IT Policy/Standards - Risk and Compliance Management - Vendor and Contract Management - IT Performance Metrics - Education and Training

Role	Function
Service Desk	- First level support - Knowledge Base Management - User Account Management - Device Management and Support - Software License Management - IT Asset Management - IT Procurement - Mobility Support
Infrastructure	- Network Planning and Support - Telephony, Email - File and Print Infrastructure - Information Security - Remote Access Provisioning - Data Centre - Back-ups - Lifecycle and Capacity Planning
Business Solutions	- Systems Support - Systems Administration - Database Management - Application Security

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 toward 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

ITSM is how IT teams manage the delivery of IT services to their clients.

4.7.1.   Service Level Measurement

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 City 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.

4.7.2. Knowledge Management

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 City'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 Strategy

There is no overall Security Strategy at the City. A Security Strategy is a documented strategy that defines what the organization wants to achieve with regards to information security, and how it intends to get there. A Security Strategy should consider corporate objectives so that the Strategy does not conflict with these objectives.

A Security Strategy is not the sole responsibility of the IT Department to develop but is their responsibility to deliver the technology side of it. There are other aspects of a Security Strategy that must be developed and driven by Senior Management.

4.8.2. Security Framework

To develop a Strategy, it is a good idea to adopt one of the industry standard frameworks and build around it. NIST proposes, in the cybersecurity framework, a 5-step approach that can be adapted to various organizations. The underpinning strategy around each step can take your high-level vision to the next level.

The sample NIST Cybersecurity Framework below outlines some examples of what can be put in place in each category to build out a solid framework.

NIST Item	Description
Identify	- Asset Management - Business Environment - Governance - Risk Assessment - Risk Management Strategy
Protect	- Access Control - Awareness Training - Data Security - Information Protection Processes and Procedures - Protective Technology
Detect	- Anomalies and Events - Security Continuous Monitoring - Detection Processes
Respond	- Response Planning - Communications - Analysis - Mitigation - Improvements

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Recover	• Recovery Planning • Improvements • Communications

4.8.3.   Security Incident Response and Disaster Recovery

North Battleford does not have a formal Incident Response Plan (IRP) or Disaster Recovery Plan (DRP). 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.

North Battleford 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, 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 back-ups are part of a DR 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 just a few of the items that go into Security Incident Response and Disaster Recovery planning. We highly recommend that the City invest in formal plans and programs to address these issues.

4.8.4.   Information Security Awareness Training

North Battleford does not do any 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 City's networks and information assets.

4.8.5.   Risk Management

There is no formal Risk Management Program, either for internal items or for assessing third parties. Most organizations understand risk management and so know that 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 City, 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 City's data to any other party, and if they have the resources to be able to effectively deliver the services required by North Battleford.

4.8.6.   Other Matters Requiring Attention

Other issues that require action are listed below.

Action Required	Description
Vulnerability Scans	No vulnerability scans are run on Wi-Fi networks to discover current vulnerabilities.
Encryption	Mobile devices such as laptops are not all encrypted.
Privileged Accounts	Privileged account holders do not use regular accounts when privileges are not required.
Data Destruction	A formal Data Destruction Policy/process is not in place.
Windows Servers	Some Windows servers are at end-of-life and pose a security threat.

Action Required	Description
Unattended Computers	Unattended computers are not auto-locked.
Windows Server Hardening	Ports, protocols, and services on Windows servers not disabled (currently working on this).
File Server Security	Lack of granular security on the file server.

4.8.7.   Security Program

All of the items in this Risk and Vulnerability section, along with the reports from Websec Information Security Services, should be taken under consideration and developed into a Security Program.

Each item should be prioritized, assigned and monitored with a roadmap put in place to determine when each item will be addressed. The security-related items in the Work Plan section of this Report can be used as the basis for developing the Security Program.

4.9.   Financial Analysis

North Battleford's annual IT budget is comparatively low.

The consultants compared public sector IT spending with North Battleford's using multiple metrics, and all measurements have shown that North Battleford's IT funding levels are low compared to other municipalities.

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

- 2020 overall operating budget: $32.7 million.
- 2020 IT operating budget: $443,000.
- 2020 number of full-time employees: 250.

Description	2020 Budget Amount
Total IT Operating Budget	$443,000
Total Municipal Operating Budget	$32,700,000

Description	2020 Budget Amount
IT Budget as a Percentage of Total Operating Budget	1.35%

The IT budget as a percentage of the total City's budget is 1.35%. 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 over 100 municipal engagements by Perry Group Consulting.
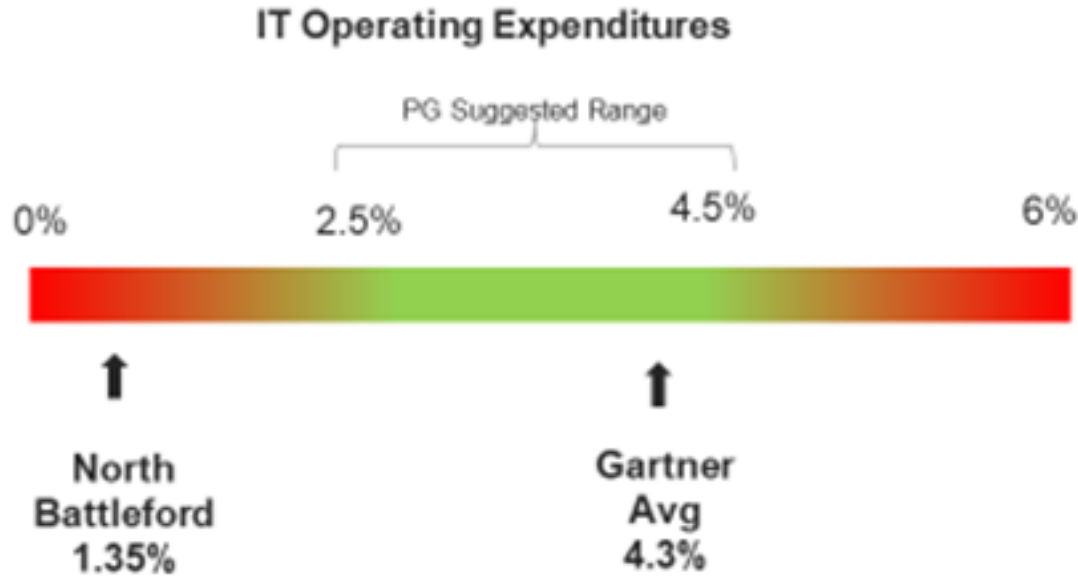

Figure 9: North Battleford IT Operating Expenditures

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%.

In order to reach higher levels of customer satisfaction and internal efficiencies, North Battleford has an opportunity to increase its technology funding to reach the Perry Group recommended minimum level. Additional operating funding could allow the City 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 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 small 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 City has been increasing its technology budget in the past years, but there is still a gap to be filled.

Another commonly used metric is the IT spending per employee. For this comparison, only the number of FTEs (Full-Time Employees) are used. The following table shows a comparison of North Battleford with the industry.

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

Metric	Innisfil	Huron County	Whitehorse	Haldimand	Essa	North Battleford
# of Residents	36,000	60,000	25,000	45,000	21,000	14,000
IT Spending Per Employee	$ 6,906	$ 5,754	$ 4,903	$ 3,243	$ 4,833	$ 1,772
IT Operating Budget as a % of the Municipal Budget	3.1	2.8	2.0	1.9	1.6	1.35

The table above shows a selective comparison of the funding metrics among small municipalities.

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It is important to highlight that the Town of Innisfil is included as it is known for its technology advancements and the high-level of technology funding is justified.

4.10. GIS Capabilities

The City has no recognized GIS capabilities, yet the findings indicate a strong requirement for such a solution. A GIS Strategy and solution adds significant value and capabilities for municipalities in today's world.

4.11. Business Process Optimization

4.11.1. Time Tracking and Payroll Process Flow

As part of the review, Perry Group added a process review at no additional cost to the City. The process chosen was the Time Tracking and Payroll process.

A complete process flow diagram has been provided separately to North Battleford. Here, we will provide a scoring summary of the current process.

Good Service Assessment

A "good service" is a service that a customer can find, understand, and use without having to ask for help.

The Good Service Assessment table consists of the 15 universal attributes of a good service based on Lou Downe's Good Service Assessment Methodology.

Each attribute is rated against the following rating index:

0	1	2	3	4
It is not possible for users to do this	A small minority of users can do this with extreme difficulty or effort	Some users can do this, but it still requires difficulty or effort for most	Most users can do this, but it requires difficulty or effort for some	All users can do this easily and consistently

Good Service Scorecard (Based on the Current Service Offering)

A Good Service…	Rating	What is your service <u>failing</u> to do for users?	What does "good" look like for your service?	What's stopping your service from doing this now?	What could you do to change it?
1. Is easy to find	4	All staff know where to find a Timesheet and/or the process to request time off.	n/a	n/a	n/a
2. Clearly explains its purpose	2	The purpose of time tracking is clear to staff. The purpose of equipment tracking is not clear.	Staff clearly understand the purpose and the expectations of equipment tracking.	Clear communications.	Explain the purpose of equipment tracking to staff.
3. Sets the expectations a user has of it	2	Time tracking expectations are self-explanatory. Equipment tracking expectations are not clear.	See item #2.	Clear communications.	Explain the purpose of equipment tracking to staff.
4. Enables each user to complete the outcome they set out to do	3	Mostly allow the employees to complete the outcome. The number of steps could be improved.	Time off requests are automatically populated in the timesheet without having to re-enter and re-approve. Bank balances are automatically enforced.	Lack of an automated self-service system.	Implement a self-service digital system to track time off requests and integrated timesheets including digital approval workflow and integrated with Payroll.

A Good Service…	Rating	What is your service failing to do for users?	What does "good" look like for your service?	What's stopping your service from doing this now?	What could you do to change it?
5. Works in a way that is familiar	2	Manual timesheets are outdated.	See item #4.	Lack of an automated self-service system.	See item #4.
6. Requires no prior knowledge to use	2	Users must know the specific job codes, equipment codes and work codes.	Staff select regular work types and equipment by name instead of using codes.	Time and resources.	Digital timesheet provides dropdown descriptions and default values instead of codes.
7. Is agnostic of organizational structures	4	Not applicable.	n/a	n/a	n/a
8. Requires the minimum possible steps to complete	1	Multiple duplicate steps are followed in the process. e.g., time off requests are approved during the time of request and re-entered on the timesheet.	See item #4.	Lack of an automated self-service system.	See item #4.

A Good Service…	Rating	What is your service failing to do for users?	What does "good" look like for your service?	What's stopping your service from doing this now?	What could you do to change it?
9. Is consistent throughout	1	Each department is using their own time off tracking sheets, methods and timesheets. Five different timesheet frequencies are in place.	All staff using a single automated system to track time off and timesheets.	Lack of an automated self-service system.	See item #4.
10. Has no dead ends	4	There are no dead ends in the process.	n/a	n/a	n/a
11. Is usable by everyone, equally	4	All staff are able to use the current service.	n/a	n/a	n/a
12. Encourages the right behaviours from users and service providers	1	Collection of equipment use data could be duplicated. Current informal sick/vacation tracking process could lead to inefficiencies.	See item #9.	Lack of an automated self-service system.	See item #4.

A Good Service…	Rating	What is your service failing to do for users?	What does "good" look like for your service?	What's stopping your service from doing this now?	What could you do to change it?
13. Responds to change quickly	1	Since all tracking is manual paper-based and duplicated, changes could not be actioned quickly.	See item #9.	Lack of an automated self-service system.	See item #4.
14. Clearly explains why a decision has been made	4	Reasons are provided to all decisions.	n/a	n/a	n/a
15. Makes it easy to get human assistance	4	Admin assistants and supervisors are available to help with any questions.	n/a	n/a	n/a
Total Score	**39**	**Level 3**	---	---	---

Scoring Levels Explained

0-20 – Level 1

It is not possible for all but the most expert and determined users to find and use this service.

It may pose significant risks to those users who are able to use it by encouraging unsafe behaviours and may make it extremely difficult for users to understand and resolve issues when they arise.

21-30 – Level 2

Though a minority of users might be able to complete your service, it is unlikely to get them to the goal they need to achieve. The majority of your users are likely to struggle to find or use your service, either because it is not inclusive, or it is designed for expert use.

31-40 – Level 3

Though some users will be able to use your service to reach their desired goal, the service is still difficult to use for the majority of users and is likely to favour those with time and previous experience.

Your users may face delays in the use of your service due to organizational silos or unnecessary bureaucracy and may still become confused by inconsistencies in the service or ways of working that are unfamiliar.

41-50 – Level 4

Most users are able to find and use your service successfully, although some users may still be excluded.

A user's ability to achieve the goal they set out to achieve – in one seamless service – is still likely to be made more difficult by organizational silos or more inconsistencies in your service.

51-60 – Level 5

Your service is easily findable and usable by anyone who needs to use it, enabling all users to consistently achieve the goal they set out to achieve. Your service is likely to encourage behaviours that benefit not just your user and staff, but society and the planet as a whole.

4.12. Current State Summary

To summarize the current state, the following tables indicate the findings with respect to the various aspects of the assessment.

Is the City making the right technology investments?
The City has implemented some industry recognized business systems but not in a strategic manner.
The level of technology investment in North Battleford is low.
The City is struggling to make the most of its current technology investments.
Software technologies are selected and purchased at the department or business unit level, resulting in significant overlap and duplication of features and lack of support by the IT Department.
Corporate-wide view of technology investment is not prevalent.

Is an effective IT Governance model in place?
There is an IT budget approval process.
There is no IT Governance in place for IT oversight such as an IT Steering Committee.
There is no project evaluation and prioritization process.

Are the City's software solutions cost effective?
There are opportunities to expand the use of some of the systems.
There are opportunities to consolidate some of the systems.
There are municipal functions with gaps where no software solutions have been implemented.

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What are the City's future business needs?

The City should integrate the various business systems by going to market for a single record ERP system.

More end-to-end digitized business processes should be put in place.

More online services for the public are required.

More stable technology infrastructure and security should be in place.

Municipal staff and management should have access to data analytics for informed and effective decision-making.

Municipal GIS and digital mapping is not currently available to the staff and public.

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

Yes, in general, the IT staff and management have the knowledge to take the City forward.

Some skills and functions may need to be upgraded for future technologies such as Cloud and Data Analytics.

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

The planning, permitting, bylaw and licensing processes could benefit from a property-centric process automation system. The City is using Vadim iCity at the moment to track some of the transactions.

The Asset and Work Management processes are collected and managed by 9+ custom and purchased applications. A business solution that digitizes these end-to-end processes could benefit the City.

Does the City have a solid and secure IT environment?

Some basic security requirements are in place, but other things could be done to improve overall security.

The infrastructure is stable, but there are many departmental reports of poor performance. There are concerns that it may not be able to handle the increased security and information needs of the future.

The City is not in a strong position to be able to respond to and recover from a significant incident that may cause a disruption in IT services.

Is IT effectively delivering IT services to its clients?

IT is delivering services effectively within the parameters that have been set to the point that the business can function, however, there are no metrics or other methods in place to establish which services are effective and which require improvement.

ITSM functions are lacking, including knowledge management and change management.

Strategic Directions and Recommendations

5.0 Strategic Directions and Recommendations

5.1. Strategic Directions

To effectively address the threats and opportunities a municipality faces, some changes in strategic direction are required. For North Battleford, the consultants, in collaboration with the City, identified a number of strategic directions the City should take. These strategic directions are listed below.

Strategic Directions – TOP 3	Description
Improve IT Security	Security Program, Incident Response etc.
RFP for New ERP	Allow for a single record, increased integration, etc.
Disaster Recovery and Business Continuity	Develop plan and implement solution to recover from a major incident.

Strategic Directions	Description
Improving IT Governance	IT Steering Committee, Project Prioritization, etc.
Corporate View of Business Solutions	Look at IT holistically to achieve maximum value for the City.
Invest More in IT	Increase IT budget to implement recommendations in this Report.
Business Process Optimization	Similar to what was done with timesheets as part of this project.
Online Services	Provide enhanced customer service.
Business Solutions Training	Required to create awareness of functionality of current solutions.
IT Service Management	Helpdesk metrics, Change/Knowledge Management, etc.
Remote Facility Infrastructure/Technologies	Improve remote networks and field tools for future expansion.

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Strategic Directions	Description
Expand SharePoint Use	Improve data sharing, corporate Intranet, etc.
Business Intelligence	Data-driven decision-making.

Although the Top 3 as selected by the City are considered very important, the others should not be discarded. The above list is not in any specific order but the recommendations later in this document will identify priorities for all of them.

5.2.   Recommendations

5.2.1.   Invest in a Corporate ERP (Enterprise Resource Planning) System

Due to the number of siloed business solutions, it will be beneficial for the City to go to market for a single ERP solution that will provide much of the functionality required by a municipality.

Ongoing investment in a Corporate ERP with centralized customer profile and public online service capabilities – linked to updated Content Management System (CMS) and online/web service delivery capability – will result in significant improvements to customer and employee satisfaction.

To receive full benefits of automation, individual business systems should be integrated with one another. Specifically, all systems that deal with payments, must be integrated with the Finance system. Lack of integration creates duplication of effort and exponentially increases risk of error. The greatest risk to business application integration and consolidation is the weakness of the Vadim iCity ERP.

Implement a Single Integrated Municipal ERP

The City should consider implementing a single municipal ERP system that is capable of automating multiple lines of business.

Implementation of a centralized ERP with centralized customer record, financial management (G/L, AP, AR, Payroll), HR Time and Attendance, Asset Management, Work Order and web-based online services capabilities would be a large leap into online services and the reduction of duplicate Finance, HR, Asset Management and Work Order systems within the City.

While it is difficult to find a single system that can cover all business areas of a municipality, there are systems that have modules to automate most key areas.

A single municipal ERP should include most of the following modules:

ERP Modules
- Finance (G/L, AP, AR, Payroll).   - Property (centralized property record with Utilities and Tax).   - Asset and Work Management.   - Property related services: - Parks and Forestry Management.   - Mobile access to field staff.   - HR (central employee record with performance management / training / certifications and attendance management).   - Centralized property record.   - Utility and tax billing and payment management.   - Planning Approvals, Permitting, Bylaw Enforcement, Licensing.   - Online Customer Incident Reporting Portal.

Imagine the simplicity of having a single system that is capable of automating most of the business areas and is inherently integrated with specialized business applications that have features not found in the ERP?

Such an environment would be easy to maintain and would be less expensive. Such a system could generate integrated data that would allow the City to perform data analysis for better / more informed decision-making.

The recommendation is to go to the market with an RFP for a municipal ERP. Once procured, the implementation should be performed in phases. The first phase should implement one of the modules and provide a window for the City to familiarize itself with the system and then expand to the rest of the business areas.

5.2.2.   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 high-level IT Strategy (ITMP) to align with the Corporate Strategy and guide major decisions on IT systems and processes.
- A Change Control Process.
  - A process where significant changes to infrastructure and systems are evaluated for value and risk.
- Project Intake and Prioritization Group.
  - This Group will review major project requests such as system upgrades, new system purchases and other projects that would take considerable time and resources.
  - 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.
- Service Level Agreements
  - An agreement between the City and third-party service providers where expectations, roles and responsibilities are clearly explained.

IT Steering Committee

Perry Group recommends an IT oversight group such as an IT Steering Committee. They should be responsible for approving the IT Strategy, setting the direction and for ensuring that IT conforms to that Strategy and direction.

Change Control

Additionally, we recommend that the City adopt a more formal Change Control process, to mitigate the potential of system failure or degradation during or after a system change is made. This process should involve examining the risk involved, the value the change will bring to the City, and ensuring there is a backout plan.

There should also be a "change window" where everyone understands when the change will occur and take appropriate steps to ensure their work is saved and no one is working on that system.

Finally, all changes should be tested before releasing the system back to production.

Project Prioritization

Since it is not feasible for the City to perform multiple major projects at the same time, there should be a project prioritization process, where each project is evaluated based on value, risk and resources required to execute the project.

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 North Battleford.

Service Level Agreements (SLAs)

The City should have SLAs in place with all major service providers that clearly state services, service levels and roles and responsibilities.

5.2.3. Improve the Security Posture of the City

There are those who believe that security is a barrier to efficiencies, but if implemented properly it can be an enabler.

We must consider first, the loss of productivity should a security incident cause service disruption. 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 North Battleford's constituents.

Recommendations to Mitigate the Risk of a Security Incident
Develop a Security Strategy that aligns with corporate objectives.
Ensure that risk is mitigated but that business can still be accomplished.
Ensure that security is not considered a barrier to conducting business.
Develop a Security Program to address risks and vulnerabilities highlighted in this Report and also the reports developed by Websec.

Recommendations to Mitigate the Risk of a Security Incident
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.
Implement a security awareness training program for all personnel.
This will mitigate the risk of staff opening malicious attachments or clicking on links inside emails that could lead to malware infecting the network.
Complete the development and implementation of an IT Policy that includes security standards and practices.
A Policy should not be overwhelming or complex. It should be as concise as possible while stating the purpose and the policy statements. An IT Policy helps personnel understand what is and is not permitted and will help to facilitate appropriate security practices throughout the organization.
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 (2FA).
2FA introduces a second layer of security access making it more difficult for an attacker to penetrate the City's network.
Develop and implement a Disaster Recovery Plan and a Security Incident Response Plan.
A Disaster Recovery Plan is not just having a back-up. 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.
Resolve the granular security issue on the file server.
Perform Risk Assessments on major third-party service providers and suppliers.
Upgrade Windows servers that are at end-of-life and no longer supported.

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Recommendations to Mitigate the Risk of a Security Incident
Perform regular scanning for vulnerabilities including Wi-Fi networks.
Ensure that users with privileged accounts switch to regular accounts when elevated privileges are not required.

5.2.4. Resolve Issues with IT Infrastructure

The City has a good, solid network in general, but has some poor areas of connectivity outside the main building.

The IT infrastructure is the base on which everything else is built, must be robust, and reliable to facilitate other improvements to business solutions and services. The municipality should review the ability to upgrade the speed and capacity of the Point-to-Point network communications infrastructure and ensure that suitable power conditioning and generators are available to maintain the environment in the event of a power failure.

Enhanced Wi-Fi capabilities should be put in place to provide staff in facilities buildings with communications and business systems access and free public Wi-Fi access, where appropriate.

The City should review the ability to improve the field worker connectivity in remote areas to facilitate their ability to embrace technology while in the field rather than having to come back to the office to use the technologies.

5.2.5. Improve Customer Service and Accessibility for Residents / Visitors / Businesses

With the majority of businesses having to close down their in person operations during the Coronavirus pandemic, they are trying to make decisive shifts to keep their customer service and support operations running.

This crisis has revealed that a robust, Customer-First Service Strategy is required in order to maintain long-term business resilience and success so, with the delivery of municipal services to residents, visitors and businesses, North Battleford can seize the opportunity to provide end-to-end service capability through greater emphasis on access to more services via the corporate website.

Optimize and Digitize Business Processes

The efficiency of the City depends on its business processes.

The current business processes should be optimized through process review. The optimized processes should then be digitized for optimal efficiency.

It is important to digitize entire processes rather than specific activities within a process, i.e., identify duplication of work and less value-adding activities within a process and eliminate those. Activities that could be done better by a business system should be automated. Identify points in a process where data is tracked separately by staff from different departments. These could be eliminated by data integration or sharing.

It is important to note that the City should not digitize a "bad process". Automation projects should always be preceded by a process improvement exercise.

See Appendix 2 – To-Be Time Tracking and Payroll Process for an example of improving business processes.

5.2.6.   Minimize Data Entry, Process Duplication, and Hard Copy Documentation

Most of the business processes in the City are using paper, even where a business system is in place. Some areas use both paper and a system for tracking their activities. This is common among municipalities.

In order to receive maximum benefit from automation, a business process must be digitized from beginning to end. This means not using paper for any of the activities. Such digitized processes require capture of data as part of the process, e.g., a building inspector performing an inspection in the field must enter their inspection notes directly into the system while in the field.

A paperless digitized business process also requires a culture change within the City. Technology alone would not be sufficient. People and processes should be the primary focus in developing paperless and digitized processes.

5.2.7.   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.

Implementing select ITSM processes will improve overall performance of IT and deliver better levels of service to the whole organization. To implement ITSM processes, the City should:

Activity	Description
Develop IT performance metrics to establish service level satisfaction.	This allows the organization to determine focus areas for improving service.
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.
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.

5.2.8.   Maintain Long-Term Cost Sustainability

Online vs. Over The Counter

It is proven that online services are less expensive than providing the same service over-the-counter or over-the-phone channel. In order to reach long-term cost sustainability, the City should consider moving public-facing services to the web.

Single System vs. Multiple

As explained in the Implement a Single Integrated Municipal ERP section, the City should invest in a single integrated municipal ERP rather than implementing departmental silo systems.

A single business system that incorporates multiple lines of business and that is integrated with a single database will allow the City to reduce ongoing maintenance costs and will help build expertise within the City to support and maintain.

5.2.9. 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 City 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 City 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 functionality of current platforms like PerfectMind and M365 has the potential to completely transform how work is done in North Battleford. 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 City 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 North Battleford staff through a few examples of a BPO review in order to help root the discipline (and mindset) within the City.

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.

The typical steps in a business process optimization effort are:

- Scoping and Planning.
- As-Is Analysis.

- To-Be Design.

- Transition Planning.

- Continuous Improvement.

5.2.10. Implement Recommendations from Payroll Process Review

Note that these processes should be implemented after the ERP (with Human Resource Information System (HRIS) and Payroll) solution is chosen or within the current HRIS if the City chooses to stay with it.

Regardless of the HRIS solution North Battleford 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.). Allowing staff to help themselves in order to get at this information should be a very highly prioritized need within an HRIS solution.

5.2.11. Cloud and Shared Services

The City is familiar with the use of external services. It is recommended that some future business systems be considered for implementation using the Cloud infrastructure.

Many government organizations have adopted the Cloud as a convenient platform 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 allows the City to concentrate on business process optimizations and service improvements using the existing systems, rather than spending resources on maintaining hardware.

The recommendation is, therefore, to look at the Cloud as an option for any future system implementations or major upgrades where a Cloud solution is available.

5.2.12. 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 City's current posture with respect to Cloud services, a policy must be developed to address current and future Cloud deployments.

5.2.13. GIS Capabilities Opportunities

The need for a Corporate GIS System was identified and discussed quite often in the surveys and department interviews and a direct 2-way integration with the ERP is recommended.

ESRI Canada has several free and low-cost introduction, training and preliminary assessment consulting programs specifically geared to smaller municipalities.

It is recommended that a group of CNB operations and IT management staff ascertain what is available to them by having a discussion with ESRI Canada to understand the low-cost capabilities and benefits of GIS services, aerial and satellite-based ortho imaging, import and export capabilities of AutoCAD-based drawings, integrations with popular ERPs for small to mid-sized municipalities, etc.

5.3. Mobilizing the Recommendations

This section addresses how the City should prepare for the implementation of the ITMP recommendations.

There are a handful of important changes required in order to help achieve a true transformation.

The following key areas require special attention:

- Repositioning of IT.
- IT funding.

5.3.1. Repositioning IT

Manager of IT and Associated Governance

Perry Group is recommending that the role of IT Coordinator be elevated to Manager of Information Technology. This is not simply a title change but is intended to reflect the importance of information technology to North Battleford.

This change will not mean that the Manager of IT will have carte blanche over IT decisions – that is why we strongly recommend the IT Steering Committee to oversee decisions and strategies involving information technology.

The Manager of IT role would be actively involved with helping to develop IT strategies for the organization, and this should be reflected in the title. The Manager of IT would be responsible for all IT operations, and for reporting to and consulting with the IT Steering Committee on matters where significant strategic and financial considerations are involved.

The IT Manager role would, therefore, have additional accountabilities. The IT Manager will not just be responsible for "keeping the lights on" but will have an important role in helping the IT Steering Committee to develop, implement and monitor the various strategies recommended in this Report.

This will facilitate IT becoming a strategic partner with the business rather than just being a back-office function. The IT Manager will work with the departments to discover their current and future requirements and ensure they are met.

Business Support Analyst

Perry Group is recommending that the role of Business Support Analyst be added to the IT Department.

This role is essential for ongoing staff support and the maintenance and growth of the ERP and its integration to downstream systems. The major functional capabilities of this position would be:

- Provide operational support to CNB departmental staff for ERP application use questions or business process steps or linkages with downstream integrated applications. This is particularly important once the vendor has completed an initiative and has moved the new features into production.

- Provide business process analysis support to help CNB business units review and fine tune their business processes. Once the business processes have been streamlined, they would be converted into requirements that would be used by the ERP or downstream application configuration vendor to implement into the new staff or public portal environments.

- This resource would propose modifications to the business processes, field labels, field format verifications, lookup tables in the ERP staff or public screens.

- This resource would have advanced training in the ERP reporting capabilities, so that they could generate statistical and Business Intelligence dashboards and reports that would be used by the business staff to monitor and manage their business.

- The role would also look at business solutions corporately and propose systems integrations where appropriate and cost effective.

- For larger initiatives, this resource would work, as an integral resource, in the project team with the Departmental Business Unit Subject Matter Experts (SME) and the vendor's Project Manager, Business Analyst and Configuration Analysts. This CNB IT resource would ensure that the Businesses' needs are being understood and met, that Corporate focused goals and standards are being maintained. The benefit to the vendor is that the vendor has an IT and Business savvy CNB IT resource available to them with an organization wide perspective to discuss technical options and capabilities with before options are taken to the Business Department for consideration. Options that are detrimental to the Corporate focused goals and standards, options that generate large changes in scope, time or costs can be discussed and discarded without involving the operational department. These options and choices would be documented and depending on the scope and scale of the decision, recommendations may need to be brought to the Manager of IT and possibly to the IT Steering Committee for review and decision approval

Proposed IT Organization Structure and Associated Governance
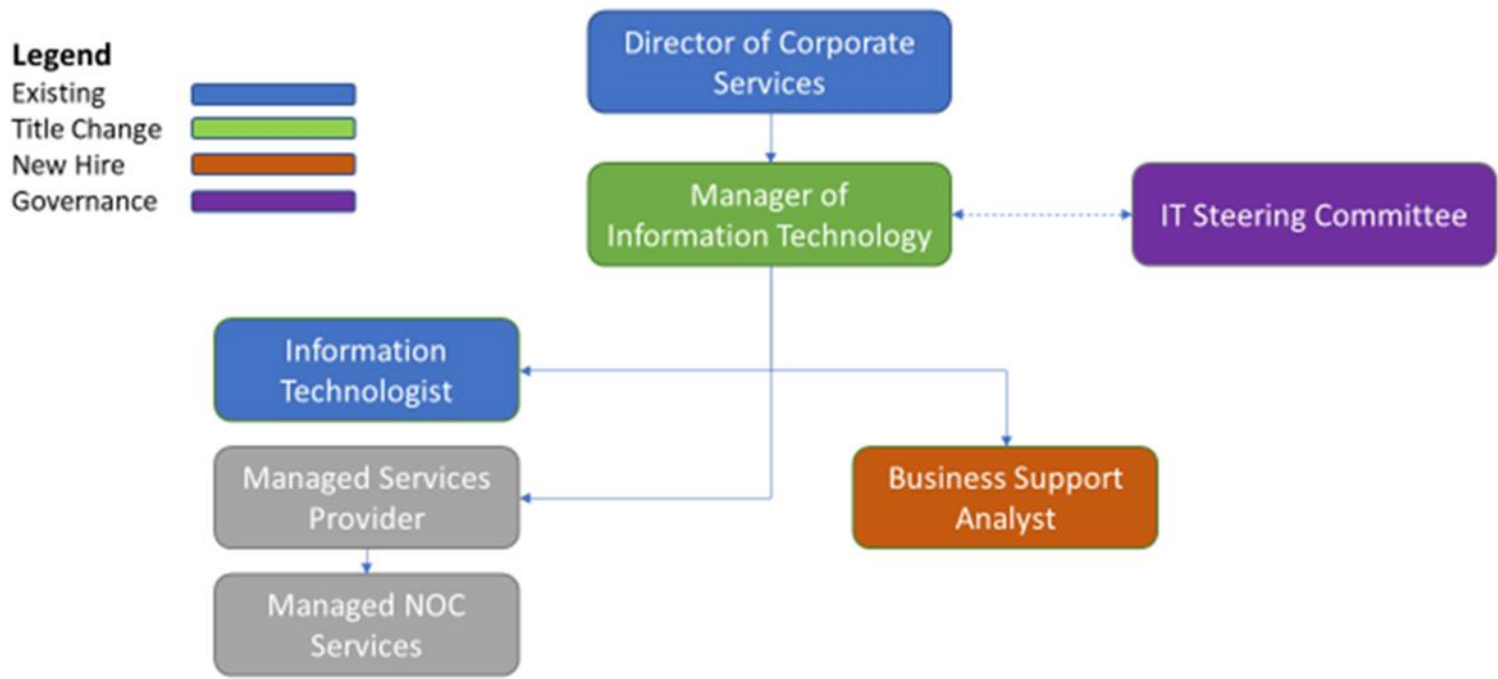
Figure 10: Proposed IT Organization Structure

The above does not change the direct reporting situation – IT will still report directly to the Director of Corporate Services. There is no reason to change this reporting relationship as IT is a corporate service and aligns appropriately with the rest of the Director's portfolio.

Funding

In order to implement the recommendations of this project, the City must resolve the funding shortfall.

As explained in the Financial Analysis section, North Battleford's technology budget is low. The Perry Group recommended range for technology funding is 2.5% to 4.5% of the total operating budget.

The recommendation is to take corrective action to fill this gap in the next three years. The technology spending is an *investment for the future*.

ITMP Work Plan

6.0   ITMP Work Plan

The following table identifies specific initiatives with their related cost estimates and a brief summary of the benefits.

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

🟨 Business Solutions   🟩 Governance and Resourcing   🟦 Infrastructure and Security   🟥 ITSM

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	Form the IT Steering Committee, set the meeting schedule and develop the Terms of Reference	N/A	N/A	Oversight of all IT activities ensuring alignment to corporate objectives
3	High	Elevate the IT Coordinator role to that of IT Manager	N/A	TBD	Allows the role to become more strategic rather than a back-office function
4	High	Hire the Business Support Analyst	$3k	$80k	Facilitates the requirements gathering and implementation on the new ERP

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ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
5	High	Form the ERP Core Group to develop and agree to Corporate ERP Goals, needs review, and evaluate the potential benefits of a new ERP solution	N/A	N/A	This Group should contain a cross section of departmental stakeholders and will be able to make a corporate-based decision based on risk and value
6	High	Develop requirements and Negotiated Request for Proposal (NRFP) documents	N/A	N/A	This will clearly set out the RFP requirements
7	High	Go to market with an NRFP for a municipal ERP that includes Finance, Asset, Work, Permitting and Licensing, customer portals, etc.	N/A	N/A	Allows the City to discover what ERP solutions are available
8	Medium	Implement the process improvements from the Payroll process review	TBD	TBD	There will be significant efficiency improvements
9	Medium	Identify a select few business processes that should be reviewed for improvements	TBD	TBD	The high priority process improvements will be addressed
10	High	Develop and implement the Project Intake and Prioritization process	N/A	N/A	Allows the City to take on projects based on organizational value
11	High	Develop the Security Strategy	N/A	N/A	Aligns security measures with corporate objectives and risk appetite

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ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
12	High	Develop a Security Program to address the risks and vulnerabilities highlighted in this Report and the Websec Report	TBD	TBD	Addresses all gaps and vulnerabilities identified in security assessments
13	High	Develop and implement an organization-wide annual Information Security Awareness Training Program	N/A	$5k	Mitigates the risk of personnel actions causing a security incident
14	High	Upgrade all Windows servers that are end-of-life	N/A	N/A	Mitigates the risk of an attack on unsupported platforms
15	High	Resolve granular security issues on file server	N/A	N/A	Mitigates the risk of unauthorized information access
16	High	Implement regular scanning for vulnerabilities on Wi-Fi networks	N/A	Minimal	Mitigates the risk of attacks through Wi-Fi networks
17	Medium	Implement Change Control process	N/A	N/A	Mitigates the risk of system changes causing service disruptions
18	High	Implement Finance modules of ERP and migrate legacy data	$50k	$40k	Stage 1 of the new ERP
19	Medium	Develop and implement SLAs with major third-party service providers	N/A	N/A	Allows the City to understand exactly what services are to be provided and who is responsible

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ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
Year 2 – 2023					
20	Medium	Create a Risk Register with all identified risks, evaluate the probability and impact and prioritize addressing each risk	N/A	N/A	Facilitates tracking of IT risks and assigns a Directly Responsible Individual (DRI)
21	High	Implement encryption for all mobile devices including laptops	$2k	Minimal	Mitigates the risk of a data breach should a mobile device be lost or stolen
22	Medium	Complete the development of the IT Policy and implement	N/A	N/A	Lets the whole organization understand what is and is not permissible
23	Medium	Implement 2-Factor Authentication	TBD	TBD	Adds another layer of defence to prevent attacks
24	Medium	Perform Risk Assessments against major third-party service providers and suppliers	N/A	N/A	Lets the City know if its service providers have risks that need to be addressed
25	Medium	Back-ups retention and frequency schedules should be approved by the IT Steering Committee	N/A	N/A	Allows IT to implement practices that meet the organization's requirements
26	Medium	Create regular user accounts for those with privileged accounts and ensure privileged accounts are used, only when necessary	N/A	N/A	Mitigates the risk of an attacker using elevated privileges to infiltrate a network

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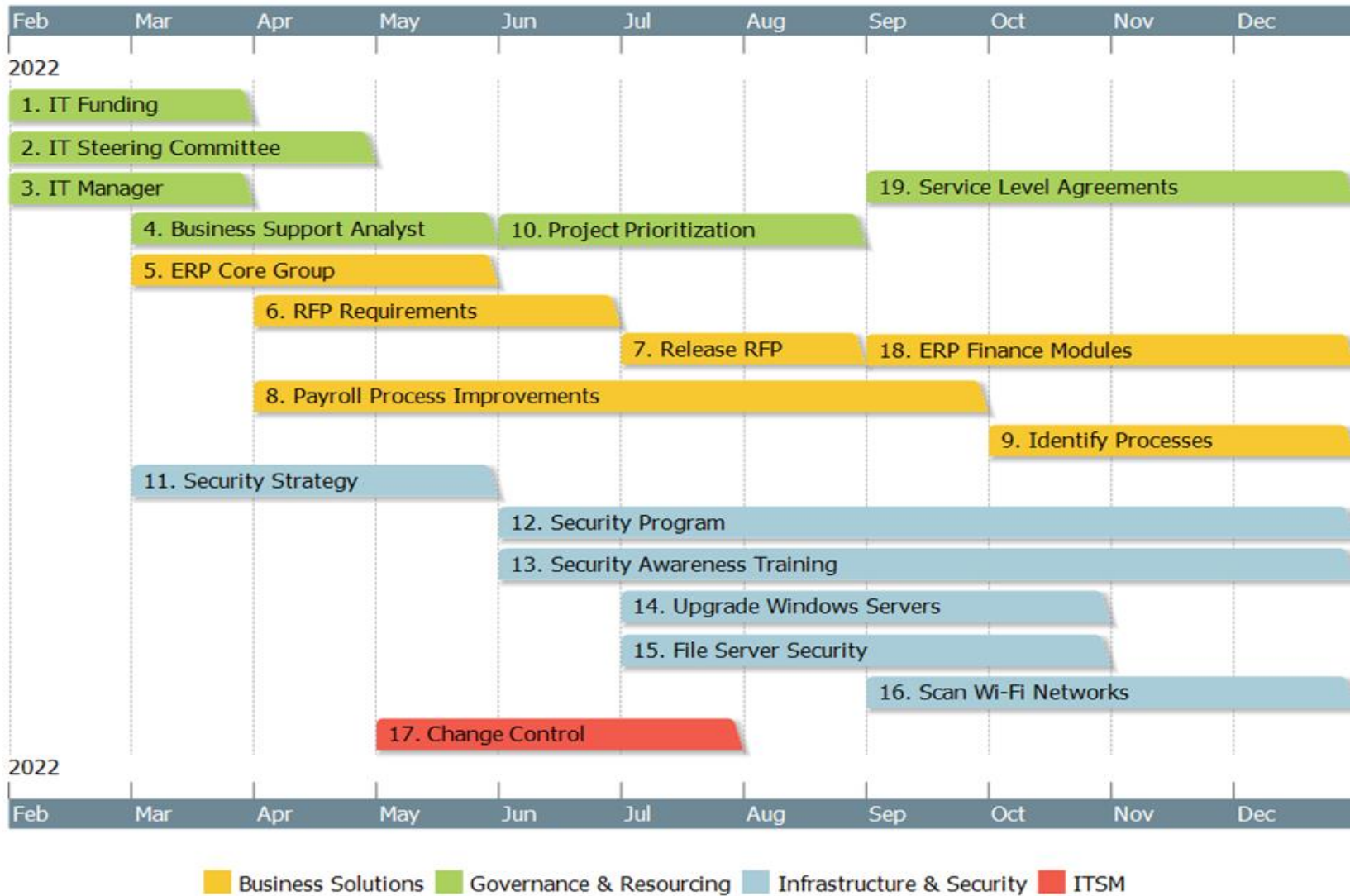| ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
27	Medium	Review the ability to upgrade the speed and capacity of the Point-to-Point network communications infrastructure	TBD	TBD	Improved communications
28	High	Develop and implement a Disaster Recovery Plan	$35k	TBD	Allows the City to recover from a significant incident
29	High	Implement a Central Property and Address Data Store and orthophoto capabilities into ERP and recommended GIS system	$125k	$40k	Integration of modules with Finance
30	High	Integrate the recommended Document Management systems into the ERP	$75k	$30k	Integration of Electronic Document Management (EDM) with the ERP
31	Medium	Review which services could be delivered online and develop a prioritized list	TBD	TBD	Improved services to constituents
Year 3 – 2024					
32	Medium	Develop and implement a Security Incident Response Plan	N/A	N/A	Allows the City to respond promptly in the event of a security incident
33	Medium	Implement auto-lock for unattended computers	N/A	N/A	Mitigates the risk of unauthorized information access

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
34	Medium	Disable all ports, services and protocols that are not required	N/A	N/A	Mitigates the risk of an attacker using a non-required service to perform an attack
35	Medium	Implement a formal Data Destruction Policy and procedures	N/A	N/A	Mitigates the risk of end-of-life devices providing opportunities to access data
36	High	Implement the customer portal of the Municipal ERP into the website	$100k	$30k	Improves services to constituents
37	High	Develop a new ERP Integration Strategy	N/A	N/A	Allows more integration with the ERP and other business solutions
38	High	Implement Building and Planning Permits and Licensing capabilities linked to ERP Central Property and Address, customer and employee centralized identities	$250k	$70k	Integration of departmental functions
39	Medium	Implement Cloud Governance	N/A	N/A	Facilitates decisions about whether a system should be moved to the Cloud
40	Medium	Review systems that could be migrated to the Cloud	TBD	TBD	Note that this should be an ongoing process – every time a system is procured or upgraded the Cloud option should be looked at
41	Medium	Engage a third-party to assist with developing a GIS Strategy	TBD	TBD	A GIS Strategy will improve many services in the City

ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
Year 4 – 2025					
42	Low	Implement a Mobile Device Management system	N/A	$12k	Allows the City to manage mobile devices such as erasing them if lost or stolen
43	Medium	Develop and implement an IT Knowledge Base	N/A	N/A	Facilitates personnel resolving their own IT issues
44	Low	Develop IT performance metrics to establish service level satisfaction	N/A	N/A	Allows the City to understand which services are being delivered effectively
45	High	Implement the Asset Inventory and Registry into the ERP and GIS systems	$100k	$30k	Integration of departmental functions
46	High	Implement the Asset and Work Management capabilities linked to ERP Central Property and Address, customer and employee centralized identities	$200k	$60k	Integration of departmental functions
Year 5 – 2026					
47	High	Implement HRIS and Learning Management System (LMS) capability linked to ERP central employee records	$100k	$30k	Integration of departmental functions

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ID#	Proposed Priority	Opportunity	Capital Impact	Operating Impact	Summary of Benefits
48	High	Expand the ERP to field personnel	$65k	$15k	Allows field workers to directly access systems from the field
49	Low	Expand the M365 platform to use other apps: Forms, Flow, Teams, etc.	$50k	N/A	Integration of departmental functions

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6.1. Timelines

6.1.1. Year 1 – 2022

6.1.2.   Year 2 – 2023

6.1.3.   Year 3 – 2024

Gantt chart timeline for 2024 (Jan–Dec):

- 32. Security Incident Response Plan (Jan–Jul) — Infrastructure & Security
- 33. Auto Lock Computers (Feb–Jul) — Infrastructure & Security
- 34. Ports, Services, Protocols (Mar–Jul) — Infrastructure & Security
- 35. Data Destruction Procedures (Apr–Aug) — Infrastructure & Security
- 39. Cloud Governance (Mar–Jul) — Governance & Resourcing
- 36. ERP Customer Portal (Jan–May) — Business Solutions
- 40. Cloud Systems Review (Jul–Dec) — Business Solutions
- 37. ERP Integration Strategy (Feb–May) — Business Solutions
- 38. Permits & Licensing (May–Nov) — Business Solutions
- 41. GIS Strategy (Sep–Dec) — Business Solutions

Legend:
- Business Solutions (yellow)
- Governance & Resourcing (green)
- Infrastructure & Security (blue)

6.1.4. Year 4 – 2025

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

2025

- 42. Mobile Device Management
- 43. IT Knowledgebase
- 44. IT Performance Metrics
- 45. Asset Inventory and ERP
- 46. Asset and Work Management

2025

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

■ Business Solutions   ■ Infrastructure & Security   ■ ITSM

6.1.5. Year 5 – 2026

Appendices

Appendices

Appendix 1 – Tables and Figures

Appendix 2 – To-Be Time Tracking and Payroll Process

Time Tracking and Payroll Process

As an example of improving business processes, we analyzed the Time Tracking and Payroll process and have developed the following process flow to improve the process and provide efficiencies.

To-Be Service Recommendations

The consultants and the North Battleford staff worked collaboratively to find improvements to the current service. The improvement ideas were conceptualized in a future to-be process map. Potential elimination and/or improvements to current tasks were identified and the potential time savings were estimated (refer to the "As-Is Process Map with Improvements" document provided separately).

Service Improvement Summary

This section summarizes the Digital First service improvements and benefits.

Improvement Impact(s) (low, medium, high)	High
# of Annual Transactions	14,500 timesheets 1000 sick/vacation requests
# of Steps Eliminated or Improved	76 out of 108 steps eliminated or improved
Process Time Saved per Transaction	22 minutes per timesheet and 7 minutes per sick/vacation request
Elapsed Time Improvement	N/A
Estimated Cost Avoidance / Value of Time Saved Annually	$225,653

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Proposed Day-In-The-Life Scenario

Fred is a North Battleford staff member working in the Roads Maintenance team. Fred is planning to take time off to go on a vacation. Using the City's Employee App, Fred enters the details of the request on his smartphone.

The App automatically shows what he is eligible for. The system also routes the request to Fred's manager and the manager is able to view all vacations of their team for the requested time period. The manager approves the vacation request online.

An automated notice is sent to Fred confirming that his vacation has been approved. The system provides an option to automatically update the Outlook calendar as well. Fred's vacation balance is automatically updated. When it's time to prepare the timesheet (TS), the system automatically fills the vacation dates and pre-fills the work time for Fred. Fred updates the pre-filled TS with overtime (O/T) hours. The TS is also routed to the manager for approval.

All TSs are routed to Payroll for processing. All TS data are already in the Payroll system to be reviewed. An exception report shows the irregularities in the data. The Payroll Clerk quickly corrects the issues and runs the Payroll batch.

Fred also has access to the Work Management system in the field. At the end of each day, Fred enters the equipment hours for the crew into his App. Equipment is linked to work orders, which are linked to assets. The data gathered in the field are also available for cost distribution by Finance.

Fred's manager can use the equipment use statistics to justify the budget requests at the end of the year.

To-Be Process Map

The future ideal service map was formulated by incorporating digital improvements to the current process as discussed at the as-is workshop.

The technology capabilities and process re-design ideas were incorporated to build the high-level To-Be Process Map. The To-Be Process Map was shared with the Subject Matter Experts and further improved.

Time off request

Start → Staff using a self-service tool (web/mobile): request for time-off, Sick etc. → system checks the available balance, enforce rules and advice the staff accordingly → Request automatically forwarded to the manager/supervisor → If approved, automatically updates the balance/bank and informs staff → (junction) → System auto generates the TS and includes approved exceptions → Staff update job codes/project codes etc. if required → staff digitally approves TS → System routes to the manager for approval → After the mgr. approval, Data available in the Payroll system → TS data available to beReviewed by Payroll → **End**

Sick request

Start → Staff self-service via web/mobile App → (junction) → System enforce rules: e.g. sick note after 2 days, Covid test etc. → Sick records automatically fed to the TS → (junction)

Manager/Admin staff on behalf of the staff can enter a sick request → (junction)

```
                    ┌──────────────┐     ┌──────────────┐     ┌──────────────┐
                    │ Staff Logs   │     │ Employee     │     │ Check        │
   ╭─────────╮      │ into the     │     │ portal       │     │ available    │     ┌──────────────┐
   │  Start  │ ───▶ │ Employee     │ ──▶ │ provides     │ ──▶ │ balances,    │ ──▶ │ Staff receive│     ╭─────────╮
   ╰─────────╯      │ Portal/      │     │ access to    │     │ download     │     │ required     │ ──▶ │   End   │
                    │ App          │     │ multiple     │     │ pay slips... │     │ information  │     ╰─────────╯
                    └──────────────┘     │ staff        │     └──────────────┘     └──────────────┘
   Self-service                          │ inquiries    │
   inquiries                             └──────────────┘
```

Self-service inquiries

Start → Staff Logs into the Employee Portal/ App → Employee portal provides access to multiple staff inquiries → Check available balances, download pay slips, request letters, initiate performance, update personal info, request time off, changes to approved time off requests etc. → Staff receive required information → End

Self-service Equipment usage tracking

Start → Each crew has access to a mobile data capture device: Tablet/smartphone/ laptop with a mobile app → Work Management system/ app contains all equipment, GLCodes, descriptions etc. (downloaded from the Financial system) and linked to the Service Request and Asset → Daily, during the shift, Team lead/ crew members update the app with usage of equipment → date, time, user automatically tracked → End of the day, all equipment usage data sent to Sup for approval (If needed) → Data imported to the Financial system → End

Page 2

Process Changes

The following high-level process changes are recommended:

- Digitize the absence tracking and time tracking processes with integration to the Payroll system.
- Implement an exemption-based time tracking model.
  - Employee absences are tracked from the point of request to approval.
  - Approved sick form was discontinued for a while, but some departments are still using it.
- Implement a formalized standard process to track time off requests.
  - All departments to use a single Employee App to request and approve absences

Policy Changes

To implement and realize the to-be process, the following process and policy changes must be considered:

- Implement a consistent simplified process for time tracking.
  - Daily, Weekly, Bi-weekly, Bi-monthly, and Monthly timesheets are used currently. Consolidate these five frequencies to two: Weekly and Monthly.
  - The Fire Chief (only in the Fire department) approves all timesheets. In the other departments, the supervisors and managers approve their teams' timesheets. Standardize the timesheet approval process so that the immediate supervisor is responsible for the approval of all timesheets and absence requests.
- Decouple equipment tracking from the Time Tracking process.
  - Team leads responsible for field crews should be tracking the equipment usage within the Work Management system.

People Changes

In order to achieve the future state, it is important to consider the following recommendations related to the people involved in providing the service:

- Execute change management – including training and communications – to all stakeholders, i.e., staff, customers, contractors, external service providers.

Technology Changes

In order to achieve the recommended service improvements, the following technology changes should be considered:

- Implement an HRIS that has the capabilities to track all aspects of employees from hire to retire.

- Implement the Employee Self-Service feature of the HRIS to facilitate self-service time off requests and digital approval workflow.

- Implement automated timesheets based on approved time off requests automatically populating the timesheet.

- The Timesheet Module should be able to provide user-friendly description of time codes instead of just the codes.

- Approved absences should be available in a departmental shared calendar.

- Time off requests should enforce the limits by default, e.g., staff should not be allowed to request vacation time if they don't have sufficient time in their bank.

- Sick requests should automatically enforce the rules (such as a doctor's note after 2 days, COVID test based on symptoms, etc.).

- Staff should have the ability to use the self-service system remotely on smart phones, e.g., vacation approval by the manager using a smartphone, sick request initiated through a smartphone.

- System should automatically update the balances/bank when a time off request is approved.

- Employee self-service inquiries:

  - Staff should be able to make standard requests online through the self-service portal and receive services such as letters of employment, update personal information, apply for external education programs, submit qualifications, and license renewals, etc.

  - Online access to current and past pay slips.

  - Online access to tax documents, etc.

Service Model Changes

Implement an exception-based time tracking model.

In such a model, the staff time off requests must be tracked using a formal and standard method, as noted above.

Anticipated Challenges

The service design team has identified the following challenges that may be faced during the implementation of the proposed recommendations.

- Time and resources to be assigned to make the changes.
- Technical capabilities of the existing systems, e.g., Vadim system has two companies in the current configuration.
- Change management for staff and managers.
- Remote field staff access and usability of the system functions for remote users.

Patterns in Use

The digital service provisioning requires certain standard patterns.

The following table identifies the use of specific patterns applicable to this service.

Pattern	Description	Applicable
Apply	Completing an application to receive a service.	
Be Notified	Receive alerts, notifications.	Yes
Book	Book a room, item or an appointment for a specific date and time.	Yes
Check	Check status, check eligibility, check what's closest, etc.	Yes
Get Information	Find info (read text on website, watch a video, download a doc, understand requirements, etc.).	
Internal Workflow	Internal process, approvals, etc.	Yes

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Pattern	Description	Applicable
Pay	Pay a fee to the municipality.	
Register	Create an account and come back using it to get updates, provide updates, etc.	Yes
Request	Ask for something from the City (e.g., copy of a certificate, a pass, ticket, etc.).	Yes
Tell	Report something, inform the City of something.	

Optimization Benefits Estimates

The future digital process allows the automation and/or elimination of existing manual activities.

The following table calculates estimated benefits to customers and internal staff.

	Customer Experience (CX)	CX Rating	Elapsed Time	Savings From Eliminated Activities	Hardcopy Documents
Current	All staff using manual timesheets, manual vacation/sick requests	Low	1 – 3 days	108 steps	15 documents received / generated
Future	Online self-service	High	1 – 3 days	76 steps could be eliminated or improved through automation	8 documents received / generated

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Improvement	High	N/A	10 minutes saved per TS generation 12 minutes per TS processing by Payroll 7 minutes per sick/vacation request 1 hour/week by each department for scheduling	7 documents could be eliminated or digitized

Customer Experience Rating

- **High** – Service can be accessed at anytime from anywhere, no need for face-to-face interactions, convenient to the customer and the staff.

- **Medium** – While most actions are seamless, some tasks are inconvenient, e.g., print sign and mail documents, make payments using a cheque.

- **Low** – Requires a visit, print and mail, face-to-face interactions. No or limited online features available.

Estimated Benefits Summary

An average hourly rate of $50 has been applied for the calculations below. This is a blended figure that includes benefits and rounded to incorporate the time spent by all levels of staff.

Annual # of Transactions	# of Hours Saved per Transaction	Hourly Rate ($)	Cost Avoidance
14,500 timesheets generated by staff	10 minutes	$50	$120,833
14,500 TSs processed by Payroll department	12 minutes	$50	$145,000

Annual # of Transactions	# of Hours Saved per Transaction	Hourly Rate ($)	Cost Avoidance
1,000 sick and vacation requests processed	7 minutes	$50	$5,833
Weekly scheduling in four departments	1 hr / dept / week	$50	$10,400
Total potential cost avoidance per annum @ 80% success rate			**$225,653** **(100% = $282,067)**

Appendix 3 – Role of the IT Steering Committee (ITSC)

Introduction

An ITSC can take many different forms. For North Battleford, 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 City 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 ITMP, 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.

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 ITMP and make necessary adjustments based on organizational priorities.

ITSC Mandate

- The Committee shall meet at least six times per year.

- The Committee shall review all proposals for IT investments with projected costs over $50,000.

- All proposals must be pre-reviewed for technological merit by IT.

- 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 Return on Investment (ROI).

- All proposals must align with the ITMP recommendations.

- ITSC has the authority to reject or defer any proposal that it deems not to have made a sufficient business case or which does not significantly contribute to the strategic goals of the City.

- 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.

Appendix 4 – Sourcing and Procurement of a New ERP Solution

Potential Contract Project Manager (NRFP)

Should the Business Support Analyst not be sufficiently grounded in Project Management skills and procedures, it is recommended that CNB hire a contract Project Manager to manage the processes related the ERP Requirements gathering, the NRFP creation and issuance and the configuration and implementation of the new ERP to support Business Applications and Online Services as described previously.

The Project Manager would be responsible for scheduling of all meetings, collection and consolidation of the business requirements for the ERP in conjunction with the Business Subject Matter Experts and the ERP Business Support Analyst, ensuring NFRP purchasing practices, vendor communications, reporting and presentation schedules are created and maintained, ensuring CNB approvals and required documents are signed and collected to finalize the contracts. Once the contracts are signed, the Project Manager in conjunction with the ERP Business Support Analyst, would manage the timing, CNB meeting schedules, Vendor and Subject Matter Expert adherence to configuration, testing and data load milestones and movement into production. Most importantly, the Project Manager would be responsible to monitor, manage and document any scope creep and ensuring the contractor is only paid for completed work or phases based on Phase Completion Draws and not monthly draws. Estimated Project Manager costs are an estimated cost of $8k per month

Note: Although potentially a more expensive option, Perry Group Consulting has many senior consultants that are experienced in the gathering of requirements, creation and execution of RFP / NRFP processes, working with municipalities to select an appropriate solution to meet their needs and then help with the finalization of vendor contracts, software and service licensing etc. Once the procurement is complete, the Project Manager could be recruited, and they could continue working through the design, configuration and installation on the ERP

RFP Creation

Create an ERP replacement core group with decision-making level representation from Finance, Payroll, Human Resources, Asset Management and Operations and Leisure Services Workorder business needs.

#	RFP Creation Process
1	Review recent NRFPs issued by municipalities with a population under 100,000 and (ideally) also looking to replace Vadim (such as Aurora (existing Vadim implementation), Gananoque, Peterborough, Vernon, North Grenville, Grand Prairie, Windsor, etc.).

#	RFP Creation Process
2	ERP should be Cloud-based and be specially called out within the RFP.
3	Prepare to issue an NRFP for a Municipal ERP that requests the following attributes/modules with a goal to use one system for as much as the business processes as possible (see the Typical NFRP Process description for details).
3a	Financials including G/L, AP, AR, electronic invoice submission, payment, and reconciliation.
3b	B2B centralized vendor records.
3c	Payroll, Employee, Salary, Time, and Attendance.
3d	HRIS, Performance Management, Employee History, Job Classification, Union Affiliation, Training and Certification History and prompting for re-certifications and linkages to LMS, SCORM-compliant) for scheduled and on-demand training.
3e	Asset management. Inventory of tangible/depreciable assets (signs, fire hydrants, valves, etc.), fleet. Non-tangible assets (municipal trees). Asset Management of land-based assets such as parks with playgrounds, sports fields, washrooms, skate parks, etc., cemeteries with cemetery plots, columbarium, maintenance structures, etc.
3f	Work Order Management, linking employee costs (time and attendance) to maintenance of assets under management.
3g	Land and Property Management such as Planning, Engineering, Property Information and Municipal Addressing.
3h	Permits and Licensing processes for Planning, Building, Animal Control (licenses and enforcement) and Parking and Municipal Enforcement.
3i	Taxation and centralized owner "people" records.

#	RFP Creation Process
3j	Direct linkage/integration to a GIS Mapping System (ESRI, Google, etc.) to aid in staff and public visualization of assets, work orders, service requests, trends, etc. in a geo-spatial context overlayed on a City map.
3k	Direct linkage/integration to Microsoft SharePoint Document Management System (re-use existing technology and skills); storage of documentation associated with the ERP.
3l	Web-based online staff portal – centralized staff / employee record / classification – staff will use this portal to enter attendance, submit leave requests, view pay advice notices, HR/Payroll notices, etc.
3m	Web-based online vendor portal – centralized vendor record / classification – staff will use this portal to upload invoices, review POs issued to them, review status of payments, etc.
3n	Web-based online customer portal – centralized customer "people" record / classification – customers may be owners of properties for taxation or permit and licensing functions, but also may be customers for service requests concerning issues or concerns.
3o	Web-based online payment portal to facilitate the payment for customer and vendor services, taxes, or fees.

Understanding of Requirements

This section is created to generate conversation, fine tuning of the City's perspective and establish an agreed understanding of the near and future goals of the new ERP, usually discussed at the ITSC and SMT level.

#	Premise / Understanding the Requirements
1	Payroll, salary, time, and attendance is a financial construct – attendance breaks down to a cost – a labour worked cost, a sick time cost, a vacation time cost, a leave time cost (doctor/dentist appointment, bereavement, etc.).
2	HR/HRIS is about the employee in documented personal and historical attributes (as above) – production linkage to an online LMS may drive a sole source selection for the LMS.

#	Premise / Understanding the Requirements
3	Specific business units may have specialized engineering or statistical applications related to their function that may have work order, task lists, or trending analysis that may not fit into the ERP. • Business process review needs to understand and document what features should be used where. • IT Steering Committee may need to make a decision on what features will be used, where and when. • Departments / sections may need to be instructed and monitored to ensure data is being maintained in the correct systems to support the goals of the City.

	Once the ERP platform, the modules being implemented, and timing has been decided, the City's business functions and applications will need to be categorized as being directly within the ERP or an outside integrated application (i.e., Payroll, HRIS, Asset Management, Work Orders, Cemeteries, Facility Maintenance, Fleet Maintenance, Parks and Trees inventory and maintenance, etc.):

	1. City will have a clear understanding of what back-office business functions will be contained within the ERP.
	
	   o What the data attributes and structures for customer, vendor and contractor records will look like.
	
	   o What existing business applications (or portions of) are candidates for consolidation into the ERP.
	
	   o What the web requirements and web CMS requirements are to integrate with the ERP public portal and support the centralized customer, vendor, and contractor Identity records.

4	2. City will have a clear understanding of what will **not** be contained within the ERP.
	
	   o What existing systems can be enhanced and integrated into the ERP base corporate data to provide a common application to more business units within the City.
	
	   o What new business systems are required to be purchased and integrated into the ERP base corporate data to fulfill the business needs.

	3. Based on this review, a list of new projects will need to be created by the IT Manager and the Project Intake and Prioritization Working Group and reviewed by the ITSC to:
	
	   o Determine if existing back-office business process reviews are required to enhance and streamline the business.
	
	   o Identify opportunities for online customer interaction to improve efficiency of the City and make more service transparent to the community.
	
	   o Evaluate if existing applications are suitable for growth and enhancement, i.e., can it integrate into ERP base of corporate data, have a customer portal that can integrate with ERP and web CMS, etc.
	
	   o Corporate priority-setting of what systems will be purchased, upgraded, integrated, etc. when based on business need and efficiencies gained by the upgrade.

#	Premise / Understanding the Requirements
	o Based on the above project descriptions, preliminary service, and benefit reviews, estimated timelines and costs, Capital Budget requests can be created for consideration by Council.

Procurement and Evaluation Methodology

#	Procurement and Evaluation Methodology
1	Use a dual envelope NRFP procurement methodology. This methodology is becoming more popular with software procurements because it includes the following:
1a	Benefits of a Request for Information (RFI), such as seeing new and upcoming features vendors are developing with the ability to add them into the validation and scoring process for the final selection.
1b	Eliminates the issue, where some vendors will not respond to RFIs due to time and resource constraints which may exclude industry-leading vendors from the subsequent RFP.

#	Procurement and Evaluation Methodology

1c	Similar to a traditional RFP, an NRFP contains a formalized scoring chart with sections for:
	
	   o Company experience.
	   o Technical support.
	   o Ability to satisfy back-office technical requirements.
	   o Public portal capability with single customer identities for customers, suppliers, contractor working on behalf of City, etc.
	   o New capabilities and enhanced features that drive efficiencies identified during proposal and demonstration phases.
	   o Cost: suggest 20% of value.
	
	NOTE: Past experience has shown that the first five bullet points should be evaluated on a points score based on the number of items and importance within the sections. This will help to identify proposal ranking and which vendors will be short listed.
	
	For example:
	
	<u>Company Experience</u> – 4 lines/sections of attributes worth 10 points each for a total score out of 40.
	
	<u>Technical Support</u> – 5 lines/sections of attributes worth 10 points each for a total score out of 50.
	
	<u>Ability to Satisfy Back-Office Technical Requirements</u> – 45 lines/sections of attributes worth 10 points each for a total score out of 450.
	
	<u>Public Portal Capability with Single Customer Identities for Customers, Suppliers, Contractor Working on Behalf of City, etc.</u> – 18 lines/sections of attributes worth 10 points each for a total score out of 180.
	
	<u>New Capabilities and Enhanced Features that Drive Efficiencies Identified During Proposal and Demonstration Phases</u> – 1 section – more of a subjective consideration of the value to the enhancements or benefits to the City worth a total score out of 50.
	
	At the end of the process, where the cost is going to be factored into the decision, the sections 1 to 5 (out of possible score of 770) will be converted into a percentage (two decimal places) and with the cost added as a percentage to the result for a score based on 100%.

#	Procurement and Evaluation Methodology
2	Typical NRFP Process includes:
2a	Issue NRFP on street, offering a 3-5 week closing, with expectation to extend another week.
2b	Several typical Question, Answer and Addendum cycles.
2c	Close of the submission.
2d	Proposal envelope opening.
2e	ERP Core Group perform individual review and scoring based on scoring chart.
2f	ERP Core Group and Purchasing determine the consensus-based Stage 1 score for submissions and short list submissions to the highest scored 3-4 proposals that move into Stage 2.
2g	Inform other vendors that they did not pass Stage 1 short list and return sealed pricing envelopes.
2h	Formal product feature demonstration script prepared by the City, detailing back-office technical requirements, public portal and enhanced feature expected to be demonstrated. Script given to the vendors in Stage 2. Vendors are told that a live demonstration is expected and not a PowerPoint presentation.
2i	Schedule for 3-4-hour long demonstrations, 2-3 weeks in the future for the vendors (to effectively show the features of an ERP).
2j	Extend invitations to all staff that might be using the ERP features to attend the demonstrations, even though they will not be scoring the presentations. Makes them feel that they are part of the reviews, and they can learn what new features are available in the marketplace and what other municipalities are doing.
2k	ERP Core Group update their Stage 1 individual reviews and scoring based on what was shown during the Stage 2 demonstrations.

#	Procurement and Evaluation Methodology
2l	ERP Core Group and Purchasing meet to determine the consensus-based Stage 2 score for the submissions. The Costing Envelope is opened and factored into the determination of the "best qualified vendor" proposal.
2m	- Purchasing begins the negotiation process with the "best qualified vendor". - Requesting "Best and Final" pricing with the vendor. - Review and negotiation of Terms & Conditions. - Review and negotiation of various licensing agreements, etc.
2n	Purchasing issues PO and signs various contracts if the negotiations are successful.
2o	If negotiations are not successful, Purchasing begins discussion with the "next best qualified vendor", revised pricing matrix created for this proposal and negotiations begin as above.

6.1.6.   Business Applications and Online Services Linkages to the ERP Requirements

The following chart identifies the recommended business processes and key features of the ERP that should be included within the base system and serve as a Master Data Source for any additional systems that are not contained within the ERP:

- The list is in a suggested priority and timeline order to ensure that the required constructs have been established in advance of the needs identified in the future business process priority setting and reviews.

- Items 1 to 7 establish the base organization Master Data Source data constructs for the organization to use when determining how data should be collected within business process reviews and also with integration with future downstream applications that will not be included withing the core ERP.

- Item 8 is a decision point – depending on the completion of the planned CMS RFP and the availability of a new industry standard CMS and CNB website for the Employee, Vendor and Customer Portals, a decision by the ITSC will need to be made.

- Items 9 through 13 are the major business processes that would be accessible through the Employee, Vendor and Customer Portals.

- Items 14 through 15 were identified as priority business processes to be reviewed and implemented as a foundation for the City.

- Item 16 is a planning and prioritization of "What Projects to do Next" decision point – as discussed in above in the Understanding Requirements Section # 4.

- Items 17 through 25+ are business processes identified within the Discovery Phase that staff and business leaders identified that could be streamlined, business processes enhanced, online services provided, and efficiencies gained. These business processes relate to Item 16 and are not in any specific order.

#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
1	G/L – General Ledger for the organization	ERP	All G/L records for the City to record their transactions and accounts		
2	Centralized Employee Record (key for future processes)	ERP Employee Master	Used to drive Payroll, Work Orders, Time and Attendance, etc.	See in Payroll line item	

#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
3	Centralized Customer Record (key for future processes)	ERP Customer Master	**Types:** **Owner:** linked to property record **Resident:** linked to property record **Vendor:** linked to Vendor / AP record **Other:** Non-resident service requests or payments		Consolidate three in Vadim to one in new ERP Used in taxation, service requests
4	Centralized Vendor Record (key for future processes)	ERP Vendor Master			Used in AP
5	Centralized Property Record (key for future processes)	ERP Property Master			Used in taxation and future property-related permit and license-related services
6	Integration with selected ERP-compliant Document Management System (SharePoint)	ERP and Document Management	Copies of all incoming and outgoing documents, spreadsheets, invoices, PDFs, etc. stored in Document Management System		

#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
7	Integration with selected ERP-compliant GIS Mapping System	ERP Property Master and GIS Mapping System	Linkage between Property Records and the GIS		
8	Decision point – it is expected that most modern ERP Public Portals can be rendered in a frame or in a separate web tab	ERP and CNB website		Depending on the availability of the new CMS and CNB website, the following portals will be rendered in the new or existing mrwebsites.ca	Recommendation: keep momentum moving forward for process redesigns and implementation of online portals and migrate online service portals to new CMS architecture and website when the site is finished Note: new websites are difficult and can be fraught with technical issues and slowdowns during their implementation
9	AR – Taxation	ERP Owner and Property Master and Document Management	Linkage between AR, Property Records and Owner Records Copies of tax statements and receipts stored in Document Management	Property Tax Portal allows owners to authenticate to their Tax Accounts using a username (email address) and password to review historical tax bills and payments, current tax accounts and make online payments	

#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
10	AR – Integration with PerfectMind	ERP, Banking Institution and PerfectMind			
11	AR – other	ERP and others			
12	AP – Online Invoice Submission, Reconciliation / Review, and electronic payment	ERP Vendor Master, Banking Institution and Document Management		Vendor to be able to authenticate to their portal, submit invoices, view status of their invoices, view any AP questions concerning the invoices and view the dates of payment	Business process review to streamline business processes and enable enhanced back-office efficiencies and vendor access to information
13	Payroll	ERP Employee Master, Banking Institution and Document Management		Employees can create timesheets, request time off and view history and pay advice notices	Based on Business Application Reviews

#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
14	HRIS	ERP Employee Master and Document Management	Performance Management, Employee history, Job Classification, Union Affiliation, Training and Certification history and prompting for re-certifications Linkages to LMS SCORM compliant for scheduled and on-demand training		Is a separate HRIS System from the ERP required? Is there a short list of HRIS systems that are certified to integrate with the ERP and the Corporate Employee Record that can be purchased through an invited RFP process? An LMS SCORM-compliant training application can be triggered from within the LMS to manage the availability and completion status of scheduled and on-demand training for staff 24/7 and results of training recorded back into the HRIS system
15	Learning Management System	ERP, HRIS and Document Management			Is there a short list of LMS systems that are certified to integrate with the HRIS and the ERP Corporate Employee Record that can be purchased through an invited RFP process?

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#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
16	Results of Corporate Priority setting by ITSC of what systems will be replaced by ERP, which systems will be kept, upgraded, integrated with the ERP, what systems will need to be purchased, etc., based on business need and efficiencies gained by the upgrade. Council-approved Capital Budget and Operating Impact Request which includes service and benefit reviews expectations, estimated timelines and costs.				
17	Creation of centralized list of assets	ERP Asset Inventory Master and link to GIS			Depending on capabilities of existing Asset Management systems and organizational priority, this capability may be earlier or later in the timeline
18	Inventory of tangible / depreciable assets (signs, fire hydrants, valves, etc.)				Depending on capabilities of existing Asset Management systems and organizational priority, this capability may be earlier or later in the timeline
19	Fleet		Asset condition, maintenance schedules, maintenance work orders, etc.		Depending on capabilities of existing Asset Management systems and organizational priority, this capability may be earlier or later in the timeline
20	Non-tangible assets (municipal trees)		Forestry section	Public portal to allow for request for a municipal tree inspection (dead or broken branch on road allowance)	Depending on capabilities of existing Asset Management systems and organizational priority, this capability may be earlier or later in the timeline

#	Business Process	Host System	Back-Office Process	Employee, Vendor and Customer Portals Capability	Comments
21	Land-based assets such as parks with playgrounds, sports fields, washrooms, skate parks, etc.		Parks section	Public portal may be linked to PerfectMind Leisure system for the booking of parks, sports fields, etc.	Depending on capabilities of existing Asset Management systems and organizational priority, this capability may be earlier or later in the timeline
22	Cemetery plots, columbarium, maintenance structures		Cemetery section	Public portal could be linked to the cemetery system to perform genealogical research of cemetery residents	Depending on capabilities of existing Asset Management systems and organizational priority, this capability may be earlier or later in the timeline
23	Work Orders		Staff mobile access to work orders		
24	Building and Planning		ERP Property Master, Licensing and Permits	Public and Contractor portal access to create permit requests, submission of documents, request / schedule inspections and view current process statuses	
25	Municipal Enforcement		ERP Property Master, Licensing and Permits	Public Portal access to request permits or licenses	

Appendix 5 – Systems Inventory

While this inventory is not complete (in that some of the fields do not have data) it is a good starting point for the City to maintain and update software inventory.

This was not part of the scope but should provide value to the City. This information came from Interview Guides and through interviews with:

- Finance.
- Operations.
- Corporate Services.
- Fire.
- Legislative Services.

Software	Department/Role	Use	Work Order Capability	Financial Capability
Adobe Creative Cloud – Cloud Hosted, Annual Subscription	Corporate			
Adobe Pro – Local, Owned 5 Licenses	Corporate			
All-Net Service Tracker – Cloud Hosted, Subscription	Corporate	Service Tracker software for public complaints		
AutoCAD (Civil 3D, Map 3D) – Local, Owned, Annual License	City Engineer, Operations			
Bins Management – Lateral Innovations Software as a Service (SaaS) software	Operations	Garbage pickup		Y

Software	Department/Role	Use	Work Order Capability	Financial Capability
CimSites – Cloud Hosted, Annual License https://www.cimscemeterysoftware.com/	Parks and Arena Manager	Cemetery Management	Y	Y
CorePoint – Cloud Hosted, Monthly Subscription	Human Resources	Occupational Health and Safety		
ESRI Cloud – Cloud Hosted, Annual Subscription				
Facility Dude – Cloud Hosted, Subscription		Building Maintenance Work Orders	Y	Y
FDM – Hosted by the province, accessed remotely	Fire	Fire Dispatch		
Fire House – Local, Owned, Annual License	Fire	Fire Records Management, personnel scheduling, properties, inspections, activities, permits asset management	Y	
Fluke EMaint – Cloud Hosted, Subscription		Asset Management / Maintenance Management Software	Y	Y

Software	Department/Role	Use	Work Order Capability	Financial Capability
		Mechanical and Instrument Work Orders		
Genetec Security Centre – Local, Owned		Unified Security Platform		
Genetec Patroller – Local, Owned		License plate recognition		
Google Docs	Students and Volunteers	Document sharing		
I Am Responding – Cloud Hosted, Subscription				
Icesoft		Emergency Notification system		
InfoHR – Local, Owned		Annual License		
Infonet	Airport			
Johnson Controls – work orders for building maintenance – tracks labour and materials costs	Operations		Y	Y
Kofax PDF		PDF Conversion		
Live Barn	Leisure Services	Arena Software		

Software	Department/Role	Use	Work Order Capability	Financial Capability
MAX Galaxy (currently being replaced by Perfect minds) – Cloud Hosted, Annual Subscription	Leisure Services	Recreation		
Mitchells Pro Demand by Snapon	Operations			
MS Dynamics (being replaced by PerfectMind)	Leisure Services	Recreation		
MS Office 2016 – Local, Owned 10 Licenses	Corporate			
MS Office 365 – Cloud Hosted, Annual Subscription	Corporate			
MS OneDrive (Office 365 Hosted) – Cloud Hosted, Annual Subscription	Corporate			
MS Query – Owned, Free				
MS SharePoint (Office 365 Hosted) – Cloud Hosted, Annual Subscription	Corporate			
MS Teams (Office 365 Hosted) – Cloud Hosted, Annual Subscription	Corporate	Collaboration and eMeeting management, Council Agendas		
NAMS +	Operations			
Nero GPS Equipment Tracking	Operations			

Software	Department/Role	Use	Work Order Capability	Financial Capability
Office 365 Hosted Exchange and Application Suite – Cloud Hosted, Annual Subscription	Corporate			
PerfectMind	Leisure Services	Recreation		Y
Power PDF – Local, Owned, Annual License		PDF Generation and View		
Questica – Cloud Hosted, Annual Subscription	Finance	Budgeting		Y
Recycle Coach	Operations	Recycling		
ReportExec – Cloud Hosted, Annual Subscription	HR, Others	Incident Management		
Sensus Smart Metres and control software being installed across the City	Operations		Y	Y
SGI – Cloud Hosted, Free from SGI		Licensing and vehicle registration access		
Site Minder – Local, Owned, Annual License	IT	SSO login capabilities		
Survey123 – Owned, Free		ArcGIS survey software		

Software	Department/Role	Use	Work Order Capability	Financial Capability
Target Solutions – Cloud Hosted, Subscription	Corporate	Online Training Management solution		
TRUX (Replaced WesDis) – Local, Owned, Annual License	Operations – Waste Management	Landfill and scale management and billing		
Vadim iCity – Local, Owned, Annual Subscription	Corporate	Financial ERP System	Y	Y
Vadim Reporting – Local Owned, Annual Subscription 5 Licenses		Online problem reporting		
Vadim Intelliview – Local, Owned, 5 Licenses				
Vector Solutions		Asset Management		
VenTek Ticket Manager – Cloud Hosted, Annual Subscription		Automated Parking and Enforcement solution	Y	Y
Voyent Alert	Fire	Emergency Notification		
VT Scada	Operations	SCADA		
Watchguard Video – Local, Owned	IT	Security Management system		

Software	Department/Role	Use	Work Order Capability	Financial Capability
When To Work – Cloud Hosted, Subscription	Leisure Services	Employee scheduling	Y	Y
Wonderware (now called Aveva)	Operations	Controls interface for WWTP (Waste Water)		
Zasio (Versatile Enterprise and ERMS) – Local, Owned, Annual License	Legislative Services	Digital Records Management		
Zoom – Cloud Hosted, Monthly Subscription	Corporate	Conference meetings		

Appendix 6 – New Systems Requested / Identified

Software	Department/Role	Use/Reason	Work Order Capability	Financial Capability
Fleet Work Order System	Operations	Currently use paper forms and then re-enter into a spreadsheet	Y	
NAMS+ (already in use)	Operations	Inventory of assets and asset info		
eMaint	Operations	Better use of capabilities and staff training		
Electronic Timesheet System / HRIS System	Finance, Operations	Timecards, vacation, hours banked, integrated Payroll, HR forms		Y
Facility Dude (already in use)	Operations	Enhance capabilities usage or replace		
New Financial Statement Product	Finance	Financial statements are currently produced in Excel		Y
Municipal Licenses	Finance			
Building, Zoning and Planning Review & Management System	Building, Planning	Permits, whole process is on paper. Zoning for individual		

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Software	Department/Role	Use/Reason	Work Order Capability	Financial Capability
		properties is difficult to find		
Enhanced Mobile Capabilities	Operations, Fire, Leisure Services			
Agenda/Meeting Software – Council Packages	Legislative Services	Budget approved in 2021		
Records Management	Legislative Services	Budget allocated in 2023		
Centralized Digital Signage Software	Leisure Services	Advertising, Public Service Announcements		
Updated Surveillance System	Leisure Services	Monitor Canadian Heritage Standard		
Updated digitization of art collection	Leisure Services	Digitize art collection		
Mapping of municipal trees	Parks / Forestry	35,000 trees are being inventoried on an Excel spreadsheet		

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BATTLEFORDS COMMUNITY PROJECT

This project is about doing things differently. It is about focusing on the gifts and assets that we all have and bringing them together to make a difference. Everyone in the Battlefords has something to offer and everyone is needed.

Our goal is that the Battlefords is a vibrant community that is striving to be better!

WHAT DO WE WANT TO BE

Our hope for the project:

We want our children to be safe and free to be kids.

We want people to feel safe to say hi to each other.

We want people to have a meaningful career path.

We want a community worth investing in.

We want a community that is worth your best effort.

How Do We Get There (Stages)

Our Process:
Our approach is an Asset-Based Community Development or ABCD is an approach. This means that we begin with people's gifts, strengths, and resources. These assets equip people to create local opportunities and respond to needs and challenges in their neighbourhood. The premise of ABCD is that everyone in a community has something to offer and everyone is needed.

1 PROJECT LAUNCH

Creating the local leadership team by developing a core group and interested people.

2 COLLECT DATA AND HAVE CONVERSATIONS

Hosting Conversations to Identify Shared Vision and Neighbor Gifts and Talents

3 IDENTIFY AND COMPILE

Identifying themes and compiling into a community report that profiles: demographics, shared community assets, hopes, challenges, and potential priorities for shared action.

4 COMMUNITY CELEBRATION

Sharing what we have learned with the community and fostering the growth of initial plans.

5 ACTION PLANNING

Choosing shared priorities and buiding broad community engagement and shared leadership

6 WORK TOGETHER TO IMPLEMENT

Deepening community and working together through shared action (Collective Impact)

What does this mean for the Battlefords

Doing things differently - trying a new way to get together

Develop a plan built on what we have

Provide support and develop partnership and linkages to other networks to coordinate actions and avoid duplication

Coordinate planning by engaging residents, groups, associations, organizations, and government to come together a create a plan that makes our community better.

What have we accomplished (In Covid Times)

- ○ Formed the group that will provide the base
- ○ Developed mission statement and Vision
- ○ Built Infographic and communication media
- ○ Attended a number of events and built on our base knowledge of the community
- ○ Designed a survey to build on our knowledge
- ○ Attended as a group a community building conference sponsored by Tamarack

What's in in it for City of NB

- Make a difference in your community
- Learn about the amazing things that our community has to offer
- A partner in building a vibrant Battlefords
- Chance to network
- Access to training and resources

What are We Asking For

- ○ Be allowed to address City Council as a formal part of the agenda
- ○ Develop a plan so we complement each other rather than duplicate
- ○ Council support and backing with various levels of government
- ○ Develop information gathering methods that are cross purpose
- ○ Join us in celebrations

Learn more about the project by emailing

battlefords.community.project@gmail.com

![North Battleford logo]

For Council Discussion

MEETING DATE: February 22, 2022   **MEETING: Planning Committee**

TO: Randy Patrick, City Manager

FROM: Brent Nadon, Director of Finance

SUBJECT: Update to the City of North Battleford Institutional Investment Policy

Background Information

The original Investment Policy was drafted in 2018 and was attached as a schedule to the Investment Policy Bylaw (Bylaw No. 2056). As part of a best practice policy review framework, a review of the current Institutional Investment Policy was undertaken in conjunction with the RBC Wealth Management team. Brendon Boothman and Jerrod Schafer were involved in the drafting of the original policy so we requested they review the policy for both housekeeping changes that may have arisen over the last three years and for adjustments to improve our overall return on investment. Our Finance investment team then met with the RBC team to review and discuss proposed changes to the policy.

Strategic Goal(s)

- Economic Vitality SG3.0
- Organizational Excellence SG5.0
- Excellence in Governance and Citizen Focused Services SG7.0

Discussion and Comment

Attached to this memo you will find a redline version of the Institutional Investment Policy to facilitate a review of proposed changes to the policy. Text or graphics to be removed will have a strikethrough and suggested additions will be shown in red or orange text.

The majority of the proposed changes are of the 'house-keeping' variety, but one important change is the proposal to add a new Moderate Term Portfolio to the current short term and long term portfolios. In order to deal with liquidity and short term cash flow issues, the City carries a significant balance (around $5 million) in the short term portfolio. Establishing a moderate term portfolio with a three-to-five-year horizon will provide additional opportunities to increase our investment returns through increased investment opportunities. This strategy will also minimize the dollar value of our funds that are in the short term pool, which receive very low returns in the current low interest rate environment.

Options for Consideration

1) Review and recommend changes as presented for the Institutional Investment Policy.

2) Review and recommend other changes for the Institutional Investment Policy.

3) Make no changes to the current Institutional Investment Policy.

Budget Issues

No direct impact, but higher investment returns lead to potentially higher funding for capital projects in the budget.

Public Notice and Communication

If Council approves the changes the public will be aware of all changes.

Recommendation(s)

Administration respectfully requests the Planning Committee to review and recommend changes for Council approval.

Respectfully submitted,

Brent Nadon
Director of Finance

Approvals:

City Manager: _Randy Patrick_   **Date:** _Feb 17/22_

SECTION 1 – OVERVIEW ~~& DEFINITIONS~~

PURPOSE OF STATEMENT

The purpose of this policy is to provide the prudent governance guidelines for the investments of the City of North Battleford. The primary objective is to protect the principal of the reserve investments, while accounting for liquidity requirements and maximizing the returns to financially benefit the taxpayers of the city in perpetuity.

INVESTMENT & RISK PHILOSOPHY

An investment allocation has established the guidelines for the total portfolio, which over the long-term should achieve the investment objectives of the City. These guidelines were developed with the following considerations:

• ~~The City has a long-term time horizon;~~
• As a corporation providing services for residents and businesses in perpetuity, The City of North Battleford has a long term (indefinite) time horizon.
• Protecting the real (inflation adjusted) value of the investment reserves is critical with a long term (indefinite) time horizon.
• Sustainable withdrawals (considering inflation and portfolio growth) are an important consideration for the long term portfolio to protect the real value of the investments.
• Equity investments have historically provided greater returns than fixed income investments over the long-term, although with greater short-term volatility (risk);
• Liquidity must be planned and prioritized in the event that the city requires funds for specified purposes;
• Limits will be set regarding withdrawals from the portfolio to ensure the continued growth of the portfolio;
• The investment return on the Funds is a function of capital market returns, asset allocation, investment manager structure and individual managers;
• The long-term asset mix is the most important component of a portfolio's risk and return;
• Diversification of asset classes, implementation strategies, and security selection can improve the risk and return characteristics of the portfolio;
• Market timing at the policy level is an inefficient strategy for consistently increasing returns;
• Effective manager structure can improve the net returns and lower the risk of the Funds.

In order to achieve long-term investment objectives, the portfolio must utilize assets that provide uncertain returns such as Canadian equities, foreign equities and non-government bonds. Institutional asset allocation, diversification and professional management will be the key tools utilized to manage the overall level of risk.

PRUDENT INVESTOR RULE

The Prudent Investor Rule requires a trustee to act prudently and with caution, discretion, loyalty and care but does not restrict the assets in which a trustee can invest. The Prudent Investor Rule makes use of Modern Portfolio Theory and applies the standard of prudence to the entire portfolio rather than to individual investments. It identifies the fiduciary's central consideration as the trade-off between risk and return as found in the CFA Institute Standards of Practice Handbook.

The ultimate responsibility for approval of the Cities investment policy lies with City Council. The most effective management and oversight of the investment portfolio is best achieved through the delegation of its responsibilities to the city administration and investment professionals.

CITY COUNCIL
It is the responsibility of City Council to approve the investment policy statement.

CITY ADMINISTRATION
It will be the responsibility of the City Manager and Director of Finance, or their delegate(s) to ensure the investment policy is carried out to meet the needs of the city. This includes communication, and scheduled meetings with the investment advisor and monitoring of the investment mix to ensure compliance with the policy in achieving the stated objectives.

INVESTMENT ADVISOR
The Investment Advisor is responsible to provide advice, research, guidance and technical expertise to city administration to monitor the compliance of the investment policy, monitor performance and provide a high level of service and reporting to the City North Battleford, including any circumstances that could prevent the attainment of the cities objectives. The advisor shall monitor the overall asset allocation of the portfolio as well as the due diligence, selection and continuous monitoring of the investment managers.

INVESTMENT MANAGER(S)
Professional portfolio managers will have full discretion in the day-to-day investment management of the portion of the Fund for which they have been given responsibility, subject to this policy and any amendments thereto. Investment managers will exercise the care, skill and diligence that can reasonably be expected of a prudent expert. Investment managers must be vetted and portfolio assets retained in the custody of a major Canadian investment firm. These managers will utilize professionally managed segregated portfolios, pooled funds, exchange-traded funds to manage their portion of the portfolio.

CUSTODIAN
The Custodian is responsible to fulfill the regular duties of a Custodian as required by law and in accordance with any agreements between the city and custodian including recording income and expenses of the portfolio, provide periodic portfolio statements of all assets and transactions during the period and in conjunction with the Investment Manager(s), periodically reconcile the list of assets, and provide the City with a copy of such reconciliation. Finally, provide monthly, quarterly and annual performance measurement data to assist in the monitoring process.

CONFLICT OF INTEREST
Any person involved in the investment, or the administration of the investment may not permit personal interests to conflict with the exercise of duties and powers with respect to the city's investments. Such conflicts, actual or perceived, must be disclosed to the City Manager and Director of Finance. These guidelines shall not be read to contravene or otherwise limit the scope of any prior or subsequent conflict of interest guidelines that the City may have established or may establish for the conduct of Council, officers, employees, and agents.

SECTION 3 – INVESTMENT OBJECTIVES, ASSET MIX & SPENDING POLICY

INVESTMENT OBJECTIVES

The objective of the Cities investments is to provide long-term growth to support municipal operations and/or capital expenditures to the benefit of the taxpayers. Therefore the overall portfolio objectives are:

• To increase the market value of the investment portfolio and preserve of the real (inflation adjusted) value of the reserves as set aside for future capital projects;
• Sufficient planned liquidity to enable the City to fulfill annual withdrawal requirements, regardless of economic and market conditions.
• To mitigate risk with professional investment management and prudent diversification requirements.

ASSET MIX

The asset mix provides the investment parameters and benchmark portfolio, which should, over the long-term, achieve the investment objectives of the City. In order to achieve these objectives, the City will operate three pools of investments including a Short Term Pool, Moderate Term Pool and Long Term Pool.

In order to achieve the objectives, the City will operate two pools of investments. **The Short Term Pool** includes assets specifically targeted for expenditure within a 5 year period as well as annual spending policy withdrawals from the long-term pool, not immediately required.

The Long Term Pool is for investment assets the city does not intend to utilize for a period of 5 years and longer. This pool will be invested in such a way that it will experience greater volatility in the short term, leading to greater long term returns. The long-term pool will have a spending policy to fund capital expenditures on an annual basis.

SHORT TERM POOL TARGET ALLOCATION LIMIT
The short term pool includes assets specifically targeted for expenditure within a two year time period. The short term pool will have an asset allocation of 100% cash equivalents and/or fixed income investments to match a spending requirements. This will includes interest savings, guaranteed investment certificates (GICs), and bonds with five two years or less to maturity rated AA or higher or subject to Canadian Deposit Insurance Corporation (CDIC) considerations. The short term pool will not be recognized in the evaluation of manager performance as its objective will be focused towards capital preservation and liquidity, rather than long term returns.

Deposits and withdrawals from the Short Term Pool will be in consultation with the City Manager, Director of Finance or delegate, in accordance with the guidelines of the investment policy to meet the cash flow requirements of the City.

MODERATE TERM POOL TARGET ALLOCATION
The moderate term pool is designed for investments with a time horizon of three to five years. The primary objective of the pool is the preservation of the real value of capital, minimized volatility, liquidity for approved withdrawals and a secondary objective of maximized returns.

Asset Class	Minimum	Target	Maximum
Cash, Cash Equivalents & Fixed Income	50.00%	60.00%	100.00%
Equity	0.00%	40.00%	50.00%

LONG TERM POOL TARGET ALLOCATION LIMITS ~~& SPENDING POLICY~~

The long term portfolio is intended to provide greater long term returns in protecting the cities investment reserves against the long term effects of inflation. To achieve this long term investment goal, the long term pool will utilize an asset mix with a bias towards equity investments. Risk is controlled by investing in a well-diversified portfolio of asset classes, through multiple investment managers and multiple geographic locations.

Asset Class	Minimum	Neutral	Maximum
Short Term Bonds	2.50%	5.00%	5.00%
Global Fixed Income	22.50%	30.00%	45.00%
TOTAL FIXED INCOME	25.00%	35.00%	50.00%
Canadian Equities	20.00%	22.50%	25.00%
Global Equities	30.00%	37.50%	40.00%
Inflation Sensititive	0.00%	5.00%	10.00%
TOTAL EQUITIES	50.00%	65.00%	75.00%

Asset Class	Minimum	Target	Maximum
Cash, Cash Equivalents & Fixed Income	20.00%	30.00%	45.00%
Equity	55.00%	70.00%	80.00%
Alternative	0.00%	0.00%	10.00%

~~Below are the withdrawal limits for the cities investment portfolio.~~
- ~~No more than 4.0% of the portfolio value each year may be targeted for withdrawal and utilized in the upcoming municipal budget for capital expenditures;~~
- ~~Any withdrawal amounts that exceed 4.0% of the December 1st balance in any year must be approved by Council.~~

Investment returns shall be reinvested within the Moderate and Long Term Portfolios to grow the original investment principal. Withdrawals from the Moderate and Long Term pools will be determined in the annual budget process to provide adequate liquidity planning.

SECTION 4 – RETURN EXPECTATIONS

ABSOLUTE RETURN EXPECTATIONS
~~The financial objective of the portfolio is to earn a rate of return in excess of 4.0% on a rolling five year basis of the Bank of Canada target rate for inflation (2.0%).~~ In order to attain these returns while managing and controlling risk, the city will utilize multiple investment managers within the portfolio. In this way added diversification is obtained for the portion of the cities' assets that are invested in a portfolio that is expected to be more volatile. Diversification is a tool to improve risk investment returns, to mitigate exposure to any single risk and to enhance the return per unit of risk to the total return.

- The short term pool will not be recognized in the evaluation of manager performance as its objective will be focused towards capital preservation and liquidity, rather than long term returns.
- The financial objective of Moderate Term Portfolio is to earn a rate of return of 1.5% over the Bank of Canada target rate for inflation (2.0%) on a rolling five year basis net of all investment management costs.
- The financial objective of the Long Term Portfolio is to earn a rate of return of 4.0% over the Bank of Canada target rate for inflation (2.0%) on a rolling five year basis net of all investment management costs.

PERIOD OF PERFORMANCE MEASUREMENT
For purposes of evaluating the performance of the pool and the Investment Managers the primary time period for evaluation will be five years. Return objectives are net of fees and include realized and unrealized capital gains or losses plus income from all sources.

Recognizing that the returns achieved over such shorter periods may vary significantly from the relevant goals, the general trend of results relative to the goals and the likelihood that satisfactory returns can reasonably be expected over five year moving periods should form the basis for the evaluation of the moderate and long term pools performance.

RELATIVE RETURN OBJECTIVES
The relative return objectives for the portfolio are to achieve an annualized return, after investment management fees that exceed the return that would result from the passive management of the Benchmark Portfolio on a five year moving average basis, assuming annual rebalancing. This is an important guide in evaluating the performance of the cities investments in comparison to overall capital markets.

INVESTMENT MANAGER MONITORING AND CONTROL
The primary focus is on the absolute long-term performance of the investment portfolio. However, the short-term performance will be evaluated on an ongoing annual basis. This short-term evaluation will be completed by the investment advisor and made by comparing the actual performance of the portfolio (net of fees) with the returns from an index portfolio constructed with reference to the benchmark asset allocation. The passive index will be the evaluated at the current weightings of the portfolio represented by FTSE TMX Bond Universe (Fixed Income), S&P/TSX Composite (Canadian Equities) and MSCI World Index (Global Equities).

SECTION 5 – INVESTMENT MANAGER MONITORING & CONTROL

COMPLIANCE REPORTING

On a quarterly basis, the investment advisor(s) will provide a report for City Administration and Council to identify the current asset allocation to ensure compliance with the investment policy. The report will outline overall allocation, security holdings, dollar investment return and performance of the portfolio.

On a monthly basis, the investment advisor(s) will provide a report for corporate accounting and audit purposes to outline security holdings, transactions, valuations, income and performance of the portfolio.

PERMITTED INVESTMENTS & MODERATE/LONG TERM POOLS CONSTRAINTS

Investments shall not be made in investment categories other than those mentioned without an amendment of the Investment Policy Statement. The following investments may be made either via segregated holdings of a professional manager or through pooled or mutual funds. Investments in any single corporate issuer may not exceed 10% of the total portfolio value, with the exception of passive or actively managed pooled products (exchange traded funds and mutual funds) which are internally more diversified than the single line item represents.

Cash and Cash Equivalents: Cash equivalents will consist of interest savings accounts or guaranteed investment certificates (GICs). All fixed income securities with less than 12 months to maturity are considered a cash equivalent. Investment in the money market instruments of a single issuer may not exceed 10% of the market value of the total reserve portfolio, except for the securities of the Federal and Provincial governments of Canada and US Federal government and GICs or investment savings of the six largest Canadian Banks (RBC, CIBC, TD, ScotiaBank, BMO & National Bank)

Fixed Income: The Bond portfolio must have a minimum weighted average rating of A by DBRS or an equivalent rating by another recognized rating agency and includes preferred shares. ~~Bonds rated BBB may not represent more than 20% of the bond portfolio. Up to 20% of the fixed income allocation may be held in bonds denominated in non-Canadian currency or 50% of the fixed income portion can be held in pooled funds with foreign bonds hedged to Canadian Currency.~~ Foreign bonds and bonds rated below investment grade may be held in investment pools only, not as segregated holdings. Any pooled bond product rated below investment grade can represent a maximum of ~~10%~~ 15% of the overall portfolio. Investments in fixed income securities of a single issuer may not exceed 10% of the market value of the Fixed Income portion of the Fund, except for securities of the Federal and Provincial governments of Canada, GICs of the 6 largest Canadian Banks or diversified professionally managed pooled products.

Equities: Equities include common stocks, ~~preferred stocks~~ and limited liability income trusts. Foreign equity is included to provide diversification to reduce the overall risk profile of the equity portfolio and to enhance returns. Investments in the equity securities of a single issuer may not exceed 10% of the market value of the Equity portion.

Derivatives: The use of derivatives is permitted to replicate a security or to hedge foreign currency exposure utilized in professionally managed pooled funds (mutual funds).

Alternative Investments: This asset class includes non-traditional investments whose returns have low correlation to equity and bond markets. These include professionally managed pools in non-traditional asset classes with a limit of 5% per individual issuer and 10% of the entire portfolio of the long term investment pool only.

CONFLICTS BETWEEN THE INVESTMENT POLICY AND POOLED FUND INVESTMENT POLICIES

While this investment policy are intended to guide the management of the Fund, it is recognized that, there may be instances where there is a conflict between the cities investment policy and the investments of a professionally managed pooled (mutual) fund. After a review of the pooled (mutual) funds investment policy and agreement with the City Manager, Director of Finance and Financial Manager, an investment can be made in such a pooled fund to improve the diversification, risk management and/or return potential of the overall portfolio. A maximum weighting of 15% of the total portfolio can be held in these investments. Any amount beyond 15% would require approval from council or an amendment to the investment policy.

MONITORING, SELECTING & REPLACING INVESTMENT MANAGERS

From time to time, the Investment Advisor may recommend adding investment managers or replacing an investment manager from the portfolio. Manager selection and replacement must occur with a significant amount of due diligence including:

• Investment managers firm overview, staff longevity and assets under management;
• Investment managers overall investment style;
• Diversification, risk and return improvements to the overall portfolio;
• Investment performance compared to respective benchmarks.

Investment managers may be replaced due to consecutive performance lagging the benchmark, personnel changes within the firm or superior performance of a similar asset class of another firm/investment manager.   Manager replacement occurs without the approval of council, unless there is a change to the overall investment policy.

INVESTMENT POLICY REVIEW

On an annual basis, the Investment Advisor and City Administration may determine changes are required to the Investment Policy. If no changes are required, no further action is required. Any changes to the Investment Policy must be approved by Council due to:

• Changes in general economic conditions;
• The possible effect of inflation or deflation;
• Needs for liquidity, regularity of income and preservation of capital;
• Changes in expectations of long-term returns and risks associated with the different asset classes of investments;
• Changes to risk tolerance;
• Expectations of the cities' future cash flows;
• New investment products; and
• Any practical issues that arise from the application of the Investment Policy.

INVESTMENT REVIEW MEETINGS

The Investment Advisor(s) shall meet with the City Manager, Director of Finance, Financial Manager and other delegates at least semi-annually to provide a review of portfolio transactions, portfolio performance, capital markets outlook and other relevant matters. From time to time, North Battleford City Council may request meetings with the investment advisors as well.

SELECTION OF AN INVESTMENT ADVISOR

The Investment Advisor must have a demonstrated reputation for expertise in institutional portfolio management, provide proactive advice, high quality client service and competitive investment management/custodial services. The investment consultant must be associated with a reputable Canadian firm.