INFORMATION TECHNOLOGY SERVICES FUNCTIONAL REVIEW
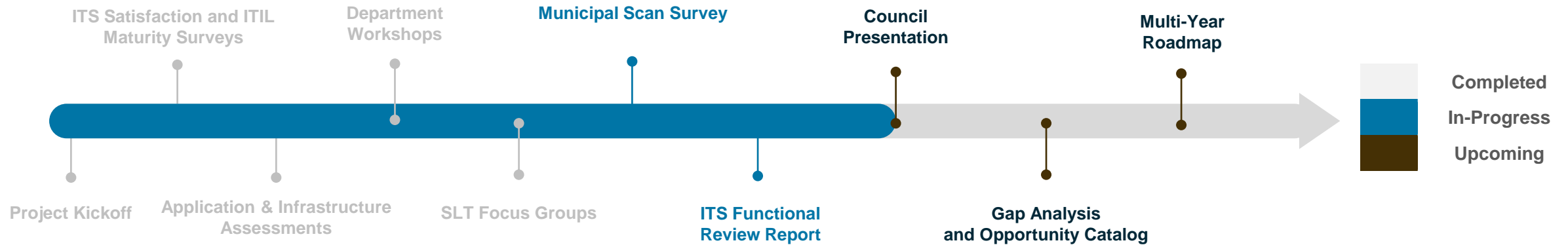
Strathcona County

Council Report – November 2023

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Report Purpose

THAT Administration prepare a report for Council's consideration by the end of July 2023 on the Human Resources and Information Technology Services **department business models, with information on how the services provided are delivered, including levels and the use of contracted services.**

IT Functional Review Overview

ITS Satisfaction and ITIL Maturity Surveys

Department Workshops

Municipal Scan Survey

Council Presentation

Multi-Year Roadmap

Project Kickoff

Application & Infrastructure Assessments

SLT Focus Groups

ITS Functional Review Report

Gap Analysis and Opportunity Catalog

Completed

In-Progress

Upcoming

Engagement Purpose

01 Document the current ITS business model including staffing, services, processes, etc.

02 Identify and discuss department-needs for ITS support and services

03 Identify gaps in current ITS operations while identifying opportunities for growth and improvements
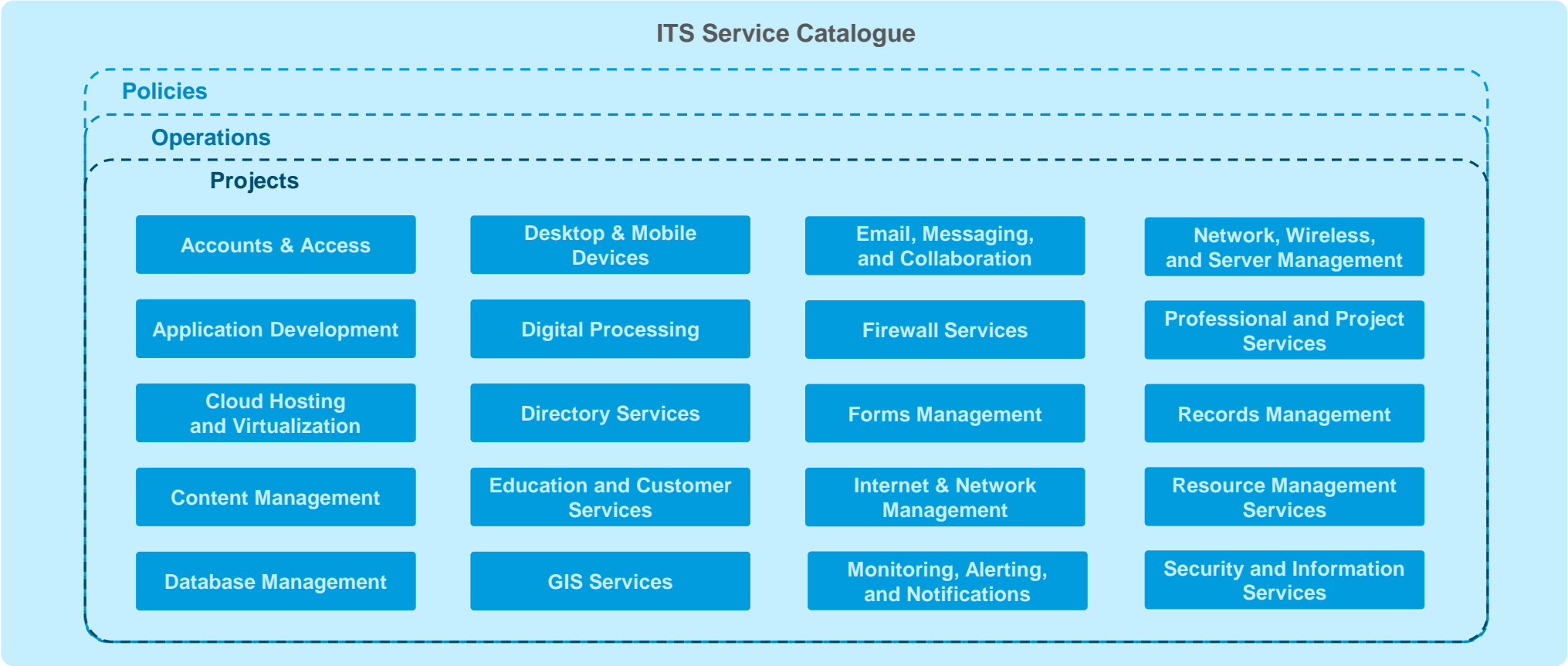
Key Project Activities

01 Conducted 8 workshops with 14 departments, three SLT focus groups, and four ITS Manager interviews

02 Leveraged industry research including Gartner and Info-Tech reports

03 Reviewed materials gathered in the documentation request process

04 Released an ITS satisfaction survey with over 100 responses, and a municipal scan survey with 12 responses
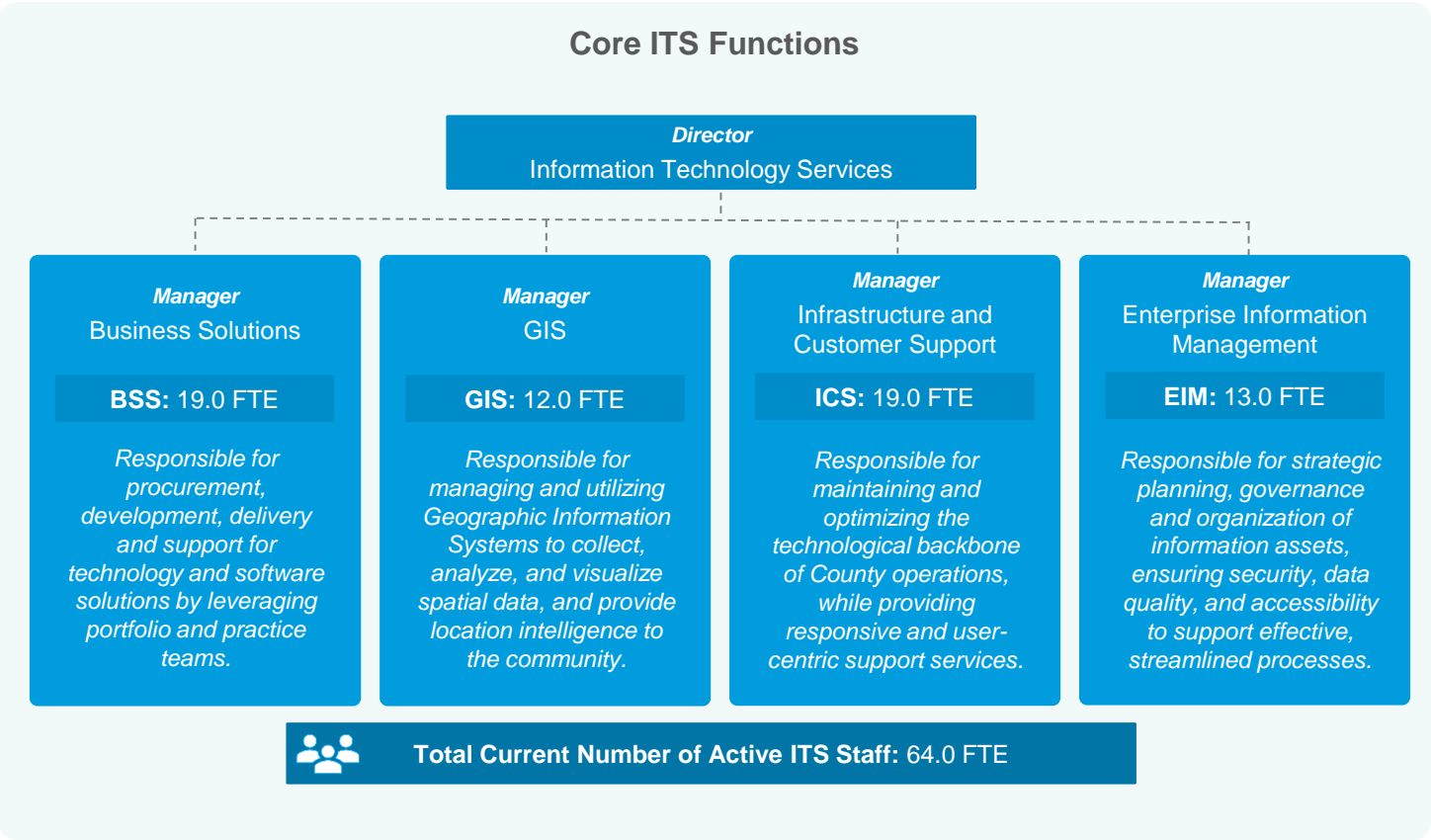
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ITS Current State Overview

The ITS department provides a number of services all of which contribute to the technology backbone that supports County-wide operations. The department **oversees projects, operations, and policies** for all of the following services.

ITS Service Catalogue

Policies

Operations

Projects

Accounts & Access	Desktop & Mobile Devices	Email, Messaging, and Collaboration	Network, Wireless, and Server Management
Application Development	Digital Processing	Firewall Services	Professional and Project Services
Cloud Hosting and Virtualization	Directory Services	Forms Management	Records Management
Content Management	Education and Customer Services	Internet & Network Management	Resource Management Services
Database Management	GIS Services	Monitoring, Alerting, and Notifications	Security and Information Services

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ITS Business Model

The ITS department has **a decentralized delivery model**. Additional ITS staff are integrated into departments across the County along with shadow IT resources who do not report to ITS but are able to provide IT support in select cases.

Core ITS Functions

Director
Information Technology Services

Manager Business Solutions	**Manager** GIS	**Manager** Infrastructure and Customer Support	**Manager** Enterprise Information Management
BSS: 19.0 FTE	**GIS:** 12.0 FTE	**ICS:** 19.0 FTE	**EIM:** 13.0 FTE
Responsible for procurement, development, delivery and support for technology and software solutions by leveraging portfolio and practice teams.	*Responsible for managing and utilizing Geographic Information Systems to collect, analyze, and visualize spatial data, and provide location intelligence to the community.*	*Responsible for maintaining and optimizing the technological backbone of County operations, while providing responsive and user-centric support services.*	*Responsible for strategic planning, governance and organization of information assets, ensuring security, data quality, and accessibility to support effective, streamlined processes.*

Total Current Number of Active ITS Staff: 64.0 FTE

Tech Staff Outside of ITS

There are additional technology roles outside of ITS across the organization. Many of these roles are focused on GIS, IT administration, and Oracle.

The Business Excellence (BEX) department houses the largest subset of external IT support. This department was created through the Business Transformation project to provide focused support for critical corporate services as the organization transforms to modern business practices. This includes leading the Oracle implementation, as well as on-going stabilization and continuous improvement of business transformation activities that are supported by the Oracle platform. The BEX department includes individuals with expertise in the platform and business functions the platform enables who managed the rollout, ongoing support, and future strategy for the County.

Contracted Resources

ITS also utilizes contracted resources for several reasons including specialized support for highly technical, short-term projects, major implementations and ad-hoc needs.

Leveraging contractors is common practice in IT departments because of the specialized equipment and expertise that is required for certain requests.

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ITS Current State Overview

Incidents and service requests are received primarily through the ITS Portal. **The following numbers reflect the current project queue along with incidents and requests received over 2021/2022.** These numbers do not include requests received outside of formal IT channels.

Projects, Incidents, and Service Requests

A large volume of both external and ITS sponsored projects are focused on asset lifecycle and improvement and expansion resulting in limited capacity to explore new innovations and growth opportunities.

Queue Listing (09/26/23)	Cancelled	Completed	In Progress	Planned Future Projects	Grand Total
ITS External (Sponsored by Customer Department)	**6**	**18**	**16**	**29**	**69**
Application Upgrades & Replacements		9	2	16	27
Improvement & Expansion	4	5	6	5	20
Innovation & Growth	2	3	8	6	19
Operational Projects		1		2	3
ITS Internal (Sponsored by ITS)	**1**	**7**	**8**	**6**	**22**
Application Upgrades & Replacements		5	3	2	10
Improvement & Expansion				1	1
Innovation & Growth		1		2	3
Operational Projects	1	1	5	1	8
Grand Total	**7**	**25**	**24**	**35**	**91**

*Opportunity Requests can include any of the following: crises, service enhancement, business problem, new idea, service maintenance, new application request, life cycle management, additional work for existing projects

Incidents

An IT incident is an unexpected event that disrupts or reduces the quality of a business operational process or service. It can cause a loss of operations, services, or functions.

Since May 2020 ITS has resolved/closed an average of **452 incidents per month**, or about 5400 incidents per year, *across all teams*.

- 2021: **5,362** incidents resolved
- 2022: **5,389** incidents resolved

Service Requests

A service request is a formal request by a user or department for any service they require from the IT service catalog.

Since May 2020 ITS has fulfilled an average of **670 service requests per month**, or about 8043 service requests per year, *across all teams*.

- 2021: **7,901** service requests fulfilled
- 2022: **8,706** service requests fulfilled

ITS Contracted Resources

Strathcona County leverages several **contracted resources to support essential IT functions** that are highly specialized and/or require additional resourcing support and capacity. The following provides an overview of current contracted resource utilization:

Projects and Initiative Examples

- **Transition to NG911:** contractors are supporting the NG911 implementation and providing a unique set of skills and knowledge in telecommunications, network infrastructure, emergency services, and standards compliance.

- **M365 Rollout:** contractors were leveraged throughout the County's transition to M365 to augment existing internal resources, to enhance capacity and expertise with the platform.

- **GIS Aerial Imagery:** contractors are brought in on a two-year rotation to take GIS aerial images leveraging their high-tech position equipment and high-resolution cameras.

- **Intelli:** contractors were engaged for implementation because specialized configuration required up front. Intelli is used by the Recreation, Parks and Culture department and ITS full-time staff are able to support it on an ongoing basis.

- **Oracle:** contractors are being used for the Oracle implementation as it is large ERP system that requires highly specialized team and extensive knowledge base. Most organizations do not implement Oracle using solely in-house resources.

ITS Contractor Spend

	2021	2022	2023	2024
	$1,649,983	$522,555	$706,600	$1,230,600

Benefits

- Access to specialized subject matter expertise for complex, specialized, and/or short-term activities.
- Additional resourcing to support ITS and department functions that do not have capacity.

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Industry Insights and Standards

Information Technology trends in the Canadian public sector project continued growth of the digital movement and development of digital strategies. Some of the top focus areas include **technology modernization, cyber security and privacy, and the citizen experience**.

IT Trends in Canadian Local Government

- **Creating seamless integrations for digital channels** into the traditional in-person and telephone services is a key driver for Canadian public sector organizations

- Putting **security borders around systems using legacy tools** has proven to be challenging as there are vulnerabilities in the old systems, investments into new systems should be considered to combat security threats

- Local governments should leverage **application portfolio management tooling** that supports evaluation of the health of applications and operation and project investments in them

- **AI is helping governments with predicative maintenance**, improved cybersecurity analytics/defense, among many other potential uses

- Effective enterprise portfolio management requires organizations be dedicated to **developing and maintaining good quality, current data** around the key aspects of their enterprise portfolio

84%
of Canadians want increased access to enhanced, digitized municipal services

Top Technology Implementations 2023
Cloud Connectivity

Artificial Intelligence

Sensors and Monitoring

Chatbots

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Current Security Posture

The security landscape for municipalities is changing constantly and rapidly with new tools and techniques to combat attacks. The top IT security risks for Canadian municipalities include **ransomware, supply chain, operational technology, talent, and governance.**

Top IT Security Risks for Canadian Municipalities

- **High Impact Areas:**
  - *Ransomware:* A successful attack would lock out data from staff until it could be recovered.
  - *Supply chain:* A successful attack would compromise software and hardware prior to delivery that is introduced to the environment creating vulnerabilities.
  - *Talent:* Security talent is scarce and highly sought after. Labour costs are increasing, resulting in the need for contractors with specialized expertise.

- **Medium Impact Areas:**
  - *Governance:* Without following a defined framework, we may miss high risk items or areas.
  - *Operational Technology:* Most of this technology is core infrastructure that has safeguards that if disrupted would impact the public.

Key Security Statistics:

- **Email Security:** The County averages around **100,000 emails a week**, of which **10% are spam or malware**.

- **Firewalls:** The County network is protected by firewall security services. On average **between 700,000 to 1,000,000** attempts to gain access to our network blocked daily.

- **Malware / Antivirus:** The County uses an industry standard antivirus solution on all devices. Since July 1 they have **remediated 90 viruses** that were active in the environment.

- **Backup & Recovery:** The County operates a comprehensive backup service for both on-premise data as well as private and public cloud infrastructure. The average volume of recoveries is **four recoveries per month**.

- **Security Training:** The County provides mandatory security training that is **completed by all staff members every 2 years**.

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Local Government Statistics

Gartner and Info-Tech reports provide local government comparators which were used to benchmark Strathcona County's current IT position relative to spending, FTE count, and contractor usage.

Local Government Comparators		
Metric	**Local Government (2023)**	**Strathcona County**
IT Operational versus Capital Spending	83% to 17%	93% to 7%
IT Spending as a % of Operating Expenses	4.3%	3.5%
IT FTEs as a % of Employee	3.8%	3.2%
IT Spending per Employee	$10,500	~ $8,000
% of IT Spending on Contracting	11%	4.5%

Municipal Comparators

Strathcona County			
	IT Staff as % of Municipal Staff	Average SRs / Incidents per Year	Average IT Projects per Year	IT Spend as a % of Municipal Operating Budget
Strathcona County Population ~ 100K	**3.2%**	**~14,000**	**~45 projects**	**3.8%**

Municipal Comparators			
Municipality	IT Staff as a % of Municipal Staff	Average SRs / Incidents per Year	Average IT Projects per Year	IT Spend as a % of Municipal Operating Budget
City of Red Deer Population ~ 100K	3.3%	13,000	40	Not Provided
City of Lethbridge Population ~ 100K	2.6%	12,000	35	3.2%
City of Kamloops Population ~ 90K	2.8%	3,000	30	5.3%
City of Kelowna Population ~ 130K	3.3%	13,000	30+	3.5%
City of Kingston Population ~ 170k	2.8%	13,000	15-20	2.5%

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Key Findings

Findings from the ITS Functional Review suggest department and citizen expectations and needs are evolving. To meet these needs, ITS should take an **agile governance approach and align with the continued digitization of services in the industry.**

Business Model
The current department business model involves the use of centralized IT resources as well as more specialized IT resources that sit within various departments. These resources assist with specific department needs such as GIS capabilities.

Governance
Governance processes, policies and procedures within ITS need to be simplified and re-focused on customer service. Current structures are complex and encourage County staff to side-step formal intake and procedures. The County needs to adopt industry standard governance models to support consistent IT investment, stewardship and client experience between departments.

Department Demand
Project and opportunity request volumes are consistent and high volume, keeping ITS resources fully utilized resulting in limited capacity for further collaboration and innovation. ITS will need to continue adapting and finding new ways to support department needs and assist with ad-hoc application and IT requests.

ITS Involvement
The ITS Satisfaction Survey along with department and SLT workshops revealed a consistent sentiment that departments want ITS to be more involved in their operations. Whether it be throughout solution procurement, implementation, ongoing technical support, etc. department staff feel more collaboration would be a value-add.

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Key Findings

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Industry Trends
Key trends in the IT space show the ongoing digitization of services and the digital movement bringing new technology and services to the table including the integration of AI. As a result, security best practices are constantly evolving to account for new vulnerabilities organizations face.

Contractors
The current contracting model is in alignment with industry standards including the use of contractors to support critical operations and bring in specialized expertise for set periods of time to offset capacity and skill requirements. These individuals are necessary for the implementation and roll out of enterprise-wide solutions and projects that require significant technical specialization and tooling.

Business Excellence
The BEX department was created to provide focused support for critical corporate services to meet the needs of business across the organization including and ongoing management of Oracle along with any business transformation activities that are supported by the platform. Oracle is a large, specialized, and complex system which requires cross functional resources to provide expert support and strategic direction to the County.

Road Mapping and Future Needs
ITS alongside the executive team is working together to create a roadmap (or masterplan) to continue the positive developments the department is achieving. A recent study by MNP Digital which captured feedback from municipalities across Canada, 35% of respondents identified meeting citizen and stakeholder expectations as a major challenge.

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QUESTIONS AND ANSWERS?

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