MISSISSAUGA

Information Technology

2020–2023 Business Plan
& 2020 Budget

Foreword

Our Vision for the Future

Mississauga will inspire the world as a dynamic and beautiful global city for creativity and innovation, with vibrant, safe and connected communities; where we celebrate the rich diversity of our cultures, historic villages, Lake Ontario and the Credit River Valley. A place where people choose to be.

Mississauga City Council approved **Our Future Mississauga**; a Strategic Plan to achieve this vision over a 40-year timeframe. The City engaged over 100,000 people to develop this Vision Statement. To achieve this vision the City has identified five Strategic Pillars for Change: **move**, **belong**, **connect**, **prosper** and **green**. Each year the City proposes various initiatives that are aligned with the Strategic Pillars and are intended to bring us closer to fulfilling our vision for the future. The City has over 300 lines of business which are consolidated into the 16 Services Areas (including the Stormwater Program) that are outlined in this Plan. The 2020-2023 Business Plan and 2020 Budget document details how and where the City plans to allocate resources to deliver programs and services.

The City is committed to providing programs and services cost effectively. In this Plan we have outlined measures that will help us assess the quality, efficiency and customer satisfaction that our services achieve. The results help inform decisions on resource allocation and direct program offerings, and improve service delivery to ensure our vision is efficiently realized.

ourfuturemississauga.ca

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Executive Summary of Information Technology

Mission: We are committed to providing our clients with innovative, reliable, responsive and secure solutions that align business, process and technology.

Services we provide:

The Information Technology (IT) Service Area has six sections that focus on technology planning, service delivery, support, and operations to enable City services and drive efficiencies.

Interesting facts about this service:

- IT operates seven days a week, 365 days a year
- The City provides online services and information including 3-1-1 online service requests and items available for purchase, with 18.5 million unique digital visits in 2018
- “Wireless Mississauga” is free public access to high speed Wi-Fi available at many City facilities (libraries, community centres, marinas and arenas). In 2018, the total number of hours of free City Wi-Fi used by the public translated to 529 years of service (455 years in 2017)
- The Public Sector Network is a state-of-the art fibre network co-owned by the Region of Peel, Mississauga, Brampton and Caledon. Over 850 kilometres of high-speed fibre connect 922 partner and 17 subscriber facilities, for a total of 939 facilities (888 facilities in 2017)
- During the first eight months of 2019, the City classified an average of 580,000 monthly incoming emails as “malicious” - an average of 310,000 were classified as “clean”

Highlights of the Business Plan include:

- Continue to enhance the Cybersecurity Operations Centre (CSOC) with the hiring of an IT Security Specialist
- Implement the Smart City Master Plan which uses technology to create sustainable economic development, increase operational efficiency, and improve community life
- Enhance the financial and human resources systems to automate and streamline processes while leveraging the latest technologies
- Continue with implementation of the Digital Strategy in partnership with Strategic Communications including the phased rollout of the new City website (mississauga.ca)
- Continue to expand the availability of free public Wi-Fi throughout the city, in our small business districts, downtown and public spaces and parks
- Develop a solution for capacity planning to address dynamic business requirements and reduce reliance on costly external resources
- Continue to maintain IT infrastructure in a state of good repair while sustaining City services

Net Investment ($000s)	2020	2021	2022	2023
Operating	31,400	32,616	33,343	34,651
Capital	28,170	22,405	13,667	15,000
Full Time Equivalents	229.8	240.8	233.8	219.8

Core Services

Vision, Mission, Goals of Service and Service Delivery Model

Vision

To support the City's overall strategic pillars of move, connect, prosper, belong and green through the strategies and action items defined in the IT Master Plan to create a connected and engaged City.

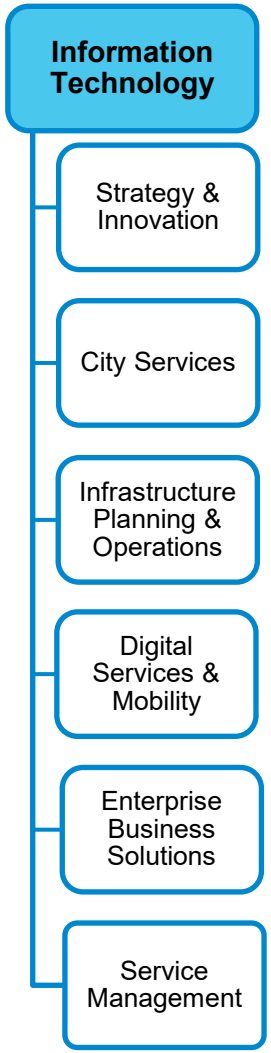
Mission

We are committed to providing our clients with innovative, reliable, responsive and secure solutions that align business, process and technology.

Goals of Service

- Foster open and accessible government
- Enable decisions through research and analytics
- Create a connected and engaged workplace
- Improve services through innovation and partnerships
- Build connected and engaged City; a Smart City for everyone

Service Delivery Model



Current Service Levels and Trends

The IT Service Area is responsible for the planning, development, maintenance and overall management of the City of Mississauga's technology infrastructure, business solutions and digital public services.

IT provides and supports the systems, applications, computers, networks, data, internet access, security and policies critical to the delivery of City services seven days a week, 365 days a year.

Partnerships have been established to improve service, efficiency and cost effectiveness in areas such as Wireless Mississauga for Sheridan, The Public Sector Network, and Voice Communication (VCOM) Radio.

Smart City and Internet of Things (IoT) initiatives are in demand through public transit initiatives. Wi-Fi and other direct public services are available through Open Data and sensor technology. There are pressures to deliver service using augmented reality and artificial intelligence (AI) in public spaces where citizens, visitors, and businesses are likely to access our services and interact with the City.

IT Services are provided 24/7/365 and support the following:

- Mississauga.ca for information and online services
- Business Solutions for public (e.g., Transit, Library, Recreation, Culture, and Economic Development)
- Financial, Human Capital and City Asset Systems
- Primary and Secondary Data Centres
- Fibre Network for all Voice and Data Communications
- Business Continuity and Disaster Recovery Services
- Intranet, Staff Productivity Tools, Software
- Secure, "Connect Anywhere" Virtual Private Network (VPN) Services
- Public, Staff and Call Centre Voice Communications
- Secure Staff Wireless and Internet Access
- Free Public Wi-Fi "Wireless Mississauga" and Virtual Campus (Eduroam)

Presentation to Council

Performance Measures and Results

The City of Mississauga is committed to delivering services economically and efficiently. The City's performance measures are used to help assess how well we are doing at achieving our goals and where we need to improve operations. The results also inform decision making and strengthen accountability.

Balanced Scorecard

A Balanced Scorecard groups measures in four key areas of an organization's performance: Financial, Customer, Employee, and Business Process. By paying attention to all four areas, an organization can retain balance in its performance and ensure that it is moving toward the attainment of its goals.

Below are descriptions of the measures tracked in this Service Area's Balanced Scorecard. The Balanced Scorecard that follows shows trends since 2016 and expected outcomes up to 2023.

Financial Measures

Capital Spend Rate (Spending Efficiency) shows the rate at which IT is spending its capital funding. IT is attempting to increase this rate by utilizing project management best practices and agile resource models. A two-year turnaround is targeted.

Operating Maintenance Budget Growth measures the rate of growth of IT's software and licensing budget.

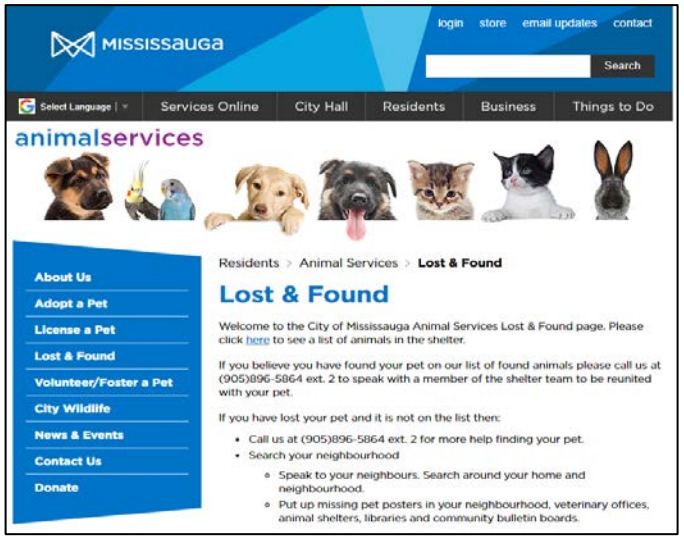
Optimization of Voice & Data Communications measures the percentage of employees that use a software phone versus a traditional phone. The City expects to increase this percentage as more office staff adopt mobile workforce strategies.

Customer Measures

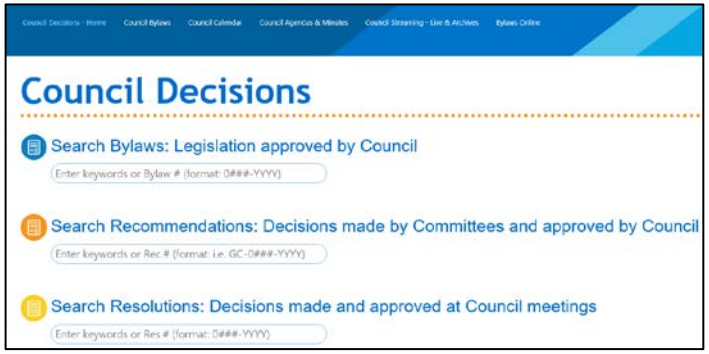
Wi-Fi Service Hours per Access Point measures the usage of the City's public Wi-Fi services. Expectations are for continuous growth as the City adds Smart City initiatives.

Number of Open Datasets provides the number of publicly available datasets that can be used for application development or reports.

Number of Self-Serve Web Applications counts the number of City self-serve web applications. The City targets adding two self-service applications per year. In 2019, new apps were for Animal Services Lost & Found and Words: Council Decisions.



Animal Services Lost & Found Online Registry App



Words: Council Decisions App

Employee Measures

Percentage of Mobile Workers shows how the City's modernization strategy is working and is an indicator of City workforce mobility. Mobile work is cost-effective, contemporary and enticing to potential new talent.

Number of Connected Things exhibits growing infrastructure requirements and how progressively Mississauga is becoming a Smart City.

Number of Real-Time Dashboard Measures demonstrates how IT is increasingly using automation for building reports and monitoring City services.

Internal Business Process Measures

City Website Unique Visits measures the volume of use by citizens and businesses on the City's website.

IT Help Desk First Call Resolution is the percentage of calls that are resolved in one phone call. Strategies to improve include enhancing the IT knowledgebase management process, expanding the IT Service Desk training and continuous learning program, and live transferring calls.

Balanced Scorecard

Measures for IT	2016 (Actual)	2017 (Actual)	2018 (Actual)	2019 (Plan)	2020 (Plan)	2021 (Plan)	2022 (Plan)	2023 (Plan)
Financial:								
Capital Spend Rate (Spending Efficiency)	34.8%	38.1%	44.5%	45%	45%	45%	45%	45%
Operating Maintenance Budget Growth	8.9%	17.4%	16.3%	25%	*6%	10%	10%	10%
Optimization of Voice & Data Communications	3%	6%	10%	12%	14%	17%	20%	22%
Customer:								
Wi-Fi Service Hours per Access Point	8,435	8,935	9,775	9,815	10,200	10,900	12,000	13,200
# of Open Datasets	31	101	200	230	255	280	305	330
# of Self-Serve Web Applications	68	70	72	75	77	79	81	83
Employee:								
Percentage of Mobile Workers	16%	43%	47%	51%	56%	62%	67%	71%
# of Connected Things	11,315	11,723	13,228	13,800	14,500	15,300	16,100	16,800
# of Real-Time Dashboard Measures	41	99	129	177	185	210	235	250
Internal Business Process:								
City Website Unique Visits (millions)	20.3	18.5	18.5	20	22	24	26	28
IT Help Desk First Call Resolution Rate	84.3%	91.6%	94.6%	95%	95%	95%	95%	95%

*2020 decrease a result of software licensing rationalization to transit

Awards and Achievements

2018 Project Team Award – GOLD was received from the corporate Project Management Support Office for the Transit Application Portal (TAP) Project. There are more than 1,200 Transit Operators, Mechanics and General Service Persons (GSPs) in the Transportation & Works Department who did not have Active Directory accounts or email accounts and could not access corporate apps for pay statements and City job postings. Over the course of six months, the TAP project successfully rolled out an online portal that can be accessed by staff from City locations and via the Internet from home or mobile devices. Staff now have access to web email, online paystubs, printing capabilities, and corporate applications.

Transit Application Portal Project Team

2018 Project Lead Award – SILVER was received from the Project Management Support Office for the Infor System Upgrade Project. Infor is used to manage critical infrastructure and assets such as bridges, roadways and stormwater systems. It is also the main system that supports the 3-1-1 Call Centre, permits management and work order management. Staff were assigned the challenging task of upgrading the system in under two years. The upgrade was successfully completed on time and as scoped.

Infor System Upgrade Project

The **2018 City Manager's Award of Excellence – Team Award** was presented to a team comprised of staff from IT, Environment, Parks & Forestry, Strategic Communications, MiWay, Culture and Traffic Management for their presentation entitled, "The Work of Wind: Air, Land, Sea."

"The Work of Wind: Air, Land, Sea" Project Team

The **2018 Corporate Award for Innovative Business Solutions** for their "THRIVE Project Phase 1: Transforming How the City Hires Talent" was awarded to a team comprised of IT, HR, Strategic Communications, Library and Works Operations & Maintenance staff.

The "THRIVE Project Phase 1" Project Team

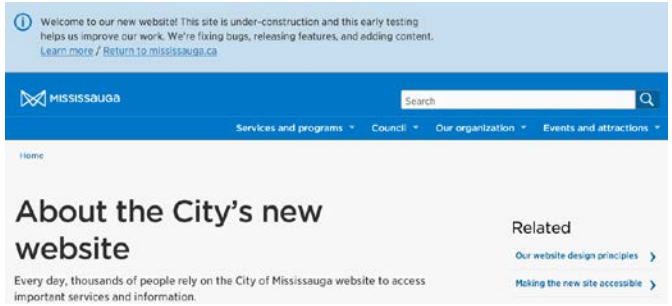
The **2018 Corporate Award for Excellence in Working Together** was presented to the Aerial Spray Program Team, comprised of individuals from IT, Parks & Forestry and Strategic Communications.

Other Achievements of note include:

- **Extending Mobility through various Transportation & Works sections –** the push to continue IT's "Mobile First" strategy (as outlined in the IT Master Plan) continues with the deployment of laptops and mobile technology to Transit and Maintenance supervisors and Works Operations teams. More than 250 staff had their technology needs assessed and provisioned with updated mobile technology in 2019
- **Transportation Network Companies (TNC)** – Council approved (June 2019) recommendations to formalize the TNC Pilot Project to regular operations, and provisions for continued improvements. This includes an in-house-developed data sharing model, comprehensive database and data analysis, secure file transfer protocol connections, an advanced mobile device app for vehicle inspections with the ability to issue and print Notices of Contravention, and a records maintenance module with system access controls. Mississauga's experience developing the policies, systems and processes to license, monitor and enforce ride sharing companies was presented by IT at the 2019 MISA Ontario Annual Conference in Niagara Falls, Ontario

June 2019 MISA Conference Logo

- **The First Phase of the new Mississauga.ca website** was completed in spring 2019. As progress continues, additional features and content will be released. Priorities include improved navigation and making information easier to understand



Announcement of new mississauga.ca website

The 2020-2023 Business Plan Outlook

As the City looks to the future

Planning for the Future

IT is planning to expand many programs in the future including:

- Continuing development of the City's Cybersecurity program (BR# 5468) to provide heightened protection against an increasing danger of sophisticated global cyber threats
- Implementing the Smart City Master Plan (BR# 6014) to advance the Smart City vision for the next three to five years
- Modernizing technologies, platforms and infrastructure that support mississauga.ca
- Implementing an Automated Staffing Solution (BR# 6043) that will reduce overtime and manual processing of staff scheduling and improve compliance with collective agreements
- Continuing to implement online services, introduce innovative uses of augmented reality and artificial intelligence (AI) to provide City services in public spaces
- Supporting citizen engagement by providing technology and tools that integrate with City planning processes, communications and public consultation (e.g., City Budget)
- Engaging youth and post-secondary students to drive innovative community-developed apps with the start-up community
- Meeting the increasing demand for video production and streaming (BR# 5967)
- Expanding the Tech Hub (BR# 5979) to offer onsite expertise while supporting the growth of our mobile workforce
- Mandatory upgrading or replacement of the Voice Communication (VCOM) radio system of 1,300 radios, in partnership with Peel Region, Peel Police and Mississauga, Brampton and Caledon Fire
- Enhancing online service delivery on items such as tax self-service, pet registration, licence renewals and Recreation program registration
- Implementing enhancements while supporting additional clients to our TXM property tax system (BR# 7248)
- Continuing to implement iParks, introducing sensor-based technology to measure environmental indicators and participation in parks
- Continuing to provide and expand public Wi-Fi
- Maintaining IT infrastructure in a state of good repair

…For IT, the future is now

Finding Efficiencies

Lean Program

The City's Lean Program focuses on strengthening the organization's culture of continuous improvement and instills Lean concepts and principles as a way of work in every Service Area. The program focuses on maximizing customer value and minimizing waste along with empowering staff at all levels to problem-solve on a daily basis.

Since becoming permanent in 2016, the Lean program has delivered significant results. In IT, 192 staff have received introductory White Belt Training, four staff have received intermediate Yellow Belt Training, and five staff have received advanced Green Belt Training. Four projects (including rapid improvements) and 204 small improvements have produced such enhancements as improved customer experience, faster processing times, higher quality and lower costs. (For definitions of classifications, see the Glossary.)

Some highlights of the many projects and small improvements completed include:

- SharePoint Work Request Process led to a reduction in the number of IT Service Desk support cases and a standardized work request process – freed capacity of 2,555 hours per year
- New IT helpdesk process that reduced 14.5 per cent of helpdesk calls (433 hours per year), resolution lead time by 20.3 per cent, and statistics calculations by 300 hours per year
- IT Storefront team improved the control and management of all computer and mobile inventory, reducing storage area needs by 50 per cent
- Partial floor replacement in the data centre to improve air flow
- Geospatial Solutions freed capacity (2,500 hours per year) with a single sign-on (SSO) to their ArcGIS system. The SSO reduces multiple password requests, lowers helpdesk requests for password resets and reduces hacker exposure
- A short-term contract was set up by Audio Visual Services leading to consistent costing, service levels for clients

Completed Initiatives					Total Benefits	
Improvement Type	**2014-2017**	**2018**	**Sept 2019**	**Total**	**Type**	**Total**
Small Improvement	36	99	69	204	Cost Savings and Avoidance	$980,382
Rapid Improvement	-	-	1	1	Customer Service Improvements	83
Project	1	1	1	3	Safety Improvements	21
Total	37	100	71	208	Environmental Improvements	17
In-Progress Initiatives	**Goals of the Initiatives**					
46 Small Improvements, 4 Rapid Improvement Events	Reduce paperwork and manual input, create standard templates/checklists, improve workflow					

Advancing the City's Strategic Plan

The City's Vision and Strategic Plan are the starting points for our annual business planning and budgeting cycle. The 40-year Strategic Plan, Our Future Mississauga, is built on five pillars – **move, belong, connect, prosper,** and **green.** Business plans are designed to strengthen aspects of these pillars to support the attainment of Mississauga's Vision.

Below are examples of how the initiatives of Information Technology relate to the Strategic Plan pillars.

move - developing a transit oriented city

- IT is providing the technology services for the Light Rail Transit and Advanced Traffic Management Services (ATMS)
- IT supports transit with MiWay technology, real-time bus tracking and advanced analytics

belong - ensuring youth, older adults and new immigrants thrive

- Virtual Campus allows locally registered students and students registered at institutions in 70 countries around the world to access their post-secondary school's resources from City Hall, Celebration Square, libraries, community centres, transit terminals and parks. Mississauga was the first city in Canada to have a "virtual campus"

connect - completing our neighbourhoods

- IT is working to modernize mississauga.ca to meet the needs of users by redesigning existing services to meet people-centred digital standards, starting with mississauga.ca informational and transactional services

prosper - cultivating creative and innovative businesses

Smart City Wi-Fi will provide:

- Free access to Wi-Fi and Smart City sensor technology tailored to meet the needs of each local community
- Opportunity for local business, innovation and learning while ensuring free access to broadband for those that may not have reliable access elsewhere

green - living green

- IT's data centre has reduced energy consumption and expenses by leveraging modern technology, environmental sensors, and using Cloud-based services to grow our data and computing requirements in a smart way

ourfuturemississauga.ca

Transforming our Business with Technology

The IT Master Plan, dated October 2015, established a three to five year outlook with strategies and actions for investment in technologies that are innovative and improve how City services are provided. The IT Master Plan is being refreshed in 2019, aligning with corporate priorities and objectives of the City's Strategic Plan. IT will work directly with all departments to update their technology roadmaps. The second iteration of the IT Master Plan is expected to be ready for the 2021-2024 business planning cycle.

Five key strategies have been developed as part of the IT Master Plan. These inspire the City to be innovative in how technology is used to enhance and deliver City services while, at the same time, transforming the City of Mississauga into an engaged and connected city:

- Foster Open and Accessible Government
- Enable Decisions through Research and Analytics
- Create a Connected and Engaged Workplace
- Improve Services through Innovation and Partnerships
- Build a Connected and Engaged City

There are 21 key actions within the IT Master Plan which provide specific direction on technologies and innovations that support the overall objectives and transformation of the City through the adoption of technology.

As the technology landscape has continued to rapidly change, the City has developed and grown significantly. Therefore, it is prudent to continually renew the City's IT strategy, ensuring alignment with changing City, business and technology trends.

The plan reflects these key technology trends:

- Broadband and free Wi-Fi are expected
- Services driven by consumers (mobile apps and sites)
- Everything/everyone is connected
    - Traffic signals, streetlights, sensors
    - City fleet and mobile workforce
- Fibre, Wi-Fi, cellular
    - Open data, big data, hackathons
- Cloud computing, software as a service
- Social media, online engagement, digital inclusion
- Innovative technology partnerships
- Disruptive technologies
- Technology driving the economy
- Cybersecurity and threat intelligence (BR #5468)
- Smart City (BR# 6014)
- Digital transformation in libraries, streaming content for ebooks, music, video

City in the cloud depiction

Maintaining Our Infrastructure

One of the most critical components of the IT capital budget is ensuring that technology is renewed in line with both industry and operational standards. IT security is also extremely important as news of successful IT security hacks, breaches and scams are in the news regularly. In 2020, the City will require one IT Security Analyst to detect, analyse, respond to, and prevent Cybersecurity incidents. This aligns with the implementation of the National Institute of Standards and Technology (NIST) IT Security standard and the three-year IT security work plan.

The technology required to provide City services is supported by a primary data centre and backup data centre located off-site. All supporting technology including network devices, servers and databases are updated based on the following lifecycle program:

- Servers and storage area network – five years
- Desktop computers, laptops – four years
- Minor software upgrades for all City business systems and software – three years; major – seven to 10 years
- IT standards are reviewed annually and reported to Council for standard software and hardware

Federal and provincial government funding programs are leveraged when possible to assist in funding IT programs.

A fundamental piece of the City's infrastructure is the Public Sector Network. Some key facts:

- The Public Sector Network is a partnership between Mississauga, Peel, Brampton and Caledon (Mississauga owns about 22 per cent)
- The Public Sector Network includes 800 kilometres of high speed fibre connecting 291 City sites and nodes (distribution points to connect things like intersections or extend Wi-Fi) and is the largest publically owned fibre network in Canada
- Total capital cost of this network pays for itself over a two-year period via cost avoidance of leased telecommunication lines. Operating costs are fully funded through subscriber fees where the City leases fibre to partner agencies

As of December 31, 2018 the estimated replacement value of the City's hardware and software assets was $154 million and annual replacement was $21 million.

Managing Our Human Resources

Workforce Analytics

Thirty-seven employees are enrolled in the leadership succession planning program and eleven leaders are eligible for retirement within the next four years. IT is providing development experiences to those that can move into these key roles.

Our Structure

IT was reorganized in January, 2014 to better align resources with providing service to the public, enhancing enterprise business solutions and ensuring that effective IT strategies and innovations enhance City services and operations. Partnerships have been established to improve service, efficiency and cost effectiveness. The Public Sector Network (PSN), VCOM Radio and Wireless Mississauga for Sheridan College are examples.

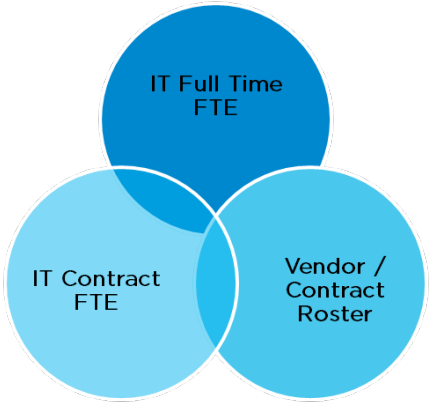
Our Talent

The Information Technology Division is comprised of:

- Section and Program Managers
- Business Analysts
- Project Managers
- IT Technicians & Specialists
- Database Administrators
- Application Specialists (e.g., SAP, GIS, SharePoint)
- Helpdesk Specialists
- Application Developers
- Communication Specialists
- IT Security Specialists
- System and Network Architects
- Students, Sheridan Co-op Program

Critical Roles/Functions to Achieve Business Goals

Current staffing issues are focused around Information Technology's ability to assign the right resources to priority initiatives while maintaining a level of capacity to deliver projects and maintain day-to-day operations. A combination of permanent, contract and part-time staff is utilized so that resources to deliver on key projects can grow with demand and be directly funded by the initiative.



The IT Resource Model

IT and HR recently established a new staffing agency roster to acquire specific technical skills or capacity needed for short term assignments supporting capital funded projects. This will address some of the resource pressures and technical needs on projects and aligns with being agile and responsive in a cost effective way.

Talent Needs

To keep up with today's continually changing Information Technology needs, a pre-qualified IT Roster for professional services was implemented so that unique skill sets could be acquired on an "as needed" basis. IT has also created a roster of staffing agencies to provide staff augmentation for both project and operational activities. This provides more agility to respond to increasing workloads.

The 2020 budgeted resource requests are as follows:

- One IT Security Analyst to detect, analyse and prevent cybersecurity incidents
- Two part-time positions or co-op students (1.4 FTEs) to assist with the large increase in audio-visual requests for Council meetings, event management and video production
- Five co-op students (3.3 FTEs) to join the Tech Hub to address the continuing expansion of the mobile workforce
- One Smart City Project Leader to begin implementation of the Smart City Master Plan
- Three contract staff (one Project Lead, one Business Analyst, one Scheduling Specialist) to commence work on the Automated Staff Scheduling Solution
- One TXM Technical Lead to implement enhancement and manage additional clients for the City's property tax program

Proposed Full Time Equivalent Staffing Distribution by Program

Program	2019	2020	2021	2022	2023
IT Admin, Strategy & Innovation	27.8	30.8	34.8	26.8	15.8
IT City Services	51.0	51.0	54.0	54.0	53.0
IT Digital Services & Mobility	55.0	55.4	55.4	55.4	55.4
IT Enterprise Business Solutions	26.4	26.4	28.4	29.4	28.4
IT Infrastructure Planning & Operations	37.0	41.0	43.0	43.0	42.0
IT Service Management	22.0	25.3	25.3	25.3	25.3
Total Service Distribution	**219.1**	**229.8**	**240.8**	**233.8**	**219.8**

Note: Numbers may not balance due to rounding.

Proposed Operating Budget

This part of the Business Plan sets out the financial resources required to deliver the proposed 2020-2023 Business Plan. Information is provided by major expenditure and revenue category as well as by program. The costs to maintain existing service levels and operationalize prior decisions are identified separately from proposed changes. The budget for 2019 was $29.97 million and the proposed budget for 2020 is $31.4 million.

Total Changes to Maintain Current Service Levels

Total amount to maintain current service levels is $1.346 million.

Labour and benefits are projected to increase by $537,000. Reflected in this are labour/other fringe benefit changes totaling $412,000 and $125,000 for annualization of the previous year's new positions. Maintenance and licensing costs are being increased by $823,000 due to inflationary and contractual obligations and the significant shift to cloud-based subscription solutions. Miscellaneous minor net increases total $5,000.

IT Support Cost allocations increase by $19,000 and assist in reducing the total IT cost pressures.

Efficiencies and Cost Savings

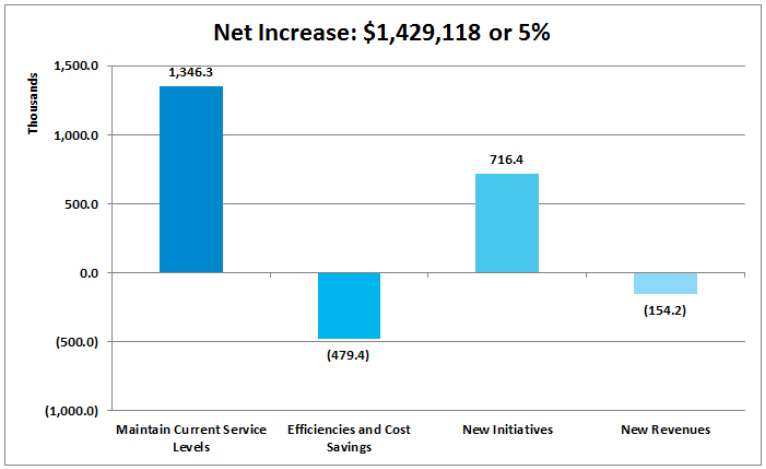
Total amount of IT cost savings is $479,400.

IT Maintenance and Licensing costs are reduced by $381,000 due to rationalization, and leasing costs at 201 City Centre Drive have been reduced by $53,400. There is also a reduction of $45,000 in the copier contract (year two of three).

New Initiatives and Revenues

IT has six new initiatives that impact the 2020 budget – BR# 5468 (Cybersecurity Operations Centre); BR# 5967 (Meeting the Increased Demand for Video Production and Streaming); BR# 5979 (Tech Hub Expansion); BR# 6014 (Smart City Master Plan Implementation); BR# 6043 (Automated Staff Scheduling Solution); and BR# 7248 (TXM Technical Lead). The total net operating impact of these budget requests is $562,200.

Proposed Changes for 2020 Net Operating Budget by Category ($000s)



Operating Budget Details

The following table identifies the budgeted and forecasted operating expenditures and revenues for 2020-2023, as well as the 2019 Budget and 2018 Actuals by major program within the Service Area.

Proposed Budget By Program ($000s)

Description	2018 Actuals	2019 Budget	2020 Proposed Budget	2021 Forecast	2022 Forecast	2023 Forecast
Expenditures to Deliver Current Services						
IT Admin, Strategy & Innovation	1,031	746	685	721	689	715
IT City Services	6,521	7,715	7,497	7,739	7,873	8,020
IT Digital Services & Mobility	7,410	8,182	8,534	8,647	8,762	8,878
IT Enterprise Business Solutions	3,792	4,293	4,264	4,537	4,762	4,992
IT Infrastructure Planning & Operations	7,739	8,070	8,795	8,941	9,074	9,199
IT Service Management	2,429	1,919	2,017	2,075	2,119	2,168
Total Expenditures	28,922	30,926	31,793	32,661	33,279	33,971
Revenues	(895)	(955)	(955)	(955)	(955)	(955)
Transfers From Reserves and Reserve Funds	0	0	0	0	0	0
New Initiatives and New Revenues			562	910	1,019	1,635
Proposed Net Budget Including New Initiatives & New Revenues	**28,027**	**29,971**	**31,400**	**32,616**	**33,343**	**34,651**
Expenditures Budget - Changes by Year			3%	3%	2%	2%
Proposed Net Budget - Changes by Year			5%	4%	2%	4%

Note: Numbers may not balance due to rounding.

Summary of Proposed Budget

The following table shows the proposed budget changes by description and category. Costs (labour; operational costs; and facility, IT and support) and revenues are shown by category with the approved 2019 budget for comparison. The three columns to the far right of the table show the totals proposed for 2020 and their dollar and percentage changes over 2019.

Summary of Proposed 2020 Budget

Description	2019 Approved Budget ($000s)	Maintain Current Service Levels	Efficiencies and Cost Savings	Annualized Prior Years Budget Decisions	Proposed New Initiatives And Revenues	Special Purpose Levies	2020 Proposed Budget ($000s)	$ Change Over 2019	% Change Over 2019
Labour and Benefits	23,098	412	0	125	521	0	24,156	1,058	5%
Operational Costs	9,612	829	(479)	0	195	0	10,156	544	6%
Facility, IT and Support Costs	(1,783)	(19)	0	0	0	0	(1,802)	(19)	1%
Transfer To Reserves & Reserve Funds	0	0	0	0	0	0	0	0	0%
Total Gross Expenditures	**30,926**	**1,221**	**(479)**	**125**	**716**	**0**	**32,510**	**1,583**	**5%**
Total Revenues	(955)	(0)	0	0	(154)	0	(1,109)	(154)	16%
Transfer From Reserves & Reserve Funds	0	0	0	0	0	0	0	0	0%
Total Net Expenditures	**29,971**	**1,221**	**(479)**	**125**	**562**	**0**	**31,400**	**1,429**	**5%**

Summary of Proposed 2020 Budget and 2021-2023 Forecast

Description	2018 Actuals ($000s)	2019 Approved Budget ($000s)	2020 Proposed Budget ($000s)	2021 Forecast ($000s)	2022 Forecast ($000s)	2023 Forecast ($000s)
Labour & Benefits	22,365	23,098	24,156	25,077	25,518	26,166
Operational Costs	8,062	9,612	10,156	10,665	10,962	11,631
Facility, IT and Support Costs	(1,506)	(1,783)	(1,802)	(1,802)	(1,802)	(1,802)
Transfer To Reserves & Reserve Funds	0	0	0	0	0	0
Total Gross Expenditures	**28,922**	**30,926**	**32,510**	**33,940**	**34,677**	**35,995**
Total Revenues	(895)	(955)	(1,109)	(1,324)	(1,334)	(1,344)
Transfer From Reserves & Reserve Funds		0	0	0	0	0
Total Net Expenditures	**28,027**	**29,971**	**31,400**	**32,616**	**33,343**	**34,650**

Note: Numbers may not balance due to rounding.

Proposed Cost Increase Required to Maintain Current Service Levels

The following table provides detailed highlights of budget changes by major cost and revenue category. It identifies the net changes to maintain existing service levels, taking into account efficiencies, cost savings, and cost increases arising from prior year decisions.

Description	2019 Budget ($000s)	2020 Proposed Budget ($000s)	Change ($000s)	Details ($000s)
Labour and Benefits	**23,098**	**23,635**	**537**	Increase/Decrease Reflects Labour Adjustments and Other Fringe Benefit Changes
Administration and Support Costs	(1,783)	(1,802)	(19)	IT Allocation Changes based on revised vendor forecasts
Communication Costs	455	455	0	
Contractor & Professional Services	95	95	0	
Equipment Costs & Maintenance Agreements	8,397	8,820	422	Updated Maintenance and Licensing Costs for ESRI, Onx, SAP and other various applications. Offset mainly by GIRO duplication which is already included in Transit Budget
Finance Other	165	165	(0)	
Materials, Supplies & Other Services	96	96	0	
Occupancy & City Costs	292	219	(73)	IT Tax, Hansen and Ecity moved to Civic Centre, savings partially offset by Smart commute moving from TW to IT
Staff Development	71	71	0	
Transportation Costs	41	41	0	
Subtotal - Other Operating	**7,828**	**8,158**	**330**	
Total Revenues	(955)	(955)	(0)	
Subtotal - Revenues	**(955)**	**(955)**	**(0)**	
Total	**29,971**	**30,838**	**867**	

Note: Numbers may not balance due to rounding.

Proposed New Initiatives and New Revenues

This table presents the costs by Budget Request (BR) for proposed new initiatives. Each BR is numbered. Detailed descriptions of each Request can be found in the pages following the table.

Description	BR #	2020 FTE Impact	2020 Proposed Budget ($000s)	2021 Forecast ($000s)	2022 Forecast ($000s)	2023 Forecast ($000s)	2020 to 2023 FTE Impact	2020 to 2023 Capital ($000s)
New Initiative								
Cybersecurity Operations Centre	5468	1.0	272	308	315	322	1.0	4
Meeting the Increased Demand for Video Production and Streaming	5967	1.4	65	66	67	68	1.4	33
Tech Hub Expansion	5979	3.3	164	167	170	172	3.3	167
Enterprise Performance Measures and Decision Support	5984	0.0	0	95	130	132	2.0	226
Meeting the Demand of Connected Devices/Internet of Things (IoT)	5997	0.0	0	117	119	122	1.0	0
Smart City Master Plan Implementation	6014	1.0	108	146	148	151	1.0	716
Automated Staff Scheduling Solution	6043	3.0	(0)	0	62	664	2.0	2,189
TXM Technical Lead	7248	1.0	(47)	(223)	(231)	(239)	1.0	4
TXM Support AD and QA	7250	0.0	0	235	239	243	2.0	0
Total New Initiatives		**10.7**	**562**	**910**	**1,019**	**1,635**	**14.7**	**3,339**
Total New Revenues		**0.0**	**0**	**0**	**0**	**0**	**0.0**	**0**
Total New Initiatives and New Revenues		**10.7**	**562**	**910**	**1,019**	**1,635**	**14.7**	**3,339**

Note: Numbers may not balance due to rounding. Amounts are Net.

Budget Request #: 5468

Proposed Initiative	Department	Service Area
Cybersecurity Operations Centre	Corporate Services	Information Technology

Description of Budget Request

The Cybersecurity Operations Centre (CSOC) objective is to protect the City's digital assets and systems. CSOC comprises people, processes and technologies to strengthen the City's security posture in the wake of increasing cyber incidents. CSOC staff is comprised primarily of security analysts who detect, analyze, respond, report, and prevent cybersecurity incidents. This request is for one analyst and third-party professional services. One analyst/capital funding was approved in 2019.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	272.3	307.8	314.8	321.8
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	272.3	307.8	314.8	321.8
* Net Change in $		35.6	6.9	7.0
FTEs	1.0	1.0	1.0	1.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	4.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

Cyber attacks/crime continue to grow. In 2015, cyber crime was estimated at $24 million globally; in 2017, $200 billion. In 2019, it is expected to be $2 trillion. We estimate the City's digital assets generate 7,000 security events/second. The City's email system receives approximately 90,000 external emails daily; 60,000 are classified as threats. Cyber threats are becoming more frequent, increasing in complexity and sophistication. The City needs to invest in improving protective measures.

Details of Service Change

Resourcing the CSOC will be a hybrid approach. Internal resources will handle Tier 2 (analysis, remediation) and Tier 3 (impact analysis, process improvement) activities; Tier 1 (monitoring, alerting, maintenance) activities will be handled by a third party. This ensures the City has continuous monitoring of the alert queue; triaging of security alerts; active monitoring of sensors and endpoint security and ensures data is collected and reviewed prior to escalating threats to Tier 2 staff.

Service Impact

The CSOC team is responsible for the ongoing, operational component of the City's enterprise information security. CSOC staff is comprised primarily of security analysts who work together to detect, analyse, respond to, report on, and prevent Cybersecurity incidents.

Budget Request #: 5967

Proposed Initiative	Department	Service Area
Meeting the Increased Demand for Video Production and Streaming	Corporate Services Department	Information Technology

Description of Budget Request

The IT Audio Visual (AV) group is requesting funding for two part-time positions to deal with a marked increase in requests for audio visual services for Council Chambers meetings, event management and video production. Staffing may consist of co-op students or strictly part-time.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	64.5	65.6	66.8	67.9
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	64.5	65.6	66.8	67.9
* Net Change in $		1.1	1.1	1.2
FTEs	1.4	1.4	1.4	1.4

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	32.6	0.0	0.0	0.0

Why Staff Recommend this Initiative

This change in complement will allow for increased service impact, more timely use of staff resources and relieve some of the pressure on current AV staff. Client demands (Mayor and Council, IT, Corporate Services, various committees) will be met on a more timely basis.

Key benefits:

- Meeting AV demand/expectations
- Reduced risk of service gaps
- Managing growth to meet service standards
- Improved sustainability, service continuity

Details of Service Change

Staffing costs are expected to increase approximately $65,000 in 2020. Budgeted start is January 2, 2020. It is expected these new staff will also require laptops, instant messaging and work spaces (desks).

Service Impact

As demand continues to be high for AV services, this change in the part-time complement will allow for increased service impact, more timely use of staff time and relieve some of the pressure on current AV staff. Client demands (Mayor and Council, IT, Corporate Services, various committees) will be met on a timely basis as AV services will now have the staffing complement.

Budget Request #: 5979

Proposed Initiative	Department	Service Area
Tech Hub Expansion	Corporate Services Department	Information Technology

Description of Budget Request

In order to meet demand and support the growth of the mobile workforce, IT is requesting five additional IT co-op students. In 2015, there were 1,400 mobile devices; in 2018, 3,800 devices - an approximate 171 per cent growth. This trend is expected to continue and in 2020 there will be over 5,000 devices. The demand on Tech Hub resources will continue to increase due to a larger mobile workforce, shared workspaces, digital inclusion initiatives and increasing business demands for mobile technology.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	164.2	166.9	169.7	172.5
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	164.2	166.9	169.7	172.5
* Net Change in $		2.7	2.7	2.8
FTEs	3.3	3.3	3.3	3.3

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	117.2	50.0	0.0	0.0

Why Staff Recommend this Initiative

The City's mobile workforce is expected to grow from 1,400 in 2015 to over 5,000 by 2020. The current Tech Hub needs to expand in order to support the growth of the City's mobile workforce and to meet the business needs of a shared workspace. In addition, some Tech Hub staff will be located at the Central Library which will foster innovation and continue partnerships with colleges and universities through the student co-op program.

Details of Service Change

For the first year of this BR, it is expected the five co-op students will cost approximately $154,000, resulting in an increase to the operating budget. The co-op students are planned to start January 2, 2020. An additional $10,000 is also requested for software maintenance/licensing in 2021.

There is also a capital budget component to this request - a total of $117,200 in 2020 and $50,000 in 2021.

Service Impact

In addition to supporting the "Prosper - Cultivating creative and innovative businesses" strategic pillar, this investment will provide the following benefits:

- Lower cost per Tech Hub incident and higher customer satisfaction as a result of more timely service
- Meet service expectations
- Align the resource capacity with the growth and demand of the mobile workforce
- Utilize and expand the highly successful student co-op program, providing students with the necessary tools for a successful IT career

Budget Request #: 5984

Proposed Initiative	Department	Service Area
Enterprise Performance Measures and Decision Support	Corporate Services Department	Information Technology

Description of Budget Request

The IT Analytics team is facing increasing pressures from two key areas: Analytics Infrastructure, and the Performance Measures and Analytics Program. IT requests the hiring of one full-time, permanent IT Systems Administrator to support the Business Objects and Business Warehouse environments and one full-time, contract Business Analyst for two years to support the business analysis activities required for the Performance Measures and Analytics Program.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	0.0	95.0	129.9	132.2
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	95.0	129.9	132.2
* Net Change in $		95.0	34.9	2.3
FTEs	0.0	2.0	2.0	2.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	0.0	83.0	113.5	29.5

Why Staff Recommend this Initiative

The hiring of additional resources will allow IT Analytics to meet the commitments of the Performance Measures and Analytics Programmes and ensure we are delivering the right services and advancing on our strategic vision by supporting automation of performance measures that support fact based, data driven decisions as well as supporting decisions through research and analytics or Business Intelligence Analytics for Ease of Use defined in the 2020-2022 Business Plans and Strategic goals.

Details of Service Change

It is expected the 2021 operating labour budget will increase by approximately $128,000 (annualized) for the Business Intelligence Administrator (grade G, start April 1/21 - there will be additional costs for laptop and workspace requirements. The Business Analyst (grade F, start April 1/21) will have no effect on the operating budget as it will be funded via the capital budget. The capital budget will increase approximately $111,000 (annualized) as a result.

Service Impact

The additional resources will allow us to continue to support the delivery of the Performance Measures and IT Analytics Program, ensure the overall health of the City's Business Intelligence infrastructure and meet our clients' increasing expectations for service delivery.

The additional staff will allow us to achieve the following outcomes:

- Increase system uptime for the Business Objects and Business Warehouse environments
- Reduce time to complete administration and configuration requests for Business Objects and Business Warehouse by 50-75 per cent
- Reduce the time to complete the automation of measures for performance measures by 20 per cent
- Provide additional capacity to provide business analysis services (research, business cases and use cases) that are critical to the implementation of the analytics program
- Enhance the security for current and future analytics and reduce time to implement security within our corporately developed dashboards

Budget Request #: 5997

Proposed Initiative

Meeting the Demand of Connected Devices/Internet of Things (IoT)

Department

Corporate Services Department

Service Area

Information Technology

Description of Budget Request

The City needs to maintain a network that is robust, secure and able to deliver City services to both the public and staff. Due to current growth and operational demand and pressures, this is a budget request for one Network Services Specialist.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	0.0	117.4	119.5	121.6
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	117.4	119.5	121.6
* Net Change in $		117.4	2.1	2.1
FTEs	0.0	1.0	1.0	1.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

Current growth and operational demand and pressures have led to this budget request for one FTE. The need for connected devices is increasing, creating growing demand on our resources and infrastructure. Staff turnover has resulted in the loss of highly specialized staff. These staff are required for critical business continuity and growth in operational demand.

Details of Service Change

As the contract staff will be offset by the capital budget, the net budget impact for the addition of one grade F, full-time Network Services Specialist will be approximately $117,000 in 2021 (start January 2, 2021). In addition, new staff will require workspace and a laptop.

Service Impact

It is expected that the addition of the Network Services Specialist will allow IT to meet the increasing demand for connected devices and business continuity. Increased demand by the public and staff for City services via the network will continue to be met. In addition, the Network Services Specialist and contracted staff will continue to support Smart City, cloud infrastructure, office space planning, Internet of Things (IoT) devices and the mobility strategy.

Budget Request #: 6014

Proposed Initiative	Department	Service Area
Smart City Master Plan Implementation	Corporate Services Department	Information Technology

Description of Budget Request

A Smart City uses data and communication technologies to create sustainable economic development, increase operational efficiency, improve the quality of government services and make improvements to community life.
To implement the Smart City Master Plan, IT requests the hiring of one full-time, permanent Smart City Project Leader (2020), one contract Smart City Coordinator (2021), and the establishment of an annual Smart City Innovation Fund of $150,000 to support Call for Innovation Challenges.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	107.7	145.8	148.2	150.7
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	107.7	145.8	148.2	150.7
* Net Change in $		38.1	2.4	2.5
FTEs	1.0	2.0	2.0	1.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	154.0	233.0	179.0	150.0

Why Staff Recommend this Initiative

The City of Mississauga has been recognized for its advancements in Smart City initiatives including free public Wi-Fi, open data, hackathons, fibre network, Advanced Traffic Management, LED Lighting, mobility, online services, mobile apps and social media. In addition, Mississauga has connected City Services such as building automation, snow ploughs, the works fleet, transit and fire.

Details of Service Change

In addition to an annual, ongoing capital request of $150,000, the full-time, permanent Smart City Project Leader (grade H, start date April 1, 2020) will cost approximately $108,000 in 2020 ($146,000 annualized). In 2021, the request for a contracted Smart City Coordinator will be funded via the capital budget.

Service Impact

The addition of these staff will allow the City to continue its investment in innovation via the Smart City Master Plan. This investment will continue fostering digital inclusion, supporting innovation and ideation, engaging youth and the tech community and mobile and digital transformation.

Budget Request #: 6043

Proposed Initiative	Department	Service Area
Automated Staff Scheduling Solution	Corporate Services Department	Information Technology

Description of Budget Request

IT requests three contract staff to begin implementing an Automated Staff Scheduling Solution. Seven contract staff are requested in 2021; one permanent FTE in 2022; and one permanent FTE in 2023. Current manual tasks relating to staff shift scheduling, shift exchanges and payroll will be automated. Some benefits: compliance and adherence to the Employment Standards Act, collective bargaining agreements and reduced overtime through strategic staff scheduling.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	0.0	0.0	62.2	663.8
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	62.2	663.8
* Net Change in $		0.0	62.2	601.6
FTEs	3.0	10.0	11.0	2.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	232.3	1,169.8	787.4	0.0

Why Staff Recommend this Initiative

Automated scheduling software will enable multiple improvements including error reduction and the elimination of non-value-added work. It is a best practice, currently in use in several other municipalities.

Details of Service Change

In 2020, three contract staff will be required to begin implementation of this BR - in April 2020, one Project Lead (grade H) and one Business Analyst (grade F); in September 2020, one Scheduling Specialist (grade F). The total cost of $224,300 will be capital funded.

Service Impact

Addition of these staff will allow the City to begin implementing a City-wide Automated Staff Scheduling Solution. These positions will be capital funded.

The following major business needs will be met by this project:

- Single staffing solution for the Corporation; meets the needs of all business units
- Improved compliance with legislation, HR policies, and collective agreements
- Scheduling puts a heavy load on the staff that does the scheduling
- Reduced workload and errors with regards to scheduling activities, resulting in cost savings/elimination of non-value-added work - estimated to save up to 50 per cent of staff time spent on scheduling activities
- City can avoid paying some overtime costs through appropriate scheduling
- SAP integration can avoid manual entry of payroll
- Centralized reporting without the need to combine data from multiple systems
- Best practice - other municipalities are using automated software for scheduling

Budget Request #: 7248

Proposed Initiative	Department	Service Area
TXM Technical Lead	Corporate Services	Information Technology

Description of Budget Request

The IT TXM team requests one TXM Technical Lead to develop efficiencies and support the management of onboarding additional clients while implementing enhancements to evolve the TXM application. Two new municipalities have been added in 2019-2020, with a third requesting a demonstration. In addition, there are nine other municipalities that have expressed interest in TXM.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	107.7	145.8	148.2	150.7
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	154.2	369.1	379.1	389.3
Tax Levy Requirements	(46.5)	(223.3)	(230.8)	(238.6)
* Net Change in $		(176.8)	(7.5)	(7.7)
FTEs	1.0	1.0	1.0	1.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	4.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The City's TXM System is recognized as system that works and meets the daily business needs of a full property tax business cycle. This is proven, reliable and supported (IT, Revenue) software with a strong future demand. It is estimated (based on 2019 data) that the City would recover approximately $1.2 million annually should the current nine municipalities opt in.

Details of Service Change

The full-time, permanent TXM Technical Lead (grade H, start date April, 2020) will cost approximately $108,000 in 2020 (annualized $146,000). This salary will be offset by an increase in TXM recoveries revenue of approximately $154,000.

Service Impact

The addition of this staff member will improve development estimates, project planning, and resource utilization to manage increasing work requests and projects. In addition, the City maintains its reputation for quality products and service with the expansion of the TXM product.

Budget Request #: 7250

Proposed Initiative	Department	Service Area
TXM Support AD and QA	Corporate Services Department	Information Technology

Description of Budget Request

Add a Quality Assurance (QA) resource and an Application Developer resource to the TXM Team to support additional clients.

Required Annual Operating Investment

Impacts ($000s)	2020	2021	2022	2023
Gross Expenditures	0.0	234.8	238.9	243.1
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	234.8	238.9	243.1
* Net Change in $		234.8	4.1	4.2
FTEs	0.0	2.0	2.0	2.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital ($000s)	2019 & Prior	2020	2021	2022	2023 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

A QA resource will enable concurrent initiatives to be executed and provide business continuity to support road map initiatives and client work requests. An Application Developer will manage the increase in work requests coming from the onboarding of additional clients.

Details of Service Change

Adding a QA resource and Application resource to the TXM team.

Service Impact

Enable concurrent initiatives to be executed while supporting the onboarding of clients.

Proposed Capital Budget

This section summarizes the forecast 10-year capital requirements for this service. The following table presents the forecast by major program. The next table summarizes the sources of financing for the capital forecast.

Proposed 2020-2029 Capital Budget by Program ($000s)

Program Expenditures	2020 Proposed Budget	2021 Forecast	2022 Forecast	2023 Forecast	2024-2029 Forecast	Total 2020-2029
Applications	16,607	7,598	3,068	5,055	33,478	65,806
Geospatial Solutions	250	350	250	250	1,600	2,700
Infrastructure	9,248	12,459	8,735	7,898	53,232	91,572
PC Replacement & Peripherals	2,065	1,998	1,614	1,797	12,860	20,334
Total	**28,170**	**22,405**	**13,667**	**15,000**	**101,170**	**180,412**

Note: Numbers may not balance due to rounding. Numbers are gross.

Proposed 2020-2029 Capital Forecast Highlights:

- $26.47 million – Server Storage Expansion/Replacement, Server Applications
- $15.95 million – PC/Notebook/Tablet Lifecycle Replacement
- $14.44 million – Switches and Routers
- $11.48 million – Network Security Infrastructure
- $10.86 million – SAP and SAP Related Processes
- $10.30 million – Network Fibre
- $9.42 million – TXM Platform Maintenance/Workplan
- $8.09 million – Network Wireless Infrastructure
- $7.23 million – VOIP System and Phones
- $5.89 million – MAX Online Services, Platform
- $5.78 million – Voice Communication (VCOM) System
- $4.46 million – IT Security Program and Enhancements

Proposed 2020-2029 Capital Budget by Funding Source ($000s)

The following table provides the funding sources proposed to fund the capital portion of the proposed 2020-2023 Business Plan and 2020 Budget and the consolidated forecast for 2024-2029.

Funding	2020 Proposed Budget	2021 Forecast	2022 Forecast	2023 Forecast	2024-2029 Forecast	Total 2020-2029
Tax Capital	28,170	22,405	13,667	15,000	101,170	180,412
Total	**28,170**	**22,405**	**13,667**	**15,000**	**101,170**	**180,412**

Note: Numbers may not balance due to rounding. Numbers are gross.

Proposed 2020 Capital Budget Detail ($000s)

The following table provides a detailed listing of proposed capital projects for 2020.

Program: Applications

Project Number	Project Name	Gross Cost	Recovery	Net	Funding Source
CPIT006404	Desktop Operating System Upgrade	307	0	307	Tax Capital
CPIT006408	CLASS Replacement Project	250	0	250	Tax Capital
CPIT006783	Work Management and Resource Capacity Planning Solutions	123	0	123	Tax Capital
CPIT007116	SAP S4 HANA Upgrade (part of the SAP Roadmap)	6,910	0	6,910	Tax Capital
CPIT007120	SuccessFactors Sustainment Services	125	0	125	Tax Capital
CPIT007410	eCity Hosting and Online Services Hosting and Services	750	0	750	Tax Capital
CPIT007422	MAX - Online Services	250	0	250	Tax Capital
CPIT007433	TXM Platform Maintenance	1,125	0	1,125	Tax Capital
CPIT007488	Library Integrated Library System (ILS Sirsi Dynix)	400	0	400	Tax Capital
CPIT007490	AirWatch System Upgrade and Staff Training	50	0	50	Tax Capital
CPIT007626	Faster System - New	1,300	0	1,300	Tax Capital
CPIT007627	Telematics-AVL/GPS Project	225	0	225	Tax Capital
CPIT008041	eCity Web and Mobile	900	0	900	Tax Capital
CPIT008044	IT Security Program 2020	380	0	380	Tax Capital
CPIT008045	Desktop Software Licenses 2020	900	0	900	Tax Capital
CPIT008046	IT Security Enhancements 2020	150	0	150	Tax Capital
CPIT008048	TXM Workplan 2020	350	0	350	Tax Capital
CPIT008052	CPS-CMO IT Upgrade Program - Replacement	200	0	200	Tax Capital
CPIT008054	Parksmart - Auto Process	100	0	100	Tax Capital
CPIT008055	Delphi Applications	125	0	125	Tax Capital
CPIT008056	Nice Radio and Voice Recording System for Transit	150	0	150	Tax Capital
CPIT008058	SAP Legislative Changes and Enhancements 2020	150	0	150	Tax Capital
CPIT008060	Fiori Timesheets Enhancement	200	0	200	Tax Capital
CPIT008061	SAP Enhancements - benefit changes	100	0	100	Tax Capital
CPIT008068	SCSM Lifecycle Replacement	150	0	150	Tax Capital
CPIT008074	Server Applications	593	0	593	Tax Capital
CPIT008256	Software New Hires - City Wide 2020	343	0	343	Tax Capital
Total		**16,607**	**0**	**16,607**	

Note: Numbers may not balance due to rounding.

Proposed 2020 Capital Budget Detail ($000s) (Cont'd)

Program: Geospatial Solutions

Project Number	Project Name	Gross Cost	Recovery	Net	Funding Source
TWOE00183	Survey and Control Network	50	0	50	Tax Capital
TWOE00184	Topographical Updating	200	0	200	Tax Capital
Total		**250**	**0**	**250**	

Note: Numbers may not balance due to rounding.

Program: Infrastructure

Project Number	Project Name	Gross Cost	Recovery	Net	Funding Source
CPIT007412	VCOM Mobile Radio	530	0	530	Tax Capital
CPIT007426	Network Fibre	1,180	0	1,180	Tax Capital
CPIT007440	AV Lifecycle Replacement of Projectors and Screens at Garry W Morden Centre	325	0	325	Tax Capital
CPIT007625	Tech Hub Expansion (2020)	50	0	50	Tax Capital
CPIT007629	Smart City Master Plan Implementation	150	0	150	Tax Capital
CPIT007634	IT Legal Counsel	160	0	160	Tax Capital
CPIT007641	Automated Staff Scheduling Solution	224	0	224	Tax Capital
CPIT008062	Decommission PeopleSoft servers	250	0	250	Tax Capital
CPIT008065	Special IT Equip - Includes Public 2020	250	0	250	Tax Capital
CPIT008070	Switches and Routers	2,456	0	2,456	Tax Capital
CPIT008071	VoIP Systems & Phones	150	0	150	Tax Capital
CPIT008072	Server and Storage Replacement & Expansion	1,900	0	1,900	Tax Capital
CPIT008076	Network Wireless Infrastructure	673	0	673	Tax Capital
CPIT008079	Network Security Infrastructure	950	0	950	Tax Capital
Total		**9,248**	**0**	**9,248**	

Note: Numbers may not balance due to rounding.

Proposed 2020 Capital Budget Detail ($000s) (Cont'd)

Program: PC Replacement & Peripherals

Project Number	Project Name	Gross Cost	Recovery	Net	Funding Source
CPIT007445	Library Public PC Replacement	120	0	120	Tax Capital
CPIT008063	PC/Notebook/Tablet Lifecycle 2020	1,735	0	1,735	Tax Capital
CPIT008069	Network Services UPS Business Continuity	210	0	210	Tax Capital
Total		**2,065**	**0**	**2,065**	

Note: Numbers may not balance due to rounding.

Proposed 2020-2029 Capital Budget by Sub-Program ($000s)

Sub-Program	2020 Proposed Budget	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast	Total Forecast
Applications											
IT Applications-New	3,472	1,941	555	555	1,280	950	800	550	550	550	11,203
IT Applications-Replacement/Enhancements	11,485	5,257	2,313	4,350	3,500	3,694	5,929	7,317	4,320	1,818	49,983
IT Portal	1,650	400	200	150	600	600	420	300	300	0	4,620
Subtotal	**16,607**	**7,598**	**3,068**	**5,055**	**5,380**	**5,244**	**7,149**	**8,167**	**5,170**	**2,368**	**65,806**
Geospatial Solutions											
IT Survey Ctrl/Equip, Rd Bylaw Svcs	50	50	50	50	50	50	50	50	50	50	500
IT Topographical Updating	200	300	200	200	200	200	200	200	300	200	2,200
Subtotal	**250**	**350**	**250**	**250**	**250**	**250**	**250**	**250**	**350**	**250**	**2,700**
Infrastructure											
IT Network Infrastructure	6,089	8,251	4,959	5,585	5,280	5,349	5,253	5,730	5,235	7,660	59,391
IT Server Expansion	0	0	0	0	0	0	0	0	0	0	0
IT Server Replacement/Maintenance	2,150	1,664	1,425	1,570	3,800	3,550	940	830	1,550	4,035	21,514
IT Service Management	1,009	2,545	2,351	743	805	1,445	420	420	305	625	10,667
Subtotal	**9,248**	**12,459**	**8,735**	**7,898**	**9,885**	**10,344**	**6,613**	**6,980**	**7,090**	**12,320**	**91,572**
PC Replacement & Peripherals											
IT PC/Notebook-Replacement/Maintenance	1,855	1,505	1,475	1,452	2,141	1,900	1,890	1,670	1,399	1,400	16,687
IT Peripherals	0	160	10	10	160	100	100	160	0	0	700
IT Specialized Equipment	210	333	129	335	320	355	110	610	270	275	2,947
Subtotal	**2,065**	**1,998**	**1,614**	**1,797**	**2,621**	**2,355**	**2,100**	**2,440**	**1,669**	**1,675**	**20,334**
Total Expenditures	**28,170**	**22,405**	**13,667**	**15,000**	**18,136**	**18,193**	**16,112**	**17,837**	**14,279**	**16,613**	**180,412**

Note: Numbers may not balance due to rounding. Numbers are net.