

# IT Solutions & Support

Led by: Information Technology

## Description:

This service provides the technology, devices and infrastructure that underpins the delivery of all technology solutions for The City. This service develops and maintains both corporate-wide and line-of-business applications and improves and automates business processes to enable City business units to deliver internal and citizen-facing services.

## Customers:

Direct customers are individuals that interact with IT or use IT services on a daily basis, including corporate management, office employees, frontline/field employees, civic partners, Council and citizens. Indirect customers are individuals or organizations that benefit from IT's services and include citizens, businesses and post-secondary institutions.

## What is delivered to customers:

**Business Systems & Consultation:** Applications, tools and standards that help business units improve delivery of services to citizens.

**Workforce Productivity:** Technology (e.g. computers, devices, software) and network access to perform day-to-day business activities.

**Infrastructure & Platforms:** Technology infrastructure that supports City business activities.

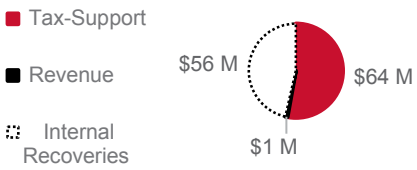

## Partners:

Key partners of this service include: Corporate Analytics & Innovation, Customer Service & Communications, Law, Corporate Security, Supply, and external contracted service providers.

## Service need (value proposition):

IT Solutions and Support supplies technology and associated infrastructure to connect over 18,000 City staff, 260 City facilities, and 3,000 vehicles to enable The City to perform day-to-day business activities. This includes provisioning and support for more than 15,000 computers, 16,500 mobile devices (e.g. radios, modems, smartphones), and 14,000 telephone lines. With over 460 business and enterprise applications, 2,000 software titles (e.g. productivity tools and utilities), and resilient technology infrastructure to support essential applications, technology is behind every citizen-facing transaction. The City's 450 kilometers of fibre-optic infrastructure provides high-speed connectivity, promotes research and development, and encourages economic diversity and resiliency. Leveraging technology increases The City's effectiveness, efficiency, and capacity to deliver services to citizens of Calgary.

## Current state service value

<p><b>92%</b> IT Client Satisfaction Rating</p> <p><b>30,320</b> Number of Network Devices/Sensors (IoT)</p>	<p><b>127,443</b> Number of Service Desk Tickets Per Year</p> <p><b>375,000</b> Number of myID Citizen Accounts</p>	<p>2018 Budgeted Gross Operating Expenditures Funding Breakdown (\$ Millions)*</p> <p><b>\$6,500</b> Annual operating cost per employee</p>  <p>* Gross operating budget and the service cost ratio may include internal recoveries that are also included in other services gross operating budget.</p>
<p><b>Connections to Citizen Priorities</b></p> 		<p><b>What the service includes (\$000s)</b></p> <p>The IT Solutions and Support service includes: Business Systems &amp; Consultation (\$62,704), Workforce Productivity (\$28,511), and Infrastructure &amp; Platforms (\$30,488).</p> <p><b>Key Capital Investments</b></p> <p>IT's Annual Investment Programs are focused on maintaining service by completing only essential lifecycle activities for critical software, network, servers, storage, and end-user devices. This will result in reduced service levels for this budget cycle.</p>



## What we've heard and service outlook

### What we heard: Research & Engagement Results

In the 2017 Client Satisfaction Survey, 92 per cent of respondents indicated they were satisfied overall with IT, with 48 per cent indicating they were very satisfied. IT has also achieved a 98 per cent customer satisfaction rate through surveys conducted when IT Service Desk tickets are closed. The Citizen Perspective Survey found that seven out of 10 Calgarians are confident in The City's ability to protect privacy and confidentiality when conducting online transactions. In addition, 88 per cent of Calgarians have indicated they are satisfied with The City of Calgary's web-site, based on the Citizen Satisfaction Survey.

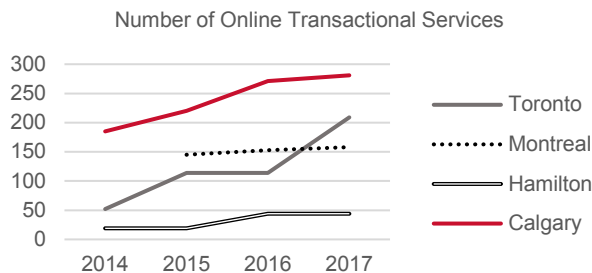
### What Council has directed

The IT Solutions and Support service supports all 61 services and all Council Directives. The Council-directed investment in fibre-optic infrastructure (GPT2015-0485) enhances Calgary's economic resiliency and promotes economic diversification. IT's investment in infrastructure supports citizen and employee safety by connecting cameras and help phones as well as providing systems that support community growth, development, accessibility and inclusion. IT systems support innovative technology partnerships to help build, fund and sustain resilient transportation networks. The use of energy-efficient technology devices and implementation of energy-saving initiatives support A Healthy and Green City. IT's commitment to process improvement is highlighted through recent IT Zero-Based Review opportunities. Technology supports innovation and the efficient delivery of City services to citizens.

### What are we watching?

Technology security remains one of the top concerns for The City. Additional technology risks include business disruption due to system failure and ability to sustain the increasing pace of technology lifecycle demands with reduced funding. The Internet of Things is the network of devices, software and sensors capable of connecting and exchanging data. Robotic process automation blends automation with artificial intelligence to allow systems to learn and make more complex decisions. These trends are expected to appear in emerging software/technology to increase automation and enable more efficient service to citizens. Citizens now expect mobile on-demand personalized self-serve solutions to access municipal services. Limited capital funding is available in this budget cycle for infrastructure lifecycle and to pursue new technology advancements.

### Benchmarking



Source: Municipal Benchmarking Network Canada

The number of online transactional services represents City services that can be completed through a web browser or mobile application, enabling citizens to access City services at anytime from anywhere. The City of Calgary has consistently been the national leader in this area, ranking first among municipalities participating in the Municipal Benchmarking Network Canada. The use of online services helps The City to stay competitive, streamlines processes, promotes innovation, and increases convenience for citizens.

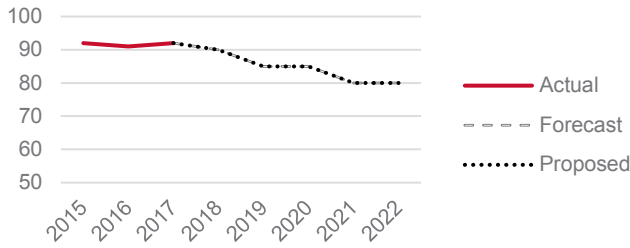
### What matters to Calgarians

VALUE DIMENSION	DESCRIPTION
Responsiveness	The ability for IT to provide products, services and infrastructure in a timely manner.
Expertise	IT is able to design and deliver products, services and infrastructure that meet business needs today and in the future.
Affordability	The City's investment in technology leads to greater efficiency, cost avoidance and better service for citizens.
Connectivity	Technology enables City staff to easily connect to each other and to citizens.
Reduces risk	IT manages technology risk by using standards and methodologies for projects, processes and changes to the environment.



# How is the Service performing? Where we are headed and where do we want to go?

Overall Satisfaction with IT (Percentage)

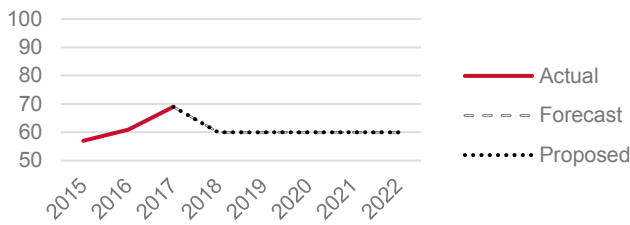


## Story behind the curve

### Overall Satisfaction with IT

Since 2014, IT has maintained a rate of overall satisfaction greater than 90 per cent. Moreover, the percentage of respondents who indicated they were “Very Satisfied” rather than “Somewhat Satisfied” has increased from 40 per cent to 48 per cent. A moderate decline in client satisfaction is anticipated due to consolidated workforce productivity devices, rationalized business software titles, and reduced service levels for less critical IT functions.

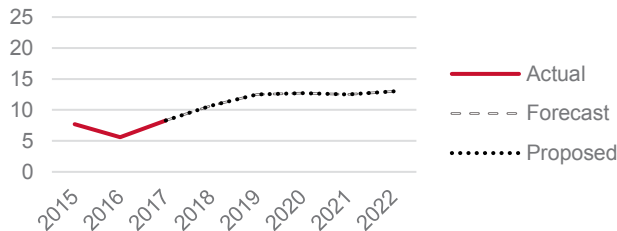
Percentage of IT Service Desk Phone Calls with First Contact Resolution (Percentage)



### Percentage of IT Service Desk Phone Calls with First Contact Resolution

This is an industry-standard measure for call centre performance where high results indicate callers have their issues fully addressed without delay or the need to have another team dispatched to assist. Between 2015 and 2017, The City of Calgary IT Service Desk saw a significant increase in its rate of first contact resolution, improving from 57 percent to 69 percent.

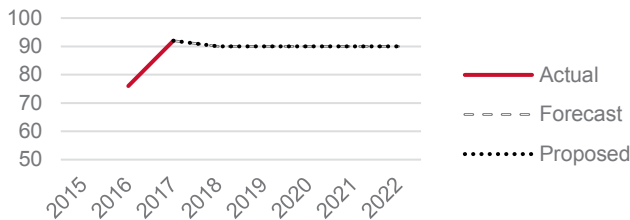
IT Software Expenditures as a Percentage of Overall IT Expenditures (Percentage)



### IT Software Expenditures as a Percentage of Overall IT Expenditures

Software costs are a key driver of overall IT expenses and are part of an ongoing contractual obligation for the maintenance and support of foundational and line-of-business systems. Investment in enterprise software is required due to increasing corporate demands, inflationary impacts, and changes in the software model (shift from a capital expense to an operating expense as the licensing model moves from purchased licenses to subscription-based). Opportunities identified as part of the IT Zero-Based Review will focus on identifying software rationalization and consolidation opportunities.

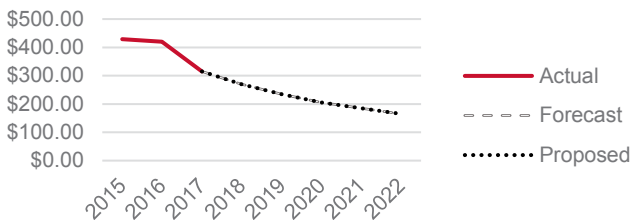
Benefits Realization of Technology Projects (Percentage)



### Benefits Realization of Technology Projects

This measures the number of survey respondents who agreed that technology projects completed for their business unit have achieved the desired outcome. In the most recent survey, 92 per cent of respondents agreed that new technology projects successfully realized the anticipated benefits, a substantial increase from the previous year. This demonstrates that the vast majority of City business units are recognizing the positive value of investments made in IT projects.

City Network Gross Operating Cost per Connected Device (Dollars)



### Operating Cost per Connected Device on the City Network

This measure shows the cost efficiency of the City’s data network. Network operating costs are expected to remain relatively static as more devices are connected in the coming years due to The City’s previous investment in technology infrastructure.



# What do we propose to do?

## What we propose to continue doing

STRATEGY
Broker technology services and resources for The City to find efficiencies in a constantly changing and growing technology landscape.
Enhance and support citizen-centric digital services to connect citizens and employees with data and technology to enable all City services.
Build and maintain secure and resilient technology infrastructure to improve the availability of City services.
Enable an agile IT workforce by attracting and retaining people with the right skills for the future.
Optimize technology platforms and applications by balancing business technology investment decisions with corporate solutions.
Manage information as a strategic asset by advancing the use, reliability, and value of civic data through improved access and analysis.

### Why?

With limited capital and operating funding, IT will be focusing on finding and leveraging efficiencies through technology and service contracts, digital services, resilient infrastructure, and an agile workforce. The IT Zero-Based Review will be pursuing opportunities to further eliminate redundancy and avoid cost. Technology platforms and application inventories will continue to be reviewed and optimized, and information will be managed as a corporate asset.

## What we propose to do less of

STRATEGY
Pro-active lifecycle replacements for non-essential technology (risk will be partially offset by purchasing extended vendor support).
Investment in new technology advancements (e.g. Internet of Things and robotic process automation).
Capital investment in The City's Fibre Infrastructure Strategy (slowing growth and anticipated revenue).

### Why?

Services levels for less critical IT functions will be reduced while minimizing impact to City services. Technology lifecycles will be extended past optimal replacement periods. Investment in The City's Fibre Infrastructure Strategy and new technology advancements will be reduced.

## What we propose to do more of or include as a new offering

STRATEGY
Respond to shifts in the software industry from purchased software to subscription-based software.
Focus on optimizing workforce productivity devices throughout The City, ensuring users have the right device to do their job.
Review and adjust resource levels to maintain an agile workforce and adapt to changing priorities and technologies.
Review and optimize internal and external service contracts.

### Why?

Investment in enterprise software is required to keep up with demand and the shift in enterprise software delivery models from purchased licenses to subscription-based. As a result of the IT Zero-Based Review, IT will be focusing on optimizing workforce productivity devices and consolidating business software titles. Resource levels will be reviewed and adjusted to respond to changing business priorities. To ensure efficient IT operations, internal and external service contracts will be reviewed and optimized.



# What Operating Budget do we need to achieve these results and strategies?

For Council Approval

SERVICE PERFORMANCE RESULTS FOR 2019-2022	CURRENT	TREND
Overall Satisfaction with IT (Percentage)	90	↓
Percentage of IT Service Desk Phone Calls with First Contact Resolution (Percentage)	60	↔
IT Software Expenditures as a Percentage of Overall IT Expenditures (Percentage)	10.7	↑
Benefits Realization of Technology Projects (Percentage)	90	↔
City Network Gross Operating Cost per Connected Device (Dollars)	270	↓

## Breakdown of net operating budget (\$000s)

	2019	2020	2021	2022
Previous Year's Budget	64,318	64,704	64,515	63,366
Less Previous Year one Time	-	(1,500)	(2,050)	(900)
Base	64,318	63,204	62,465	62,466
Revenue Changes	-	-	-	-
Internal Recovery Changes	(528)	(578)	(556)	(569)
Inflation	1,056	1,157	1,112	1,140
Operating Impact of Previously Approved Capital	-	-	-	-
Operating Impact of New Capital (Incremental)	-	-	-	-
Efficiencies	(1,092)	(918)	(555)	(570)
Service Reductions	-	(400)	-	-
Service Increases	-	-	-	-
One Time	1,500	2,050	900	600
Realignments	(550)	-	-	-
<b>Total</b>	<b>64,704</b>	<b>64,515</b>	<b>63,366</b>	<b>63,067</b>

## Total Operating Budget (\$000s) for Approval

	2018 Budget	2019			2020			2021			2022		
	At Mar 31	Base	One-Time	Total	Base	One-Time	Total	Base	One-Time	Total	Base	One-Time	Total
<b>Expenditure</b>	121,703	120,589	1,500	122,089	119,850	2,050	121,900	119,851	900	120,751	119,852	600	120,452
<b>Recoveries</b>	(56,478)	(56,478)	-	(56,478)	(56,478)	-	(56,478)	(56,478)	-	(56,478)	(56,478)	-	(56,478)
<b>Revenue</b>	(907)	(907)	-	(907)	(907)	-	(907)	(907)	-	(907)	(907)	-	(907)
<b>Net</b>	64,318	63,204	1,500	64,704	62,465	2,050	64,515	62,466	900	63,366	62,467	600	63,067



# Recommended Capital Investment to Support Service Delivery

For Council Approval

## Capital Budget for Council Approval

ACTIVITY	DESCRIPTION	2019 REQUEST (\$000s)	2020 REQUEST (\$000s)	2021 REQUEST (\$000s)	2022 REQUEST (\$000s)	2023+ REQUEST (\$000s)	Total REQUEST (\$000s)
Annual Investment Program(s)		26,602	26,528	26,681	24,473	-	104,284
415200	Network Infrastructure (Hardware and Cabling)	300	300	300	300	-	1,200
415250	IT-Enterprise Storage Units	2,535	2,232	1,821	684	-	7,271
415770	IT Communications Infrastructure	934	1,112	974	1,179	-	4,198
415802	IT-Enterprise Servers	1,688	2,792	2,457	1,413	-	8,350
415803	IT -Lifecycle Replace-Desktop	3,500	2,800	2,700	4,000	-	13,000
415806	Data Centre Environmentals (Lifecycle Replacement)	400	504	874	304	-	2,082
415810	IT-Calgary City Net	2,218	1,993	1,978	1,204	-	7,392
415890	Enterprise Software Licensing	5,796	6,000	6,168	6,018	-	23,981
415891	Software Lifecycle Replacement	1,785	1,740	1,775	1,710	-	7,010
415894	IT Service Resiliency and Disaster Recovery	406	217	343	316	-	1,282
415970	PeopleSoft FSCM	530	283	283	283	-	1,378
415990	PeopleSoft HCM	325	325	685	685	-	2,020
417570	IT-Development Pool	5,000	5,000	5,000	5,000	-	20,000
418960	Fibre Optics	1,000	1,000	1,000	1,000	-	4,000
480300	Enterprise Info Management	186	231	325	379	-	1,120
Project(s)		-	-	-	-	-	-
Program(s)		-	-	-	-	-	-
<b>Sub-Total (New Budget Requests)</b>		26,602	26,528	26,681	24,473	-	104,284
Previously Approved Budget Remaining		20,364	974	-	-	-	21,338
<b>Total Capital Investment</b>		46,966	27,502	26,681	24,473	-	125,622



# Recommended Capital Investment to Support Service Delivery

For Council Approval

## Explanation of Capital Budget Requests

### Annual Investment Program(s)

#### **Activity 415200: Network Infrastructure (Hardware and Cabling)**

New Budget Request of \$1,200 thousand for lifecycle, maintenance and growth of critical network connectivity cabling and equipment in City buildings.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

#### **Activity 415250: IT-Enterprise Storage Units**

New Budget Request of \$7,271 thousand for lifecycle of City data centre data storage devices. These devices store all City data used by applications and employees.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

#### **Activity 415770: IT Communications Infrastructure**

New Budget Request of \$4,198 thousand for lifecycle of phone equipment and upgrades to contact centre applications, mobile device security management, web conferencing and in-building wireless coverage.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

#### **Activity 415802: IT-Enterprise Servers**

New Budget Request of \$8,350 thousand for lifecycle of City servers. Approximately 450 physical servers hosting 5900 virtual servers support all City applications and services.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

#### **Activity 415803: IT -Lifecycle Replace-Desktop**

New Budget Request of \$13,000 thousand for lifecycle of Windows based computing devices, infrastructure, and multifunction printers for all City business units.

Funding from Capital Reserves

Operating Impact of Capital: None

#### **Activity 415806: Data Centre Environmentals (Lifecycle Replacement)**

New Budget Request of \$2,082 thousand for lifecycle and maintenance of environmental management systems that support critical data centres and other essential compute spaces.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

#### **Activity 415810: IT-Calgary City Net**

New Budget Request of \$7,392 thousand for the lifecycle and upgrade of The City's high-speed data network backbone, last mile access, and security infrastructure.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

#### **Activity 415890: Enterprise Software Licensing**

New Budget Request of \$23,981 thousand for The City's contractual obligations for enterprise-wide software licenses.

Funding from Capital Reserves (\$5,600 thousand) and Pay-As-You-Go (\$18,381 thousand)

Operating Impact of Capital: None



## Recommended Capital Investment to Support Service Delivery

For Council Approval

### **Activity 415891: Software Lifecycle Replacement**

New Budget Request of \$7,010 thousand for the lifecycle of essential software applications and supporting technologies that enhance critical business capabilities and services across The Corporation.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

### **Activity 415894: IT Service Resiliency and Disaster Recovery**

New Budget Request of \$1,282 thousand for the maintenance and upgrade of essential infrastructure and systems required for City Service Resiliency and Disaster Recovery.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

### **Activity 415970: PeopleSoft FSCM**

New Budget Request of \$1,378 thousand for essential investment to PeopleSoft FSCM supporting critical Supply and Financial reporting, payable/receivables, contract, audit and service delivery.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

### **Activity 415990: PeopleSoft HCM**

New Budget Request of \$2,020 thousand for essential investment to PeopleSoft HCM supporting critical human capital management, payroll, pension and benefits and workforce planning and systems.

Funding from Pay-As-You-Go

Operating Impact of Capital: None

### **Activity 417570: IT-Development Pool**

New Budget Request of \$20,000 thousand to provide technology solutions to enhance the delivery of all City services.

Funding from Capital Reserves

Operating Impact of Capital: None

### **Activity 418960: Fibre Optics**

New Budget Request of \$4,000 thousand for the continuation of the Council-approved Fibre Infrastructure Strategy.

Fibre infrastructure connects all City services, buildings, and assets.

Funding from Capital Reserves

Operating Impact of Capital: None

### **Activity 480300: Enterprise Info Management**

New Budget Request of \$1,120 thousand for investment to the enterprise records management tool and information management practices, supporting key FOIP and records management legislated requirements.

Funding from Pay-As-You-Go

Operating Impact of Capital: None