Subject: Information Technology Services 2022 Work Plan Update

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Report to Information Technology Sub-Committee on 31 May 2022

Submitted on May 19, 2022 by Sandro Carlucci, Chief Information Officer (A)

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Ward: Citywide

Objet : Mise à jour du plan de travail de 2022 des Services de technologie de l'information

Dossier : ACS2022-ICS-ITS-0002

Rapport au Sous-comité de la technologie de l'information

le 31 mai 2022

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REPORT RECOMMENDATION(S)

That the Information Technology Sub-Committee receive this report for information.

RECOMMANDATION(S) DU RAPPORT

Que le Sous-comité de la technologie de l'information prenne connaissance du présent rapport.

BACKGROUND

Information Technology Services (ITS) is a key partner to all service areas across the City of Ottawa; enabling technology solutions that support optimized, efficient, and innovative service delivery. Residents rely on digital, accessible, secure, convenient, and efficient ways to obtain City services, and employees trust ITS to provide, support, and maintain various tools and solutions to complete their work.

ITS has developed a multi-year roadmap that organizes work into four focus areas: Digital City, Advanced Innovation, Modern IT, and Secure City.

- Digital City – Using technologies, relationships and experience to advance the consistency, collaboration, security, and self-serve access for employees and residents.

- Advanced Innovation – Enabling the next wave of technology, talent, and tactics for all services and programs, using emerging technology and behaviour-driven designs.

- Modern IT – Replacing legacy systems with powerful platforms and continuing to modernize the IT skills portfolio and service delivery model.

- Secure City – Ensuring the protection of people, services and data against harm by way of theft, unauthorized use, disclosure, modification, damage and/or loss of the City's digital infrastructure.

Aligning with the City's Strategic priority to deliver Service Excellence through Innovation, and the Innovative Client Services department's Digital Excellence pillar, ITS continues to create a technology environment that is strong, interconnected, secure and modern. This innovative environment supports the transformation of the City's workforce from a dependency on physical tools and workplaces to an adaptable and collaborative digital workforce.

DISCUSSION

ITS is accountable for the operation and security of the City's computing and information environment. Through core operations, ITS is responsible for leading the way by ensuring the City's assets and information are reliable and secured.

The four key focus areas that structure the ITS multi-year work plan, ensure that strategic investments in technology adhere to software platform rationalization and yield long-term results. ITS' work plan goals ensure departments' priorities are achieved and

return on investment (ROI) is maximized via reliable and secure IT infrastructure and innovative technology solutions. Improvements to the ITS work plan allows for continuous review, refresh, and reprioritization of work items to ensure the plan meets the current needs of the corporation while maintaining an outlook on future work.

The ITS work plan aligns efforts to the priorities of the City's departments and services by providing modern and stable technology solutions that make it possible for City employees to deliver world-class services to our community.

The following sections outline the main objectives of the four ITS pillars and provide information on some of the key initiatives taking place within them.

Digital City

The Digital City pillar focuses on using technologies, relationships, and experience to advance the consistency, collaboration, security, and self-serve access for employees and residents. Despite the rapid adoption and volume of new technologies and digital solutions to support the corporation, the number of internal resources dedicated to ITS has not changed over recent years.

In February 2022, ITS received Council approval to transfer $1 million of professional services funding to the compensation budget to establish nine full-time equivalent (FTE) positions (ACS2022-ICS-ITS-0001). Those positions were created to contribute to initiatives in the following functions, many of which were focused under the Digital City pillar:

- Collaboration Technologies

- Digital Security Operations

- SAP Platform Modernization

- Client Relationship Management Solution Developers

- Mobile App Channel for City Services

- Geographic Information System (GIS) Development

- Accessibility Technical Assessments

Internal resources represent lower costs compared to the more expensive hourly rates for consultants. As a result of this cost difference, ITS expects to achieve delivery of the same services for less funding. The anticipated additional $880,000 in capacity will be allocated to other ITS initiatives.

Additionally, staffing internal positions focused on these modern digital solutions helps to recruit and retain employees with exceptional technical talents. As the City continues to replace legacy technologies with more modern platform solutions, ITS will have built the required capacity internally to design, build and support the range of new capabilities.

An example of where some of these new resources are being allocated is the replacement of the legacy Lagan application used mainly by the City's 3-1-1 service. This key project will produce a modern cloud-based platform that will continue to improve customer service and experience.

Streamlining of several processes and leveraging out-of-the-box capabilities of the improved digital customer service platform will realize immediate benefits for residents and the employees serving them through 3-1-1. The intent of the first phase is to build a foundation that will deliver core functionality, including reporting, business intelligence, and knowledge articles. This foundation will enable further functionality to be developed in future phases.

Additional projects, such as the introduction of an Election Candidate Portal to replace the current paper-based process, and the enhancement of the Online Parking Permits system, are made possible through the City's continued investment in its people and in leveraging enterprise platforms.

Advanced Innovation

The Advanced Innovation pillar focuses on enabling the next wave of technology, talent, and tactics for all services and programs using emerging technology and behaviour-driven designs. Technology continues to be a key enabler of our transformation as our organization looks to create efficiencies, build a thriving workforce, and digitally transform.

ITS has been working to build out a scalable, secure, and solid technology foundation to support the organization's digital transformation. Recent years have been spent improving the foundation to enable adoption of emerging technologies and evidence-based decision making and insights.

Currently, ITS is further developing its digital platform by focusing on an 'Internet of Things' (IoT) and Sensory Strategy and creating the City's IoT platform. The ability to leverage sensory data, which is data obtained from sensor instruments or scanners, will enable the City to identify new opportunities and to make informed and data-driven decisions. Building on the data platform and assets, ITS is developing an internal

skillset and capability to support mixed/augmented reality use cases within the City of Ottawa.

Over the last four years, the focus has been to establish readiness of a digital platform and technology ecosystem. ITS is achieving this goal by enabling innovation within the City at the cross-section of IoT, analytics, and automation technologies. These technologies are already being adopted and adapted to deliver against the organizational strategy and departmental key initiatives. In 2022 and 2023, the focus is on maturing the existing capabilities that have been established and having the holistic platform and tools in place to enable organizational transformation.

Examples where these platforms and technologies can be leveraged include:

- Visualizing sensory data over top of the City's digital twin, a virtual model of the city of Ottawa;

- Enabling further insights through sensory technologies and data collected with those sensors;

- Services offered for automation of business processes and analytical insights/ visualization across the City;

- Availability of automation and analytics tools for employee self-service;

- Creating capacity through process automation that will further improve client and employee experience; and

- Integrating technologies across the organization to enable further innovation and support our vision of an integrated digital platform.

Modern IT

The focus of the Modern IT pillar is around replacing legacy systems with powerful platforms and continuing to modernize the IT skills portfolio and service delivery model. It also seeks to ensure that ITS services are streamlined, agile, secure, and efficient by applying automation tools to IT processes and procedures. This will create capacity and enable rapid development of business solutions.

The Chief Information Officer is accountable for oversight into the technology activities at the City. Based on past governance reviews, ITS has principal responsibility enterprise-wide for the deployment and maintenance of the IT resources used to deliver City services to the people, businesses, and visitors of Ottawa.

The City must adapt and adjust to consider better IT centralization throughout the organization to ensure the security of our systems and data. This has become even

more critical with the ongoing rapid adoption of digital solutions across all services and programs. As such, ITS will be implementing a multi-year Enterprise IT Program which will more formally centralize IT functions under the purview of the Chief Information Officer and IT Services to provide more comprehensive security, incorporate efficiencies, streamline costs, and provide a consistent and integrated client experience.

Enterprise IT relies on a modern partnership between ITS and other Service Areas involving regular collaboration, communication, and consultation with departments. This coordinated approach ensures compliance with ITS policies and standards, and enables enhanced purchasing power, risk mitigation, increased returns on investment, and a reduced technical footprint. Examples of the work being conducted under this program include:

- Developing an enterprise-wide capabilities catalogue and software rationalization roadmap;

- Formalizing technology partners' functions and reporting requirements;

- Reviewing purchasing processes and authorities for hardware and software;

- Refreshing the IT Service Management framework and processes city-wide;

- Establishing and implementing a Total Cost of Ownership model to better inform technology decisions; and

- Maturing enterprise and integration design and architecture standards.

Secure City

The Secure City pillar ensures the protection of people, services, and data against harm by way of theft, unauthorized use, disclosure, modification, damage and/or loss of the City's digital infrastructure. The City's digital infrastructure, data, information and information systems are critical assets requiring a mature security posture.

In a time where cybersecurity threats are at an all-time high, the work within this pillar has become increasingly important.

Recently, ITS has been continuing to enhance its security framework through the establishment of the Identity and Access Management Program (IAM).

Identity and Access Management refers to a set of policies, processes and supporting technologies that enable internal and external digital identities. The IAM program function is to help mitigate risk associated with identities and to unify discrete identity-based solutions with enterprise governance, process, and technical initiatives to

secure identities and to manage access and privileges for on-premise and cloud systems.

In 2022, the program is focused on establishing governance, refreshing policies and technology standards, enforcing authentication and authorization, and deploying key technologies such as Privileged Account Management (PAM), Secrets Management and Multi-Factor Authentication (MFA).

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

LEGAL IMPLICATIONS

There are no legal impediments to receiving the information in this report.

COMMENTS BY THE WARD COUNCILLOR(S)

As a City-wide report, this section is not applicable.

ADVISORY COMMITTEE(S) COMMENTS

This section is not applicable.

CONSULTATION

This section is not applicable as it is an information report.

ACCESSIBILITY IMPACTS

ITS supports and considers the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA) in its operations, projects and initiatives. All ITS projects and initiatives include an assessment of accessibility requirements. Accessible criteria, features and functionality are included in all public-facing technologies to ensure compliance with Web Content Accessibility Guidelines (WCAG) 2.0 and AODA requirements.

RISK MANAGEMENT IMPLICATIONS

The ITS workplan in 2022 will continue to strengthen the City's key systems, practices, procedures and governance to identify and mitigate risks. As a subset of enterprise risk management, the implementation and maintenance of the City's IT Security and Digital Risk program will significantly reduce the overall enterprise risk posture.

RURAL IMPLICATIONS

There are no rural implications as a result of this report.

TERM OF COUNCIL PRIORITIES

ITS continues to align its work with the Strategic Priority to deliver Service Excellence through Innovation, leading and supporting initiatives and projects to enhance and revolutionize our information technology and digital capabilities across the Corporation.

DISPOSITION

As required, ITS will follow-up on direction received as part of consideration of this information report.