

SUBJECT: Information Technology Services Digital Resource Alignment

File Number ACS2022-ICS-ITS-0001

Report to Finance and Economic Development Committee on 1 February 2022

and Council 9 February 2022

Submitted on January 21, 2022 by Sandro Carlucci, Chief Information Officer

**Contact Person: Jason Barney, Manager, Applications Management, Information
Technology Services, Innovative Client Services, 613-580-2424 x16492,
jason.barney@ottawa.ca**

Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE

**OBJET : Affectation des ressources des Services de technologie de
l'information**

Dossier : ACS2022-ICS-ITS-0001

Rapport au Comité des finances et du développement économique

le 1 février 2022

et au Conseil le 9 février 2022

Soumis le 21 janvier par

Sandro Carlucci, Chef des technologies de l'information

**Personne ressource : Jason Barney, gestionnaire, Direction de la gestion des
applications, Services de technologie de l'information, Services novateurs pour la
clientèle, 613-580-2424 poste 16492, Jason.Barney@ottawa.ca**

Quartier : CITY WIDE / À L'ÉCHELLE DE LA VILLE

REPORT RECOMMENDATION(S)

**That the Finance and Economic Development Committee recommend that
Council approve the transfer for \$1 million of professional services funding within
the Information Technology Services budget to the compensation budget and
establish nine (9) full-time equivalents as outlined in the report.**

RECOMMANDATION(S) DU RAPPORT

Que le Comité des finances et du développement économique recommande au Conseil d'approuver le transfert d'un financement pour services professionnels d'un million de dollars du budget des Services de technologie de l'information au budget de rémunération et d'établir neuf (9) équivalents temps plein comme il est indiqué dans le rapport.

EXECUTIVE SUMMARY

Information Technology Services (ITS) is a key corporate services provider and partner across all City services, enabling technology solutions that support optimized, efficient, and innovative service delivery.

The Service Excellence Through Innovation Priority in the 2019-2022 Term of Council Priorities/City Strategic Plan identifies enhancing information technology and digital capabilities to better support delivery of services to our 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.

Due to the volume of critical solutions needed to support the City's response to the COVID-19 global pandemic, ITS had to augment the internal complement of staff with external professional services in order to deploy multiple solutions within a short period of time.

Many of these solutions required purchasing new software and/or developing new functionality within existing application platforms to meet unprecedented deadlines and business requirements. As a result, a significant amount of the knowledge and development experience is currently with external resources that are generally more expensive, under time-bound contracts and increasingly difficult to find for some functions. This could eventually pose challenges for the ongoing sustainability of critical assets and digital security.

This report recommends that \$1 million in funds budgeted for professional services be converted to compensation dollars, and that nine (9) full-time equivalents be established to ensure the required knowledge and skill sets are focused in-house.

In addition to the benefits of building these skills internally for ongoing maintenance and future development of new solutions, internal resources represent lower costs compared to the more expensive hourly rates for consultants. The estimated cost of getting external professional services to accomplish the work proposed to be brought in house is \$1.88 million. As a result of this cost difference, ITS would achieve delivery of the same services for less funding. The anticipated additional \$880,000 in capacity would be allocated to other ITS initiatives, allowing the service area to accelerate its workplan.

In accordance with the Delegation of Authority By-law, Council approval is required for adjustments to the continuous full-time equivalents and associated base compensation budget.

Subject to the approval of these recommendations by the Finance and Economic Development Committee and Council, staff will update the Information Technology Sub-Committee (ITSC) on any impacts to the annual ITS workplan, specifically in the focus areas of Modern IT and a Digital City. This update will include how these resources will contribute to, and enable, the work that continues to report under the purview of ITSC.

SOMMAIRE

Les Services de technologie de l'information (STI) sont un fournisseur et un partenaire clé de toutes les directions générales de la Ville, mettant en œuvre des solutions technologiques qui soutiennent une prestation de services optimisée, efficace et innovante.

La priorité Excellence du service par l'innovation, qui fait partie des priorités du mandat du Conseil du Plan stratégique de la Ville 2019-2022, préconise l'amélioration de nos capacités numériques et en matière de technologies de l'information afin d'être mieux à même d'offrir des services à notre population. Malgré l'adoption rapide et le volume des nouvelles technologies et solutions numériques à l'appui de la municipalité, le nombre de ressources internes consacrées aux STI n'a pas changé au cours des dernières années.

En raison du volume de solutions essentielles nécessaires pour soutenir la réponse de la Ville à la pandémie mondiale de COVID-19, les STI ont dû ajouter à leurs effectifs internes des ressources professionnelles externes afin de déployer plusieurs solutions dans un court laps de temps.

Bon nombre de ces solutions nécessitaient l'achat de nouveaux logiciels ou l'élaboration de nouvelles fonctionnalités sur les plateformes d'applications existantes afin de respecter des délais et de répondre à des exigences commerciales sans précédent. Par conséquent, ce sont des ressources externes qui possèdent actuellement une part importante des connaissances et de l'expérience en matière de développement et elles sont généralement plus coûteuses, soumises à des contrats de durée limitée et de plus en plus difficiles à trouver pour certaines fonctions. Cela pourrait tôt ou tard poser des problèmes pour la durabilité continue des actifs critiques et la sécurité numérique.

Le présent rapport recommande qu'un million de dollars des fonds prévus au budget pour les services professionnels soient convertis en dollars de rémunération et que neuf (9) équivalents temps plein soient établis afin de s'assurer que les connaissances et les compétences requises sont concentrées à l'interne.

En plus des avantages que procure le développement des compétences en interne pour l'entretien continu et l'élaboration future de nouvelles solutions, les ressources internes coûtent moins cher par rapport aux tarifs horaires plus élevés des consultants. Le coût estimatif pour l'obtention de services professionnels externes pour accomplir le travail proposé à l'interne est de 1,88 million de dollars. Les STI pourraient donc fournir les mêmes services pour un financement moindre. Le montant supplémentaire prévu de 880 000 \$ serait affecté à d'autres initiatives des STI, ce qui permettrait au secteur d'activité d'accélérer la mise en œuvre de son plan de travail.

Conformément au Règlement municipal sur la délégation de pouvoirs, l'approbation du Conseil est requise pour apporter des modifications aux équivalents temps plein continu et au budget de base de rémunération connexe.

Si ces recommandations sont approuvées par le Comité des finances et du développement économique et le Conseil municipal, les membres du personnel informeront le Sous-Comité de la technologie de l'information (SCTI) des éventuelles répercussions sur le plan de travail annuel des Services de technologie de l'information (STI), tout particulièrement sur les principaux volets « Systèmes de TI modernes » et « Ville numérique ». Ils préciseront la manière dont ces ressources contribueront au travail, tout en le rendant possible, et en feront rapport sous la direction du SCTI.

BACKGROUND

Information Technology Services (ITS) is a key partner to all service areas across the City; enabling technology solutions that support optimized, efficient, and innovative service delivery. The global COVID-19 pandemic necessitated substantive adjustments across the corporation as lines of business re-calibrated to deliver services safely and reliably. This resulted in an exponential increase in demand for digital solutions and the introduction of new digital channels and capabilities across all departments.

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

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

This report addresses the Digital City and Modern IT focus areas as they relate to the ongoing investment into digital technologies and the resources required to design, build, and support them.

DISCUSSION

The City of Ottawa is considered to be a digital leader among our municipal peers and within the public sector space. Information Technology Services (ITS), working in collaboration with all departments, including Ottawa Public Health and the Ottawa Public Library, has been delivering innovative and complex digital solutions for many years. Within the Innovative Client Services department, ITS has outlined the need to continue investing in digital city services and resident experiences. The Service Excellence Through Innovation Priority in the 2019-2022 Term of Council Priorities/City Strategic Plan identifies an action to “enhance our information technology and digital capabilities to better support our ability to deliver services to our residents.” As well, the COVID-19 global pandemic has created significant demand for more digital services and channels, including a permanent requirement for digital workspaces and collaboration tools to support employees who will continue to work remotely. The culmination of these corporate priorities for more digital solutions and capabilities has meant investing in new technologies which requires support through specific knowledge and skill sets.

Digital skills & resource requirements

Investing in modern technologies to support the digital space means equally investing in our employees to be able to build and support these technologies. Due to the volume of critical solutions needed to support the City’s response to the global pandemic, ITS has had to augment the internal complement of staff with external professional services in order to deploy multiple solutions within a short period of time. Many of these solutions required purchasing new software and/or developing new functionality within existing application platforms (such as SAP or Microsoft Dynamics 365) to meet these unprecedented deadlines and business requirements. As a result, a significant amount of the knowledge and development experience for the technologies the City of Ottawa now owns and supports is with external resources that are generally more expensive and under time-bound contracts.

In direct contrast to the rapid adoption and volume of new technologies and digital solutions seen over the previous years, the internal resources (compensation dollars and permanent Full Time Equivalent (FTE) employees) dedicated to ITS has not

changed while the number of applications, critical systems, data/technical security parameters, and connected devices have grown exponentially.

This scenario has created the following technical and organizational risks:

- As demand for digital solutions continues to increase, the competition and costs for certain external skill sets is also increasing
- Reliance upon external consultants exposes the City to the risk of uncertain availability of consultants
- Investing in external resources to design and build core service delivery solutions creates a knowledge gap for being able to efficiently support the solution and/or further develop it
- The number and duration of projects and need to retain external resources for a period of time can expose the City to certain liabilities and additional employment law considerations

This report recommends that the funds that would normally be spent on professional services be converted to compensation dollars, and that nine (9) full-time equivalents be established to ensure the required knowledge and skill sets are focused in-house. In accordance with the Delegation of Authority By-law, Council approval is required for adjustments to the continuous full-time equivalents and associated base compensation budget.

This approach is beneficial for several reasons, including:

- Internal resources represent lower costs compared to the more expensive hourly rates for consultants
- Internal resources enable capacity development and cross-training opportunities. Staff that take over from consultants can cross-train other internal resources to create skills depth, which is not possible when consultants are performing the work
- Staffing internal permanent positions focused on these modern digital solutions helps to draw 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
- Building the complement of permanent internal resources supports the cultural change occurring within ITS, where we invest in our own staff, and support employee engagement as well as our commitment to excellence in service delivery

IT Services has identified the areas of highest demand specifically in the online services, digital collaboration and meetings, and technology security spaces where

external resources have been consistently required to carry out critical development and ongoing support. These offer the greatest opportunities to build permanent internal resources using existing funding. Table 1 below outlines the functions that could be brought in house, the estimated cost for the work if it were done by external professional resources, and the recommended number of FTEs needed to bring the work in house, at an average cost of \$112,000 per position (inclusive of benefits). Should this recommendation be approved, the transfer of the \$1 million which would have been spent in funding professional services, would also yield \$880,000 in avoided professional services costs capacity which will be allocated to other IT initiatives.

Table 1: Recommended Conversion of Professional Services Dollars to Compensation

Functions	Details	FTEs
Collaboration Technologies	<p>The City has shown an increased need for audio visual solutions, media streaming and production support services. This trend has greatly accelerated during the pandemic with significant increases in technology support requests for digital events such as:</p> <ul style="list-style-type: none"> • Mayor and City Manager Town Halls • Council and Committee meetings • Departmental All Staff meetings • Public engagements <p>The demand for audio visual support services is expected to increase as the organization continues to adopt digital meetings, events, and remote working. This resource is required to provide on-site support on an ongoing basis for collaboration technologies, including supporting Council and Committee digital hybrid meetings as needed.</p> <p>Currently costs are approximately \$300,000 in professional services to conduct this work.</p>	1
Digital Security Operations	<p>The City's digital infrastructure, data and information systems are critical assets requiring a mature security posture. An effective security program is a continuously moving target due to an ever-changing threat landscape and the growing reliance on digital services and new technologies. Hiring skilled consultants is becoming increasingly difficult and expensive and does not address the sustainability or succession planning aspects of growing a solid internal Technology Security team.</p>	2

	The equivalent external resources would cost approximately \$340,000 in professional services to conduct this work.	
SAP Platform Modernization	<p>With the delivery of cloud solutions for Procurement, Human Resources Management, workforce scheduling, as well as the need for Cash Management and Treasury Risk Management capabilities, there is an increased resource demand to implement and support these net new solutions.</p> <p>The volume of work happening within the SAP platform has created a dependency on external resources to meet demands. Shifting these resources internally would ensure that the proper knowledge and skill sets are available to support these critical applications for the long-term.</p> <p>Currently costs approximately \$290,000 in professional services to conduct this work.</p>	1
Client Relationship Management Solution Developers	<p>The Client Relationship Management platform, Dynamics 365, is the hub for delivering the majority of the City's digital services online. This platform supports many capabilities and is also expected to replace numerous legacy applications in the coming years. This consultant skillset is in high demand in the industry and is generally costly. It has become critical to be able to strengthen internal expertise on this platform to support ongoing development requirements and solution maintenance.</p> <p>Currently costs approximately \$400,000 in professional services to conduct this work.</p>	2
Mobile App Channel for City Services	<p>The City's mobile app was created using a team of external resources. There is currently no IT employee with dedicated mobile app skills or knowledge to continue developing and supporting this important channel for service delivery. With the demand for mobile services continuing to increase, it is essential that ITS bring the skills and knowledge for this channel in-house.</p> <p>Currently costs approximately \$200,000 in professional services to conduct this work.</p>	1
Geographic Information System (GIS) Development	Location-based capabilities are an essential component to many solutions delivered by a municipality. There are multiple enterprise-wide projects currently underway which require GIS integrations and development, such as the Land	1

	<p>Management Solution (replacing the legacy MAP system), the Elections Management System, and the Lagan/311 solution replacement. This work is currently being completed by consultants, which creates risk as the knowledge is not retained and the work will be unsupportable unless transferred to internal staff.</p> <p>Currently costs approximately \$150,000 in professional services to conduct this work.</p>	
Accessibility Technical Assessments	<p>The City is mandated to ensure public facing digital solutions meet the legislation set out in the Accessibility for Ontarians with Disabilities Act (AODA). These requirements will soon be mandated for all internal applications as well, increasing the requirements for this area of expertise exponentially. AODA assessments are required for all projects which has created a backlog due to a lack of skilled internal resources.</p> <p>Currently costs approximately \$200,000 in professional services to conduct this work.</p>	1

FINANCIAL IMPLICATIONS

There are no financial implications contained in this report. In accordance with the Delegation of Authority By-law, Council approval is required to adjust the continuous full-time equivalents and associated base compensation budget.

The increase in the compensation budget is offset with the equivalent decrease in professional services budget, resulting in no financial implications.

LEGAL IMPLICATIONS

There are no legal impediments to approving the recommendations in this report.

COMMENTS BY THE WARD COUNCILLOR(S)

Not applicable as this is a City-wide report.

ADVISORY COMMITTEE(S) COMMENTS

No consultations were conducted for this report.

CONSULTATION

No consultations were conducted for this report.

ACCESSIBILITY IMPACTS

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

RISK MANAGEMENT IMPLICATIONS

There are risk implications. These risks have been identified and explained in the report and are being managed by the appropriate staff.

RURAL IMPLICATIONS

There are no rural implications related to the report recommendations.

TERM OF COUNCIL PRIORITIES

The resources identified in this report directly support the Service Excellence Through Innovation action to “enhance our information technology and digital capabilities to better support our ability to delivers services to our residents.”

DISPOSITION

The Finance Department will process the required budget adjustments and create the FTEs. IT Services will work with Human Resources to create and staff the approved positions.