City of Ottawa

Business Technology Plan

2014

November 2013
Information Technology Services
ACS2013-COS-ITS-0003

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Message from the CIO

This past year has been one of significant change and improvement for the City of Ottawa with regards to the use of information and communication technology. A new technology work planning structure, bringing together all aspects of the City administration, has been put in place. With this new structure, we have improved the way we prioritize and coordinate efforts across the various departments in the City. Such a structure puts us at the forefront of what the industry refers to as "technology governance" and ensures that our focus on technology is tightly aligned with the priorities of City Council.

The City of Ottawa – Business Technology Plan (the "Plan") is the result of the new planning and prioritizing process and will be delivered by a reorganized and refocused Information Technology Services (ITS) department. Our responsibility is that of an IT service function, working to ensure that other areas of the City are better able to deliver City services to the people, businesses and visitors of Ottawa through the application of business technology enabled solutions.

This Plan recognizes, and seeks to balance, the competing pressures that exist for any technology organization, the need to keep existing systems running and supported while developing new solutions which take advantage of the latest technology.

Accordingly, 30% of our effort is focused on advancing the capabilities of the City with new systems and technology. A very high proportion of that investment is focused on transformational initiatives which will both improve service and reduce the cost of delivering those services. This includes empowering field workers with technologies that allow them to stay in the field, round trip information tying service requests to work orders and back, and continued focus on the objectives of the ServiceOttawa Program.

The remaining 70% of our efforts and spending is focused on maintaining and updating the existing infrastructure and solutions. While this is at the high end of industry standards, it is reflective of the nature of a municipality with such a varied and complex line of businesses, akin to the most complex private sector conglomerate. This Plan brings forward those elements of the previous plans which have been updated to reflect both a year of effort and innovation.

Sponsored by the IT Sub-Committee of the Finance and Economic Development Committee, the Business Technology Plan is a living document that is refreshed annually to remain relevant in response to economic, social and technological influences.

Gini Bethell
Director, IT Services & Chief Information Officer
November 2013

Executive Summary

The Business Technology Plan is an evolution of the existing Technology Roadmap document which has been presented as part of the budget process in preceding years. Building on the improved IT corporate work planning process, the Plan incorporates the business initiatives enabled by technology for all City departments with the ongoing technology infrastructure renewal and maintenance operations vital to maintain City services. The Plan is in direct support of Council's City Strategic Plan, with the focus remaining on moving services to the Internet to provide citizen centric access to municipal information and services. At the same time, a key driver is implementing technology which allows the City to support the growth of services by exploiting information and communications technology without incurring additional costs.

The Business Technology Plan considers the business needs of all City departments as well as support for departments such as Transit Services, Ottawa Public Health and the Ottawa Public Library which report through Boards or Commissions to Ottawa City Council.

The Business Technology Plan is divided into four (4) sections which correspond with the business priority areas for the Information Technology Services department:

- ServiceOttawa Program;
- New Transformational Projects;
- Ongoing Business Initiatives; and
- Operational Support.

The primary focus for the Information Technology Services department is to continue to support ServiceOttawa initiatives to help them achieve their target annual savings when fully deployed and enable the City to fund growth and services through the resulting efficiencies. The ServiceOttawa Program has the potential to touch upon all aspects of the technology and application infrastructure. Included in this are renewal of our Geographic Information Systems (GIS), Voice Over IP (VOIP) telephony, deployment of mobile devices to field workers and integration of applications to allow the safe and timely transmission of information from one application to another. These efforts support ServiceOttawa's mandate of improving residents' and business' experiences with City services through the use of technology and transformed business processes.

New transformational projects are beginning in 2014. These are intended to support departmental initiatives where technology can be used to fundamentally change the processes

by which work is done to improve service and/or reduce costs. Such improvements are underway for business processes within the Community and Social Services (CSS) and Human Resources departments, as well as with project management and library technology advances. Integration with provincial systems requires new efforts for Ottawa Public Health and the CSS department. Advances at Transit Services also require new initiatives to build on recent changes, such as Presto, and to prepare for light rail in the future.

Investments in technology that are expected to produce significant financial and operational benefits for a corporation most often require several years to deliver from inception to completion. As such, there are a number of business initiatives in 2014 that will continue, or build on, efforts started in previous years. These projects include improvements to enterprise asset management, financial systems and support for business process improvements. Below are highlights of some of the business initiatives that were recently completed.

- The **Geographic Information System (GIS) Renewal** project was completed in the first quarter of 2013. The project was intended to replace the City's 'end of life' GIS technologies with a vendor supported enterprise GIS technology infrastructure that would allow multiple channels of GIS consumption such as: web mapping for ottawa.ca, desktop GIS analysis, mobile GIS and GIS integration with applications such as CSM and EAM, all through a single technology architecture and with a common GIS data source.

- The first release of the **Social Eligibility Reporting Vendor Information System (SERVIS)** was rolled out to staff in June 2012. The new application is used by the Community and Social Services (CSS) department to support the delivery and management of employment, financial and social support to low-income individuals and families.

- The **Payment in Lieu of Taxes (PILT)** system was deployed in the spring of 2013. The new PILT system replaced the previous system and is used to calculate, invoice, record and reconcile payments, produce reporting as well as perform budget modelling and forecasting.

- Upgraded the **Intranet (Ozone) Content Management Platform** to a new supported version. The new platform ensures that it will be supported by the vendor and provides a number of new features, including an improved search engine.

- The **Treasury Manager Replacement** project was implemented in January of 2013. This is a critical application used by the Treasury Services Division of Finance for

managing the City's money market, reserve fund and sinking fund investment portfolios, valued at approximately $1.4 billion.

- Replacement of the **Point of Sale Cash Register System** project was completed in February of 2013. This project replaced an obsolete fleet of Datasym cash registers with an updated Point of Sale (POS) Cash Register system. The project provided a City wide integrated cash register system to consolidate payments and automate manual processes.

- Updates to the **Overpayment Recovery and Arrears (ORA)** system were completed and deployed in February 2013. The ORA system supports and is used by city staff daily to track, monitor and assist in the collection of Ontario Work and Social Housing recoveries.

Operational Support is a core responsibility of ITS, and it is expected that 70% of the effort is devoted to supporting and maintaining the technological backbone for City services. These initiatives are imperative in order to ensure that the City can continue to offer the existing services that support the business processes in place today.

The intake, evaluation and prioritization for the 2014 Business Technology Plan is overseen by the IT steering committee comprised of senior managers, with contributions from all City departments. The Plan corresponds directly to the City Strategic Plan and works within Council-approved directions and assigned resources pursuant to annual budget allocations.

Beyond the efforts for 2014, there are many opportunities which have been identified to further advance the City's services to citizens and/or transform business processes that cannot be accommodated in the coming year. Efforts will continue this year to identify options for the next Term of Council to consider these opportunities in 2015 and beyond.

Introduction – Business Technology Plan

The Business Technology Plan is a planning tool to describe and communicate the direction for Information Technology (IT) at the City of Ottawa, including the key initiatives and building blocks that are needed to align IT programs and investments with the City's Strategic Plan.

The Plan helps achieve the City's objectives through leveraging information technology capabilities to meet the needs of residents, businesses and visitors by:

- Keeping the technology base current, creating more opportunities for the City to capitalize on advances in technologies and new business models;
- Implementing technology solutions that support the ServiceOttawa Program and other transformational initiatives to improve the overall client experience and achieve efficiencies through transforming the way City services are delivered; and
- Maintain, upgrade/replace critical business applications to improve operational performance, reduce the complexity of the IT environment, and support the day-to-day business of the City.

The Plan is divided into the following sections which correspond with the business priority areas for the Information Technology Services department:

- ServiceOttawa Program;
- New Transformational Projects;
- Ongoing Business Initiatives; and
- Operational Support.

Where an initiative is aligned to a strategic objective within the City Strategic Plan, the strategic objective reference number is shown in the title of the initiative. For example, "SE1" relates to the first Service Excellence (SE) strategic objective to ensure a positive experience for every client interaction. The strategic objective reference numbers can be found in Appendix 1 – City Strategic Map.

The Plan is a living document developed in partnership with all City departments which will continue to evolve and respond to the changing needs of the City of Ottawa. Progress against the Plan is reviewed and a new plan produced annually to reflect changing business priorities, emerging technologies and fiscal constraints. Affordability and sustainability will always be reflected in the Plan's priorities.

1.0 ServiceOttawa Program

The ServiceOttawa initiative was approved by City Council in 2009 to improve the way the City delivers services and information to residents, businesses and visitors.

ServiceOttawa focuses on improving services by making them citizen-centric, user-friendly, streamlined and cost-effective; making more services available online and personalized through self-serve functions; ensuring that City information is consistent, accurate, timely and accessible; and shortening the time required for City staff to respond to, and complete, service requests.

Information Technology Services plays a significant role in supporting the efforts of the ServiceOttawa Program to advance service delivery by exploiting Internet and the latest communications technology to help them achieve their target annual savings when fully deployed and enable the City to fund growth and services through the resulting efficiencies. Examples of technology successes in 2013 include:

- The **Client Service Management (CSM)** team streamlined the support processes, enhanced the solution and implemented business intelligence reporting capabilities to better support the client needs.

- The **Public Works Services Traffic Systems and Mobility Plant Maintenance** solution went live in March of 2013 and to date over 18,600 work orders have been created of which over 3,600 work orders were generated through the integration with the CSM system. The solution re-engineered and automated work management processes, including how work is scheduled, assigned, executed and recorded through the use of mobile devices in the field.

- The **Human Resources Employee On-Boarding** solution went live in March of 2013 and to date the solution has processed 1,180 new hire movements along with 669 rehires and 627 employee transfers. The solution enhanced the e-recruiting functionality of hiring and on-boarding employees.

- The **geoOttawa Online Mapping Services** was released on ottawa.ca for public use in April of 2013. This application has consistently seen approximately 9,000 visits each week with an average of 6,000 location searches a day. This solution replaced the City's eMap web mapping application and has provided the foundation for a number of other location-based applications to leverage the technology in the future.

The ServiceOttawa Program enters its final year in 2014 and requires continued technical support from ITS staff. The ServiceOttawa initiatives planned for 2014 are described in more detail in the ServiceOttawa Roadmap (ACS2013-COS-SOD-0006).

2.0 New Transformational Projects

A transformational project is by definition one that fundamentally changes the processes by which work is done to improve service and/or reduce costs. All departments participated in a new intake process, and had input into the prioritization of work for 2014. Below is a listing of the prioritized projects by department. Each one has been aligned to at least one of the objectives identified in the City Strategic Plan.

2.1 Community and Social Services

Data Integration (SE2) - The CSS Data Integration project consists of a survey of the systems in all CSSD business lines in order to document what data exists in these systems, and what can actually be linked based on identity and any other factors. The project will report the results of the survey, identify the risks associated with systems designed/developed/maintained by external organizations, and determine what information could be extracted and brought together to provide a single source of searchable information for their clients.

Childcare Waitlist (SE1, FR1, SE2) - Develop a centralized wait list solution to replace the existing 'Centralized Waitlist'. This solution will allow parents to provide their information *once* in order to see if they qualify for a subsidy, and staff would be able to provide a 'matching' of parents to their preferred choices. Once a child is placed, the Waitlist solution will download their data into the Ontario Child Care Management System (OCCMS). This is expected to result in significant savings in our contract for the existing centralized wait list and child care information line.

Public Engagement Strategy (GP1, SE1) – The goal is greater public satisfaction with how the City engages residents. Consistency across the corporation is needed on using tools that

meet the principles of engagement set out in the Public Engagement Policy. This includes the suite of tools available for staff use depending on the engagement activity, shared tools and resources that are easy to use and tools which are compatible with software currently in use by the City.

Social Assistance Management System (SAMS) Data Conversion (Provincially mandated) - The City of Ottawa is partnering with the Ministry of Community and Social Services and the City of Toronto to do the groundwork necessary in order to be able to move to the new provincial SAMS. This partnership represents a new, improved relationship between the City of Ottawa and the Province; one that puts the City of Ottawa in a position to be able to identify critical download issues that may cause issues before the download happens. We are moving forward with this work in advance of the provincial implementation due to the complexity of the information and data structures in the existing systems.

Housing Collaborative (work with Province) (SE1, SE2, HC3, FS2) - In collaboration with seven (7) other municipalities in Ontario, procure a solution that will meet governance, administrative, financial and asset management needs of the housing service managers. The new system will have multi-channel secure web access for housing providers, Housing Branch staff, the province, and wait list applicants. Because eight municipalities are involved in this venture, it is a cost effective solution and has access to resources from the many partners involved by using a collaborative approach to meet the common needs of all the municipalities. Note: The City of Ottawa will not be the lead municipality, but will have CSS and ITS staff (Architecture) stay involved to be ready to deploy this solution during the next term of Council.

2.2 Environmental Services

Enterprise Asset Management (EAM) – The work on this project will carry through into 2014. Now that the infrastructure is in place, new work will begin in 2014 to add new assets into the maintenance solution.

EAM Field Mobilization - The implementation of Maximo for the Water and Waste Water divisions of Environmental Services provides an Enterprise Maintenance Management system capable of supporting a mobile field staff. This project's primary objective is to replace the

current paper-based work order system used by field staff with a mobile solution. This mobile solution will also capture staff time and leave information, material usage, and financial costs which will electronically feed SAP payroll, materials management and financials.

Bridges & Structures - The Structures project's primary objective is to replace Infrastructure Services department's Structure Information Management System (SIMS) by extending the current Enterprise Asset Management System (EAM) to address both Inspections and short/long term financial planning of the City's 6000 structures.

Ontario 1 Call (Provincially mandated) - As of June 19, 2014 the City must be able to provide ON1Call with information regarding the location of municipal underground infrastructure within five (5) business days of receiving a request, per the Ontario Underground Infrastructure Notification System Act, 2012. The solution will receive "calls for locates" from ON1Call that will link into EAM initiating a Service Request to perform the work. There will be a notification back to ON1Call once the "locate" work has been completed, and if any damages occurred to underground infrastructure due to excavation.

2.3 Human Resources

Performance Development Program (EE4) - The implementation of an online Performance Development Program (PDP) is an approved Council priority. The objective is to build an organizational capability and performance culture/mindset by implementing an automated PDP tool to administer and track results of the program and provide a more readily accessible record of employee performance. The tool will enable on-line development of annual Individual Contribution Agreements (ICAs) for all City staff, and allow the tracking of the completion of mid-year and final-year performance reviews. The tool will also enable the monitoring of performance development needs and gaps.

Online Training Registration (EE3) - Twelve (12) City departments have indicated a need to implement SAP's on-line training registration and tracking for training delivered by their departments – this is for both departmental-specific and corporate training.

Sick Leave Certification for ATU (EE3, EE4, OAG Recommendation) - Implementation of a new Sick Leave notification protocol that would involve employees providing managers with documentation. For example, a medical certificate excluding diagnosis information allowing managers to certify or deny sick leave, and have better opportunity to provide support to employees in managing absences. This process would greatly improve attendance management, with preventative and early intervention approaches to sick leave management including timely workplace accommodation and return to work plans.

360 Leadership Feedback/Review (EE1) - The 360 Leadership Feedback Survey is an important tool in supporting leadership development. The survey process will establish a quantitative baseline that will allow leaders to measure their progress and demonstrate the City's commitment to professional development of leaders

Qualitative Insight, Research & Consulting (QUIRC) (SE 1, SE 2, GP 2, EE 4) - Managers will be able to receive monthly information based on more up-to-date HR data, including information not currently available, such as trending and analyses of HR demographic, talent management, and employee wellness measures, etc. This information has the added benefit of depth – managers will be able to drill down into the tool to view the detail behind the displays and analyses, which is not available with current scorecards. HR also participates in numerous surveys, including the quarterly HRMS Survey, with whom QUIRC is developing a partnership to enable and simplify the response process. This tool will also provide a readily available view of three important data sets that help us understand how employee engagement and HR trends impact client satisfaction across all City departments. This fact, the speed and low expense is a significant enabling tool to our focus on the client experience.

2.4 Infrastructure Services

Project Management (TM11, ES19) - The Infrastructure Services department requires a harmonization of its project management tools. The implementation of a single reporting tool to support all of the Design and Construction branches will benefit branch reporting using a redesigned, relevant and holistic process.

2.5 Ottawa Public Health

Panorama (SE1, Board of Health A2, B5, B6, E2, F3, F4) – This is a web-based, ministry-funded and mandated public health information management system. PANORAMA is a multi-year, pan-Canadian 'Integrated Communicable Disease and Surveillance Management' solution that is being rolled out in phases to public health units across the country at the provincial level. In Ontario, Phase 1 roll-out includes the first two of six modules: The Immunization Management Module creates and manages immunization schedules and determines eligibility; also used to plan, deliver and track immunization sessions and related information. The Vaccine and Materials Inventory Management Module maintains appropriate levels of vaccine and other immunization-related medical supplies and materials; manages inventories, supports vaccine cold chain maintenance and the sharing/ transfer of vaccine in the case of an outbreak. The IRIS Data Conversion is required for conversion of existing data records to the new system.

2.6 Ottawa Public Library

Employee Mobility (SE1, SE2, OPL D3) - Appropriate tools and solutions are required to support the Library's goal of interacting with the customer as the point of service. This includes tablets/devices to support employees roaming throughout branches while maintaining access to critical Library software (e.g. Symphony Workflows client or planned mobile circulation / web client software, access to staff network for shared drives, Outlook, etc.). It also requires the ability to respond to phone calls while out on the floor in branches, including VoIP-based telephone headsets or other 2-way communication devices.

Creative Lab Spaces (SE1, OPL A3, B1, D3) - Public libraries around the world are changing dramatically. Part of the transformation involves use of space evolving from rows of books to spaces for creation and exploration (e.g. makerspaces). One of the traditional roles of the public library in society is facilitating the creation of knowledge in our communities. Promoting literacy through instruction has long been a part of the librarian's job. Today, the concept of literacy encompasses much more than just reading and writing; it has evolved into "transliteracy," commonly defined as the ability to read, write and interact across a range of platforms and tools. As new technologies emerge in our communities, library customers turn to libraries and librarians for instruction in the use of new technologies, for help and troubleshooting, and in some cases as their only means of access to those technologies. Most

public libraries now provide public access computers and instruction to support computer literacy.

The Ottawa Public Library will provide access to new technologies and instruction to support new literacies. This will involve purchasing and installing new types of software and equipment on the public network, including but not limited to 3D printers, Mac-based computers with video/music editing software, etc.

2.7 Parks, Recreation and Cultural Services

CLASS Payment Card Industry (PCI) Resolution (HC2, SE1, SE2) – Hosting online recreational program registration and all debit and credit card payments made through the CLASS system will significantly reduce the City's Payment Card Industry (PCI) compliance scope, with all payments directed outside the City's network. The City will be able to achieve PCI compliancy for CLASS by eliminating the requirements for processing and storage of credit card information from the City's network infrastructure. This will also reduce corporate risk and alleviate resource pressures to support and maintain these assets in the PCI secure environment.

2.8 Transit Services

SAP Integration for Transit projects (Operational) - Omnibus project to integrate multiple Transit applications with SAP using the SAP Process Integration (PI) platform for data exchange to and from the various platforms according to business requirements. Transit applications include TeleStaff, PRESTO, Trapeze Ops and AssetWorks M5. The interface with SAP Payroll will also be used as a blueprint to integrate future Transit scheduling applications with SAP Payroll.

Support for Trapeze (Operational) - Upgrade the Trapeze Suite of applications from v11 to v12/13 and deploy the Trapeze Account Based Faring (ABF) module. This will offer a PRESTO equivalent function to Para Transpo users, including an SAP interface to automate revenue recognition of the ABF module.

3.0 Ongoing Business Initiatives

There are a number of business initiatives that are currently underway which will require continued IT support and efforts in 2014. The details of these projects are as follows:

3.1 City Clerk and Solicitor

Elections - There are multiple initiatives underway in advance of the 2014 municipal elections. As identified in the City Strategic Plan, the City Clerk and Solicitor is in the process of securing the hardware (vote tabulators) and software necessary to deliver the 2014 municipal elections. Following an open and multi-step procurement process, the related vendor of record for the 2014 and 2018 regular elections has been selected and a contract is in place.

The internal Election Management System is also in the process of being replaced. This application is used to manage several aspects of the election, including the voters' list, candidates' information, election workers, inventories and voting locations. On October 9, 2013, Council amended the Contribution Rebate program and the technology that supports this program is currently being updated. The City's current internal print ordering system is also scheduled for updating in order to ensure accurate and timely printing of essential documents throughout the election process.

Operational support will be provided up to, and including, the three voting days. This will include an Elections Call Centre in the Colonel By Room, and the lease/rental of approximately 400 cell phones.

Records Management – RMS & BIMS – As a public organization, the City of Ottawa has a fundamental obligation to ensure the protection of information. We are legally obligated to create, identify and maintain records that document the City's business transactions and activities. The City also has a responsibility to preserve its documentary heritage for present and future generations, and further recognizes that information and archival holdings are valuable assets and essential factors in the achievement of City objectives.

Merging the electronic and physical records management systems will allow City staff to be more productive as they would manage their records, physical and electronic, in a single system. More critically, staff looking for information (e.g. MFIPPA requests, litigation requests,

etc.) would be able to search more effectively in a single system. Information management professionals and ITS technical staff would have only one system to support in cases where major organizational changes occur or when file plan changes need to be made.

3.2 Environmental Services

Enterprise Asset Management (EAM) - This is a multi-year, multi-phased project. The first phase of the project involved the replacement of the legacy ITX application used to plan and manage maintenance activities for water and sewer infrastructure. The EAM solution went live in March of 2013 and to date, over 150,000 work orders have been created using the system. The system provides a closed loop for over 6,000 client requests originating through the 3-1-1 system since March 2013.

Now that the infrastructure is in place, the aspect of the project continuing into 2014 will focus on adding new assets into the maintenance module and adding mobile solutions for supervisors and crews in the field.

3.3 Financial Services

Hosted Enterprise Payment Service Solution (HePPS) -The City pays annual merchant transaction fees and operating costs to maintain payment card industry (PCI) compliance in support of our payment card acceptance. By moving to a hosted solution, the City would no longer be responsible for the processing of payment cards nor would the merchant of record, which significantly reduces the City's cost to PCI compliance maintenance. This means the City can expand its acceptance of payment cards to all lines of business and channels.

Water Billing - The current water billing system (Aquacis) has been extended beyond its useful life. The system was built on the PowerBuilder 8 platform, which is close to 10 years old, and this technology is no longer supported by the vendor. A full replacement of the water billing system is required in order to obtain the next generation of utility billing that can provide increased functionality, and be supported by ITS and/or a commercial solution vendor. A procurement process is currently underway to find an appropriate solution.

3.4 Public Works

Public Works Maintenance Management System (MMS) - In conjunction with ServiceOttawa projects, including Mobile Workforce Solutions and Citizen Centric Services, MMS will introduce significant changes to core work functions in the Public Works department.

MMS captures and automates the entire work management process for Public Works, integrates with other systems and provides a unified and rich data source for operational and management reporting across the department. It forms the integrating role across other ServiceOttawa initiatives, such as the Mobile Workforce Solution.

MMS will be implemented in the following operational areas of the department: Forestry Services; Traffic Management; Traffic Operations; Parks, Buildings and Grounds; Roads Operations; and Parking Operations.

4.0 Operational Support

The ITS department manages a vast and complex technology infrastructure for both voice and data. This technology is the foundation for all the services that ITS provides to our clients. In 2012, the City had over 15,000 IT devices[1] spread over 2,760 square kilometres and 350 sites. ITS supports more than 7,952 desktop computers, 2,914 laptops, 319 tablets, 1,503 smartphones (Blackberries) in addition to 1,270 printers and the underlying business systems and technology infrastructure as shown in Figure 1 below.

[1] Number of IT devices is based on the 2012 OMBI report

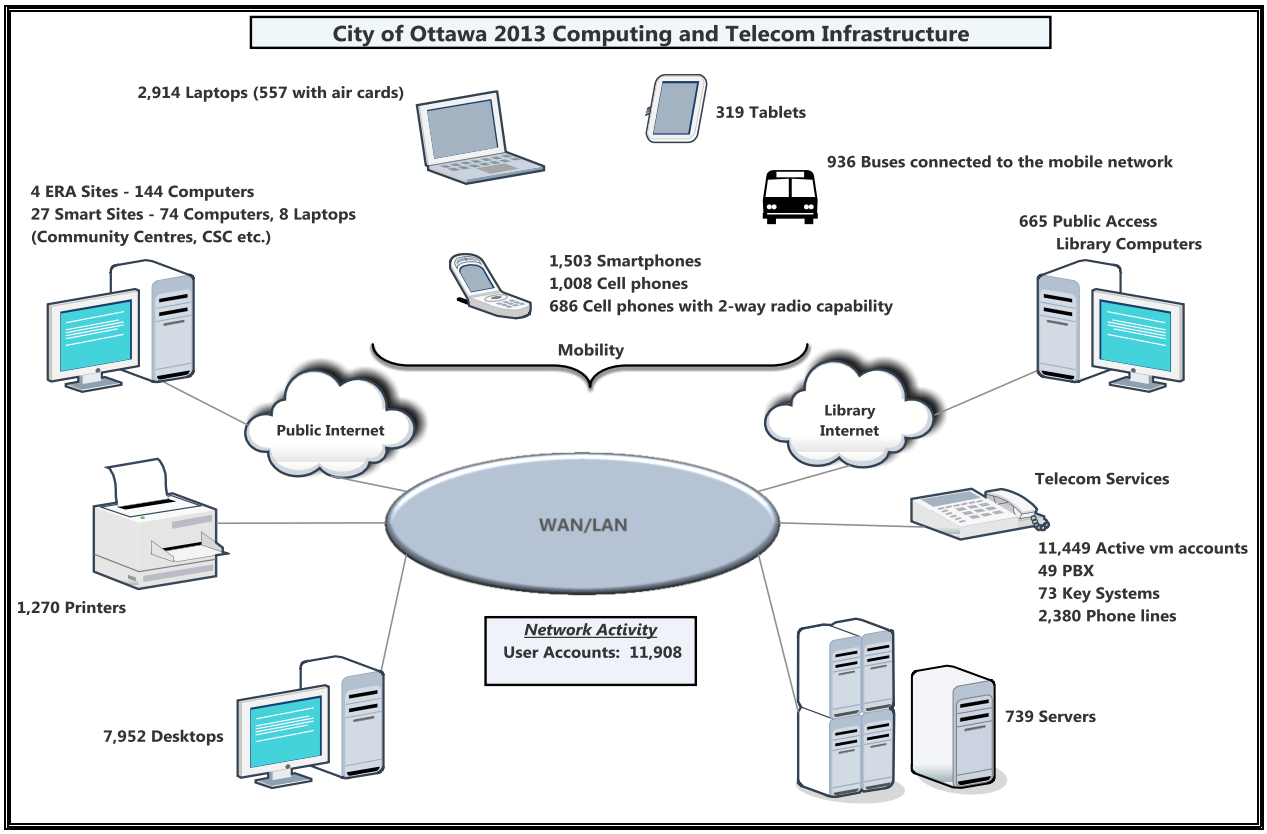


Figure 1 – City of Ottawa 2012 Client and Server Infrastructure

Due to its diverse business activities, the City uses a wide range of business applications. Large corporate-wide applications include SAP (Enterprise Resource Planning for Finance, Supply, Human Resources, Real Property and Asset Management/Field Operations), geographic information system (traditional GIS functionality and business functionality supporting the Call Centre, Bylaw Enforcement, Permit and Planning Application Tracking, Property Information, Infrastructure Permits, Business and Animal Licensing and Infrastructure), Records Management System, and the CLASS recreation program registration and facility booking application.

For new business systems or replacement of existing applications, the City's policy/practice is to, where possible, use and leverage what is already available to meet business needs. Where this is not feasible, ready-made COTS (Commercial Off-the-Shelf) software, ASP (third-party Application Service Providers), Managed Services, or open-source products may be acquired. Our goal is to allocate 70% of our efforts and spending to maintaining and updating the existing infrastructure and solutions. While this is at the high end of industry standards, it is reflective of the nature of a municipality with such a varied and complex line of businesses.

Within the ITS Department, the Operations Services and Solutions and Technology Infrastructure groups are responsible for keeping the business moving forward by supporting the operational requirements of all City departments. Operational work has been categorized into four (4) distinct sections:

Break / Fix - Applies to all breaks in technology that cause a business process to not function the same as it did the day before. Also applies to planned work that is expected to break something, such as the impact to applications following an organizational change.

Service Request - Includes those repetitive activities that are performed to ensure that business is, and continues to be, operational. Examples include a staff move; an IT Order; cell and smartphone orders; Service Desk assistance; IT security consulting; risk assessment, etc.

Natural Growth - Includes requests for 'more of the same'. For example: adding more users or locations to an existing system; new Collective Agreement updates; expanding CLASS to a new Parks, Recreation and Cultural facility, etc.

Computing Technologies Lifecycle - Applies to the work that ITS does to keep the business areas of the City running. This includes all networks; infrastructure hardware and software; phones; security; virtual desktop infrastructure (VDI); Windows 7 application mitigation; database management; patching; subject matter expert to project work; preventative maintenance cycles; GIS; SAP; web; technology infrastructure and desktop engineering; etc.

In addition to the operational work summarized above, these groups have a number of ongoing operational projects that are carrying over from 2013. Those projects will be completed by end of year 2013 so that the team can focus solely on its core accountability and creating capacity to take on the support of transformational projects that are currently underway.

The specific operational support initiatives are described in more detail in Sections 4.1 to 4.11.

4.1 Computing Technologies Lifecycle (SE1, SE2, GP1)

The computing technologies project plan includes telephone systems, desktop and laptop computers, servers (physical and virtual) and associated operating systems, centralized storage, data communications equipment and security components (e.g. firewalls) which support the business and enterprise applications of the City. Each technology area/vendor has

specific product end-of-life or end-of-support timeframes and policies that must be accommodated.

This project ensures that all computing equipment, such as desktop and laptop computers used by over 11,000 City of Ottawa staff are supported and meet the current business needs. Personal computers are used to access the secure internal City of Ottawa Network for day-to-day service delivery. Secure and stable computers are required for access to the electronic information (data) used to make sound business decisions. Lifecycle programs ensure there is continuous vendor support and that the City's information assets and resources are secure and protected from security risks.

4.2 Windows Server 2003 Replacement (SE2)

The City has 400 application servers which are currently using the Windows Server 2003 operating system. Microsoft will discontinue support for this platform effective July 2015. The City must continue to migrate all affected servers to a supported platform (currently using Windows Server 2008) prior to this date in order to mitigate risk from elevated security threats, lack of new functionality or other liabilities.

Migration to the newer server operating system, Windows Server 2008, will impact all of the solutions residing on those servers. As with other server platform upgrades, all applications and systems must be fully tested, assessed for business validity, and then solution paths put in place.

4.3 Windows 7 Migration (SE1, SE2)

The City's desktops and laptops are currently running the Windows XP operating system. The vendor, Microsoft, as of April 2014 will no longer provide support for this platform. The operating system is at end-of-life and as such, will no longer receive security patches or releases. This leaves the entire enterprise-wide technical infrastructure of the City at serious risk of damage from security breaches associated with out of date patches and possible accessibility from external sources. As well, other software vendors are releasing new versions of their products that do not work with Windows XP. Vendors and the City of Ottawa must stay current with the Microsoft Operating Systems announcements in order to remain viable.

As part of the Windows 7 migration, 153 City applications have been retired and staff have tested and modified over 269 City applications to ensure that they will work with the new operating system. Overall, 875 applications, including desktop software, have been certified.

An additional 60 applications still need to be tested. As of October 2013, the ITS department has migrated 4,251 devices, representing 39.1% of the corporate fleet of desktop computers and laptops. The remaining devices will be migrated between now and Q1 2014.

4.4 Standard Browser Upgrade to Internet Explorer 10 (SE2)

Web technology continues to rapidly evolve, requiring vendors of browsers to release newer versions more frequently to keep pace with the requirements of a connected world. The ITS department is migrating all City desktop computer and laptop browsers to Internet Explorer (IE) 10. This will allow newer, more modern applications to function properly, while providing compatibility modes for legacy browsers and applications. Internet Explorer 10 has advanced security features that will protect the City's network and infrastructure from damage caused by security threats. IE 10 will render websites better and faster than IE 8.

4.5 Mobile Device Management (SE1)

Tablets have rapidly become useful tools which can provide capabilities that neither traditional laptops nor smartphones can fulfill. Tablet orders have outpaced desktop and laptop orders. Currently ITS does not have a tool to secure, monitor, manage or support our fleet of corporate tablets. This situation limits the functionality and support IT can offer to clients and can potentially create security issues.

Without an enterprise Device Management Strategy, tablet technology is excluded from patching and version control, resulting in reduced effectiveness.

ITS will select and begin implementation of a management tool that will enable tablets to access and integrate with current and future City of Ottawa solutions, and enable distributed management. ITS will also enable security patches and updating software through releases, secure tablet devices, provide device management support, create reports, and monitor devices, among other features.

4.6 Enterprise Directory Service Enhancement (SE1)

The Enterprise Directory Service (EDS) manages the identity of staff and contractors accessing information technology in the City. Network and business applications depend on that identity service to manage authentication and authorization. While EDS currently creates, updates, and disables network accounts for staff automatically based on the Human

Resources (HR) system data, it does not automatically create e-mail accounts or home shared drives. This results in inefficiencies for both business clients and ITS staff. Network access for new staff can also be delayed if there is any backlog in HR processing or if a high number of requests are received at one time.

We will modify EDS to streamline processes associated with its identity management functions through service enhancements. In conjunction with the automation of the process for hiring staff, through the eRecruitment project, new staff will start in their position significantly quicker than today, ultimately improving business productivity.

4.7 Microsoft System Center Configuration Manager (SCCM) Upgrade 2013 (SE 2)

Microsoft System Center Configuration Manager (SCCM) (formerly Microsoft Systems Management Server (SMS), is a systems management software product by Microsoft for managing large groups of Windows-based computer systems. SCCM provides remote control access, patch management, software distribution, operating system deployment, network access protection, and hardware and software inventory toolsets. The Systems Management Server (SMS) is over 10 years old and has reached end-of-life. Investments are required to upgrade from the current SMS to SCCM and to take advantage of the new features of the SCCM tool. Availability of the SCCM solution is critical to support the release of new software solutions, and patches, and will be key to the Windows 7 Operating System deployment.

4.8 Virtual Desktop Infrastructure (SE2)

The ITS department currently maintains and supports over 40 desktop configurations (or “images”), including the corporate standard and several client specific images. These images typically include the operating system, security features, and software applications. With over 11,000 desktops managed through the Computer Lifecycle Replacement Program, utilizing virtualization tools will result in fewer computers to replace on an annual basis since this technology will allow for extended life of the device. Even with management tools, applying patches to the operating system, upgrading applications and modifying configurations is a time and labour-intensive task, often involving implementations where staff moves from computer to computer to manually install software upgrades.

We are implementing a Virtual Desktop Infrastructure (VDI) solution. Benefits of this solution include centralized image management, increased security, and decreased downtime. Additionally, VDI will allow the ITS department to respond to client image requirements with more flexibility and agility.

4.9 Marval 12 Upgrade (SE2)

The ITS department currently uses a product called Marval to create and manage Service Desk Support cases providing an audit trail for SAP Support Centre Activity, regarding software releases. Reports are generated for call activity and resolution which in turn aids in finding efficiencies and determining resources. Maintenance to the system, with regards to functionality, reliability, capacity and flexibility, is required. Additional licenses, professional services and internal resources are required to keep Marval operational.

4.10 Service Catalogue (SE2)

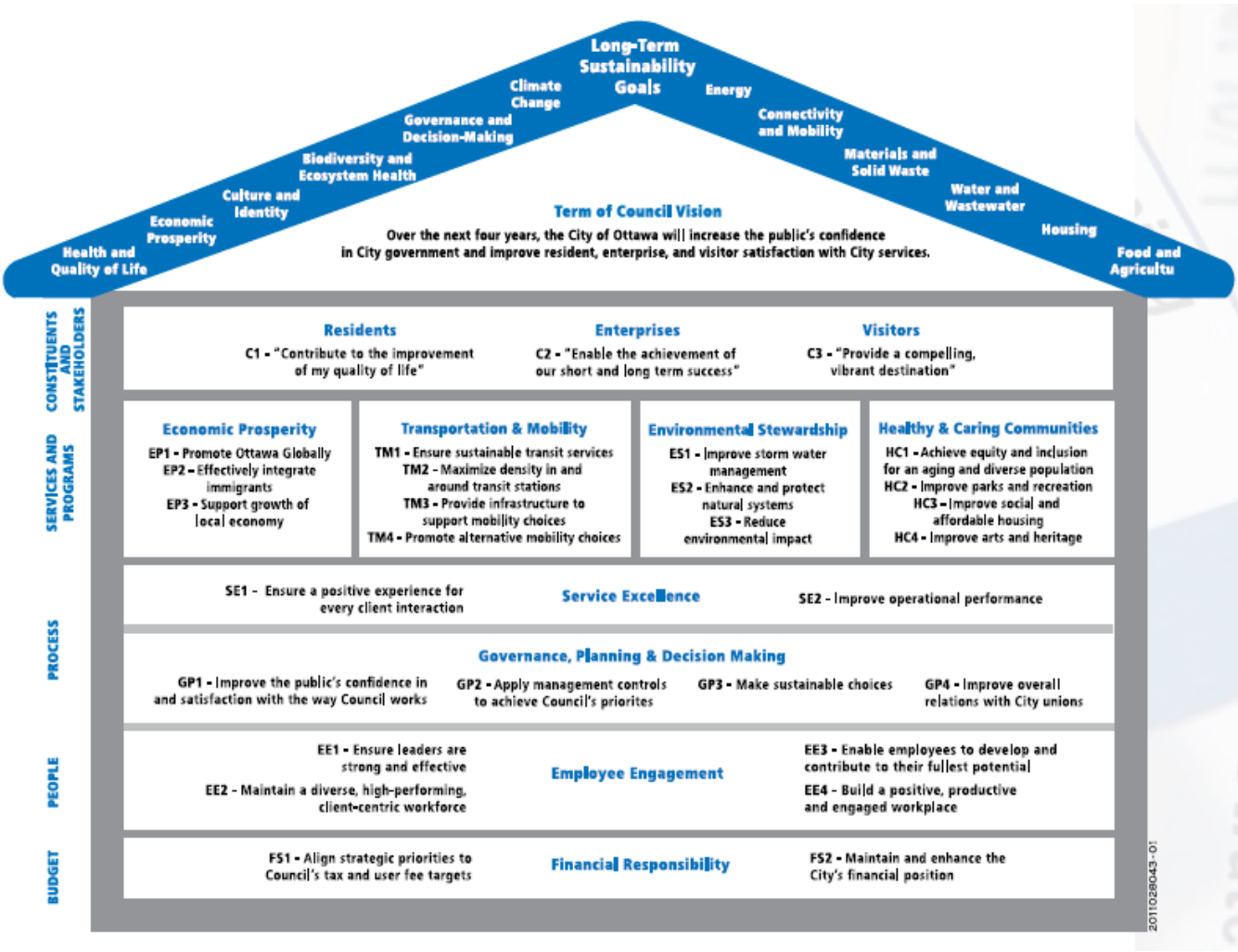
The service catalogue will publish services offered by ITS in a client friendly format. The catalogue will be used to help IT clients understand the nature of the services offered along with the associated processes and the corresponding service levels. It will be accessible online and clients will be able to request and track the progress of their service request through the catalogue.

4.11 Business Continuity Planning (SE1)

This initiative provides support to the Office of Emergency Management in the development of departmental business continuity plans, the aim of which is to help prepare for disruptive events such as natural disasters, power failures, etc. with the objective of maintaining high priority City services at sustainable levels. These continuity plans will provide specific guidance on how employees in each business unit will respond to an emergency. This initiative will identify and ensure that high priority technology systems have the necessary disaster recovery measures in place and the associated procedures documented.

Appendix 1 – City Strategic Map

City Council articulates its priorities for a Term of Council by using a strategy map. With this tool, Council is able to link strategic plans with performance measurement goals by converting strategic objectives into measures and targets, which are then captured in the City Balanced Scorecard.



Appendix 2 – ITS Guiding Principles

The Information Technology Services (ITS) department is guided by a set of principles that inform the outlook and approach for the deployment of IT resources and how the department achieves its business goals. While operational planning may be dynamic, the following guiding principles remain relatively constant and are the basis for key decisions:

- Prioritize IT investments across the enterprise based on alignment with corporate business strategies as directed by the corporate governance team.
- Continuously improve and optimize the business data and information, network, application and hardware infrastructure, within the financial framework, to achieve a fast, flexible, cost effective and sustainable computing environment that meets the client's needs, and to reduce risk of disruptions to City services and impacts on citizens.
- Provide IT services and capabilities where the workers are, including at the office, in the field, or on the move.
- Provide access to information in a secure manner and protect personal information.
- Evolve a standards based technology architecture that is integrated with City businesses, enabling cost-effective evolution of services and infrastructure and connectivity with City residents and business partners.
- Reduce the complexity of the City's IT environment through an enterprise architecture program that supports growth, managing change and delivering business-technology outcomes, and promotes standardization and reusability.
- Leverage strategic sourcing to respond to fluctuations in workload and/or reduce support costs/dependencies, improve IT responsiveness and flexibility, and manage risk.
- Emphasize collaboration with clients and stakeholders, integration, reuse and sharing as a primary strategy for supporting technology planning, and investment decision making to ensure successful business outcomes with sustainable solutions.

Appendix 3 – Key Performance Indicators (2012-2013)

- **Enabling the Business:** At the end of 2012, 11,908 network accounts were active, giving City staff access to corporate and business specific technology tools to deliver municipal services. This represents a 4.52% increase compared to 2011, providing 90.1% of staff with network access (OMBI).

- **Staff Support:** As the technology user base increases at a consistent level year over year, ITS staffing levels remain essentially flat or at a declining position. ITS staff levels in 2012 reflected a small increase of 2%, with a projected reduction by year end 2013 of 14%, of which 9% was the result of transferring the Information Management function (35 Budgeted FTEs) to the City Clerk and Solicitor department and a 5% reduction to achieve the corporate ServiceOttawa efficiency targets. In 2014, there is a projected reduction of 3.3% in staff levels as part of the corporate staff rationalization exercise.

- **Client Satisfaction:** Over the past two years the ITS average client satisfaction rating for quality and performance of IT help desk services has been over 97%, with over 70% clients being very satisfied with services received. The industry benchmarking data shows an average IT client satisfaction rating of 74.4% (MetricNet).

- **Technology Investments:** In 2012, the ITS operating expenditure represented 1.59% of total City operating expenditure (OMBI), which is lower than industry published numbers. For IT expenditure as a percent of operating expenditure, the Government sector average in 2012 is 3.6%, and for all industries was 4.5% (Gartner).

- **Technology Investment per Employee:** The ITS operating expenditure per City full time employee (FTE) for 2012 is $3,113. Industry published numbers indicate the Government sector average for 2012 was $7,075 and for all industries was $13,584 (Gartner).