Report to/Rapport au :

Information Technology Sub-Committee
Sous-comité de la technologie de l'information

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CITY WIDE / À L'ÉCHELLE DE LA VILLE Ref N°: ACS2012-COS-ITS-0002

SUBJECT: **CITY OF OTTAWA – TECHNOLOGY ROADMAP 2012 – 2015 – STATUS UPDATE**

OBJET : **VILLE D'OTTAWA – FEUILLE DE ROUTE TECHNOLOGIQUE 2012 - 2015 – MISE A JOUR**

REPORT RECOMMENDATIONS

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

RECOMMANDATIONS DU RAPPORT

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

EXECUTIVE SUMMARY

The Technology Roadmap outlines planned key strategic investments and foundation building blocks that position the City of Ottawa to respond to business needs and citizen expectations. With a focus on exploiting the Internet and improving interaction with citizens and access to services via broadening the channel options, the City is expecting that this approach will result in improved operational performance, citizen satisfaction and achieve a higher level of confidence and trust in the City as a public institution.

This report provides a status update on the IT Roadmap to June 2012. Staff will report back with updated status in the fall of this year as part of the 2013 budget process.

RÉSUMÉ

La Feuille de route technologique précise les principaux investissements stratégiques prévus ainsi que les éléments de base qui permettront à la Ville d'Ottawa de répondre aux besoins opérationnels et aux attentes des citoyens. Mettant l'accent sur l'exploitation d'Internet et l'amélioration de l'interaction avec les citoyens et de l'accès aux services par l'élargissement du nombre de canaux offerts, la Ville s'attend à ce que cette démarche améliore le rendement opérationnel et la satisfaction des citoyens, et qu'elle assure un degré accru de confiance dans la Ville en tant qu'institution publique.

Le présent rapport fait le point sur l'état d'avancement de la Feuille de route technologique au mois de juin 2012. Le personnel fera une nouvelle mise à jour sur la Feuille de route cet automne, dans le cadre du processus budgétaire de 2013.

BACKGROUND

The concept of *eGovernment* is not new, having emerged over the past 10 years with the objective of "reinventing government" and moving to a more citizen-centric business model.

This *e-Government* citizen-centric business model is characterized by:

- Balancing cost containment with innovation;
- Doing more but differently in terms of productivity through a more effective workforce;
- Greater interaction with citizens and access to services via broadening the channel options;
- IT-enabling more services, and
- Demonstrating "best value" for the tax dollar.

The City of Ottawa Technology Roadmap 2012-2015 responds to the challenge of transforming the way municipal government operates by exploiting technology and the Internet to help the organization deliver on Council's commitment to Service Excellence.

This plan describes the technology investments that support the vision of Citizen Centricity and Governance, and stresses technology as the key to maximizing efficiencies and service delivery. These investments are planned in accordance with the affordability envelope, aligned with the 4 year financial time frame, to maximize benefits to the transformation activities.

In order to implement full technology solutions, realize savings, and continue to deliver services, investment is required in 3 key areas:

- Specific technologies that enables the key Service Excellence initiatives (Service Ottawa);

- Initiatives designed to improve operational performance, reduce the complexity of the IT environment, and support the day-to-day business of the City (IT Operations);

- Reduce the risk of service interruption by modernizing an aging infrastructure and deploying foundational technology that supports Service Ottawa and City services (IT Asset Renewal).

These goals will be accomplished by reducing the complexity of the IT environment, standardizing and consolidating where feasible, assessing and planning for emerging technologies, and by applying leading industry practices to improve operations and performance.

DISCUSSION

The success of eGovernment, including Service Ottawa, will be dependent on a robust and modern infrastructure. The Technology Roadmap includes a number of specific initiatives and investments that directly support both the short and long-term objectives of Service Ottawa and are building blocks for the future that will enable the Information Technology Services (ITS) department to effectively and rapidly deploy and support new and emerging technologies.

The roadmap categorizes investments in two streams:

1. **Foundation and Modernization Technologies**: This category addresses the building blocks on which Service Ottawa and future eGovernment initiatives are dependent and that need to be in place in order for ITS to effectively and rapidly deploy and support the new technologies. In addition, it represents an ongoing capital spend to maintain/upgrade/replace existing technology infrastructure and assets to continue to support day-to-day operations. These investments are described in the Technology Roadmap.

2. **Strategic Initiatives:** Continued investment in new technology or best practices will result in improved citizen-centred experience, operational performance, annualized savings and/or deferral of capital expenditures. A series of initiatives are planned to continue to move the ITS environment forward to a more efficient, effective operational future state.

Note: *Numbers in brackets following each initiative correlates with Technology Roadmap 2012-2015 report.*

1. Foundation and Modernization Technologies:

Information Technology Services is well underway in its Foundation and Modernization Technologies implementing key enabling technologies as well maintain/upgrade/replace

existing technology infrastructure activities. As of June 2012, ITS has made progress on Foundation and Modernization Technologies as outlined below.

Business System Renewal Program (4.1)
This program provides for the overhaul of legacy applications that have reached their end of viable life and are still in use for city service delivery.

- Work was only done on legacy systems to prepare for Service Ottawa and maximize investment.

Enterprise Systems: Information Management (4.2)
The Enterprise Content Management System (for City Information Management) is an infrastructure element that requires ongoing upgrade and sustainment activities to remain current and ensure ongoing compliance with legislation.

Status:

- Scanning into the Business Information Management System (BIMS) via the Multifunctional Devices (MFD);
- Design & implementation of electronic records disposition;
- Client interface upgrades to meet client needs:
    - Single Sign On;
    - Additional information type – Reference;
    - Changes to existing roles;
    - Changes to improve ease of use for our clients.
- Shared drive conversions;
- Replacing the current physical records management system (RMS) with the BIMS module physical content manager (PCM).

Network Infrastructure (4.3)
The network infrastructure program is focused on lifecycle replacement and growth of the City's computer network and telecommunications infrastructure. Primary focus will be Voice over Internet Protocol (VoIP), Server Virtualization, and the Storage Roadmap.

VoIP

Status:

- Communication Plan 40% complete;
- Development environment for core and enhanced capabilities 75% complete.

Next Steps:

- Complete Communication Plan and commence execution;
- Complete Security assessment, build and commence recommended configurations;
- User Acceptance Testing (UAT) and deployment of Nuance speech attendant, Cisco Voicemail to remaining Mitel users (5,000);
- Build
    - Complete Development environment for enhanced capabilities;
    - Network operation management system and processes;
    - End user web-based e-learning training;
    - Data network WAN, LAN and core infrastructure for 180 Elgin;
    - Configure access layer and circuits for ITS group 2 at 100 Constellation.

Server Virtualization

Status:
- 117 servers have been virtualized, representing 85% of 2012 target.

Next Steps:
- Complete balance of 2012 server reductions (21 servers).

Storage Roadmap

Status:
- Storage Roadmap report received;
- Phase 1 design for Tier 2 Storage initiated.

Next Steps:
- Complete Tier 2 design, purchase and implement.

Enterprise Systems - Content Management (4.4)

The sustainment of the Enterprise Content Management (ECM) infrastructure is the focus of this investment. This infrastructure has been expanded to accommodate Web Content Management, OZONE web publishing, new electronic records management, integrated document/records management system and legislative report management.

Status:
- Upgraded application to support rollout of the SIRE electronic agenda tool to Council and Committees;
- Upgrade of Ozone to SiteStudio 11g.

Desktop Computers & Laptops (4.5)

This lifecycle and renewal program funds the lifecycle upgrades and replacements of desktop computers and laptops that are common to all City departments.

Status:
- Configuration and on-site client computing installation support;
- 564 desktops deployed;
- 120 laptops deployed.

Next Steps:
- Deployment activities continued to meet annual renewal targets.

Enterprise Systems: Database Management & Business Intelligence (BI) 4.6

This item is focused on ensuring that databases and BI servers are life cycled and software versions are upgraded for vendor support.

Status:
- Developed new, more efficient and secure method of deploying SQL Server and Oracle Databases to accommodate increased volume of requests.

Next Steps:
- Replace five development and QA servers;
- Acquire additional support to augment staff levels for new toolsets;
- Acquire training to augment existing skill sets.

Enterprise Systems: Web Services (4.7)
This investment is sustaining the web-based services technology, the City public website Ottawa.ca, the theatre websites as well as the employee intranet portal, Ozone. This also provides the primary support infrastructure for e-Services applications and web publishing.

Status:
- Increased focus on Software QA, project management and technical services for major eServices programs;
- Stabilized Ottawa.ca functionality and performance;
- Released Centrepointe and Shenkman Theatre web sites on SiteStudio 11g;
- Released Development Search Application with QR Codes.

Next Steps:
- Establish/procure software tools for productivity and efficiencies;
- Perform necessary upgrades to meet increased transaction demand and growth.

Enterprise Systems: Security Services (4.8)
The process of transforming the IM/IT Security function at the City from a primarily reactive, threat-focussed organization into one which is more cost-effectively managed, risk-based and integrated with the City's overall business risk management framework is essential.

Status:
- Information Risk Management Policy created in alignment to Corporate Risk Management Policies

Next Steps:
- Begin the process of establishing measurement processes to reflect effectiveness and business value

Enterprise Systems: SAP (4.9)
This initiative represents the continued evolution of SAP to enable and support Service Ottawa initiatives and management processes.

Status:
Support augments for:
- The Public Works MMS go lives (Forestry in April);
- HR, e-recruitment and payroll functions;
- Planning for infrastructure upgrades to address:
    - Storage;
    - host development and test;
    - growth and on-going performance and stability.

Next Steps:
- Continue support of production environments;
- Purchase and implement infrastructure upgrades.

Enterprise Systems: GIS (4.10)
The Enterprise GIS program supports business focussed desktop and web solutions that are utilized by over 3,000 staff. The eMAP component is consistently within the top five to ten areas accessed by the public and building sectors via Ottawa.ca.

Status:
- GIS Renewal program:
    - eMAP replacement (geoOttawa) will go live;
    - New roads data model implementation;
    - All GIS renewal project completions;
- Citizen Service Management (CSM) R2 will go live.

Enterprise Systems: Information Technology Service Management (4.11)
Information Technology Service Management (ITSM) is a continuous improvement function which seeks to continually improve the effectiveness and efficiency of IT services and processes.

Status:
- Planning and implementation for the creation of the self service portal for the Service desk.

Next Steps:
- Develop Online Service Catalogue identifying ITS services and products;
- Implementation of self service portal.

Enterprise Systems: Information Technology Performance Management (4.12)
Performance management and establishing the appropriate measures for technology delivery services is an ongoing focus. ITS currently uses the Total Cost of Ownership best practise methodology with associated benchmarking as a formal indicator of ITS operational and financial performance.

Status:
- Data Center benchmark:
    - Cost and staffing level submissions to leading external parties for comparison.

Next Steps:
- Complete Data Center benchmark;
- Establish performance measures aligned with Corporate Strategic Plan;
- Establish measures for internal ITS balanced scorecard.

Business Systems: Program Registration & Facilities Booking (4.13)
The Program Registration & Facilities Booking solution is the City's complex software solution used to manage recreational programming, recreational facilities booking and CPR/First Aid Training.

Status:
- Architectural review conducted to assess increasing capacity requirements;
- New infrastructure environment for testing and development activities proposal; completed.

Next Steps:

- Program upgrade testing and completion for all 10 components.

Internet Filter Lifecycle (4.14)

The Internet Filter is a key element of establishing security for the City access and technology environment. This product is purpose-built to ensure network and systems are protected to the greatest extent possible.

Status:

- Identification/assessment of current Internet Filter product/service;
- Market place product analysis targeting solutions with core capability strengths in addition to providing the key deficiencies (a high availability configuration).

Business Systems: Information Technology Service Management Toolkit (4.15)

The Information Technology Service Management Toolkit is a 'Commercial Off-The-Shelf' (COTS) product currently used to support IT Service Management processes. It is the primary front-line case management tool used by the ITS Service Desk.

Status:

- Additional licenses procured for the COTS product to accommodate increased user access.

Next Steps:

- Execute upgrades and go-live processes.

Service Oriented Architecture Infrastructure (4.16)

A Service-Oriented Architecture is a software architecture that is based on key concepts of an application front-end, service, service repository, and service bus.

Status:

- Service Oriented Architecture (SOA) strategy completed;
- SOA suite licensing for a second clustered server completed;
- SOA hardware procurement for second server underway.

New Business Systems: Council & Committee Meeting Management (4.17)

Automation of the legislative process related to Council and Committee Meetings including agenda creation, meeting management, vote management and paperless meeting capability drives the need for a new solution set.

Status:

- This solution set introduces a new complex system that must be maintained and supported. The establishment of the skills, methods and processes necessary to support the infrastructure is essential for sustainment.
- Planned Start in 2013.

2. Strategic Initiatives:

As of June 2012, ITS has made progress on Strategic Initiatives as outlined below.

Open Data Ottawa (5.1)
The City has joined other government organizations in Canada and around the world by providing public access to its data.

- Purchase of 2 servers for enablement of the Transit GPS data;
- Expansion of Open Data catalogue to include live Transit GPS data, bicycle trip counters, well water testing, library events and others;
- Open Data technology strategy underway.

Virtual Desktop Infrastructure (5.2)
The VDI infrastructure is the current recommended future state of the corporate PC (where applicable) and the preferred method for tailoring desktop solutions for a varied client base.

- All required lab infrastructure is in place for Proof of Solution;
- Proof of Solution phase is underway in lab.

Desktop Software Consolidation (5.3)
The goal of this initiative and program is to consolidate and reduce the total number of legacy packaged software solutions supported by ITS.

- Desktop Software Consolidation (DSC) project is initiated and running parallel to, and integrated with Windows 7 Program;
- The goal of the DSC is to put a strategy / standard in place that restricts the numbers and versions of purchased software packages (COTS). Industry standards are suggesting current version minus 1 or 2 releases is an optimal practice.

Enterprise Architecture (5.4)
The City of Ottawa is continuing development and implementation of an Enterprise Architecture (EA) program to support the Service Ottawa program and other large scale transformational projects.

- EA framework training completed for key staff;
- In 2012, the focus will be on establishing internal resources to operationalize the EA program within ITS and business departments.

5.5 IM/IT Research & Testing
This initiative will allow the efficient detection of functional, performance, and security issues and permit consistency in testing procedures with automated test tools and resources.

- ITS assessment completed;
- Software Quality Assurance (QA) skills acquired to develop strategy which will include:
    - Implementation approach for formal QA;
    - Scope of QA services;

- Recommended test environment and QA tools;
- Organizational structure including roles and responsibilities;
- Communication Plan;
- Risk and mitigation policy;
- Performance measurement guidelines and processes.

5.6 Network Access Control

Network access control technologies enable the secure use of publicly-accessible network access points, and can provide secure and flexible access to the City network for volunteers, community groups and business partners.

- Commencing product research and procurement strategy.

5.7 Two Factor Authentication

- Deferred to 2013 as a result of the current major upgrade to the corporate access control system.

RURAL IMPLICATIONS

There are no specific rural implications associated with this report.

CONSULTATION

Staff have worked closely with client departments in the development of the Technology Roadmap.

LEGAL IMPLICATIONS

There are no legal implications associated with this information report.

RISK MANAGEMENT IMPLICATIONS

There are no risk implications associated with this information report.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this information report.

ACCESSIBILITY IMPACTS

Accessibility requirements have been taken into consideration in the development of the Technology Roadmap.

TECHNOLOGY IMPLICATIONS

This information report has no additional technology implications other than those described in the report.

TERM OF COUNCIL PRIORITIES

The Technology Roadmap has been identified as part the Council Priorities under the Service Excellence category (SE1 - Ensure a positive experience for every client interaction – Reference Number 47) as part of the approved City Strategic Plan.

SUPPORTING DOCUMENTATION

Document 1 - City of Ottawa Technology Roadmap 2012-2015
Document 2 – Presentation – Technology Roadmap Status

DISPOSITION

The City Operations Department will action any direction received as part of consideration of this report.