



Office of the Auditor General / Bureau du vérificateur général

**FOLLOW-UP TO THE 2008 AUDIT OF INFORMATION
TECHNOLOGY CAPITAL EXPENDITURES AND PROJECT
APPROVAL PROCESS**

2010

**SUIVI DE LA VÉRIFICATION DES DÉPENSES EN
IMMOBILISATIONS LIÉES
AUX TECHNOLOGIES DE L'INFORMATION ET DU PROCESSUS
D'APPROBATION DES PROJETS DE 2008**

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EXECUTIVE SUMMARY

Introduction

The Follow-up to the 2008 Audit of IT Capital Expenditures and Project Approval Process was included in the Auditor General’s Audit Plan.

The key findings of the original 2008 audit included:

- The City needs to have a more consistent approach to setting its Information Technology (IT) priorities;
- The escalation/resolution process for disputes arising from the priority-setting process has not been clearly documented;
- While the recommendations arising from the Mayor’s recent eGovernance Task Force have yet to be implemented, management anticipates they will be in place by the time the 2010 budget is presented to Council;
- The role of Executive Management Committee as the final approval authority should be clarified;
- The current process allows departments to receive budget approval before projects have been prioritized; and,
- There is a need to centralize IT capital funding under a single authority.

Summary of the Level of Completion

The table below outlines our assessment of the level of completion of each recommendation as of December 2010. Subsequently, management’s response in the Winter of 2011 was in agreement with that assessment.

CATEGORY	% COMPLETE	RECOMMENDATIONS	NUMBER OF RECOMMENDATIONS	PERCENTAGE OF TOTAL RECOMMENDATIONS
LITTLE OR NO ACTION	0 – 24	-	-	-
ACTION INITIATED	25 – 49	-	-	-
PARTIALLY COMPLETE	50 – 74	-	-	-
SUBSTANTIALLY COMPLETE	75 – 99	11, 12	2	14%
COMPLETE	100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14	12	86%
TOTAL			14	100%

Conclusion

In response to the budgeting and capital expenditure recommendations, the audit recommendations have been fully addressed, through the implementation of quarterly reporting, for both IT-owned and client owned capital expenditures.

The updating of Portfolio Value Management Framework (PfVM) process and its associated tools has fully addressed the majority of the audit recommendations from the 2008 Audit of Information Technology Capital Expenditures and Project Approval Process. The updates included:

- Providing overall guidance on Initiating an IT Project (using a 5-step approach);
- The identification of project owners for all projects;
- The requirement of a Concept Value Case;
- The distinction of projects which are transformational in nature from those which are sustaining or operational;
- The development of formal priority setting criteria and tool, through the creation of the Business Value Index (BVI) Scoring Tool to aide in the prioritization of projects prior to seeking funding approval;
- The review by the Technology Architecture Panel (TAP) to ensure overall feasibility and performance of options analysis;
- The requirement of Business Case Template for all growth and transformation projects;
- The clarification of voting rights for the Value Assessment Panel (VAP);
- The requirement that all projects are reviewed by the VAP or Mini-VAP (depending on project size and cost) review prior to approval by Council;
- The communication of value score and relative priority for all IT initiatives using the Project Scoring Summary; and
- The development of a new escalation process and the clarification of the Executive Management Committee (EMC) as final authority.

One area not fully addressed, but substantially addressed, was the formal and informal communication of overall requests and the informal communication of ITS capacity to address those requests.

Beyond this, the Project Management Office (PMO) maintains all of the documents related to the new prioritization process and continues to monitor their progress. The PMO has committed to making continuous process improvements as potential changes are identified.

Acknowledgement

We wish to express our appreciation for the cooperation and assistance afforded the audit team by management.

RÉSUMÉ

Le Suivi de la vérification des dépenses en immobilisations liées aux technologies de l'information et du processus d'approbation des projets de 2008 était prévu dans le Plan de vérification du Bureau du vérificateur général.

Les principales constatations de la vérification de 2008 sont les suivantes :

- Il faudrait que la Ville ait une façon plus uniforme d'établir ses priorités en matière de technologies de l'information (TI).
- Le processus d'examen et de résolution des différends découlant de l'établissement des priorités n'est pas clairement documenté.
- De plus, si les recommandations découlant du Groupe de travail du maire sur le gouvernement électronique restent à être mises en œuvre, la Direction prévoit qu'elles seront en place au moment où le budget 2010 sera soumis au Conseil.
- Il conviendrait de clarifier le pouvoir d'approbation ultime conféré au Comité de la haute direction.
- Le processus actuel permet aux services d'obtenir l'approbation de leur budget avant que les projets n'aient été priorisés.
- Il faudrait centraliser et confier à une seule autorité le financement des immobilisations liées aux TI.

Sommaire du degré d'achèvement

Le tableau ci-dessous présente notre évaluation du degré d'achèvement de chaque recommandation au mois de décembre 2010. Par la suite, la réponse de la direction à l'hiver 2011 concordait avec cette évaluation.

CATÉGORIE	POURCENTAGE COMPLÉTÉ	RECOMMANDATIONS	NOMBRE DE RECOMMANDATIONS	POURCENTAGE DU TOTAL DES RECOMMANDATIONS
PEU OU PAS DE MESURES PRISES	0 - 24	-	-	-
ACTION AMORCÉE	25 - 49	-	-	-
COMPLÉTÉE EN PARTIE	50 - 74	-	-	-
PRATIQUEMENT COMPLÉTÉE	75 - 99	11, 12	2	14 %
COMPLÉTÉE	100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14	12	86 %
TOTAL			14	100 %

Conclusion

À la suite des recommandations concernant la budgétisation et les dépenses en immobilisations, les recommandations de la vérification ont été intégralement traitées grâce à la mise en œuvre de rapports trimestriels relativement aux dépenses en immobilisations relevant de la TI et des clients.

La mise à jour du processus relatif à la Structure de gestion de la valeur du portefeuille et des outils qui y sont liés a permis de régler la majorité des recommandations de la vérification découlant de la Vérification de 2008 des dépenses en immobilisations liées aux technologies de l'information et du processus d'approbation des projets. Les mises à jour comprenaient :

- La fourniture de directives générales quant au lancement d'un projet de TI (à l'aide d'une approche en cinq étapes);
- L'identification des propriétaires du projet pour tous les projets;
- L'exigence d'une analyse de la valeur conceptuelle;
- La distinction entre les projets de nature transformationnelle et les projets de maintien ou opérationnels;
- L'élaboration de critères et d'outils d'établissement des priorités officiels grâce à la création d'un outil d'établissement de l'indice de vitalité des entreprises (BVI) afin d'aider à décider l'ordre de priorité des projets avant l'approbation de financement;
- L'examen par le Comité de l'architecture technologique (CAT) afin d'assurer la faisabilité générale et le rendement de l'analyse des options;
- L'exigence d'un gabarit d'analyse de rentabilisation pour tous les projets liés à la croissance ou aux activités de transformation;
- La clarification du droit de vote pour le Comité d'estimation de la valeur (CEV);
- L'exigence que tous les projets soient examinés par le CEV ou le mini-CEV (selon la taille et le coût du projet) avant d'obtenir l'approbation du Conseil;
- La communication de la valeur du projet et de la priorité relative de toutes les initiatives de TI à l'aide du Sommaire d'évaluation du projet;
- L'élaboration d'un nouveau processus d'intensification et la clarification du rôle du Comité de la haute direction (CHD) en tant qu'autorité finale.

Un domaine, qui n'a pas été entièrement réglé, mais l'a été en grande partie, concerne la communication officielle et non officielle de toutes les demandes et la communication non officielle de la capacité du STI de traiter ces demandes.

En outre, le Bureau de gestion des projets (BGP) conserve tous les documents liés au nouveau processus d'établissement des priorités et continue d'en surveiller les progrès. Le BGP s'est engagé à continuer d'apporter des améliorations au processus au fur et à mesure que des changements potentiels seront décelés.

Remerciements

Nous tenons à remercier la direction pour la coopération et l'assistance accordées à l'équipe de vérification.

1 INTRODUCTION

The Follow-up to the 2008 Audit of IT Capital Expenditures and Project Approval Process was included in the Auditor General's Audit Plan.

The key findings of the original 2008 audit included:

- The City needs to have a more consistent approach to setting its Information Technology (IT) priorities;
- The escalation/resolution process for disputes arising from the priority-setting process has not been clearly documented;
- While the recommendations arising from the Mayor's recent eGovernance Task Force have yet to be implemented, management anticipates they will be in place by the time the 2010 budget is presented to Council;
- The role of Executive Management Committee as the final approval authority should be clarified;
- The current process allows departments to receive budget approval before projects have been prioritized; and,
- There is a need to centralize IT capital funding under a single authority.

2 KEY FINDINGS OF THE ORIGINAL 2008 AUDIT OF IT CAPITAL EXPENDITURES AND PROJECT APPROVAL PROCESS

Audit Objective 1

The table below summarizes the IT capital spending at the City of Ottawa for the 2001-2006.

	(\$000)	2001	2002	2003	2004	2005	2006
ITS-Owned Capital Budget		\$13,326	\$55,828	\$10,274	\$8,655	\$9,315	\$5,442
ITS-Owned IT Capital Spending		\$7,347	\$25,452	\$29,393	\$16,932	\$9,108	\$10,462
Surplus/Deficit		\$5,979	\$30,376	-\$19,119	-\$8,277	\$207	-\$5,020
Client-Owned Capital Budget		\$8,528	\$10,486	\$3,214	\$475	\$1,890	\$2,322
Client-Owned IT Capital Spending		\$5,138	\$7,387	\$5,375	\$2,267	\$4,454	\$4,837
Surplus/Deficit		\$3,390	\$3,099	-\$2,161	-\$1,792	-\$2,564	-\$2,515
Total IT Capital Budget		\$21,854	\$66,314	\$13,488	\$9,130	\$11,205	\$7,764
Total IT Capital Spending		\$12,485	\$32,839	\$34,769	\$19,199	\$13,562	\$15,298
Surplus/Deficit		\$9,369	\$33,475	-\$21,281	-\$10,069	-\$2,357	-\$7,534
Total City Operating Budget		\$1,681,519	\$1,726,046	\$1,838,862	\$1,898,338	\$1,988,358	\$2,126,424
Total City Capital Budget		\$528,989	\$539,152	\$505,042	\$299,039	\$639,791	\$1,345,422

	(\$000)	2001	2002	2003	2004	2005	2006
Total City Budget		\$2,210,508	\$2,265,198	\$2,343,904	\$2,197,377	\$2,628,149	\$3,471,846
Total IT Spending as % of City Budget		2.13%	3.06%	3.07%	2.53%	1.93%	1.64%
ITS Operating Spending		\$34,621	\$36,376	\$37,114	\$36,332	\$37,232	\$41,813
ITS-Owned IT Capital Spending		\$7,347	\$25,452	\$29,393	\$16,932	\$9,108	\$10,462
Client-Owned IT Capital Spending		\$5,138	\$7,387	\$5,375	\$2,267	\$4,454	\$4,837
Total IT Spending		\$47,106	\$69,215	\$71,882	\$55,531	\$50,794	\$57,112
IT Operating as % of IT Total		73.50%	52.56%	51.63%	65.43%	73.30%	73.21%
IT Capital as % of Total Capital		2.36%	6.09%	6.88%	6.42%	2.12%	1.14%
ITS-Owned Capital as % of IT Total		15.60%	36.77%	40.89%	30.49%	17.93%	18.32%
Client-Owned IT Capital as % of IT Total		10.91%	10.67%	7.48%	4.08%	8.77%	8.47%

Source: City of Ottawa Financial Services

A summary of the key observations resulting from the review of IT expenditures is provided below.

1. City of Ottawa IT Spending

- There are significant variances, both surplus and deficit, each year for both ITS-owned and client-owned capital budgets indicating a need for regular reporting on total IT capital spending as well as greater monitoring of these expenditures in the future.
- Total IT spending (capital and operating) between 2001 and 2006 was approximately 2% of the total City budget, slightly higher during Transition.
- During the period 2001 to 2006, the annual total IT spending (capital and operating) appeared generally to increase, when omitting the Transition related spending.
- Client-owned IT capital spending was relatively consistent and stable between 2001 and 2006, with the lowest spending in 2004 and the highest in 2002.
- ITS-owned IT capital spending varied by large amounts between 2001 and 2006, with the lowest spending in 2001 and the highest in 2003.

2. Client-Owned IT Capital Spending

- On average, client-owned IT capital spending remained relatively stable during the period 2001 to 2006.
- Highest three consumers were:
 - Transit Services (\$14.2M) 48%
 - Library Services (\$5.2M) 18%
 - Fire Services (\$4.5M) 15%
- Lowest three consumers were:

- CPS - Other (\$116K) <1%
 - Utility Services (\$78K) <1%
 - Traffic and Parking (\$4K) < 1%
- Transit Services and Library Services were the only areas which had positive spending activity for every year between 2001-2006 – together consuming 66% of total client-owned IT capital.
 - Only Utility Services and Traffic and Parking were not consistent consumers, i.e., they had spending in less than four out of the six years reviewed.

3. ITS-Owned IT Capital Spending

- During 2001 to 2006, the ITS-owned IT capital spending fluctuated considerably from year to year.
- The highest three activity consumers of ITS-owned IT capital, overall and consistently, between 2001 to 2006 were:
 - Transition (40%, \$39.9M);
 - Lifecycle maintenance for computers and peripherals (17%, 16.5M); and,
 - SAP platform sustainment (17%, \$16.4M).
- The lowest three activity consumers between 2001 to 2006 were:
 - Departmental technology improvements (<1%, \$167K);
 - Sustainment – electronic information technology (<1%, \$132K); and,
 - Telecommunications (<1%, \$71K).

Audit Objective 2

Overall, the defined prioritization process maps well to the COBIT guidelines and controls. We have identified four key issues that could be addressed to strengthen the process and alignment with COBIT.

1. Priority Setting Criteria

The audit revealed that, while there is a process in place for portfolio value management to formally prioritize IT initiatives using the value plot, there are not consistent priority setting criteria being used to establish IT related priorities or priorities within a program with appropriate records of the decision regarding the priority.

2. Governance

- The majority of new initiatives were not reviewed by the Value Assessment Panel (VAP), but by the internal IT Committee (Investment Category Selection Panel (ICSP). As a result, there is a perception that the process is not as

transparent to all those affected. While it is appropriate to adopt a governance structure that best supports the IT initiative being considered, there do not appear to be guidelines regarding the structures that should be used.

- The escalation/resolution process for disputes arising from the priority-setting process has not been clearly documented and the role of Executive Management Committee should be clarified as the final approval authority.

3. Flexibility

- The current process does not differentiate between discretionary (i.e., non-mandatory) projects. Under the current process, any discretionary client-IT initiative over 10 days goes to VAP, regardless of its size, all are subject to the same steps, regardless of whether it is a small or large project. By contrast, all non-discretionary initiatives are not supported by a business case and treated equally. At the time of the audit, some changes had been identified and proposed to the process which would address this issue.
- A mechanism in the process is required which distinguishes those projects that are sustaining or operational in nature from those that are transformational. This could be in the form of requiring different levels of detail for project documents coming forward, etc. Additionally, this would provide another level to consider when balancing the overall portfolio of IT investment.

4. Capacity and Corporate-wide Management

- In a number of audits from previous years, management has expressed concern over a perceived lack of attention from ITS on required IT initiatives, however this audit has shown a process is in place for operating areas to present a business case for their requirements and obtain funding for these initiatives independently from ITS.
- ITS continues to face increasing pressure to demonstrate to clients and/or the public the value of IT work. The new accountability and performance management culture also requires ITS to account for money spent. Business cases have been tailored to provide qualitative and quantitative analysis of costs/benefits and risks.
- There remains increasing reliance on IT to assist and to enable the business to achieve operational objectives. The current process of clients receiving budget approval prior to going to ITS for workload prioritization sets expectations regarding the overall City-wide priority of the proposed initiative and the capacity for ITS to deliver in the desired timeframe. Given the limited IT resources and increasing number of client programs/projects, ITS needs to ensure that the limited resources are first directed to initiatives that have risk-adjusted, highest value.

- This issue, along with the earlier observation of the need for improved monitoring of IT capital expenditures on an annual basis, suggests the need to centralize IT capital funding under a single authority. This would permit the annual IT capital budget to come forward for approval in a coordinated fashion and allow senior management and Council to have a consolidated picture of IT capital funding and priorities each year.

Mayor's Task Force on eGovernment

In 2008, the Mayor asked a group of experienced high-tech executives to review the City of Ottawa's use of technology and make recommendations that would improve interaction with the public while increasing the effectiveness and efficiency of City operations. Throughout the first four months of the year, this group interviewed Information Technology Services (IT) staff and management at the City and also reviewed existing plans and past performances. Their recommendations were released in June and their action plan approved by Council in August 2008.

The Task Force identified that Ottawa lagged behind other public and private organizations in gaining the benefits of information and communications technology. The root of the problem lay in the way that the City approached technology. Instead of making investments, which would pay off over time, Council sought to minimize expenses within a single year, thus ensuring that no major transformation of service could occur. Efforts were focused on internal processes when they should have been focused on the citizens using the service. Thus the City was not delivering the improvements and cost-reductions achieved by banks and other levels of government.

The Task Force identified that the use of technology should, over time, reduce costs and improve service, offsetting natural growth factors which were driving up expenses and tax rates. To do so, the City would need to put in a proper governance model, which focused on investment with clearly defined returns over a period of 3 to 5 years. Projects would have to put the citizens at the centre of their business model and work to eliminate manual efforts, which drove up costs and drove down public satisfaction. The responsibility for effective use of technology lies not with IT Services but with every department in the City of Ottawa.

Eight specific recommendations were made to allow the City and its taxpayers to get the most from technology.

1. Institute a governance model that involves everyone from City Council to staff.
2. Require a citizen-centric focus for all City programs and services.
3. Implement outcome-based measures for all activities, services and projects.
4. Produce investment plans for each branch identifying how technology will be leveraged to improve service while reducing costs.

5. Ensure that when council directs staff to take action, the resulting proposal includes a technology alternative that directly or indirectly offsets any increase in staff.
6. Compare Ottawa's service delivery, on an outcome and cost basis, with service delivery in the best public and private organizations in the world, and not just with service delivery in other Canadian municipalities.
7. Ensure that all investment plans respect and leverage the City's common technology infrastructure, architecture, processes and applications.
8. Invest in a Chief Strategist for service delivery, reporting directly to City Council, who will drive the implementation of these recommendations.

Management indicated that its goal is to have the recommendations progressed to the point where they will make fundamental changes to the budget process for the coming year.

3 STATUS OF IMPLEMENTATION OF 2008 AUDIT RECOMMENDATIONS

2008 Recommendation 1

That management ensure a complete analysis of corporate-wide IT capital spending is conducted on an annual basis to monitor and track IT expenditures.

2008 Management Response

Management agrees with this recommendation.

IT Services reviews both IT-owned and client-owned capital expenditures on a quarterly basis and provides input into quarterly financial and performance reports for Council. In addition, IT capital spending is consolidated in the annual OMBI performance report on information technology. The analysis conducted during the audit will be used as a template for future monitoring and year-end analysis of IT expenditures.

It should be noted that the analysis of budget vs. actual spending incorrectly concludes there have been significant surplus/deficits in terms of capital spending since amalgamation. This is misleading in that the analysis does not factor in the carry-over of unspent spending authority from year- to-year. Management provides regular reports to Council on operating and capital works-in-progress which clearly identify spending against budget and any variances.

Secondly, in order to ensure consistency and avoid confusion with the definitions used by Council for capital planning and reporting, the grouping of growth and strategic initiatives into one broader category is not recommended by Financial Services.

Management Representation of the Status of Implementation of Recommendation 1 as of September 30, 2010

On an annual basis, IT Services provides quarterly reports to the IT Subcommittee / CSEDC / Council on operating and capital works-in-progress, which clearly identify IT expenditures against budget and variances.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 1

Quarterly reports are submitted to IT Sub-Committee and Corporate Services and Economic Development Committee (CSEDC) providing updates on the status of the capital works in progress as each quarter end. The Capital Status Reports outline by project: the project lead, when the project was approved by Council, planned spending, the uncommitted balance, the spending plan on the uncommitted balance and target completion date.

Quarterly operating/capital status reports are prepared as part of the reporting framework approved by Council.

OAG: % complete **100%**

2008 Recommendation 2

That management update current documentation for the existing prioritization process.

2008 Management Response

Management agrees with this recommendation.

As noted in the report, the prioritization process was under review at the time of the audit. Changes were recommended and approved by the Executive Management Committee (EMC) on November 22, 2007. Documentation has been modified and updated to reflect the approved changes and was fully implemented as of June 30, 2008.

Management Representation of the Status of Implementation of Recommendation 2 as of September 30, 2010

The prioritization process was under review at the time of the audit. Changes were recommended and approved by the Executive Management Committee on November 22, 2007. Documentation was modified and updated to reflect the approved changes and was fully implemented as of June 30, 2008.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 2

An updated prioritization process was approved as part of the Rules of Engagement for Technology Savings, which was approved as presented (November

22, 2007). As a result, documents have been updated and modified to reflect this new prioritization process.

Updated documents include an overall 5-step approach that Client Relationship Management and the IT Account Manager use to guide the business units in utilizing the PfVM to initiate IT-enabled projects, as well as the underlying process documents including the following:

- Concept Value Case Template;
- Business Value Index (BVI) Scoring Tool;
- Technology Architecture Panel Terms of Reference;
- Business Case Template;
- Value Case Briefing Note Template; and
- Value Assessment Panel and Mini-VAP Terms of Reference.

It is worth noting that the Project Management Office maintains the documents, continues to monitor the process and is prepared to make continuous process improvements as potential changes are identified.

OAG: % complete

100%

2008 Recommendation 3

That management clarify the voting rights of all members of the Investment Category Selection Panel.

2008 Management Response

Management agrees with this recommendation.

As noted in the report, the terms of reference for the Investment Category Selection Panel (ICSP) were under review at the time of the audit. It was subsequently determined that the ICSP was no longer required in the new prioritization process approved by EMC on November 22, 2007.

Management Representation of the Status of Implementation of Recommendation 3 as of September 30, 2010

The terms of reference for the Investment Category Selection Panel (ICSP) were under review at the time of the audit, it was subsequently replaced by the VAP. The VAP mandate is to provide consultation and input to ITS, in support of the ITS mandate and the selection of IT investments. Specifically the VAP, with its corporate-wide senior management membership, represents the business perspectives of the City clients that ITS serves, in the review of proposed IT investments. The VAP evaluates and endorses proposals and business cases for IT investment decisions that are under ITS' mandate. Consensus is the preferred style of decision-making with all members having an equal right of participation. Where a consensus decision is not possible, a simple majority of four (4) members will be

required to approve a decision. These voting rights are documented in the VAP Terms of Reference.

Management: % complete ***100%***

OAG's Follow-up Audit Findings regarding Recommendation 3

As a result of the updated prioritization process the Investment Category Selection Panel was replaced by the Value Assessment Panel. The voting rights for the members of the VAP are outlined in the VAP Terms of Reference. Per the VAP Terms of Reference, the VAP is composed of five members of the Senior Management Team (SMT), including the Director of ITS (Chair), and four directors representing each of the City departments: Business Transformation Services (BTS), Community & Protective Services (CPS), Planning, Transit & Environment (PTE), and Public Works & Services (PWS). The EMC shall appoint the departmental representatives.

Consensus is the preferred style of decision-making with all members having an equal right of participation. Where a consensus decision is not possible, a simple majority of four members will be required to approve a decision.

OAG: % complete ***100%***

2008 Recommendation 4

That management clarify the project approval process including the escalation and dispute resolution process and clarify the role of the Executive Management Committee for final project approvals.

2008 Management Response

Management agrees with this recommendation.

As noted in the report, the project approval process, including the escalation and dispute resolution process, were under review at the time of the audit. Changes were approved by EMC on November 22, 2007. The role of the EMC in final project approval has been clarified in the new prioritization process, which was implemented as of June 30, 2008.

Management Representation of the Status of Implementation of Recommendation 4 as of September 30, 2010

The project approval process, including the escalation and dispute resolution process, were under review at the time of the audit. Changes were approved by EMC on November 22, 2007. The role of the EMC in final project approval has been clarified in the new prioritization process, which was implemented as of June 30, 2008.

Management: % complete ***100%***

OAG's Follow-up Audit Findings regarding Recommendation 4

As a result of the updated prioritization process, which was approved by the EMC on November 22, 2007 and implemented as of June 30, 2008, a new approval process and escalation process have been developed. Per the Terms of Reference of the VAP: "If the Project Sponsor is in disagreement with a decision of the VAP, the matter may be referred to the EMC for reconsideration through the Director ITS and the Executive Director, BTS. The decision of the EMC is final."

OAG: % complete

100%

2008 Recommendation 5

That management ensure all proposed projects are reviewed by the Value Assessment Panel to increase the transparency of the prioritization process for those parties not directly involved.

2008 Management Response

The amended prioritization process approved by EMC on November 22, 2007, requires the VAP to review in detail, all proposed IT projects that are estimated to exceed \$100,000. This is an industry best practice. Smaller projects will be reviewed by a committee of senior IT managers and the director/CIO, and reported to the VAP. The results of all reviews including costs, benefits, risks, and value scores, irrespective of size, will be communicated to all City Departments.

Management Representation of the Status of Implementation of Recommendation 5 as of September 30, 2010

The Value Assessment Panel reviews, in detail, all proposed IT projects that are estimated to exceed \$100,000. Smaller projects are reviewed by a committee of senior IT managers and the director/CIO, and reported to the VAP to ensure a transparent prioritization process.

Management: % complete

100%

OAG's Follow-up Audit Findings regarding Recommendation 5

The VAP, annually at a minimum, is responsible for reviewing and approving proposed investments estimated to exceed \$100,000 for growth and transformation projects and for Reviewing and approving investments with lower financial thresholds but that have high business risk.

The Strategic Planning Committee (SPC and commonly referred to as the Mini-VAP) is responsible for reviewing and approving proposed growth and transformation investments estimated not to exceed \$100,000 for growth and transformation projects and approve unplanned, cross-divisional Sustaining Projects regardless of the estimated investment.

Review and prioritization results from VAP and Mini-VAP are available to all business groups to review.

OAG: % complete

100%

2008 Recommendation 6

That management develop guidelines for appropriate governance models to be used.

2008 Management Response

Management agrees with this recommendation.

As noted in the report, IT Services has been working to consolidate various IT governance models that were in place during amalgamation. Since 2004, IT Services has been applying a common model for IT projects, irrespective of funding source. The governance model being used for project priority setting and selection was developed by Fujitsu Consulting and is a recognized best practice, endorsed by the IT Governance Institute and the Information Systems Audit and Control Association (ISACA). It applies to all IT-enabled projects, whether funded from operating or capital budgets. The changes approved by EMC on November 22, 2007 further clarify the IT governance model. These changes were fully implemented as of June 30, 2008 and Guidelines have been communicated to City departments.

Program governance (priority setting, financial management, monitoring and reporting) is conducted within the overall City of Ottawa governance model and its associated guidelines and criteria. In the case of ITS, a Strategic Planning Committee of managers and the director review and approve branch and program priorities as part of the annual operational planning cycle. A governance model for project management of all approved IT-enabled projects was established in 2001, based on the Project Management Institute (PMI) and the Project Management Book of Knowledge (PMBok). Both project prioritization and project management frameworks are industry best practices that ITS continues to enhance and evolve toward a higher level of maturity.

Management Representation of the Status of Implementation of Recommendation 6 as of September 30, 2010

IT Services has consolidated various IT governance models. PfVM and PLC (Project Life Cycle) are the overall frameworks that are used by IT Services to ensure that the investment of people and technology across all the IT lines of business are optimized to achieve business value, at the lowest possible cost, with a known and acceptable level of risk. VAP and Mini-VAP are responsible for reviewing and approving proposed investments. The VAP is responsible for reviewing and approving proposed investments estimated at exceed \$100,000 for growth and transformation projects. The ITS Strategic Planning Committee has assumed the role of the Mini-VAP and are responsible for reviewing and approving proposed

investments estimated not to exceed \$100,000 for growth and transformation projects. In addition, the Mini-VAP approves the cross-divisional sustaining project regardless of the estimated investment. The Technology Architecture Panel is responsible for considering the business problem and determining what technology or technologies are the most likely to deliver the most efficient and cost-effective solution, and assign ITS resources to assist with the cost estimates.

Management: % complete *100%*

OAG's Follow-up Audit Findings regarding Recommendation 6

The revised PfVM process has established a program governance model that considers large, small, Transform, Sustain and Growth projects within a formal structure that applies documented criteria and publishes the results. Additional documentation regarding roles and responsibilities of the various roles and committees involved in the process is available.

Project governance, while not explicitly defined to the same extent as the program governance model, uses the Project Management Book of Knowledge, a recognized industry standard for project management. In addition to this, the Project Management Office is involved in the process, actively assisting and supporting project managers prepare their project charters and other related project documentation. The project charter template includes a section on roles and responsibilities, which the PMO reviews and ensures it follows the ITS requirements. This active participation and monitoring by the PMO provides a greater degree of consistency than the previous process.

OAG: % complete *100%*

2008 Recommendation 7

That management ensure the use of business cases for all proposed IT projects and establish a process to update the business case when needed.

2008 Management Response

Management agrees with this recommendation.

A formal business case has been required since 2004 for all "discretionary" IT projects. The changes approved by EMC on November 22, 2007 require a formal business case for all IT projects. In addition, as part of the IT project management practice and project life cycle, IT Services requires the IT project manager to review the business case at key phases in the implementation of each project. Any significant variation in either the costs or the benefits triggers an automatic review of the business case.

Management Representation of the Status of Implementation of Recommendation 7 as of September 30, 2010

Since 2007, all the IT growth and transformation projects have to develop and complete a business case. The business case is one of the most important documents in helping IT management understand the business value of an IT enabled investment or business opportunity. Better business cases strengthen the quality of strategic alignment, project planning, financial estimates, and cost benefit and options analysis. IT Services requires the IT project manager to review the business case at key phases in the implementation of each project. Any significant variation in either the costs or the benefits triggers an automatic review of the business case.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 7

As a result of the new prioritization process, all IT projects categorized as growth and transformation projects require the completion of a business case. In order to ensure that business cases are completed properly, the business case template includes an introductory section that outlines the purpose and users of a business case, as well as a detailed breakdown on how to complete each section of the business case. The business cases template includes a revisions section which outlines the date and description of the change as well as the individual who made the changes. The PMO and the IT Account Managers support the business in preparing the business case documents.

Additionally, the PfVM process includes checkpoints in the process at key stages to validate and, if necessary, update the business case. Any changes in the business case result in the project being reviewed again by the VAP or Mini-VAP.

OAG: % complete **100%**

2008 Recommendation 8

That management develop and document formal priority setting criteria, aligned with the value plot tool, that can be used by both business and ITS to prioritize projects and activities/projects within a program.

2008 Management Response

Management agrees with this recommendation.

As noted in the report, the prioritization process that was implemented in 2004 "is based on the Control Objectives for Information and Technology (COBIT) framework, and has appropriate steps and control points against the audit criteria". Modifications to the priority setting criteria and tools were streamlined and approved by EMC on November 22, 2007. The new processes are currently being implemented to prioritize all IT projects, including those eligible for funding through the IT Investment Fund. Although the value plot tool has been superseded

by the new process, additional tools will be available for business and ITS, and plans are underway to make them available on-line (Ozone) by the end of Q4 2008.

Management Representation of the Status of Implementation of Recommendation 8 as of September 30, 2010

This recommendation has been implemented as of June 30, 2008. Processes and supporting tools are posted on Ozone under "Information Technology" and are available to all clients through their ITS Client Relationship Managers. The Business Value Index, resulting from the spreadsheet-based tool, highlights the most influential factors for assessing investments and indicates how each investment might add value to the City. The results are displayed in a matrix to compare multiple investment opportunities using the same criteria. Using this methodology, senior management can compare and contrast the proposed technology-enabled projects to determine the initiatives that align best with the City's priorities, and yield a quick return on the investment to find efficiencies.

Management: % complete ***100%***

OAG's Follow-up Audit Findings regarding Recommendation 8

The value plot tool has been superseded by the Business Value Index Scoring Tool. The scoring tool uses an underlying spreadsheet (embedded formulas are protected fields) which outputs a BVI score based on both quantitative and qualitative factors. Quantitative measures are mostly driven by financial measures including net present value (NPV), payback period and external funding available, while qualitative factors, are driven by legislation, policy framework, business benefits, business alignment, business risks and project risks. The resulting BVI can be compared in order to assist in the prioritization of projects. This BVI tool is used on all project and program activities.

OAG: % complete ***100%***

2008 Recommendation 9

That management include a mechanism in the process which distinguishes those projects that are sustaining or operational in nature from those that are transformational.

2008 Management Response

Management agrees with this recommendation.

Under the amended process approved by EMC on November 22, 2007, the definition of projects has been modified to distinguish sustaining/operational projects from those that are transformational. The new definitions were fully implemented as of June 30, 2008.

Management Representation of the Status of Implementation of Recommendation 9 as of September 30, 2010

Under the amended process approved by EMC on November 22, 2007, the definition of projects has been modified to distinguish sustaining/operational projects from those that are transformational. The new definitions were fully implemented as of June 30, 2008.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 9

As a result of the updated prioritization process, which was implemented in June 30, 2008, the project definitions have been updated to distinguish sustaining/operational projects from transformational ones.

OAG: % complete **100%**

2008 Recommendation 10

That management ensure the project owner is clarified for all IT projects.

2008 Management Response

Management agrees with this recommendation.

The new prioritization process approved by EMC on November 22, 2007 clarifies the definition of IT operational or sustaining activities for which ITS is the owner. Similarly, the business sponsor of any IT project must be clearly identified in the business case as a condition of VAP review. Once approved, the project cannot proceed until a project sponsor has signed off on a project charter.

Management Representation of the Status of Implementation of Recommendation 10 as of September 30, 2010

The new prioritization process approved by EMC on November 22, 2007 clarifies the definition of IT operational or sustaining activities for which ITS is the owner. Similarly, the business sponsor of any IT project must be clearly identified in the business case as a condition of VAP review. Once approved, the project cannot proceed until a project sponsor has signed off on a project charter.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 10

Under the new prioritization process, ITS is the owner of all sustaining projects. For growth and transformational projects, business owners are identified in the project charter and/or concept value case.

OAG: % complete **100%**

2008 Recommendation 11

That management communicate to all client groups the overall requests and ITS capacity to address the requests.

2008 Management Response

Management agrees with this recommendation.

As noted in Recommendation 5, the impact of resource requests on ITS capacity will be reviewed with the Value Assessment Panel and results will be communicated to all client groups commencing in 2008. Additional tools will be researched and implemented as appropriate to facilitate the communication of overall IT investment capacity and performance results on an ongoing basis.

Management Representation of the Status of Implementation of Recommendation 11 as of September 30, 2010

ITS Client Relationship Managers provide consistent and frequent communication to their clients with regard to project status and ITS' capacity to address these requests.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 11

Each business group has an assigned IT Account Manager who is responsible for meeting on a regular basis with the business representative(s) to discuss emerging initiatives/projects and projects in progress. The IT Account Manager shares the BVI scores and the complete list of prioritized projects as part of these discussions. Discussions are comprised of formal meetings, with agendas and documented minutes as well as informal communications via email and telephone. The IT Account Manager provides insight into high-level ITS capacity to the extent that it is available to complete a project and rough estimates of when projects may be completed. The IT Account Manager does not provide concrete timelines or detailed information on ITS capacity; hence business areas do not necessarily have a thorough understanding of overall capacity and timeline for their projects in the queue. All projects that are prioritized are deemed valuable to the City, but based on ITS capacity, not all projects may be completed in the year that they are prioritized.

OAG: % complete **80%**

Management Representation of Status of Implementation of Recommendation 11 as of Winter 2011

Management agrees with the follow-up audit finding.

The IT Account Managers are working closely with the client IT Business Partners as part of an "In Flight Project Review". The objective of this review is to prioritize

the client department's IT requirements and reduce the overall active IT-enabled projects within the City of Ottawa to create capacity.

The In Flight Project Review is scheduled to be completed in Q2 2011 and all requests and ITS capacity to address these requests will be communicated to all client groups at that time.

Management: % complete 80%

2008 Recommendation 12

That management share the value score and relative priority for all IT initiatives to manage expectations regarding the ITS capacity and ability to meet the required timeframes.

2008 Management Response

Management agrees with this recommendation.

See Recommendations 5 and 11.

Management Representation of the Status of Implementation of Recommendation 12 as of September 30, 2010

Client Relationship Management (CRM) provides the primary interface between ITS and the senior management teams in each of the corporate departmental units. This is accomplished by assessing needs, assisting in the definition of projects, developing and presenting business value cases and assisting management teams to prioritize needs, providing management business level intelligence to the IT management team. In addition, the value scores, results, and relative priority of all the ITS initiatives that are reviewed by the VAP and Mini-VAP are shared with the client groups through the Client Relationship Management function to ensure transparency of the process and manage client expectations.

Management: % complete 100%

OAG's Follow-up Audit Findings regarding Recommendation 12

The BVI scores, results and relative priority for ITS initiatives which are reviewed by the VAP and Mini-VAP are aggregated into a Project Scoring Summary document and communicated to client groups through the Client Relationship Management function. Expectations are managed through the use of Client Relationship Management IT Account Managers.

As discussed in Recommendation 11, while the IT Account Managers are meeting with their business representatives to communicate priorities and high level capacity of ITS, there is no formal documented schedule or timeline for the prioritized initiatives.

OAG: % complete 80%

Management Representation of Status of Implementation of Recommendation 12 as of Winter 2011

Management agrees with the follow-up audit finding.

As stated in the management comment for Recommendation 11, the ITS department is currently conducting an “In Flight Project Review”. The objective of the review is to prioritize the client department’s IT requirements in an effort to reduce the overall active IT-enabled projects within the City of Ottawa to create capacity.

The In Flight Project Review is scheduled to be completed in Q2 2011 and all requests and ITS capacity to address these requests will be communicated to all client groups at that time.

Management: % complete **80%**

2008 Recommendation 13

That management require all projects to go through the priority setting process prior to seeking funding approval via the Council budget approval process.

2008 Management Response

Management agrees with this recommendation.

The new processes and governance model approved by EMC on November 22, 2007 requires that all IT projects go through the priority-setting process prior to seeking funding approval via the Council budget approval process. The process allows for exceptions that would be addressed on a case-by-case basis (e.g., where the IT component of a capital request is secondary to the project, such as technology for a new Library which has already been approved by Council). EMC directed ITS to work with Corporate Planning and Financial Services to integrate the IT priority-setting process with the corporate planning cycle and budget process. This work is underway and will be evaluated in conjunction with the 2009 budget process.

Management Representation of the Status of Implementation of Recommendation 13 as of September 30, 2010

Since June 30, 2008, all IT projects go through the priority-setting and approval process (Value Management). Branches use this information to develop budget requests where funding does not exist within an existing Council-approved operating or capital envelope.

Management: % complete **100%**

OAG’s Follow-up Audit Findings regarding Recommendation 13

As part of the new prioritization process, all projects go through a priority-setting process prior to approval by Council, including BVI Scoring and the development of a business case and a concept value case. Exceptions are addressed on a case-by-case basis by the VAP or the Mini-VAP.

OAG: % complete**100%**

2008 Recommendation 14

That management centralize the Corporate IT Capital budget within a single funding envelope and ensure that annual IT Capital budgets are presented for approval on a consolidated basis.

2008 Management Response

Management disagrees with this recommendation.

For the past two budgets (2007 and 2008), the capital budget has been presented and status reports were prepared by service area. From an IT perspective, this means that if an IT-related project relates to a specific service area such as Long Term Care, that project will be presented in the Long Term Care service area. This was recommended and approved by Council in 2004 in the "It's About Accountability" document prepared by Plamondon and Associates. Corporate IT budgets that do not relate to a specific service area are presented together.

More recently, the Mayor's Task Force on e-Government conducted an external best-practice assessment of the IT budget, and specifically noted that combining IT capital funds into one budget confuses accountability. The City's SAP system can easily produce a consolidated report of IT spending from numerous cost centres and internal orders.

Since IT exists to make other branches more effective and efficient, it is important for Council to ensure that departments exploiting the technology are accountable for the benefits. To that end, the LRFP Sub-Committee recently recommended to Council that "staff be directed to incorporate anticipated efficiency savings from investments in technology in the efficiency column of the budget pages for affected branches for future budgets". ITS will support Financial Services to implement this recommendation for the next budget cycle.

Management Representation of the Status of Implementation of Recommendation 14 as of September 30, 2010

At the IT Sub Committee on May 17, 2010 Councillor Legendre moved the following motion:

"Whereas the Auditor General has recommended centralization of all IT Capital budgets; and Whereas the Mayor's Task Force on e-Government and City staff have recommended the opposite to improve accountability; Therefore be it resolved that the Information Technology Sub-Committee recommend that Corporate Services and Economic Development Committee and Council receive this report for information and approve that the City retain flexibility to allocate budget most effectively as recommended by staff of both IT and other departments; and, that all significant IT Capital projects be reviewed by the IT Sub-committee, with joint reports from both IT and affected departments."

The motion was carried at CSEDC on June 1, 2010 and Council on June 9, 2010.

Management: % complete **100%**

OAG's Follow-up Audit Findings regarding Recommendation 14

Based on the above-mentioned motion carried by the CSEDC on June 1, 2010 and Council on June 9, 2010, no further action is required on this recommendation.

OAG: % complete **100%**

Mayor's Task Force on eGovernment - 2008 Recommendations

Eight specific recommendations were made to allow the City and its taxpayers to get the most from technology.

1. Institute a governance model that involves everyone from City Council to staff.
2. Require a citizen-centric focus for all City programs and services.
3. Implement outcome-based measures for all activities, services and projects.
4. Produce investment plans for each branch identifying how technology will be leveraged to improve service while reducing costs.
5. Ensure that when council directs staff to take action, the resulting proposal includes a technology alternative that directly or indirectly offsets any increase in staff.
6. Compare Ottawa's service delivery, on an outcome and cost basis, with service delivery in the best public and private organizations in the world, and not just with service delivery in other Canadian municipalities.
7. Ensure that all investment plans respect and leverage the City's common technology infrastructure, architecture, processes and applications.
8. Invest in a Chief Strategist for service delivery, reporting directly to City Council, who will drive the implementation of these recommendations.

Management indicated that its goal is to have the recommendations progressed to the point where they will make fundamental changes to the budget process for the coming year.

Management Representation of the Status of Implementation of the Mayor's Task Force Recommendations as of September 30, 2010

Of note, Council did not approve the recommendations of the Mayor's Task Force on eGovernment as presented; but passed the following motion, which contained the following five recommendations:

1. *Direct staff to assess the business case for strategic investments in technology in their day-to-day operations, and that a technology assessment and business case be included in every Committee and Council report, where relevant, so that*

Council has as much information as possible regarding the potential for technology investments to improve service to citizens;

Complete. The standard Council report has been modified to include a section on the Technology Implications to provide Council with the assessment of the technology investments available to improve service to citizens in the most cost-effective manner. In particular, technology assessments and associated business cases played a fundamental role in shaping the 2010 budget process as reflected in the Technology Roadmap, which serves as a key support to efficiency savings and service excellence.

- 2. Direct the Executive Director of Business Transformation Services to bring forward a report to Corporate Services and Economic Development Committee and Council that reviews the City's Data Dissemination Policy and makes recommendations to amend the Policy to allow for Open Access to Public Data that will benefit the City and its citizens;***

Complete. The City of Ottawa Open Data Report ([ACS2010-COS-ITS-0005](#)) recommended that Council adopt the principles of Open Government and declare City of Ottawa data to be "Open". The report was tabled on April 19, 2010 at the IT Sub Committee, forwarded to Corporate Services and Economic Development Committee on May 4, 2010 and approved by Council on May 12, 2010.

- 3. Direct the City Clerk to bring forward a proposal for electronic agendas, as a recommended technology investment from the Technology Investment Fund, to be included in the 2009 Capital Budget;***

Complete. The proposal for the electronic agendas was received by the ITS department and \$275,000 was allocated from the IT Investment Fund capital account to fund the Council Agenda Building tool initiative.

- 4. Direct that the Mid-Term Governance Review include an option for the establishment of a committee or subcommittee of Council to review the potential for large-scale investments in information technology and make recommendations to City Council on those investments; and***

Complete. On September 9, 2009, Council approved the establishment of a subcommittee of Corporate Services and Economic Development Committee (CSEDC) to focus on large scale technology initiatives ([ACS2009-CMR-CCB-0051](#)). The Information Technology Sub-Committee mandate is to advise City Council on large-scale investment in information technology and long-term planning of information technology needs for the corporation of the City of Ottawa.

- 5. Direct the City Manager to bring forward to the October 21, 2008 meeting of the CSEDC Committee a report on the establishment of the position of Chief***

Technology Advisor indicating the term, mandate and proposed budget for approval at that time.

Complete. On October 8, 2008, Council approved a motion that the position of the Chief Technology Advisor, as recommended in the Mayor’s Task Force on eGovernment (the “chief strategist for service delivery”), being one of the two “most critical changes that [the Task Force] identified”, be approved as a temporary contract position reporting to the Deputy City Manager of City Operations, in order to provide external advice on implementing a governance model as well as outcome-based measures for all activities, services and projects. Mr. Rob Collins was appointed in late 2008, and has continued to advise the Deputy City Manager of City Operations and the IT SubCommittee on these and related matters. Mr. Collins’ contract will end with this term of Council.

Management: % complete **100%**

OAG’s Follow-up Audit Findings regarding Mayor’s Task Force Recommendations

OAG: % complete **100%**

4 SUMMARY OF THE LEVEL OF COMPLETION

The table below outlines our assessment of the level of completion of each recommendation as of December 2010. Subsequently, management’s response in the Winter of 2011 was in agreement with that assessment.

CATEGORY	% COMPLETE	RECOMMENDATIONS	NUMBER OF RECOMMENDATIONS	PERCENTAGE OF TOTAL RECOMMENDATIONS
LITTLE OR NO ACTION	0 – 24	-	-	-
ACTION INITIATED	25 – 49	-	-	-
PARTIALLY COMPLETE	50 – 74	-	-	-
SUBSTANTIALLY COMPLETE	75 – 99	11, 12	2	14%
COMPLETE	100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14	12	86%
TOTAL			14	100%

5 CONCLUSION

In response to the budgeting and capital expenditure recommendations, the audit recommendations have been fully addressed, through the implementation of quarterly reporting, for both IT-owned and client owned capital expenditures.

The updating of Portfolio Value Management Framework (PfVM) process and its associated tools has fully addressed the majority of the audit recommendations from the 2008 Audit of Information Technology Capital Expenditures and Project Approval Process. The updates included:

- Providing overall guidance on Initiating an IT Project (using a 5-step approach);
- The identification of project owners for all projects;
- The requirement of a Concept Value Case;
- The distinction of projects which are transformational in nature from those which are sustaining or operational;
- The development of formal priority setting criteria and tool, through the creation of the Business Value Index (BVI) Scoring Tool to aide in the prioritization of projects prior to seeking funding approval;
- The review by the Technology Architecture Panel (TAP) to ensure overall feasibility and performance of options analysis;
- The requirement of Business Case Template for all growth and transformation projects;
- The clarification of voting rights for the Value Assessment Panel (VAP);
- The requirement that all projects are reviewed by the VAP or Mini-VAP (depending on project size and cost) review prior to approval by Council;
- The communication of value score and relative priority for all IT initiatives using the Project Scoring Summary; and
- The development of a new escalation process and the clarification of the Executive Management Committee (EMC) as final authority.

One area not fully addressed, but substantially addressed, was the formal and informal communication of overall requests and the informal communication of ITS capacity to address those requests.

Beyond this, the Project Management Office (PMO) maintains all of the documents related to the new prioritization process and continues to monitor their progress. The PMO has committed to making continuous process improvements as potential changes are identified.

6 ACKNOWLEDGEMENT

We wish to express our appreciation for the cooperation and assistance afforded the audit team by management.