SURREY
CITY OF PARKS

Corporate Report

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COUNCIL-IN-COMMITTEE

TO:	**Mayor & Council**	DATE:	**June 15th, 2006**
FROM:	**General Manager, Finance, Technology & HR**	FILE:	**1340-01**
SUBJECT:	**City of Surrey Information Technology Strategic Plan**		

RECOMMENDATION

That Council receive this report as information.

INTENT

The purpose of this report is to provide information to Council relative to the formulation of an Information Technology Strategic Plan for the City.

BACKGROUND

The City of Surrey continues to face increased demands on its information technology resources as rapid growth occurs. In 2005, the City completed a three-year effort to retire older systems and implement more modern mainstream technologies. To accomplish this, Surrey has relied on a technology planning process that is project-focused and typically uses a one-year time window. While the process takes business goals into account and has been largely successful in upgrading the City's technology, concern exists that it might not properly balance short-term needs with longer-term goals.

To address this concern, staff went to RFP in October 2005 and subsequently engaged Pacific Technologies, Inc. (PTI) to work in partnership with a Project Steering Committee consisting of senior management representatives from all City departments to prepare a corporate-wide Information Technology (IT) Strategic Plan.

PTI was established in 1993 and specializes in local government Information Technology strategic planning. The Company has direct experience with municipal business functions and a proven track record of plans that get funded, implemented and delivered on their promise. Their clients include the cities of Seattle WA, Fresno, CA, Scottsdale, Az and Boise, ID.

The objective of this undertaking was to:

- Determine how to align the use of information and communication technology with the City's business and policy goals;
- Provide an actionable "blueprint" for deployment of IT resources in direct support of those goals, and
- Examine the City's tactical and strategic technology needs.

PTI, in partnership with the Project Steering Committee, conducted interviews, formed focus groups, and held workshops involving over 160 City stakeholders. The Steering Committee provided critical guidance to the project team throughout the project.

The consultants were asked to create a Five-Year Information Technology Strategic Plan, based on a comprehensive assessment of the City's current Information Technology position, within the context of the City's overall strategic direction. To accomplish that, they analyzed information related to technology planning, policies and procedures, Citywide planning initiatives, quantitative data related to technology spending and support, staffing levels, staff deployment, infrastructure, application software and governance. They then benchmarked this information against their extensive database for other large cities.

The project was completed in three major phases over a six-month period:

- **Assessment** – an evaluation of the current IT position based on decision making, service delivery, applications and technical infrastructure;
- **Strategy Development –** the Project Steering Committee, in partnership with PTI, then leveraged the information collected at the assessment stage to develop recommendations for addressing the major findings and to establish strategic IT goals, and
- **Implementation Planning –** Based on the recommendations from the 'strategy development' stage, a work plan was created that defines a key set of projects intended to implement the recommendations.

The result of the above exercise was intended to create a 'blueprint' for the future of information technology at the City, with the ultimate objective of moving towards agreed-upon strategic goals. The Plan, as it was created, is intended to be a living document that should be reviewed annually.

DISCUSSION

The following is a summary of the results of the planning efforts as outlined in the Information Technology Strategic Planning document dated April 17, 2006 as prepared by PTI, along with recommendations from Staff:

A. Strengths of the City's Information Technology Function

The assessment brought to light, positive aspects of information technology at the City, specifically they were:

1. Professionally Managed IT Organization: The IT Division operates in a highly efficient manner. Staff is very proficient at all levels of the Division;

2. Large Standardized Environment: There are standards, policies and procedures in place and significant progress has been made in implementing Information Technology Infrastructure Library (ITIL) practices. ITIL is an integrated set of IT services management best-practices with common definitions and terminology, for delivering quality IT services.
3. Information Technology Investment Committee: The City's Information Technology Investment Committee (ITIC) is comprised of representation from each department and is a forum for decision-making and a mechanism for directing strategic investments;
4. Automation of Municipal Functions: Virtually all City functions have some degree of automation. This helps to increase staff productivity and to enhance customer service;
5. Updated Technology: The City has a Technology Replacement Reserve Fund that is used to ensure that desktops, workstations, software and servers are up to date. This ensures continuity of IT service availability and avoids unplanned expenditures to replace obsolete technology, and
6. Reliable, Safe and Secure Network: The City's network infrastructure is well designed and effectively supports day-to-day business operations ensuring information privacy and system integrity.

B. Key Findings and Recommended Solutions

The consultants found that the City's information technology organization is much stronger than most others that they have studied. The following is a list of key findings and recommended solutions from PTI, followed by comments from City Staff:

1. Information Technology Decision-Making

An Information Technology Investment Committee is in place. Aligned with best practices, the city has a forum for making IT decisions and a body to provide strategic direction.

Key Findings:

a. Existing IT decision-making processes have tended to be more tactical in nature. There is a need for a formal, written plan for making major investment decisions to ensure Surrey's IT governance process provides clear City-wide strategic direction;
b. Although the City has established committees for the City website and GIS, the focus of each of these committees is more operational than strategic. A long-term vision for these key technologies should be created.

PTI Recommendations:

a. Alter the composition and focus of the ITIC to primarily or exclusively include general managers. The focus will be to set strategic priorities while shifting the responsibility for initial project review and priorization to 'interest groups';
b. Develop 'interest groups' for major City functional areas that cross-organizational boundaries (eg. Land, website, public safety, finance, etc). The purpose of these groups is to steer development of more detailed plans, serve as the primary body for ranking initiatives and to provide appropriate communication to all stakeholders;
c. Use a balanced scorecard (or similar process) to rank proposed projects. This will objectively priorize and align IT initiatives with City business objectives;
d. Implement an IT Decision-Making Model that builds on the existing IT decision making model, that will help provide strategic IT direction as well as ensure that Staff make informed IT investment decisions that clearly align with overall business priorities, and

e. Conduct regular workshops on emerging technologies for senior managers that will help them to remain current with innovative solutions that address business issues. It will also infuse the enterprise with a forward-thinking approach to technology.

Staff Comments:

a. The Senior Management Team (SMT) should provide direction to ITIC to identify a series of 'interest groups' for major functional areas that cross organizational boundaries and to recommend a ranking process for IT initiatives that would align with the City's business objectives;
b. After the completion of above initiatives, the current ITIC membership should be reviewed with a view of including primarily general managers, with the Manager, Information Technology as chair. The remaining members could then be a valuable resource to the new 'interest groups';
c. At least annually, senior IT staff should conduct a workshop to educate SMT on emerging technologies that may provide innovative solutions for addressing business issues, and
d. Business units will continue to be responsible for assessing and priorizing their departmental specific needs and bringing them forward to either an 'interest group' or ITIC.

2. *Automation of City Functions*

While there is some form of technology in almost every function, the City lags behind other municipalities in some areas of automation. Surrey is missing opportunities to streamline and automate functions, contrary to best practices in some instances (e.g. wireless field automation and Intranet).

Key Findings:

a. Computron, the City's financial system, is not the most recent release and has several unimplemented modules;
b. Although Staff is able to manage paper and electronic documents, there appears to be operational inefficiencies. A document/content management solution would effectively limit the City's liability surrounding lost, inaccurate, or inappropriately managed information and reduce the time required to satisfy citizen information requests;
c. There are currently two maintenance management applications in operation configured as point solutions to enable more specific department needs. One application is not versioned to the current release. The use of two systems can lead to redundant services and increased IT support costs. Staff is also required to learn multiple application interfaces and the City misses opportunities to standardize business practices;
d. The City should continue to expand its eGovernment position;
e. There is no master address database. Addresses are stored in a variety of applications, using different formats. This has potential to result in conflicting address information, redundant data entry and difficulty in getting a comprehensive picture of all activity associated with a particular address, and
f. The City does not have an enterprise customer relationship management (CRM) system nor a 311 service.

PTI Recommendations:

a. Upgrade the City's Finance System (Computron) so that Surrey can continue to receive support from the vendor and have automated support for the latest industry best practices. This upgrade will also provide an opportunity to evaluate and streamline business practices;

b. Implement Computron modules for fixed assets, workflow, integrated purchase requisitions, accounts receivable, contract management and project accounting. By upgrading and implementing these modules, the City can expect to see improved accounting controls, cost savings, and tighter integration with other City systems. It will also position the City for a potential future upgrade to a more robust and comprehensive enterprise resource planning solution, and

c. PTI developed and reviewed an extensive list of potential strategic planning initiatives with the Project Steering Committee. The Committee created a short list of strategic program areas important to Surrey and ranked them using a voting process. These strategic program areas include the following:

   i Enhancement of the website with an emphasis on a customer-centric design and increased transactional capabilities for high volume customer contact points;

   ii Integration of land-related information across all major City applications, with a long-term vision of creating a single source for address and property data, including ownership records, tax history, permit history, geospatial data, etc;

   iii Investment in enterprise content management, providing a mechanism for managing the creation, retention and appropriate destruction of the city's electronic records, including email, documents (e.g. word documents) and scanned materials (e.g. plans, images, correspondence, etc);

   iv Investment in field automation, leveraging wireless technology and mobile computing devices for field staff as a mechanism for increasing efficiency and productivity;

   v Investment in business intelligence (BI) that will further leverage existing software licences. BI is the least expensive major initiative and offers a high payback by enhancing decision-making through better analytics, and

   vi Customer relationship management (CRM) enterprise software and the implementation of a 311 service could be looked at in the longer term, once the critical priorities have been dealt with.

   Once implemented, the above initiatives reflect a combination of Surrey-specific business needs as well as adoption of industry trends and best practices in both public and private sectors. Surrey can expect to realize significant gains in operational productivity and service to constituents.

Staff Comments:

a. The upgrade of the Computron Financial System to version 9.0 was successfully implemented in May;

b. Finance and IT staff are currently assessing the benefits of implementing additional Computron modules. Some are expected to be implemented later this year. Others may be included in 2007, if feasible;

c. Staff will develop a strategy for a more efficient automated system of managing the City's public works and parks maintenance program by mid 2007;

d. ITIC will work with the Website Committee to develop a Website eGovernment Strategy that will move Surrey forward in the investment in eGovernment;

e. Staff will contain the scope of the integrated land information program area to ensure a practical approach. They will focus on creating a solution that ensures data integrity and consistency with various system integration points for key land information elements;
f. Staff will continue to utilize the "Business Effectiveness Improvement" program area to enable department specific initiatives brought forward by business units in support of their objectives,
g. Staff will monitor to determine if longer term regional plans evolve to implement a 311 service, and
h. Once the ITIC has identified the City's 'interest groups' and they have recommended a ranking process for capital investment in information technology, all of the program areas identified above will have their submitted projects evaluated.

3. *Technical Infrastructure*

PTI noted that, from an infrastructure perspective, Surrey operates efficiently and the network infrastructure appears to be sufficient for present needs.

Key Findings:

a. IT operates in a largely standardized environment and the City's hardware and software are kept up to date. Standards lower costs, improve security and enhance system uptime. The City also benefits from the ability to leverage large contracts for purchasing technology;
b. The City's network will need to increase its bandwidth to accommodate emerging technologies. Significant investment is required for deploying voice-over-IP, video conferencing and other data intensive applications;
c. No wireless field access to the City's network exists. Contrary to industry practices, the City does not take advantage of wireless mobile computing devices to reduce trips back to the office. There is no enterprise-wide standard for wireless mobile computing support or related strategy;
d. Staff can be better prepared to resume IT operations in the event of a major service disruption. They plan to adapt Firehall #1 to accommodate an alternate data centre, and
e. There is potential room for server consolidation. This would reduce support costs and the total cost of ownership over the life of the hardware.

PTI Recommendations:

a. Continue to enforce network security and infrastructure standards and to pursue its structured approach to asset management;
b. The City may need to pursue network upgrades as well as ISP bandwidth upgrades for high-bandwidth applications such as enterprise content management, VOIP, video conferencing or other similar technologies;
c. Contract with a regional cellular service provider to enable wireless mobile computing access to City systems. This technology offers realizable efficiency gains through reduced trips back to the office and real-time data access, as well as improved services for constituents;
d. Prepare a formal IT Disaster Recovery Plan and invest in the creation of a disaster recovery site;
e. Implement WiFi 'hotspots' at strategic locations such as libraries and City Hall, and
f. Invest in further server consolidation to reduce support and maintenance costs.

Staff Comments:

a. Conduct a network capacity study and upgrade the network to improve response time on the City's Internet access, for instance, as it relates to COSMOS and to enable appropriate performance for the growing number of web-based applications that are becoming more bandwidth intense;

b. As further technology is planned to be introduced, its impact on the network infrastructure will be anticipated. Any resulting network upgrade requirements will be incorporated as part of the project scope;

c. Depending upon ITIC's recommendations, it is assumed that an 'interest group' will be formed to evaluate the City's need to automate field work processes such as building permits, inspections, and bylaw infractions. As part of this process, the Group will also evaluate the need to contract with a regional cellular service provider to implement wireless mobile computing access to City systems;

d. A formal IT Disaster Recovery Plan will be prepared and a disaster recovery work site will be created to accommodate the Plan;

e. Establish WiFi 'hotspots' at the libraries and recreation centres on a pilot basis. As this method becomes more reliable and secure, the use of this technology will be expanded, and

f. Staff will explore the possibility of further server consolidation.

4. *Resource Allocation*

Surrey lags behind industry best practices in staffing levels for areas such as server, security and network administration and business systems analysis.

Key Findings:

a. Surrey is not able to keep its entire application portfolio current. This can limit the City's ability to undertake new initiatives and can eventually impact services to citizens. Also, if software is kept current, the City then has the ability to take advantage of new capabilities inherent in the updated products;

b. As the City's population continues to grow, more pressure will be placed on service delivery. This will mean that additional business unit staff may be needed. A properly staffed IT Division can help the entire City improve productivity;

c. The IT Division spends a significant amount of time on capital projects. There is little labour distinction made between capital projects and day-to-day operations. Service levels for maintenance activities are diminished when staff is constantly balancing resources between capital and operating needs, and

d. In order to minimize implementation costs, final documentation, post implementation follow-up and ongoing maintenance of new software is not usually given a high priority when balanced against other critical IT needs. This typically results in under-utilized software, gaps in functionality and end-user frustrations.

PTI Recommendations:

a. In order to address the current understaffing issues in the Information Technology Division, PTI is recommending that staffing levels be increased in the areas of business application support, business systems analysis and the administration of the network, security, servers and telephony, and

b. As new technology is introduced to the City, further staffing requirements will have to be addressed.

Staff Comments:

a. Management is aware that when compared to other surrounding municipalities, Surrey has less staff per capita in all City departments. Over time, this has provided staff with many opportunities to grow within the organization and to be challenged by 'thinking out of the box', which has also earned the City one of the lowest turnover rates in the region. City staff pride themselves on being part of a lean organization that enables them to practice innovative ways of efficiently providing services. That said, dollars spent on the right technological solutions could easily be leveraged into significant savings. Staff will conduct a review of the resourcing requirements of the technology functions throughout the City to determine the optimum staffing levels for current operations as well as 'after-hours' support;

b. Staff will also conduct a review of the amount of time the Division currently spends on capital-related functions and re-allocate funding between operating and capital programs to better match the actual activity. The cost of capital projects will be more accurately reflected. This will allow staff to re-allocate resources to address staffing needs in critical areas of the organization such as IT. This change will be reflected in the 2007 Financial Plan to be presented to Council in November;

c. Business cases are developed for IT projects. Staff will ensure that all future business cases will include the cost of all City staff required to implement the technology as well as the on-going cost of operating and maintaining the system;

d. In order to relieve the pressure of the implementation of capital projects, staff will consider more effective use of consultants, contractors and temporary employees to complement our own staff, and

e. As new systems are implemented, such as a document management system, responsibilities for optimization of business use of the system and functional expertise will reside in the business area. To ensure maximized value is received from investment in new systems, staff will strive to create an overlap of functional and technical expertise between the business units and IT. A partnership approach will be used in delivering services. This concept has already been implemented with PeopleSoft.

C. Summary

Many of these initiatives will build on the City's existing investment in technology and also properly plan for future investment in new technology. The capital costs of some of the initiatives outlined in this report are already included in the Five-Year Financial Plan. Other initiatives will be added in future Financial Plans as they are brought forward. On-going costs will be identified in business cases and reviewed as part of the worthiness of each project. Estimated costs and expected benefits for each recommendation are included in the IT Strategic Plan. This Plan will be reviewed and updated each year, prior to the presentation of the Financial Plan.

CONCLUSION

The IT Strategic Plan is well thought out and provides both breadth and depth in planning for future IT investments. The process revealed no surprises, confirming for the City's senior managers that past technology decisions have been sound, and that future IT investment will build on that.

The process of preparing the plan provided an opportunity for participants to consider and prioritize the opportunities for investment in technology, within the context of overall City direction, best practises, their own experience and the experience of the PTI consultants. PTI brought a proven, business-driven methodology to the process that engaged participants and fostered shared ownership.

The IT Strategic Plan will be used as a framework for moving forward with IT investment. The City can expect that funding the recommended projects will yield significant benefits. This will help Surrey maintain its lean approach to staffing in the face of increasing demands for services resulting from population growth. The recommended technology investments will help the City minimize the need for new positions by improving operational efficiency and allowing for citizen self-service.

In addition, the planned projects will help ensure that Surrey keeps pace with growing citizen expectations for technology-driven services from the public sector. Capabilities such as extensive online service offerings, online availability of public information, and wireless network access from City facilities are becoming the norm, and must continue to be expanded if Surrey is to remain comparable to its peers. These features also contribute to Surrey's attractiveness as a place work, live and to do business.

Finally, the recommendations will ensure that Surrey's vital IT infrastructure remains reliable, secure, responsive and capable of helping the City recover in the event of a disaster that interrupts business operations.

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