

Memorandum

City of Lawrence

Information Systems Department

To: David L. Corliss
City Manager

From: James Wisdom
Interim Information Systems Director

cc:

Date: April 17, 2008

Re: Information Systems 2010 Budget Request

Overview

This document summarizes the Information Systems Department budget request and important issues for the 2010 budget year. Information Systems is primarily an internal service delivery department that supports the technology needs of other departments. The department's technology support covers the following primary areas:

- Desktop computers, servers, networking and security
- IBM i5 midrange system housing all financial & building inspection software
- Geographic information systems (GIS)
- eGovernment services (in tandem with City Manager/Public Information division)
- Telecommunications
- Document imaging

The Information Systems budget, aside from personnel costs, largely consists of expenditures for annual software license fees, computer and peripheral maintenance, and telecommunication-related expenses such as Internet connectivity, telephone trunking, and data circuits. Since these costs are for the most part not optional the department's budget needs are tied to market increases for these services. Additionally, most of these services are in support of the entire organization rather than department-centric.

Given the challenge of annually increasing software and hardware maintenance fees, the submitted budget still complies with the city manager directive of maintaining a no-increase in the 2010 budget outside of personnel costs.

Program Improvements and Significant Issues

- **Unfilled Information Systems Network Technician position**
Information Systems lost one Systems Technician position in the 2009 budget process, and the department currently has another position that is vacant. It is important to emphasize that Information Systems be allowed to fill the position before the end of this calendar year, as any sustained loss of another position will create a very adverse situation for the department's support capabilities.
- **Replacement of City Hall phone and voice mail systems (\$689,981)**
The Rolm telephone system at City Hall is the central point of communication for City operations, not only for citizens needing services but for other city facilities that connect to this system. The City Hall telephone system was purchased in 1993 and has long been out of production. The City's voice mail system is also no longer supported. A significant issue is that replacement parts for both the phone system and the primary voice mail system must be now located from used equipment vendors. New features such as Voice over IP (VoIP), unified communications, and a host of other communication improvements cannot be implemented on these old systems. It is worthy to note that \$154,789 of this estimate is to replace older network switches and routers that were already needing to be replaced.

The current phone network is a hodgepodge of phone manufacturers and has over twenty different phone systems and multiple voice mail systems to manage. The estimated replacement costs above include implementing a single managed system that manages telecommunications for all locations. Replacing only the City Hall phone system would require purchasing out-dated technology that would cost approximately \$200,000, and that would still leave dependent systems such as the Law Enforcement phone system (which is as old as the City Hall system) and others in the same condition of needing upgraded also. Going beyond City Hall, it is estimated that it would cost approximately \$400,000 to \$450,000 to replace only the five systems for City Hall, the two Police Department locations, Wastewater Plant and the Kaw Plant. And, upgrading only these five locations would still leave many other City employees still using different phone and voice mail systems.

In implementing a VoIP solution, the voice and data networks become one allowing us to leverage future investments and ease future replacement costs. Information Systems recommends that the City's telecommunications system be replaced with a new system to provide reliable and improved service in the future.

In addition to considering this project as a program improvement, it could also be considered under the CIP budget process or as a lease-purchase agreement as several telecommunication manufacturers are currently offering multi-year leases with some interest rates as low as 0%.

- **Replacing Backup Equipment** (Program Improvement: \$80,157)

The City has received notification from the manufacturer of our current backup equipment that the seven year old unit currently used to backup the majority of servers will be considered "end-of-life" as of February, 2011. After that date, maintenance, updates and support will no longer be available. The current backup solution is a multi-drive tape autoloader using LTO-2 tape technology that backs up approximately 8 terabytes of data on a variety of servers using several different operating systems. Backup trends have since moved from tape technologies to disk-based backups using deduplication technology that greatly optimizes backup storage and resources. Information Systems has investigated a variety of backup manufacturer offerings in the recent weeks and the proposed backup equipment replacement is necessary to ensure the continued integrity and reliability of server backups.

- **Replacing City's Primary Router** (Program Improvement: \$14,816)

The "CityMain" router is the device that "directs traffic" on the network. It tells all the computers, servers, printers, and other devices where all the others are. This router also physically controls the connections to the Community Building, Central Maintenance Garage, Streets/Solid Waste, Indoor Aquatic Center, Clinton Water Plant, and sixteen (16) smaller buildings within the city. The router will be seven years and needs to be replaced.

- **Aging Network and Technology Infrastructure**

The Information Systems Department currently manages the City's technology infrastructure that includes servers, desktop systems, notebooks, routers, switches, firewalls, phone systems, Enterprise Resource Planning (ERP) software system and a host of specialized applications. Among this wide variety of equipment and applications are many potential large expenditures over the next few years that can't be covered under the funds the City typically allots for technology in recent budgets. Currently, there are 365 personal computers that are old enough that they are out of warranty and there are many network components that are seven years old, or older.

Information Systems has been recommending the replacement of the City's phone system for several years, and there will come a day that the issue can't be neglected. The replacement of the phone system will be a complicated process that will include changing the types of communication lines used and many configuration considerations. The City, and the citizens of Lawrence, would be better serviced if this was implemented in a planned phased approach rather than waiting until the equipment fails.

The City's AS/400 server that supports the City's financial, payroll, budget, personnel and many other applications should be replaced in the 2011 or 2012 budget, an expenditure that will more than likely exceed \$100,000. The current network infrastructure for forty-seven (47) building locations has many network components that are seven years old or older and should be replaced. The City has a legacy ERP software system that has been used for twenty-one years and is based on technology that is being phased out. Although it would be an arduous task to

replace the ERP System, it would provide many improved benefits and services to the employees and the citizens of Lawrence in the long run.

The Information Systems department has \$315,660 of non-personnel funds in the recommended 2010 budget that are mostly consumed by annual software and hardware maintenance and telecommunication services. The department typically has about \$8,000 to \$10,000 a year for capital outlay expenditures that are available for technology replacements under the discretion of our department. Information Systems would recommend that a "Technology Reserve Fund" be created to identify funds allocated for planned and approved technology implementations, and scheduled replacements which could allow for funds to be set aside on an annual basis for future budget items. For example, if the AS/400 server is typically replaced every five years at a cost of \$100,000, it would be recommended that \$20,000 would be allocated each year to the Technology Reserve Fund for that specific purpose to ensure that the necessary funds were available when the replacement was needed. Information Systems would also recommend using project codes in the fund that would identify the amount of funds that had been set aside for each project and their purpose. Other organizations, such as Douglas County and the City of Olathe, use the type of funding methods as they have been described. If properly funded and managed, the Technology Reserve Fund could allow for the regular scheduled replacement of technology equipment in a more planned manner.

Summary

The submitted budget request will enable Information Systems to maintain existing services, software licensing, and hardware support. Your approval of the base budget and consideration of the program improvements is requested