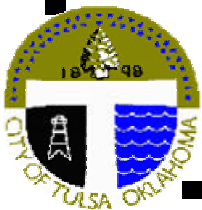


**Financial Systems Support**

**City of Tulsa  
Internal Auditing  
November 2008**





# Financial Systems Support



**City of Tulsa  
Internal Auditing  
November 2008**

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Chief Internal Auditor

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Phil Wood, CIA, CFA  
City Auditor

**AUDIT TEAM:**

Cathy Criswell, CIA, CPA  
Jim Bella, CISA  
Bill Mobley  
Tina McIntosh



## **Summary of Project**

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### **Scope:**

Review information technology procedures related to financial systems support.

### **Objectives:**

- Evaluate procedures for ensuring continuous service delivery
- Determine whether financial systems are secure
- Evaluate problem and incident resolution

**Overall Risk Exposure:** (Low, Moderate or High)

**HIGH**

**Conclusion:** (Satisfactory, Satisfactory-needs improvement, or Unsatisfactory)

**SATISFACTORY**

### **Significant Project Results:**

- The GEAC and Accounts Receivable system support functions are staffed by a very knowledgeable group of dedicated professionals who have gained the confidence and respect of the system's users.
- Problems and/or incidents related to the GEAC and Accounts Receivable systems are resolved quickly and efficiently by the technical support staff.
- There is a thorough and well tested backup plan for disaster recovery of the GEAC and Accounts Receivable Systems. Also, data and system files are adequately secured in an off-site storage facility at all times.
- System access is not always removed in a timely manner from employees who transfer jobs or terminate employment with the City.
- There is insufficient cross-training within the Financial System technical support group.

**Responsible Officer:** Ben Stout, Chief Technology Officer,  
Director of Information Technology Department

## **Findings, Recommendations and Management Responses:**

### **Finding 1:**

System access is not always removed in a timely manner.

### **Summary:**

System access is not always removed in a timely manner from employees who transfer jobs or terminate employment with the City. In many instances users have either terminated their employment with the city or been transferred to a different organizational unit days or sometimes weeks before their system access/permission codes were changed to reflect their new status.

The Systems Analyst/Programmer in the Information Systems Department responsible for maintaining user access/permission code tables does not always receive notification of a user's job status change in a timely manner. The user department supervisor relies on a copy of the personnel change authorization form to serve as notice to the IT department that an employee's status has changed. It can take an inordinate amount of time for this to occur even after the supervisor has transmitted the form to the Human Resources department.

This finding was first reported in October 2002 in the *Financial Systems – Mainframe System Security Audit*. The finding was also reported in September 2003 in the *Wire Transfer* audit. We understand that ITD is in the process of addressing the situation. We encourage consideration of the following recommendations as part of this effort.

### **Recommendation:**

- Supervisors who are responsible for processing the appropriate paperwork for employee terminations and transfers should also immediately notify the appropriate personnel in the Information Systems Department with instructions for removing or changing the access/permission codes for the transferred or terminated employee.
- Management should consider changing the Personnel Action form routing instructions to rout a copy directly to the Information Technology Department.

**Response:**

IT agrees with the finding. The IT department will implement a new user provisioning process to improve proper maintenance of user access/permissions to all City of Tulsa systems. The process will be facilitated through the IT Service Desk, and the high-level steps are as follows:

- HR receives a Personnel Action form for every employee termination or transfer
- HR sends an e-mail to the IT service desk to notify IT of all terminations and transfers
- The IT service desk opens a parent service ticket for each termination or transfer, and child service ticket to each IT team responsible for maintaining user access/permissions for any COT system
- The IT team(s) review the user access/permissions for their given system and make the appropriate changes (removal, alter permissions) per the service ticket, then close the child service ticket
- When all the child service tickets have been closed, the service desk updates and closes the parent service ticket

This process should be fully implemented by the end of 2008.

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**Finding 2:**

There is insufficient cross-training within the Financial System technical support group.

**Summary:**

There has been very little time devoted to cross-training for the professional staff. The ability of ITD to continue quality support may be impaired by not having depth of cross-trained expertise in case of staff losses. It is possible that certain financial system modules could have no technical support available for a period of time due to unscheduled absenteeism of the staff.

**Recommendation:**

Management should develop a cross-training plan for the Financial System support group which would allow Programmer/Analysts to be cross-trained in technical aspects of significant modules of the Financial System. Effective cross-training may require increased staff size.

**Response:**

IT agrees with the finding. IT Management will develop a cross-training plan for the Financial System support group. The plan will ensure that any single points of failure are addressed for support of the Financial Systems. The plan will be developed so that it can be accomplished without any additional headcount for the IT department.

The consolidation of the IT department also provides the ability to identify additional resources for cross-training from the current staff, if needed.

The plan will be developed in 1<sup>st</sup> quarter 2009.

### **Finding 3:**

Customer satisfaction surveys are not completed regularly.

### **Summary:**

Financial systems support personnel conducted a customer satisfaction survey in February 2007. The last customer satisfaction survey was done in 2000.

The February 2007 customer satisfaction survey was adequate for measuring traditional operational support metrics for which the Financial Systems Support staff considers itself responsible. However, the survey questions did not address broader issues such as the adequacy of supplied data, report formats and media, search capability, and future needs.

The survey was distributed only to personnel in the Finance and Human Resources Departments. Distribution did not include senior managers across the City who attempt using finance and imaging systems for making business decisions.

Many surveys were not signed. This did not provide a means to ask follow-up questions on negative comments nor pursue details on good suggestions.

Financial Systems Support personnel regularly attend Finance Department staff meetings. Attendance at staff meetings provides an opportunity to learn about issues which the Finance Department has with the financial system.

Again, however, the focus in the staff meetings is on the core mainframe processes, not on delivery systems that are outside the control of Financial Systems Support personnel. Delivery systems are the network, security and access control systems (via which users log on to the network), desktop PCs operating in a sub-optimal state and reporting systems such as Content Manager and On Demand. In discussions with other departments that use the financial systems, we have noted that they are satisfied with the performance of the Financial Systems personnel concerning support of core processes, but struggle with issues that may be due to either design or lack of training.

### **Recommendation:**

To preclude the possibility of a significant level of user dissatisfaction from developing, we recommend the following steps be taken:

- IT should conduct formal, annual surveys of the GEAC and Accounts Receivable systems users to determine their level of satisfaction with the system and the support provided by the IT staff.
- IT should design the customer satisfaction survey to include all aspects impacting user productivity and satisfaction. The form can be designed to group questions that are traditionally addressed by financial systems support and those that are broader IT issues.

- Survey distribution should include a broad representation by all departments of the City of Tulsa, not just the Finance Department.
- On a regular, informal basis IT staff members should personally visit with the users to further familiarize themselves with user needs, processing concerns, etc.
- IT staff should have a process to implement reasonable suggestions for improvement of service provided by the formal surveys and informal discussion.

**Response:**

IT agrees with the finding. IT is currently gathering customer satisfaction data via the IT service desk. When a customer closes a ticket, they have the option to rate the service they received from the IT department and provide comments. This data is being collected and reviewed on a regular basis.

IT will develop a formal annual survey to collect customer satisfaction data from all City of Tulsa business departments. The data will be reviewed by IT management as input to identify opportunities for IT service improvement and/or IT systems improvement. The first survey will be distributed in 2009.

#### **Finding 4:**

Contracts for services in support of financial systems have expired or were extended temporarily past expiration dates.

#### **Summary:**

Attempts to attract vendors to bid on IT contracts for financial systems have repeatedly failed. This occurs because contract terms and conditions set forth in bid information were in accordance with state law which requires that vendors assume unlimited liability.

The Oklahoma Attorney General issued an opinion dated April 14, 2006, addressing unlimited vendor liability. That opinion affirmed vendors are responsible for their own intentionally wrongful acts or negligence and that contractual terms can not limit the extent of vendor liability for wrongful or negligent acts. The opinion also provided the State (including municipalities) can not assume vendor liability nor release the vendor from it unless at the time the contract is executed funds have been appropriated and encumbered to pay for any contingent liability which might arise.

City employees believe vendors do not bid because they cannot afford to assume unlimited liability.

#### **Recommendation:**

Management should do one or more of the following:

1. Perform a legal review of the Attorney General's opinion to determine if there are viable alternative contract terms and conditions that adequately protect the City of Tulsa while limiting vendor liability. Investigate insurance, self-insurance and other financing sources as possible alternatives.
2. Initiate liaison activities with the Oklahoma State Legislature to address the requirements in law that produced the referenced Attorney General Opinion. In conjunction, gather documentation that the consequences of state laws discourage most vendors from bidding.
3. Determine if it is possible for the City to encumber or arrange for a source of funds dedicated to discharging possible liability responsibility prior to entering into a contract. This approach would provide funds to cover possible liability claims and thus allows for limiting vendor liability.

**Response:**

IT agrees with the finding. However, IT management does not view this as solely an IT issue, as it impacts all contracts for goods and/or services for all city departments. Resolution will require coordinated efforts between many departments, including IT, Purchasing, and Legal, as well as potential state legislative changes.

IT has submitted this on the list of items from the City of Tulsa that is submitted to the Oklahoma State Legislature for review on an annual basis. IT will continue to include this on the list each year.

### **Finding 5:**

The full range of factors that technology users might perceive as financial system interruptions are not monitored or addressed

### **Summary:**

Financial system uptime is excellent. Peripheral devices, and even the printer, have been so trouble free that traditional monitoring activities have ceased. IT management very narrowly defines “financial system interruptions” to be the mainframe and only two software applications that run on it. However, failure or slow-down in any of the intermediary components of the infrastructure which delivers financial information to clients is considered by clients as an interruption of the financial systems. Examples include log-on difficulties, EXTRA, network slowness, imaging system design, lack of training with the imaging and the financial systems, etc.

Often, IT can be proactive in solving technical issues before a problem impacts customer satisfaction and customer productivity. A proactive mode requires:

1. Monitoring incidental data such as customer reported incidents, technical logs, queues and other infrastructure measurements.
2. Analyzing incident data for discovery of predictive trends and indications of possible overarching/underlying problems which generate the incident data.
3. Responding to mounting incidental indicators to solve problems before they impact customer productivity and satisfaction.

The service desk software includes only basic components of the available modules and lacks a configuration database that collects incident data to aid in problem discovery. Without a consolidated configuration management database, the potential problem solving capability of the system is not being realized. By concentrating only on traditional data processing metrics, staff is not collecting adequate information about the user experience.

### **Recommendations:**

1. Establish a broader liaison function with the user departments.
2. Include system interruptions in the customer survey.
3. Upgrade the service desk software to enable tracking of system interruptions.
4. Adopt a proactive problem resolution style, which would include identifying relevant metrics, automating the collection of metrics, timely resolution of problems, and tracking recurring problems to be included in budget planning.

**Response:**

The IT department is currently working to develop and implement a comprehensive IT services strategy, following ITIL best practices. To date, the following items have been developed and implemented:

- IT Production Change Management
- IT Production Incident Management
- IT Production Support Contacts and Escalation Procedures for all IT systems

The following items will be developed and implemented in 2009

- System SLA's - documented Service Level Agreement for each City of Tulsa system
- System Monitoring - proactive monitoring of system resources to notify appropriate IT personnel of potential service impacting conditions so that IT personnel can take appropriate action to resolve before the condition occurs
- Regular review of all service tickets to identify recurring problems and determine appropriate course of action to address them

## **Report Distribution**

Mayor

Councilor, District 1

Councilor, District 2

Councilor, District 3

Councilor, District 4

Councilor, District 5

Councilor, District 6

Councilor, District 7

Councilor, District 8

Councilor, District 9

City Auditor

Chief Technology Officer

Director of Organizational Development and Performance

General Counsel

Mayor's Chief of Staff

City Attorney

Finance Director

    Controller, Accounting Division

    Senior Administrative Services Officer (Finance)

Personnel Director

Council Administrator

Council Secretary

Mayor's Audit Advisory Committee