



Office of the City Manager

INFORMATION CALENDAR

June 12, 2007

To: Honorable Mayor and
Members of the City Council

From: *PK* Phil Kamlarz, City Manager

Submitted by: Christopher Mead, Director, Department of Information Technology

Subject: Update: Implementation of FUNDS\$ Change Management Audit Recommendations

SUMMARY

In response to a request by the Director of Information Technology (IT) and the City Manager, in FY03 the City Auditor conducted an Information Systems FUNDS\$ Change Management Audit. The purpose of the audit was to determine whether program change controls over the City's financial system, FUNDS\$, were adequate and if programming best practices were being observed.

The Audit findings and recommendations were presented to Council on May 4, 2004 (CF 33-04) and a progress report was presented to Council on March 21, 2006. The original audit report can be found on the City's website. (Link: [FUNDS\\$ Change Management Audit](#)). In the intervening time, the Department of Information Technology has made progress in implementing the audit recommendations and many of the recommendations have been implemented. This update is meant to keep Council informed of our progress.

CURRENT SITUATION AND ITS EFFECTS

The following reports on progress regarding each outstanding audit recommendation.

Finding 1: No formal written policies and procedures for implementing program changes to FUNDS\$.

Recommendation 1:

1.0 *Develop formal written policies and procedures for implementing program changes to FUNDS\$. The procedures should cover the processes of approving change requests, implementing a test and production environment, user testing, documenting results, reviewing results, migrating changes, and handling emergencies.*

6/12/07 City Manager Response:

- 1.0 Partially implemented. The delivery of a new version of the DoIT Service Request system has taken longer than anticipated to complete and deploy. However, beta testing on that system has been completed and it will be release for general use by June 2007.

Finding 2: Lack of segregation of functions and duties.

Recommendation 2:

- 2.1 *A programmer who modifies programs should not have access to production files and data. This is a preventive measure to mitigate the risk of unauthorized modifications that threaten application and data integrity. IT should develop a long-term plan to expand resources in the Application Development Division by either adding staff, implementing a policy of job rotation, or cross training to segregate incompatible functions as well as to reduce reliance on one single individual for performing critical tasks in the change process.*
- 2.2 *Access to production by the programmers should be restricted and subject to supervisory review and approval.*
- 2.3 *Require programmers to log and document program changes using a standardized format to facilitate ease of review and monitoring by the manager. When managerial review cannot be performed, peer review among the programmers should be in place. The bottom line is that all program changes should be subject to some form of review.*
- 2.4 *Consider installing a change control software package to facilitate the change process and to reduce reliance on human efforts.*

6/12/07 City Manager Response:

- 2.1 to 2.4 Partially Implemented. Funding was reserved in the FY 2006-2007 budget for a change control system. The Department of Information Technology has conducted an extensive review of products and an RFP is scheduled to be completed in April 2007 and the selected system implementation in August 2007.

Finding 3: Inadequate controls over H.T.E.'s remote access to FUNDS\$.

Recommendation 3:

- 3.3 *Develop and formalize procedures to improve controls over vendor remote access. The procedures should provide an auditable and internally controlled method of granting access to the vendor and monitoring vendor activities.*

- 3.5 *IT should consider negotiating with H.T.E. to restrict H.T.E.'s access to the test machine. IT should also consider limiting H.T.E.'s access to the production machine to emergencies only.*

6/12/07 City Manager Response:

- 3.3 Partially implemented. The change control software mentioned in the response to Recommendation 2, above, will also provide the ability to better monitor HTE activity. The software will log all changes made to software and, optionally, can be configured to disallow changes unless specifically approved by IT. In addition, the City recently revised the support agreement with HTE. This resulted in contract language that fortifies the city's interests, strengthens the provisions related to vendor access of the system and memorializes HTE's commitment to log all of their activities on the City's system.
- 3.5 Not implemented. The proposed change management software mentioned in Recommendations 2 above would help to address this issue by providing an audit trail that could be reviewed by IT at any time. The recommendation that HTE be confined only to the test environment is not practical. It would seriously impact service delivery, particularly to critical functions such as payroll and general ledger processing.

Finding 4: Not all FUND\$ related service requests are formally logged or documented.

Recommendation 4:

- 4.1 *Since the service request tracking system provides a consistent mechanism for tracking service requests, the Application Development Division should require departments to enter all FUND\$ service requests in the system. The electronic service request should serve as a base document for user initiated program changes requiring in-house support. No user initiated program change should be implemented without an authorized service request.*
- 4.2 *Consider enhancing the service request tracking system so that it can be accessed directly and used by management in IT and Finance to manage and to analyze FUND\$ related requests or problems.*

6/12/07 City Manager Response:

- 4.1 Partially implemented. A new change control form has been added to the DoIT Service Request system and all technical staff will be required to have all change request plans approved prior to making any change to the City's software. The new form will be implemented by June 2007.

- 4.2 Partially implemented. All users in all departments will be able to view all service requests for their department with the new version of the service request system which will be implemented by June 2007. IT is currently meeting on a monthly basis with most departments and provides a report of all open and pending service requests.

Finding 5: FUNDS modules continue to not have module leaders.

Recommendation 5:

- 5.1 *The City Manager, Human Resources, Finance and IT together should perform a final review of the A.R. on “Application Experts”. Once the review is completed, the updated A.R. should be issued and distributed to City staff.*
- 5.2 *Direct the user department directors to officially designate a qualified “Application Expert” for each FUNDS module.*

6/12/07 City Manager Response:

- 5.1 Partially implemented. The A.R. has been drafted and is being reviewed by the Technology Governance Group (TGG). The new target date for implementation is November, 2007.
- 5.2 Not implemented. The memo to the department directors will be issued as soon as the Application Expert A.R. has been issued in November 2007.

Finding 6: Concerns with FUNDS version upgrade.

Recommendation 6:

- 6.2 *IT should consider including in the service support agreement a provision requiring H.T.E. to provide complete documentation of their changes and to be responsible for timely correcting problems resulting from incomplete documentation.*
- 6.4 *Since recurring costs and efforts are required to maintain custom programs, a cost and benefit justification should be required for all program change requests submitted by user departments. When a reasonable justification cannot be provided, IT should retain the right to deny the request.*

6/12/07 City Manager Response:

- 6.2 Implemented Feb. 2007 IT aggressively negotiated contract language with HTE in the latter part of 2006. While some concessions had to be made, a number of new provisions were added to the agreement, particularly in the areas of documentation, change control, and support protocol.

- 6.4 Implemented Oct. 2006 IT carefully reviews each request and evaluates the impact of each on our overall system support workload. In addition, IT meets monthly with most departments and discusses all such requests in context to departmental and citywide needs.

Finding 7: Project management methodology and IT governance are not formalized.

Recommendation 7:

- 7.2 *The draft IT Master Plan should undergo a thorough review process by the appropriate group. After recommended changes have been considered and incorporated, as appropriate, the IT Master Plan should undergo final review and approval by the City's policy group and the City Manager.*

6/12/07 City Manager Response:

- 7.2 Partially Implemented. The previous Master Plan submitted to the former City Manager Weldon Rucker for approval is now out of date. IT will revise the plan to be in alignment with the City's current needs and seek the approval of the City Manager not later than December 2007.

BACKGROUND

The Department of Information Technology is responsible for maintaining and supporting the City's financial system, commonly known as FUNDS\$. The May 4, 2004 audit raises many valid points regarding formalized methods, software maintenance record keeping and management participation in decisions to modify existing software or create new software. The Department of Information Technology has conducted a thorough review of existing practices, carefully considered the audit recommendations and taken a pragmatic approach to implementing more formalized methods that will reduce the City's exposure to damage due to either inadvertent or malicious software failure. In addition, all requests for software development, acquisition or enhancement are carefully considered in context to the return on investment and the organizational needs of the City.

POSSIBLE FUTURE ACTION

The Department of Information Technology continues to refine its software maintenance procedures and to pursue the acquisition of software to facilitate and enforce those policies. Another progress report will be delivered to Council no later than December 18, 2007.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

The current estimate for obtaining change management software is \$15,000 - \$25,000 (General Fund) for the initial purchase and a recurring software support cost of \$1,500 - \$2,500. If additional staff is added to facilitate the division of duties recommended, an additional \$162,000 - \$202,000 per year will be required.

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