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**Enterprise Resource Planning System Implementation
Report on Internal Auditing's monitoring activities
For the fiscal year ended June 30, 2017**

Office of the City Auditor

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## Description of Enterprise Resource Planning (ERP) System

In June of 2016, the City of Tulsa acquired new financial, human resources, content management and permitting systems from Tyler Technologies Inc. These systems will be replacing an archaic patchwork of systems that have led to redundant processes, manual work-arounds, and informational silos. The City is currently in the process of implementing the new systems with the first "go live" scheduled for October 2017.

System implementation timeline and budget status

Internal Audit spoke with both the City of Tulsa and Tyler project managers regarding "go live" dates. They are confident the "go live" date of October 2017 for the financial component will be met.
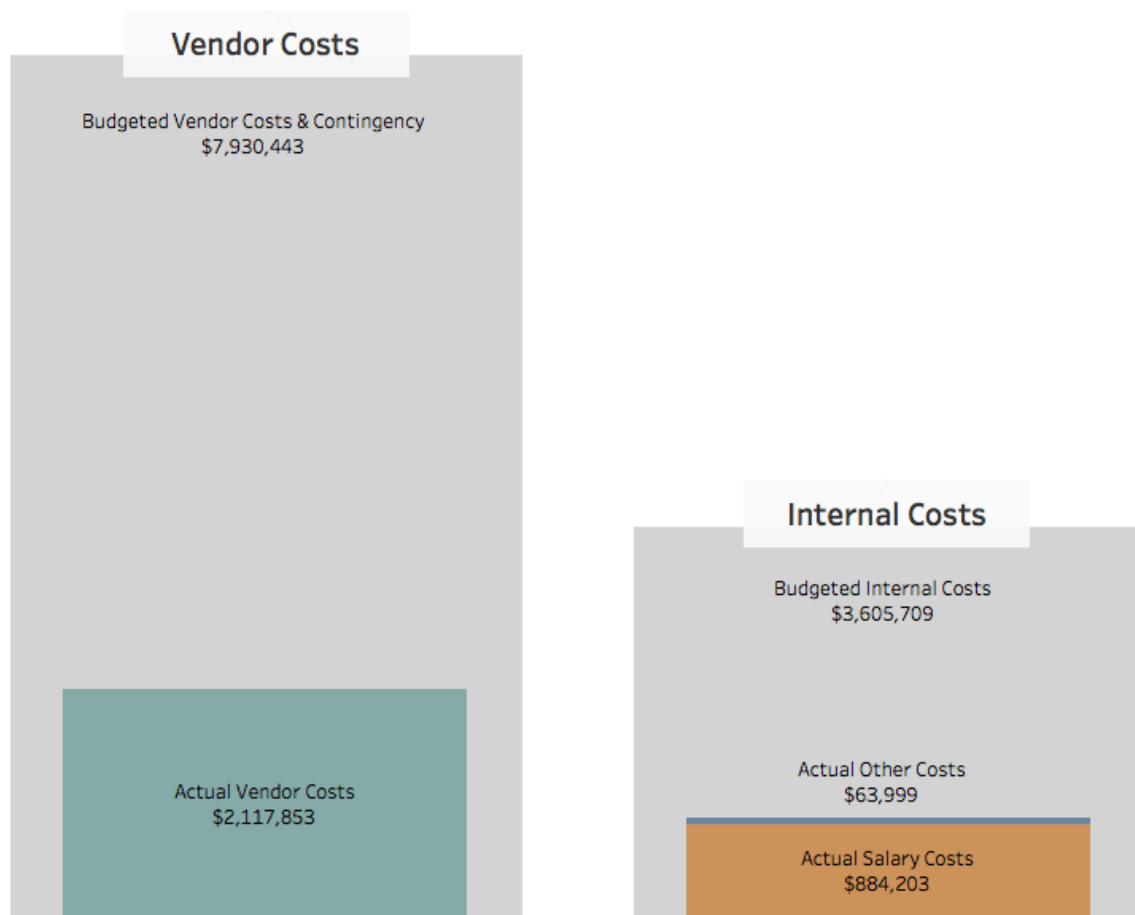
The budget is on track at this point with a contingency of $631,641 should additional expenses be required. One item identified that would impact the contingency amount is adding a bid management model to the ERP.

Current status of implementation tasks
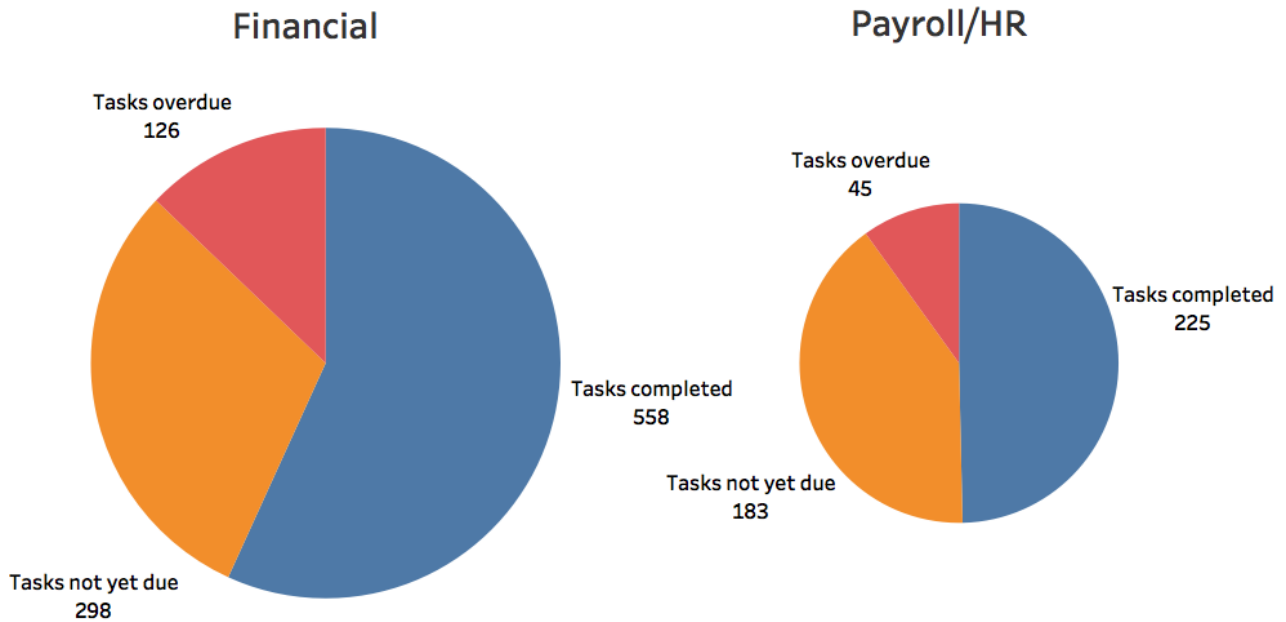
*Overdue tasks include tasks that are up to 99 percent complete as of June 30, 2017. See further detail at Attachment 2.

Budget status of financial and payroll/HR components

Vendor Costs

Budgeted Vendor Costs & Contingency
$7,930,443

Actual Vendor Costs
$2,117,853

Internal Costs

Budgeted Internal Costs
$3,605,709

Actual Other Costs
$63,999

Actual Salary Costs
$884,203

High impact areas

Internal Auditing has identified the following high impact areas of this project and are monitoring to ensure that risks are mitigated appropriately:

- Assigning adequate human resources for effective and efficient transition to the new systems
- Interfacing the City's other systems properly with the new systems
- Converting data from the old to the new system accurately, completely and timely
- Willingness of employees to change their processes or thinking to gain the efficiencies offered by the new system
- Embedding controls adequately into the system to provide security, prevent fraud, abuse, and inaccuracies
- Creating informative, complete, and accurate reporting for the new system
- Ability to access the data at all times to minimize disruptions to the business of the City

Summary of Internal Auditing activities

Internal Auditing is monitoring and providing input through the initiation and planning phases in the following ways:

- Attending daily update meetings
- Attending a large number of training sessions, setup sessions, and static environment testing
- Participating on the Role Based Access Controls project team.
- Providing training on access controls.
- Meeting with project managers as questions arise.
- Sitting on the ERP executive steering committee.
- Providing input on data integrity with ERP Repository extracted from existing Mainframe financial system
- Attending status updates and monitoring overdue projects
- Monitoring data and records migration.

The results of the monitoring activities are summarized in the attached table.

Audit's Next Steps

Once Internal Auditing receives access to the new system's data, we will begin testing the high impact areas as the data is added to the system. During this testing phase, Internal Auditing will also begin building a continuous auditing universe and documenting future data analytic possibilities.

Attachment 1: Internal Auditing's Observations on ERP Implementation

This table includes information on best practice requirements[1] for ERP implementation and Internal Auditing's observation about the extent to which the requirements have been met.

Topic	Requirement[1]	Auditor Observation
Business case	A business case has been prepared and reviewed by management. The business case is the rationale for initiating the project, expected benefits, estimated costs, and key attributes to evaluate the success of the project.	The project charter clearly defines the business case for the project.
Scope management	The initial scope of the project has been established through a feasibility study, alignment with the IT architecture and the development of an initial high-level project plan.	The project scope defines and supports City of Tulsa's objectives. Management reviewed and approved the project scope.
Roles & responsibilities	The responsibility for the project is assigned to senior stakeholders from the affected business units and IT.	Roles and responsibilities are adequately defined, including an executive steering committee meeting regularly and effectively. The sponsors are at the correct level of the organization for the scope. The affected business units have adequate roles in the project group to ensure project success. Executive sponsors attend daily update meetings to show support and track progress.
Approvals	The project is approved by senior management, depending on the investment and criticality of the project, and the approvals are documented.	The team documented all approvals at the correct levels. Funding requests for the project are adequately approved and budgeted.

Integration of departments and IT.	The business and information management teams are integrated, information requirements are clearly documented, project objectives are aligned with the business and information strategies; and all affected business units are involved in the project. The steering committee reviews the effectiveness of the integration.	The team is excellent at integrating IT throughout the project through use of the daily update meetings. The data architect and database admins attend daily as well as the IT support. Information requirements are clearly documented.
Composition of project team	The project team consists of a project team leader with appropriate project management experience and the team consists of the skillsets and authority levels from their respective business units.	The project team consists of excellent project team leaders with appropriate project management experience and all affected business units are involved in the project with skill sets and authority levels that are needed. They meet daily when their units are affected to share what they are working on and if they have hit any road blocks.
Risk and issue management	Risk analysis has been applied to the project during the initial phase; risks have been identified. Where risks can be mitigated, appropriate processes have been implemented; where risks are inherent to the process, appropriate monitoring processes are in place.	Project management created an FMEA Risk Analysis. They evaluated 29 potential risks and how to address them. The project team also risk ranked the severity of the effect, possibility of failure and likelihood controls will detect failure. The team also documented the recommended corrective action and the department who owns the corrective action. The project team presented the results of this study to the steering committee and continues to report on risks as they come up during the process.

Escalation procedures	Escalation procedures are established to include monitoring by the steering committee.	The project charter documents the escalation plan and the project manager knows the plan.
Escalation management	Escalation of serious project issues should be directed to the steering committee and senior management on a timely basis; the escalation should be documented and resolution monitored.	Project management adequately escalates project issues to senior management on a timely basis.
Quality management	Project sponsor has defined specific quality expectations and criteria.	A traceability matrix ensures all defined requirements are met and approved through user acceptance testing.
Communication plan	A communication plan is established to provide stakeholders and project leadership with appropriate information to ensure that the project meets functionality, budgetary and timeline goals.	A communication plan provides stakeholders and project leadership with appropriate information to ensure that the project meets functionality, budgetary and timeline goals.

[1]Requirements are based on the Information Systems Audit and Control Association's Systems Development and Project Management Audit/Assurance Program.

Attachment 2:

Completed vs. Total Tasks by Due Date
Munis Financials and Payroll HR
As of June 30, 2017