

CITY OF CHARLOTTE
OFFICE OF INTERNAL AUDIT
MEMORANDUM

To: Sabrina Joy-Hogg, Deputy City Manager

July 2, 2019

From: Greg McDowell, City Auditor

Re: MUNIS ERP IT General Controls and Purchasing Workflow – RSM Report

Background

The City of Charlotte's Internal Audit Department engaged the consulting firm RSM US LLP (RSM) to conduct an audit of IT general controls (ITGCs), and a Purchasing Workflow Diagnostic Review. The scope of RSM's audit follows:

- MUNIS ERP System ITGC – logical security, security administration, operations and change management
- MUNIS Purchasing Workflow Diagnostic Review – accuracy and completeness of data, review and approval of expenditures prior to payment, segregation of duties

Results Summary

RSM concluded that the MUNIS ERP ITGC and Purchasing Workflow “Needs Improvement.” Moderate deficiencies were observed in the following areas:

- Change Management Documentation
- Production Changes Review and Approval
- Privileged-Level Access Authorization
- Delegation of Duties (forwarding) within the Purchasing Workflow

Minor deficiencies and additional observations are detailed in the attached report.

RSM Recommendations and City's Response

Detailed findings, recommendations and management responses are addressed on pages 4-9. Finance, Procurement and I&T have taken or planned actions to address RSM's recommendations, while acknowledging certain weaknesses in the MUNIS ERP.

Actions Planned

Internal Audit will follow-up the RSM recommendations and management responses to determine that planned actions are completed timely. In addition, weaknesses noted will inform future audit plans. Internal Audit will report periodic updates.

glm

City of Charlotte



MUNIS ERP ITGC Audit & Purchasing Workflow Diagnostic Review Report June 2019

EXECUTIVE SUMMARY

Background

We have conducted an audit of the IT general controls (ITGCs) and performed a diagnostic review of the City of Charlotte MUNIS ERP system. Our services were performed in accordance with the terms of our engagement letter.

This report is intended solely for the information and use of management by the City of Charlotte. It is not intended to be, and should not be used by anyone other than these specified parties. City of Charlotte's external auditors and examiners may be provided a copy of this report in connection with fulfilling their respective responsibilities.

Objective and Scope

Our procedures were performed in accordance with the agreed upon scope and approach set forth in our engagement letter dated August 29, 2018 and were limited to those described therein. In summary the scope included:

MUNIS ERP System ITGC Audit

The audit assessed controls within the following IT auditable domains:

- Logical Security
- Security Administration
- Operations
- Change Management

MUNIS Purchasing Workflow Diagnostic Review

The review included an assessment of the following purchasing workflows to determine:

- The accuracy and completeness of data (i.e. system reconciliations, GL reconciliations, etc.)
- If expenditures were properly reviewed and approved prior to payment
- If proper segregation of duties were clearly defined and properly set up

Purpose

MUNIS ERP System ITGC Audit

The purpose of the audit was to:

- Understand the MUNIS ERP system controls to determine if the design of the control activities supporting the MUNIS ERP system (assuming they are deemed effective when tested) is adequate to mitigate significant risks
- To test the effectiveness of the control activities in place to mitigate significant risks
- To verify if the controls work as intended and communicate where control gaps exist

MUNIS Purchasing Workflow Diagnostic Review

The purpose of the purchasing workflow review was to evaluate the MUNIS system's built-in controls for an effective and adequate purchasing workflow process for the City of Charlotte.

Overall Summary/Highlights

The overall MUNIS ERP ITGC and Purchasing Workflow Diagnostic Report is **Needs Improvement**. Definitions of the rating scales are included in Appendix B.

The findings report ratings for the audit and review is individually listed on page 3 (Executive Summary) and detailed findings and areas of improvement are listed on pages 4-11 (Detailed Observations) of this report.

If you have any questions concerning this report, please contact Carrie Furr at 704-517-4964 or Simeon Munezero at 980-475-9226.

We would like to thank all City Of Charlotte team members who assisted us throughout this review.

EXECUTIVE SUMMARY

Ratings and Conclusions

The following is a summary of observations noted in the areas reviewed. Definitions of the rating scales are included in Appendix A.

Ratings by Observation	
Part 1 – MUNIS ERP ITGC System Audit	Finding Rating
Change Management Documentation	Moderate Deficiency
Production Changes Review and Approval	Moderate Deficiency
Privileged-Level Access Authorization	Moderate Deficiency
Backup and Restore Review	Minor Deficiency
IT Policies and Procedures	For Management Knowledge
Part 2 – MUNIS Purchasing Workflow Diagnostic Review	Finding Rating
Delegation of Duties (forwarding authority)	Moderate Deficiency
Procurement Workflow Process (new blanket process flow)	Minor Deficiency
Inconsistency in Roles and Responsibilities Definition	Minor Deficiency
Account Payables Reconciliation	Minor Deficiency
Business Policies and Procedures	For Management Knowledge
Vendor Management Workflow	For Management Knowledge
Insufficient System Built-In Controls to Avoid Employees Self-Approval	For Management Knowledge

DETAILED OBSERVATIONS

Part 1 - MUNIS ERP ITGC System Audit Observations

Change Management Documentation	Recommendation	Management Response
Risk Rating: Moderate Deficiency		
<p>Per review of the change management documentation noted:</p> <ul style="list-style-type: none"> • Inability to validate appropriate segregation of duties amongst change personnel due to an absence of evidence in the support provided for 12 of the changes sampled • Inability to identify an approver for 9 of the sampled changes • Backout plans were not developed for 1 of the sampled changes • No evidence of change testing was provided for 1 of the sampled changes 	<p>Changes made should be adequately documented to evidence:</p> <ul style="list-style-type: none"> - Segregation of duties - Appropriate level of management reviewed and approved changes being implemented - Backout plans are developed - Change testing performed 	<p>We acknowledge the finding. Although segregation of duties procedures exists, as part of the I&T standard operating procedures, none have been formally documented. Change management SOPs will be created and implemented by June 30, 2020.</p>
Production Change Review and Approval	Recommendation	Management Response
Risk Rating: Moderate Deficiency		
<p>A review of the Change Management documentation indicated there are processes that pertain to 'post change validation'. However, inquiry with management indicated no formalized process exists for the review of production changes.</p>	<p>The post change validation process should be formalized and documented per the Change Management documentation to ensure changes were validated and approved by the appropriate level of management.</p>	<p>Change management SOPs will be created and implemented by June 30, 2020.</p>
Backup and Restore Review	Recommendation	Management Response
Risk Rating: Moderate Deficiency		
<p>A review of the Backup and Restore plan indicated the following:</p> <ul style="list-style-type: none"> • Standards for monitoring backup executions, failures and error resolutions were not defined • The plan does not indicate the frequency when restore testing is to be performed 	<p>The Backup and Restore plan should include backup execution, failures and error resolution standards for proper monitoring to be in place. Management should define and document the restore frequency and</p>	<p>I&T concurs. The backup and restore procedure documents will be updated to provide the requested details. Full backups are taken daily at night with log backups taken every two hours.</p>

	monitor to ensure it is being performed as required.	ERP application database restores are automated and execute daily, weekly, and monthly as Windows scheduled tasks to different environments. These will likewise be documented.
Privileged-Level Access	Recommendation	Management Response
Risk Rating: Moderate Deficiency		
During a review of accounts with administrative access to the MUNIS ERP application it was noted that one account was unable to be identified by management and had administrative privileges.	Remove the one administrative account identified by management that does not require such access.	I&T agreed. This account has been removed and the annual audit procedures modified to prevent future occurrences.

Part 2 – MUNIS Purchasing Workflow Diagnostic Review Observations

Delegation of Duties (forwarding authority)	Recommendation	Management Response
Risk Rating: Moderate Deficiency		
<p>During our walkthrough meetings, we noted that delegation of the approval authority function (“Forwarding”) is active in MUNIS. This allows managers/approvers to forward their approval authority to other team members. According to the policy and procedures, department buyers and city staff are responsible for: “Not forwarding their own approvals in the System of Record to any other System User;”</p> <p>The City requires that the delegating authority open a ticket with the IT support desk to process approval authority forwarding requests. With the forwarding function activated, managers/approvers can bypass opening a ticket with the IT support desk, thus not complying with the existing policy and procedure.</p>	Delegation of authority function should be disabled for MUNIS end users to avoid the ability to freely forward their approval authority, without due diligence and in accordance to the existing policy.	Agreed. City Procurement will continue to work with ERP Support on improvements to system controls where possible, and/or alternative processes and compliance strategies where necessary.

Procurement Workflow Process (new blanket process flow)	Recommendation	Management Response
<p>Risk Rating: Minor Deficiency</p> <p>MUNIS does not appear to support the New Blanket PO submission process. In our review of workflow snapshots of 1 sample (Sample 4), we reviewed a purchase order request submitted in error under the former Blanket PO procedures. Due to the incorrect submission, MUNIS did not detect the requisition and/or stop the requisition and consequently the Blanket PO request incorrectly followed the regular PO process. The requisition did not receive the proper review and approvals that are required for this type of transaction.</p> <p>The actual policy/process requires that the Blanket PO be directly entered into the workflow instead of being submitted to Procurement for preapproval. If the new Blanket PO submission process is not correctly entered into the MUNIS system, the MUNIS control process does not recognize the error and Procurement loses control over the process.</p> <p>New Blanket PO Reports are available; however, a review of the findings is currently not being performed (potential here to assess risk, gather analytics and track findings to assess the new change).</p>		
	<p>When there is a management decision that affects the existing system controls and processes, a ticket should be created and communicated to IT/Developers to ensure that such changes are reflected in MUNIS. A back-up process in addition to the system updates are also encouraged because of the extended implementation timeframe that is required for a system change (potentially taking years to implement a system change).</p>	<p>Agreed. City Procurement will continue to work with ERP Support on improvements to system controls where possible, and/or alternative processes and compliance strategies where necessary.</p>

Procure to Pay Workflow Process: Inconsistency in roles and responsibilities definition	Recommendation	Management Response
Risk Rating: Minor Deficiency		
<p>Inconsistency in roles and responsibilities definition between MUNIS and policies and procedures documents. While reviewing the system-generated reports, we noted that the definition, roles and responsibilities in the policy and procedures documents differ from the definition, roles and responsibilities designed in MUNIS. For example, PO approver is set up in MUNIS as Buyer according to management interpretation. Lack of clarity in designing fields in MUNIS to correspond to guiding documents (policy and procedures) may lead to confusion and misinterpretation.</p>	<p>We recommend a detailed review of roles and responsibilities definitions in the policy and procedure documents to ensure that they are properly mapped to defined roles and responsibilities in MUNIS.</p>	<p>Agreed. City Procurement will perform a detailed review of roles and responsibilities definitions in policies, procedures and Munis to ensure consistency, and/or include appropriate referential guides for clarification where necessary.</p>
Account Payables Reconciliation	Recommendation	Management Response
Risk Rating: Minor Deficiency		
<p>Lack of comprehensive monthly reconciliation. RSM requested for AP accounts' the reconciliation reports for the month of July 2018 for Storm Water (202460, 202461 & 202462). We noted that the reconciliation was prepared on 09/25/2018 and reviewed 10/1/2018. Later when we inquired about variances between the trial balance, balance sheet and reconciliation reports, the original preparer submitted a new reconciliation report on 10/08/2018 noting that they used the wrong balances on the reconciliation report.</p>	<p>We recommend a complete inventory of the balance sheet reconciliations and controls in place to ensure that reconciliations are performed timely and accurately.</p>	<p>Finance agrees that reconciliation is an important control. Finance is currently reviewing other balance sheet accounts (AR) but agrees that AP accounts should also be reconciled on a regular basis. Available resources to complete the reconciliations are an issue.</p>

OPERATIONAL AND PROCESS IMPROVEMENT OPPORTUNITIES (FOR MANAGEMENT KNOWLEDGE)

IT Policies and Procedures	Recommendation	Management Response
Risk Rating: For Management Knowledge		
<p>Although management communicated that policies are not generally reviewed or updated on an annual basis, RSM performed a review of the policies and noted the following:</p> <ul style="list-style-type: none"> The Information Security Manual (updated 2017) did not show evidence of approval by the appropriate member of management. The Protection of Restricted Data Policy (ADM 13 – updated 2009) and the Information Security Policy (ADM 16 – updated 2010) documents were not formally reviewed and approved by the appropriate member of management during the audit. 	<p>We recommend that management review and update the policies and procedures at least once a year. We recommend a detailed review to ensure that changes to the procedures are up to date with the IT requirements and environment.</p>	<p>I&T acknowledges the recommendation. The Information Security Manual is reviewed regularly and routed for management approval. In the future, I&T will document review and approval.</p>
Business Policies and Procedures	Recommendation	Management Response
Risk Rating: For Management Knowledge		
<p>RSM obtained and reviewed existing policies and procedures. We noted that the current AP, billing, collection and deposit, city vendor and e-business receipts and payment policies and procedure documents were last reviewed and approved by the City of Charlotte Manager on June 1, 2016. In some cases, these policies and procedures do not correspond to the actual processes; for example, there have been changes to the process around the Blanket PO process in November 2017 but the procedure documents were not updated to reflect this change.</p>	<p>We recommend that management review and update the policies and procedures at least once a year. We recommend a detailed review to ensure that changes to the procedures are up to date in the governing documents.</p>	<p>Agreed, and suggest that reviews and updates of policies and procedures occur regularly every 1 – 3 years.</p>

Vendor Management Workflow	Recommendation	Management Response
Risk Rating: For Management Knowledge		
<p>For the purpose of our walkthrough and purchasing cycle diagnosis/analysis, we selected a sample of four (4) purchasing transactions for our testing from the requisition process to payment process.</p> <p>During our review of Vendor samples, we noted one sample was created 02/19/18 and originally recorded as "Vendor A" with a dba. While reviewing the audit trail, we noted a correction (indicated in the supporting documentation and audit trail) reflecting a change completed by staff on 09/12/18 to correct the dba name, after Internal Audit selected the vendor as our sample. This change took place the day prior to our scheduled walkthrough with Vendor Management (09/13/2018). Due to the limitation in our scope (not testing a full sample); we are unable to determine whether this is an isolated error or whether it is a general widespread issue. This is an indication of incomplete/inaccurate customers/vendors' Masterfile management.</p>	<p>Management should implement controls to ensure that vendors' information in MUNIS is accurate and updated.</p>	<p>Agreed. City Procurement will continue to work with vendors to improve the quality, accuracy and reliability of vendor data in Munis.</p>
Insufficient System Built-In Controls to Avoid Employees Self-Approval	Recommendation	Management Response
Risk Rating: For Management Knowledge		
<p>The City of Charlotte's AP Policy states the following "Payments are not allowed that would result in the approver of the payment being named as the payee." It was unclear if the Accounts Payable Department currently has a control or process in place for preventing an individual from approving their own payments.</p>	<p>We recommend adequate application controls to ensure that employees would not have the ability to approve the payment of their own transactions.</p>	<p>Finance agrees with the recommendation. However, there is not a security feature in the system that would prevent a user with approval rights from approving their own reimbursement request. Finance is in the process of implementing Concur to manage employee reimbursements and travel and there is functionality in this system to prevent this.</p>

APPENDIX A—RATING DEFINITIONS

Risk Rating Definitions	
Rating	Definition
(5) Major Deficiency	A systemic control issue that represents a material risk to earnings or capital, a high risk, or material financial misstatement. Issues identified would lead to adverse business results or cause a negative public impact. Immediate follow-up and executive management involvement is required.
(4) Moderate Deficiency	A control issue that represents or could lead to a potential risk to general ledger or possible financial misstatement that could potentially lead to a loss, penalty, or fine. Prompt follow up and resolution by management in a timely manner is required.
(3) Minor Deficiency	A control issue that represents an immaterial risk to general ledger or possible financial misstatement implications. These deficiencies would also relate to policy or procedural issues outside of company guidelines or processes that could lead to a greater deficiency over time. Needs management attention and follow up within a reasonable timetable established with management.
(2) Reportable Concern	An isolated issue or concern that has minimal risk to the company that has not been addressed or identified and should be brought to management's awareness. Management has the choice whether to resolve the issue within a reasonable timetable.
(1) For Management Knowledge	An issue or concern that is addressed with management verbally or in the Exit Conference discussion only. These issues are not included within the formal reporting process beyond the Exit Conference. This would also relate to immaterial concerns addressed and corrected by management during the audit.

APPENDIX B—REPORT RATING DEFINITIONS

Report Rating Definitions	
Rating	Explanation
Excellent	Well above average performance, controls significantly exceed the performance of peer departments and functions. No findings or control issues found.
Very Good	No major or moderate deficiencies with no more than four minor deficiencies identified; generally above average performance.
Satisfactory	No major deficiencies, up to two moderate deficiencies, and one or more minor deficiencies; average performance. High observations that are pervasive in nature.
Needs Improvement	Three or more moderate deficiencies or one major deficiency with other findings; below average performance.
Unsatisfactory	Regulatory violations that pose significant regulatory risk, multiple material control deficiencies, or significant opportunity for financial loss; poor performance.



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