TECHNOLOGY & INNOVATION
CAYENTA UTILITY ACCOUNTING CONTROLS & APPLICATION REVIEW
AUDIT 23-15
JANUARY 3, 2024

City of Tampa
Jane Castor, Mayor

Internal Audit Department
315 E. Kennedy Boulevard
Tampa, Florida 33602
Office (813) 274-7159

January 3, 2024

Honorable Jane Castor
Mayor, City of Tampa
1 City Hall Plaza
Tampa, Florida

RE: Cayenta Utility Accounting Controls & Application Review, Audit 23-15

Dear Mayor Castor:

Attached is the Internal Audit Department's report on Cayenta Utility Accounting Controls & Application Review.

The Technology & Innovation (T&I) Department has already taken positive actions in response to our recommendation. We thank the management and staff of the T&I for their cooperation and assistance during this audit.

Sincerely,

/s/ Christine Glover

Christine Glover
Internal Audit Director

cc: John Bennett, Chief of Staff
Dennis Rogero, Chief Financial Officer
Russell Haupert, Director of Technology & Innovation
Rob Edwards, MIS Project Leader
Megan Birnholz, Assistant City Attorney

TECHNOLOGY & INNOVATION
CAYENTA UTILITY ACCOUNTING CONTROLS
& APPLICATION REVIEW
AUDIT 23-15

/s/ Stephen Mhere

Senior Auditor

/s/ Vivian Walker

Lead Senior Auditor

/s/ Christine Glover

Audit Director

TECHNOLOGY & INNOVATION
CAYENTA UTILITY ACCOUNTING CONTROLS & APPLICATION REVIEW

BACKGROUND

The Cayenta application is a utility management system the City of Tampa (COT) acquired for use mainly by three departments: Water, Wastewater, and Solid Waste and Environmental Program Management. The application software was implemented in 2019 and upgraded in 2022.

The Technology & Innovation Department (T&I) has a technical support team for the utility management system consisting of eight full-time employees. This includes a project leader, lead systems analyst, applications systems analyst, and senior applications programmers. The project leader reports directly to the Chief Technology Officer.

STATEMENT OF OBJECTIVE

This audit was conducted in accordance with the Internal Audit Department's FY 2023 Audit Agenda. The audit objective was to determine if Cayenta's system of internal controls was adequate for departments that use Cayenta to fulfill their obligations in an effective and efficient manner.

STATEMENT OF SCOPE

The audit covered Cayenta activities in FY 2022 and FY 2023. We reviewed activities of T&I, as the department providing technical support to all Cayenta users. We also examined activities in the departments that use the application. Original records were reviewed as evidence and verified through observation and physical examination.

STATEMENT OF METHODOLOGY

We accomplished our audit objective as follows:

- Evaluated internal controls related to the Cayenta application, including a review of relevant policies.
- Reviewed the contract between COT and N. Harris Computer Corporation, the Cayenta application vendor.
- Interviewed T&I's Management Information Systems Project Leader responsible for Cayenta, the Water Operations Director, and the Solid Waste Director to discuss their perspective of fraud and disparity risk within their respective functions.
- Surveyed various department users of Cayenta to get a sense of their satisfaction with the application.
- Assessed the reliability of the data processed in Cayenta.

- Reviewed Tampa.gov, Intranet, and budget books for performance metrics related to Cayenta. Cayenta is not the source of information for the customer service-related metrics being reported.

STATEMENT OF AUDITING STANDARDS

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

AUDIT CONCLUSION

Based upon the test work performed, we conclude that the system of internal controls is adequate for departments that use Cayenta to fulfill their obligations in an effective manner. However, there is room for improvement in information security detective controls.

AUDIT LOGS FOR CAYENTA SERVICE ORDERS

STATEMENT OF CONDITION: One of Cayenta's most important functionalities is the creation and management of service orders. Cayenta utilities generates service orders as part of fulfillment of connection or disconnection requests. Users from various COT departments, particularly Solid Waste and Water, utilize this functionality extensively. There are approximately 1,113 user accounts in Cayenta. Most of these users are COT employees, but others are associates of N. Harris Computer Corporation. Many of these users have access rights to the system that allow them to create or update service orders.

When audit history tables in Cayenta have been appropriately configured, the application can generate audit logs. That means, if a properly configured table is created, deleted, or altered/changed, an audit log will be created to show what was done, at what time, and by whom. However, we found that this audit log generation capability is not enabled for service order tables. We found that while the application logs an audit history when a service order is initially created, it does not do so when that order is subsequently changed; therefore no record is created to show who might have made the change. Solid Waste implemented a workaround that requires users that change service orders to use the comments section of the service order to record their identity and describe what they would have done.

CRITERIA: Information security best practice standards recommend that an audit log should be created when an alteration or change of data is initiated in a system. Such a log should have sufficient information to help determine who did what and when without ambiguity.

CAUSE: T&I indicated that this condition exists because the appropriate audit history table has not been configured.

EFFECT OF CONDITION: This condition means that audit logs do not always accurately reflect the history of service order changes. This leads to a lack of accountability for Cayenta users.

RECOMMENDATION: We recommend T&I work with N. Harris Computer Corporation to configure the appropriate audit history table(s) so that audit logs are generated and identify not only users who create service orders but also those who update them.

MANAGEMENT RESPONSE: T&I concurs with this assessment and will work with the business unit and Cayenta Technical Support to enable and implement audit logging for Cayenta Service Orders while we investigate a longer-term solution.

While the system has the capability, it is not enabled by default because it could negatively impact system performance, therefore Cayenta does not typically recommend we enable this feature. We are assessing performance mitigation options to support this effort.

TARGET IMPLEMENTATION DATE: It will take 90 days to configure, test and implement.