



Hillsborough
County Florida

Board of County Commissioners County Internal Auditor's Office
Oracle Enterprise Resource Planning System

Report # OA-19-02

April 3, 2019



TO: Commissioner Ken Hagan
Commissioner Pat Kemp
Commissioner Lesley "Les" Miller Jr.
Commissioner Sandra Murman
Commissioner Kimberly Overman
Commissioner Mariella Smith
Commissioner Stacy White

FROM: Peggy Caskey, County Internal Auditor

DATE: April 3, 2019

SUBJECT: Oracle Enterprise Resource Planning (ERP) System, Audit Report # OA-19-02

The Protiviti, Inc. Audit Team performed an audit of the Oracle ERP System. The County Internal Auditor managed the Protiviti professional services contract.

The purpose of this Report is to provide management independent, objective analysis, recommendations, counsel, and information concerning the activities reviewed. As such, this Report is not an appraisal or rating of management.

Although the Audit Team exercised due professional care in the performance of this audit, this should not be construed to mean that unreported noncompliance or irregularities do not exist. The deterrence of fraud and/or employee abuse is the responsibility of management. Audit procedures alone, even when carried out with professional care, do not guarantee that fraud or abuse will be detected.

I appreciate the cooperation and professional courtesies extended to the Audit Team. Management of the audited area gave the Audit Team full, free, and unrestricted access to all applicable activities, records, property, and personnel necessary to accomplish the stated objective of this audit engagement. Personnel also provided necessary assistance for the Audit Team to effectively perform the audit in an efficient manner.

Sincerely,

Peggy Caskey, CIA, CISA, CFE County Internal Auditor

CC: Christine Beck, County Attorney
Mike Merrill, County Administrator

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	1
Overall Opinion	1
Audited By	1
Professional Services Contract Managed By	1
Background Information	2
Audit Objective	3
Approach	3
Methodology	4
Scope	4
Overall Evaluation	5
Positive Attributes	6
Audit Comments and Recommendations	7
Appendix A – Oracle Configurable Controls	48
Appendix B – Segregation of Duties Conflicts – Conflicts to Address	54
Appendix C – Roadmap	57

EXECUTIVE SUMMARY

As per the 2018 Annual Audit Plan, the County Internal Auditor contractually managed Protiviti's performance of the ERP System audit. The principal objectives of this audit were to assess the efficiency and effectiveness of the ERP System in order to determine if it is functioning at an optimal level. Exit conferences were held on November 29, 2018, and December 12, 2018. The Audit Team's analysis did not identify any unacceptable levels of practices. Other minor concerns, that may have been identified and not included in this Report, were communicated to management and/or corrected during fieldwork.

OVERALL OPINION

It is Protiviti's overall opinion that while there are opportunities to improve the ERP System's functioning and control structure, the ERP System can effectively support the Board of County Commissioners (Board) and its needs. While there have been recurring material weaknesses and significant deficiencies related to the ERP System identified by the external auditors, the Board's support organizations have worked to address the issues, and results have improved. However, there is a lack of formalized governance and inadequate change control frameworks exist, which have inhibited the ERP System to reach its full potential. There is conflict between individuals under the Board and the Clerk of Circuit Court & Comptroller (Clerk) related to roles and responsibilities in the ERP System that continue to hamper effective collaboration and strategic direction.

The Audit Team made observations and identified positive attributes, as well as opportunities and recommendations to further improve overall ERP System functionality, change management, and governance, which are included in this Report.

AUDITED BY

Protiviti, Inc. Audit Team

Martin Nash, Protiviti, Inc. Managing Director

Kevin McCreary, Protiviti, Inc. Director

Matt Nease, Protiviti, Inc. Senior Manager

PROFESSIONAL SERVICES CONTRACT MANAGED BY

Peggy Caskey, CIA, CISA, CFE, County Internal Auditor

BACKGROUND INFORMATION

Oracle Enterprise Resource Planning (ERP) System Background

The ERP System is a software package used by the County to manage day-to-day business activities, such as accounting, procurement, cost accounting, budgeting, and manufacturing. The ERP System supports approximately 5,300 Board employees in addition to Clerk, City of Tampa, and Civil Service employees located in administrative sites across Hillsborough County. Original data entry of transactions is decentralized at the user level. Most of these transactions are originated by personnel in the Board's administration departments. These Oracle transactions are governed by the Board's policies. Accounting record financial statements are prepared and generated by the Clerk in automated workflows.

Several years ago, the Board, Clerk, City of Tampa, and Civil Service began a collaborative ERP System implementation effort. This collaboration was a result of aging financial and human resource technologies that operated separately at each organization and did not communicate well with each other. Oracle EBS Release 12.1 was selected as the application after the selection process. In March 2012, the Board and the City of Tampa awarded Applications Software Technology (AST) Corporation of Naperville, IL, a \$34 million, 5-year contract for a new ERP System project for software, implementation, integration, training, and technology hosting services (to perform Oracle Managed Cloud Services for database hosting and system administration). Hosting of the ERP System environment is provided by Oracle on Demand. Each organization had representatives on the Implementation Steering Committee and representatives who were involved in establishing business requirements in their respective areas.

The first phase went live in August 2013 with Oracle Financials. The last phase, Oracle Payroll, went live in January 2015. Post-implementation, the ERP System integrates departments and functions across the four organizations (Board, Clerk, Civil Service, and City of Tampa) into a single ERP System that aims to serve all users. Certain ERP System administrative functions have been provisioned to support personnel under the Board's, Clerk's, and City of Tampa's organizations.

Governance

There is an informal post-implementation Governance Committee comprised of representatives on behalf the four organizations who share the ERP System. However, the effectiveness of governance has been limited due to a lack of clear definition of roles and responsibilities.

Change Management

ERP System maintenance service requests and system change requests are currently performed through one of two methods: 1) Oracle's Managed Cloud Services (via on Demand); and 2) internal by either Clerk ESS or City of Tampa. The Board, Clerk, and City of Tampa electronically submit an Oracle Request for Change Form to Oracle Managed Cloud Services (via on Demand). All three organizations have designated reviewers and approvers to vet the impact of the submitted change. Once the three organizations approve the change request (via electronic sign-off), Oracle on Demand changes are implemented by Oracle Managed Cloud Services. Non-Oracle on Demand changes are made by the Clerk or the City of Tampa, as applicable, and the change is put into production.

AUDIT OBJECTIVE

Since the ERP System's implementation, material weaknesses and significant deficiencies attributed to it have been recurring. The principal objectives of this audit engagement are to:

- Ensure governance and change control processes are in place to drive strategic priorities and risk management.
- Ensure ERP System access of support staff is appropriate.
- Ensure functional and technical knowledge of support staff are effectively deployed and knowledgeable.
- Ensure that the Board's ERP System activities and those activities that cross over to the Clerk are working cohesively together in an efficient and effective manner for end-to-end transaction processing.

APPROACH

The audit was conducted in conformance with the Generally Accepted Government Auditing Standards. These Standards require the County Internal Auditor to plan and for Protiviti to perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the audit comments and conclusions based on the audit objectives. The Protiviti Managing Director believes that the evidence obtained provides this reasonable basis.

METHODOLOGY

The Protiviti Audit Team's approach included three phases: diagnostics, analysis and recommendations. The diagnostic and analysis phases of the audit consisted of the following:

- Document review: The Audit Team requested and reviewed numerous documents such as policies, procedures, standards, implementation artifacts, organizational charts, information flow diagrams, job descriptions, past audit reports, and system configuration, among others.
- System change and configuration review: The Audit Team provided management with structured query language (SQL) queries to run against its production system database. The queries were used to determine changes to user access, system changes, and current system configurations.
- Personnel interviews: The Audit Team conducted interviews with members of the County Administration, the Clerk's County Finance Department, Board and Clerk business process owners, end-users, and system support groups, to develop an understanding of the strengths, weaknesses, opportunities and organizational strengths, and to gather information on relevant aspects of the audit areas. Multiple follow-up interviews and email correspondence took place during the audit.
- Benchmarking: The Audit Team reviewed system configuration and user access privileges to best practices for risk management and operational efficiency.
- Highlighting accomplishments and noteworthy matters: During the audit, the Audit Team documented several matters that reflected management's success or were important enough to point out, even though they did not specifically represent an opportunity for improvement. These are included in the "Positive Attributes" section of this Report.

SCOPE

Prior to the Audit Team's commencement of work, preliminary meetings were held with key management of the audited area to agree upon scope. A contract was secured with Protiviti, Inc. to assist the County Internal Auditor with subject matter expertise and guidance. The project kick-off meeting was held on July 5, 2018, fieldwork began on August 2, 2018, and the end of fieldwork meeting was held on November 26, 2018. The scope of work focused on the following four areas:

Change Control Processes

System Access and Configuration

Functional and Technical Knowledge of Assigned Resources Including Related Fiscal Processes and Financial Processes

End-to-End Business and Support Processes

The Board and Clerk have integrated business processes. Therefore, end-to-end analysis required both organizations' involvement in business processes and activities related to transactions that are governed by the Board's policies; and the Board's financial statements prepared and generated by the Clerk. The City of Tampa's, Civil Services', and the Clerk's business processes, transactions, and activities unrelated to the Board's business processes, transactions, and activities were outside the scope of work for this audit. The impact of change control and support activities across the multi-governmental ERP System was in the scope of work for this audit.

OVERALL EVALUATION

Auditees were responsive to the Audit Team's inquiries and provided information as requested. The Audit Team encountered knowledgeable and dedicated employees during the audit.

The following table summarizes the audit comments and corresponding cross references to the page number where the audit comment details can be found in this Report.

Audit Comment	Conclusion of Objectives	Page
1	Formal governance framework and inter-local agreement are not in place.	7
2	Opportunities exist to enhance the change control framework(s) to better suit the multi-tenant environment as well as to provide detective controls for changes.	14
3	Opportunities exist to enhance support staff access policies and segregation of duties conflicts and inappropriate access authorizations exist in Oracle.	19
4	Opportunities exist for enhanced effectiveness of the support organizations.	23
5	Opportunities exist to enhance and further control the Procure to Pay Process in Oracle.	31
6	Opportunities exist to enhance and further control the Accounting of Capital and Operating Expenditures Process in Oracle.	33
7	Opportunities exist to enhance and further control the Accounts Receivable Collection Process in Oracle.	37
8	Opportunities exist to enhance and further control the Employee Recruitment to Separation (including Payroll) Process in Oracle.	41
9	Opportunities exist to enhance and further control the Budget Planning to Reporting Process in Hyperion.	45

Each recommendation has an associated level of implementation effort, meaning the level of effort needed to put the recommendation in place:

Level of Implementation Effort	Full-Time Equivalent (FTE) Hours
High	Greater than 400 hours
Medium	81 - 400 hours
Low	80 hours or below

A roadmap and methodology for prioritization of the recommendations are provided in Appendix C of this Report.

POSITIVE ATTRIBUTES

The Audit Team determined management is performing activities that would be expected for a well-functioning ERP System, including:

- Addressing material weaknesses and determining creative ways to remediate.
- Support groups are committed to serving their customers and have adequate knowledge as a whole for the ERP System's functionality.
- The ERP System is generally configured with automated (configurable) controls that the Audit Team benchmarked against.
- Despite issues at go-live, including an overall gap in organizational change management, usage of the ERP System has improved, and it has appeared to become more stable.
- Taking steps to remediate segregation of duties issues and further control the ERP System using the Oracle Advanced Controls GRC (governance, risk and compliance) product.

AUDIT COMMENTS AND RECOMMENDATIONS

AUDIT COMMENT 1

Formal governance framework and inter-local agreement are not in place.

The objective was to determine if ERP System governance was defined, consistent, and aligned with business objectives.

The Audit Team conducted interviews with members of the Governance Committee from the Board and the Clerk, and the County Attorney's Office, and reviewed documentation pertaining to the inter-local agreements that were in place as part of the implementation.

TESTING RESULTS

Through inquiries and observations, the Audit Team determined:

1. Roles and responsibilities between the Board and Clerk are in dispute, including the approval process and ability to perform user administration and system change management, which limits the effectiveness of the Governance Committee when conflicts rise to its level. Part of this dispute can be tied to concerns that either agency may perform system changes or other actions beneficial for themselves that may impact the other negatively or create unacceptable risk. This has contributed to disputes that take away from activities that benefit both organizations and the citizens of Hillsborough County.
2. A formal governance framework or inter-local agreement is not in place.

The existing Governance Committee is represented by members from the Board, Clerk, City of Tampa, and Civil Service. However, formalized overarching governance and control objectives guiding strategic direction and vision, decision making, conflict resolution, and accountability do not exist.

An example of this negatively impacting the environment is the upgrade from Oracle EBS 12.1.3 to Oracle EBS 12.2. Upgrade 12.1.3 is on Oracle's Premier Support through December 2021. After this, it will be on Oracle's Sustaining Support indefinitely, meaning it will not be developed further, and security alerts, updates/fixes, and patches will be available only for pre-existing issues. At this time, a decision on whether to upgrade has not yet been determined. This upgrade will likely take several months to complete, and its delay presents a risk to the Board.

Prior to implementing the ERP System, an inter-local agreement (between all four organizations) existed to govern the implementation. The inter-local agreement was first put in place on October 20, 2009, and renewed on February 28, 2012; however, this agreement expired upon completion of the implementation, and has not been renewed.

Prior to audit fieldwork kickoff, a Governance Committee meeting was held on June 11, 2018. The Audit Team reviewed the meeting agenda, and noted the following discussion topics:

1. Governance – Structure/Inter-local Agreement
2. Governance, Risk, and Compliance (GRC) – Oracle Advanced Controls application

3. This Audit

4. Strategic Planning

Since this meeting, formalization of the Governance Committee activities is still to be determined.

RECOMMENDATION 1.1

Prior to implementing a formalized governance framework, the Board's management should first:

Conduct workshops with the Clerk to agree upon roles and responsibilities between the Clerk and Board's organizations, focusing on the areas of conflict, namely user administration and system change management, though all areas of conflict should be explored. This can happen at the Governing Bodies or the Joint Governance Committee level of the proposed Governance Framework (see Recommendation 1.2). The County Attorney's Office should be included as necessary to reach an agreement. City of Tampa and Civil Service representatives should also be included as necessary too. Formalize the roles and responsibilities, as well as ramifications and escalation path for deviations from agreed upon roles and responsibilities in an inter-local agreement. It is recommended a third-party (or multiple third-parties, including one with Oracle knowledge) be retained to moderate the discussion as deemed necessary.

STEP 1

As a first step, agreement on who can perform system changes (the internal support departments versus Oracle Managed Cloud Services) can be determined and formalized in an overarching governance-approved change control policy. The following can be explored:

1. Change Method	2. Access to Change Portal	3. Deviations from Agreement
The requesting agency can select to use either the internal support departments or Oracle Managed Cloud Services to promote a change based on the type / complexity of change. Regardless of the decision, the support departments should be consulted and approve the change on the basis and testing results of the change itself, not the migration methodology.	The internal support departments should continue to have access to view all changes in the Oracle ACE portal (used for Oracle Requests for Change). This access will provide visibility into what Oracle Managed Cloud Services is doing for the agencies.	Deviations from this process should follow the ramifications as described in the inter-local agreement.

STEP 2

As a second step, explore giving the ability to allow the Board's support group (Enterprise Solutions and Quality Assurance (ESQA) Department) to provision user access (i.e., change what users can access by adding or removing responsibilities on their profile), by providing the current security administration Responsibility ("CNTY Security Administrator"), with an agreement formalized in an inter-local agreement, on which Responsibilities can be provisioned (and which will not require final approval from the internal support departments). This is a significant area of conflict between the two groups, which is impacting the cooperation and efficiency across both support organizations. If there is a business need to allow ESQA the ability to provision user access in a limited fashion (e.g., grant specific users only certain

responsibilities) in order to perform their responsibilities, controls exist to monitor the activities performed by ESQA. Changes to a user's access can be monitored as needed using the Oracle Governance, Risk, and Compliance (GRC) product, and review of the monitoring activities set up by the Board's and Clerk's management should be part of an independent (internal and/or external) auditor's continuous auditing procedures, in addition to providing input on the appropriateness of access. However, the Audit Team believes an agreement on what ESQA can provision is necessary prior to getting access to "CNTY Security Administrator." This solution will not work otherwise. As an alternative, the following custom Oracle Responsibility can be created:

1. Agree on Scope	2. Create the Responsibility	3. Changes to Scope
Board and Clerk management agree upon the Oracle Responsibilities that the ESQA Department (or the Information and Innovation Office) can provision. The ESQA Department will use the current change control framework to approve and provision access (e.g. a security form is created and the user's supervisor approves). Agreement is formalized in an inter-local agreement. The Clerk's Enterprise Solutions and Support (ESS) Department would not provide final approval for these Responsibilities.	A custom Responsibility can be created for the ESQA Department (or the Information and Innovation Office) that uses a Form Personalization/customization that only allows provisioning of Responsibilities agreed to in step #1. The ESQA Department's (or Information and Innovation Office's) users are given this custom Responsibility.	Changes to the Responsibilities in step #1 are discussed and approved as part of the governance structure described below. User access changes are monitored and reviewed as part of the overall change control framework and independent auditors (internal and/or external) review monitoring activities as part of their continuous auditing procedures.

Creating this custom Oracle Responsibility is not preferable, as the Clerk's ESS Department would likely still need access to "CNTY Security Administrator," and disputes for its access may still exist. Preferably, the two organizations can agree on rules for both using "CNTY Security Administrator."

STEP 3

As a third step, all support and business owners should seek agreement with the Governance Committee on the segregation of duties ruleset being used as part of the Oracle governance, risk, and compliance (GRC) Application Access Controls Governor (AACG) implementation. While GRC is an excellent tool to manage risk, it should not drive business decisions, and the Board should work with the Clerk to determine how it will be used to manage risk.

Absent first agreeing on roles and responsibilities, a governance framework may be ineffective, since conflicts that could rise to it may be because one side believes it has the authority to do something, and the other side disagrees. Thus, conflicts may remain unresolved, impacting the effectiveness and strategic direction of the ERP System, and the ability to serve the citizens of Hillsborough County.

An additional benefit of agreeing to roles and responsibilities is that business processes may be further refined/simplified, such as approval workflows and ownership of data entry, including supplier information and grants/awards.

Implementation Level of Effort: High

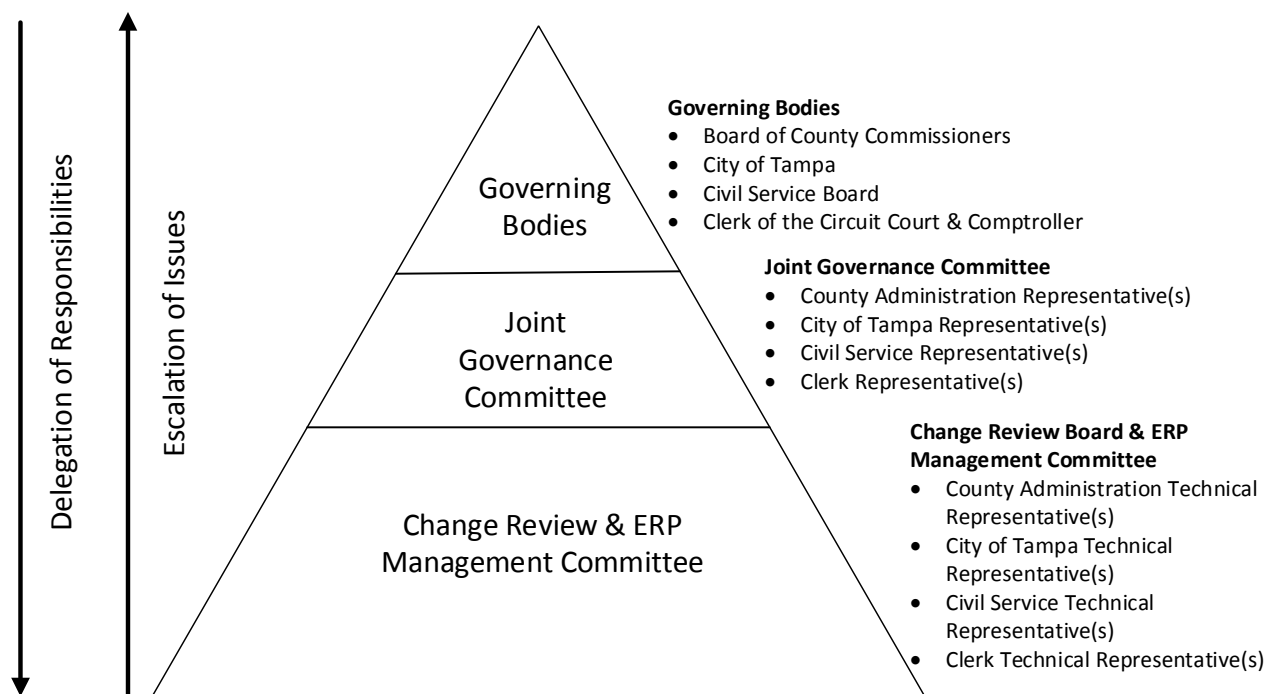
Recommendation 1.2

Once roles and responsibilities are agreed to and formalized in an inter-local agreement, the Board should:

Revisit the inter-local agreement from the implementation and consider renewing and updating. Management should consider:

- Organization details
- Reporting structure
- Subcommittees

Using the inter-local agreement as a baseline and updating it for the current environment, the structure below is recommended:

**Exhibit A: Proposed ERP Governance Structure**

Governing Bodies	<p>Governing Bodies should consist of the entities that authorize contracts and funds on behalf of the Board's, the Clerk's, the City of Tampa's, and Civil Service Board's organizations as well as who the individuals on the Joint Governance Committee ultimately report to. This is the final escalation point for issues the Joint Governance Committee cannot resolve.</p> <ul style="list-style-type: none"> • Board of County Commissioners • City of Tampa • Civil Service Board • Clerk of the Circuit Court & Comptroller
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Joint Governance Committee	<p>The Joint Governance Committee should consist of appointed representatives of the four organizations that share the Oracle Environment. Members of the Joint Governance Committee should not be members of the Change Review & ERP Management Committee.</p> <p>The Joint Governance Committee works with the Change Review & ERP Management Committee members to achieve consensus and provide roadmaps on goals, objectives, and strategic direction for the ERP System. The Joint Governance Committee resolves issues escalated to it by the Change Review & ERP Management Committee (including user access related disputes). In cases where there is a Board/Clerk dispute, it's recommended the dispute is settled between the two organizations only, unless there is a reason to involve the City of Tampa and the Civil Service (e.g. they are impacted as well). The Joint Governance Committee also provides direction to the Change Review & ERP Management Committee on subject areas to research and provide options, in order to drive strategy of the ERP System (e.g. system upgrade timeline/options).</p> <p>The Joint Governance Committee should be chaired by an individual member of the Committee, rotated quarterly; chairs should not be from the same organization back-to-back. Joint Governance Committee meetings should be held monthly.</p>
Change Review & ERP Management Committee	<p>The Change Review & ERP Management Committee should consist of appointed representatives of the four organizations that share the Oracle Environment. Members of the Change Review & ERP Management Committee should not be members of the Joint Governance Committee. These individuals should have in-depth knowledge of Oracle.</p> <p>The Change Review & ERP Management Committee should review and approve all upcoming system changes, perform lookbacks on implemented changes using system-generated change listings (to ensure changes circumventing change control processes were not promoted to production), coordinate multi-agency activities as necessary, prioritize efforts, and resolve issues escalated to it by the agencies. Unresolvable issues should be escalated to the Joint Governance Committee. This Committee should agree upon and maintain the segregation of duties ruleset.</p> <p>The Change Review & ERP Management Committee should be chaired by an individual member of the Committee, rotated quarterly; chairs should not be from the same organization back-to-back. Change Review & ERP Management Committee meetings should be held weekly or bi-weekly.</p>

Implementation Level of Effort: High

Recommendation 1.3

Regarding the Oracle EBS modernization to Cloud ERP, this is an involved process and requires strategic guidance from the Governance Committee. Likely, this will need to involve outside resources to assist who have experience in such upgrades (e.g. Oracle Consulting Services or a third-party vendor) and will take several months to complete. All of the customizations currently in place to support core business processes will go away and have to be replaced by process changes standardized by how Cloud ERP operates.

Given the functionality enhancements to Oracle Cloud ERP and continuing Premier Support through 2030, an upgrade is inevitable.

While the Oracle Cloud ERP modernization initiative has benefits, given the volume and impact of the change required, should be treated as a net-new implementation. The decision to move to these products should be done with efficiency and clarity given the risks of the current environment.

Implementation Level of Effort: High

AUDIT COMMENT 1 MANAGEMENT RESPONSE**1.1 – Concur:**

Corrective Action Plan: Roles and Responsibilities, each agency's intended use, maintenance, control and security of the system will be determined during workshops with all impacted stakeholders to include the Board Chair (Commissioner Miller) and County Executive Leadership, the Clerk of the Circuit Court (Pat Frank) and Clerk Executive Leadership, County Attorney's Office and Clerk's Counsel and the City of Tampa. These workshops, to be facilitated by a neutral third-party, will focus on defining responsibility of provisioning access and roles to Board staff (similar to responsibilities that Clerk staff have in the management of their unique business processes and support of end-users) while implementing tools to identify issues and manage risk for all support staff (BOCC and Clerk) assigned responsibilities that have the potential to impact BOCC transactions and financial reporting.

This critically important first step is required as it sets the foundation for implementing corrective actions for the findings below. Additionally, all corrective action plan estimates below are dependent upon this corrective action taking place in a timely manner.

1.2 – Concur

Corrective Action Plan: Upon finalization of roles and responsibilities set in 1.1, Governance staff under the BOCC will update the Inter-local agreement to reflect the agreed upon operating environment.

1.3 – Concur:

Corrective Action Plan: Representatives from Oracle's State and Local Applications team have agreed to partner with the Governance Committee to develop a strategic plan and associated roadmap identifying a clear path for Enterprise Resource Planning (ERP) software modernization.

AUDIT COMMENT 2

Opportunities exist to enhance the change control framework(s) to better suit the multi-tenant environment as well as to provide detective controls for changes.

The objective was to determine the effectiveness of the change control framework.

The Audit Team conducted interviews with members of the ESQA Department and the Clerk's ESS Department. The below table notes how changes are managed by both departments:

Board's ESQA Department	Clerk's ESS Department
Supports users under the Board, as well as other agencies, such as Supervisor of Elections, Environmental Protection Commission, etc.	Supports users under the Clerk. Performs user assignment and maintenance for both organizations, as well as most system changes and configurations that do not fall under the scope of Oracle Managed Cloud Services.
For Oracle Managed Cloud Services changes, a Board, Clerk, and City of Tampa representative are to sign off on the change.	
For non-Oracle Managed Cloud Services changes, only impacted agencies as noted by the change ticket requestor are to sign off on the change.	

The Audit Team also reviewed documentation from the Board's and Clerk's organizations that described the change management policies and procedures. This documentation included user access provisioning materials for both organizations. This approach was used by the Audit Team to determine the design effectiveness of the change control framework. Despite there being change control policy for the ESQA Department and the Clerk's ESS Department, there is not an overarching, governance-approved change control policy.

To determine operating effectiveness of the change control framework, the Audit Team sampled 60 system changes and 60 user access changes during the period between October 1, 2017, and July 31, 2018. The population of in-scope system and user changes was obtained using structured query language (SQL) queries provided to the Clerk's ESS Department by the Audit Team. The system change queries were ran against the production environment and returned updates to specific database tables, database objects, and Unix files; all changes were expected to be associated with a change ticket, with supporting documentation as described in the change control policies and procedures. The user access change queries were also ran against the production environment and returned updates to specific user accounts, when ERP System Responsibilities were either added or removed; all changes were expected to be associated with a change request and approval.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to enhance the change control framework design and operating effectiveness. While reviewing the user access change sample, the Audit Team found two issues that required a Clerk response only, not a Board

response. This has been communicated to the Clerk and Board separately outside of this Report. The Audit Team also identified the following operating effectiveness exceptions of the change control framework:

Preventative and Detective Controls	
Control effectiveness exception	<p>Preventative and detective controls are not in place for the change control framework, including both non-Oracle Managed Cloud Services changes performed by the ESQA Department and the Clerk's ESS Department, and user access changes performed by the Clerk's ESS Department. Changes to either can be made that circumvent the change control frameworks since access needed to perform these changes is generally always in place for applicable users.</p> <p>During the audit, and outside of the 60 samples selected by the Audit Team, it was discovered that changes were made by the Clerk's ESS Department to the "CNTY HRMS Manager" Oracle Responsibility, which is used by the ESQA Department's personnel to maintain the Oracle Human Resources (HR) System. This change was not approved by the ESQA Department/Board and did not go through the prescribed change control process. The change was later reversed.</p>
Recommendation 2.1	<p>Outside of provisioning access to applicable users who perform changes only when needed, and removing it once the change is complete, the Oracle Advanced Controls (GRC) Configurable Controls Governor (CCG) and/or Preventative Controls Governor (PCG) being implemented by the Clerk can be used to track all non-Oracle Managed Cloud Services changes, including system/configuration changes and user access changes. The Configurable Controls Governor/Preventative Controls Governor can produce logs showing these changes; these logs should be shared and reviewed across the Board, Clerk, and City of Tampa at a frequency to be determined by the three agencies' management, but no less frequent than monthly. Each change in the logs should be tied to a change ticket (e.g. a lookback analysis), which should be the responsibility of the applicable member of the Change Review & ERP Management Committee (as recommended above in 1.2) to map (or as delegated).</p> <p>Implementation Level of Implementation Effort: High</p> <p>Another option, and easier to implement in the short-term, would be to use queries (such as the ones used by the Audit Team to determine the change population) to review and monitor changes. Each change should be tied to a change ticket, which should be the responsibility of the applicable member of the Change Review & ERP Management Committee member to map (or as delegated).</p> <p>Implementation Level of Implementation Effort: Medium</p>

Changes the Clerk's ESS Department Can Perform

Control effectiveness exception	<p>For changes the Clerk's ESS Department can perform, agreed upon ownership for Oracle Managed Cloud Services execution and Clerk's ESS Department execution is not formalized in governance-approved change control policy. Specifically, the ESQA Department can submit a change request to Oracle Managed Cloud Services (via its contract with Oracle), which the Clerk may reject on account of the Clerk's ESS Department being able to perform the change itself.</p> <p>The Audit Team reviewed a sample of 60 changes. Nine of these changes tie back to two change requests. One was related to General Ledger (GL) Approver (Disable New Batch & New Journal from the Find Journals window) and the other was related to human resources (HR)/Learning Responsibilities.</p> <p>In both cases, the Clerk's ESS Department rejected the changes due to the deployment method, not because it disagreed with the nature of the changes, citing its ability to create the change instead of Oracle Managed Cloud Services. The ESQA Department created a request for change with Oracle Managed Cloud Services and had Oracle Managed Cloud Services promote the change via Oracle's FNDLOAD tool.</p>
Recommendation 2.2	<p>As part of the recommendations in Audit Comment 1, changes to be performed by Oracle Managed Cloud Services and changes to be performed by the Clerk's ESS Department should be formally agreed to as part of governance-approved overarching change control policy. Both the Clerk's ESS Department and the ESQA Department change control policies are good starting points; they both contain control points that would be expected from a robust change control policy (e.g. testing, approvals, documentation, etc.).</p> <p>Having Oracle Managed Cloud Services promote changes via the FNDLOAD tool is an acceptable practice. However, these changes should still go through the change control process and have all agencies approve the changes prior to production migration. Deviations from the practice should be escalated as part of the governance framework and language laid out in the inter-local agreement.</p> <p>Implementation Level of Implementation Effort: Medium</p>

Population of non-Oracle Managed Cloud Services changes

Opportunity for improvement	<p>A population of non-Oracle Managed Cloud Services changes are not proactively shared or required by policy across agencies, so there is limited visibility to non- Oracle Managed Cloud Services changes if an agency creates a change ticket, but does not list the other agencies as impacted (if listed as impacted, the agency will get notified of the change, but this input is at the change ticket owner's discretion and introduces human error). A risk that changes are made that impact another agency, and the impacted agency not having the opportunity to test the solution is introduced.</p>
Recommendation 2.3	<p>A listing of all proposed changes should be shared with all agencies weekly for information purposes, regardless of if the agency is impacted by the change.</p> <p>Level of Implementation Effort: Low</p>

Change Review Board	
Opportunity for improvement	A Change Review Board between the Board, Clerk, and City of Tampa agencies to create awareness of upcoming changes and discuss/resolve potential concerns does not occur with formalized regularity.
Recommendation 2.4	<p>A formal Change Review Board (e.g. the Change Review & ERP Management Committee from Audit Comment 1) between all agencies should be created and should meet a frequency to be determined by the agencies' management, but no less frequent than bi-weekly. In addition to discussing and approving proposed changes, topics should also include:</p> <ul style="list-style-type: none"> a. Patches and testing/deployment timelines; b. Items needing to be escalated to the Joint Governance Committee; and c. Agreement on a release schedule (e.g. one day weekly) to apply non-emergency changes, to facilitate effective planning of necessary activities, while taking the entire change population into account. Changes noted as "emergency" can be implemented outside of the release schedule, but should be reserved for true emergency changes, and should be limited in frequency. <p>Level of Implementation Effort: Medium</p>

Segregation of Duties Check at Time of User Provisioning	
Opportunity for improvement	Segregation of duties is not noted in policy to review prior to access provisioning. This creates the risk that a user is assigned an Oracle Responsibility that provides access that creates a segregation of duties conflict.
Recommendation 2.5	<p>Oracle Advanced Controls (GRC) Application Access Controls Governor (AACG) is being implemented by the Clerk. Board management should work with the Clerk to ensure preventative provisioning is being used as part of it, to ensure that segregation of duties and sensitive/privileged access is being reviewed as part of the user provisioning process. A segregation of duties review should be performed as part of the annual user access review process.</p> <p>Level of Implementation Effort: High</p>

Training/ Knowledge Validation	
Opportunity for improvement	Training/knowledge validation is not formally in place prior to provisioning access, to reasonably ensure end users know how to properly use the Responsibilities assigned.
Recommendation 2.6	<p>All agencies relying on Oracle should consider requiring user training prior to provisioning Responsibilities to critical Oracle functions that introduce risks that are either high likelihood or high impact to the organizations, especially support departments and those with privileged access. Level of Implementation Effort: Medium</p>

AUDIT COMMENT 2 MANAGEMENT RESPONSE

2.0 - Concur:

Corrective Action Plan: Upon completion of 1.1 and 1.2 above, the Governance Committee will approve a comprehensive Change Control Policy which will include the following components:

- Establishment of a formal Change Review Committee
- Creation of change reviews and associated timetables
- Change coordination, approval and implementation methods
- Transparency and timetables for all changes proposed by any support organizations
- Proper oversight, utilizing the Governance, Risk and Controls (GRC) software, to ensure segregation of duties and access to sensitive/privileged information during the provisioning of user responsibilities for all staff having access to BOCC transactions and support processes
- Ensure privileged users with critical system responsibilities have the specialized training and knowledge required to carry-out associated business functions prior to granting system access.

AUDIT COMMENT 3

Opportunities exist to enhance support staff access policies and segregation of duties conflicts and inappropriate access authorizations exist in Oracle.

The objective was to determine if support staff access was appropriate, properly monitored, segregated, and change controlled, in addition to following best-practices.

The Audit Team conducted interviews with members of the Clerk's ESS Department, the ESQA Department, and Oracle Managed Cloud Services. The Audit Team also ran a third-party tool (Fastpath) to review access and potential segregation of duties issues of support staff. Documentation was provided to the Audit Team also, and included PowerBroker policies, procedures, and access listings from Oracle Managed Cloud Services.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to more effectively control support staff access and leverage best practices:

Support Staff Activity Monitoring	
Opportunity for improvement	Support staff activity is not monitored or reviewed for appropriateness.
Recommendation 3.1	<p>The Audit Team does not recommend full-time monitoring of support staff (e.g. keystroke logging). Instead, using Audit Comment 2, Recommendation 2.1, changes that support staff perform should be reviewed, as described in the recommendation. Additionally, ensure segregation of duties rules are adhered to, so support staff do not have conflicting abilities.</p> <p>Level of Implementation Effort: High/Medium</p>

PowerBroker Credential Rotation	
Opportunity for improvement	PowerBroker credentials are rotated quarterly; a best-practice is to rotate them more frequently, with the highest maturity level being after each use.
Recommendation 3.2	<p>Enquire with Oracle Managed Cloud Services on the feasibility of rotating PowerBroker credentials on a more frequent basis, at a period to be determined by management, though not less frequently than monthly. For privileged user accounts in the ERP System not tied to a specific human user that are used for certain administrative activities (e.g. PO Admin, SYSADMIN), rotate credentials at least monthly as well.</p> <p>Level of Implementation Effort: Low</p>

Privileged Access Definition	
Opportunity for improvement	Privileged Access Management (PAM) policies and procedures including a definition of privileged accounts and privileged account criteria (e.g. Oracle Responsibilities assigned to accounts that would make it privileged) as it relates to Board activities are not defined in a policy for the Oracle application. A best-practice for privileged accounts is to require more frequent recertification for appropriateness (e.g. quarterly instead of yearly).
Recommendation 3.3	<p>Define privileged user accounts and privileged Responsibilities and determine a recertification frequency as agreed to by management, though not less frequent than quarterly. Access to PowerBroker and Board Oracle Responsibilities used to configure the system and perform changes for Board operations should be reviewed at this frequency as well.</p> <p>Level of Implementation Effort: Medium</p>

PowerBroker Access Request	
Opportunity for improvement	PowerBroker access request and yearly recertification evidence is in email form and not retained outside of the email application.
Recommendation 3.4	<p>Store PowerBroker access requests, recertification documentation and evidence in a centralized, easy to query and access, location (e.g. OnBase).</p> <p>Level of Implementation Effort: Low</p>

In general, the Audit Team determined support staff does not have high-risk inappropriate access based on current, though disputed (as previously described), roles and responsibilities. However, by using an access review tool called Fastpath, the Audit Team identified items needing attention, including some segregation of duties issues that should be investigated further; segregation of duties conflicts outside of the scope of this audit were provided to the applicable agency's management separately. While the Clerk is currently implementing Oracle Advanced Controls (GRC) AACG module, the Audit Team found the following issues that impact Oracle Responsibilities used for Board activities.

Oracle AZN Menus	
Item needing attention	"AZN Menus" ("Process" tab) exist for several Board Oracle Responsibilities, which provide wide-ranging and unintended access. These menus exist typically for implementation purposes, but best-practice is to remove them at go-live. See Appendix B for specifics.
Recommendation 3.5	<p>Remove all AZN Menus from impacted Oracle Responsibilities.</p> <p>Level of Implementation Effort: Low</p>

Segregation of Duties Conflicts

Item needing attention	Various segregation of duties conflicts exist for both Board Users and Responsibilities, including some that are considered high risk (mainly the ability to perform both setups and transactions). Some segregation of duties conflicts exist for support staff too (the Clerk's ESS Department and ESQA Department), though the Audit Team does not consider them high risk. See Appendix B for specifics.
Recommendation 3.6	<p>Investigate and remediate (as needed) the high-risk segregation of duties conflicts and segregation of duties conflicts of support staff identified by the Audit Team. Remediation can include removing the Responsibility from the user, modifying the Responsibility to remove the conflict, and/or identifying mitigating controls that manage the associated risk. This should be a joint effort between the Clerk's ESS Department and the ESQA Department.</p> <p>Level of Implementation Effort: Medium</p>

Password Reset Oracle Responsibility

Item needing attention	The "CNTY Help Desk Password Reset" Responsibility is only supposed to allow for the update of user passwords by Board help desk staff. However, it also allows adding new users, though Responsibilities cannot be assigned to users (thus reducing the risk).
Recommendation 3.7	<p>Update the form personalizations used for the "CNTY Help Desk Password Reset" Responsibility to prevent the addition of users.</p> <p>Level of Implementation Effort: Low</p>

AUDIT COMMENT 3 MANAGEMENT RESPONSE

3.0 – Concur

Corrective Action Plan: Governance will ensure that Privileged Access Management (PAM) policies will be documented, passwords are changed per best practice standards and those accounts with privileged access are monitored and access is routinely audited, and if necessary, rotated on a recurring basis. Segregation of duties, as identified by Protiviti, will be reviewed and addressed during this process. The Governance Committee will establish policies for the use of GRC to actively audit all staff with responsibilities to critical system functions that have significant risk and high organizational impact.

AUDIT COMMENT 4

Opportunities exist for enhanced effectiveness of the support organizations.

The objective was to determine if Oracle support staff resources are appropriate, sufficient, and effectively deployed to achieve efficient and effective system usage and management, and that resources are effectively deployed and they are used in a way that optimizes the achievement of leveraging the full functionality of a tier one ERP Solution.

Additionally, the objective was to assess if Oracle support staff members possess the knowledge, skills, and other competencies needed to perform their individual responsibilities. Knowledge, skills, and other competencies is a collective term that refers to the professional proficiency required of the Oracle system support group (a combined effort) to effectively carry out its professional responsibilities.

The Audit Team conducted interviews with members of the Clerk's ESS Department, ESQA Department and Information and Innovation Office and reviewed documentation related to job descriptions of individuals in the Clerk's ESS Department and ESQA Department, service desk tickets for both organizations, and organization charts to determine the activities performed on a daily, monthly, quarterly and annual basis, and current workload backlog.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that the Clerk's ESS Department and the ESQA Department, taken individually, are reasonably structured to service and maintain the ERP System. The Audit Team also determined the job descriptions and key job requirements to align with similar organizations reviewed by the Audit Team. However, the Audit Team identified areas for improvement to optimize the use of Oracle:

Service Level Agreement Definition	
Opportunity for improvement	Service level agreements (SLAs) are not in use for ESQA Department services to its customers (i.e. end-users) or for services the Clerk's ESS Department performs for the ESQA Department (e.g. user administration, system change management).
Recommendation 4.1	<p>The ESQA Department should investigate establishing service level agreements and reporting against service level agreements to provide customer service targets and measurement against those targets. Additionally, the ESQA Department should work with the Clerk's ESS Department to agree on appropriate service level agreements for services the Clerk's ESS Department provides to the ESQA Department, assuming the service provided doesn't result in conflicts needing resolution (e.g. by the Joint Governance Committee).</p> <p>Level of Implementation Effort: Medium</p>

ESQA and ESS Collaboration	
Opportunity for improvement	<p>The ERP System is supported by the Clerk's ESS Department and the ESQA Department. As such, both organizations are involved in day-to-day issue management, project executed, and maintenance of the System. Formalized and defined meetings between these two Departments to discuss ongoing projects with cross-organization impacts, collaboration, issues, and other items of interest currently take place.</p> <p>Additionally, the Audit Team observed the relationship between the two organizations is often contentious, particularly as it relates to change control and user maintenance, which risks negatively impacting the effectiveness of both organizations. The Audit Team noted this contentiousness cuts both ways. This behavior directly correlates to the observations noted in 1.1 related to a lack of a defined governance organization.</p>
Recommendation 4.2	<p>Once a formal governance structure is established, each group should be responsible for participating and attending during each weekly meeting. Further, each group should actively contribute to facilitate a more productive meeting. This meeting should continue to be used to discuss cross-organization items of interest, projects, issues, and strategy. Additionally, management should consider supporting and modernize the EBS application as a true enterprise through better collaboration. The chances of this can be improved by locating both the Clerk's ESS Department and the ESQA Department on the same floor. Currently, they exist on separate floors, which require separate elevator banks to access. Both organizations support Oracle and work together to some degree; co-locating ERP support staff will encourage face-to-face interaction, quick issue resolution, and teamwork. A longer-term goal may be to establish a true shared-services organization to support the ERP System, reporting to the Joint Governance Committee, though the implementation of this will likely be difficult and may distract from other necessary activities.</p> <p>Level of Implementation Effort: Low (meeting), High (co-location)</p>

AUDIT COMMENT 4 MANAGEMENT RESPONSE**4.1 – Concur**

Upon completion of 1.1 above, implement system access to the County Administrator's ERP support organization, Enterprise Solutions and Quality Assurance (ESQA) that is commensurate with the support access provided to the other agencies (i.e. The City of Tampa and the Clerk's Office). Additionally, ESQA will establish service level agreements defining service levels in concert with respective business clients.

It is worth noting that ESQA was formally established by the Office of the County Administrator to provide support for critical back-office business system functions for over 4,000 end users. It is essential that ESQA has the necessary authority and associated system responsibilities to provide departments with effective business system support. Without this foundational component service level agreements cannot be effectively implemented, negatively impacting supported clients.

4.2 - Concur

A venue has existed since the ERP system was implemented for all three (3) agencies to share their projects and associated timelines. However, we acknowledge that opportunities exist to improve communications.

It is worth noting that long-standing weekly teleconference meetings with the ERP system hosting provider, Oracle Managed Cloud Services (OMCS) take place with all respective agency support staff from the County, Clerk and City of Tampa. These meetings act as a venue to communicate plans for global system changes, raise and address system issues, as well as discuss planned projects or changes specific to individual agencies. Decision points from these discussions are documented and then communicated to all agency stakeholders via an established change management process to ensure changes are properly tested and approvals are captured from all three (3) respective agencies before changes are implemented into the production environment - minimizing global defects that have the potential to impact all agencies.

With the inherent risks associated with a multi-tenant environment, changes have the potential to impact all agencies. While meetings have been established to ensure formal change management procedures are followed not every change has been ushered through this formal process. As noted in the auditors' findings, changes that weren't communicated have been implemented in the past, resulting in global system impacts that have prevented County end-users from performing their job duties. Therefore, opportunities exist for tighter change management controls and enhanced communications among agency support staff. These issues will be addressed as a component of Governance as highlighted in recommendation 2 above.

AUDIT COMMENT 5

Opportunities exist to enhance and further control the Procure to Pay Process in Oracle.

The objective was to evaluate the effectiveness and efficiency of information processing (including appropriate access authorizations and controls) across the Board's Procure to Pay Process (P2P), including Oracle Approvals Management Engine (AME) approvals/workflows, iSupplier, and P-cards.

The Audit Team conducted interviews with members of the ESQA Department, Clerk's ESS Department, the Clerk's County Finance Department, Procurement Services Department, and the Board departmental accounting users. The Audit Team also reviewed implementation and configuration documentation and ran queries against the production Oracle environment to obtain current configurations and user access of the Procure to Pay Process.

The Clerk's County Finance Department/Accounts Payables processes payments for obligations incurred by the departments established under the Board and other independent agencies who provide services for the citizens of Hillsborough County. There are five methods of invoice processing within the Clerk's County Finance Department: purchase orders/contracts, direct payments, purchasing card payments, and interfaces. The Clerk's County Finance Department/Accounts Payables has four functional areas.

Clerk's County Finance Department/Accounts Payables Functional Areas	
Function	Responsibility
Intake Section	Responsible for receiving, scanning, and indexing all payment documentation.
Payables Processing	Oversees the audit and disbursement approval of payment requests for all Board departments and independent agencies.
Quality Assurance	Responsible for the post review of payment requests and their disbursement type document.
Payments and Distribution	Responsible for generating and distributing disbursements (scheduling payment runs and either mailing checks or sending payment files to the bank).

Oracle Approvals Management Engine (AME) workflows are utilized for requisitions, purchase orders, and expense reports in the Procure to Pay Process. The Clerk's County Finance Department enters purchase order invoices into Oracle for the Board, based on support the user department loads into OnBase; invoices over \$500 are reviewed by the Clerk's County Finance Department Accounts Payables Quality Assurance Group. Board departments enter direct invoices and the Clerk's County Finance Department performs its pre-audit function by reviewing and approving in Oracle, based on support the user department loads into OnBase. Currently, utilities invoices (via the CUPS System) and water refunds (via the AIMS System) are automatically interfaced into Oracle. Social Services invoices (via the ACES System) are manually entered into Oracle and bypass the Approvals Management Engine workflow; the Clerk's County Finance Department compares the signoff and signature in the invoice image from OnBase to the approval matrix.

Procurement and sourcing functions for Board departments are managed by the Board's Procurement Services Department. Oracle's Purchasing Suite (including iSupplier, iProcurement, Sourcing, and

Contracts modules) are leveraged. Supplier management in Oracle is a joint function between the Procurement Services Department and the Clerk's ESS Department.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to enhance the use of Oracle for the Procure to Pay Process. Despite these opportunities, the Audit Team observed some good leveraging of Oracle functionality, and it appears that the production environment access provisioned to users allowed for completion of activities. During the course of the audit, the Audit Team found several opportunities for improvement that pertained to Board operations, but would require a Clerk response only, not a Board response. These opportunities were provided to the Clerk and Board separately outside of this report:

P-Card Extract from Bank of America	
Opportunity for improvement	The P-card extract from Bank of America's "Works" into Oracle iExpense is not performed at a reasonable frequency, creating impacts to P-card holders and a higher workload for approvers, leading to less time to adequately review transactions.
Recommendation 5.1	Investigate options to automate the Bank of America Works extract/interface Level of Implementation Effort: Medium

iSupplier Enhancements

Opportunity for improvement	<p>A project was launched to release additional iSupplier functionality to the Procurement Services Department. This included several supplier maintenance functions and now allows the Procurement Services Department to conduct a larger part of the supplier maintenance process, where previously the Clerk was responsible. However, the following functionality, which would improve the process, is not enabled:</p> <ul style="list-style-type: none"> a. Uploading invoices into iSupplier by vendors; b. Supplier satisfaction feedback, including feedback on the sourcing process in Oracle; c. Ability for suppliers to enter/maintain the entirety of their information, with Procurement Services Department users reviewing/approving; and d. Reporting on changes to fields in supplier records.
Recommendation 5.2	<ul style="list-style-type: none"> a. Configure iSupplier to allow supplier uploads of invoices. b. Configure iSupplier to solicit, collect, and compile supplier feedback, using the survey page. A number of comments were made by the Procurement Services Department staff and department end-users regarding the difficulty and confusion caused by the ERP System for suppliers. However, utilizing the survey functionality will provide a central location for suppliers to provide feedback, and for the Procurement Services Department to review. c. Investigate allowing suppliers to enter and maintain a larger subset of their own data. iSupplier Responsibilities can be configured to allow suppliers the ability to do so, and workflows can be configured for Clerk and/or Procurement Services Department users to audit/approve the data. Doing so would allow Clerk and Procurement Services Department users to focus on other tasks more value-added, compared to data entry; and d. The Procurement Services Department should identify the fields that should be change-tracked from iSupplier and the business case to do so. Oracle Preventative Controls Governor (PCG) module could be utilized to prevent change and provide reports/alerts. <p>Level of Implementation Effort: High</p>

Payments Missing Bank Accounts

Opportunity for improvement	<p>Before Board payments are issued by the Clerk's County Finance Department's Payments Team, a manual review of the payment batch is performed for missing bank accounts. Payments missing a bank account are manually removed from the batch for investigation and resolution.</p>
Recommendation 5.3	<p>A determination should be made as to who owns the vendor master data. Once decided, a vendor master data cleanup should be performed. Doing so will provide benefits to the Procurement Services Department, including removing/merging duplicate records, identifying incorrect data, and identifying missing data (including bank accounts). Further, once iSupplier functionality is deployed, ongoing maintenance would be performed by the suppliers.</p> <p>Level of Implementation Effort: Medium</p>

Sourcing Enhancements	
Opportunity for improvement	<p>The sourcing process has several opportunities for enhancement:</p> <ul style="list-style-type: none"> a. Award approval is manual/paper-based. Approvals are not performed in Oracle, though a pilot of using Oracle for approvals was performed and later abandoned; b. When a Board department enters a new requisition, it can populate the 'Suggested Buyer' field. Once the Requisition is approved, it then gets routed directly to that buyer, without the Procurement Services Department's control. If the suggested buyer field is empty, the requisition will come into the demand workbench in the Unassigned queue, so the Procurement Services Department can assign the requisition to the appropriate buyer. The Board's departments have been told by the Procurement Services Department to leave the 'Suggested Buyer' field blank, but if staff copies a previous requisition, the field is populated automatically; c. Line utilization of a blanket purchase agreement is determined manually, by pulling invoices and analyzing via Microsoft Excel.
Recommendation 5.4	<ul style="list-style-type: none"> a. Approval workflows in Oracle for awards should be re-investigated. This should include identifying ways to address the pain points of the pilot (such as customizing alerts/emails to be more descriptive of the award being approved, without having to open the record), causing it to be abandoned; <ul style="list-style-type: none"> Level of Implementation Effort: High b. Create a form personalization to prevent entry in the 'Suggested Buyer' field and to clear the field if a requisition is copied. <ul style="list-style-type: none"> Level of Implementation Effort: Low c. Assign and run the Purchase Order and Release Detail Report to show how much of each line item of a blanket purchase agreement has been released. <ul style="list-style-type: none"> Level of Implementation Effort: Low

Three-way Match Tolerances	
Opportunity for improvement	<p>Three-way match tolerance in most cases is either \$0 or 0%, which does not allow for any difference between the purchase order, invoice, and receipt. This risks leading to rework for immaterial differences, including reissuing the invoice by the vendor and/or updating the purchase order. This also risks losing out on earned discounts because of invoice processing delays.</p>
Recommendation 5.5	<p>A dollar value and/or percentage tolerance should be investigated for three-way match. A small, immaterial tolerance could be used that would cover rounding errors and other small differences, which would reduce unnecessary rework and free resources to perform more value-added activities. Consider 5% and \$100 (the more restrictive of the two will be used) as a starting point.</p> <p>Level of Implementation Effort: Low</p>

Oracle Business Intelligence (BI) for Procure to Pay

Opportunity for improvement	Dissatisfaction exists with the current version of Oracle Business Intelligence (BI) and its reporting capabilities with iSupplier, sourcing events, and measuring the performance of the Procurement Process. During implementation, the Board's Business Intelligence efforts were focused on core financials, and both the Procurement Services Department and the Human Resources Department processes were a lesser priority. A quote has been provided by Oracle to provide an upgrade to the existing Business Intelligence version and licenses, which would begin to address outstanding requests. The ESQA Department writes Business Intelligence reports or SQL reports as able, to respond to end-user requests.
Recommendation 5.6	<p>Given the limitations discussed, a review of the business process should be performed to ensure all key data elements are included to enable accurate and efficient reporting. The Oracle Business Intelligence strategy should be investigated by the Oracle Joint Governance Committee and be part of the overall Oracle go-forward strategy. While a quote has been provided by Oracle, it includes licensing costs and professional services fees from Oracle Consulting Services. If it is decided to continue to investigate upgrading Oracle Business Intelligence, competing quotes should be gathered from other professional services firms to assist with the implementation, potentially resulting in a reduced cost.</p> <p>Level of Implementation Effort: High</p>

Accounts Payable & Procurement Configurable Controls

Opportunity for improvement	The Audit Team utilized a library of Board related accounts payables and purchasing system-based Oracle configurable controls and compared them to existing settings. Refer to Appendix A for specific configurations that can be leveraged for enhanced control.
Recommendation 5.7	<p>The configurable controls in Appendix A should be reviewed and implemented where able.</p> <p>Level of Implementation Effort: Low</p>

AUDIT COMMENT 5 MANAGEMENT RESPONSE**5.0 – Concur**

A comprehensive review of the County's Procure to Pay Process will be included in our strategic planning process contained in our response to recommendation 1.3.

Audit Comment 5.0 covers Procure to Pay, which is one of the County's key business processes

Functions within this process involve several business process owners, hundreds of end-users across BOCC Departments who are responsible for procurement and payments activities, and thousands of suppliers. As noted by the auditors there are significant re-engineering opportunities for improvement. In order to present a cohesive and holistic view of the problems and related cause(s), we grouped similar items from the 13 specific recommendations under 7 separate Opportunities for Improvement contained in Audit Comment 5.

EBS is designed to be a distributed system providing access to manage business processes directly to those business owners. For the Procure to Pay Process, business owners include Procurement Services and the Chief Financial Administrator. Departmental and external end users include BOCC Requisitioners, Accounting Staff and Suppliers who are able to directly transact within business processes utilizing embedded controls which include restricted system access, workflow approvals, system alerts and exception reporting.

When the system isn't distributed appropriately to business owners and end users – to take advantage of automated processes and embedded automated controls – we create manual work arounds with duplicative efforts, creating inefficiencies, delays in processing transactions, inability to utilize business intelligence to prepare process performance reports significantly impacting the ability to report accurate and timely information to decision makers. Access to timely and accurate information was a key goal for purchasing an integrated ERP system.

During Oracle EBS implementation much of the functionality was not well understood (as with any implementation of our size and complexity). Therefore duplicative and inefficient processes were replicated, rather than leveraging ERP functionality. Those processes impact numbers and levels of staff required to process transactions – introducing unnecessary risk, making transaction processing more burdensome. As noted by the auditors, users and suppliers are unable to see information and make changes and or transact efficiently with Oracle EBS and we are therefore unable to take advantage of many of the benefits of our Tier 1 integrated business system. End users have been focused on processing their transactions through less than optimal processes rather than on the reporting and analysis of the results of those transactions.

The background information above sets the foundation for our responses below:

Audit comment 5, Section 5.1, Concur

The County will develop a process to download PCard transactions more frequently allowing our approvers appropriate time to review and approve transactions.

Audit comment 5, Sections 5.2, 5.3 & 5.5, Concur

This section includes anecdotal information that it is difficult and confusing for suppliers to utilize the ERP system. However, much of the ERP functionality for suppliers hasn't been provided to them. For example, functionality exists entirely within the application for suppliers to directly update their own information, see and respond to bid opportunities, participate in collaborative discussions, review and provide feedback, upload invoices and view the status of their payments. The current process of creating a new supplier account includes processes outside the EBS system which incorporates emails, faxes, manual forms, etc., rather than ERP system functionality. Adding to their confusion is that the process of becoming a supplier

is disjointed between department end-users, Procurement and County Finance – all having a role in the set-up – often resulting in back and forth requests to the supplier. Adding more to supplier confusion, section 5.3 of the report states that supplier records are missing bank accounts, have been duplicated in the system and are inaccurate. The recommendation includes a determination as to “who owns the supplier master data” a full 5 years post implementation. Lack of ownership has created delays in making improvements. When supplier records are inaccurate and/or missing key payment information, payments can be delayed or sent/deposited to the wrong location/account. Section 5.5 identifies the need to establish a dollar value and/or invoice percentage tolerance that could be used to cover when rounding issues or other small invoice issues arise. This would preclude the current process of returning those invoices to suppliers to correct and resubmit – another process creating inefficiencies and dissatisfaction for suppliers. Therefore the County will proceed with establishing a non-zero tolerance level starting with reviewing the 5% or \$100 tolerance level (whichever is less) as recommended.

Audit comment 5, sections 5.6 & 5.4 – Concur

Section 5.6 states that dissatisfaction exists with business intelligence reports for Procurement's performance measurements. ESQA worked with Procurement to deliver comprehensive performance reports and dashboards, and for departments to monitor their procurements. However, due to customizations involving manual processes and/or systems outside of the ERP, some performance information and status reports for Procurement, suppliers and end-users are inaccurate or not possible. One of those processes is discussed in the report, Section 5.4a, which states that the automated award approval process in Oracle was abandoned and replaced by a paper approval process.

Section 5.6 recommends reviewing Procurement business processes and upgrading Business Intelligence (BI) in order to alleviate some of the reporting issues. In November 2018 the County Administrator approved a contract with Oracle for the County to upgrade our BI applications. ESQA is working with Oracle to implement the upgrade and it is scheduled for completion by December 2019. While this upgrade will most certainly provide reporting and dashboard enhancements, if we continue utilizing work arounds outside of the Oracle EBS system, reports for those processes will continue to be inaccurate.

Section 5.7 Concur

ESQA will work with business owners to review configurable controls as outlined in the attachment and make changes based on those reviews.

To close-out our responses for the Procure to Pay process, Section 5.2 includes background information describing a project currently underway to assign responsibilities for supplier maintenance functions to the County's Procurement Department. Based on the entirety of our responses above to Audit Comment 5, we intend to finalize provisioning the Procurement Department staff with the proper system access, approved by County Governance to maintain supplier records and procurement processes – with support from ESQA. As outlined in Section 5.2, the BOCC will implement controls to monitor those changes that introduce risk.

AUDIT COMMENT 6

Opportunities exist to enhance and further control the Accounting of Capital and Operating Expenditures Process in Oracle.

The objective was to evaluate the effectiveness and efficiency of information processing (including appropriate access authorizations and controls) across the Board's Accounting of Capital and Operating Expenditures Process in the ERP System, including initiation, capitalization, depreciation, and retirement.

The Audit Team conducted interviews with members of the ESQA Department, Clerk's ESS Department, and the Clerk's County Finance Department. The Audit Team also reviewed implementation and configuration documentation and ran queries against the production Oracle environment to obtain current configurations and user access of the process.

The Board and its departments leverage Oracle's Financials (General Ledger, Fixed Assets, Accounts Payable, Grants Accounting), Procurement, and Projects modules to support the capital improvement program. Construction work in progress is tracked via Oracle Projects and assets are transferred to Oracle Fixed Assets once the project has reached substantial completion. The Clerk's County Finance Department Capital Assets Group supports the process, including when the asset has been moved to the Oracle Fixed Assets sub ledger and when the asset is disposed of. Grants and awards are often used to fund capital projects and are maintained in the Grants Accounting Module.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to enhance the use of Oracle for the Accounting of Capital and Operating Expenditures Process. This Process has had repeated issues uncovered during the annual single audit. However, the single audit for FY2017 did not uncover issues related to the Process. Because of these issues, the Clerk's ESS Department and the ESQA Department have worked together to address the root causes, including finding common resolutions when the two organizations' initial resolutions conflicted. It appears that the production environment access provisioned to users allowed for completion of activities:

Construction Work in Progress	
Opportunity for improvement	<p>During the go-live conversion, issues were created by not reconciling sub ledgers to the general ledger, loading assets directly into Oracle Fixed Assets and expenditures separately into Oracle Projects. This caused incorrect reporting of Construction work in progress (CWIP) and was reported as part of the FY15 single audit. This has also caused the linkage between project related assets and their associated projects at the time of conversion to be broken. Typically, these issues are addressed once a conversion project has reached substantial completion and the project can be pushed to Oracle Fixed Assets. However, master projects are in use, which generally stay open in perpetuity, so issues may remain unaddressed, unless they are proactively reviewed.</p>
Recommendation 6.1	<p>Board management is currently taking a number of actions to address this issue; these efforts should continue:</p> <ul style="list-style-type: none"> a. More frequent reconciliations between projects, grants, general ledger, and any other associated sub ledgers. It is recommended that this occur monthly for each project, not just those that have reached substantial completion. Doing so will help identify issues timely and when front of mind, versus potentially much later, when the details of expenditure circumstances may be forgotten. <p>Level of Implementation Effort: Low</p> <ul style="list-style-type: none"> b. ESQA is working with County Finance, BOCC Departments, and Budgeting to design a decision tree for master projects vs. standalone projects to help provide better control, monitoring, and precision with managing project budgets and spend. <p>Level of Implementation Effort: High</p> <ul style="list-style-type: none"> c. The ESQA Department and the Board's Chief Financial Administrator are working on an updated administrative directive to guide end-users on proper Oracle use, including POETA (accounting string) selection. Coupled with updated training sessions, steps to addressing common issues at the time of user entry that are based on user error can be taken. <p>Level of Implementation Effort: High</p>

Supplier Invoicing	
Opportunity for improvement	<p>Supplier invoices are moving from Projects to Fixed Assets as one lump sum record, versus individually, making reconciliation and research of an asset's invoice difficult and time consuming. This is caused by the "Group Supplier Invoices" checkbox in the Capital Project template being checked.</p>
Recommendation 6.2	<p>Board management has discussed unchecking the "Group Supplier Invoices" for projects beginning FY19 and going forward. It is recommended this action be completed.</p> <p>Level of Implementation Effort: Low</p>

Accounts Payable to Fixed Assets

Opportunity for improvement	When project-related assets are pushed directly from Oracle Accounts Payables to Oracle Fixed Assets (when needing to tag and put the asset into use right away), asset numbers are not tied to the associated expenditures in Oracle Projects, since the asset goes straight to Fixed Assets from Accounts Payables.
Recommendation 6.3	<p>Board management has discussed addressing this via tasks/sub-tasks in the project. That would send the expenditure from Projects to Fixed Assets when needed, versus waiting for the project to reach substantial completion, or skip Projects completely. It is recommended this action be further investigated.</p> <p>Level of Implementation Effort: Medium</p>

Capitalization Treatment of Expenditures

Opportunity for improvement	Capitalization treatment at time of purchase order entry for a Board department and inside the Oracle Projects Module can conflict with each other. For example, a purchase order can be charged to a POETA (accounting string) that is capitalizable and will go through budgetary control as a capital expenditure. Once in Projects, the expenditure can be switched to non-capitalizable; this is known as "Flag Flipping." Doing so creates an out of balance because adjustments are not made to the general ledger when this occurs, to account for the change in the accounting treatment of the expenditure. It merely determines if the expenditure should interface to Fixed Assets.
Recommendation 6.4	<p>Board management is investigating transaction controls and sub-ledger accounting rules to manage expenditure/task combinations, to prevent the issue of contradicting capitalization treatment during requisition/purchase order entry and in Projects. Using project controls can help prevent selecting expenditure type and tasks that would have different capitalization treatment. Additionally, Board management should investigate removing the ability to change the Capitalize flag in Projects from current Oracle Responsibilities, and creating a new custom Responsibility with the ability to do so and assigning it to only a select group of individuals who have the authority and training to do it accurately when needed (this would include being able to perform the necessary adjusting entries and reconciliations needed).</p> <p>Level of Implementation Effort: High</p>

Miscellaneous Batch Entry

Opportunity for improvement	Some Board expenditures are made directly to the general ledger and associated entries are not always made to Projects via miscellaneous batch entry. This creates an out of balance between projects and the general ledger.
Recommendation 6.5	<p>In addition to monthly reconciliations of all projects, Board management should review SLA rules and investigate creating a process to create miscellaneous batches in Projects (potentially via Web ADI) that will in turn create the Board's general ledger entries automatically through the normal transfer process. If entering a journal in the general ledger must be done, monthly reconciliation can help validate if a miscellaneous batch was not entered.</p> <p>Level of Implementation Effort: Medium</p>

AUDIT COMMENT 6 MANAGEMENT RESPONSE**6.0 - Concur**

Staff from ESQA, Clerk County Finance, and Management and Budget have formed a comprehensive work group to address opportunities in the Project Accounting module. The Project Accounting work group has developed a list of deliverables and is addressing each item on a priority basis. Those items will be implemented upon unanimous agreement or discussed with the Chief Financial Administrator and Deputy Comptroller for further direction, if needed.

6.2 - Concur

This recommendation was addressed in September 2018. All new capital improvement projects (CIP) created beginning with fiscal year 2019 include the new grouping rules as researched and approved by staff in ESQA, Management & Budget and County Finance.

AUDIT COMMENT 7

Opportunities exist to enhance and further control the Accounts Receivable Collection Process in Oracle.

The objective was to evaluate the effectiveness and efficiency of information processing (including appropriate access authorizations and controls) across the Board's Accounts Receivable Collection Process.

The Audit Team conducted interviews with members of the Clerk's County Finance Department. The Audit Team also reviewed implementation and configuration documentation and ran queries against the production Oracle environment to obtain current configurations and user access of the Accounts Receivable Collection Process.

Revenue is recognized by the Board's Departments in three different ways:

- The first process is by journal entry, in which cash is received and revenue (or deposits or unearned revenue) is recorded directly to the general ledger (e.g. by user departments who don't enter their receivables into Oracle).
- Accounts receivable is the second process, which creates an invoice in the Oracle Accounts Receivable Module, and a receivable balance at the time of revenue recognition in the Oracle general ledger.
- The third process is through Event Billing in the Projects/Grants Modules. Receipts for both standard and Projects invoices are posted in the Accounts Receivable Module.

The Clerk's County Finance Department reviews and approves accounts receivable invoices and receipts for appropriate support, referring to the provided documentation in OnBase.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to enhance the use of Oracle for the Board's Accounts Receivable Process. It appears that the production environment access provisioned to users allowed for completion of job activities:

Accounts Receivable System Usage	
Opportunity for improvement	Certain transactions are stored in disparate and homegrown systems capturing receivable information. As a result, reconciliations between the general ledger and these ancillary systems are manual, and information is difficult to reconcile.
Recommendation 7.1	Investigate the feasibility of using EBS to enter accounts receivable invoices and receipts directly into Oracle Accounts Receivable, instead of associated ancillary systems, though each department boundary system may have a business need to have accounts receivable information in it, which may create duplicate work.
	Level of Implementation Effort: High

Accounts Receivable Receipt Numbering

Opportunity for improvement	Accounts receivable receipt numbers are manually entered by the Board department users. This introduces the risk of duplicate accounts receivable receipts being entered.
Recommendation 7.2	<p>A form personalization can be created to automatically generate the receipt number, based on business requirements (e.g. a numbering scheme that includes identifying characteristics such as customer name and date).</p> <p>Level of Implementation Effort: Low</p>

Event Billing

Opportunity for improvement	<p>The Event Billing Process is five steps. At the department level, a Grant Accountant performs two of the steps of the Event Billing.</p> <p>The first step (Draft Revenue) will generate entries in both the Projects and Awards sub ledger (which tracks grants and capital projects) and in the general ledger. The entries to the general ledger occur through a nightly scheduled process.</p> <p>The second step (Draft Invoice) of the Event Billing starts the progression that creates an accounts receivable invoice in the Accounts Receivable sub ledger, which is imported daily to the general ledger. Grant related invoice numbers are six numerical digits that begin with an "8."</p> <p>The third step (Interface Draft Invoice) is to interface the draft invoice from Projects to Accounts Receivable, which is done with a scheduled overnight process.</p> <p>The fourth step (Import Invoices) is to import the invoices from the staging table in Accounts Receivable which is done by Clerk County Finance manually after reviewing for proper documentation for each billing record.</p> <p>The fifth step (Accounting Lines) is to create accounting, which is done by Clerk County Finance for all billing records that are successfully imported into Accounts Receivable.</p> <p>As part of the month-end closing process, the Clerk's County Finance Department reviews the accounts receivable suspense accounts to ensure there is no balance (evidencing that all steps in the Event Billing process are completed). However, given this is a multi-step process, opportunities for error exist and Suspense Account balances are found as part of the month end close.</p>
Recommendation 7.3	<p>Investigate creating a custom request set that combines both the first and second Event Billing programs, to minimize month-end suspense account resolution, and gain efficiencies.</p> <p>An alternative solution to enhance the reconciliation of the suspense account is to include the project # in the accounting string for the revenue, receivable, and the suspense accounts. That way, every item in the suspense account is denoted with a project number, so that research and resolution is easier. Note that this is a common practice for entities using Oracle project accounting.</p> <p>Level of Implementation Effort: Medium</p>

Accounts Receivable Configurable Controls	
Opportunity for improvement	The Audit Team utilized a library of Board related accounts receivable system-based Oracle configurable controls and compared them to existing settings. Refer to Appendix A for specific configurations that can be leveraged for enhanced control.
Recommendation 7.4	<p>The configurable controls in Appendix A should be reviewed and implemented where able.</p> <p>Level of Implementation Effort: Medium</p>

AUDIT COMMENT 7 MANAGEMENT RESPONSE

7.1 - Concur

The County will explore enhancing its use of Accounts Receivable functionality within the Oracle EBS platform.

7.2 – Concur

Implementation Plan: ESQA created a solution at the request of County Finance. The solution has been tested and will be routed to all 3 agencies for testing and approval for implementation in March 2019.

7.3 – Concur

Implementation Plan: The auditors' recommendations will be reviewed and prioritized as part of the Project Accounting Work Group project discussed in our response to 6.0 above.

7.4 – Concur

We concur that BOCC staff should review the Accounts Receivable settings and configurations as noted in Appendix A. Support staff will review the business needs, assess risks and make recommendations to Governance for decisions as we share a customer database with multiple agencies.

AUDIT COMMENT 8

Opportunities exist to enhance and further control the Employee Recruitment to Separation (including Payroll) Process in Oracle.

The objective was to evaluate the effectiveness and efficiency of information processing (including appropriate access authorizations and controls) across the Board's Employee Recruitment to Separation (including Payroll) Process in Oracle.

The Audit Team conducted interviews with members of the ESQA Department, Human Resources Department, and the Clerk's County Finance Department. The Audit Team also reviewed implementation and configuration documentation and ran queries against the production Oracle environment to obtain current configurations and user access of the Process.

A centralized team under the Human Resources Department called the Human Resources Data Team acts as the point of contact for entering and maintaining human resources data in Oracle for Board employees. This includes new hires, transfers, and terminations, among others. Though this means self-service functionality isn't used to its full potential, this centralized team acts to ensure data is entered completely and accurately and appears to be functioning well. In addition to a variety of employee/manager self-service functionality, Oracle Advanced Benefits (OAB) is utilized for employee benefits management and Oracle Learning Management (OLM) is used to track training. The ESQA Department maintains these Oracle modules, though changes must go through the prescribed change control frameworks. The Clerk manages the Payroll Process, including payments to the Board's employees.

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to enhance the use of Oracle for the Employee Recruitment to Separation Process. It appears that the production environment access provisioned to users allowed for completion of activities:

Employee Onboarding Workflow

Opportunity for improvement	Employee onboarding in Oracle requires the department director to approve the Personnel Action (PA) for the new hire, after the Human Resources Data Team enters the required information. Delays in procuring an employee a badge and other activities are delayed when the approval process is not performed in a timely manner.
Recommendation 8.1	Investigate updating the workflow to obtain the department director's approval after a badge has been provisioned to the employee, and other requirements for the user to perform his/her job have been provided, or, have the request re-route back to the Human Resources Data Team if the department director does not approve it in a set amount of time. Updates can be made to employee records if needed when the department director reviews it later. Level of Implementation Effort: Medium

Oracle to Kronos Adjustments

Opportunity for improvement	Adjustments made to the Oracle record are not reflected in Kronos as needed.
Recommendation 8.2	The ESQA Department and the Clerk's County Finance Department's management stated that a project is underway that will address this issue, via an upgrade to Kronos version 8 and using the historical edit feature. As part of this project, the ESQA Department should work with the Clerk's County Finance Department to ensure issues are resolved and that the Board's users are sufficiently trained to use the historical edit feature appropriately. Level of Implementation Effort: High

Payroll "Insufficient Funds" Error

Opportunity for improvement	"Insufficient Funds" errors occur during payroll runs during the transfer to general ledger payroll job when the Board's employees are linked to grants that have expired. This causes delays in the Payroll Process when the employee records need to be updated to remediate the error. Currently, the Clerk's County Finance Department will open a ticket with the ESQA Department to correct the cost allocation.
Recommendation 8.3	The ESQA Department should work with the Board's Management and Budget Department to regularly and proactively identify and update employees tied to expired grants. This process should occur no less frequently than monthly. Reporting and/or alerts can be developed indicating employees tied to expired grants. Level of Implementation Effort: Medium

JobAps	
Opportunity for improvement	Dissatisfaction exists with JobAps, which is used by the Board's departments as its application/recruitment system. Dissatisfaction exists primarily with the user experience, reporting capabilities, and functionality.
Recommendation 8.4	<p>The ESQA Department's and the Human Resources Department's management stated that a request for proposal is planned for a JobAps replacement. As part of this request for proposal, pain points with the current system should be documented, and requirements to remediate pain points should be clearly defined.</p> <p>Level of Implementation Effort: High</p>

Oracle Business Intelligence (BI) for Human Resources	
Opportunity for improvement	Dissatisfaction exists with the current version of Oracle Business Intelligence and its reporting capabilities. During implementation, the Board's Business Intelligence efforts were focused on core financials, and both the Procurement and the Human Resources Processes were a lesser priority. The organizational structure in Oracle Human Resources is also granular and specific, including steps that are done outside of the system, which makes creating reports challenging. A quote has been provided by Oracle to provide an upgrade to the existing Business Intelligence version and licenses, which would begin to address outstanding requests. The ESQA Department writes Business Intelligence reports or SQL reports as able, to respond to end-user requests.
Recommendation 8.5	<p>Considerations should be made regarding having all critical HR activities performed within Oracle to get better reporting. Further, the Oracle Business Intelligence strategy should be investigated by the Oracle Joint Governance Committee and be part of the overall Oracle go-forward strategy. While a quote has been provided by Oracle, it includes licensing costs and professional services fees from Oracle Consulting Services; if it is decided to continue to investigate upgrading Oracle Business Intelligence, competing quotes should be gathered from other professional services firms to assist with the implementation, potentially resulting in a reduced cost.</p> <p>Level of Implementation Effort: High</p>

Segregation of Duties Conflicts	
Opportunity for improvement	Segregation of duties conflicts exist with the ESQA Department's staff assigned to the "CNTY US Super HRMS Manager" Oracle Responsibility, which assigns wide-ranging access to the Human Resource Process.
Recommendation 8.6	<p>Investigate and remediate the conflicts identified by the Audit Team (Appendix B). Remediation can include removing the Responsibility from the user, modifying the Responsibility to remove the conflict, and/or identifying mitigating controls.</p> <p>Level of Implementation Effort: Medium</p>

AUDIT COMMENT 8 MANAGEMENT RESPONSE**8.1 – Concur**

We agree with the need for timely approvals of personnel actions and ESQA will work with HR to determine the severity or scope of how widespread the issue is within the County and work to implement reports, alerts and process improvements.

8.2 – Concur

With the implementation of Kronos 8.1, the County can now perform historical edits in Kronos, not in Oracle EBS, and ESQA will be including training on how to perform historical edits in their advanced Kronos training once the process and training materials have been finalized.

8.3 – Concur

ESQA has developed and distributed monitoring/exception reports to identify expiring grants and any payroll costs or personnel attached to the associated grants.

8.4 – Concur

The County is in the process of gathering requirements associated with a new recruitment and talent management solution, which should include the input from department stakeholders across the enterprise. Additionally, the proposed solution should be identified as a part of the strategic planning process.

8.5 – Concur

While we agree that the current Business Intelligence system is in need of an upgrade, the root of the issues that the Human Resources Department has with the Business Intelligence system will not be resolved until the HR organizational structure, as implemented in Oracle EBS, is addressed to standardize on a level-based hierarchy and HR business processes are fully realized within the Oracle EBS platform.

As stated in responses to section 5, with respect to the need for an upgrade of the current Business Intelligence system, the County has completed the contracting phase of a Business Intelligence upgrade project (to the most current version) and is beginning the implementation phase of the upgrade. Estimated timeline for completion of the County Business Intelligence system upgrade is anticipated by the end of the calendar year.

8.6 – Concur

The ESQA department will analyze the conflicts identified by the Audit team in Appendix B and based on direction from County Governance, will either remove the conflicting menu entries from the "CNTY US Super HRMS Manager" responsibility, or where removal is not feasible or would impact the ability to support the Human Resources module, develop monitoring controls to prevent misuse of the responsibility.

AUDIT COMMENT 9

Opportunities exist to enhance and further control the Budget Planning to Reporting Process in Hyperion.

The objective was to evaluate the effectiveness and efficiency of information processing (including appropriate access authorizations and controls) across the Budget Planning to Reporting Process in Hyperion, including budget planning, modeling and development, presentation and approvals, uploads and downloads, budget amendments, reporting, and variance analysis.

The Audit Team conducted interviews with members of the ESQA Department, and the Management and Budget Department. The Audit Team also reviewed implementation and configuration documentation and user access role mapping for Hyperion.

Oracle Hyperion Public Sector Planning and Budgeting is used for the budgeting process, with department budgets being entered by the Management and Budget Department. Monthly, budget amendments entered in the Oracle general ledger and actuals are sent via Financial Data Quality Management (FDM) to Hyperion. Budget approvals are done offline, outside of Hyperion (though budget amendments go through the Approvals Management Engine (AME) approvals process in Oracle).

TESTING RESULTS

Through inquiry, observation, and testing, the Audit Team determined that several opportunities exist to enhance the use of Hyperion for the Budget Planning to Reporting Process. It appears that the production environment access provisioned to users allowed for completion of activities:

Hyperion Administration Accounts	
Opportunity for improvement	Administrative functions are performed using seeded (i.e. "out of the box") accounts, specifically the CUSTADMIN and HYPADMIN accounts. For clarity, the HYPADMIN account is limited to OMCS support and used when applying patches or updates. Using these accounts does not allow an audit trail to show which specific human user made updates.
Recommendation 9.1	<p>Named accounts should be created for each support user that needs to perform administrative functions. These accounts can keep the same roles as the seeded accounts but will provide visibility to the human user that performs the functions. Also, administrative tasks, such as maintenance of accounts and cost centers can be automated using Financial Data Quality Management, and don't require manual execution.</p> <p>Level of Implementation Effort: Low</p>

Board Department Use of Hyperion	
Opportunity for improvement	The Board's departments manually prepare their budgets outside of Hyperion, based on extracts from Hyperion that are provided by the Management and Budget Department. The Management and Budget Department then enters the budgets in Hyperion. Conversely, an alternative approach is to allow departments to enter their own budgets. The Clerk and Board's implementation team considered allowing departments to enter budgets, but decided on the current model instead, based on different department sizes, complexity, and quality assurance.
Recommendation 9.2	<p>While there are benefits to keeping budget entry within the Management and Budget Department (namely, quality assurance), Board management should consider piloting a program using a reasonable budgeting sub-process, such as grants funding, with a department that has knowledgeable staff and a manageable number of grants to enter their budgets in Hyperion, with the Management and Budget Department acting in a review/approval role. This will require additional users in Hyperion and changes to the security structure, but it would reduce manual, offline processes used for budget entry. Further, improved transparency into their budgets through 'read only' views would allow the ability to see the progression through the approval phases. Starting with one department is recommended for the first pilot.</p> <p>Level of Implementation Effort: High</p>

AUDIT COMMENT 9 MANAGEMENT RESPONSE**9.1 – Concur**

Currently, the CUSTADMIN password is known by three technical support resources within the ESQA department for the purpose of technical system administration and configuration changes and are not used for maintenance of accounts or cost centers.

Although the CUSTADMIN account is not used by process or business end users, the ESQA department will create named accounts for their technical support staff with roles that duplicate the functionality found in the CUSTADMIN account, so that system usage or changes may be monitored.

9.2 - Concur

During the FY 21 budget process, the Management and Budget Department will consider a pilot project to allow one department to balance their grant funds through the Hyperion budgeting system. If the pilot results in budget process efficiencies, it will be rolled out to additional departments in future years budgets.

APPENDIX A – Oracle Configurable Controls

Note: The Board of County Commissioners Operating Unit (BOCCOU) was reviewed as part of this audit, not the Clerk's Operating Unit or the City of Tampa's Operating Unit. The Board should work with ERP governance to review and implement those controls as approved by governance as shown in the table below.

Accounts Payable / Cash Management

Configuration Reference	Control Objective	Risk Description	Recommended Setting	Hillsborough Setting
Matching - Allow Final Matching	When an invoice is Final Matched to a purchase order, any subsequent invoice that is matched to that PO will be placed on a matching hold that cannot be manually overridden.	If a Purchase Order is not Final Matched, invoices can be matched to PO's that should be closed, thereby allowing unauthorized transactions to be processed.	If Invoice Match Option is set to "Purchase Order", Allow Final Matching should be enabled.	Not enabled
Hold Unmatched Invoices	Hold Unmatched Invoices is enabled at a supplier site, which applies a Matching Required hold to an invoice during Invoice Validation if it has item line distributions that are not matched to either a purchase order or receipt.	When Hold Unmatched Invoices is not checked at the supplier site level, invoices that have Item line distributions that are not matched to a PO or receipt will not be held, which may lead to the payment of unauthorized or inaccurate transactions.	Enabled - May override at supplier site level for suppliers that do not require a purchase order such as utilities or service providers. Setting at 'Payables System Setup' level is the default value for suppliers.	Not enabled at the 'Payables System Setup' level, meaning new suppliers default to this setting as disabled (but can be enabled).

Configuration Reference	Control Objective	Risk Description	Recommended Setting	Hillsborough Setting
Expense Report - Automatically Create Employee as Supplier	The employee is automatically created as a Supplier if the employee does not already exist when processing an expense report. Payables cannot import expense reports without corresponding suppliers and lists them on the Exceptions section of the Expense Report Import Report.	Minimizes risk of data entry errors. When used in conjunction with Employee Update Program (run regularly before each expense report import or payment batch run), can ensure consistency between HR Employee and Payables Supplier addresses for employees and minimize risk of payments being sent to an incorrect or unauthorized address.	Disabled. Employee creation process should be formalized through HR process.	Enabled
Invoice - Recalculate Scheduled Payment	When payments are made in stages, the balance due on an invoice is automatically recalculated to reflect the partial payment made.	Overpayment of invoices.	Enabled	Not enabled
Archive	The Bank Statement Import program automatically archives all information from the Bank Statement Interface tables once the information has been successfully transferred to the Bank Statement tables. The information is then purged.	Records of historical bank statements are not maintained.	Enabled	Not enabled

Configuration Reference	Control Objective	Risk Description	Recommended Setting	Hillsborough Setting
Purge	The Bank Statement Import program automatically purges all information from the Bank Statement Open Interface tables once the information has been successfully transferred to the Bank Statement tables.	If successfully imported interface data is not purged there is a risk that it could be mistakenly imported again.	Enabled	Not enabled

Procurement

Configuration Reference	Control Objective	Risk Description	Recommended Settings	Hillsborough Setting
Enforce Buyer Name	The Buyer's username is automatically recorded during purchase order entry, preventing the manual entry of another active buyer's username.	Unauthorized employees may purchase items that become liabilities to the company. There can also be a possible lack of accountability.	Enforce Buyer Name = Enabled	Not Enabled

Configuration Reference	Control Objective	Risk Description	Recommended Settings	Hillsborough Setting
Over Receipt Action	Over-Receipt Actions are defined for receipts that exceed the quantity received tolerance. Options include: None – Receipts may exceed the selected tolerance. Reject – Purchasing does not permit receipts that exceed the selected tolerance. Warning – Purchasing displays a warning message but permits receipts that exceed the selected tolerance.	Unordered items may be received and paid for that have not been reviewed or authorized.	Over Receipt Action = Warning or Reject	Over Receipt Action set to "Warning" or "Reject" for all defined organizational levels. Consider setting all to "Reject".
Allow Blind Receiving	Blind receiving requires receivers to record in the exact quantity they physically receive, and does not display the purchase order quantity.	Minimizes risk of inaccurate entry of receiving transactions - improve inventory accuracy by forcing receiver to count items.	Allow Blind Receiving = Enabled. Purchasing ignores all quantity receipt tolerances (but would get caught during invoice matching) to ensure receipt of the exact amount the supplier shipped.	Not Enabled
Approver Can Modify	Document approvers are prevented from modifying the documents they approve.	Unauthorized purchases and updates can be made to the document.	Approver Can Modify = Disabled	Enabled for Document Types "Release, PA, PO, and Requisition" for BOCCOU.

Configuration Reference	Control Objective	Risk Description	Recommended Settings	Hillsborough Setting
Enforce Price Tolerance (%)	Price tolerance percentage between Requisition and Purchase Order is enabled and enforced by the system. If both price tolerance percentage and amount are enabled, Oracle will enforce the more restrictive of the two.	Transaction processed using inaccurate or unauthorized pricing.	Enforce Price Tolerance (%) = Enabled	Not Enabled
Enforce Price Tolerance Amount	Price tolerance amount between Requisition and Purchase Order is enabled and enforced by the system. If both price tolerance percentage and amount are enabled, Oracle will enforce the more restrictive of the two.	Transaction processed using inaccurate or unauthorized pricing.	Enforce Price Tolerance Amount = Enabled	Not Enabled

Accounts Receivable

Configuration Reference	Control Objective	Risk Description	Recommended Settings	Hillsborough Setting
Write-off Limits Per Receipt	Write-off authorization limits are set at the system and user levels.	Inaccurate or unauthorized adjustments/credits may be made at system and user level	Defined levels per user	Not defined

Configuration Reference	Control Objective	Risk Description	Recommended Settings	Hillsborough Setting
Customer Profile Classes	Customer profile classes are assigned to group customer accounts with similar credit worthiness, business volume, and payment cycles, and provide default settings for key fields on the customer form, such as credit limits, payment terms, statement cycles, invoicing, and discount information.	Credit is extended to customers who are not credit-worthy. Collection efforts are incurred on less risky accounts.	Use of Customer Profile Classes may increase efficiency and decrease data entry errors. Based on Client preference and business needs. Also define amount limits for finance charges, dunning, and statements. When you change a setting on the Customer Profile Class, you may also choose to apply that change to all customers assigned to that profile class, or just to new customers.	Not defined
Automatic Transaction Numbering	Automatic Transaction Numbering automatically numbers to new transactions for both Manual and Imported Transaction Source types.	Manual transaction numbers may not have a logical order. Multiple transaction "numbering conventions" may be used.	Automatic Transaction Numbering = Enabled	Set to "No" for 'Project Invoices' and 'Project Accounting Internal Invoices'
Automatic Batch Numbering	Automatic Batch Numbering automatically assigns numbers to batches when the Transaction Source type is set to Manual. When the Transaction Source type is set to Imported, Receivables automatically numbers the batch with the batch source name - request ID.	Manual batch numbers may not have a logical order. Multiple batch "numbering conventions" may be used.	Automatic Batch Numbering for Manual Sources should be set to Yes in order to prevent duplication.	Set to "No" for 'BOCC MANUAL'

APPENDIX B – Segregation of Duties Conflicts – Conflicts to Address

Note: The following list includes any Oracle EBS user with segregation of duty conflicts impacting the Board's Financial Statements. Segregation of duty conflicts that do not impact the Board's Financial were not in the scope of work, and therefore not documented in this report.

AZN Menus to Define Risk Management Strategy

Responsibility Name	User Menu Name	Sub User Menu Name	Assigned Users
BOCC Inventory Superuser	INV_NAVIGATE	AZN_PR_ATO	0
BOCC Inventory Superuser	INV_NAVIGATE	AZN_PR_INVENTORY	0
BOCC Procurement Inventory Requestor	Purchasing SuperUser GUI	AZN_PR_PROCUREMENT	0
GL Testing	GL_SUPERUSER	AZN_PR_GL	1
Oracle Sales Administrator	AS_SUPERUSER	AZN_PR_ATO	1
Oracle Sales Administrator	AS_SUPERUSER	AZN_PR_INVENTORY	1

High Risk Intra-Responsibility Conflicts to Define Risk Management Strategy

Note: Intra-responsibility conflicts exist when a single Oracle responsibility allows a user access to conflicting functions, thus creating a segregation of duty risk. These responsibilities are outlined within the below table and are higher risk given they allow access to both sides of the conflict.

Responsibility Name	Conflict Name	Risk	Board Users	Clerk Users	Other Users
BOCC Payables Supervisor	AP Setup & AP Invoice Entry	High	0	3	0
CNTY Fixed Assets Manager	FA Setup & FA Depreciation	High	0	1	0
CNTY Fixed Assets Manager	FA Setup & FA Transfer to GL	High	0	1	0
BOCC Procurement Management	PO Approval Setup & PO Purchase Order Entry	High	7	0	7
BOCC Procurement Buyer	PO Setup & PO Purchase Order Entry	High	17	0	7

Responsibility Name	Conflict Name	Risk	Board Users	Clerk Users	Other Users
BOCC Procurement Management	PO Setup & PO Purchase Order Entry	High	7	0	7
BOCC Procurement Buyer	PO Setup & PO Receiving Transactions	High	17	0	7

User Conflicts to Define Risk Management Strategy – High Risk User Conflicts and ESQA Conflicts

Note: The following table summarizes the conflicts by user total and will include users having one or more responsibilities providing access to conflicting functions.

Conflict Name	Risk	Board Users	Clerk Users	Other Users
AP Payments & CE Bank Reconciliation	High	0	1	0
AP Setup & AP Invoice Entry	High	0	7	1
AR Setup & AR Transactions	High	0	1	0
FA Setup & FA Depreciation	High	0	1	0
FA Setup & FA Transfer to GL	High	0	1	0
HR Employee Absences & HR Process Payroll	Medium	3	0	0
HR Enter/Hire Applicants & HR Compensation Benefits Setup	Low	3	0	0
HR Enter/Hire Applicants & HR Enter Manual Payments	Low	3	0	0
HR Enter/Hire Applicants & HR Job Setup	Low	3	0	0
HR Enter/Hire Applicants & HR Process Payroll	Low	3	0	0
HR Enter/Hire Applicants & HR Salary Management	Medium	3	0	0
HR Enter/Maintain Employees & HR Compensation Benefits Setup	Medium	3	0	0
HR Enter/Maintain Employees & HR Enter Manual Payments	Medium	3	0	0
HR Enter/Maintain Employees & HR Job Setup	Medium	3	0	0
HR Enter/Maintain Employees & HR Process Payroll	Medium	3	1	0

Conflict Name	Risk	Board Users	Clerk Users	Other Users
HR Enter/Maintain Employees & HR Salary Management	Low	3	0	0
HR Job Setup & HR Process Payroll	Medium	3	0	0
HR Payroll Setup & HR Process Payroll	Medium	3	0	0
INV Item Master & PO Receiving Transactions	Low	6	0	0
INV Item Master & PO Requisition Entry	Medium	6	0	0
PO Receiving Transactions & INV Adjust Physical Inventory	Medium	6	0	0
PO Requisition Entry & INV Adjust Physical Inventory	Low	6	0	0
PO Setup & PO Purchase Order Entry	High	22	0	11
PO Setup & PO Receiving Transactions	High	22	0	11

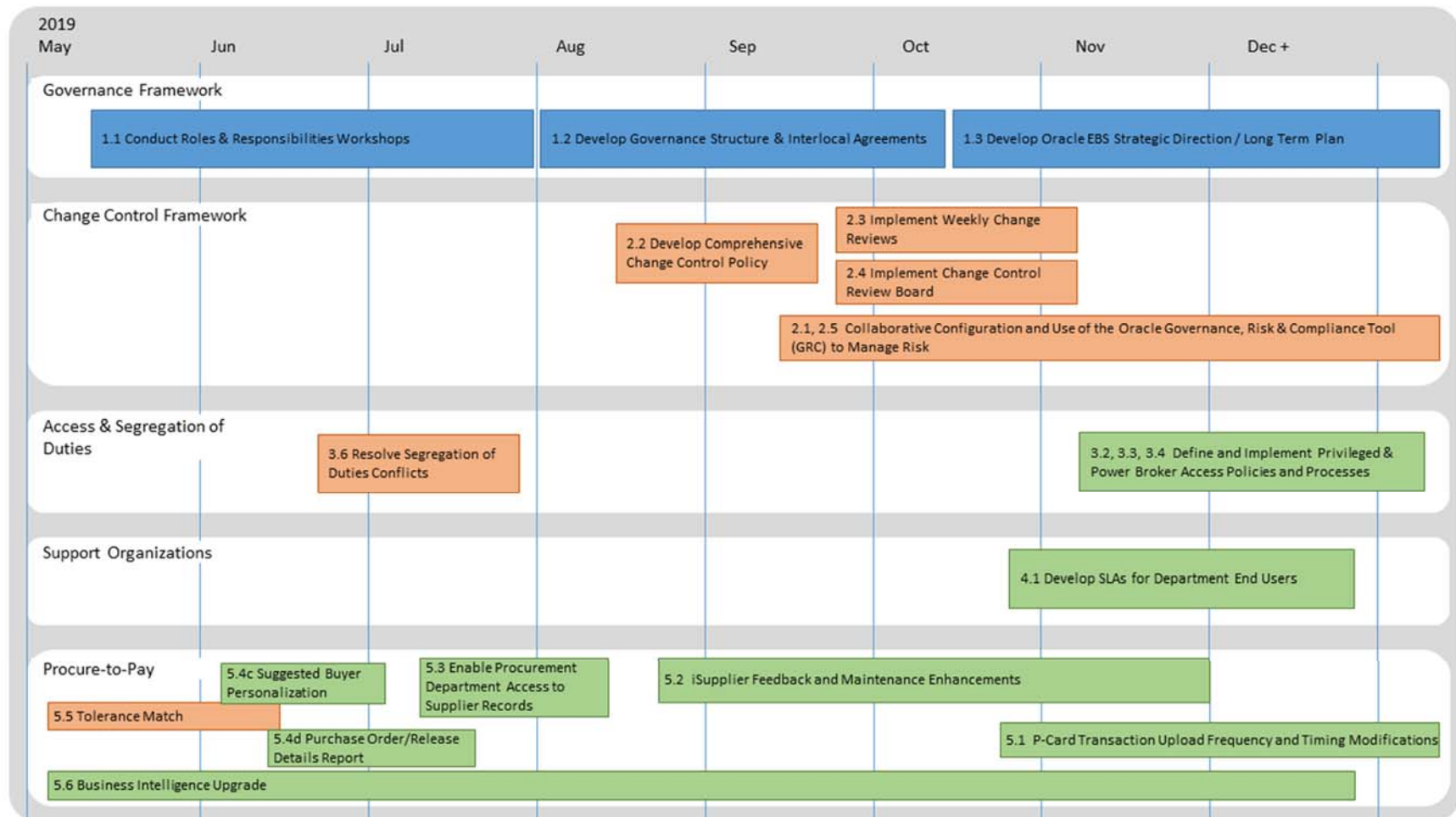
APPENDIX C – Roadmap

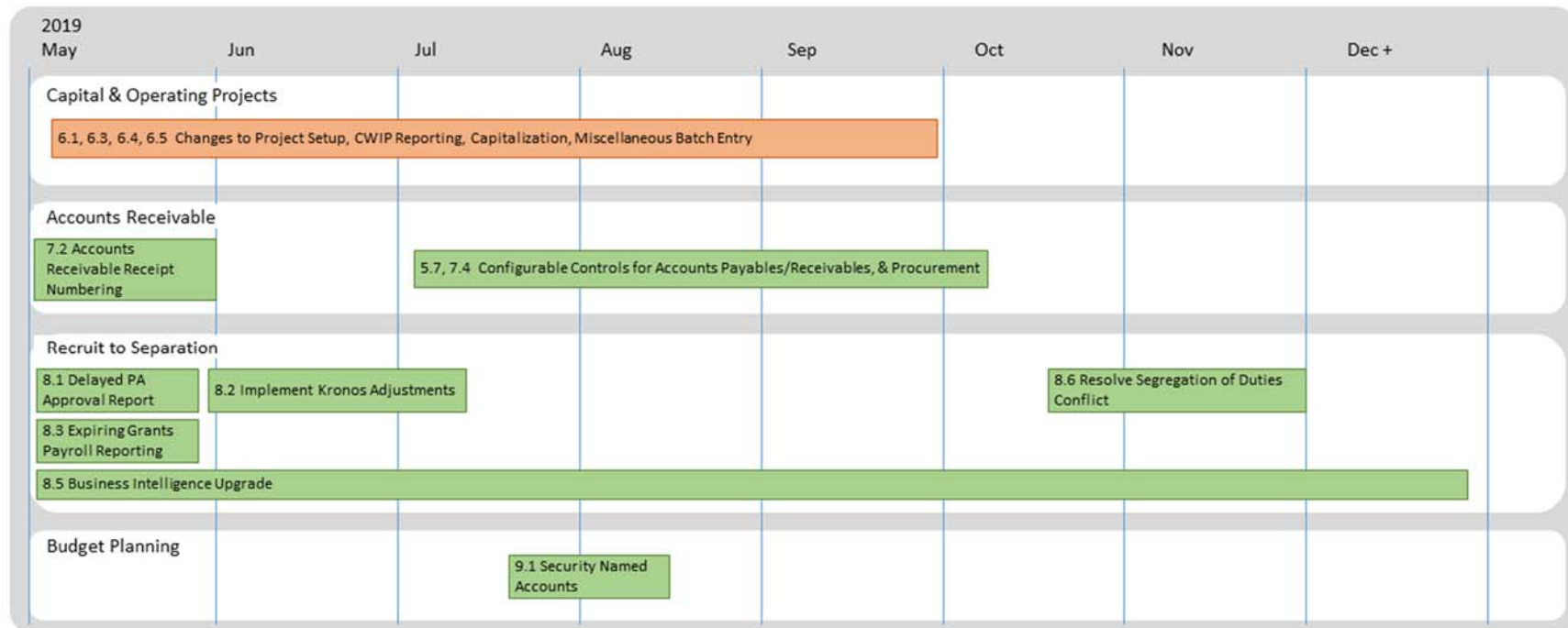
The following steps should be taken, in order, to apply the recommendations in this report:

1. Workshops to seek agreement of roles/responsibilities and finalizing the governance structure. Recommendations provided in this report can be the starting point. This should complete within three months of the audit report issuance.
2. In a parallel to Step #1, assign low level of effort recommendations that will be implemented for resolution; these recommendations should be resolved within three months of the audit report issuance or agreement on the prioritization of the changes. The Board should collaborate with the Clerk as necessary to complete these activities.
3. The Board should review medium/high level of effort recommendations and prioritize. This should include performing a discovery process to determine more specific level of effort, requirements, etc. This should take place within the next six months of the audit report issuance. It is recommended that an individual is assigned to manage this information gathering and drive the associated activities. It is also recommended that recommendations from Audit Comments 1, 2, 3, and 4 are prioritized over the Audit Comments 5, 6, 7, 8, and 9 (within these, recommendations from Audit Comments 5 and 6 offer the most opportunity for improvement of operations, and should be prioritized over Audit Comments 7, 8, and 9).
4. After Step #3, the Board should work with the Clerk to determine where there are cross-dependencies and agree on a timeline for implementation. Recommendations for where there are existing tickets/projects should be candidates for initial resolution.

Appendix C Management Response

The County Administrator's recommended Roadmap for achieving successful outcomes utilizing audit report recommendations was submitted together with our responses. This Roadmap will be utilized instead of the one identified in the Auditor's report located in Appendix C.





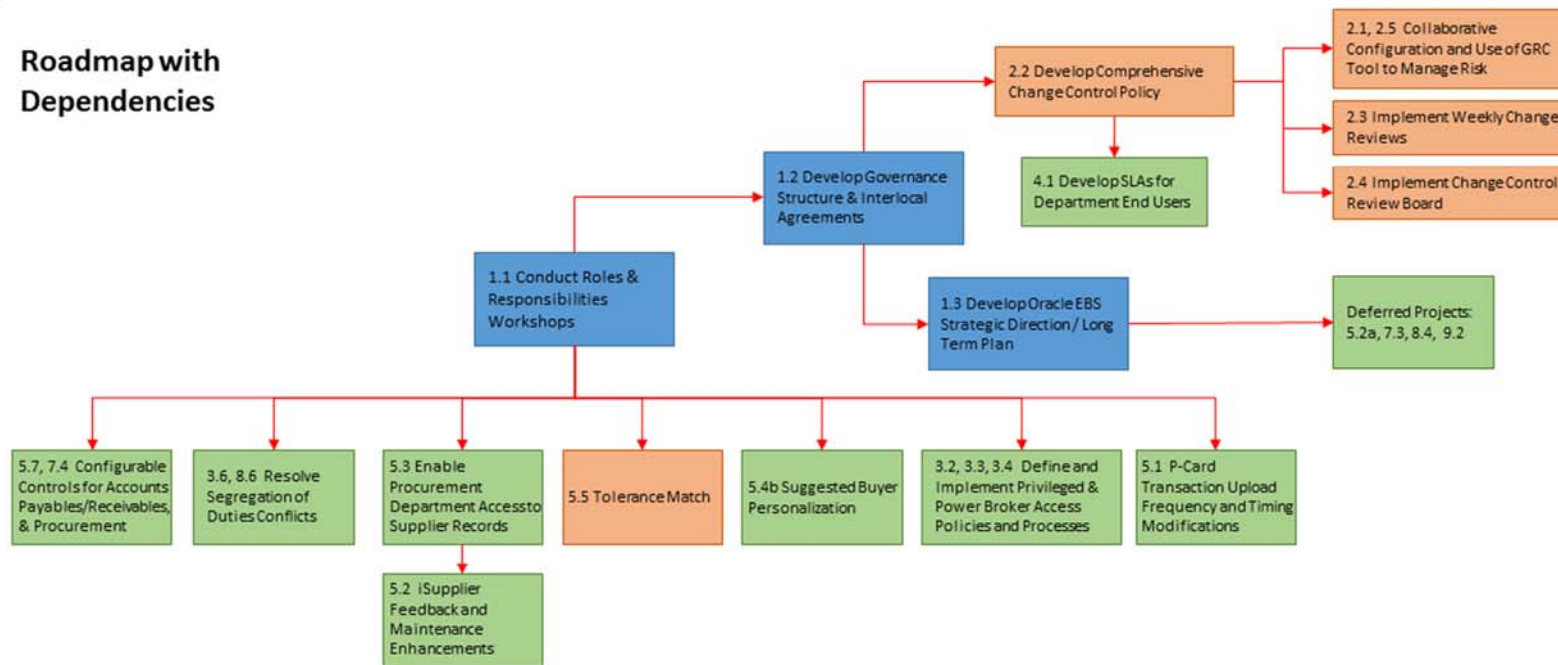
Recommendations to be Deferred Pending Oracle EBS Strategic Long Term Plan

- 5.2a, 6.2 – Supplier Invoicing Changes
- 7.3 – Redesign Event Billing Process
- 8.4 – JobAps Replacement
- 9.2 – Hyperion Budgeting Process for Department Budgeting

LEGEND

- Executive Team Led Project
- Joint County/Clerk Project
- ESQA Department Led Project

Roadmap with Dependencies



Roadmap with No Dependencies

