



**A Report to the  
Audit Committee**

**Mayor**  
David Briley

**Oracle R12 Implementation  
Steering Committee**  
Dawn Clark

**Audit Committee Members**  
John Cooper  
Charles Frasier  
Talía Lomax-O'dneal  
Bob Mendes  
Brackney Reed  
Jim Shulman

Metropolitan  
Nashville  
Office of  
Internal Audit

**Audit of Oracle E-Business Suite  
R12.2 Implementation Interim  
Report 02**

April 2, 2019

## EXECUTIVE SUMMARY

April 2, 2019



### Why We Did This Audit

The Oracle E-Business Suite R12.2 implementation will affect Metropolitan Nashville Government's financial reporting and daily business practices.

### What We Recommend

There are no recommendations at this time.

# Audit of Oracle E-Business Suite R12.2 Implementation

## BACKGROUND

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The Oracle E-Business Suite R12.2 capital project is a two-year implementation project with a capital spending need of approximately \$23 million and involves about 34,200 hours of work effort. The Metropolitan Nashville Council has appropriated \$23 million for this project to date.

The implementation project started in July 2017 with an estimated go-live of May 2019. After significant implementation completion, the project team finalized go-live dates as:

- July 1, 2019, for Oracle E-Business Suite R12.2.
- Mid-July 2019 for Oracle Human Capital Management Talent Management Cloud.
- October 2019 for Metro Nashville Public Schools' Taleo Recruiting and Onboarding.

## OBJECTIVES AND SCOPE

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The audit objective is to determine whether controls exist so the implementation of the Oracle E-Business Suite R12.2 will satisfy business requirements, ensure data security, and include segregation of duties.

The interim audit report covers the onset of the project up to February 28, 2019. The Accounts Payable module was selected for overall comprehension of the implementation process and review of application controls.

## WHAT WE FOUND

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Oracle E-Business Suite R12.2 has standard controls built into the system which need to be configured or customized by developers to satisfy Metropolitan Nashville Government's specific needs. The design phase of the Accounts Payable module is still ongoing in parallel to the building and testing phase of other modules.

## GOVERNANCE

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The Metropolitan Nashville Government Department of Finance, Human Resources Department, Information Technology Services, and Metro Nashville Public Schools formed a steering committee in 2016 to oversee the migration from JD Edwards to Oracle E-Business Suite R12.2. The project team comprises members from Metropolitan Nashville Government's Information Technology Services and CSS International. The project management also contains representatives from Information Technology Services and CSS International.

The Metropolitan Nashville Government created a core team for each functional area affected by the project to assist in documentation, configuration, and to be trained as internal consultants for the new system. Subject matter experts in each functional area have been designated to provide insights, so business requirements are accurately collected, communicated, and implemented. The project team holds a weekly status meeting and monthly steering committee meeting to report on project status.

## PROJECT STATUS

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The Metropolitan Nashville Council has appropriated \$23 million in Capital Spending Plans for the Oracle E-Business Suite R12.2. The project's incurred expenditures compared to the approved budget are shown in Exhibit A.

### Exhibit A - Project Budget versus Expenditures as of March 11, 2019

Capital Spending Plan	Budget	Total Expensed	Expense Percentage
FY 2017 - 2018	\$12,000,000	\$11,785,728	98
FY 2018 - 2019	11,000,000	8,398,313	76
Grand Total	\$23,000,000	\$20,184,041	88

Source: Metro JD Edwards Three Year Budget/Actual Report

The project team runs several implementation phases (design, build, and validate) concurrently for different modules to achieve resource efficiency. The majority of the design phase for several functional areas is completed. Developing reports, interfaces, conversions, enhancements (RICE) and conduct system testing are major activities during the design stage. As of March 7, 2019, out of 808 RICE objects, 184 objects (23 percent) are still in design phase, primarily reports, including 12 RICE objects (16 percent) of the 77 objects for the Accounts Payable module. The status of the RICE project deliverables is available in Appendix A.

The Accounts Payable module has 18 identified risks along with 27 corresponding controls to address those risks. The design and configuration of 16 available controls are completed; 5 user access controls are in process; and 6 project management controls are established and ongoing. Details of the Accounts Payable risk and control implementation status are available in Appendix B.

Two rounds of integrated system testing (IST) were completed in October 2018 and February 2019 respectively. These tests covered configuration and conversion of the staging instance and user acceptance for six business functions. The results of the integrated testing are shown in Exhibit B.

## Exhibit B – Integrated System Testing Passing Results as of March 11, 2019

IST Round	Total Test Scripts	Total Passed	Pass Percentage
IST1	278	263	95
IST2	207	204	99
Grand Total	485	467	96

Source: CSS Project Development Platform Website

User Acceptance Testing is on schedule and in preparation. Testing is scheduled to start on March 25, 2019, and conclude in May 2019. This is the final user testing performed in a real-world scenario to validate the software against the business requirements.

### OBJECTIVES AND CONCLUSIONS

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*Do controls exist so that the implementation of the Oracle E-Business Suite R12.2 Accounts Payable module will satisfy business requirements, ensure data security, and segregation of duties?*

**Generally Yes.** The Oracle E-Business Suites R12.2 system has standard control mechanisms to meet the overall resource management needs of users. The Accounts Payable module was selected for assessment of whether available controls are configured to meet business requirements specific to the Metropolitan Nashville Government. All identified available controls within the Accounts Payable module are either established or in the process to be established based on the current version of design documents to meet business requirements, ensure data security, and segregation of duties.

## **GOVERNMENT AUDITING STANDARDS COMPLIANCE**

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

## **METHODOLOGY**

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To accomplish our audit objectives, we performed the following steps:

- Studied Oracle E-Business Suite R12.2 system documentation.
- Interviewed key personnel within Oracle E-Business Suite R12.2 Implementation Core Team.
- Reviewed and analyzed vendor's Response to Request for Proposal and contract for Oracle R12 Implementation Project.
- Evaluated internal controls currently in place.
- Considered risk of fraud, waste, and abuse.

## **AUDIT TEAM**

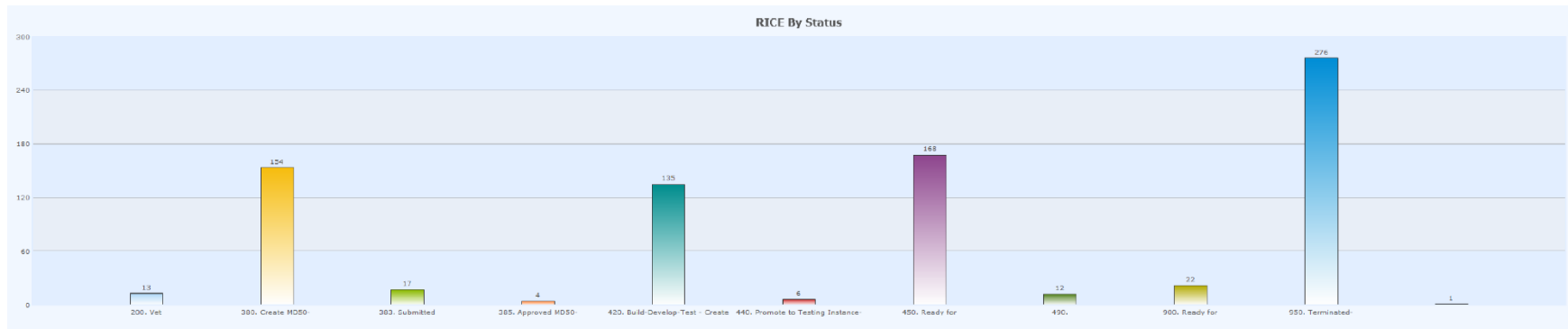
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Nan Wen, CPA, In-Charge Auditor

Lauren Riley, CPA, CIA, ACDA, Quality Assurance

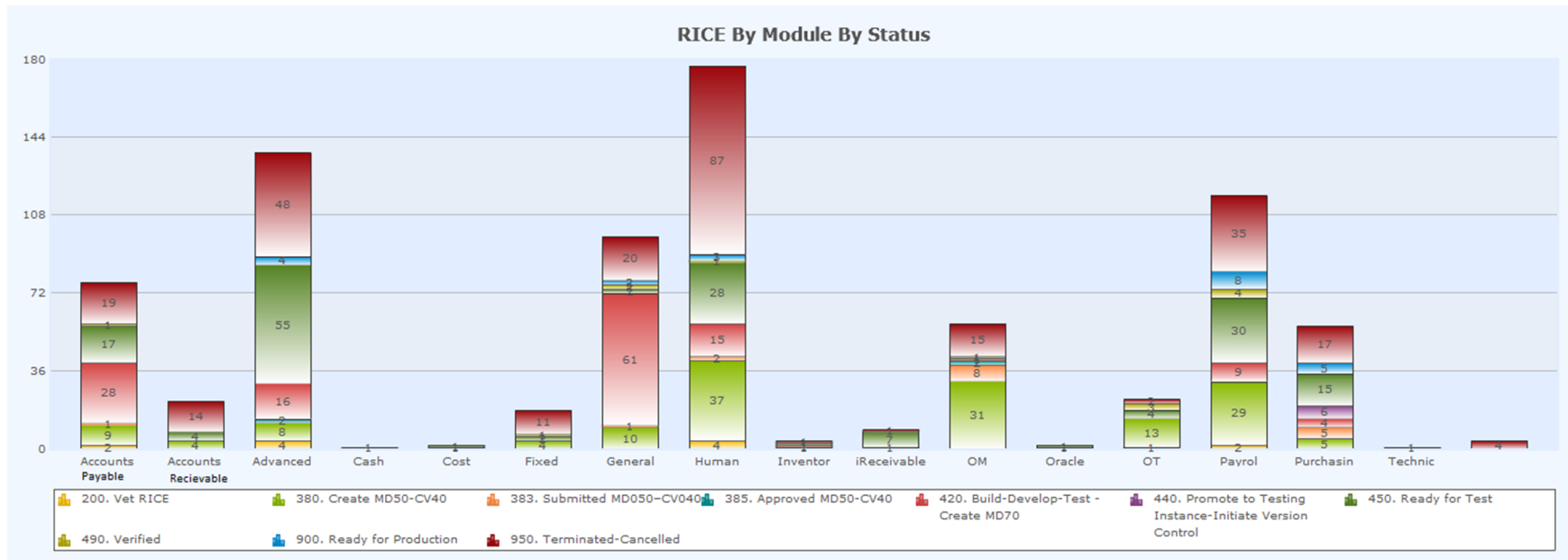
Mark Swann, CPA, CIA, CISA, ACDA, CMFO, Metropolitan Auditor

## APPENDIX A – RICE STATUS AS OF MARCH 7, 2019



Source: CSS Project Development Platform Website

MD 50 is the deliverable for the functional design specification and CV40 for conversion design. The '200 Vet RICE', '300 Approved to Begin Design', and 'Create MD50-CV40' objects are all part of the design phase.



Source: CSS Project Development Platform Website

## APPENDIX B – ACCOUNTS PAYABLE RISK AND CONTROL IMPLEMENTATION STATUS

No.	Risk	Available Controls	Implementation Status
R1	Same vendor is entered more than once with small variations and established as multiple vendors.	1) Only one EIN number can be associated with each vendor; duplicate name is not allowed.  2) Different sites can be set up for the need of subsidiaries.	1) Configuration completed  2) Configuration completed
R2	Vendor information is entered incorrectly causing untimely payment or payment to the wrong vendor.	Vendor entry validation check such as county field validation check, vendor name check, and ABA # field limit check.	Configuration completed
R3	Fictitious supplier is established allowing fraud to be committed.	1) Access to Suppliers function is limited to authorized users who are not involved in the supplier approval process.  2) Suppliers function and Purchase Order function cannot be accessed by the same user.  3) Allow 3-way match.	1) Configuration in process  2) Configuration in process  3) Configuration completed
R4	Supplier is compromised through unauthorized access to the system.	1) Access to vendor update and maintenance is limited to authorized users who are not entering invoice payment information and not part of the procurement process.  2) Supplier Audit Reports (Supplier Full Address with Codes, Supplier Report with Tax ID and Payment Terms)	1) Configuration in process  2) Design completed
R5	Sensitive data (supplier tax ID, etc.) gets exposed to outsiders or for inappropriate use.	Only the last four digits of the tax ID or SSN will be shown through masking for inquiry only responsibilities.	Configuration completed
R6	Invoices are entered with error and omission of information leading to over or under payment or payment to a vendor who is not supposed to be paid.	Pre-validated invoice in Kofax is submitted to R12 through Kofax-Documentum interface.	Build completed
R7	Invoice processed does not represent goods and services actually received.	1) Two-way match.  2) Allow three-way match.  3) Do not allow Matching Account Override.	1) Configuration completed 2) Configuration completed 3) Configuration completed
R8	Invoice amount is larger than the amount in the purchase order and the amount received, and it is processed without hold.	Invoice tolerance limit set according to business need. Both general government and Metro public school has a 10 percentage tolerance limit set on quantity and price of goods and services ordered.	Configuration completed
R9	Matching requirements are overridden at the line level by the user on a PO to bypass the control set at site, application or responsibility	Grant the sub-menu that provides access to the Profile Personal Values form only to authorized AP users.	Configuration in process

## APPENDIX B – ACCOUNTS PAYABLE RISK AND CONTROL IMPLEMENTATION STATUS

	level.		
R10	Duplicate invoice could be created so the vendor is paid twice.	Vendor number along with site code and invoice number will be checked against system record to ensure that no duplicate invoice for the same vendor is created.	Configuration completed
R11	Random or unauthorized payment voucher could be created and paid.	1) Unique, sequential numbers for payment can be set up or changed by superuser only.  2) Only authorized users in the Accounts Payable department can create a payment batch.	1) Configuration completed  2) Configuration in process
R12	Unauthorized payment occurs due to lost or stolen check.	Positive pay files are created.	Build completed
R13	ACH payment is not processed due to extra space entered during bank account information input.	ABA# field size limits entry to 9 digits.	Configuration completed
R14	Bank accounts are modified by unauthorized users and payment goes to an incorrect account.	Inquiry only access form built for the user does not have the AP entering and editing responsibilities.	Build completed
R15	System is not built for business need.	1) Business requirement document signed off by Metro Accounts Payable team lead.  2) Regular team meetings; Steering Committee meetings.  3) Integrated System Testing (IST) and User Acceptance Testing (UAT)	1) Completed  2) Ongoing  3) IST completed, UAT Ongoing
R16	Customized implementation is not developed to meet specific requirement of the business need.	1) Functional design specification workshops conducted to meet implementation customization requirement.  2) Functional design customization specification requirement sign off by Metro AP team lead.	1) Ongoing  2) Ongoing
R17	Project is not tracked and accounted for which may lead to failure of the implementation.	Project Delivery Platform (PDP) utilized by CSS to manage project implementation on every aspect.	Ongoing
R18	Budget is not tracked and may lead to the overspending and/or inappropriate spending.	Metro project manager is monitoring the budget on a continuous basis.	Ongoing



## APPENDIX C – MANAGEMENT RESPONSE

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### METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY



DAVID BRILEY  
MAYOR

DIRECTOR OF FINANCE  
METROPOLITAN COURTHOUSE  
ONE PUBLIC SQUARE, SUITE 106  
NASHVILLE, TENNESSEE 37201  
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April 1, 2019

Mr. Mark Swann  
Metropolitan Auditor  
Office of Internal Auditor  
404 James Robertson Parkway  
Nashville, TN 37219

Re: Audit of the Metropolitan Nashville Government's Oracle R12.2 E-Business Suite  
Implementation Interim Report 02

Dear Mr. Swann:

This letter acknowledges the Finance and Information Technology Departments' receipt of the interim draft report dated March 26, 2019 for the above referenced project. The information presented in the content is accurate.

Regards,

A handwritten signature in blue ink, appearing to read "Talia Lomax-O'dneal".

Talia Lomax-O'dneal

A handwritten signature in black ink, appearing to read "Keith Durbin".

Keith Durbin