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July 7, 2021

The Honorable Ronald D. Kouchi,
President, and
Members of The Senate
Thirty-First State Legislature
Hawaii State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,
Speaker, and
Members of The House of Representatives
Thirty-First State Legislature
Hawaii State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawaii Department of Education's FMS Modernization Project.

In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,


Douglas Murdock (Jul 8, 2021 15:11 HST)

Douglas Murdock
Chief Information Officer
State of Hawai'i

Attachment (2)



FMS Modernization Project

Department of Education (DOE)

IV&V Monthly Status Report – Final

For Reporting Period: **April 16 – May 15, 2021**

Draft Submitted: June 8, 2021

Final Submitted: June 29, 2021

Overview

- Executive Summary
- IV&V Findings and Recommendations
- IV&V Status
- Appendices
 - A – IV&V Findings Log & Priority Ratings
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Executive Summary

The Aukahi project is reportedly on track to initiate their planned kickoff of the final production system build despite carrying multiple risks. To stay on schedule, the project has again elected to move to the next project phase without implementing and testing some critical interfaces and reports. The project is considering implementing a soft launch of the system (for a limited number of users) 2-3 days prior to go-live which could help mitigate some of these risks and provide the project with early valuable feedback from users doing real work in the production system. DOE project team members continue to state their strong commitment to ensure the project stays on schedule and continue to make efforts to improve system quality. Because the project has not fully estimated the level of effort for project activities and the capacity of their resources (i.e., utilize a fully resourced project plan), IV&V remains concerned that many activities have been pushed out closer to go-live, which the team may struggle to effectively complete without schedule slippage or sacrificing quality.

Early feedback from some training sessions have questioned the effectiveness of training and, if system features are added after training has been completed, it remains unclear how these changes will be communicated to users. IV&V remains concerned that DOE may not be fully prepared to maintain and/or fully support the system post go-live. The overall support infrastructure has yet to be fully defined so DOE may have limited time to prepare, resource, and establish user support processes, which could lead to user confusion and frustration at go-live and could negatively impact post go-live worker productivity. Further, projects that carry a higher risk profile, such as Aukahi (currently tracking 3 high and 10 medium risks/issues) hold the potential for even minor missteps, bugs, or unexpected events to trigger a significant disruption to the schedule and/or post go-live worker productivity. If DOE elects to keep to their planned go-live date to quickly replace their failing legacy FMS, IV&V recommends DOE implement an “all hands on deck” strategy between now and once the system begins to stabilize post go-live, and prepare their users for a potentially difficult transition to the new system through multiple communications sent by the OCM (Organizational Change Management) team as well as senior leadership.

Executive Summary (cont'd)

Mar	Apr	May	Category	IV&V Observations
M	H	H	Cost & Schedule Management	The project continues to make progress toward their aggressive go-live date. However, the project continues to carry risks associated with the aggressive schedule including: 1. Not all planned system features will be available at go-live. 2. Some functionality has yet to be fully vetted, implemented, and tested. 3. Users will be required to perform multiple workarounds until functionality can be implemented that would eliminate the need for them. 4. DOE support infrastructure has yet to be fully defined, and they may not have sufficient time to effectively prepare for their new support duties, and their support personnel may not be able to fully support the system at go-live. 5. The number of users requesting help from support personnel could be extensive and could quickly overwhelm support personnel which could lead to user frustration and hinder their work productivity. 6. User training may have been rushed which may lead to training that does not fully prepare all users to operate the system without assistance from support personnel. The project is considering implementing a soft launch of the system a few days prior to opening the system to all end users. A soft launch approach could help mitigate the risk of unexpected system bugs at go-live and provide the project with valuable feedback from users doing real work in the production system. IV&V remains concerned that the project plan is not fully resourced, therefore there is no objective way to determine which remaining tasks and system features will be completed prior to go-live. This could complicate training and increase user frustration as they may not know, at the time of training, exactly which features (or required work arounds) will be available at go-live. IV&V recommends DOE make extensive efforts to manage user expectations by communicating what functionality will be available at go-live, what workarounds will be required, and when functionality to eliminate workarounds will be implemented, in order to promote user buy-in and minimize user frustration. Some stakeholders continue to voice concerns that the system will have limited capabilities at go-live due to the aggressive schedule. IV&V remains concerned that some functionality has yet to be fully vetted and that testing scripts may not have been comprehensive due to the tight schedule. IV&V recommends DOE make extensive OCM efforts to manage user expectations at go-live as well as devote resources to actively monitor user inputs/actions post go-live, correct errors, and coach users on proper usage of the system.

Executive Summary (cont'd)

Mar	Apr	May	Category	IV&V Observations
M	M	M	Human Resources Management	DOE project participants continue to state their strong commitment to ensure the project stays on schedule and continue to make efforts to improve system quality. The replacement DOE PM appears to be making progress towards matching the same support levels provided by the recently departed PM. Key DOE project participants have stated they continue to operate at their maximum capacity and IV&V remains concerned that many important planned activities have been pushed out closer to go-live, which presents a risk that the month prior to go-live (June 2021) could require more activities than the team has capacity to accomplish, resulting in further sacrifice of quality or schedule slippage. Because the project schedule is not fully resourced, there is currently no objective way to determine the workload of SME's and whether they will have time to complete assigned tasks prior to go-live. IV&V and DOE leadership remain concerned that the SI does not have a comprehensive or rigorous methodology that could mitigate quality control risks and concerns. DOE SMEs continue to make extensive independent efforts to review SI work products and continue to find errors the SI had overlooked. The lack of rigor in software development practices (e.g., strict adherence to release management procedures) and in go-live planning could lead to rework, schedule delays, and user frustration if important steps or configuration elements are overlooked. SI efforts to improve work quality have not always proved successful. The SI has been unable to replace resources that present the most challenges and as go-live draws near, resource replacement will likely not be feasible because of the time it would take to onboard and bring new resources up to speed. The SI has made efforts to address risks associated with delays and ineffective communication due to the time zone difference with the SI global (offshore) team. However, it appears global team task delays continue to slow the projects overall cadence, though, some delays and inefficiencies are due to DOE SMEs lack of capacity.

Executive Summary (cont'd)

Mar	Apr	May	Category	IV&V Observations
M	M	H	Project Management & Organization	Though project activities continue to progress, IV&V continues to observe instances of inefficient and unproductive PM practices that continue to put an additional burden on DOE SMEs to assist the SI with managing project risks and tasks that are typically managed by the SI. IV&V continues to recommend the SI explore more efficient methods to speed communications and reduce the time DOE SMEs spend in meetings. Training material development appears to be on track as the project appears to have addressed the initial productivity challenges. However, feedback from some of the early training sessions have questioned the effectiveness of training. Attendees have reported that some sessions are not comprehensive and only cover the "happy path" and don't always address how to handle potential complications. Attendees have reported that some SI instructors are simply reading slides from the training slide deck and question the sessions value over reading slides on their own. IV&V recommends the project quickly address this issue for future courses and consider how they might provide supplemental training for users that already attend courses that provided limited value. IV&V also recommends the project allow users to apply what they've learned by doing real work in a test or sandbox environment or during a soft launch and gather important feedback for the OCM team to address through broad communication on any aspects of the system that could cause confusion. The project has already determined that some features may be introduced late into the production build which may require adjustments to training materials. IV&V is concerned that Learning Management System (LMS) limitations can make it difficult to make quick training material changes and which could lead to user confusion if updates are delayed. IV&V remains concerned that DOE may not be fully prepared to maintain and/or fully support the system post go-live. Current efforts to establish a user support and help desk infrastructure may not be adequate to fully support users at go-live, and DOE has yet to identify a resource to lead this effort. Delays in finalizing the Maintenance & Operations (M&O) plan and clarifying how their existing organization support resources (USTs) will support system users have left DOE with little time to fully define and resource important user support processes. Failure to fully define, prepare for, and implement this support infrastructure could lead to user confusion and frustration at go-live and could negatively impact worker productivity and system buy-in. Therefore, IV&V has escalated this risk category to a "High" priority. IV&V recommends DOE work quickly to appoint a resource to lead the development and execution of a comprehensive support plan and that DOE leadership clearly communicate the priority and importance of establishing a fully operational support infrastructure prior to go-live. IV&V also recommends the project work to bring SI resources onsite pre- and post- go-live to better support DOE support team members and users.

Executive Summary (cont'd)

Mar	Apr	May	Category	IV&V Observations
M	M	M	Quality Management	Now that the project team has performed multiple environment builds, the quality of the final production build is likely to increase. However, the SI continues to make multiple reactive changes to security configurations as multiple security bugs continue to be identified throughout testing, and it remains unclear why some security related bugs continue to be identified despite test scripts being passed in earlier testing phases. IV&V has observed instances of SI security configuration practices that lack the sufficient quality controls and/or rigorous processes typically applied to system implementations of this size and complexity. It appears the SI continues to be over reliant on their single security resource. Despite delays in the closeout of UAT (due to delays in implementing some data conversions and interfaces), the project elected to move forward with the next testing phase, Rehearsal Smoke Test (RST), accepting the risk that the testing of the system may be incomplete. Project delays have now led to slippage of the planned 5/14/21 RST completion date and the project will again elect to move to the next phase (Production Environment build) without completing the prior testing phase, despite having only completed 46% of RST test scripts. IV&V remains concerned that test scripts do not have full traceability to contract requirements and may not be comprehensive enough to catch some system defects.

Executive Summary (cont'd)

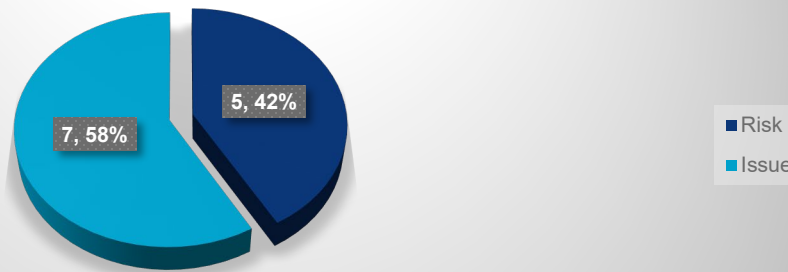
Mar	Apr	May	Category	IV&V Observations
M	M	M	System Architecture & Design	The project continues to contend with multiple Oracle Financials (OF) platform bugs that have hindered project productivity and complicated testing efforts. For example, Oracle has yet to resolve a platform bug where the Hawaii Standard Time (HST) default setting is inconsistently applied throughout the system. Also, due to limitations on securing attachments in the system, the project has elected to store all FMS worker documents, that would normally be attached to records in the system, in Google Drive. Work arounds such as these present various training and system support challenges and could confuse and frustrate users and negatively impact user buy-in and overall productivity. IV&V remains concerned that the SIs approach to security configuration has been largely trial and error in lieu of more rigorous analysis efforts. This approach has put an additional burden on DOE SMEs and testers and could lead to more security bugs. IV&V also remains concerned with the level of changes the SI continues to make to the security model this close to go-live, that some aspects of security may not have been implemented properly and/or fully tested, and that some users may have been over-provisioned in order to pass test scripts. Inaccurate security configurations could lead to user frustration due to system access issues, a high volume of help desk tickets, and increase the risk of fraud, could lead to a chaotic post go-live if multiple users are reporting security configuration issues. The SI has stated that as DOE SMEs gain a deeper understanding of system security, they are requesting more changes to the model, however, it remains unclear whether deeper SI analysis and vetting of requirements could have prevented this. IV&V remains concerned that custom security configurations (e.g., special user requests) could require a significant level of effort for DOE IT support staff to implement.



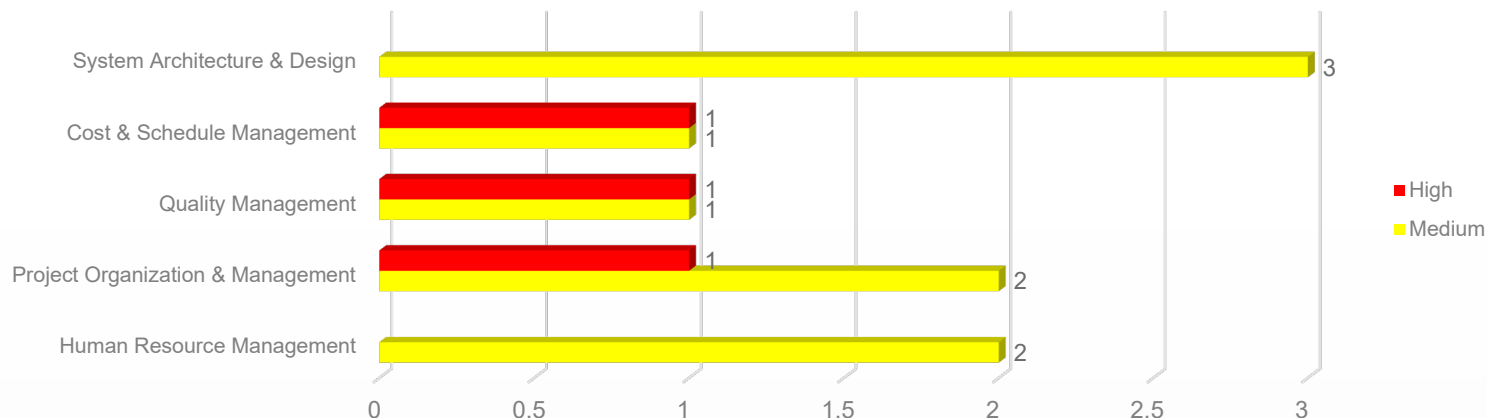
IV&V Findings and Recommendations

IV&V identified 12 findings (7 issues and 5 risks) for this reporting period. The following chart breaks down the findings by type/category/priority.

Findings by Type



Open Risks/Issues by Category/Priority



IV&V Findings and Recommendations (cont'd)

Summary of IV&V Open Risks/Issues Criticality

Category	Type	#	Finding Title	Criticality
Cost & Schedule Management	Risk	3	Adoption of an aggressive schedule could lead to poor system quality, user frustration, stretch DOE resources beyond their capacity, and bad press.	High
	Issue	4	Delayed finalization of the Project Management Plan (PMP) and schedule could lead to stakeholder confusion and less than informed planning and ultimately lead to reduced productivity and project delays.	Medium
Human Resource Management	Issue	2	Over reliance on a few skilled and overtaxed DOE project resources could lead to significant project disruption.	Medium
	Issue	5	SI staffing challenges could reduce project productivity and system design quality, and lead to schedule delays.	Medium
Project Organization & Management	Risk	6	COVID-19 State-wide shutdown could hinder project activities and negatively impact the project schedule and budget.	Medium
	Risk	8	Inefficient project management practices could lead to overall lack of productive project activities and ultimately schedule delays.	Medium
	Risk	11	Insufficient knowledge transfer (KT) and M&O planning prior to go-live could lead to project delays and diminished quality of post go-live support.	↑ High
	Risk	14	Training material development may be extensive and could lead to project delays or reduce the effectiveness of training	Medium
Quality Management	Issue	10	Inadequate release management processes could lead to significant rework and schedule delays.	High
	Risk	12	Insufficient testing strategy and planning could lead to poor test quality, including incomplete and invalid test results.	Medium
System Architecture & Design	Issue ↑	7	Oracle Financials environment constraints could lead to schedule delays and leave the project unable to meet development, testing, and training objectives.	Medium
	Issue	9	User provisioning and security model complexities could lead to unmet user expectations, unfulfilled business objectives, and schedule delays.	Medium
	Issue	13	Integration with older (antiquated technology) systems could be unexpectedly complicated and lead to schedule delays.	Medium

IV&V Findings and Recommendations (cont'd)

H Cost & Schedule Management

#	Key Findings	Criticality Rating
3	Risk - Adoption of an aggressive schedule could lead to poor system quality, user frustration, stretch DOE resources beyond their capacity, and bad press: In October of 2018, the aging DOE FMS failed, was offline for several weeks, and led to significant disruption of critical operations. As a result, the DOE quickly procured and launched this project with the goal of replacing their FMS as quickly as possible to avoid a similar event. The project is currently executing an aggressive, accelerated timeline with a January 2021 go-live date. This accelerated schedule incurs risks that the DOE has deemed acceptable given the potential larger risks associated with another legacy FMS failure. In order to speed implementation, the project has elected to implement a cloud-based Oracle Software-as-a-Service platform based on a pre-configured template, leverage Agile SDLC methods, limit the amount of new or improved functionality, and scaled back some project documentation and early analysis. The accelerated schedule could lead to: • Lack of thorough consideration of required business process changes resulting from the new system • User confusion and frustration due to the added burden of learning a new system with new processes, unmet expectations for improvements, and significant disruption to their daily duties • Over allocation of project resources and users • Significant OCM and Training efforts with limited time to plan and execute • Project decisions to cut corners to meet milestones and DOE expectation • Unproductive working sessions due to insufficient analysis efforts • Limited time to react to or resolve issues that may arise • Poor system design • A flurry of chaotic stakeholder activity as the project progresses closer to go-live. If this risk is realized, negative user feedback could lead to inflammatory media coverage which could negatively impact legislative, board of education, and public support. The project has stated they will only go live if the system sufficiently supports DOE operations and users are able to do their jobs.	High

IV&V Findings and Recommendations (cont'd)

H Cost & Schedule Management (cont'd)

#	Key Findings	Criticality Rating
4	Issue - Delayed finalization of the Project Management Plan (PMP) and schedule could lead to stakeholder confusion and less than informed planning and ultimately lead to reduced productivity and project delays.: The project is currently operating under a draft Project Management Plan (PMP) and project schedule. The PMP was due 3/12/20 but, as of this reporting period, both have not been finalized. DOE project leadership has indicated that existing drafts appear to lack sufficient details. The projects accelerated schedule leaves little room for any impact to project productivity. Lack of a finalized PMP could lead to uncertainty around project scope and uncertainty around how the project will be executed or managed, which can reduce overall project cadence and productivity. Delays in establishing a clear, detailed baselined schedule could lead to project delays and leave the project unable to effectively monitor project progress. Further, the lack of a clear critical path could leave the project with little time to respond to critical path activities that may have already impacted the project go-live date.	Medium

IV&V Findings and Recommendations (cont'd)

H Cost & Schedule Management (cont'd)

Recommendations	Progress
Take steps to assure sufficient OCM planning, and activities are performed to prepare users for the significant change taking place at an accelerated rate.	In progress
Project leadership closely monitor project productivity and meet regularly to perform continuous process improvement (continuously reach out for feedback and move quickly to improve unproductive project elements and processes).	In progress
Leadership take steps to closely monitor project team capacity and assure resources are not overallocated.	In progress
Request that the SI address issues with their project team that place an unnecessary burden on overtaxed DOE SMEs.	In progress
Project make early efforts to plan for and prepare contingency plans in the event it becomes clear the accelerated schedule is unsustainable or critical project objectives will not be met by the planned go-live date.	In progress
Request the SI proactively augment their team with additional experienced resources as needed to assure project milestone deadlines are met.	In progress
<<NEW>> DOE make extensive efforts to manage user expectations with regard to system limitations and work arounds.	In progress
<<NEW>> DOE executive leadership clearly communicate to project stakeholders (including testers) how they should prioritize project activities appropriately so that the project can meet their go-live date.	In progress

IV&V Findings and Recommendations (cont'd)

M

Human Resource Management

#	Key Findings	Criticality Rating
2	Issue - Over reliance on a few skilled and overtaxed DOE project resources could lead to significant project disruption: There are currently 3-4 DOE team members who are relied on to a greater extent than others. Each of these individuals have significant standing critical operational responsibilities and most have managerial responsibilities as well. While each of these team members have indicated a strong commitment to project success, each has multiple competing priorities, and most will be constrained with operational tasks between now and go-live. It remains unclear if DOE staffing levels committed to in the original Statement of Work (SOW) have been met. Over reliance on key resources can not only overtax and thereby reduce the effectiveness of these key individuals, but also presents a risk of significant project disruption in the event of their departure. While most projects have this risk, the risk impact for this project, from IV&V's perspective, is higher than most, and while the project could be impacted by the loss of any DOE team members, there are 3-4 individuals who are relied on to a greater extent than others. Loss of these individuals could lead to significant project disruption. Failure to transfer standing daily operational and managerial responsibilities from these individuals to other DOE resources could stretch them beyond their capacity and lead to a lack of job satisfaction, decreased productivity, decrease in quality, and increases the probably they could make critical mistakes that could negatively impact the project. Several of these key resources have indicated they have significant operational responsibilities and projects between now and go-live (e.g., year-end close, audit, the Time & Leave project, preparations for the new school year, etc.) and may simply lack the capacity to meet all current expectations. Further, if the SI is not able to resolve some staffing challenges (see <i>Risk #5</i>), the project may increase their reliance on these individuals and may have to work harder to ensure system designs are accurate, project milestones are met, and overall project activities remain productive.	Medium



IV&V Findings and Recommendations (cont'd)

M

Human Resource Management (cont'd)

#	Key Findings	Criticality Rating
5	Issue - SI staffing challenges could reduce project productivity and system design quality, and lead to schedule delays: Since soon after project launch, the DOE project leadership has raised several concerns with regards to the SI project team. DOE stakeholders have reported that working session productivity has, at times, been hindered by the apparent lack of sufficient knowledge, capabilities, and expertise of some SI team members. While some appear to have some strong capabilities and financial system knowledge, others appear to lack the capability to drive productive discussions, quickly solution implementation issues, and accelerate the Software Development Lifecycle (SDLC). The SI has recently responded to DOE leadership concerns that the SI PM lacked sufficient capabilities, experience, and the temperament to perform effectively as the project PM. The SI has responded to these concerns and the engagement manager has temporarily taken over PM responsibilities and augmented their team with a project coordinator resource. DOE leadership has raised concerns with other SI leads as well and the SI appears to be making efforts to augment their staffing model to address each concern. Due to the accelerated project schedule, the project can ill afford to tolerate a lack of productivity given go-live is in 6 months. One of the primary factors of project success is establishing a skilled, experienced, productive, highly available and high-functioning team. If the SI is not able to quickly implement a staffing model that can establish this kind of team, the project schedule could be at risk. Further, the lack of sufficiently capable SI resources could weigh heavily on already constrained DOE SMEs as they attempt to compensate and extend additional efforts to ensure project milestones are met. The addition of highly capable and experienced SI resources could reduce the burden on DOE SMEs. This risk is likely to be exacerbated by the significant time zone difference between the project team (HST and PST) and the SI technical team who reside in India. The SI teams' apparent lack of deep, expert-level Oracle Financials (OF) cloud expertise could continue to reduce the productivity of work sessions and/or lead to poor design decisions that could require significant rework once a better design or solution is discovered.	Medium

IV&V Findings and Recommendations (cont'd)

M

Human Resource Management (cont'd)

Recommendations	Progress
Executive leadership regularly monitor the workload and job satisfaction of key individuals as well as assist with workload management, clarification of priorities, and establishment of a sustainable pace.	In progress
Temporarily re-allocate operational/managerial responsibilities from key resources until project completion.	In progress
Consider temporary staff augmentation options (e.g., temps or 89-day hires) to both augment the existing project team and augment the operations staff to offload operational responsibilities from key resources.	In progress
Prepare contingency plans in the event that the DOE project team can no longer sustain project and operational activities at the expected pace.	In progress
Work closely with the SI in their staffing efforts and quickly, but thoroughly, vet additions to the SI project team.	In progress
Request the SI explore augmenting their team with highly capable, expert-level resources that can provide technical leadership that could potentially accelerate the project and reduce the burden on constrained DOE SMEs.	In progress
Request the SI make efforts to ensure solutions they have provided, and key decision documents are properly vetted by industry experts to ensure the best options are being presented to DOE SMEs.	Not started

IV&V Findings and Recommendations (cont'd)

H

Project Management & Organization

#	Key Findings	Criticality Rating
6	Risk - COVID-19 State-wide shutdown could hinder project activities and negatively impact the project schedule and budget: On 3/23/2020, the Governor issued a “stay at home, work from home order” that appears to have reduced the ability of the DOE to be fully functional, as the large majority of their workers have been required to work from home/remotely. Though the governor has allowed state workers to return to the workplace, many continue to work remotely. The state legislature is currently contemplating implementing 1-2 day/week furloughs as well as salary cuts for state workers to make up for budget shortfalls due to COVID-19. While the extent to which remote work requirements will impact the project are not fully known, it will likely complicate planning and execution of training, testing, and OCM. Many users have a strong preference for in-person training, however, due to social distancing policies, existing classroom capacity has been significantly reduced. Limited in-person training could lead to unmet user expectations and frustration as well as reduce the effectiveness of training. In the event in-person training is limited, project training planning and preparation will likely increase. If furloughs are mandated, the project may not be able to meet project milestone deadlines which could also negatively impact the project budget. IV&V will continue to monitor for other COVID-19 related impacts. Given that the project currently relies heavily on 3-4 key resources (see Finding #2), if any one of these individuals contract COVID-19, the project could be negatively impacted by their lack of availability. The project is currently faced with productivity and communication challenges because, due to COVID, the SI off-shore senior technical resources reside in India. Time zone (India team) challenges appear to have limited communications with the project team, and SMEs have often had to wait until the following day to get answers to some questions. Further, SMEs have indicated that the lack of in-person project work sessions has likely hindered their productivity.	Medium

IV&V Findings and Recommendations (cont'd)

H Project Management & Organization (cont'd)

#	Key Findings	Criticality Rating
8	Risk - Inefficient project management practices could lead to overall lack of productive project activities and ultimately schedule delays: This project is scoped to be staffed by both a DOE PM and an SI PM with the SI PM managing the bulk of SDLC activities with the DOE PM assisting in managing DOE assigned project activities. The DOE struggled to adequately staff the DOE PM position during the initial months of the project, until they were able to acquire a capable consultant to fill the role, April 2020. The project reported some early insufficient and inefficient project management processes, including: • Insufficient action item tracking and follow-up • Insufficient attention to risk management • Inefficient meetings • Lack of clear meeting objectives and late delivery of meeting agenda's • Lack of preparation and planning for meetings and work sessions • Insufficient guidance on attendee management and vetting of attendees • Previous SI project manager (PM) had not met project expectations for project leadership, strategic direction, communication, and organization. The SI has recently responded to DOE leadership concerns by removing the SI PM and adding a project coordinator to their team, and the SI engagement manager has taken over as the PM and is now making some progress in addressing the above concerns. Lack of good project management processes can lead to an overall lack of project productivity, and ultimately lead to schedule delays and stakeholder frustration and reduced user buy-in. The SI appears to be making good progress in addressing DOE project management concerns. However, the impacts of operating the project under poor project management processes for the initial 5 months of the project remain unclear. Further, the current SI PM could be quickly overwhelmed as they attempt to fulfill both the PM and engagement manager roles, in addition to other responsibilities in their role as Vice President of Operations and senior CherryRoad executive (principle/partner). The recently added SI project coordinator appears to have had a positive impact on PM processes.	Medium

IV&V Findings and Recommendations (cont'd)

H Project Management & Organization (cont'd)

#	Key Findings	Criticality Rating
11	Risk - Insufficient knowledge transfer and M&O planning prior to go-live could lead to project delays and diminished quality of post go-live support.: There appears to be a lack of clarity around post go-live support responsibilities and the level of SI support. Apparently, some contractual post go-live support requirements have yet to be clarified and agreed to between the SI and DOE. Further, DOE expectations for the SI to train their IT staff have not been met. The DOE IT group currently has some interface development project responsibilities and DOE's expectation was that the SI would provide sufficient knowledge transfer (KT) on Oracle Financials (OF) and Oracle Integration Cloud (OIC) in order to perform these tasks in a timely manner as well as meet expectations for DOE post go-live support responsibilities. DOE has stated their expectation that DOE IT staff would work alongside the SI technical team for KT throughout project implementation, however, the level of KT has not met DOE expectations thus far. If the DOE IT staff are not sufficiently trained to effectively implement their project tasks this could lead to a reduction of efficient execution and quality of the technical components they have been assigned and, ultimately, to schedule slippage. Lack of clarity or sufficient planning around post go-live support could lead to diminished quality of post go-live support. Failure to adequately augment the existing DOE IT group with OF skillsets could leave DOE unable to adequately support the new OF system post go-live and lead to an over-reliance on costly vendor resources and impact the project budget.	High

IV&V Findings and Recommendations (cont'd)

H

Project Management & Organization (cont'd)

#	Key Findings	Criticality Rating
14	Risk - Training material development may be extensive and could lead to project delays or reduce the effectiveness of training.: DOE leadership, including the Superintendent, has indicated that the quality, effectiveness, and comprehensiveness of training is a top priority. Early indications are that both the number and degree of changes may be significant. The project is currently tracking, via the projects Change Impact Analysis (CIA) spreadsheet, impactful changes to users and daily operations with the implementation of the new system. Training material will need to effectively address these changes and prepare users for work arounds, process changes, and new system concepts. The SI has indicated that much of the system has maintained out of the box Oracle Financials functionality which should accelerate training material development. However, integrating CIA items into the training material could require a significant level of effort for both the SI and DOE. Because of the high priority given to the effectiveness of training, DOE review cycles may be unexpectedly extended in order to ensure quality. Given tight timelines and an aggressive go-live date, the project may elect to accept training material that does not fully meet their expectations, or they may elect to extend the schedule in order to resolve training material issues. The SI is in the process assessing whether increased resources or additional time needs to be allotted to this effort to ensure timely delivery of training materials.	Medium



IV&V Findings and Recommendations (cont'd)

H Project Management & Organization (cont'd)

Recommendations	Progress
• Begin early contingency planning to address further impacts of COVID-19, such as potential furloughs as well as fully remote UAT and Training.	In progress
• Perform an assessment of DOE remote capabilities prior to UAT and Training to determine stakeholder's ability and effectiveness in relying on remote access for project participation.	In progress
• Continue to monitor project stakeholders and system users are sufficiently competent with remote meeting technology including ensuring they are highly functional with remote access technology (e.g. WebEx), as UAT and Training will likely require some level of (if not full) remote participation.	In progress
• Send broad communications to assure stakeholders the project has a clear understanding of COVID-19 impacts to the project and provide regular updates, as appropriate, as new plans and tactics develop.	In progress
• Detail relevant OCM strategies and plans for addressing the impacts of COVID-19 in the project OCM Plan.	In progress
• Request the SI make efforts to address time zone challenges with the off-shore technical team.	In progress
• Initiate efforts to request exemptions from hiring freeze constraints and furlough exemptions for the DOE project team.	In progress
• Monitor and provide regular feedback on PM processes and implement continuous process improvement processes to assure consistent and effective project management.	In progress
• Document and execute detailed risk mitigation steps for tasks that appear to be slipping that include offering additional resources to support project team members who are falling behind on critical path tasks.	In progress

IV&V Findings and Recommendations (cont'd)

M

Quality Management

#	Key Findings	Criticality Rating
10	Issue – Inadequate release management processes could lead to significant rework and schedule delays: Due to existing Oracle Financials cloud limitations, upload of data is often difficult to back out. Errors made during data uploads can either require manual data entry corrections or an environment refresh that will likely take 3 weeks. During initial uploads to the development environment, the wrong version of a file use mistakenly uploaded which created some disruption of development activities. Due to limitations of the OF cloud limitations, back out of bad data or configurations is not always automated and therefore can require manual correction of data. Alternatively, if the data corruption is significant, the project may elect to refresh the environment to a previous state, however, an OF refresh will likely take 3 weeks, which may not be feasible given the tight deadlines. If comprehensive quality controls are not implemented as an integral part of release management processes, mistakes that are made by both DOE and the SI can be difficult to back out. Lack of clear upload file versioning and other controls could lead to wrong files being uploaded which could lead to disruption of development efforts and, if not caught, could lead to disruption of testing phases and ultimately, schedule slippage. If release management procedures are unclear or if the execution of release procedures lack sufficient rigor, the likelihood of missteps may increase. Missteps during testing or go-live could lead to user confusion, reduced user buy-in, costly schedule delays, reduced executive stakeholder project support, and a negative public perception that could be picked up by the local media (aka "bad press").	High

IV&V Findings and Recommendations (cont'd)

M

Quality Management (cont'd)

#	Key Findings	Criticality Rating
12	Risk – Insufficient testing strategy and planning could lead to poor test quality, including incomplete and invalid test results: IV&V has observed some unproductive test preparation work sessions and some confusion among the project team members as some elements of the test strategy and plan are unclear or not well defined. At times, it appears the SI is asking DOE test leads to perform activities they lack expertise to perform. DOE test leads have also stated that SI led testing preparation efforts have not always been productive and have not met their expectations that the SI would provide sufficient testing preparation guidance. The SI appears to have responded by replacing the SI Test Lead, and the SI PM has taken over as the SI Test Lead, despite concerns that the SI PM may be overallocated. It is unclear whether the SI PM has capacity to effectively lead the testing effort and provide DOE test leads with sufficient guidance for them to adequately prepare for testing. The SI reports that they are making efforts to find a permanent replacement. Additionally, IV&V has concerns with the proposed testing strategy. The SI has stated they intend to begin System Integration Testing (SIT) without some system components being fully operational which could, A) result in incomplete testing and, B) invalidate test results for functionality that has been previously tested.	Medium

IV&V Findings and Recommendations (cont'd)

M

Quality Management (cont'd)

Recommendations	Progress
Implement comprehensive and rigorous release management processes and quality controls (checks and double-checks).	In progress
Clarify and fully vet the testing strategy and plans for DOE leads and stakeholders.	In progress
Request the SI address their team's failure to effectively follow release management processes.	In progress

IV&V Findings and Recommendations (cont'd)

M System Architecture & Design

#	Key Findings	Criticality Rating
7	Risk – Oracle Financials environment constraints could lead to schedule delays and leave the project unable to meet development, testing, and training objectives: The project has planned for a total of 4 environments, currently slated for development, testing, training, and production. Oracle Financials cloud service level agreements for environment refresh is reportedly 3 weeks. The SI has indicated they are working on a strategy for accomplishing project objectives with the limited environments and the DOE is reportedly making efforts to increase the number of environments. Typically, projects of this size, complexity, and pace rely on quick environment refreshes in order to effectively meet development, testing, and training objectives. Most will plan for an abundance of environments in order to avoid the need to repurpose environments, avoid project delays, and provide flexibility to "freeze" environments to improve testing and training quality. If the project is unable to quickly refresh environments and is has only a limited number of environments.	Medium

IV&V Findings and Recommendations (cont'd)

M System Architecture & Design (cont'd)

#	Key Findings	Criticality Rating
9	Issue – User provisioning and security model complexities could lead to unmet user expectations, unfulfilled business objectives, and schedule delays: Initial security discussions have revealed some complexities and challenges with implementing a security model that fully meets DOE business objectives including segregation of duties, principle of least privilege. The project has elected to implement a single Business Unit (BU) for all of DOE, which could create system implementation challenges given Oracle Financials security is optimally implemented for multiple BU's. The SI is making efforts to ensure DOE business objectives are met and can be implemented so as not to put an undue burden on user provisioning staff. Implementation of a security model that does not meet user expectations and fully support end user provisioning and segregation of duties controls can lead to user frustration that: • Security is too restrictive and hinders their ability to be productive and do their job • Security is overly permissive and privileged information is visible to other groups that do not have a business need for the data • User provisioning maintenance is overly complex and/or labor intensive • The security model has made testing overly complex due to tester user provisioning challenges The security model is currently being developed by a single SI resource. Failure to fully vet the proposed security model with multiple Oracle Financials cloud security experts and fully address DOE business objectives, could lead to project disruption in the event that a significant change to the model is needed as go-live approaches and as a result of mounting user complaints.	Medium

IV&V Findings and Recommendations (cont'd)

M System Architecture & Design (cont'd)

#	Key Findings	Criticality Rating
13	Issue – Integration with older (antiquated technology) systems could be unexpectedly complicated and lead to schedule delays: The project currently has requirements to integrate with older systems that often lack sufficient documentation and/or system expertise. A number of systems that the new FMS must interface with are based on older technology that may be incompatible with new technology and can be difficult to integrate with. Many systems have accumulated a significant amount (decades in some instances) of technical debt, reportedly due to lack of funding and technical team capacity. For example, it has been reported that patching for many systems are severely out of date and may run on Operating Systems or other software technology/tools that are no longer supported by the vendor. Many of these systems no longer have system experts because support staff have moved on or retired, and documentation and/or knowledge transfer upon their departure may not have been sufficient. Documentation for many older systems is reportedly missing or incomplete. Unexpected complications that arise in attempts to integrate with antiquated systems can lead to project delays or unexpected costs for tools to compensate for limitations of antiquated systems. Interface development efforts can also be delayed when expected system documentation, expertise, or vendor support is no longer available. Given the amount of technical debt these systems have accumulated over the years and the lack of system patching, the system could open the FMS replacement system, other connected systems, and the DOE to undue system failure risks. If any of these antiquated DOE systems fail during project execution, project resources (who are already at capacity) will likely have to be reallocated towards repair and recovery of these systems and lead to schedule delays.	Medium

IV&V Findings and Recommendations (cont'd)

M System Architecture & Design (cont'd)

Recommendations	Progress
• DOE leadership reevaluate the Oracle representative's role on the project and request they provide better support for DOE technical leads for both pre and post go-live support.	Not started
• Make early OCM efforts to manage expectations based on platform limitations.	In progress
• Establish clear controls with regard to fraud, segregation of duties, and least privilege permissions.	In progress
• Request the SI develop an environment management plan with sufficient details to describe how the project will mitigate risks related to OF environment limitations.	In progress
• Consider prioritizing patching and system upgrades to stabilize boundary systems.	In progress
• Strategically plan to procure or provision additional environments as necessary to assure accelerated development cycles as well as provision standby environments that will speed development in the event a critical environment has become corrupt (e.g., mistakes are made to irreversible fields).	In progress
• Consider implementing early, basic proof of concept interfacing with older systems to assure integration is feasible and to vet optimal interface solutions. Perform early discovery and due diligence to identify potential complications with integrating with older systems.	In progress

IV&V Status

- **IV&V activities performed during the reporting period:**
 - Attended Project Management meetings
 - Attended Weekly Managers & Leads meetings
 - Attended various Working Group sessions
 - Review relevant project documentation
 - Led IV&V Risk Review sessions with project leadership and the SI
 - Interviewed DOE and SI project team members
 - Produced IV&V Monthly Status Report
- **IV&V next steps in the coming reporting period:**
 - Attend key project meetings
 - Interview additional key project stakeholders
 - Deliver next IV&V Monthly Status Report

Appendix A – IV&V Criticality Ratings

This appendix provides the details of each finding and recommendation identified by IV&V. Project stakeholders are encouraged to review the findings and recommendations log details as needed.

See definitions of Criticality Ratings below:

Criticality Rating	Definition
	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely, and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely, and a different approach may be required. Mitigation strategies should be implemented as soon as feasible.
	A low rating is assigned if there is a possibility of slight impact to product quality, scope, cost, or schedule. Minimal disruption is likely, and some oversight is most likely needed to ensure that the risk remains low. Mitigation strategies should be considered for implementation when possible.

Appendix B – IV&V Standard Inputs

To keep abreast of status throughout the project, IV&V regularly:

- **Attends the project meetings**
- **Reviews the project documentation**
- **Utilizes Eclipse IV&V® Base Standards and Checklists**



PCG Eclipse IVV
Checklists

Appendix C – IV&V Details

- What is Independent Verification and Validation (IV&V)?
 - Oversight by an independent third party that assesses the project against industry standards to provide an unbiased view to stakeholders
 - The goal of IV&V is to help the State get the solution they want based on requirements and have it built according to best practices
 - IV&V helps improve design visibility and traceability and identifies (potential) problems early
 - IV&V objectively identifies risks and communicates to project leadership for risk management
- PCG IV&V Methodology
 - Consists of a 4-part process made up of the following areas:
 1. **Discovery** – Discovery consists of reviewing documentation, work products and deliverables, interviewing project team members, and determining applicable standards, best practices and tools
 2. **Research and Analysis** – Research and analysis is conducted in order to form an objective opinion.
 3. **Clarification** – Clarification from project team members is sought to ensure agreement and concurrence of facts between the State, the Vendor, and PCG.
 4. **Delivery of Findings** – Findings, observations, and risk assessments are documented in this monthly report and the accompanying Findings and Recommendations log. These documents are then shared with project leadership on both the State and Vendor side for them to consider and take appropriate action on.

Note: This report is a point-in-time document with findings accurate as of the last day in the reporting period.



Solutions that Matter

Id	Short Desc	Title / Summary	Finding Description	Analysis and Significance	Recommendation	Updates	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date
8	PM processes	Inefficient project management practices could lead to overall lack of productive project activities and ultimately schedule delays.	This project is scoped to be staffed by both a DOE PM and an SI PM with the SI PM managing the bulk of SDLC activities with the DOE PM assisting in managing DOE assigned project activities. The DOE struggled to adequately staff the DOE PM position during the initial months of the project, until they were able to acquire a capable consultant to fill the role, April 2020. The project reported some early insufficient and inefficient project management processes, including: ■ Insufficient action item tracking and follow-up ■ Insufficient attention to risk management ■ Unclear project scope definition ■ Lack of clear meeting objectives and late delivery of meeting agenda's ■ Lack of preparation and planning for meetings and work sessions ■ Insufficient guidance on attendee management and vetting of attendees ■ Previous SI project manager (PM) had not met project expectations for project leadership, strategic direction, communication, and organization. The SI has recently responded to DOE leadership concerns by removing the SI PM and adding a project coordinator to their team, and the SI engagement manager has taken over as the PM and is now making some progress in addressing the above concerns. The project is currently operating under a draft Project Management Plan (PMP) and project schedule. These deliverables were due 3/12/20 but, as of this reporting period, have not been finalized (see Risk #4).	Due to the accelerated project schedule, the project can ill afford to tolerate a lack of productivity. Lack of good project management processes can lead to an overall lack of project productivity, and ultimately lead to schedule delays and stakeholder frustration and reduced buy-in. The SI appears to be making good progress in addressing DOE project management concerns. However, the impacts of operating the project under poor project management processes for the initial 5 months of the project remain unclear. The project could realize the reduced productivity during the planning and analysis phase has led to project delays. Further, the current SI PM could be quickly overwhelmed as they attempt to fulfill both the PM and engagement manager roles, in addition to other responsibilities in their role as Vice President of Operations and senior CherryRoad executive (principle/partner). The recently added SI project coordinator appears to have had a positive impact on PM processes.	• Request the SI work quickly to acquire a dedicated and highly-capable project manager that has proven experience successfully driving an Oracle cloud-based K-12 project in an accelerated timeframe. • Monitor and provide regular feedback on PM processes and implement continuous process improvement processes to assure consistent and effective project management. • Integrate risk management practices into existing processes (e.g. Review important deadlines in weekly working sessions). • Document and execute detailed risk mitigation steps for tasks that appear to be slipping that include offering additional resources to support project team members who are falling behind on critical path tasks. • Reallocate SI PM responsibilities so they can focus on effective, detailed management of the project. Consider augmenting the team with a project assistant to manage the project schedule. • Project leadership reassess meeting scheduling processes and reach agreement with DOE SMEs on more optimal meeting governance to reduce the number and length of meetings so the project team can focus on and accelerate project tasks.	05/15/2021 - The SI's project management (PM) practice challenges continue to persist with little to no improvements. Though project activities continue to progress, IV&V continues to observe instances of inefficient and unproductive PM practices that continue to put an additional burden on DOE SMEs to assist the SI with managing project risks and tasks that are typically managed by the SI. 04/15/2021 - DOE SME's continue to report (and IV&V has observed) instances of SI leads lack of preparation before meetings. IV&V continues to recommend DOE leadership request the SI make direct contact with key SME's prior to meetings to speed communications and reduce time spent in meetings so they can become more productive and be freed up to work on project activities. It appears the SI continues to rely on meetings with multiple participants to collaborate amongst themselves and resolve project issues. IV&V and DOE SME's have noted that SI leads continue to make the same mistakes despite DOE SME feedback on important management processes and practices that need improvement. The SI approach to team coaching and continuous process improvement remains unclear. IV&V recommends DOE request the SI consistently coach their team members for continuous process improvement and how to effectively manage their tasks. It is becoming clear the SI teams limited project and task management capabilities compounded by the SI global teams time zone difference continues to delay interfaces, conversion, and other project tasks. 03/15/21 - IV&V remains concerned that the SI PM lack sufficient capacity to perform all required PM tasks to meet DOE expectations. DOE SMEs have stated they are accepting the fact that the SI team members lack the capacity and/or capability to perform comprehensive task management and DOE PMO and SMEs have stepped in, as needed, to fill these gaps. DOE resources have stepped up efforts to assist the SI with task management and the PMO has taken over report development tracking. 02/15/21 - IV&V continues to note instances of poor PM practices including lack of SI preparation for meetings (see related update to Finding #5), poor communication, lack of meeting minutes/agendas, schedule confusion (see update to finding #4), and unproductive meetings. 01/15/21 - DOE SMEs continue to report (and IV&V has observed) instances of unproductive	Project Organization & Management	Risk	Medium	Open			6/30/2020
11	KT & Long term support	Insufficient knowledge transfer and M&O planning prior to go-live could lead to project delays and diminished quality of post go-live support.	There appears to be a lack of clarity around post go-live support responsibilities and the level of SI support. Apparently, some contractual post go-live support requirements have yet to be clarified and agreed to between the SI and DOE. Further, DOE expectations for the SI to train their IT staff have not been met. The DOE IT group currently has some interface development project responsibilities and DOE's expectation was that the SI would provide sufficient knowledge transfer (KT) on Oracle Financials (OF) and Oracle Integration Cloud (OIC) in order to perform these tasks in a timely manner as well as meet expectations for DOE post go-live support responsibilities. DOE has stated their expectation that DOE IT staff would work alongside the SI technical team for KT throughout project implementation, however, the level of KT has not met DOE expectations thus far. The SI has stated they are not contractually obligated to formally train the DOE IT staff on the technology.	If the DOE IT staff are not sufficiently trained to effectively implement their project tasks this could lead to a reduction of efficient execution and quality of the technical components they have been assigned and, ultimately, to schedule slippage. Lack of clarity or sufficient planning around post go-live support could lead to diminished quality of post go-live support. Failure to adequately augment the existing DOE IT group with OF skillsets could leave DOE unable to adequately support the new OF system post go-live and lead to an over-reliance on costly vendor resources and impact the project budget.	• DOE develop a resource management plan to address gaps in their existing IT team to ensure they are able to meet expectations for project implementation and post go-live support. Plan may include augmenting their IT staff with an additional resource to, at minimum, manage Oracle quarterly update. • DOE explore seeking legislative exemptions to acquire experienced Oracle Financials (OF) resources to fill gaps on their IT staff as soon as possible to reduce dependence on vendors to support the system and to fill current skillset gaps and capacity constraints with existing DOE IT resources. • Consider preparing return on investment (ROI) data to present to the legislature that could clearly justify the cost of highly compensated OF (possibly exempt) resources that could potentially provide cost savings to the state compared to the cost of equivalent vendor support contracts. • Clarify SI KT, warranty, and post go-live support contractual obligations well ahead of go-live to avoid disagreements and last minute efforts to adequately support the system post go-live. • Consider instituting a distributed model/strategy (e.g. "Super SME") to support tier 1 user assistance, on-going training, and OCM communications. • DOE work quickly to appoint a resource to lead the development and execution of a comprehensive support plan • DOE leadership clearly communicate to relevant resources the priority and importance of establishing a fully operational support infrastructure prior to go-live.	05/15/2021 - IV&V remains concerned that DOE may not be fully prepared to maintain and/or fully support the system post go-live. Current efforts to establish a user support and help desk infrastructure may not be adequate to fully support users at go-live and DOE has yet to identify a resource to lead this effort. Delays in clarifying how their existing organization support resources (USTs) will support system users have left DOE with little time to fully define and staff important user support processes. IV&V and DOE leadership are also concerned with DOE's lack of documented governance, not only with support processes but other areas as well (e.g., knowledge management, cross divisional communications/collaboration, etc.). Failure to fully define, prepare for, and implement this support infrastructure could lead to user confusion and frustration at go-live and could negatively impact worker productivity and system buy-in. Therefore, IV&V has escalated this risk to a "High" priority. IV&V recommends the DOE work quickly to appoint a resource to lead the development and execution of a comprehensive support plan and that DOE leadership clearly communicate the priority and importance of establishing a fully operational support infrastructure prior to go-live. IV&V recommends the project work to bring SI resources onsite pre- and post- go-live to better support DOE support team members and users. 04/15/2021 - Security Knowledge Transfer (KT) sessions appear to have improved once the SI made some resource changes and made improvements to the KT materials. IV&V and the DOE PMO remains concerned that the DOE may not be fully prepared to support the system post go-live and/or post warrant when the SI is no longer available to assist. Early KT security sessions seem to indicate that Oracle security configurations may be complicated and DOE IT support staff may have difficulty troubleshooting and effectively resolving support tickets in a timely manner. IV&V will reassess once KT sessions are complete. IV&V recommends DOE augment their IT staff with an additional resource to support the system and to, at minimum, manage Oracle quarterly updates. 03/15/21 - The SI recently held security KT sessions for DOE IT FMS support staff, however, these sessions have yet to meet DOE expectations as they appeared to be unproductive. Details of division of responsibility between the SI and DOE post go-live have yet to be finalized. The project has elected to delay functional KT sessions to allow DOE functional leads to focus on more urgent project tasks. IV&V and the PMO have raised concerns that	Project Organization & Management	Risk	High	Open			8/17/2020

Id	Short Desc	Title / Summary	Finding Description	Analysis and Significance	Recommendation	Updates	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date	
14	Training material	Training material development may be extensive and could lead to project delays or reduce the effectiveness of training	DOE leadership, including the Superintendent, has indicated that the quality, effectiveness, and comprehensiveness of training is a top priority. Early indications are that both the number and degree of changes may be significant. The project is currently tracking, via the projects Change Impact Analysis (CIA) spreadsheet, impactful changes to users and daily operations with the implementation of the new system. Training material will need to effectively address these changes and prepare users for work arounds, process changes, and new system concepts.	The SI has indicated that much of the system has maintained out of the box Oracle Financials functionality which should accelerate training material development. However, integrating CIA items into the training material could require a significant level of effort for both the SI and DOE. Because of the high priority given to the effectiveness of training, DOE review cycles may be unexpectedly extended in order to ensure quality. Given tight timelines and an aggressive go-live date, the project may elect to accept training material that does not fully meet their expectations, or they may elect to extend the schedule in order to resolve training material issues. The SI is in the process assessing whether increased resources or additional time needs to be allotted to this effort to ensure timely delivery of training materials.	- Request the SI improve their quality assurance processes to ensure project deliverable drafts go through a rigorous quality assurance process prior to submission for DOE review. - DOE prepare contingencies and explore allocating additional resources to assure training material and training delivery quality.	05/15/2021 - Training material development appears to be on track as the project appears to have addressed the initial productivity challenges. However, feedback from some of the early training sessions have questioned the effectiveness of training. Attendees have reported that some sessions are not comprehensive and only cover the "happy path" and don't always address how to handle potential complications. Some have reported the SI instructor is simply reading slides from the training slide deck and question the sessions value over simply reading slides on their own. IV&V recommends the project quickly address this issue for future courses and consider how they might provide supplemental training for users that already attend courses that provided limited value. IV&V also recommends the project allow users to apply what they've learned by doing real work in a test or sandbox environment or during a soft launch and gather important feedback for the OCM team to address by providing broad communication prior to go-live on any aspects of the system that could cause confusion. IV&V is concerned that Learning Management System (LMS) limitations can make it difficult to make quick changes to training materials. The project has already determined that some features may be introduced late into the production build which may require adjustments to training materials. 04/15/2021 - The project is making extensive efforts to complete their first Aukahi introductory course which should be available for users the week of 4/26/21. DOE is also planning to provide supplementary support material to their users, including: policy/procedure documentation, walkthroughs of functional processes, guides to using forms, Vendor Payment charts, and a terminology crosswalk from legacy FMS to Aukahi. SI course duration estimates have recently increased, raising DOE concerns that the existing schedule will no longer be feasible. The SI has addressed this concern by adding an additional training resource. Details of post-go-live training for new DOE employees remains unclear. 03.15/21 - The SI has revised their training plan to allow more time for DOE QA and review in response to DOE concerns that the initial training material development schedule was not feasible. The DOE and IV&V remain concerned with delays in the development of training materials as well as SIs lack of quality assurance. Initial SI training material drafts were submitted for DOE review without proper quality assurance. The SI has stated they will improve quality assurance efforts and include their functional leads in the review process.	Project Organization & Management	Risk	Medium	Open				2/15/2021