OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

P.O. BOX 119, HONOLULU, HAWAI'I 96810-0119
Ph: (808) 586-6000 | Fax: (808) 586-1922
ETS.HAWAII.GOV

January 4, 2022

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 (Jan 4, 2022 13:20 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: **July 20 – August 15, 2021**

Draft Submitted: September 8, 2021

Final Submitted: December 9, 2021

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

- Executive Summary
- IV&V Findings and Recommendations
- IV&V Status
- Appendices
    - A – IV&V Findings Log & Priority Ratings
    - B – Standard IV&V Inputs
    - C – IV&V Details
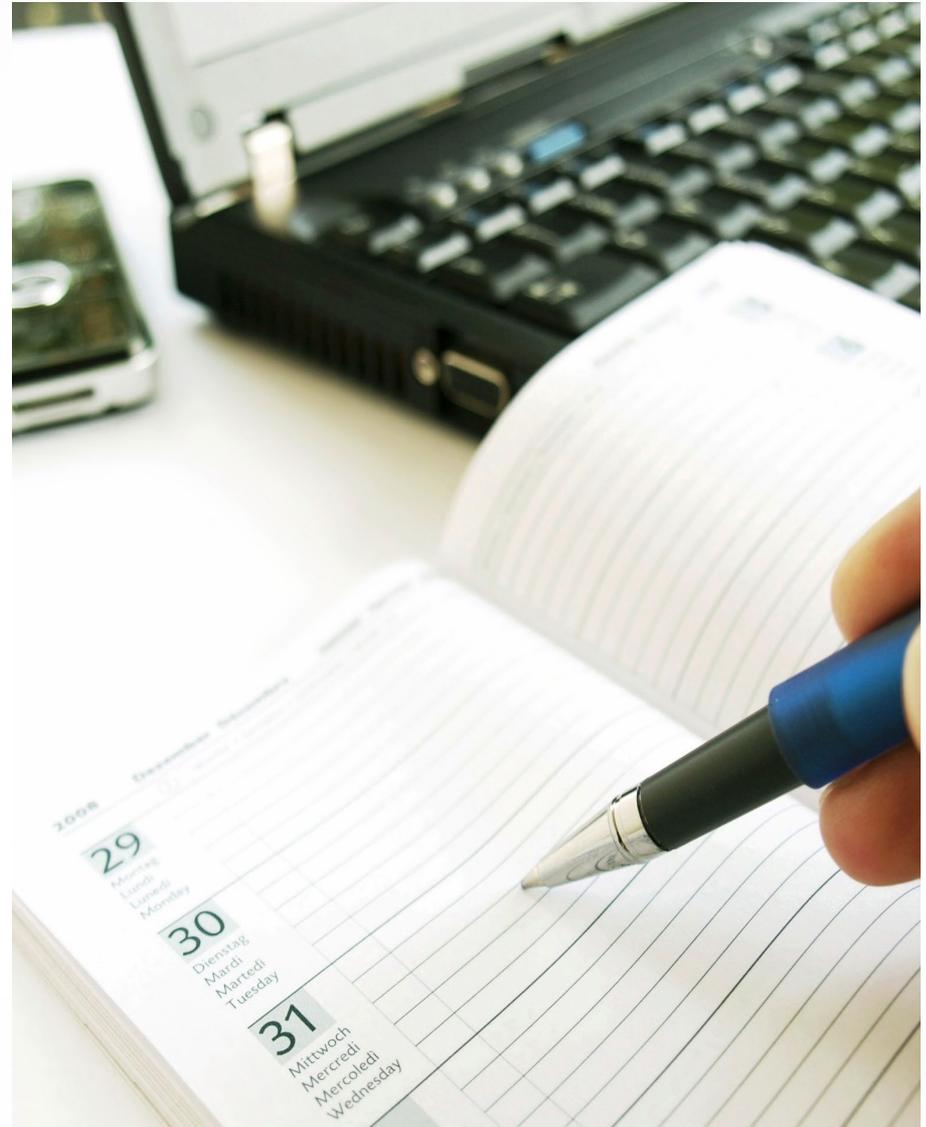
Executive Summary

The Aukahi Financial Management System (FMS) has been up and running for over 3 weeks now and, despite some challenges, users appear to be adapting to the new system and some significant process changes. IV&V remains concerned that the project may still face challenges meeting their post go-live support and system operation objectives and remains concerned that the single DOE procurement SME lacks the capacity to manage and provide timely completion of assigned tasks. As of the end of this reporting period, this SME had approximately 231 tickets assigned to them, many of which have gone unresolved for over 3 weeks. Further, the existing triage support team (3 DOE resources) that supported them will be rolling off the project on 8/27/21; this single resource will now take over triage responsibilities for the category of tickets that has by far the most Aukahi tickets.

IV&V continues to recommend DOE optimize their help desk (HD) processes and reporting to provide greater visibility for DOE executive leadership to effectively assess the impact the system is having on users. For example, HD reporting should provide better visibility into the number of tickets that have gone unresolved for greater than 10 and 20 days, as well as provide better indicators of specific bottlenecks. HD data currently suggests the Aukahi support team is losing ground on ticket resolution as the number of new unresolved tickets continues to outpace resolved tickets. Some users have stated they have lost confidence in submitting tickets to resolve their issues and the ability of the support infrastructures to support them. IV&V recommends DOE make efforts to acquire broad direct user feedback (potentially via surveys) to objectively assess actual user experience from the field rather than relying on anecdotal reports. Failure to acquire sufficient direct user feedback could lead to uninformed leadership decisions as managerial feedback may not align with individual user experiences. Further, early post go-live surveys could provide a baseline to compare to later surveys that could provide greater visibility into the effectiveness of improvement efforts.

IV&V also remains concerned that project management challenges and the planned departure of the DOE PM in October could impact the effective and timely completion of the remaining project activities. It remains unclear who will compensate for the loss of the DOE PM resource; these responsibilities may fall on the already constrained DOE SMEs and DOE IT leadership. Also, once the SI warranty period ends in mid-October 2021, the SI intends to replace their original project team with SI Managed Services team members who may lack subject matter expertise to fully support the system and meet DOE expectations for their system support objectives.

IV&V has opened a new issue with regard to DOE's lack of well-defined and/or documented service management processes. This issue has already hindered project development efforts and post go-live system support/maintenance quality and productivity.

IV&V also remains concerned with the lack of clarity around who will lead and be responsible for the quality of user support, DOE's ability to effectively manage Oracle quarterly releases, and whether the current security configurations mitigate fraud and fully support separation of duties and the principle of least permissions (PoLP).

Executive Summary (cont'd)

Jun	Jul	Aug	Category	IV&V Observations
H	L	L	Cost & Schedule Management	IV&V remains concerned that the project may still face challenges meeting their post go-live support and system operational objectives. Tasks that have been pushed out (in order to prioritize go-live activities and meet their aggressive schedule) could continue to limit project team capacity and could lead to delays in implementing important or time sensitive system enhancements and negatively impact DOE business objectives. The project has reported that some system reports and other features need to be completed soon in order to avoid impacts to business operations.

Executive Summary (cont'd)

Jun	Jul	Aug	Category	IV&V Observations
(M)	(M)	(M)	Human Resources Management	IV&V remains concerned that the single DOE procurement SME lacks the capacity to manage and complete tasks assigned. As of the end of this reporting period, this SME had approximately 231 tickets assigned to them, and they are the single DOE resource assigned to assessing and solutioning procurement procedural issues and managing solutions to procurement system issues. This SME is also providing individual training for area leaders (CABMs) to explain complex workarounds for one impactful procurement system issue. Though efforts are being made to support the procurement SME, IV&V continues to recommend additional resources be allocated to address the significant number of tickets assigned to this SME and to avoid delays in resolving user tickets, many of which have gone unresolved for over 3 weeks. Further, the existing support ticket triage team (3 DOE resources) will be rolling off the project on 8/27/21 and this single resource will now take over triage responsibilities for the category of tickets that has by far the most Aukahi tickets. Other DOE project SMEs have experienced some relief now that the system has gone live, though others continue to be constrained. IV&V continues to recommend DOE leadership make additional efforts to manage and solution overallocated project DOE resources as back-to-school activities and other DOE initiatives continue to weigh on DOE project and support team personnel, including an initiative to enhance their HR system to support tracking COVID vaccination and testing. Once the SI warranty period ends, mid-October 2021, the SI intends to replace their original project team with a new SI Managed Services team. IV&V remains concerned that the new SI team may lack subject matter expertise to fully support the system and could struggle to meet DOE expectations for completing remaining contractually required requirements and meeting their post go-live system support objectives.

Executive Summary (cont'd)

Jun	Jul	Aug	Category	IV&V Observations
(H)	(M)	(M)	Project Management & Organization	IV&V remains concerned that planning activities to manage post go-live activities may lack sufficient detail and may not effectively plan for DOE resource constraints. Neither the SI nor the DOE PMO have plans to provide a detailed, dependency-based, and fully resourced project plan for post go-live and M&O activities. Further, IV&V remains concerned that SI PM activities appear to have been scaled back, likely leaving the burden of project management falling on DOE SME's and their PMO. Project management of the remaining project activities could further be constrained once the Gartner PM contract ends in October 2021. It remains unclear who will compensate for the loss of the Gartner PM resource; these responsibilities may fall on the already constrained DOE SMEs and DOE IT leadership.
				IV&V continues to recommend DOE optimize their help desk (HD) processes and reporting to provide greater visibility for DOE executive leadership to effectively assess the impact the system is having on users. For example, HD reporting should provide better visibility into the number of tickets that have gone unresolved for greater than 10 and 20 days, as well as provide better indicators of specific bottlenecks. HD data currently suggests the Aukahi support team is losing ground on ticket resolution as the number of new unresolved tickets continues to outpace resolved tickets. Some users have stated they have lost confidence in submitting tickets to resolve their issues and the ability of the Aukahi support team to support them.
				The project is making efforts to enable tier 2 support personnel (UST's) to resolve tickets and curtail escalation to tier 3 and 4 support personnel. IV&V also recommends DOE consider standing up a separate Aukahi FMS help desk and/or identify an acting Aukahi Support Manager to manage the significant number of Aukahi tickets and drive them to completion so that these duties do not fall on DOE functional leads that already have capacity challenges.
				It remains unclear whether Knowledge Transfer (KT) efforts have fully prepared DOE IT staff to fully support system security and other needs without SI assistance. DOE has indicated the SI has yet to conduct at least 2 more KT sessions. IV&V recommends DOE survey Aukahi system support personnel to ascertain whether they are confident they will be able to effectively support the system once the existing SI team members roll off the project in October 2021.

Executive Summary (cont'd)

Jun	Jul	Aug	Category	IV&V Observations
H	M	M	Project Management & Organization (*cont'd*)	IV&V recommends DOE make efforts to acquire broad direct user feedback (potentially via surveys) to objectively assess actual user experience from the field rather than relying on anecdotal reports. DOE has indicated their reluctance to burden their users with surveys, however, surveys could be crafted in a way that limits the level of effort to complete a survey (e.g., a 30 second multiple choice survey which gathers only high-level user experience feedback). Failure to acquire direct user feedback could lead to uninformed leadership decisions as managerial feedback may not align with individual user experiences. Further, early post go-live surveys could provide a baseline to compare to later surveys that could provide greater visibility into the effectiveness of improvement efforts. IV&V has opened a new issue (*#16: Insufficient IT Service Management processes have hindered project productivity and could negatively impact post go-live productivity and lead to rework*) with regard to DOEs lack of well-defined and/or documented service management processes (e.g., enhancement, defect, help desk, incident, change, configuration, and release processes). This issue has already hindered Aukahi development efforts and post go-live system support/maintenance productivity and had required the project team to make significant last-minute efforts to establish support processes for Aukahi FMS (*see finding #11*). Standardized release management and governance processes, developed prior to project implementation, would have saved valuable time and likely would have avoided some vendor release management miscues. If progress is not made on establishing improved IT service management processes and better IT governance, future system support and maintenance efforts (as well as future IT initiatives) could be further hindered and could leave DOE unable to effectively and efficiently meet system support, maintenance, quality, and performance objectives. The DOE IT division (OITS) has begun making efforts to establish and document clear governance processes to standardize IT processes and provide consistent guidance for system development and system maintenance/support efforts going forward.

Executive Summary (cont'd)

Jun	Jul	Aug	Category	IV&V Observations
(M)	(M)	(M)	Quality Management	DOE had elected to remove SI access to the Production (prod) environment given that there were some indications that the SI may have bypassed configuration and release management processes in order to implement quick fixes to the system. DOE has indicated they will likely restore SI read-only access to prod so the SI can more effectively troubleshoot system issues. It remains unclear if current configuration management processes are sufficient to ensure effective tracking of configuration changes and provide a feasible way to track who made changes and when. For example, after one recent incident/bug, the project was unable to provide details of which configuration changes were made just before the error message appeared. Detailed tracking of configuration changes can provide important system debugging information and speed resolution of bugs that are hindering user productivity.

Executive Summary (cont'd)

Jun	Jul	Aug	Category	IV&V Observations
(M)	(M)	(M)	System Architecture & Design	DOE leadership continues to be concerned with the quality of Oracle support, as well as system limitations, and a cloud product (Oracle Financials) that has failed to fully meet their expectations. DOE has made extensive efforts to not only craft multiple work arounds but also to train their users on how to implement complicated work arounds to address OF limitations. It remains unclear whether the current security configurations mitigate fraud and fully support separation of duties and the principle of least permissions (PoLP). IV&V recommends the project preform an assessment to determine if existing configurations fully support industry standard security controls, determine gaps, and add corrective actions to the product backlog. IV&V remains concerned that implementation of one interface (Capital Improvement system interface) that has been delayed to post go-live could pose a significant level of effort for the project team due to lack of clear requirements. DOE leadership and IV&V remain concerned that existing interfaces to external systems may face reliability challenges given that many are reliant on flat files, manual processes, and antiquated technology. IV&V recommends DOE explore prioritizing upgrades of external systems and Aukahi interfaces, where possible, to modernize (e.g., utilize modern web services) and increase Aukahi system interface reliability going forward.

IV&V Findings and Recommendations

IV&V identified 11 findings (10 issues and 1 risks) for this reporting period and opened one new issue. The following chart breaks down the findings by type/category/priority.

Findings by Type

- Risk
- Issue

1, 9%
10, 91%

Open Risks/Issues by Category/Priority

Category	Value
SYSTEM ARCHITECTURE & DESIGN	2 (Medium), 1 (Low)
COST & SCHEDULE MANAGEMENT	1 (Medium)
QUALITY MANAGEMENT	1 (Low)
PROJECT ORGANIZATION & MANAGEMENT	1 (High), 1 (Medium), 2 (Low)
HUMAN RESOURCE MANAGEMENT	1 (High), 1 (Medium)

Legend:
- High
- Medium
- Low

Axis: 0, 0.5, 1, 1.5, 2
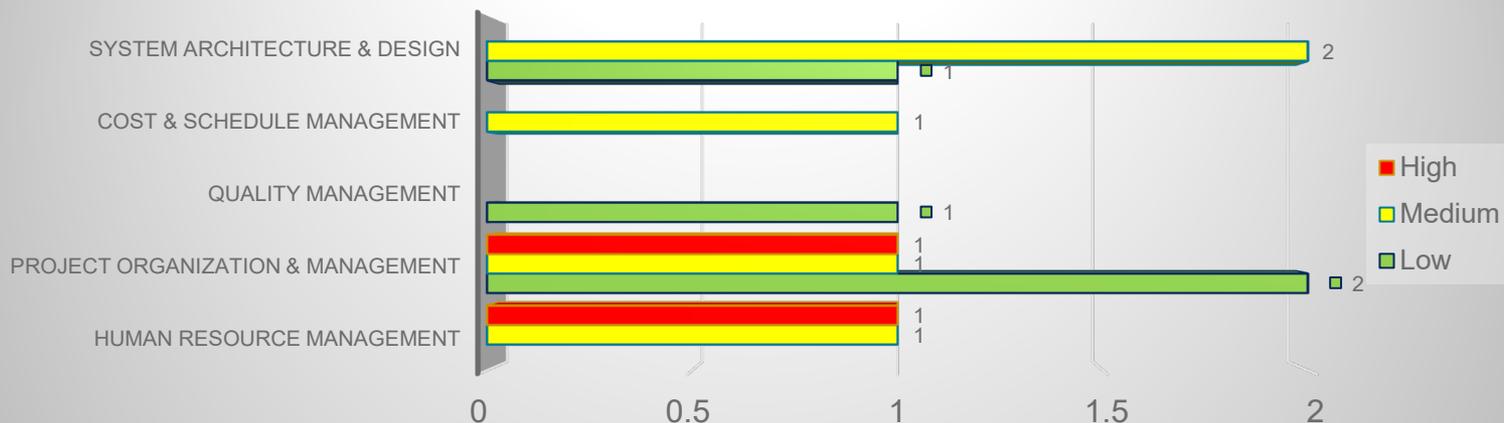
IV&V Findings and Recommendations (cont'd)

Summary of IV&V Open Risks/Issues Criticality

Category	Type	#	Finding Title	Criticality
Cost & Schedule Management	Issue	3	Adoption of an aggressive schedule could lead to poor system quality, user frustration, stretch DOE resources beyond their capacity, and bad press.	Medium
Human Resource Management	Issue ↑	2	Over reliance on a few skilled and overtaxed DOE project resources could lead to significant project disruption.	High
	Issue	5	SI staffing challenges could reduce project productivity and system design quality, and lead to schedule delays.	Medium
Project Organization & Management	Risk	8	Inefficient project management practices could lead to overall lack of productive project activities and ultimately schedule delays.	Low
	Issue	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
	Issue	15	Training challenges have led to some confusion, user frustration, and overwhelmed support personnel.	Medium
	Issue	16	<NEW> Insufficient IT Service Management processes have hindered project productivity and could negatively impact post go-live productivity and lead to rework.	Low
Quality Management	Issue	10	Inadequate release management processes could lead to significant rework and schedule delays.	Low
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.	Low

IV&V Findings and Recommendations (cont'd)

L Cost & Schedule Management

#	Key Findings	Criticality Rating
3	**Issue - 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. 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.	Medium

IV&V Findings and Recommendations (cont'd)

(L) Cost & Schedule Management (cont'd)

Recommendations	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
• DOE make extensive efforts to manage user expectations with regard to system limitations and work arounds.	In progress
• DOE executive leadership clearly communicate to project stakeholders how they should prioritize project activities appropriately.	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 *Risk #5*), 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.	High

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 Lifecyle (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 overtaxed resources.	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
• 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)

M Project Management & Organization

#	Key Findings	Criticality Rating
15	**<NEW> Issue - Training challenges have led to some confusion, user frustration, and overwhelmed support personnel**: DOE leadership, including the Superintendent, has indicated that the quality, effectiveness, and comprehensiveness of training is a top priority. However, SI implementation of training have not met DOE expectations as most SI trainers were brought in late into the project and did not have comprehensive knowledge of the system and refused to crosswalk existing legacy FMS functionality to new Aukahi functionality. Further, some SI instructors simply read though the slides without offering much context. Attendees questioned the value of these sessions over simply reading slides on their own. Post go-live, users complained that training should have included mappings between legacy FMS and Aukahi. Post go-live feedback has indicated that some users, despite attending training, remain unable to do their work without assistance. This has led to an elevated number of support tickets for basic system tasks. The bulk of support tickets appear to be related to purchasing. For the most part, DOE only has a single DOE SME responsible for responding to tickets related to purchasing. The project has also identified a significant purchase order related bug. Purchase order (PO) functionality is the most used feature in Aukahi FMS, therefore, any problems with PO's or user confusion over PO functionality will affect the largest number of users. Training challenges appear to have led to user frustration, users unable to do their job, an elevated number of user support tickets, and reduced user buy in. Because DOE currently has a single DOE SME responsible for responding to tickets related to purchasing, ticket response and resolution times will likely be delayed.	Medium

IV&V Findings and Recommendations (cont'd)

M 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.	Low

IV&V Findings and Recommendations (cont'd)

M Project Management & Organization (cont'd)

#	Key Findings	Criticality Rating
11	**Issue** - **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)

M Project Management & Organization (cont'd)

#	Key Findings	Criticality Rating
16	**Risk** - **Insufficient IT Service Management processes have hindered project productivity and could negatively impact post go-live productivity and lead to rework.**: DOE currently lacks well-defined, well-integrated, and/or documented enhancement, defect, help desk, incident, change, configuration, and release management processes. The project currently intends to utilize DOE's existing Change Control Board (CCB) but it remains unclear whether current change management processes employed by the CCB will assure effective change management for Aukahi. The DOE IT division (OITS) has begun making efforts to establish and document clear governance processes to standardize IT processes and provide consistent guidance for system development and system maintenance/support efforts going forward. The lack of established well-defined, well-integrated, and documented service management processes has hindered project development and post go-live system support/maintenance productivity. For example, lack of well-defined and documented support processes required the project team to make significant last-minute efforts to establish support processes for Aukahi FMS (see finding #11: Insufficient knowledge transfer (KT) and M&O planning prior to go-live has led to diminished quality of post go-live support). Further, in response to multiple vendor release management miscues during the early Aukahi development stages, the project invested in additional effort to create clear release management processes mid-stream during development. Standardized release management and governance processes, developed prior to project implementation, would have saved valuable time and likely would have avoided the vendor release management miscues. If progress is not made on establishing improved IT service management processes and better IT governance, future system support and maintenance efforts could be further hindered and could leave DOE unable to effectively and efficiently meet system support, maintenance, quality, and performance objectives.	Low

IV&V Findings and Recommendations (cont'd)

M Project Management & Organization (cont'd)

Recommendations	Progress
• DOE clarify the plan for training for newly onboarded system users.	In progress
• Consider establishing a policy that requires new users complete a training regime prior to gaining access to the system in order to assure system data integrity.	Not started
• DOE work quickly to allocate additional resources to support the single DOE resource responsible for responding to tickets related to purchasing.	In progress
• Train Tier 2 help desk staff to increase their ticket resolution rate and lessen the burden on overtaxed Tier 3 and 4 resources. For example, Tier 2 could be better trained to understand available training resources, guides, and other self service support resources so they can effectively direct users to find the training/information they need.	In progress
• DOE revise their support plan to effectively address instances where SMEs are overwhelmed with tickets.	In progress
• Optimize help desk reporting in order to better track and improve performance to ensure their processes customer support are optimal.	In progress
• Survey users to obtain metrics for user satisfaction as well as identification of help desk and support process improvement opportunities.	Not started
• Consider standing up a separate Aukahi FMS help desk and/or identifying an acting Aukahi Support Manager to manage the significant number of Aukahi tickets and drive them to completion so that these duties do not fall on DOE functional leads that already have capacity challenges.	In progress
• DOE consider performing an assessment of the current state of relevant IT Service Management and governance processes based on industry standards (e.g., ITIL) to identify gaps and then prioritize implementation and documentation of well-defined and robust processes.	In progress
• DOE consider establishing a separate Aukahi CCB to meet the immediate change management needs of the Aukahi FMS.	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").	Low

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
• Institute rigorous checklists and code freeze communications to assure quality release management processes.	In progress

IV&V Findings and Recommendations (cont'd)

M System Architecture & Design

#	Key Findings	Criticality Rating
7	**Issue – 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.	Low

IV&V Findings and Recommendations (cont'd)

M System Architecture & Design (cont'd)

Recommendations	Progress
• Establish clear controls with regard to fraud, segregation of duties, and least privilege permissions.	In progress
• DOE leadership escalate to Oracle executive leadership and insist efforts be made to comprehensively repair an obvious bug that likely affects a broad customer base, not just DOE.	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
H	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.
M	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.
L	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
2	DOE capacity - overreliance	Over reliance on a few skilled and overtaxed DOE project resources has led 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 (see SOW, page 3).	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 related risk), 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.	• Executive leadership regularly monitor the workload and job satisfaction of these key individuals as well as assist with workload management, clarification of priorities, and establishment of a sustainable pace. • Temporarily re-allocate operational/managerial responsibilities from key resources until project responsibilities are reduced. • Consider temporary staff augmentation options to both augment the existing project team and augment the operations staff to offload operational responsibilities from key resources. • Prepare contingency plans in the event that the DOE project team can no longer sustain project and operational activities at the expected pace or if key resoures are lost. • Prepare a resource management plan that addresses current and projected project resource constraints and clearly identifies additional resource needs, including post go-live needs. • Request that the SI address issues with their project team that place an unnecessary burden on overtaxed DOE SMEs.	08/15/21 - IV&V remains concerned that the single DOE procurement SME lacks the capacity to manage and complete tasks assigned. As of the end of this reporting period, this SME had approximately 231 tickets assigned to them and they are the single DOE resource assigned to assessing and solutioning procurement procedural issues and managing solutions to procurement system issues. This SME is also providing individual CABM training to explain complex workarounds for one impactful procurement system limitation. Though efforts are being made to support the procurement SME, IV&V continues to recommend additional resources be allocated to address the significant number of tickets assigned to this SME and to avoid delays in resolving user tickets, many of which have gone unresolved for 3-4 weeks. Other DOE project SMEs have experienced some relief now that the system has gone live, though others continue to be constrained. IV&V continues to recommend DOE leadership make additional efforts to manage and solution overallocated project DOE resources as back-to-school activities and other DOE initiatives continue to weigh on DOE project and support team personnel, including an initiative to enhance their HR system to support tracking COVID vaccination and testing. 07/15/21 - DOE has indicated their intention to extend the contract for the Gartner PM project resources beyond the original 7/23/2021 completion date to sometime in October 2021. While this should help with management of the significant number of post go-live tasks and planning activities, the division of responsibilities between the SI PM and the DOE (Gartner) PM remains unclear. Effective management of remaining tasks could be critical to ensure DOE SME capacity is managed well and preventing them from becoming overwhelmed with support and other tasks. There are early indications that the single DOE purchasing SME could quickly become overwhelmed with trouble tickets and it appears there is no plan in place to manage the potential workload. It appears the project is accepting the risk that tickets assigned to this resource could go unanswered for extended periods of time and lead to significant user frustration. The longer users wait for assistance with submitted tickets, the more teachers could be hindered from preparing for the new school year and lead to further delays in paying DOE vendors. Failure to address resource constraints could lead to further post go-live project disruption. 06/15/21 - IV&V remains concerned that key DOE project participants continue to operate at their maximum capacity and that the flurry of activities, many of which have been pushed out closer to go-live, could result in further sacrifice of quality or schedule slippage. There is currently no objective way to determine SMEs remaining workload and whether they will be able to complete assigned tasks prior to go-live. The DOE PM will likely be out indefinitely starting sometime close to 7/11/2021, therefore Gartner has	Human Resource Management	Issue	High	Open			6/30/2020
3	Accelerated Schedule	Adoption of an aggressive schedule has led 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. The SI has stated that they had scaled back early analysis efforts in order to meet DOE expectations for an accelerated schedule. The SI also stated that initial analysis would not be needed because the project would be adopting a preconfigured Oracle SAAS template for system implementation and that DOE users will be required to change their existing processes and adopt processes supported by the platform template. Some SMEs have reported early work session been unproductive due to the lack of sufficient early analysis efforts.	The accelerated schedule could lead to: • Back 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. This risk could be exacerbated by other IV&V identified risks which could lead to a need to extend the project schedule. If these potential risks are realized, negative user feedback could lead to inflammatory media coverage which could negatively impact legislative, board of education, and public support. Some SMEs have reported early work sessions have been unproductive due to the lack of sufficient early analysis efforts. This risk could be exacerbated by other IV&V identified risk which could lead to a need to extend the project	• Take steps to assure sufficient OCM planning and activities are performed to inform users of work arounds, know bugs, and process changes as a result of their aggressive schedule. • 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). • Leadership take steps to closely monitor project team capacity and assure resources are not overallocated. • Implement a plan for broad validation of system functionality with clear channels of communication for user feedback to assure all users are able to perform their duties. • Prepare and implement a public relations plan to avoid inflammatory media coverage which could negatively impact legislative, board of education, and public support. • Consider employing the role of a Scrum Master whose prime directive is to remove roadblocks to productivity. • SI clearly and often communicate specific DOE activity prioritization and dependencies and perform risk mitigation planning to avoid schedule slippage. • Clarify DOE PM vs. SI PM roles on the project with regard to monitoring critical path activities that appear to be falling behind as well as other risk mitigation activities. • DOE explore providing the project with a dedicated report writer that could be trained on the new reporting tools and offer long-term (post go-live) report writing support to system stakeholders. • DOE make extensive efforts to manage user expectations with regard to system limitations and work arounds.	08/15/21 - IV&V remains concerned that the project may still face challenges meeting their post go-live support and system operation objectives. Tasks that have been pushed out to prioritize go-live activities could continue limit project team capacity and could lead to delays in implementing important or time sensitive system enhancements that could negatively impact DOE business objectives. The project has reported that some system reports and other features need to be completed soon in order to avoid impacts to business operations. 07/15/21 - The project was able to achieve their July 19 go-live date. While go-live is no longer at risk, the project may still face challenges meeting their post go-live support and system operation objectives. Many tasks have been pushed out in order to prioritize go-live activities. Also, some SME's capacity to support ticket resolution could be constrained as they work to resolve system and new procedural issues. Further, delays in planning and implementing their post go-live support infrastructure could still lead to user frustration and bad press. This issue could be compounded by the flood of back to school activities (that often trigger up to 1000 tickets per day during this time) that will likely tax support personnel and test the patience of users when they attempt to use the system for the first time to perform back to school transactions. 06/15/21 - The project continues to accept risks associated with the aggressive schedule, including multiple readiness risks, in order to quickly move off their failing legacy FMS system. IV&V, DOE PMO, and DOE support personnel remain concerned that few details have been provided as to how user support will be provided post go-live and whether current efforts to develop and implement a comprehensive support plan can be effectively completed prior to go-live. Though the technical go-live production build appears to be progressing well, IV&V is concerned that a comprehensive operational readiness checklist has yet to be developed, managed, and tracked. This checklist can help bring order to the flurry of activities as go-live approaches and can help to assure important tasks are not overlooked. IV&V and DOE leadership have some uncertainty around the effectiveness of system testing as test script development may have been rushed, which could elevate the number of help desk tickets in the weeks following go-live. 05/15/2021 - The project continues to accept risks associated with the aggressive schedule including multiple readiness risks including: 1) Not all planned system features will be available at go-live. 2) Some functionality has yet to be fully vetted, implemented, and fully tested. 3) Users will be required to perform multiple live system workarounds until functionality can be	Cost & Schedule Management	Issue	Medium	Open			6/30/2020

Id	Short Desc	Title / Summary	Finding Description	Analysis and Significance	Recommendation	Updates	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date
5	SI Staffing Challenges	SI staffing challenges have reduced project productivity and system design quality, and led 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 Lifecyle (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 rework once a better design or solution is discovered.	• Work closely with the SI in their staffing efforts and quickly, but thoroughly, vet additions to the SI project team. • Request the SI make efforts to address time zone challenges with the off-shore technical team. • 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. • 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 SME's.	08/15/21 - Once the SI warranty period ends, mid-October 2021, the SI will replace their project team with a new SI Managed Services team. IV&V remains concerned that the new SI team may lack subject matter expertise to fully support the system and could struggle to meet DOE expectations for completing remaining contractually required requirements and meeting their post go-live system support objectives. DOE has reported that SI response times appear to be slowed now that the system has gone live, and expressed concern that some SI resources will be rolling off the project (prior to the end of the 90-warranty period) and are being replaced with SI resources that may lack the subject matter expertise of their predecessors.

- need governance over allocation and spending of MO budget - current ccb may not be optimal to accomplish goals; establish good processes to ensure MO budget is well spent and to keep SI accountable - 250k, 1k hrs or so
- CR may have broke trust between Azure and O
  - happened during India hrs, nothing in log
- may not have SN module for config mgmt
- bug - once trust is broken, quick fix doesn't work, have to exchange keys, need to engage Azure folks
- took away access from CR for prod

07/15/21 - The team came together in the remaining weeks prior to go live and key DOE SME's demonstrated the ability to mitigate many risks of the SI's lack of skilled expert development and PM resources. IV&V observed DOE SME's stepping in to catch important tasks or problematic issues that could have been missed. It remains unclear if the existing SI resources will be able to quickly solution system issues post go-live and users loss of productivity as they wait for the SI to solution and implement important system fixes. These delays could lead to reduced user buy-in and/or negative press.

06/15/21 - DOE leadership and IV&V remain concerned that the SI has been unable to replace unproductive SI resources which have put an additional burden on key overtaxed DOE SMEs as they, at times, need to compensate for some lack of productivity or lack of task management skills. However, DOE SME have reported that the quality of SI work is improving incrementally, for example, the quality of SI security configurations has improved. Still, IV&V and DOE SMEs remain concerned that the lack of quality controls around SI configurations could still lead to an increase in the number of bugs post go-live. | Human Resource Management | Issue | Medium | Open | | | 6/30/2020 |
| 7 | Oracle Platform limitations | Oracle Financials environment constraints has lead to schedule delays and left the project unable to meet some development, testing, and training objectives. | The project was planned for a total of 4 environments, currently slated for development, testing, training, and production. Oracle Financial 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. | • Plan ahead to procure or provision additional environments as necessary that would assure accelerated development cycles as well as standby environments that will speed development in the event a critical environment has become corrupt (e.g., mistakes are made to irreversible fields). • 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). • DOE leadership escalate to Oracle executive leadership and insist efforts be made to comprehensively repair an obvious bug that likely affects a broad customer base, not just DOE. | 08/15/21 - DOE leadership continues to be concerned with quality of Oracle support as well as system limitations and a cloud product (Oracle Financials) that has failed to meet their expectations. One required workaround has triggered over 200 tickets and led to significant user frustration and reduced productivity, and has required the DOE procurement SME to spend time training users on extensive and complicated work arounds so that they can perform their duties. DOE has made extensive efforts to not only craft multiple work arounds but also to train their user base on how to implement complicated work arounds to address OF limitation.

-OF has failed to meet DOE expectations related to quality as well as other limitations of the platform - required work arounds

PMO
- not a bug - confusion over O process is the problem - 2 way match PO / Invoice, now 3 way PO/Inv/r/eceipt
- receipt items may not match PO - eg tax has change with new fixcal year - overall amount changed - 5 diff scenarios - because we moved to 3way - from paper to digital receipt - over receipt, cancelling receipts - rec doesn't match legacy PO - items don't match - tax changed
- receipts - encumbered from previous yr funds
- because of how D does things
- 502 errors, bad gateway - due to O outage - not seeing these tickets anymore
  - was no O outage-
- O will fix time zone issue for whatever D reports - 2-3 will be resolved in Nov.

07/15/21 - DOE FMS support staff have reported the previously reported time zone bug has mostly gone unnoticed by most users, however, it remains unclear whether users are unknowingly utilizing inaccurate data for reports and other queries. The project is still contending with required work arounds due to Oracle limitations that may have created confusion for some users and reduced user buy-in. DOE leadership has indicated their frustration with unresponsive Oracle leadership with regard to obvious platform bugs that have been characterized by Oracle as enhancement requests that have no clear implementation date.

'06/15/21 - Oracle has stated that the previously reported time zone bug will be treated as an enhancement and not a bug. Oracle has agreed to, at no cost, repair only one instance of the time zone bug (Order Date for Purchase Orders) in their November 2021 quarterly release. Until then, users will continue to contend with these UTC dates (displayed in UTC time instead of HST) in these impactful areas. For example, | System Architecture & Design | Issue | Medium | Open | | | 6/30/2020 |

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.	• 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. • 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.	08/15/21 - IV&V remains concerned that planning efforts for post go-live activities may lack sufficient detail and may not effectively plan for DOE resource constraints. Neither the SI nor the DOE PMO have plans to provide a detailed, dependency-based, and fully resourced project plan for post go-live and M&O activities. Further, IV&V remains concerned that SI PM activities appear to have been scaled back, likely leaving the burden of project management falling on DOE SME's and their PMO, and with the lack of clarity around the division of responsibilities between the SI and DOE PM's. Project management of the remaining project activities could further be constrained once the Gartner PM contract ends in October 2021. It remains unclear who will compensate for the loss of the Gartner PM resource, these responsibilities may fall on the already constrained DOE SMEs or IT leadership. 07/15/21 - DOE leadership has raised concerns (and IV&V agrees) that the backlog of post go-live tasks are not being efficiently and/or effectively planned. It remains unclear whether the SI will fully track project tasks in a fully resourced, dependency-based project plan and track the critical path. Given that some SME's continue to be preoccupied with support tickets and resolving system issues, it remains unclear when they will have time to complete planned post go-live tasks. Therefore, resource management and critical paths could be a critical component of this planning effort. Further, it appears the SI PM activities have been significantly scaled back, likely leaving the burden of project management falling on DOE SME's and their PMO. DOE has indicated they intend to extend the Gartner PMO contract out to October 2021 which should help to mitigate some of this risk. However, there remains some ambiguity around the division of project PM responsibilities between the DOE PMO and the SI PM team. IV&V recommends DOE work quickly to clarify the division of responsibility between the two. 06/15/21 - IV&V remains concerned that some of the SI PM challenges the project continues to experience could negatively impact the management of the potentially extensive number of go-live and post go-live support activities, as well as the management of activities that have been pushed out to just before go-live. DOE has reported that SI changes to the post go-live production build checklist have been poorly communicated and has required DOE SMEs to make additional efforts to manage project communications. IV&V and the DOE PMO remains concerned that the go-live checklist critical path is being manually tracked by the SI, which could, if not managed well, could increase the risk of an unsuccessful go-live. 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	Project Organization & Management	Risk	Low	Open			6/30/2020
9	Security model complex	**User provisioning and security model complexities has led 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 that 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 other Oracle Financials cloud security experts could lead a less than optimal security model which could lead to unmet user expectations as well as project disruption in the event that a significant change to the model is needed as go-live approaches.	• Make consistent OCM efforts to manage expectations based on potential limitations of the security model as they relate to business objectives. • DOE establish clear controls with regard to segregation of duties and least privilege permissions.	08/15/21 - IV&V remains concerned that DOE resources may not be fully prepared to take over security configurations. Also, it remains unclear whether the current security configurations mitigate fraud and fully support separation of duties and the principle of least permissions (PoLP). Recommend the project preform an assessment to validate these things. BF Sheryl seems confident - wiped out MDB access, tried to replicate from another, better but not whole - immature config mgmt - designed sec with this intention but no review - curently being auditted, may no go deep into system PMO - MariaDB access took some time - CRT not responsive? Or didn't know how? - Dean Horiuchi question - iniciate a review of the system to determine - security model is complex to meet D needs - all special user req are purged at end of year, they have an expire date on request (can config, delegation can't go from more than 2-3 weeks?) - trying to automate removal of spec user req permissions 07/15/21 - KT activities continue to be delayed due to prioritization of go-live and current user support activities. The bulk of go-live tickets related to security were special user requests that give users additional permissions beyond their existing auto-provisioned roles. It remains unclear whether the current security configurations mitigate fraud and fully support separation of duties and the principle of least permissions (PoLP). 06/15/21 - As DOE SMEs knowledge of system security grows, they are better able to assist the (primarily) single SI security resource and mitigate some of this risk. DOE SMEs continue to report, and IV&V has observed, that the SI security resource continues to struggle with effective communications, which has led to DOE SME frustration and could lead to inaccurate security configurations, which could lead to multiple user security related issues at go-live as well as increase the potential for fraud. DOE is concerned that the SI has thus far not been able to produce some requested security related reports (e.g., lists of users that have been manually provisioned). It remains unclear whether the current security configurations fully support separation of duties and the principle of lease permissions (PoLP).	System Architecture & Design	Issue	Medium	Open			7/29/2020

Id	Short Desc	Title / Summary	Finding Description	Analysis and Significance	Recommendation	Updates	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date
10	Release management	**Inadequate release management processes have led 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").	• Implement comprehensive release and configuration management processes and quality controls. • Institute rigorous checklists and code freeze communications to assure quality release management processes. • Clearly define release and configuration management processes for DOE resources to manage releases post go-live. • DOE consider implementing configuration management tools that would assure more efficient configuration management.	08/15/21 - DOE had elected to remove SI access to the Production (prod) environment given that there were some indications that the SI may have bypassed configuration and release management processes in order to implement quick fixes to the system. DOE has indicated they will likely restore SI read-only access to prod. It remains unclear if current configuration management processes are sufficient to ensure effective configuration management and provide a feasible way for the project to track configuration changes. For example, users have recently reported incidents/bugs where users were getting errors saying someone has modified their record(s). The project was unable to provide details of what configurations were made just before the errors began appearing. Detailed tracking of configuration changes can provide important system debugging information and speed resolution of bugs that are hindering user productivity.

- D has taken steps to correct - limited CR access to RO on prod - have RW in other envs
- new changes - major fixes - all get ticketed in SN - mostly emergency changes at this point
- no good config mgmt tool to track

07/15/21 - SI resources appear to have implemented more discipline release management procedures prior to go-live such that go-live was not impacted by violations of this process. DOE has stated their intention to hire a release manager to manage and support Oracle quarterly releases which could help to mitigate this risk for post go-live Oracle quarterly releases that will now need to be supported by DOE personnel. The next quarterly release is slated for 8/6. This release presents an opportunity for DOE to assess their ability to manage these releases with existing DOE resources given that SI resources have managed these releases in the past. The SI has reported the existing SI project team resources will be available to assist as needed.

06/15/21 - The project is now executing the fourth and final (production) build of the system from the ground up. With the multiple build iterations, the SI appears to be increasing the quality of their configuration efforts. While this may reduce the probability that this issue will again negatively impact the project, IV&V will maintain the "high" priority risk rating as the impact of this issue at go-live could be potentially be significant. Further, DOE SMEs have reported a limited number of instances where changes have been made to the system that were not properly tracked. A number of these instances had hindered DOE testing efforts, though, the SI was able to quickly apply fixes to allow testers to move forward.

05/15/2021 - Now that the project team has performed multiple environment builds (SIT, UAT, and RST), | Quality Management | Issue | Low | Open | | | 7/31/2020 |
| 11 | KT & Long term support | **Insufficient knowledge transfer (KT) and M&O planning prior to go-live has led to diminished quality of post-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 support the new OF system post go-live 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 post go-live support. Plan may include augmenting their IT staff with an additional resource to, at minimum, to manage Oracle quarterly updates. • 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 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. • Optimize help desk reporting in order to better track and improve performance to ensure their processes customer support are optimal. • Survey users to obtain metrics for user satisfaction as well as identification of help desk and support process improvement opportunities. • Consider standing up a separate Aukahi FMS help desk and/or identifying an acting Aukahi Support Manager to manage the significant number of Aukahi tickets and drive them to completion so that these duties do not fall on DOE functional leads that already have capacity challenges. | 08/15/21 - IV&V continues to recommend DOE optimize their help desk (HD) processes and improve HD reporting in order to provide greater visibility for DOE executive leadership so they can make efforts to improve HD processes and better manage their resources in order to optimize HD performance to ensure customer needs are effectively being met. For example, HD reporting should provide better visibility into the number of tickets that have gone unresolved for greater than 10 and 20 days as well as provide better indicators of specific bottlenecks. HD data currently suggests Aukahi support is losing ground on ticket resolution as the number of new unresolved tickets continues to outpace resolved tickets. The bulk of Aukahi support tickets are currently assigned to the single procurement functional lead (approximately 230 tickets) which is already operating at their maximum capacity. The existing triage team (3 DOE resources) will be rolling off the project on 8/27/21 and this single resource will now take over triage responsibilities for all procurement tickets. IV&V recommends the project provide this functional lead with planning assistance to manage the extensive number of tasks and support tickets he has been assigned. The project is making efforts to enable tier 2 support personnel (UST's) to resolve tickets and curtail escalation to tier 3 and 4 support personnel. IV&V also recommends DOE consider standing up a separate Aukahi FMS help desk and/or identifying an acting Aukahi Support Manager to manage the significant number of Aukahi tickets and drive them to completion so that these duties do not fall on DOE functional leads that already have capacity challenges. It remains unclear whether KT efforts have fully prepared DOE IT staff to fully support system security and other needs without SI assistance. DOE has indicated the SI has yet to conduct at least 2 more KT sessions. IV&V recommends DOE survey system support personnel to ascertain whether they are confident they will be able to effectively support the system once the existing SI team member roll off the project October 2021.

07/15/21 - With the successful go-live, IV&V has modified the title of this issue to include only 'diminished quality of post-live support' as the impact. However, aspects of this risk have been realized at go-live as there are indications that insufficient post go-live support planning has diminished the quality of user support. DOE has reported that support resources have been brought on late which has limited the support planning efforts as well as support personnel (UST) training. At go-live, there was some confusion with support processes and some DOE SME's did not have the appropriate level of support and were overwhelmed with support requests and were unable to attend to tickets because they were also the single resource allocated to lead the resolution of unexpected purchasing-related system issues. There also appears to be some confusion over who would be responsible for solutioning when an excessive number of tickets are assigned to individuals who lack the capacity to resolve tickets in a timely manner. Therefore, IV&V has escalted this risk to an issue. IV&V recommends DOE optimize their help desk reporting in order | Project Organization & Management | Issue | 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
13	External Systems	**Integration with external system (potentially with antiquated technology) 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.	• Consider petitioning the State leadership for additional funding to resolve technical debt that could be putting the project and the State at risk of potentially embarrassing and costly security breaches and/or critical system failures. • Consider prioritizing patching and system upgrades to stabilize boundary systems. • Define clear procedures for updating and testing Aukahi that are thoroughly vetted when notification is received of a system Aukahi interfaces with is modified or upgraded. • Consider implementing early, basic proof of concept interfacing with older systems to assure integration is feasible and to vet optimal interface solutions. • Prioritize upgrading external systems and Aukahi interfaces where available to modernize (e.g., utilize modern web services) and increase reliability.	08/15/21 - IV&V remains concerned that implementation of one interface (Capital Improvement system interface) that has been delayed to post go-live could pose a significant level of effort for the project team due to lack of clear requirements. DOE leadership and IV&V remain concerned that existing interfaces to external systems may face reliability challenges given that many are reliant on flat files and antiquated technology. IV&V recommends DOE explore prioritizing upgrades of external systems and Aukahi interfaces, where available, to modernize (e.g., utilize modern web services) and increase reliability. - name INT12 - INT12 details - CIP - whoever did work before, only had access to legacy - acct events table doesn't existing in O - may not need that data anyway - they want what they had before - recently Adel skipped a step, ended up missing some data because sequencce was off - architecture may be fragile - flat files, timing is important, if jobs start late then breaks things, not looking for events, presence of a file to trigger 07/15/21 - Despite some challenges, project efforts to address antiquated systems risks appear to have been mostly successful, however, some interfaces had to be delayed until post go-live because of unexpected complexity and other potential external stakeholder challenges. Though the remaining interfaces were not critical for go-live, the level of effort for one interface has the potential to be significant. 06/15/21 - Most external interfaces have been completed and fully tested, though some changes have yet to be applied and tested. IV&V and DOE SMEs remain concerned that some interfaces may not have been fully tested and validated which could lead to project disruption just prior to or just after go-live. 05/15/2021 - The project has made progress in resolving unexpected complications with some external interfaces which should be implemented prior to go-live. However, due to the tight project timeline and potential complications with the implementation of one external system interface, the project has elected to delay implementation to post go-live as the business unit will not be impacted as long as the interface is implemented soon after go-live. However, the project is currently unable to anticipate when they will be able to complete this interface.	System Architecture & Design	Issue	Low	Open		7/15/2021	9/15/2020
15	Training challenges	**Training challenges have led to some confusion, user frustration, and overwhelmed support personnel.**	DOE leadership, including the Superintendent, has indicated that the quality, effectiveness, and comprehensiveness of training is a top priority. However, SI implementation of training have not met DOE expectations as most SI trainers were brought in late into the project and did not have comprehensive knowledge of existing legacy FMS functionality to new Aukahi functionality. Further, some SI instructors simply read through the slides offering little to no additional details or context. Attendees questioned the value of these sessions over simply reading slides on their own. Post go-live, users complained that training should have included mappings between legacy FMS and Aukahi. Post go-live feedback has indicated that some users, despite attending training, remain unable to do their work without assistance. This has contributed to an elevated number of support tickets for basic system tasks. The bulk of support tickets appear to be related to purchasing. For the most part, DOE only has a single DOE SME responsible for responding to tickets related to purchasing.	Training challenges appear to have contributed to some user frustration, users unable to do their job, and elevated number of user support tickets, and reduced user buy in. This risk has been further exacerbate given that a single DOE SME is responsible for responding to tickets related to purchasing, therefore, ticket response and resolution times have been significantly delayed.	• DOE clarify the plan for training for newly onboarded system users. • Consider establishing a policy that requires new users complete a training regime prior to gaining access to the system in order to assure system data integrity. • DOE work quickly to allocate additional resources to support the single DOE SME responsible for responding to tickets related to purchasing. • Train tier 2 help desk staff to available training resources, guides, and other support resources so they can effectively direct users to the training/information they need. • OCM prepare additional communications to users for the most commonly reported trouble tickets. • DOE revise their support plan to effectively address instances where SMEs are overwhelmed with tickets. • DOE collect broad user feedback (e.g, via simple, short surveys) in order to assess real user experience, adoption, and the effectiveness of training.	08/15/21 - IV&V remains concerned with the effectiveness of training and that plans for training newly onboarded system users may be inadequate and may leave users dependent on peer assistance or may leave them ill-prepared for use of the system. This could lead to a lack of productivity, mistakes, bad data, excessive support tickets, and morale issues. DOE leadership efforts to on-board a new training manager could be delayed which could further exacerbate this issue. Communication to users about what to do when they have basic "how to" questions remains unclear. Users may be reluctant to submit a trouble ticket for simple questions that are not system problems. IV&V recommends the project clearly communicate all user support options and that DOE leadership revisit potentially more effective strategies (e.g., Super-SME initiatives, Aukahi user groups, and periodic townhall Webex Q&A sessions), for providing support to users that are more efficient than submitting trouble tickets. Common user behavior is to call around (often to multiple colleagues or managers) to find someone who can help them, which can be inefficient and end up impacting overall resource capacity. IV&V recommends DOE make efforts acquire broad direct user feedback (potentially via survey's) to assess actual user experience from the field rather than relying on anecdotal data. DOE has indicated their reluctance to burden their users with surveys, however, survey's could be crafted in a way that limits the level of effort to complete a survey (e.g., a 30 second multiple choice survey which gathers only high-level user experience feedback). Failure to acquire any direct user feedback could lead to uninformed leadership decisions as top level feedback may not align with lower level user experiences. Further, early post go-live surveys could provide a baseline to compare to later surveys that could provide greater visibility into the effectiveness of improvement efforts.	Project Organization & Management	Issue	Medium	Open			7/15/2021
16	Insufficient IT Service Management processes	**Insufficient IT Service Management processes have hindered project productivity and could negatively impact post go-live productivity and lead to rework.**	DOE currently lacks well-defined, well-integrated, and/or documented enhancement, defect, help desk, incident, change, configuration, and release management processes. The project currently intends to utilize DOE's existing Change Control Board (CCB) but it remains unclear whether current change and management processes employed by the CCB will assure effective change management for Aukahi. The DOE IT division (OITS) has begun making efforts to establish and document clear governance processes to standardize IT processes and provide consistent guidance for system development and system maintenance/support efforts going forward.	The lack of established well-defined, well-integrated, and documented service management processes has hindered project development and post go-live system support/maintenance productivity. For example, lack of well-defined and documented support processes required the project team to make significant last-minute efforts to establish support processes for Aukahi FMS (see finding #11: *Insufficient knowledge transfer (KT) and M&O planning prior to go-live has lead to diminished quality of post go-live support*). Further, in response to multiple vendor release management miscues during the early Aukahi development stages, the project invested in additional effort to create clear release management processes mid-stream during development. Standardized release management and governance processes, developed prior to project implementation, would have saved valuable time and likely would have avoided the vendor release management miscues. If progress is not made on establishing improved IT service management processes and better IT governance, future system support and maintenance efforts could be further hindered and could leave DOE unable to effectively and efficiently meet system support, maintenance, quality, and performance objectives.	• DOE consider performing an assessment of the current state of relevant IT Service Management and governance processes based on industry standards (e.g., ITIL) to identify gaps and then prioritize implementation and documentation of well-defined and robust processes. • DOE consider establishing a separate Aukahi CCB to meet the immediate change man agreement needs of the Aukahi FMS.		Project Organization & Management	Issue	Low	Open			8/15/2021