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May 24, 2021

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

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

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

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawaii Department of Human Services' Systems 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 (May 24, 2021 17:47 HST)

Douglas Murdock
Chief Information Officer
State of Hawaiʻi

Attachment (2)

Hawaii Department of Human Services Systems Modernization Project

Final IV&V Status Report
for Reporting Period: April 1 - 30, 2021

Submitted: May 13, 2021

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

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PUBLIC CONSULTING GROUP

Solutions that Matter

Executive Summary

Executive Summary

In April, the project team continued to revise the project schedule due to the delays for the KOLEA ATC impact (the CMS required KOLEA modifications are causing a delay of the integration with BES) and CMM Interview, Release 0.3 UAT completed and continued improvement in overall project communications was observed. Project work continued on several releases, but it has been over 2 months since the potential delay was announced resulting in a loss of momentum. There was a noticeable reduction in the number of deliverables and project meetings during this reporting period.

The project is also faced with the challenge of meeting deadlines and maintaining quality. DHS and the ASI are taking actions to minimize rework and design the BES to take advantage of new tools and technologies by adjusting staffing and drilling down to the design details. To reduce the number of defects in UAT and improve the quality of the code, the ASI conducted a Root Cause Analysis. Other actions to improve quality may be identified as a result of the Release 0.3 Lessons Learned activity.

Feb	Mar	Apr	Category	IV&V Observations
H	H	H	Project Management	IV&V retains a high criticality rating for this category due to the lack of a Project Schedule, loss of project momentum and inability to measure the velocity of the development effort.
L	L	M	System Design	A new finding was added this month regarding the design of the BES and concerns on the availability of previous JAD documentation and lack of Eligibility and Enrollment expertise on the ASI BA and development teams. DHS and the ASI identified initial corrective actions and other measures may be implemented when the Release 0.3 Lessons Learned activity is completed.
L	L	N/A	Deployment	The project team made several improvements to the BES Release Management Practices over the last several months therefore, IV&V retired the finding in this category in April.

Executive Summary

Feb	Mar	Apr	Category	IV&V Observations
(M)	(M)	(M)	Configuration and Development	There were no material changes to this category in the reporting period.
(H)	(H)	(H)	Integration and Interface Management	The project team continued to improve the planning, coordination, and communication with interface partners. Work continues to establish a detailed schedule along with the testing approach and plan. The timing of the integration between the BES Modules (SSP, CMM, FMM) and interface partners remains a high criticality rating.

IV&V Findings and Recommendations

IV&V Findings and Recommendations

As of the April 2021 reporting period, PCG is tracking 15 open findings (7 risks and 8 issues) and has retired a total of 46 findings. Of the 15 open findings, 10 are related to Project Management, 2 in Integration and Interface Management, 2 in System Design and 1 in Configuration and Development.

Open Risks & Issues

Legend:
- Open - Med
- Open - Low
- Open - High
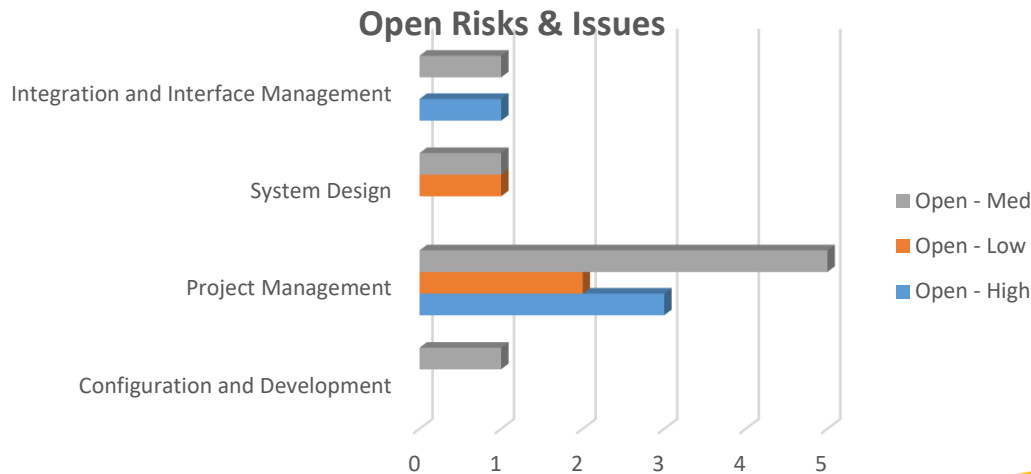
Open Risks & Issues by Category

- Configuration and Development: 1
- Project Management: 10
- System Design: 2
- Integration and Interface Management: 2
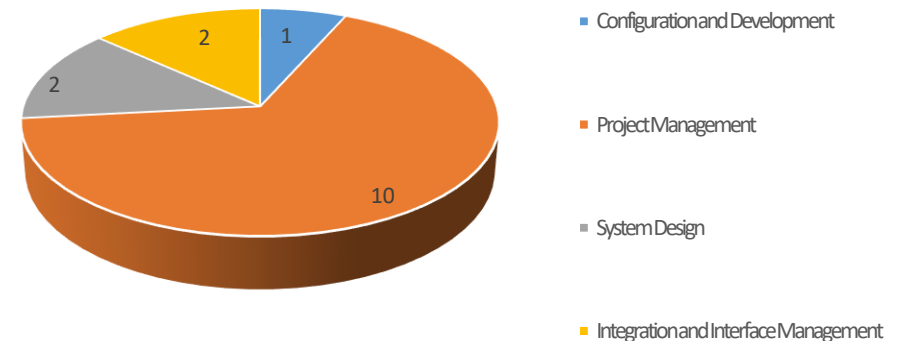
IV&V Findings and Recommendations

The following figure provides a breakdown of __all__ IV&V findings (risks, issues, concerns) by status (open, retired).

All Findings

IV&V Findings and Recommendations

Findings Retired During the Reporting Period

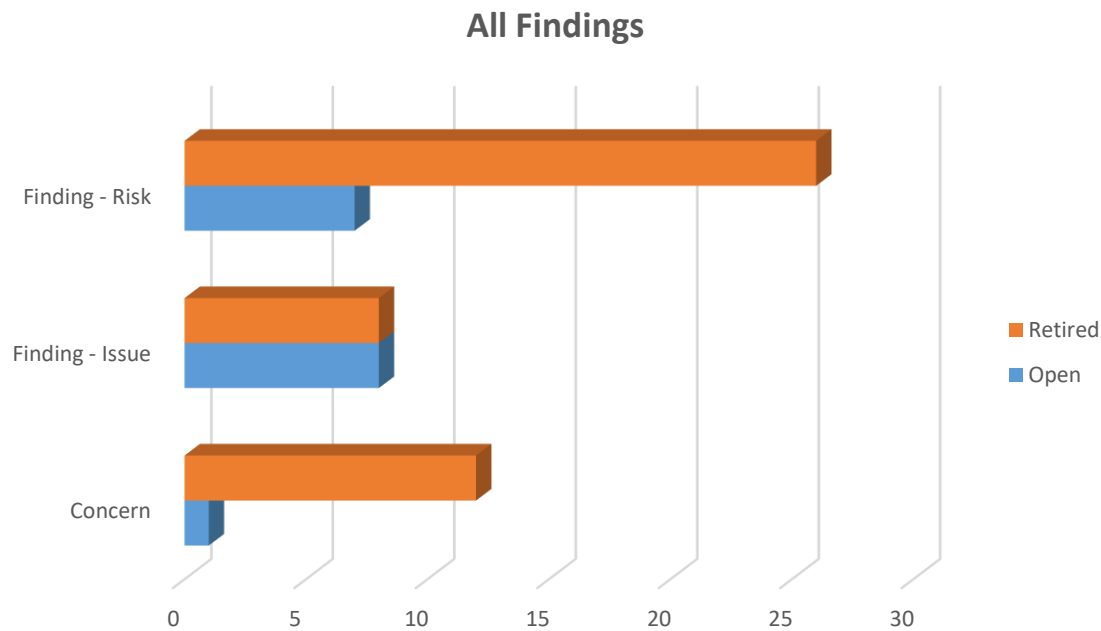| #	Finding	Category
59	**The approach used to identify release and functional dependencies may limit early identification and mitigation of schedule slippage.** The ASI demonstrated to IV&V their manual methods for tracking the dependencies and the project critical path. The methods appear to be adequate to assure the project is able to identify and mitigate tasks that impact the critical path early.	Project Management
40	**The planning and approach of the ASI Release Management practices were identified as an area to improve during early releases.** The ASI implemented the IV&V recommendations and other improvements identified in the project's lessons learned activities to manage and communicate key elements of the releases.	Deployment

IV&V Findings and Recommendations

Preliminary Concerns Investigated During the Reporting Period

#	Finding	Category
66	**An excessive number of issues/defects found in UAT may cause planned work in the future sprints to be delayed due to the prioritization of the resolution of issues/defects found in UAT.** The ASI conducted an internal Root Cause Analysis (RCA) that identified 5 main root causes for the high number of defects found in UAT: 1) Duplication of defects 2) Mobile Device defects 3) Static text defects due to design changes 4) Defects tagged to the wrong release 5) Valid defects with a shared root cause. The RCA does not address why so many defects were not detected during System Testing. The goal of UAT is to address the use of the solution by the end users. Design problems or design changes based on JAD sessions should be found in Systems Test, not UAT. DHS cited the lack of ASI-experienced BAs and the practice of updating the Functional Design Documents during SIT and UAT may also be root causes. The ASI reported corrective actions are being taken and it is anticipated the Release 0.3 Lessons Learned activity may identify further corrective actions. IV&V recommends the ASI conduct a joint (DHS, ASI, IV&V) RCA with DHS focused on identifying why defects are not being found in Unit or System Testing.	Testing

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
2	**Issue – Late Delivery of project deliverables may cause schedule delays**. The revised Project Schedule has not been published to reflect the full scope of the project due to the KOLEA ATC impact (the CMS required KOLEA modifications are causing a delay of the integration with BES) and CMM development delays. IV&V notes the project team revised the Release 0.4 schedule in this reporting period and the Release 0.5 schedule is in process. It remains unclear why updates to the schedule continue to be delayed. A residual impact of not having a project schedule is the loss of project team momentum, which is occurring based on the reduction of project meetings and deliverable reviews.	H

Recommendations	Progress
• DHS and the ASI agree and publish the revised schedule based on the KOLEA ATC impact and CMM development delays.	In process
• IV&V recommends the project team evaluate the estimating process to determine if changes should be made to reduce the number of late tasks and/or conduct a root cause analysis to determine and address the root cause(s) of the delays.	Complete

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
29	**Issue - Uncertainty and/or a lack of communication around long term architecture decisions could impact the project budget, schedule, system design, and planning decisions.** Communication and/or agreement over how BES will utilize the State data hub in the short term as well as going forward is not clear. Repeated ESI questions during the ESI Weekly Platform Status Meeting remain outstanding.	L

Recommendations	Progress
• The ASI should continue to document the architectural details in the BI-12 System Architecture Deliverable and if possible, review draft content with DHS and IV&V.	Complete
• DHS should finalize the Portal strategy and communicate the strategy with the stakeholders and project teams.	In process
• The project should vet possible architectural change impacts to the platform, M&O, MQD, and BES systems before finalizing architectural decisions.	In process
• Communication should be improved to create an awareness of possible architecture changes so that they can prepare for the possibility of a change. For example, if there is a possibility that the platform could change then analysis/design could focus on platform agnostic design and avoid extensive efforts in refining a platform specific design.	Complete
• Establish processes to ensure regular communication between the architecture team and the rest of the project team to assess impacts of architecture decisions to the project.	Complete

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
43	**Issue - DHS PMO project team members have transitioned off the project, which may cause gaps in knowledge transfer and leadership on the project**. DHS reported the 'hiring freeze' has been lifted and are working to secure the budget for these positions.	H

Recommendations	Progress
• The state should develop a transition plan for the project PMO resources as identified in the RFP, (reference RFP section 3.4.3 'DHS Staffing'). It should also include possible project resource impacts considering the COVID-19 economic impacts to the State.	Complete

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
47	**Risk – The COVID-19 pandemic and the related "stay at home" order could hinder project activities and negatively impact the project schedule and budget.** The project continues to adapt to virtual project activities and sessions. Though in-person sessions are likely more productive and can increase stakeholder participation, DHS has accepted this risk and continues to improve their virtual capabilities. The ASI stated their off-shore India SSP team has been directly impacted by the increased COVID infection rates as 3-4 of their developers have contracted COVID. If these numbers grow the ASI may transfer some of the work to other teams.	M

Recommendations	Progress
• Ramp up efforts to setup, train, and assist stakeholders on remote work devices and tools and make every effort to help them to become highly functional with remote access technology (e.g. MS Teams/Skype).	Complete
• Suggest the project and DHS create a detailed, documented risk mitigation strategy and plan that is reviewed regularly and revised to address the current state of the COVID-19 threat and related impacts over the next 6 to 12 months. The plan should include the possible economic impacts to the state budget directly related to project resources.	In process
• Update the OCM Plan to include any new activities or updates to planned activities to aid the organization through this COVID-19 pandemic in the short and long term.	Complete
• Send broad communications to stakeholders to assure clear understanding of changes to the project with this regard to impacts of COVID as well as clarifying communications as to what will remain the same.	In process
• Explore options for freeing up key BESSD SME's work on the project.	Complete

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
48	**Risk – The CMS Outcomes-Based Certification Requirements have not been published by CMS, which may impact the project schedule and funding.** No material update this month, IV&V will continue to monitor.	M

Recommendations	Progress
• DHS to continue dialogue with CMS regarding the project's approach to OBC and MITA alignment to ensure all CMS requirements are met by the BES Project.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
49	**Issue – Poor quality project deliverables may impact system design, testing artifacts and the project schedule.** Improved collaboration between ASI, DHS SMEs and Product Owners in design-related discussions is having a positive impact on the quality of deliverables. The ASI is currently developing additional quality metrics to quantify these improvements	L

Recommendations	Progress
• IV&V recommends that a facilitated root cause analysis be performed by the ASI with DHS and IV&V in attendance. Quality issues are rarely generated by a single entity in a project, so there could potentially be multiple causes or root causes of this current condition. Once the root cause(s) are identified, IV&V recommends immediate action be employed to resolve quality concerns on in-process deliverables prior to submission of subsequent deliverables.	In process
• IV&V recommends that the ASI review the Quality Management Plan to ensure that the project is working within the Quality guidelines. In particular, the ASI should evaluate and consider if it is in alignment with Section 3.1.2 Measure Project Quality, which states "ASI measures process and product quality by 1) selecting BES implementation process and product attributes to measure; 2) selecting component activities to measure; 3) defining value scales for each component activity; 4) recording observed activity values; and 5) combining the recorded attribute values into a single number called a process quality index." IV&V has not seen evidence indicating the ASI is utilizing metrics to measure its process and product quality.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
54	**Risk – User Acceptance Testing (UAT) processes and timing of inputs required for UAT could lead to implementation delays and delivery of a solution that does not meet business needs or requirements.** In discussions with DHS, during Release 0.3 UAT, Functional Design Documents (FDDs) were being updated during SIT, making it very difficult for the UAT test team to create accurate and complete test cases.	M

Recommendations	Progress
• Further develop the Lessons Learned action plan to include target complete dates. Report progress in the weekly status meeting.	Complete
• All agreed upon actions to resolve issues called out in Lessons Learned should be added to project schedule so adequate timing is provided to support UAT preparation and execution.	Complete
• The ASI could conduct a debrief meeting with DHS after SIT and UAT have completed, summarizing work completed and follow-up actions required from ASI and DHS.	In process
• Develop a clear and collaborative approach and plan to review and categorize all defects after testing if the current defined process is not being followed. This should include joint (ASI/DHS) severity level assignments for defects and determining the next steps for defects that require a change to the FDD or other previously approved or drafted deliverables.	Complete
• Evaluate the process and/or schedule to determine if adjustments could streamline the process for the UAT test team to plan and create UAT test cases, minimizing rework.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
58	**Risk – The data conversion effort lacks leadership, consistency in data governance, and effective communications which may impact the schedule**. IV&V continues to observe improved working sessions and communications across the data conversion team. However, data conversion tasks should be added to the schedule in current and future releases - including SIT and UAT testing. IV&V remains concerned and will continue to review the schedule and metrics when provided by the ASI.	M

Recommendations	Progress
• Assign a dedicated project leader to actively manage all aspects of the Data Conversion effort. Consider a full-time position until the Data Conversion effort is completed.	Complete
• Investigate and resolve communication issues that are suspected to be delaying the data conversion effort.	Complete
• Prioritize the conversion activities to validate the key tasks are addressed early to avoid further delays considering the complexity of the later releases.	In process
• Update the timing of the project Data Conversion meeting from every-other-week to weekly.	Complete
• The ASI should develop reports with metrics that accurately measure the Data Conversion progress.	In process
• Add detailed Conversion tasks to the Project Schedule.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
62	**Issue – Inability to measure development team velocity may impact the projects' ability to forecast the delivery date of the remaining features.** No major update. The CMM/FMM team is still unable to measure sprint velocity. As mentioned previously, the team is using JIRA as their task tracking tool but have not implemented the use of metrics which would enable them to track velocity.	(H)

Recommendations	Progress
• The ASI work with the subcontractor Scrum Masters to calculate the average velocity from past iterations to be used as a historical reference.	In process
• Moving forward, the development teams should provide the ASI with Sprint and Product Burndown charts at the end of every iteration.	In process
• To calculate velocity, user stories need assigned values (IV&V recommends relative story points). If the developers are not currently assigning values to user stories, IV&V recommends this become common practice.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
65	**Risk - DHS BESSD knowledgeable staff are needed on the project to ensure the BES solution is designed to meet the business needs and requirements.** The DHS Product Owners are adjusting to their new roles to include decision making and designing BES to take advantage of the new technologies. DHS has identified a replacement BES PM; onboarding is planned for May 2021.	M

Recommendations	Progress
• DHS continue to identify BESSD SME's to support the project as the project progresses.	In process
• DHS develop a project team list that identifies the participants along with their roles and areas of expertise to be used as short-term needs are identified.	Complete
• DHS utilize the BI-4 Project Schedule report developed by the ASI to identify those tasks owned by DHS in the short team in addition to the 4-month look-ahead to identify time frames and activities where there is a high-demand on DHS resources.	Complete
• Identify and on-board a replacement BES Project Manager.	In process
• Continue coaching the new BES Product Owners to ensure the new system takes advantage of new technologies and aligns to the planned business processes.	In process

IV&V Findings and Recommendations

Integration and Interface Management

#	Key Findings	Criticality Rating
60	**Risk – System Integration of the BES Modules (CMM, FMM, SSP) will be developed in the later releases vs. a continuous integration model within each release which may cause schedule delays.** Agile Best Practice is to deliver business value through the early development of technical solutions with end-to-end business processes. The ASI is building modules of the application separately and integrating them in later releases to satisfy the end-to-end business processes. This risk will remain until there is demonstration of end-to-end functionality across modules.	H

Recommendations	Progress
• Prioritize the build of integration points within each module and the creation of scripts (API calls) required for integration.	In process
• Each release demo should be a collaborative effort across all modules (end-to-end solution) and verified against system-level requirements.	Not started
• If the ASI needs all the remaining releases to demonstrate an end-to-end solution of the identified business processes across all modules, IV&V recommends planning and communicating the mitigation strategy for handling risks associated with a 'big bang' release.	Not started

IV&V Findings and Recommendations

Integration and Interface Management

#	Key Findings	Criticality Rating
63	**Risk – The lack of early planning and coordination with interface partners may result in schedule delays.** The ASI has updated the Communication Plans and project schedule regarding interfaces. At the Project Status Meeting on 04/28/2021, the ASI verbally reported that the Release 0.5 interfaces will be fully tested to include application testing with converted data. However, the project schedule does not address meetings with interface partners or interface testing. In addition, IV&V has not seen the Test Plan for interface testing.	Ⓜ

Recommendations	Progress
• Establish a communication plan for each interface partner for the duration of the BES DDI activities.	Completed
• Define a detailed schedule for each interface to include milestone dates, coordination, and execution and share with the interface partners.	In process
• Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces.	In process

IV&V Findings and Recommendations

Configuration and Development

#	Key Findings	Criticality Rating
16	**Issue – Lack of clear understanding of the DDI approach may reduce effectiveness of all SDLC Processes.** The ASI and IV&V agree that continuing to educate the DHS product owners in Agile and other software development processes can increase the quality of design sessions and productivity of their role.	(M)

Recommendations	Progress
• ASI provide an additional DDI approach overview session for stakeholders who still may be unclear on elements of the methodology, especially new product owners.	In process
• ASI make available their DDI approach documentation/materials for stakeholders to review and/or refresh their knowledge on demand.	In process

IV&V Findings and Recommendations

System Design

#	Key Findings	Criticality Rating
38	**Issue – Due to the sequencing of JADs addressing Workflow at the end instead of during current JAD sessions, the project could be faced with significant design rework, which may result in schedule delays, and impact the quality of solution design.** The ASI has stated they will continue to ensure sufficient workflow analysis in their system design efforts. However, it remains unclear whether important opportunities for optimal workflow designs have been missed which could, in the end, lead to system workflow functionality that is suboptimal or inefficient.	L

Recommendations	Progress
• ASI to quickly define how the workflow/task functionality will flow and provide training to the facilitators.	In process
• ASI augment the project team with seasoned business analysts, with significant workflow expertise, to review workflow/task functionality and integrate into systems designs with input from DHS.	In process

IV&V Findings and Recommendations

System Design

#	Key Findings	Criticality Rating
61	**Issue – Poorly executed JAD and "design sessions" could lead to inaccurate design and rework.** This finding title was revised to include design sessions. DHS has noted that some JAD results documents to include documented design decisions have been lost from prior JAD sessions. To move forward, DHS has requested the ASI to facilitate design sessions to ensure the BES is designed to meet the business requirements and take advantage of new technologies.	(M)

Recommendations	Progress
• - JAD and design sessions should be lead by experienced senior BAs, with goals, objectives and results communicated to all participants.	In process
• The facilitator should use their expertise to drive discussions through leading questions.	In process
• The DHS and ASI product owners should actively participate to ensure the system meets the requirements, designed taking advantage of new technology and aligns to the 'to be' business process.	In process

IV&V Status

IV&V Engagement Status

IV&V Engagement Area	Jan	Feb	Mar	Comments
IV&V Budget	🟢	🟢	🟢	
IV&V Schedule	🟢	🟢	🟢	
IV&V Deliverables	🟢	🟢	🟢	March IV&V Monthly Status Report, BES Release 0.2 Code Review Report Final 4/15/2021, Release 0.3 UAT Test Case Review Draft 4/28/2021
Centers for Medicare and Medicaid Services (CMS) IV&V Progress Reports	🟢	🟢	🟢	The first quarterly CMS Eligibility and Enrollment (E&E) IV&V Progress Report is on hold until IV&V and DHS determine the appropriate time to submit the report.
CMS Milestone Reviews	🟢	🟢	🟢	The first CMS Milestone Review date has not yet been determined.
IV&V Staffing	🟢	🟢	🟢	Darren MacDonald's last day on the IV&V team was April 21, 2021.
IV&V Scope	🟢	🟢	🟢	

Engagement Rating Legend		
🟢 The engagement area is within acceptable parameters.	🟡 The engagement area is somewhat outside acceptable parameters.	🔴 The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.

IV&V Activities

- IV&V activities in the April reporting period:
  - Completed – March Monthly Status Report
  - Ongoing – Review the BES Project Artifacts and Deliverables
  - Ongoing – Attend BES project meetings, (see Additional Inputs pages for details)
  - Reviewed available ASI Original Contract and BES Optimization contract amendment documentation

- Planned IV&V activities for the May reporting period:
  - Ongoing – Observe BES Design and Development sessions as scheduled
  - Ongoing – Observe Weekly Project Status meetings
  - Ongoing – Observe Weekly Architecture meetings
  - Ongoing – Observe Weekly/Monthly Security meetings
  - Ongoing – Observe Agile Development meetings
  - Ongoing – Monthly IV&V findings meetings with the ASI
  - Ongoing – Monthly IV&V Draft Report Review with DHS, ETS and ASI
  - Ongoing – Participate in weekly DHS and IV&V Touch Base meetings
  - Ongoing – Review BES artifacts and deliverables

Deliverables Reviewed

Deliverable Name	Deliverable Date	Version
BI-20 Release 0.4 Test Cases, Test Scenarios, and Scripts Title	4/30/2021	1.0
Release 0.4 Test Plan	4/23/2021	1.0
CO01 Search for Client Functional Design	4/23/2021	1.0
BI-22b Release 0.3 UAT Evaluation Report	4/23/2021	Draft
R0.5 BI-10 Walk-Through – ICD - Shared INF - MDM Master Person Index	4/15/2021	Draft
BI-10 Release 0.4 SSP - Case Management	4/22/2021	1.0
BI-10 Release 0.4 Common Function Module - Schedule & Appts, Case Notes, and Standardized Address (Iteration 1)	4/16/2021	1.0
BI-20 Release 0.4 Test Scenarios, Cases, and Scripts	4/15/2021	Draft
R0.5 Walk-Through – Review ICD: BESSD INF - FIS, DAGS, FNS Offset	4/9/2021	Draft
Release 0.4 Test Plan	4/8/2021	Draft
BI-10 R0.4 CMM – Application Registration	4/7/2021	1.0
BI-15 Release 0.3 Fully Configured and Developed System	4/7/2021	1.2
BI-11 R0.4 BESSD Interfaces and BI-11 R0.4 Shared Interfaces	4/7/2021	1.2
BI-10 R0.4 SSP - Report A Change	4/1/2021	Draft

Additional Inputs – Artifacts

Deliverable Name	Artifact Date	Version
Unisys Contract Amendment 3	4/17/2020	N/A
2019-11-22 HI Test Plan - FNS Comments.xlsx	11/22/2019	N/A
FNS Handbook 901	01/2020	V2.4
BES Risks and Issues Log	04/07/2021 04/14/2021 04/21/2021 04/28/2021	BES Risks and Issues Log
BES Weekly Schedule (BI-5)	04/06/2021 04/20/2021 04/27/2021	N/A
BES Weekly Status Report	04/07/2021 04/14/2021 04/21/2021 04/28/2021	N/A
Java Code Standards	09/11/2020	1.6
Release 0.3 UAT Test Cases	NA	NA
Release 0.3 SIT Test Cases	NA	NA
Java Code Standards	09/11/2020	1.6

Additional Inputs

Meetings and/or Sessions Attended/Observed:

1. PCG Internal BES Project Meetings x8 (04/01/2021, 04/05/2021, 04/08/2021, 04/12/2021, 04/15/2021, 04/19/2021, 04/19/2021, 04/26/2021)
2. BESSD PM Team IV&V Weekly Meeting x2 (04/07/2021, 04/28/2021)
3. BES Status Meetings x4 (04/07/2021, 04/14/2021, 04/21/2021, 04/28/2021)
4. BES UAT Huddle x3 (04/01/2021, 04/06/2021, 04/08/2021)
5. Weekly UAT Summary Meeting x2 (04/01/2021, 04/08/2021)
6. BES Development Standup Meetings x3 (04/07/2021, 04/14/2021, 04/21/2021)
7. Draft IV&V Report Review Meeting (04/01/2021,)
8. BES Implementation Planning Meeting (04/06/2021)
9. AHA Dependencies Walkthrough (04/07/2021)
10. Confluence review with ASI (04/06/2021)
11. R0.4 Release Test Plan Walkthrough (04/08/2021)
12. BES CCB Meeting (04/07/2021)
13. BES Data Conversion Meetings x5 (04/05/2021, 04/12/2021, 04/19/2021, 04/23/2021, 04/26/2021)
14. R0.4 BI-10 Comment Walkthrough (04/12/2021)
15. FMM Backlog Grooming (04/13/2021)
16. March Draft Report Meeting (04/13/2021)
17. R0.4 BI-10 SSP RAC Walkthrough Meetings x4 (04/13/2021, 04/15/2021, 04/20/2021, 04/28/2021)
18. R0.4 Screen Prototype Meeting (04/14/2021)
19. R0.4 BI-20 Walkthrough (04/15/2021)
20. Bi-weekly Sprint Demo x 2 (04/13/2021,04/26/2021)
21. Weekly Platform Status Meeting x 2 (04/06/2021, 04/27/2021)
22. Weekly DHS DDI Architecture Review Meeting x4 (04/07/2021, 04/14/2021, 04/21/2021, 04/28/2021)
23. Weekly BES Dev Stand Up Meeting x4 (04/07/2021, 04/14/2021, 04/21/2021, 04/28/2021)
24. DHS EOC x2 (04/08/2021, 04/22/2021)
25. Weekly Backlog Grooming Session Meeting x3 (04/07/2021, 04/21/2021, 04/29/2021)
26. BES R0.4 Sprint Demo – CMM (04/08/2021)

Additional Inputs - Continued

Meetings and/or Sessions Attended/Observed:

27. HI BES UAT/SIT Test Case Review x3 (04/13/2021, 04/14/2021, 04/20/2021)
28. BES R0.5 Sprint Demo – CMM (04/15/2021)
29. HI BES ASI/IV&V Mid-Month Touch Base (04/20/2021)
30. HI BES ASI and IV&V Touch Base - Functional Team (04/20/2021)
31. UAT Test Case Review (04/28/2021)
32. BES R0.5 Sprint Demo – CMM CO05g and CO05v (04/30/2021)
33. R0.4 Screen Prototype – CMM C005g, C005x, C005y (04/02/2021)
34. BI-21 DCF Comments review (04/05/2021)
35. BES Project Schedule Review x3 (04/06/2021, 04/20/2021, 04/27/2021)
36. R0.4 Walk-through – Release Test Plan (04/08/2021)
37. R0.5 ICD Walk-through – FMM Interfaces FIS, Tax Offsets, Lockbox (04/09/2021)
38. BI-11 R0.4 Deliverable Review – Resolve Outstanding Comments (04/12/2021)
39. R0.4 Screen Prototype – CMM C0053, C005k (04/14/2021)
40. R0.4 BI-20 Walk-through – Test Scenarios, Cases, and Scripts (04/15/2021)
41. R0.5 Sprint Demo – CMM C005b, Manage Authorized Representatives (04/15/2021)
42. Requirements Validation – FMM Interface Consumption (04/16/2021)
43. DHS ESC (04/15/2021)
44. R0.5 Screen Mock-Up – CMM c005sf and C005t (04/22/2021)
45. Release Checkpoint Meeting (04/29/2021)
46. R0.5 Sprint Demo – CMM C005g, C005gv (04/30/2021)
47. BES Implementation Planning Meeting x2 (04/06/2021, 04/20/2021)
48. FTI Comments Review (04/02/2021)
49. Lunch & Learn (04/30/2021)
50. Daily UAT Huddle meeting x4 (04/5/2021, 04/6/2021, 04/7/2021, 04/8/2021)
51. UAT Discussion with DHS (04/22/2021)

Appendices

Appendix A – IV&V Criticality Ratings

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 evaluated and 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 – Findings Log

- The complete Findings Log for the BES Project is provided in a separate file.

Appendix C – Acronyms and Glossary

Acronym	Definition
APD	Advance Planning Document
ASI	Application System Integrator
BES	Benefits Eligibility Solution
CCWIS	Comprehensive Child Welfare Information System
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Center for Medicare and Medicaid Services
CR	Change Request
DDI	Design, Development and Implementation
DED	Deliverable Expectation Document
DHS	Hawaii Department of Human Services
DLV	Deliverable
E&E	Eligibility and Enrollment
EA	Enterprise Architecture
ECM	Enterprise Content Management (FileNet and DataCap)
ESI	Enterprise System Integrator (Platform Vendor)
ETS	State of Hawaii Office of Enterprise Technology Services
FIPS	Federal Information Processing Standard
HIPAA	Health Information Portability and Accountability Act of 1996
IDM	Identity and Access Management (from KOLEA to State Hub)
IEEE	Institute of Electrical and Electronics Engineers
IES	Integrated Eligibility Solution
ITIL	Information Technology Infrastructure Library

Appendix C – Acronyms and Glossary

Acronym	Definition
IV&V	Independent Verification and Validation
KOLEA	Kauhale On-Line Eligibility Assistance
M&O	Maintenance & Operations
MEELC	Medicaid Eligibility and Enrollment Life Cycle
MEET	Medicaid Eligibility and Enrollment Toolkit
MOU	Memorandum of Understanding
MQD	Hawaii Department of Human Services MedQuest Division
NIST	National Institute of Standards and Technology
OE	Operating Environment
OIT	Department of Human Services Office of Information Technology
PIP	Performance/Process Improvement Plan
PMBOK®	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project/Program Management Office
PMP	Project Management Plan
QA	Quality Assurance
QM	Quality Management
RFP	Request for Proposal
ROM	Rough Order of Magnitude
RMP	Requirements Management Plan
RTM	Requirements Traceability Matrix
SEI	Software Engineering Institute
SLA	Service-Level Agreement
SME	Subject Matter Expert

Appendix C – Acronyms and Glossary

Acronym	Definition
SOA	Service Oriented Architecture
SOW	Statement of Work, Scope of Work
VVP	Software Verification and Validation Plan
XLC	Expedited Life Cycle

Appendix D – Background Information

Systems Modernization Project

The DHS Enterprise Program Roadmap includes contracting with three separate vendors with the following high-level scope:

- ESI or Platform Vendor – responsible for the shared technology and services required for multiple Application vendors to implement and support functionality that leverages the DHS Enterprise Platform.

- ASI or ASI Vendor – responsible for the DDI of the Benefits Eligibility Solution (BES Project) enhancing the currently implemented Medicaid E&E Solution (KOLEA) and providing support for the combined Solutions.

- CCWIS Vendor – responsible for the DDI of the CCWIS Solution to meet the needs of child welfare services and adult protective services (CCWIS Project) and providing support for the Solution.

Systems Modernization IV&V Project

IV&V performs objective assessments of the design, development/configuration and implementation (DDI) of DHS' System Modernization Projects. DHS has identified three high-risk areas where IV&V services are required:

- Transition of M&O from DHS' incumbent vendor to the ESI and ASI vendors

- BES DDI

- CCWIS DDI

On the BES DDI Project, IV&V is responsible for:

- Evaluating efforts performed by the Project (processes, methods, activities) for consistency with federal requirements and industry best practices and standards

- Reviewing or validating the work effort performed and deliverables produced by the ASI vendor as well as that of DHS to ensure alignment with project requirements

- Anticipating project risks, monitoring project issues and risks, and recommending potential risk mitigation strategies and issue resolutions throughout the project's life cycle

- Developing and providing independent project oversight reports to DHS, ASI vendors, State of Hawaii Office of Enterprise Technology Services (ETS) and DHS' Federal partners

Appendix D – Background Information

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's Eclipse IV&V® Technical Assessment 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.

IV&V Assessment Categories for the BES Project

- Project Management
- Requirements Analysis & Management
- System Design
- Configuration and Development
- Integration and Interface Management

- Security and Privacy
- Testing
- OCM and Knowledge Transfer
- Pilot Test Deployment
- Deployment

Public Consulting Group

Solutions that Matter

Finding Number	Title	Reporter	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Priority	Finding Status	Date Retired	Status Update	Client Comments	Vendor Comments
66	An excessive number of issues/defects found in UAT may cause planned work in the future sprints to be delayed due to the prioritization of the resolution of issues/defects found in UAT.	Earl Burba	Concern	3/29/2021	Testing				Immediate	4	4	High	Open				
65	DHS BESSD knowledgeable staff are needed on the project to ensure the BES solution is designed to meet the business needs and requirements	Jolene	Finding - Risk	3/2/2021	Project Management				ASAP	3	3	Med	Open				
63	The lack of early planning and coordination with interface partners may result in schedule delays.	Al Pangelinan	Finding - Risk	1/21/2021	Integration and Interface Management				Q4 2021	5	2	Med	Open				
62	Inability to measure development team velocity may impact the projects ability to forecast the delivery date of the remaining features.	John	Finding - Issue	12/28/2020	Project Management				7	4	4	High	Open				
61	Poorly executed JAD and design sessions could lead to inaccurate design and rework.	Brad	Finding - Issue	11/30/2020	System Design				ASAP	2	2	Med	Open	11/30/2020			
60	System integration of the BES Modules (CMM, FMM, SSP) will be developed in the later releases vs. a continuous integration model within each release which may cause schedule delays.	John	Finding - Risk	9/30/2020	Integration and Interface Management				N/A	4	4	High	Open				
58	The Data Conversion effort lacks leadership, consistency in Data Governance, and effective communications which may impact the schedule.	Brad	Finding - Risk	9/30/2020	Project Management				Q4 2020	3	2	Med	Open				

54	User Acceptance Testing (UAT) processes and timing of inputs required for UAT could lead to implementation delays and delivery of a solution that does not meet business needs or requirements.	Brad	Finding - Risk	6/24/2020	Project Management				3	1	Med	Open
49	Poor quality project deliverables may impact system design, testing artifacts and the project schedule.	Brad	Finding - Issue	4/16/2020	Project Management				2	2	Low	Open
48	The CMS Outcomes-Based Certification Requirements have not been published by Jolene CMS, which may impact the project schedule and funding.	Jolene	Finding - Risk	3/30/2020	Project Management				3	3	Med	Open
47	The COVID-19 pandemic and the related "stay at home" order could hinder project activities and negatively impact the project schedule and budget.	mfors	Finding - Risk	3/29/2020	Project Management				2	3	Med	Open
43	DHS PMO project team members have transitioned off the project, which may cause gaps in knowledge transfer and knowledge on the project.	Jolene	Finding - Issue	1/10/2020	Project Management				5	4	High	Open
38	Due to the sequencing of JADs addressing Workflow at the end and instead of during current JAD sessions, the project could be faced with significant design rework, which may result in schedule delays, and impact the quality of solution design.	mfors	Finding - Issue	8/29/2019	System Design				2	2	Low	Open

| 29 | Uncertainty and/or a lack of communication around long term architecture decisions could impact the project budget, schedule, system design, and planning decisions. | mfors | Finding - Issue | 5/28/2019 | Project Management | | | ASAP | | 2 | 2 | Low | Open | | | |

| 16 | Lack of clear understanding of the DDI approach may reduce effectiveness of all SDLC Processes. | mfors | Finding - Issue | 12/17/2018 | Configuration and Development | | | 1/31/19 | | 3 | 3 | Med | Open | | | |

| 2 | Late delivery of project deliverables may cause schedule delays. | Jolene | Finding - Issue | 11/28/2018 | Project Management | | | TBD | | 4 | 5 | High | Open | | | |