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DEPT. COMM. NO. 596

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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August 11, 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 (Aug 12, 2021 09:46 HST)

Douglas Murdock
Chief Information Officer
State of Hawai'i

Attachment (2)

Hawaii Department of Human Services Systems Modernization Project

Final IV&V Status Report
for Reporting Period: July 1 - 31, 2021

Submitted: August 11, 2021

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

Executive Summary

Executive Summary

In July, several releases were in various stages of the Software Development Life Cycle and Change Orders were being refined. IV&V notes improvements in the following areas:

- The ASI's subcontractor has taken a major step to report the velocity of the CMM and FMM development teams by establishing development estimates - meaning the velocity reports may be available mid-September.

- The integration plans for CMM with SSP and Workflow were updated to demonstrate the module integrations in the next releases.

- The ASI and their subcontractor have added leadership, business and systems analysts and development staff to the project team.

- The Project Team continues to update/streamline the SDLC processes.

DHS/ASI stopped the Release 0.4 UAT prior to completion due to several issues. IV&V notes that the majority of the UAT defects were resolved however, the number and types of defects identified in UAT remains a concern. The ASI is planning to conduct a root cause analysis and DHS and the ASI are currently reviewing options to revise the testing approach. The project schedule has not yet been approved to adjust for the delays due to the KOLEA ATC impact (the CMS required KOLEA modifications are causing a delay of the integration with BES) and CMM Interview.

| May	Jun	Jul	Category	IV&V Observations
H	H	H	Project Management	The criticality rating for this category remains high due to the absence of an approved schedule and the ASI's inability to report on the velocity of FCM (CMM and FMM modules) development, which drives project planning.
M	M	M	System Design	The project proposed revisions to the SDLC process to include "Design Sprint" sessions to support early identification of potential design issues. IV&V will monitor the effectiveness of these changes in upcoming reporting periods.

Executive Summary

May	Jun	Jul	Category	IV&V Observations
M	M	M	Configuration and Development	The ASI proposed SDLC process modifications as part of the revisions to the project schedule. Details of these changes are being developed and reviewed with DHS; IV&V will review when the information is available.
H	H	H	Integration and Interface Management	The project team continued to update the communication plans for the interface partners. The detailed interface schedule along with the testing approach and plan is in progress. The timing of the integration between the BES Modules (SSP, CMM, FMM) and interface partners remains a high criticality rating.
M	M	M	Testing	The Root Cause Analysis from the Release 0.3 UAT has not yet been made available to IV&V. Release 0.4 UAT had numerous defects and was stopped by DHS and the ASI prior to completion. The project team is currently evaluating options to improve the quality of the BES application and the ASI reported they plan to conduct a Release 0.4 Root Cause Analysis with DHS and IV&V.

IV&V Findings and Recommendations

IV&V Findings and Recommendations

As of the July 2021 reporting period, PCG is tracking 14 open findings (6 risks and 8 issues) and has retired a total of 48 findings. Of the 14 open findings, 9 are related to Project Management, 2 in Integration and Interface Management, 1 each in System Design, Configuration and Development, and Testing.

Open Risks & Issues

Open Risks & Issues by Category
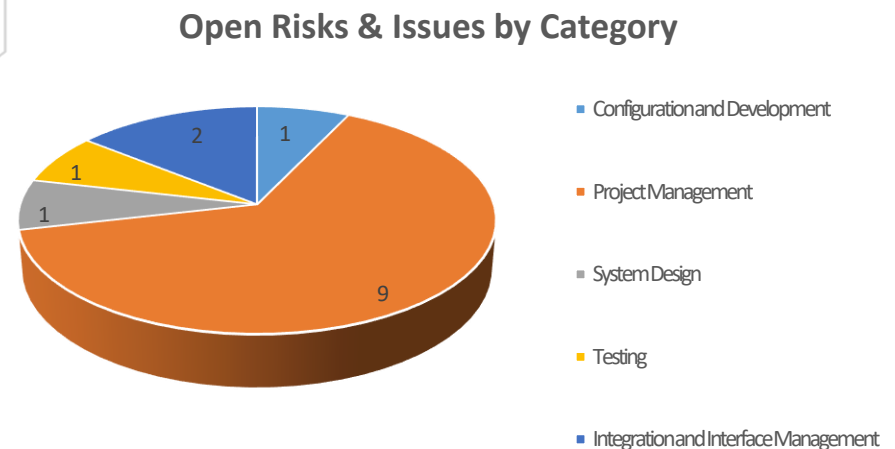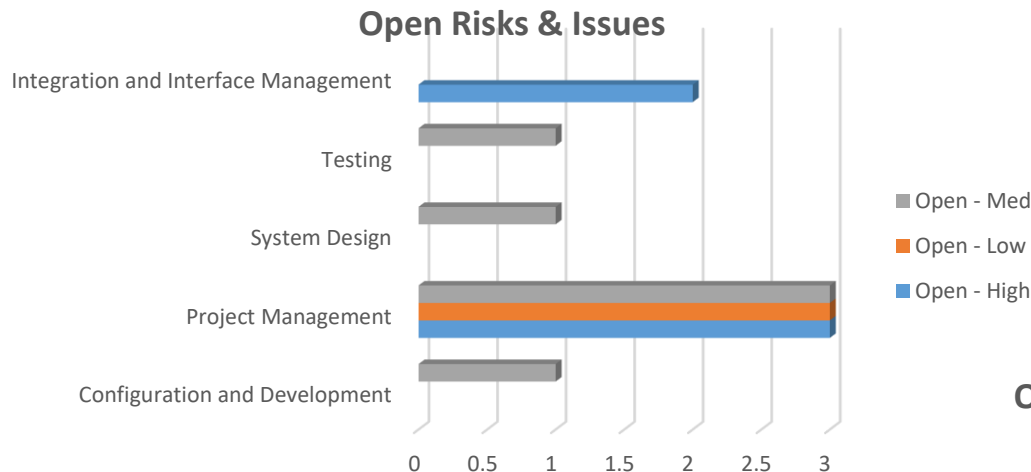
IV&V Findings and Recommendations

The following figure provides a breakdown of <u>all</u> IV&V findings (risks, issues, concerns) by status (open, retired).
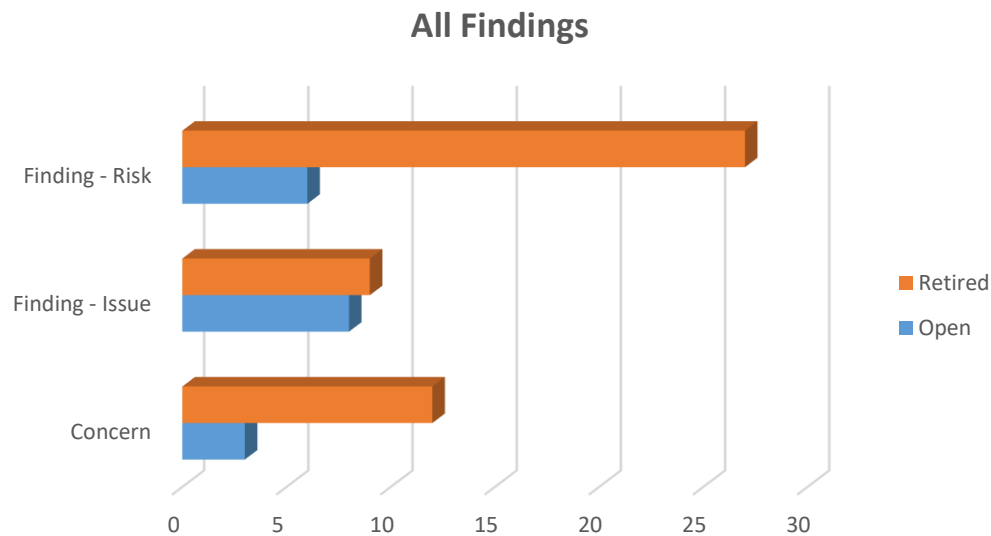
All Findings

IV&V Findings and Recommendations

Findings Retired During the Reporting Period

#	Finding	Category
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 indicated they have addressed the workflow analysis that was deferred in the initial JAD sessions and will continue to attempt to do so. Therefore, IV&V is closing this finding.	Systems Design
48	**Risk** - The CMS Outcomes-Based Certification requirements have not been published by CMS, which may impact the project schedule and funding. DHS received confirmation from CMS that there are no CMS Certification requirements for this project, therefore IV&V retired this finding.	Project Management

IV&V Findings and Recommendations

Preliminary Concerns Investigated During the Reporting Period

#	Finding	Category
67	**New –** The Americans With Disabilities Act (ADA) Section 508 compliance tool has not been identified for the project, which may cause significant rework in order to meet the ADA compliance guidelines.	Testing
68	**New –** Insufficient planning/execution of the BES Security Plan activities may lead to delays in gaining FNS approval for the BES to begin the Pilot Phase.	Security and Privacy
69	**New –** Lack of visibility/transparency into the Regression Testing approach and results may cause defects/rework within the BES application for functionality that previously passed testing.	Testing

IV&V Findings and Recommendations

New Findings

#	Finding	Category
	No new findings were identified in this reporting period.	

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
2	**Issue – Late Delivery of project deliverables may cause schedule delays**. Revisions to the project schedule continued this month. DHS and the ASI are currently evaluating SDLC process changes that may require further schedule updates. Additionally, the schedule impact of the KOLEA ATC changes is not yet final however, the ASI is planning on gaining DHS approval on the revised schedule next month.	H

Recommendations	Progress
• DHS and the ASI agree and publish the revised schedule based on the KOLEA ATC impact, CMM development delays and any other changes to address the potential SDLC Process adjustments.	In process

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.** The ASI has completed cost estimates for the 2 portal change order but are continuing efforts to refine the implementation plan. Many DHS stakeholders remain unclear on how the cost estimates were derived and the basis of allocating the cost between MQD and BESSD. Therefore, it is unclear if these plans and estimates were fully communicated and socialized prior to the CCB meeting.	L

Recommendations	Progress
• DHS should finalize the Portal strategy and communicate the strategy with the stakeholders and project teams.	In process
• The project should continue to vet possible architectural change impacts to the platform, M&O, MQD, and BES systems before finalizing architectural decisions.	In process
• DHS continue to request ASI perform due diligence in any recommendation for foundational architecture change decisions and continue to review with appropriate DHS stakeholders to assure a common understanding of the implications of these decisions.	In process
• The project should continue to ensure communication between development leads and architecture leads to assure optimal collaboration on possible architecture changes that could impact decisions in each area.	In process
• Maintain current communication 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.	In process

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**. There are no material updates in this reporting period.	H

Recommendations	Progress
• DHS continue to work with the appropriate organizations to identify the funds necessary to fill these positions.	In process

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 ASI reported that their off-shore (India) team is back to full strength after experiencing challenges with COVID. IV&V remains concerned that some communications between the project team could be hindered due to not being able to work in closer proximity.	L

Recommendations	Progress
• 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
• 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
• Project leadership continue to encourage independent phone conversations to enhance and accelerate communications, and for team members not wait for meetings to converse.	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.** The project deliverables published this month appeared to have most comments focused on functionality vs. format/grammar/spelling. This implies improvement however, without published ASI metrics on the quality of the deliverables, IV&V is unable to validate.	L

Recommendations	Progress
• 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.** DHS/ASI stopped Release 0.4 UAT before it completed due to several issues and are currently evaluating UAT options that may impact the SLDC process and schedule. IV&V completed the "Shadow Activity" with some of the UAT testers, resulting in observations and recommendations for the project team to consider in future testing activities.	M

Recommendations	Progress
• Provide IV&V with the Root Cause Analysis conducted for the Release 0.3 UAT defects.	Not started
• 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
• Designs need to be solidified prior to developing the scripts - should establish a cut-off date for the design.	In process
• Include the IV&V team as SDLC processes are modified based on the Release 0.4 UAT activities.	In process
• Include the IV&V team when the Release 0.4 UAT Activity Root Cause Analysis session is scheduled.	Not started

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**. The Data Conversion team continued to perform data mapping and cleansing activities. The ASI is currently working through some security issues related to using converted data during testing. Additionally, the ASI is developing metrics to accurately report status and indicate the progress of data conversion through implementation.	M

Recommendations	Progress
• 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
• The ASI should develop reports with metrics that accurately measure the Data Conversion progress along with a high-level pictorial view of conversion activities planned for each release.	In process
• The DHS Data Governance committee needs to clarify the usage of MDM so the BES conversion team aligns to the planned governance structure.	In process
• The Data Conversion team should evaluate the Just In Time (JIT) approach to determine if there are risks to the project that should be monitored/managed.	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.** IV&V observed improvement in planning estimations for SSP in release 0.5 Sprint 5, and although the sprint is not finished, the planned vs actual velocity chart is trending in the right direction. There were major improvements this reporting period regarding FCM (FMM/CMM) work estimations in Aha!. Use case estimates are now in Aha! for the current and follow-on release. The FCM team is tracking story points in an MS-Excel worksheet as they validate their estimates, which will be moved into Jira so they can track and report FCM velocity once the validation is complete. IV&V will continue to monitor the progress on the SSP and FCM sprint teams' ability 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.** DHS continues to recruit the BES PM position.	(M)

Recommendations	Progress
• DHS continue to identify BESSD SME's to support the project as the project progresses.	In process
• 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.** In this reporting period, IV&V observed improvement in the integration planning of the BES core modules. In each of the upcoming releases, demonstrations of the first integration points between CMM/SSP and CMM/Current (Workflow tool) are planned. The ASI provided the steps towards mitigating this risk, which IV&V will review/verify.	H

Recommendations	Progress
• Prioritize the build of integration points within each module and the creation of scripts (API calls) required for integration.	In process
• 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.	In process

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 project team continues to update the interface planning documents. IV&V conducted another review of the Communication Plans and found that 2 interface partners' contacts have not been documented, 3 MOAs have not been approved, 12 need unit test dates confirmed, 13 need system test and UAT dates confirmed, 27 need pilot and production cutover dates confirmed. In addition, IV&V reviewed the SSA process and found that the BES project team may have to satisfy several requirements in order to pass the security assessment, which may delay the scheduled completion of the SSA interface.	H

Recommendations	Progress
• Establish a communication plan for each interface partner for the duration of the BES DDI activities.	In process
• Identify and document all interface partners' contacts	In process
• 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
• Complete all MOAs and obtain approval.	In process
• Confirm testing dates with interface partners in writing.	In process
• Distribute preparation procedures for interface implementation to the interface partners.	In process
• Develop a mitigation plan to address the unavailability of Interface Partners during interface implementation	Not started

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 stated they will continue to provide the DHS and their development teams with updates to the SDLC processes via their monthly release updates. However, it remains unclear whether this will effectively communicate the methodology to DHS project team members such that they become more productive/participatory in the SDLC process or provide effective feedback to the ASI regarding design decisions, optimal testing processes, and other important SDLC activities. For example, if product owners do not fully understand the consequences of their design decisions, systems designs could require rework and the project could be faced with unexpected change orders.	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
• The project monitor DHS product owner productivity, ability/willingness to provide effective feedback to the ASI for design and other important decisions and provide coaching as needed to assure their effectiveness in their role.	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.** Design sessions were conducted this month along with the corresponding Draft Functional Design Documents. It is IV&V's understanding the project is planning to initiate "Design Sprints" to identify design issues earlier and will include DHS/ASI Product Owners, and IV&V. IV&V will assess the process when it is provided and observe the Design Sprint sessions.	M

Recommendations	Progress
• JAD and design sessions should be led 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
• The ASI should back-track significant differences in design direction to determine the root cause in an effort to identify these items as early in the SDLC as possible.	In process
• The Product Owners should have more direct interaction with the development team, proactively seeking collaboration.	In process
• The Functional Design Document process, to include the Design Sprint concept, should be clearly defined and shared with all project team members.	In process

IV&V Findings and Recommendations

Testing

#	Key Findings	Criticality Rating
66	**Issue – The 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.** In this reporting period, DHS and the ASI agreed to stop Release 0.4 UAT prior to completion due to several issues. The project leadership team is evaluating and discussing options to determine the best path forward to thoroughly test BES prior to Pilot and Statewide Implementation. The project team has reported to IV&V multiple actions taken to resolve this however, quality of the BES code and application is not meeting expectations, nor has IV&V received the results of the RCA reported by the ASI to be complete on the Release 0.3 UAT results. On a positive note, the ASI is researching and planning to report quality metrics which may identify more specific activities to improve the quality of BES.	M

Perform a joint Release 0.4 UAT (DHS/ASI/IV&V) Root Cause Analysis (RCA) to identify and take corrective actions.	Progress
• Perform a joint Release 0.4 UAT (DHS/ASI/IV&V) Root Cause Analysis (RCA) to identify and take corrective actions.	Not started
• Adjust the project plan and provide reasonable scope for UAT for subsequent releases taking into account the number of defects and testing time needed.	In process
• Validate all UAT defects are retested in SIT to ensure they are included in Regression Testing.	In process
• System and Integration testing be executed more rigorously.	In process
• The ASI should report testing metrics and DHS should monitor this Key Performance Indicator (KPI).	Not started

IV&V Status

IV&V Engagement Status

IV&V Engagement Area	Apr	May	Jun	Comments
IV&V Budget	🟢	🟢	🟢	
IV&V Schedule	🟢	🟢	🟢	
IV&V Deliverables	🟢	🟢	🟢	The Release 0.3 Draft Code Review results were published. The results of the Release 0.4 UAT Team Shadowing activity were provided to DHS.
Centers for Medicare and Medicaid Services (CMS) IV&V Progress Reports	🟢	🟢	🟢	DHS confirmed with CMS that IV&V Progress Reports are not required, therefore IV&V will remove this line item in future reports.
CMS Milestone Reviews	🟢	🟢	🟢	DHS confirmed with CMS that Certification Milestone Reviews are not required, therefore IV&V will remove this line item in future reports.
IV&V Staffing	🟢	🟢	🟢	
IV&V Scope	🟢	🟢	🟢	

Engagement Status 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 July reporting period:
    - Completed – June 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 August reporting period:
    - Ongoing – Observe BES Design and Development sessions as scheduled
    - Ongoing – Observe Bi-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-15 Release 0.4 Fully Configured and Developed System – DRAFT	7/23/2021	Draft
BI-10 R0.6 Common Functions Special Indicators – DRAFT	7/26/2021	Draft
BI-13 Security Plan DED	7/26/2021	Pre-Draft
BI-10 R0.5 Case Management Module - D-SNAP (Iteration 2)	7/27/2021	1.2
BI-10 R0.5 Case Management Module - D-SNAP deliverable (Iteration 1)	7/16/2021	1.0
BI-10 R0.5 SSP Renewals, Administrative Hearing, Case Management, Document Management - DRAFT	7/13/2021	Draft
BI-22 Release 0.4 System Test Report (Iteration 2)	7/16/2021	1.0
BI-22 Release 0.4 System Test Report (Iteration 1)	7/7/2021	1.0
BI-10 R0.5 Case Management Module - D-SNAP – DRAFT	7/2/2021	Draft
BI-14 Release 0.4 Technical Design Document - SSP (Iteration 1)	6/30/2021	1.0

Additional Inputs – Artifacts

Deliverable Name	Artifact Date	Version
Unisys Contract Amendment 3	4/17/2020	N/A
Two Portal Change Request	7/14/2021	1.0
FNS Handbook 901	01/2020	V2.4
BES Risks and Issues Log	07/07/2021 07/14/2021 07/21/2021 07/28/2021	N/A
BES Weekly Schedule (BI-5)	07/06/2021 07/13/2021 07/20/2021 07/27/2021	N/A
BES Weekly Status Report	07/07/2021 07/14/2021 07/21/2021 07/28/2021	N/A
Java Code Standards	09/11/2020	1.6
BES Shared Interfaces	N/A	N/A
R0.3 Codebase	05/11/2021	0.3

Additional Inputs

Meetings and/or Sessions Attended/Observed:

1. Weekly Platform Status Meeting – 7/6/2021, 7/13/2021, 7/20/2021, 7/27/2021
2. Weekly Architecture Meeting – 7/21/2021, 7/28/2021
3. Bi-Weekly Project Status Meeting – 7/7/2021, 7/21/2021
4. Weekly BES PMO and IV&V Touch Base –
5. Weekly BES Dev Stand-up – 7/7/2021, 7/14/2021, 7/21/2021, 7/28/2021
6. Weekly SSP Backlog Grooming Session – 7/7/2021, 7/14/2021, 7/22/2021, 7/28/2021
7. BES Data Conversion Meeting – 7/12/2021, 7/19/2021, 7/23/2021, 7/26/2021
8. Weekly Schedule Review Meeting – 7/6/2021, 7/13/2021, 7/20/2021, 7/27/2021
9. IV&V Team Meeting – 7/1/2021, 7/6/2021, 7/8/2021, 7/12/2021, 7/15/2021, 7/19/2021, 7/22/2021, 7/26/2021
10. Weekly UAT Status – 7/8/2021, 7/15/2021, 7/22/2021, 7/29/2021
11. BES UAT Shadow - CMM App Reg – 7/6/2021, 7/7/2021, 7/9/2021
12. BES UAT Shadow - SSP RAC – 7/1/2021, 7/6/2021, 7/8/2021, 7/9/2021
13. BES UAT Shadow - SSP Case Management–7/2/2021, 7/7/2021, 7/8/2021
14. DHS and IV&V Touch Base – 7/7/2021, 7/19/2021, 7/29/2021
15. Sprint Demo SSP – 7/6/2021
16. R0.4 UAT Daily Huddle – 7/9/2021-7/23/2021
17. R0.5 Screen Prototype– CMM CO05n Manage Absent Parent Information – 7/1/2021
18. [BES] Release Checkpoint Meeting – 7/1/2021
19. [BES] R0.5 Screen Prototype – CMM CO05h and CO05u – 7/1/2021
20. [BES] R0.5 Screen Prototype – SSP CS11 and CS33 – 7/1/2021
21. [BES] R0.5 Sprint Demo – CMM CO05s Manage Veterans Information – 7/2/2021
22. [BES] R0.7 Release Kickoff – 7/8/2021
23. [BES] R0.6 Screen Prototype – CF CF10 Manage Special Indicator – 7/9/2021
24. HI DHS BES June Draft IV&V Report Review – 7/13/2021
25. [BES] R0.5 BI-10 Walk-Through – CMM DSNAP – 7/13/2021
26. UAT Shadow - Draft Results Review – 7/14/2021
27. BES CCB Monthly Meeting – 7/14/2021
28. [BES] R0.5 Screen Prototype – CMM CO05i Manage Expense Information – 7/15/2021
29. HI BES ASI and IV&V Touch Base – Technical – 7/15/2021
30. [BES] R0.5 Screen Prototype – CMM CO05h and CO05u – 7/15/2021
31. [BES] R0.5 Sprint Demo – CMM CO26 & CO26a – 7/16/2021
32. Monthly ASI Functional and IV&V Check-in – 7/20/2021

Additional Inputs - Continued

Meetings and/or Sessions Attended/Observed:

33. Implementation Planning – 7/20/2021
34. ASI and IV&V Mid-Month Check-in – 7/21/2021
35. R0.5 BI-10 Walk-Through – SSP Renewals, Administrative Hearing, Case Management, Document Management – 7/21/2021
36. BES BI-13 Security Plan with DHS, ASI and IV&V – 7/22/2021
37. Lunch and Learn – 7/23/2021
38. [BES] Release 0.8 Kick-off – 7/26/2021
39. DHS-Unisys Security Touchpoint – 7/27/2021
40. Monthly Project Risk and Issue Review Meeting – 7/28/2021
41. [BES] R0.6 Screen Prototype – CMM CO05z and CO05i – 07/29/2021
42. [BES] R0.6 Screen Prototype – CMM CO05p, CO08, CO08a - 7/29/2021
43. BES Project Schedule Discussion Follow-up (Session 1) – 7/29/2021
44. [BES] R0.6 Sprint Demo – CMM CO05q Manage School Information – 7/30/2021
45. [BES] R0.6 Sprint Demo – CMM CO05l Manage Disability – 7/30/2021

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

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Solutions that Matter

Finding Number	Title	Owner	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Prior	Finding Status	Date Retired	Status Update	Client Comments	Vendor Comments
69	Lack of visibility/transparency into the Regression Testing approach and results may cause defects/rework within the BES application for functionality that previously passed testing	Earl Burba	Concern	7/28/2021	Testing	On 7/29/2021 the ASI provided feedback to questions from the IVV team dated 6/23/2021. The response/feedback addressed the IVV questions but did not address how the results through Robot framework HTML/XML reports and X-Ray integration. It is understood that the ASI has reported having built a regression suite and integrated it into their Continuous Delivery pipeline, but evidence has not been observed in testing status meetings or provided to DHS or IVV to demonstrate the effectiveness of regression testing. Since the exit criteria for Regression Testing as provided in the BI-19 Complete and Final Test Plan.pdf is "Regression Test Results Report draft has been submitted to DHS" it was expected that a Regression Test Results Report would be posted in either SharePoint or Confluence.	Since the purpose of regression testing is to help assure that code or configuration changes to address defects/bugs do not negatively affect previously working functionality having a robust regression test suite is very relevant. Without a plan for Regression Testing there is risk to the project that defect correction or continued development may negatively affect previously correct functionality.	It is recommended that regression testing results be reported to the project. It is important that DHS be informed of all regression testing results of those passed and failed test cases and that any failed test cases be analyzed to determine if code or configurations need to be made.	Immediate	4	5	High	Open				
68	Insufficient planning/execution of the BES Security Plan activities may lead to delays in gaining FNS approval for the BES to begin the Pilot Phase.	Manny Baranc	Concern	7/28/2021	Security and Privacy	Over the last several months, the BES project team has been working through the planning efforts to develop the BI-13 Security Plan while also managing through ASI Security Lead staffing changes. DHS and the ASI agreed to modify the BI-13 Security Plan Deliverable Expectation Document (DED) last month and are currently revising it to align to the requirements and changes to the project since inception.	The BES project must have a clear path to define, implement, test, and validate all Security Requirements/Controls prior to entering the Pilot phase. There are many standards that must be met, and the project team needs to agree on the BES Security Control Implementation Workbook to document the status of each control. The Security Control Implementation Workbook must be detailed and allow for ease of referencing to the Security Policies, Standards, Controls, and implementation plan along with evidence for each control.	IV&V recommends DHS and the ASI agree upon the tool to use to document and track security control implementation to ensure the tool meets DHS compliance needs. The two parties should also agree upon the tool and level of detail needed to track progress (estimates, target dates, risks, issues, evidence) if DHS and the ASI agree to use tools different than the BES Project. It is also recommended to complete the GCP Change Request to migrate the BES environments from the ESI to the ASI to help ensure current and future BI-13 documentation is accurately reflects desired roles and responsibilities.	ASAP	3	3	High	Open		7/30/2021 - On July 22, 2021, DHS, the ASI, their Security Subcontractor and IV&V met to discuss and review the current status of the BES Security Plan. The BES project team is planning to adopt the MS-Excel workbook to track the detailed SDLC components of each requirement along with status. Several questions required follow-up and may be incorporated into the revised DED. Additionally, SSA has adopted a revised process to include a detailed questionnaire to be completed prior to approval to implement this interface with the BES application. This revised process includes a significant amount of work to be completed and verified to completely address all SSA Security Requirements.		
67	The Americans With Disabilities Act (ADA) Section 508 compliance tool has not been identified for the project, which may cause significant rework to meet the ADA compliance guidelines.	Earl Burba	Concern	7/12/2021	Testing	While R0.3 and R0.4 reported that Section 508 compliance had been successfully completed the ASI confirmed that there is currently no working tool installed and that Section 508 compliance testing has not been performed. This risk has been discussed with the ASI over the past several months, but there have been no results to-date. The ASI did state that they are coding to some of the ADA requirements and are using a desk-top tool for ADA compliance. IV&V has not received any data to demonstrate the desk-top tool results nor if it provides coverage for all ADA compliance items.	There is a contractual obligation and requirement for BES to meet the system acceptance criteria of "all applicable State and federal policies, laws, regulations, and Standards, including without limitation the Electronic and Information Technology Accessibility Standards associated with Section 508 of the Rehabilitation Act.", which was verified in the Unisys proposed Technical Requirements Approach that states "The system complies with ADA branding standards as defined by DHS and adheres to W3C level 2 accessibility guidelines, sub-parts of Section 508 of the Americans with Disabilities Act (ADA), nondiscrimination safeguards in 45 CFR 8S.". If the Hawaii guidelines (https://www.hawaii.edu/access/uh-guidelines-for-accessibility/), FNS Guidelines from the 901 Handbook, and contractual obligations to adhere to the Section 508 compliance guidelines (https://section508.gov/) there may be a significant amount of rework to the solution.	It is recommended that focus and responsibility be assigned within the project for a Section 508 compliance tool to be researched, evaluated, installed, tested, and executed for upcoming releases. That responsibility should include the creation of a plan and schedule for delivering the tool and reports related to the final solution for Section 508 compliance and accessibility. Once the plan has been implemented and a tool incorporated, the ASI should generate reports to show compliance or gaps to DHS and IVV.	ed prior to fin	4	5	High	Open				
66	The 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	Finding - Issue	3/29/2021	Testing	During discussions of UAT progress and metrics the number of defects found during this phase of testing appears greater than what would be expected during UAT. On 3/29/2021 at the conclusion of R0.3 Sprint 3 there were 306 reported defects (4 High, 10 Medium, and 292 Low Severity) where 181 are "Unresolved", 108 are documented as "Not a Defect", and 17 are marked as "Done". Since the functionality had previously been Unit, System and Integration, and the needs of the state clarified during JAD sessions very few defects are expected. As such, the amount of testing expected to be completed during the current R0.3 will not be met and will be pushed to the next release. If that trend continues such that UAT may not complete as planned the schedule negatively affected. Additionally, since more defects are being reported and corrected than expected the rate of closure for defects, along with the time needed to retest those corrects, and regression test the functionality additional risk exists to the planned schedule. At the end of R0.3 it was reported that 44 issues were "Done" and 238 issues were incomplete (30 of which had all of their sub-tasks complete) and will be moved to the next Sprint designated SSP R0.3 UAT Sprint 4.	Since UAT is the vehicle for users to assure that the functionality developed and delivered meets their needs it is important that UAT be successfully completed. The high number of defects reported along with not meeting planned progress there may be an inclination to shorten the time needed to complete UAT.	Perform a joint Release 0.4 UAT (DHS/ASI/IVV) Root Cause Analysis (RCA) to identify and take corrective actions. Adjust the project plan and provide reasonable scope for UAT for subsequent releases taking into account the number of defects and testing time needed as reflected in current trending of UAT progress. Validate all UAT defects are retested in SIT to ensure they are included in Regression Testing. System and Integration testing be executed more rigorously. The ASI expect testing metrics and DHS should monitor this Key Performance Indicator (KPI). FDD's be complete and frozen prior to the completion of SIT and that completion of FDD's be added to the exit criteria for SIT and entrance criteria for UAT. An alternate recommendation would be to adjust the process to minimize schedule slippage and rework by the SIT and UAT teams. - Closed 7/30/2021	Immediate	3	3	Med	Open		7/30/2021 - In the reporting period, DHS and the ASI agreed to stop metric on UAT prior to completion due to several issues. The project leadership team is evaluating and discussing options to determine the best path forward to thoroughly test BES prior to Pilot and Statewide Implementation. The project team has reported to IVV multiple actions taken to resolve this however, quality of the BES code and application is not meeting expectations, nor has IVV received the results of the RCA reported by the ASI to be complete on the Release 0.3 UAT results. On a positive note, the ASI is researching and planning to report quality metrics which may identify more specific activities to improve the quality of BES. 6/28/2021 - There has been no material update to this finding, the ASI continues to conduct a root cause analysis. Concern still remains that defects reported in UAT exceed the number of defects reported during System Test as shown through defect leakage metrics. 5/25/2021 – An industry standard metric used to identify the efficiency of System Testing is defect leakage, i.e., how many defects are missed/slipped during System testing. The formula used is Defect Leakage = (No. of Defects found in UAT / No. of Defects found in System testing.) For Release 0.3 there were 28 'Not a Defect', 124 'Done', and 10 'Unresolved'. For UAT the defect count was 199 'Not a Defect', 135 'Done', and 8 'Unresolved'. Removing those defects marked 'Not a Defect' for System Test and UAT counts there were 134 for System Test and 143 for UAT. By plugging those numbers into the formula, the result is 106.72%. Since the industry average for good testing processes is 10-12%, the defect leakage appears excessive for this project. 4/30/2021 - The ASI conducted an internal Root Cause Analysis (RCA) that identified 5 main root causes for the high number of defects found in UAT - Duplication of defects Mobile Device defects Static test defects due to design changes Defects tagged to the wrong release 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 System Test, not UAT.		7/20/21 RAP - In response to the specific recommendations, we are taking the following actions: Recommendation 1: We will perform a RCA led by the testing leads this month. Recommendation 2: In progress, we are currently planning to integrate the UAT and SIT teams into a single team that will participate in a joint INT and SIT test. UAT will be reserved to FAT. Recommendation 3: All UAT defects are retested in both INT & SIT before they are promoted to UAT as fixed. Most will likely not become good regression candidates as the majority of the defects at this point are cosmetic, so once they are fixed, they are fixed. However, we have developed an automated regression bed. And we have made changes to how it is executed in recent weeks. It has been incorporated into the CD pipeline and will be run during the initial build cycle rather than being run later in the release. The regression test bed will continue to be built roughly one release in arrears. Recommendation 4: This recommendation is premature until the RCA has been completed. However, we are looking enhancements to the testing process that will put more focus on cosmetic defects and continue to test logic flows. We have already made the following changes: a) combined the INT and SIT teams into a single team, b) combined the CMM/ FMM testing team and SSP testing team into a single testing team. Increased the frequency of guerilla testing, c) initiated staffing to bring on former case workers to augment the testing team, d) held at least three retrospectives with the SSP development teams focused on quality improvement in both development and testing. Recommendation 5: We have looked internally at the defect leakage metrics suggested by the IV&V in May, and we found them helpful, but overly simplistic for several reasons: a) raw defect counts ignore severity of defects as
65	DHS BESSD staff with expansive business knowledge or availability are needed on the project to ensure business needs are sufficiently captured so that the BES solution is designed to meet the business needs and requirements.	Ryan	Finding - Risk	3/2/2021	Project Management	As the BES system is designed, it appears there is a lack of BESSD staff with expansive business knowledge and availability to work on the project to ensure the BES system meets the business need and requirements.	BESSD staff with expansive business knowledge and availability are critical to the project to ensure business needs and requirements are effectively documented as the new system is designed and developed.	DHS continue to identify BESSD SME's to support the project as the project progresses. 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-5 Project Schedule report developed by the ASI to identify those tasks owned by DHS in the short term 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. - Continue coaching the new BES Product Owners to ensure the new system takes advantage of new technologies and aligns to the planned business processes.	ASAP	3	3	Med	Open		7/28/2021 - DHS continues to recruit the BES PM position. 06/30/2021 - In the 06/09/2021 Status Meeting, DHS reported they added a Reports SME and two additional staff to the UAT test team. DHS continues recruiting for the BES PM position. 05/31/2021 - The DHS Product Owners continue to adjust 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 was delayed and is now planned for June 2021. 04/30/2021 - 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. 03/31/2020 - The DHS Product Owners continue to adjust to their new/revised project role, which is having a positive impact on the BES design. DHS is taking the planned actions to replace the DHS PM. 02/28/2021 - In January, DHS added many BESSD staff and is having a positive impact on the project. With the retirement of DHS' BES Project Manager (effective 2/26/2021) and Business Analyst (effective March 31, 2021) a transition plan was developed to support the onboarding of a new BES PM. DHS is taking the following actions, DHS developed a DHS BES Resource Pool to support future resource needs on the project. DHS is using a report from the BI-0S Project Schedule focused on the DHS activities and tasks planned to be performed in the next 4 months to provide early visibility to peak DHS resource needs. Additionally, the DHS BESSD Administrator spends 2-3 days per week at the ASI onsite facility to review plans, address issues and conduct follow-up as necessary.		4/23/21 RAP - DHS has added a number of product owners to the project over the past few months and given them the authority to make design decisions for the department. This has resulted in improvement in the turn around time for decisions being made.
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	The following planning and execution items have not yet been addressed and documented by the ASI. - Connectivity is planned to utilize a presently undefined ETS API Gateway; however, there is no evidence that details have been determined or documented in this regard. - There is little evidence of active and sufficient communication with interface partners for coordination, design, and testing activities (Unit Test, SIT, UAT). - Interface planning and execution tasks and activities, including those for interface partners, are neither resident nor managed within the Project Schedule. - A mitigation plan has not been developed to address the unavailability of interface partners during interface implementation after MOAs have been approved, testing dates have been confirmed, and communications have been frequent.	Interfaces is one of the areas where DDI projects often underestimate the time needed to effectively manage all the tasks and activities to successfully implement data sharing. A clearly defined communication plan and schedule that includes the coordination, planning, and execution activities along with milestone dates may minimize the risk of possible delays. In addition, after planning has been completed, interface partners will have to be available during interface implementation to ensure that the interfaces are properly tested before deploying the system to production.	1. Establish a communication plan for each interface partner for the duration of the BES DDI activities. 2. Define a detailed schedule for each interface to include milestone dates, coordination, and execution and share with the interface partners 3. Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces 4. Identify and document all interface partners' contacts 5. Complete all MOAs and obtain approval 6. Confirm testing dates with interface partners in writing 7. Distribute preparation procedures for interface implementation to interface partners 8. Develop a mitigation plan to address the unavailability of Interface Partners during interface implementation	Q4 2021	5	3	High	Open		documents. IVV conducted another review of the Communication Plans and found that 2 interface partners' contacts have not been documented, 3 MOAs have not been approved, 12 need unit test dates confirmed, 13 need system test and UAT dates confirmed, 27 need pilot and production cutover dates confirmed. In addition, IVV reviewed the SSA process and found that the BES Project Team may have to satisfy several requirements to pass the security assessment; this process may delay the scheduled completion of the SSA interface. 07/27/2021 -The project team continues to update the interface planning documents. IVV conducted another review of the Communication Plans and found that 3 interface partners' contacts have not been documented, 4 MOAs have not been approved, and testing/pilot/cutover dates have not been confirmed for 26 of the interfaces. IVV will continue to monitor. 06/30/2021 -The project team continues to update the interface planning documents. IVV conducted another review of the Communication Plans and found that 3 interface partners' contacts have not been documented, 4 MOAs have not been approved, and testing dates have not been confirmed for 20 of the interfaces. IVV will continue to monitor. 06/27/2021 -The project team continues to update the interface planning documents. However, IVV reviewed the Communication Plans and found that 11 interface partners' contacts have not been documented, 5 MOAs have not been approved, and testing dates have not been confirmed for 21 of the interfaces. IVV will continue to monitor. 05/31/2021 -The project team continues to update the interface planning documents. However, IVV reviewed the Communication Plans and found that 23 interface partners' contacts have not been documented, 14 MOAs have not been approved, and testing dates have not been confirmed for 43 of the interfaces. IVV raised the criticality rating from Medium to High this month due to the status of the communication plans and testing schedule. IV&V will continue to monitor. 04/29/2021 - The ASI has updated the Communication Plans and project schedule regarding interfaces. At the Project Status Meeting on 04/28/2021, the ASI		7/20/21 RAP - The ASI team requests that the IV&V reassess the severity of this risk in light of the following reasons: a) the ATC schedule extension has made the urgency for tackling these tasks less than it was before that started lessening the schedule risk, b) the increase from Medium to High in May was based on a misunderstanding of the current state of the MOA's and contact dates, and it continues to trend in the right direction. In regards to the final recommendation, the ASI does not doubt the importance of this; however, this is unlikely to manifest in a schedule risk. It does not have a risk to operations, and it will be managed as part of the implementation planning activities. For recommendation 3, there will be a TDD for each of the interfaces. We are working with the architecture team to build the processes to develop these for each interface partner. 4/23/21 RAP - The interface team has created communication plans for all interfaces. The decision on testing dates will be noted once the project schedule has been updated, and testing dates from the ATC. DHS has located additional MOA/ MOU with trading partners in March. There are still that remain outstanding; however, DHS is working through the process of locating those, and we do not expect that the lack of additional MOU/ MOA will have impact on the project Release 0.6 as one of the BESSD interfaces. 02/25/2021 - Archie stated that the CYCRA interface is slated for Release 0.6 as one of the BESSD interfaces and stated that Jocelyn updated the project schedule to include CYCRA.

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 Manageme to the ASI.	The subcontractor development teams don't currently track and report Sprint velocity	Velocity is an important metric in Agile development which provides project leadership the ability to forecast how many iterations the team will need to complete the remaining work. Development teams use velocity to avoid over-committing to work in future Sprints. Velocity can also be an early indicator that the project needs more time or resources to meet the planned release dates. If the ASI does not track development team's velocity, they cannot accurately forecast the delivery date of the remaining features, which may place the project cost and critical path at risk.	IVV recommends the ASI work with the subcontractor Scrum Masters to calculate the average velocity from past iterations to be used as a historical reference. Moving forward, the development teams should provide the ASI with Sprint and Product Burndown charts at the end of every iteration. The Sprint Burndown chart provides the ASI with a visual representation of the planned vs actual work completed for each Sprint and the Product Burndown chart shows the bigger picture. To calculate velocity, user stories need assigned values (IVV recommends relative story points). If the developers are not currently assigning values to user stories, IVV recommends this become common practice.	?	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	ASI-led Workflow JAD sessions have been held for CMM, with the following concerns being observed, - No clear introduction to all participants on the goal of the JAD, overview on the process and the importance of their participation. - On many occasions the conversation needed to be driven by leading questions, as expected, but was instead lead by business users - Too much pause time when participants did not know the answer to a question; several occasions where complete silence on the call for 30 seconds or more - Lack of thought leadership from the ASI on how workflow could be designed to ease/improve process for client	The CMM Workflow JAD sessions restarted in November. DHS indicated some concern regarding the CMM Workflow JAD sessions, specifically; (1) Do the JAD participants understand how the Case will be managed through workflow? (2) What improvements will be made in the new BES to support the users and clients? Incomplete or unclear JAD sessions with insufficient documentation could lead to a poor design, lacking the details needed to support business requirements; as well as missing opportunities to improve workflow and related system design.	- JAD and design sessions should be lead by experienced senior BAs, with goals, objectives and results communicated to all participants. - The facilitator should use their expertise to drive discussions through leading questions. - 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. - The ASI should back-track significant differences in design direction to determine the root cause in an effort to identify these items as early in the SDLC as possible. - The Product Owners should have more direct interaction with the development team, proactively seeking collaboration. - The Functional Design Document process, to include the Design Sprint concept, should be clearly defined and shared with all project team members.	ASAP	2	2	Med	Open		
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 Int	The BES Modules (CMM, FMM, SSP) are developed by separate teams and demo's are conducted separately with each release. Integration points between the modules are currently stubbed and the ASI has yet to demonstrate integration of the modules and end-to-end functionality.	System Integration has historically followed a 'big bang' model where all system components arrive simultaneously (usually towards the end of the project) resulting in a flawed and immature delivery. In theory, integration is expected to occur instantaneously. In reality, a 'big bang' integration strategy results in a rushed and incomplete system test process and a system that is focused on individual components rather than system capabilities.	1/27/2021 - IVV recommends prioritizing the build of integration points within each module and the creation of scripts (API calls) required for integration. - Each release demo should be a collaborative effort across all modules (end-to-end solution), demonstrating the understanding of every integration point and verified against system-level requirements. - Cancelled - If the ASI needs all the remaining releases to demonstrate an end-to-end solution of the identified business processes across all modules, IVV recommends planning and communicating the mitigation strategy for handling risks associated with a 'big bang' release.	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 Manageme	The Data Conversion effort appears to lack leadership for both the ASI and DHS. IVV has become aware that while DHS used a Data Governance Workgroup for the MDM release, it has not been active since and has not been formalized for DHS. Last, the project does not have a Data Conversion Lead assigned to lead the project. DHS has stated that the ASI should lead this effort and communicate with DHS where they are needed to assist. Multiple data cleanup actions and decisions between the ASI and DHS have lagged for several weeks, with the lack of leadership and communication suspected as the root cause. As example, it was announced in mid-month that the R0.2 data conversion effort would not result in actual conversion of data, and that the validation for R0.2 would be limited to being 'done on paper'. DHS was unaware that the ASI had a plan that did not include actually converting data. IVV will continue to monitor.	Data Conversion is often considered as one of the longest and most complex tasks in a DDI project. The lack of a Project Conversion Lead, coupled with communication challenges on tasks, activities, and decisions can, and already has, led to schedule delays.	- [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.] Closed 7/30/2021 - [Investigate and resolve communication issues that are suspected to be delaying the data conversion effort.] Closed 7/30/2021 - Prioritize the conversion activities to validate the key tasks are addressed early to avoid further delays considering the complexity of the later releases. - [Update the timing of past Data Conversion meeting from every-other-week to weekly.] Closed 7/30/2021 - The ASI should develop reports with metrics that accurately measure the Data Conversion progress. - [Add detailed Conversion tasks to the Project Schedule.] Closed 7/30/2021 - The DHS Data Governance committee needs to clarify the usage of MDM so the BES conversion team aligns to the planned governance structure. - The Data Conversion team should evaluate the Just In Time (JIT) approach to determine if there are risks to the project that should be monitored/managed.	Q4 2020	3	2	Med	Open		

#	Description	Owner	Type	Date	Category		Priority		Rating	Status
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	2	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
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	2	Low	Open
43	DHS PMO project team members have transitioned off the project, which may cause gaps in knowledge transfer and leadership on the project.	Ryan	Finding - Issue	1/10/2020	Project Management		5	4	High	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 Manageme	...	...	...	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	...	...	...	1/31/19	3	3	Med	Open	...
2	Late delivery of project deliverables may cause schedule delays.	Ryan	Finding - Issue 11/28/2018	Project Manageme	...	...	...	TBD	4	5	High	Open	...