OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

October 21, 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 (Oct 21, 2021 13:20 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: September 1 - 30, 2021

Submitted: ***October 13, 2021***

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

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PUBLIC CONSULTING GROUP

Solutions that Matter

Executive Summary

Executive Summary

During this reporting period the BES Project Team continues to adjust to the SDLC changes and the joint (ASI/DHS) System Integration Testing (SIT) approach.

Key project activities included:

- The acting BES PM (and BESSD Administrator) announced his resignation, effective September 30 .

- DHS acquired a new BES PM, who has extensive BES project experience.

- The ASI announced the departure of their System Architect, with the responsibilities shifting to an existing ASI resource as an interim solution.

The project schedule continues to be updated and is not yet approved. The ASI reported back in February 2021 that the schedule would need to be adjusted for the CMM Interview level of effort and KOLEA ATC delays for BES. The Two-Portal change request and the GCP change request are still not approved. The DHS PMO vacancies are becoming even more critical as planning for Pilot and Statewide rollout continues. The ASI has not yet scheduled a "Root Cause Analysis" (RCA) on the Release 0.4 UAT cycle, which may identify other revisions to the SDLC processes to improve code quality and/or test results.

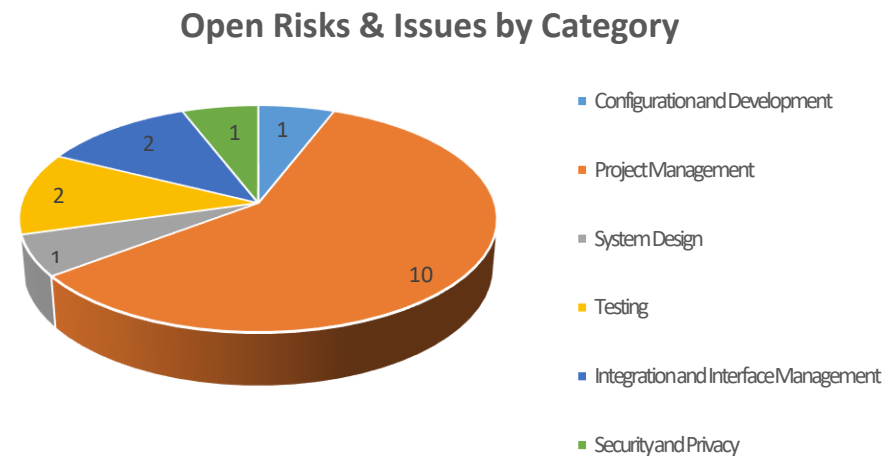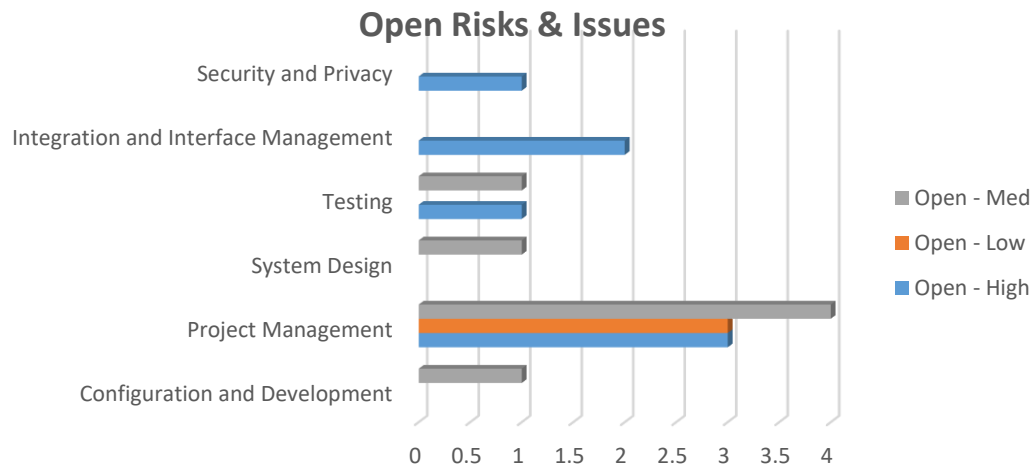| Jul	Aug	Sep	Category	IV&V Observations
H	H	H	Project Management	IV&V maintains a high criticality rating for this category given: 1) The BES project schedule has yet to be finalized or approved by DHS despite being 8 months since the ASI reported that the schedule required adjustments. 2) The lack of visibility into the cadence of development due to inconsistent velocity tracking. 3) Delays in filling key DHS project PMO resource positions
M	M	M	System Design	IV&V was invited to observe product owner meetings starting in October. This will provide IV&V additional opportunity to observe the ASI and DHS design discussions.

Executive Summary

Jul	Aug	Sep	Category	IV&V Observations
M	M	M	Configuration and Development	The project team is currently implementing a combined testing (UAT and SIT) approach. IV&V will monitor this approach to determine the impact on reducing defects and the potential for shifting the burden of testing from the ASI to DHS.
H	H	H	Integration and Interface Management	The project team continues to make progress with the interface tasks and activities. IV&V remains concerned about the amount of work remaining this far along in the project. Integration between the BES Modules remains a high criticality rating. It remains unclear if all integrations will be completed without schedule slippage.
M	M	M	Testing	DHS participation in SIT is providing the ASI team with better knowledge of business requirements and defects are being discovered earlier in Integration testing (INT). The ASI demonstrated an ADA tool used by their developers. They continue to review tools capable of providing compliance reporting.
N/A	H	H	Security and Privacy	The ASI is finalizing the BI-13 Security Plan DED. Discussions between DHS and the ASI about which version (Rev 5 versus Rev 4) of NIST Special Publication 800-53 system security and privacy controls to use are ongoing. ASI is having internal discussions on how to shift to Rev 5 and still complete the work on time.

IV&V Findings and Recommendations

IV&V Findings and Recommendations

As of the September 2021 reporting period, PCG is tracking 17 open findings (9 risks and 8 issues) and has retired a total of 49 findings. Of the 17 open findings, 10 are related to Project Management, 2 in Integration and Interface Management, 2 in Testing and 1 each in System Design, Configuration and Development, and Security and Privacy.

Open Risks & Issues

- Open - Med
- Open - Low
- Open - High

Open Risks & Issues by Category

- Configuration and Development
- Project Management
- System Design
- Testing
- Integration and Interface Management
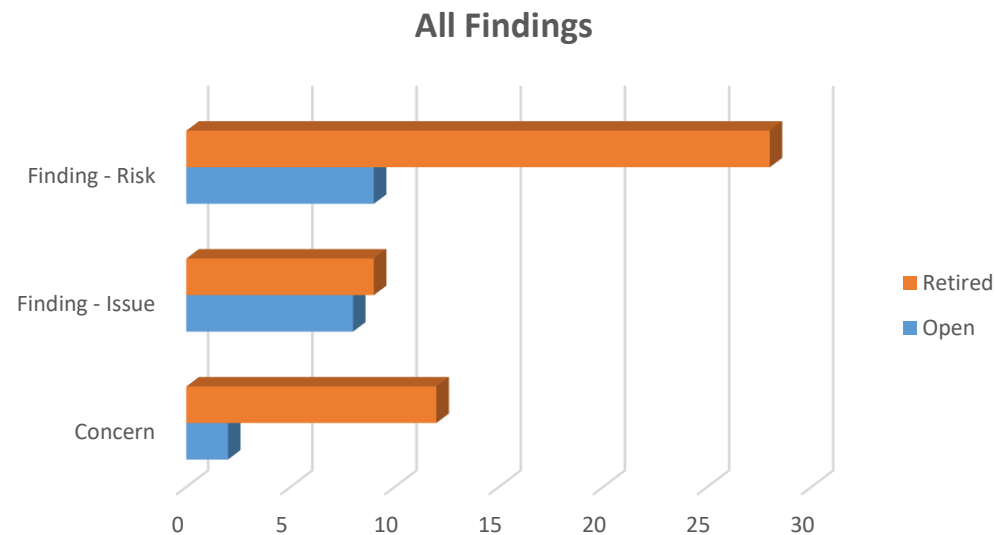- Security and Privacy

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
	None	

IV&V Findings and Recommendations

Preliminary Concerns Investigated During the Reporting Period

| #	Finding	Category
69	**Lack of DHS visibility into regression testing may cause defects/rework within the BES application.** Progress is noted in the ASI raising the visibility of regression testing in the following actions. • The ASI responded to questions posed by IV&V related to Regression Testing. • The ASI has added a Regression Testing section in the SIT dashboard and has provided reasoning for Failed Regression Test Cases. • The ASI has identified the contact resources to help IV&V understand the Python test cases, metrics gathered, the manual tests being executed by the ASI for regression testing, and regression test results. Meetings between IV&V and the ASI are being scheduled and the IV&V team will continue to monitor regression testing.	Testing
70	**Insufficient configuration management may result in preventable defects, schedule delays, budget issues and resource adjustments to compensate for quality and schedule issues.** The ASI stated their intention to update the Configuration Management Plan. It is anticipated that some configuration management responsibilities related to the GCP change request will shift from the ESI to the ASI. It remains unclear if the ASI is fully prepared to fully support configuration management.	Configuration and Development

IV&V Findings and Recommendations

Findings Opened During the Reporting Period

#	Finding	Category
	None	

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
2	**Issue – Late Delivery of project deliverables may cause schedule delays**. The ASI published a draft BI-5 Project Schedule for DHS and IV&V review and comments. The intent is that the project schedule will be re-baselined once the comments are resolved, and DHS approves the schedule. IV&V remains concerned about late deliverables while the new baseline schedule is still being revised.	(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
• Despite not yet having a revised baseline schedule, continue monitoring and analyzing deliverables that may have impact to the critical path.	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 Two-Portal and GCP change requests are still not finalized. IV&V remains concerned about the potential impact on the project schedule and budget. IV&V also remains concerned that the overall architecture remains in flux, and that ongoing component updates as the architecture team pursues the most optimal infrastructure solution will affect maintenance and operations planning.	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 (e.g., ADA, Configuration Management tools), 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**. The BESSD Administrator, serving as the interim DHS BES Project Manager resigned from DHS. To mitigate the knowledge and leadership risk, DHS backfilled the DHS BES Project Manager with a contractor possessing extensive BES project experience. The Assistant BESSD Administrator will provide an active decision-making role in the project. IV&V will monitor the impact of these project management changes. The remaining DHS PMO positions continue to be unfilled.	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.** No material updates in this reporting period.	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.** No material updates in this reporting period. The ASI reported in April 2021 that they would publish proposed quality metrics, but this has not occurred. IV&V is concerned with the lack of evidence that the ASI is following the Quality Management Plan and will evaluate raising the criticality rating of this finding.	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 – Missing and incomplete artifacts required as entry and exit criteria for each testing stage could lead to schedule slippage or delivery of a solution that does not meet business needs or requirements..** IV&V has expanded the focus of this finding to encompass all testing phases. With the changes made to the SDLC, there is some confusion on the process and timing of design documents as inputs into the testing phases. It is IV&Vs understanding that the ASI and DHS are discussing the timing of the artifacts and deliverables needed for testing. IV&V will follow up with the ASI and DHS.	**M**

Recommendations	Progress
• 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.	Complete
• 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 RCA session is scheduled.	Not Started
• Verify that all entry and exit criteria are met per documented processes for each stage of testing.	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 reviewed velocity charts for CMM, FMM, and SSP development in Jira and found inconsistent methods for tracking velocity: • The FMM velocity chart did not contain committed or completed story points. • The CMM and FMM velocity charts contained the committed story points but not the completed story points. To determine the velocity, the development teams should report both the committed and completed story points. IV&V will meet with the ASI to discuss the velocity charts in Jira and monitor this issue.	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 progress
• 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.** A BES PM has been selected and will begin on October 1, 2021. The new contract PM was previously involved with the project in a different role and therefore is knowledgeable of the project, which may mitigate the departure of the acting PM. The Assistant BESSD Administrator will provide an active decision-making role in the project. IV&V will continue to monitor.	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.	Complete
• 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
• DHS continue planning, transitioning, and adapting to staff changes.	In progress

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
71	**Risk - The lack of the final agreement on the scope and costs of the GCP Change Request (CR) may lead to unanticipated DHS costs, schedule delays, and/or the need to reduce scope.** The ASI met with the IV&V team on 9/15/21 and provided a high-level overview of GCP CR. The ASI continues to draft the CR and a date has not yet been established to present the CR at the BES CCB. IV&V is concerned with the scope of this CR and the project team's ability to fully implement the scope of work in the time remaining prior to pilot.	(M)

Recommendations	Progress
• The ASI should document the current environment M&O activities to ensure all activities are known with a clear understanding of the "AS IS" and "TO BE" model for services beginning with the DDI, through Pilot/Implementation and M&O.	Not Started
• The ASI clearly document the scope of work and cost for the GCP CR during DDI and M&O and provide to DHS for approval.	Not Started

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
72	**Risk - The inability to measure and report the overall Data Conversion work effort and progress may lead to schedule slippage.** The Data Conversion team is not accurately and concisely reporting work completed vs. planned. The ASI is currently revising the weekly status so that this can be accurately reported. As an example, the Release 0.4 status reflects all data conversion work is complete however, in other meetings the data conversion team indicated some Release 0.4 data conversion work is in progress. IV&V will continue to monitor.	M

Recommendations	Progress
• The ASI should develop reports with metrics that accurately measure the Data Conversion progress.	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
• The DHS Data Governance committee continue to clarify the usage of MDM so the BES conversion team aligns to the planned governance structure.	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.** The ASI has stated that several integration points are being defined as part of their ongoing development work and they are evaluating whether any integration points can be completed sooner than originally planned. IV&V is concerned that pushing this work towards the end of development could result in schedule slippage if components do not integrate as expected and more work is required to develop and test..	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 this approach..	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 continued to update the communication plans. IV&V conducted another review of the communication plans and found that contacts have not been documented for 1 interface partner, 3 MOAs have not been approved, 2 need unit test dates confirmed, 4 need system test and UAT dates confirmed, and 27 need pilot and production cutover dates confirmed. IV&V understands that DHS is responsible for identifying the contacts, ensuring that the MOAs are approved, and confirming the test and cutover dates. IV&V will continue to monitor.	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 project team is currently implementing a combined (UAT and SIT) testing approach, meaning DHS staff will participate in SIT. Individual Release UAT will no longer be performed at the end of each release. Final Acceptance testing will become the final UAT. It remains unclear whether this approach was chosen by DHS and the ASI to improve testing or to address the significant number of defects produced by their development teams or both. It also remains unclear whether this approach will shift the burden of testing from the ASI to DHS whose resources are already constrained. IV&V is not aware if the SDLC design process changes have been communicated and fully understood by the project team. IV&V will continue discussions with DHS and the ASI.	Ⓜ

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.	Complete
• 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.** IV&V received invites to selected Design Sprint Meetings on 9/30 and will resume monitoring design discussions between ASI and DHS. IV&V has observed and DHS/ASI has confirmed that the participation level of ASI and DHS product owners in design meetings has increased.	**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.	Complete
• The Functional Design Document process, to include the Design Sprint concept, should be clearly defined and shared with all project team members.	In process
• Invite IV&V to all future design sessions and design sprints to allow IV&V to observe and assess the effectiveness of the revised design processes.	In process

IV&V Findings and Recommendations

Testing

#	Key Findings	Criticality Rating
66	**Issue – The number of issues/defects found during testing may cause planned work in the future sprints to be delayed due to the resolution and retesting of issues/defects.** This finding has been expanded to focus on the volume of defects across testing phases (Unit, Integration (INT), System Integration Testing (SIT)). Although the ASI has not conducted the Release 0.4 testing defects root cause analysis, DHS and the ASI decided to not perform UAT per release and instead has State resources participating in SIT. By combining the DHS and ASI testing teams to focus on development and SIT it is expected that defects will be found earlier, and the BES application quality will improve. During this reporting period Release 0.5 SIT completed and the project team along with IV&V are evaluating the results.	M

Recommendations	Progress
• Perform a joint Release 0.4 UAT (DHS/ASI/IV&V) RCA to identify and take corrective actions.	Not started
• Adjust the project plan and provide reasonable scope for SIT in 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.	Canceled
• 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 Findings and Recommendations

Testing

#	Key Findings	Criticality Rating
67	**Risk - The Americans With Disabilities Act (ADA) Section 508 compliance tool has not been installed for the project, which may cause significant rework.** IV&V met with the ASI development lead on 9/23/2021 to observe the use of the Section 508 Compliance (ADA tool) currently used by developers to test pages locally and correct deficiencies. This tool (VueAxe) is a browser plugin that does not provide reporting to support ADA compliance. The ASI team is evaluating AccessiBe to provide the reporting and ability to work within the Google Cloud Platform (GCP). Once AccessiBe has been tested a follow-on demonstration will be scheduled between IV&V and the ASI development lead. IV&V will continue to monitor the progress in selecting, testing, configuring, and demonstrating the Section 508 compliance tool (ADA).	H

Recommendations	Progress
• The ASI should gain DHS' approval on the tool selected after the ASI validates it will perform as expected within the BES architecture, meeting all contractual and project requirements.	In process
• The ASI create and communicate the plan for when the ADA compliance tool will be put into action, how the tool will report compliance or non-compliance, how non-compliance will be corrected, and how and when DHS and IV&V will be provided the reports from the ADA compliance tool and how to interpret those reports for the code from previous, current and future releases.	In process

IV&V Findings and Recommendations

Security and Privacy

#	Key Findings	Criticality Rating
68	**Risk - Insufficient planning/execution of the BES Security Plan activities may lead to delays in gaining Federal Partner approval for the BES to begin the Pilot Phase.** The ASI received all feedback on the BI-13 Security Plan DED and is in the process of finalizing the document. Discussions between DHS and the ASI about which version (Rev 5 versus Rev 4) of NIST Special Publication 800-53 system security and privacy controls to use are ongoing. ASI is having internal discussions on how to shift to Rev 5 and still complete the work on time. The project team has begun documenting controls. IV&V has recommended use of the RTM to track all security requirements and would like to see the data used by the ASI to estimate level of effort. The lack of credible estimates could result in schedule delays if ASI and DHS resources are not at the level necessary to complete the work.	H

Recommendations	Progress
• DHS and the ASI agree and finalize the BI-13 DED.	In process
• The ASI continue to develop the BI13 Security Plan in close collaboration with DHS.	In process
• DHS and the ASI agree upon the tools and process that will be used to document and track security control implementation, if not included in the BI-13 Security Plan. The process should define the level of detail needed to track progress (estimates, target dates, risks, issues, evidence) along with the Requirement Traceability Matrix.	In process
• ASI, per DHS guidance, should begin to pivot toward the adoption of 800-53 Rev 5 since Rev 4 will be obsolete when the system goes live.	In process

IV&V Status

IV&V Engagement Status

IV&V Engagement Area	Jul	Aug	Sep	Comments
IV&V Budget	🟢	🟢	🟢	
IV&V Schedule	🟢	🟢	🟢	
IV&V Deliverables	🟢	🟢	🟢	
IV&V Staffing	🟢	🟢	🟢	Jeremy Riley has joined the IV&V team and Manual Barandas is no longer supporting the HI DHS BES project.
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 September reporting period:
  - Completed – August 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 October 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 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-22 Release 0.5 System Test Report	9/24/2021	Draft
BI-5 Project Schedule Baseline_210917	9/17/2021	_210917
BES Data Conversion - Release 0.4 Source to Target Mapping	9/14/2021	N/A
BI-14 Release 0.5 Technical Design Document - D-SNAP	9/7/2021	Draft
BI-10 R0.5 SSP Renewals, Administrative Hearing, Case Management, Document Management - Iteration 2	9/7/2021	2.0
Document Review and Approval Process	9/3/2021	1.0
BI-20 Release 0.5 Test Scenarios, Cases, and Scripts (Iteration 1)	8/27/2021	1.0

Additional Inputs – Artifacts

Deliverable Name	Artifact Date	Version
Unisys Contract Amendment 3	4/17/2020	N/A
FNS Handbook 901	01/2020	V2.4
BES Weekly Schedule (BI-5)	09/7/2021 09/14/2021 09/21/2021 09/28/2021	N/A
BES Weekly Status Report	09/01/2021 09/15/2021 09/29/2021	N/A
BES Shared Interfaces	N/A	N/A

Additional Inputs

Meetings and/or Sessions Attended/Observed:

1. Weekly Platform Status Meeting – 9/7/2021, 9/14/2021, 9/21/2021, 9/28/2021
2. Weekly DDI Architecture Review Meeting – 9/1/2021, 9/15/2021, 9/22/2021
3. Bi-Weekly Project Status Meeting – 9/1/2021, 9/15/2021, 9/29/2021
4. Bi-Weekly BES PMO and IV&V Touch Base – 9/29/2021
5. Weekly BES Dev Stand-up – 9/1/2021, 9/8/2021, 9/15/2021, 9/22/2021, 9/29/2021
6. Weekly SSP Backlog Grooming Session – 9/1/2021, 9/22/2021, 9/29/2021
7. BES Data Conversion Meeting – 9/13/2021, 9/20/2021, 9/27/2021
8. BES Data Conversion Working Group Meeting – 9/16/2021
9. Weekly BES Project Schedule Review Meeting – 9/7/2021, 9/14/2021, 9/21/2021, 9/28/2021
10. IV&V Team Meeting – 9/2/2021, 9/9/2021, 9/13/2021, 9/16/2021, 9/20/2021, 9/22/2021, 9/27/2021, 9/28/2021, 9/30/2021
11. Weekly DHS-Unisys Security Touchpoint – 9/7/2021, 9/14/2021, 9/21/2021, 9/28/2021
12. BES Security Control Implementation Lifecycle Meeting – 9/14/2021
13. CCWIS Check-In – 9/1/2021
14. Bi-Weekly DHS and IV&V Touch Base – 9/13/2021, 9/27/2021
15. ASI and IV&V Pre-Draft Report Review – 9/1/2021
16. R0.5 SIT Go/No-go – 9/2/2021
17. R0.5 Weekly SIT Status – 9/9/2021, 9/16/2021
18. BES – Touch base with Kristia – 9/8/2021, 9/22/2021
19. [BES] R0.6 Screen Prototype – CMM CO05 Manage Interview – 9/9/2021

Additional Inputs - Continued

Meetings and/or Sessions Attended/Observed:

21. [BES] R0.7 Screen Prototype– CMM QM08 Log Administrative Hearing – 9/9/2021
22. [BES] R0.6 Sprint Demo – CMM CO05r Manage FTW (EB Status) – 9/9/2021
23. [BES] R0.6 Sprint Demo – CMM CO05u Manage Applied for Other Income – 9/10/2021
24. [BES] R0.6 Sprint Demo – CF CF10 Manage Special Indicator – 9/10/2021
25. Google Cloud Platform Discussion with ASI – 9/15/2021
26. Executive Steering Committee Meeting – 9/16/2021
27. [BES] Release Checkpoint Meeting – 9/16/2021
28. [BES] R0.7 IF23 Cardinal Interface meeting – 9/17/2021
29. [BES] R0.7 Screen Prototype – CMM/CF PE01, PE02, PE11 meeting – 9/17/2021
30. [BES] R0.6 Sprint Demo – CF CF10 Manage Special Indicators meeting – 9/17/2021
31. Sprint Demo – 9/27/2021
32. [BES] R0.5 BI-14 Walk-Through – SSP – 9/22/2021
33. BES Defects and Enhancements - Part II – 9/23/2021
34. HI BES ASI and IV&V Touch Base - Functional Team – 9/21/2021
35. ASI/IV&V Mid-month Check-in – 9/21/2021
36. HI BES ASI and IV&V Touch Base - Technical Team – 9/16/2021
37. HI-BES - ADA demonstration – 9/23/2021
38. Lunch and Learn – 9/17/2021

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