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November 17, 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 (Nov 19, 2021 12:39 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: October 1 - 30, 2021

Submitted: ***November 15, 2021***

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

- Executive Summary
- IV&V Findings and Recommendations
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- Appendices
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  - B – Risk Identification Report
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PUBLIC CONSULTING GROUP
Solutions that Matter

Executive Summary

Executive Summary

In October, the BES Project team completed the Release 0.5 Systems Integration Testing (SIT). This was the first release where the DHS and ASI test teams worked together to conduct Integration and SIT testing, resulting in early issue identification. Initial results reported by the Project Team show improved testing metrics compared to previous releases.

The Project continues to experience disconnects between the design and development activities. With inclusion of design sprints in the revised SDLC process, it is anticipated this will dimmish over time. During this review period, IV&V was invited to more design sessions and will share any best practices or insights with the Project Team.

The significant risks to the BES Project are:

- The BES project schedule is not approved by DHS. The ASI is working to address schedule concerns raised by DHS and IV&V. The delays with CMM Interview, Single Sign-on, and KOLEA integration activities continue to be monitored for their impact to the schedule.
- The change requests for the Two-Portal approach, the Google Cloud Platform (GCP), and Rescheduling are still not approved. It remains unclear if these CRs will introduce significant scope changes
- The BI-13 Security Plan Deliverable Expectation Document (DED) used as the template for the security plan is not approved by DHS. The projects Security Team is actively working on it along with some of the implementation activities however, there is a significant amount of work that must be complete prior to Pilot.

Without an approved schedule that is realistic and comprehensive, IV&V remains concerned that the project may not be ready for Pilot by next August.

Aug	Sep	Oct	Category	IV&V Observations
H	H	H	Project Management	The criticality rating for this category remains high due to the: 1) absence of an approved schedule 2) lack of velocity reporting on FCM (CMM and FMM modules) development that drives project planning, and 3) lack of state funding to fill vacant PMO positions. This category has been at a high criticality rating since July 2020 (16 months).

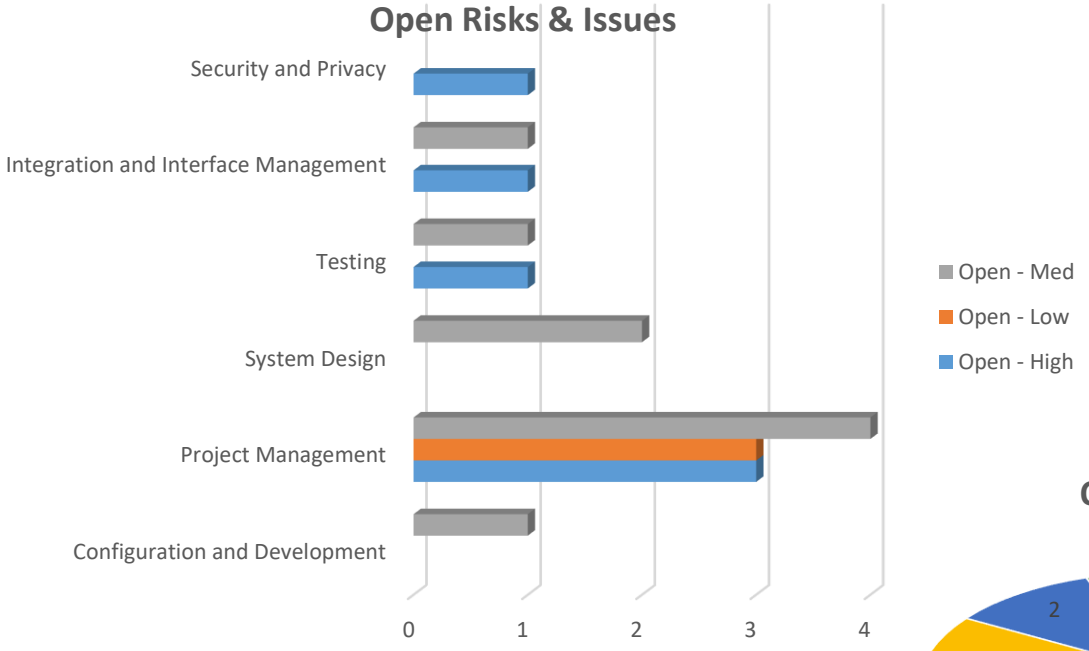
Executive Summary

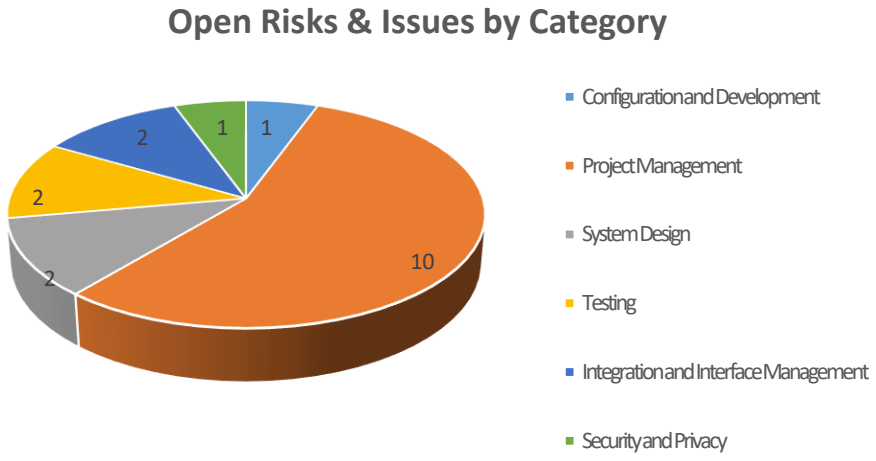
Aug	Sep	Oct	Category	IV&V Observations
M	M	M	System Design	IV&V was invited to design sessions, which will increase our visibility into the ASI and DHS design discussions. Discrepancies between what is being designed and what is being developed, are leading to defects. A new IV&V risk was opened in October pertaining to the current ASI infrastructure plans. IV&V is concerned with the number of infrastructure components, and the fact that not all components are finalized.
M	M	M	Configuration and Development	IV&V continues to evaluate the SDLC process changes and the BES project team's understanding and use thereof.
H	H	H	Integration and Interface Management	IV&V is concerned that the interface contact for CYRCA is still outstanding. This has been escalated to DHS. While the ASI and DHS have been making good progress in interface planning, IV&V is evaluating a new finding to track the development and implementation of interfaces.
M	M	M	Testing	The ASI conducted the Release 0.4 root cause analysis session with the project team. IV&V is seeing improvement in the testing process and will continue to monitor. IV&V remains concerned that the ADA tool proposed for compliance reporting is not in place.
H	H	H	Security and Privacy	Progress was made in the Security and Privacy category, but there is a significant amount of work remaining. The ASI is finalizing the BI-13 Security Plan DED. DHS and the ASI have agreed to the NIST Special Publication version to be used for the security controls. Work continues in implementing the security standards, controls and requirements.

IV&V Findings and Recommendations

IV&V Findings and Recommendations

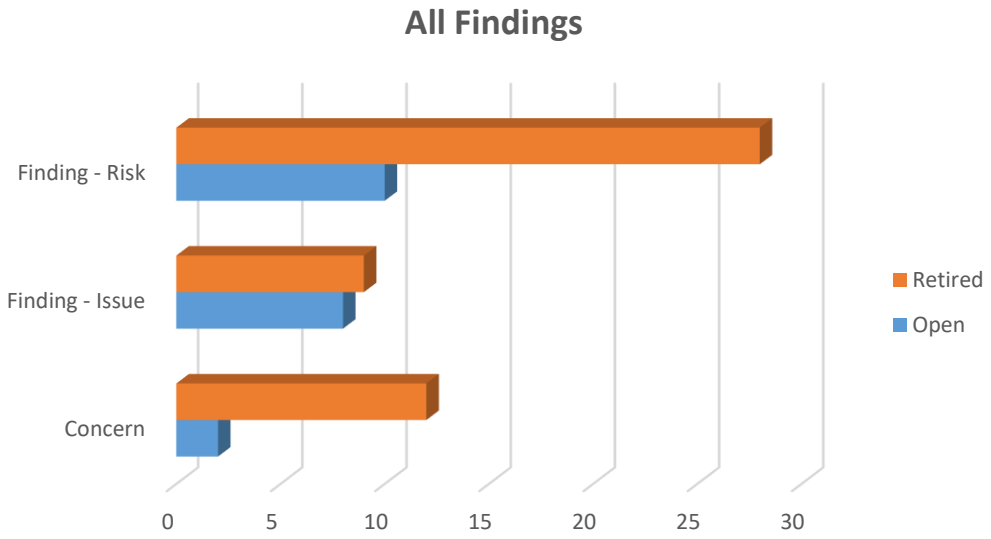
As of the October 2021 reporting period, PCG is tracking 18 open findings (10 risks and 8 issues) and has retired a total of 49 findings. Of the 18 open findings, 10 are related to Project Management, 2 in Integration and Interface Management, 2 in Testing, 2 in System Design, 1 in Configuration and Development, and 1 in 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).



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.** Although a Regression Testing dashboard is now available, it does not provide a clear view of the actual testing results. Modifications to the dashboard are in process. There are 3 types of failures reported in Regression Testing: 1 - Known defect in code, 2 - defect in test script, and 3 - new defect in the code. IV&V is focused on type 3 - new defects in code, that was previously defect-free. Note - Regression Testing is performed for each release as the code is deployed. IV&V is concerned about the effectiveness of Regression Testing since there is no assurance that the regression tests can identify problems in previous functionality that worked properly.	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 has made progress in their configuration management (CM) planning, such as identifying who will fill the Configuration Manager position but have noted that full implementation of configuration tracking may be delayed as they prioritize build out of more critical components of the BES infrastructure. The ASI will work with DHS to solidify CM tool decisions. For BES CM, they are currently considering replicating and improving on KOLEA's CM approach which only tracks the most critical configuration items (e.g., firewall and other security configurations) and creating a CM database (CMDB). It remains unclear if the ASI will utilize ServiceNow (currently in use at DHS) for their CMDB. The ASI is currently using bitbucket for configuration tracking purposes.	Configuration and Development

IV&V Findings and Recommendations

Findings Opened During the Reporting Period

#	Finding	Category
73	**Risk – The planned BES infrastructure is complex which could be difficult to implement and maintain and could lead to schedule/cost impacts. – Medium Criticality Rating** **Observation:** Current ASI infrastructure plans include a significant number of sophisticated components that make up a complex cloud infrastructure. Further, the Project Team has yet to finalize components that will make up the BES infrastructure and the additional costs and time to configure, test, and implement the planned complex environment remain unclear. **Significance:** If the level of effort to implement and manage the complexities of the BES infrastructure is not accurately accounted for and staffed by the ASI, the project could be met with unexpected costs and schedule delays. Delays in finalizing the components could exacerbate this risks and lead to further delays. Complex platforms often present system maintenance and operations challenges as system changes can present an increased potential for system failure (i.e., due to the significant number of "moving parts") and increase the level of time and effort to resolve infrastructure and application-level bugs. Further, some components remain in an immature state compared to their legacy counterparts. For example, the project recently experienced a system failure because Google Cloud failed to clearly communicate a change that led to failure in another component (i.e., Nexus). Google Cloud is generally viewed as a less mature product offering, compared to their rivals (Amazon Web Services, Microsoft Azure). IV&V remains concerned that this could lead to failures at critical points in the project (including post-go live production failures) that could be difficult to resolve and lead to project disruption. **Recommendations:** Request the ASI clearly communicate the potential costs and schedule impacts to implementing the planned infrastructure. DHS work with the ASI to assess the potential challenges of maintaining a complex environment and consider scaled back options that could reduce this risk and reduce long-term support costs. Request the ASI to develop a process to closely monitor cloud and other product changes (software updates/new releases), manage changes, and regression test once updates are applied.	System Design

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
2	**Issue – Late Delivery of project deliverables may cause schedule delays**. This month the ASI conducted two sessions to review the schedule questions raised by DHS and IV&V. It is apparent that many of activities/tasks are not yet effectively planned, meaning several updates/additions are necessary to provide a complete understanding of the project work. Additionally, the overlap of Releases 0.4 - 0.10 is concerning based on (1) the lack of visibility into resource requirements, and (2) historical project team performance does not support the aggressive schedule. DHS is reviewing the schedule with the ASI to ensure it is measurable, realistic and in-line with the project teams' past performance and resource availability.	

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.** IV&V remains concerned with the significant delays in finalizing the Two-Portal, GCP, and Rescheduling change requests (CRs). The Rescheduling CR was previously tracked as the KOLEA ATC CR. Further, it remains unclear if these CRs will introduce significant scope changes and whether these potential scope changes are fully communicated and vetted by the larger project team.	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**. 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.** 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.** DHS testing team reported inconsistencies between wireframes and Functional Design Documents, causing challenges in creating test cases and resulting in defects in development. IV&V and DHS are concerned that as the project moves to larger and more complex releases, these quality issues could negatively impact the project. IV&V added a new recommendation that the ASI focus on addressing these inconsistencies.	L

Recommendations	Progress
• 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
• ASI verifies that the information in design and testing artifacts is kept in sync and consistent.	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 observed the go/no go meeting for SSP in Release 0.6 SIT, with all artifacts required for entry criteria being in place. The CF and CMM modules were not ready for SIT so they will enter later. The ASI stated that SSP module entered SIT early, and that CF and CMM modules will enter SIT on time, but IV&V is concerned with the impact multiple sessions put on DHS resources. IV&V will assess the thoroughness of the go/no meeting for the Release 0.6 CF and CMM modules and future release go/no go meetings for consistency and accuracy.	M

Recommendations	Progress
• 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.	Complete
• 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 the velocity charts in Jira for Release 0.6 and found that the SSP velocity chart was complete. However, the velocity charts were incomplete for FMM, CMM, CF, BESSD Interfaces, and Shared Interfaces, which were scheduled in Release 0.6. In addition, IV&V noted inconsistencies in story points for Release 0.6 SSP between Aha! (222) and Jira (799). IV&V will continue to monitor.	H

Recommendations	Progress
• Calculate the average velocity from past iterations to be used as a historical reference.	In process
• Provide velocity charts with committed and completed story points for projects documented in Jira.	In progress
• Optimize work based on estimations.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
65	**Risk – Insufficient project availability of DHS BESSD staff with expansive business knowledge could lead to a BES solution design that falls short of the DHS business needs.** The ASI has reported significant improvement in the participation of experienced DHS BESSD staff since this finding was opened. IV&V will validate this input regarding BESSD staff with the new BES Project Manager, who brings extensive BES experience with a minimal learning curve and significant value to the project.	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 has not submitted the GCP Change Request to DHS. IV&V recommends that DHS and the ASI agree to a firm delivery date for the change request.	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
• DHS and the ASI agree to a firm delivery date for when DHS will receive the GCP CR.	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.** IV&V remains concerned about the progress of data conversion, given the level of work still being performed on Release 0.4. The ASI data conversion lead stated that the remaining releases contain more tables, that are just as complex as those found in Release 0.4. The data conversion team reported they are working on a new metric/measure that will be a better gauge of progress. IV&V has added a recommendation that the data conversion team consider using use cases and story points, which rest of development teams are utilizing, allowing them to have Velocity to measure progress.	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
• The Data Conversion team consider using use cases and story points to measure progress.	Not Started

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.** Increased communication between the ASI's development teams is improving each team's understanding of integration requirements and impacts to each team's code base. Therefore, IV&V is lowering this risk criticality to Medium. However, IV&V remains concerned that implementation of some integrations will occur in later releases which could lead to unexpected issues and leave the project little time to correct these issues.	M

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 continues to update the communication plans. One interface contact (CYRCA) is still outstanding. There are 3 MOAs (DAGS, HYCF, NCOA) still outstanding. IV&V has recently been invited to interface meetings, which have been very productive. The ASI and DHS have made major progress in identifying interface partner contacts and planning for testing with them. Note: Since this risk only pertains to interface planning, IV&V is evaluating the need of a separate finding regarding the implementation of interfaces.	H

Recommendations	Progress
• Establish a communication plan for each interface partner for the duration of the BES DDI activities.	Complete
• 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.** It remains unclear whether recent changes to testing and the SDLC design process have been fully communicated to and understood by the project team. Further, it remains unclear if the new testing process/approach will effectively reduce leakage problems or whether leakage would be better addressed through increased efforts to reduce system design misunderstandings and development defects.	M

Recommendations	Progress
• 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.** The BES Project Team (DHS, ASI, IV&V) has shared concerns about issues arising late in the development process during in Sprint demo and prototype meetings. IV&V has now been invited to many more of the design sprint meetings, where we will seek to understand how these gaps in design are occurring; and look to discuss potential resolutions with DHS and the ASI.	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 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.** Defect leakage metrics for R0.5 greatly improved. IV&V will continue to monitor defects reported during INT and SIT and the leakage between those testing efforts. The ASI conducted the Release 0.4 root cause analysis session with DHS and IV&V.	M

Recommendations	Progress
• Perform a joint Release 0.4 UAT (DHS/ASI/IV&V) RCA to identify and take corrective actions.	Completed
• 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
• 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.** No material updates in this reporting period. Until a tool is proven to work with the current architecture this finding will remain open, and IV&V will continue to monitor.	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 is working to resolve the final outstanding comments on the BI-13 Security Plan DED. Agreement has been reached that the Security Plan and controls documentation will follow 800-53 Rev 4 but with the addition of several Rev 5 controls as indicated by the latest IRS 1075 publication. The ASI agrees that they are contractually responsible for updating the Security Plan to the latest revision and have requested that DHS inform them in writing when they are expected to switch versions. The ASI is populating the Security Requirements Matrix in workbooks and importing it into Confluence, based upon feedback provided by DHS and IV&V. The ASI is modifying security artifacts to reflect recommendations from DHS and IV&V. Most feedback from DHS addresses the proper documentation of inherited controls. DHS made it clear that stating a control is inherited from GCP is not enough, and that it must be noted how the GCP satisfies the control objective.	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				PCG submitted the final September IV&V Monthly Status Report.
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 October reporting period:
  - Completed – September 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 November 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-14 Release 0.5 Technical Design Document - DSNAP (Iteration 1)	10/29/2021	0.7
BI-14 Release 0.5 Technical Design Document - SSP (Iteration 1)	10/28/2021	1.0
BI-10 R0.6 CMM Interview	10/27/2021	1.0
BI-10 R0.6 Common Functions Special Indicators (Iteration 2)	10/27/2021	1.1
BI-15 Release 0.5 Fully Configured and Developed System (Iteration 1)	10/20/2021	1.0
BI-20 Release 0.6 Test Scenarios, Cases, and Scripts	10/15/2021	Draft
BI-13 Security Plan DED and DCF	10/13/2021	3.1
BI-22 Release 0.5 System Test Report (Iteration 1)	10/13/2021	1.0
BI-15 Release 0.5 Fully Configured and Developed System	10/4/2021	Draft
BI-10 R0.6 SSP Application Management (No Account), Prepopulate Online Application	10/4/2021	Draft
BI-22 Release 0.5 System Test Report	10/1/2021	Draft

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)	10/5/2021 10/12/2021 10/19/2021 10/26/2021	N/A
BES Weekly Status Report	10/13/2021 10/27/2021	N/A
BES Risks and Issues Log	10/13/2021 10/27/2021	N/A
BES Shared Interfaces	N/A	N/A
NIST Special Publication 800-53 Security and Privacy Controls for Information Systems and Organizations	12/20/2020	Rev.5
NIST Special Publication 800-53 Security and Privacy Controls for Information Systems and Organizations	1/22/2015	Rev. 4

Additional Inputs

Meetings and/or Sessions Attended/Observed:

1. Weekly Platform Status Meeting – 10/5/2021, 10/12/2021, 10/19/2021, 10/26/2021
2. Weekly DDI Architecture Review Meeting – 10/12/2021, 10/19/2021
3. Bi-Weekly Project Status Meeting – 10/13/2021, 10/27/2021
4. Bi-Weekly BES PMO and IV&V Touch Base – 10/13/2021, 10/27/2021
5. Weekly BES Dev Stand-up – 10/6/2021, 10/13/2021, 10/20/2021, 10/27/2021
6. Weekly SSP Backlog Grooming Session – 10/6/2021, 10/13/2021, 10/27/2021
7. BES Data Conversion Meeting – 10/4/2021, 10/11/2021, 10/18/2021, 10/25/2021
8. BES Data Conversion Working Group Meeting – 10/21/2021
9. Weekly BES Project Schedule Review Meeting – 10/5/2021, 10/12/2021, 10/19/2021, 10/26/2021
10. IV&V Team Meeting – 10/4/2021, 10/7/2021, 10/12/2021, 10/14/2021, 10/18/2021, 10/21/2021, 10/25/2021, 10/28/2021
11. Weekly DHS-Unisys Security Touchpoint – 10/5/2021, 10/12/2021, 10/19/2021, 10/26/2021
12. HI DHS BES September Draft IV&V Report Review – 10/12/2021
13. Bi-Weekly DHS and IV&V Touch Base – 10/05/2021, 10/19/2021
14. ASI and IV&V Pre-Draft Report Review – 10/29/2021
15. [BES] R0.5 SIT Exit Criteria Go/No-Go – 10/6/2021
16. R0.6 Weekly SIT Status – 10/28/2021
17. BES – Testing Touch base – 10/6/2021, 10/27/2021
18. [BES] R0.5 BI-22 Walk-Through – 10/1/2021
19. [BES] PO Working Session– 10/5/2021, 10/12/2021, 10/19/2021
20. [BES] R0.7 Screen Prototype - PE03, PE05, CO13 – 10/5/2021

Additional Inputs - Continued

Meetings and/or Sessions Attended/Observed:

21. BES] R0.6 Sprint Demo – CMM CO05z Manage Communication Information – 10/8/2021
22. Automation Discussion (Selenium and Python) – 10/13/2021
23. MDM Data Sharing and Consent Management – 10/19/2021, 10/21/2021, 10/26/2021, 10/28/2021
24. [BES] R0.7 Screen Prototype – CMM PE06 Manage Eligibility – 10/20/2021
25. [BES] R0.7 Screen Prototype – CS23 and CS05j – 10/21/2021
26. R0.6 Sprint Demo – CMM CO05i Manage Expense Information – 10/22/2021
27. R0.6 Sprint Demo – CMM CO71 Manage Special Circumstance Allowance – 10/22/2021
28. Executive Steering Committee Meeting – 10/21/2021
29. Implementation Planning – 10/12/2021, 10/26/2021
30. [BES] R0.5 BI-15 Walk-Through – 10/7/2021
31. BES Defects and Enhancements – Action Item Updates – 10/7/2021, 10/27/2021
32. HI BES ASI and IV&V Touch Base - Functional Team – 10/19/2021
33. ASI/IV&V Mid-month Check-in – 10/19/2021
34. HI BES ASI and IV&V Touch Base - Technical Team – 10/21/2021
35. Monthly Project Risk and Issue Review Meeting – 10/6/2021
36. Interface Consumption DHS PO Meeting (CMM Interfaces) – 10/27/2021, 10/28/2021
37. Client Correspondence Product Owner Meeting – 10/28/2021
38. CMM Product Owner Meeting – 10/27/2021, 10/29/2021
39. CO20 View Alerts Product Owner Meeting – 10/29/2021

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

Ending Slide

Solutions that Matter

#	Tracker Number	Title	Reporter	Tracker Type	Identified Date	Category	Description	Clarification	Recommendation	Event Horizon	Impact	Probability	Market Volatile	Tracker Status	Date Retired	Status Update	Client Comments	Vendor Comments	Risk Comments
73		The planned AWS infrastructure is complex which could be difficult to m	mtiss	Finding - Risk	10/28/2021	System Design	Current AD infrastructure plans include a significant number of AWS components and services to support the new cloud infrastructure. Further, the Project Team has yet to finalize components that will make up the AD infrastructure and the additional costs and complexity that will be required to implement the planned complex environment remain unclear.	If the level of effort to implement and manage the complexities of the AD infrastructure exceeds the capabilities of the Project Team and IVV SEL, the project could be met with unexpected costs and schedule delays. Delays in finalizing the components being implemented could also impact the ability of the Project Team to fully test, validate and affect present system requirements and operations challenges as system changes can hold the increased potential for system failure. The AD infrastructure is complex and will require a significant amount of level of time and effort to monitor, troubleshoot and sustainment and logs. Further, some components remain in an immature state compared to their legacy counterparts. For example, the project recently experienced a system failure because Google Cloud Sql had to be restored from backup. Although the AD infrastructure is a component (i.e., Nutanix), Google Cloud is generally viewed as a less mature product offering, compared to the IT stack (Amazon Web Services, Microsoft Azure). Therefore, the potential for unplanned and lead to failures or critical points in the project (including post-go-live production failures) that could be difficult to resolve and lead to project disruption. If SHS intends to overhaul/ replace M&O	• Request the AD clearly communicate the potential costs and complexities of the planned AD infrastructure and components in SHS with the AD to assess the potential shortages of maintaining a complex environment and consider cancel back options that could reduce the complexity of the AD infrastructure. Specifically, we should develop a process to closely monitor cloud and other product changes (software updates/new releases), manage changes, and regression test once updates are applied.	Near-several months	5	5	Med	Open				
72		The inabil ity to measure and report the overall Data Conversion work s	Brad	Finding - Risk	8/31/2021	Project Management	The data conversion work shows good progress at the tactical level, however as per a review we have, the measures of SHS are developed. However, clarity on progress at a strategic/project level is difficult to measure/gauge	Data Conversion (DC) is often considered one of the longest and most challenging efforts on any project. Due to the complexity, dependencies and inequality in the overall SHS solution, it is critical that the project team understand if DC work is on schedule for Pilot and implementation and take mitigation actions if risks are identified.	- The AD should develop reports with metrics that accurately measure the progress and completion of DC work. The AD should continue to continue to clarify the scope of SHS as the SHS conversion team aligns to the planned governance structure. - The Data Conversion team should evaluate the tool in Time (JT) approach to determine if there are risks to the project that should be mentioned/managed. - The AD should continue to monitor/dial-in using our vues and viewpoints to measure progress.	Q3 2021	3	2	Med	Open		10/31/2021 - IVV remains concerned about the progress of data conversion. The AD has not yet provided the SHS Data Conversion Est. The AD also remains has stated that the remaining releases contain more tables, that are just as complex as those found in Release 0.6. The data conversion team reported they are working on a new metric/measure that will be a better gauge of progress. IVV has not yet reviewed this metric. The AD has also reported that they are using use cases and also scripts, which are of development teams are still long, allowing them to have ‘ bit help to measure progress. 11/30/2021 - IVV remains concerned about the data conversion opportunity report status of work completed. The AD is currently working to revise the weekly status so that this can be accurately reported. As an example, the AD has stated that the Data Conversion team is 50% complete however, is often impacted by the data conversion team is indicated some Release 0.6 data conversion work is in progress. IVV will continue to monitor. 8/30/2021 - The Data Conversion team continues to progress through the data cleansing, planning, and development activities for Release 0.6. Additional data conversion activities of all work that is planned to be complete for each release	9/8/2021 - RAP: The AD acknowledges the need to update the conversion metrics to provide overall progress. We will provide an update in September.
71		The lack of the final agreement on the scope and costs of the Google C Jon Fresse		Finding - Risk	8/25/2021	Project Management	In April 2020, the DHS/AD-SOAP contract amendment outlined the migration of some of the AIS environments from on-premise to cloud based solution however, not all details were aired at that point in time. Since then, the scope has been refined and the DHS is being hosted at AD environments migrated to the cloud. Since then, the scope has been adjusted and the DS is being shifted by the AD. It has been noted that the AD is considering moving the DS to the cloud however, not finalized at this time. However, enough time to document, price and negotiate the scope of work. The DS is being developed in DCP and DHS/AD is consistently reporting they are working on the DS however, it is not final.	The migration of some AIS environments to the cloud and shifting the responsibility for some activities from the PO to the AD was included in the AD/DHS SOAP Contract Amendment finalized in April 2020. However, the scope of the DS migration to the cloud was not made in the July/August 2020 timeframe. There is the DS will be next method. While the AIS application is being developed in the cloud, details regarding the specific services to be provided and by which vendor during the AIS O&S and Maintenance and Operations Phases have not been finalized.	- The AD should document the current environment Nirandi's activities to ensure all activities are known with a clear understanding of the "AS IS" and "TO BE" model for services beginning with the DS1, through the AIS application and the DS. The AD should develop a detailed scope of work and cost for the DS/AIS during O&S and file and Event provide to SHS for approval. - DHS and the AD agree to a firm delivery date for when DHS will receive the DS/AIS.	ASAP	3	3	Med	Open		10/28/2021 - The AD has not submitted the SOP Change Request to ensure all activities are known with a clear understanding of the date for the change request 09/30/2021. The AD met with the IVV Team on 10/27/2021 to discuss the scope of the upcoming SOP Change Request. The AD continues to state that the DS and AIS are not yet been established to present the CR at the 801 CCB. IVV is concerned with the scope of the CR and stating the documentation to fully implement the scope of work in the time remaining prior to plan.	9/8/2021 - RAP: Point of clarification. The SOAP agreement did not establish that the project would be deployed to the Cloud. SOAP allowed for the migration to the cloud, however, the determination that deployment would be to the on-premise environment. However, we did acknowledge that deployment may move to the Cloud. The SOAP agreement did not establish the scope of migration to the cloud. The cost, for moving the SOC Production, and Production Disaster environments were not included in the SOAP agreement nor did the AD agree that these would be cost neutral. We continue to work through the CR process for the final environment.
70		Insufficient configuration management may result in preventable defe mtiss		Concern	8/31/2021	Configuration and Development	The 8.6.SS1 Rev DeliverableSection 5.2 establishes the framework for the Configuration Management Plan, however, it remains unclear if the AD has established the configuration baseline for the DS and existing DS items (e.g., CMDB), and building out the CM infrastructure. The projects Google Cloud Platform (GCP) Change Request and Security Control Implementation Workbook have not been updated to reflect requirements or decisions that would impact CM. The project currently relies on GitHub for tracking of some configurations.	Configuration Management is a set of processes and procedures that ensures the AIS is understood and works correctly. The AIS solution includes many components that must be tracked as part of the Configuration Management Plan and if not properly managed, could provide the project team with accurate, dynamic and timely information on the AIS configuration and status. Currently, the project relies on GitHub agents to the full list of items that are included in the configuration plan along with the details regarding the management of the configuration items, reporting and audit factors.	• AD adhere to plans for configuration management as documented in 8.6 SS1 Plan, Section 5.2 and clarify Nirandi's and/or any changes with the AD. • The AD should update the Configuration Management Plan to include a complete list of configuration items or settings they will track. • Identify the DHS POC for the Configuration Management activities and ensure that all configuration management activities and updates and ensure defined CM steps and plans are being followed, are effective, and are achieving CMS objectives for CM.	ASAP	3	3	Med	Open		10/28/2021 - The AD has made progress in their configuration management (CM) planning, such as identifying who will fill the Configuration Manager role and the tools they will use for the implementation of configuration tracking and reporting. IVV will also provide build out of more critical components of the AIS. 10/31/2021 - The AD has made progress in their CM planning decisions. For DS1.0A they are now considering replicating and improving on AD.SS1's CM approach which only tracks the most critical configuration items (e.g., firewall and other security configurations), and creating a CM database (CMDB). It remains unclear if the AD will implement this approach for DS1.0A or DS1.0B. The AD is committing to kickback for configuration baseline progress. 9/29/21 - The AD has stated their intention to make updates to the Configuration Management Plan. It is anticipated that the AD will	
69		Lack of DHS visibility into regression testing may cause defects/rework	Earl Burba	Concern	7/26/2021	Testing	The 8.06.SS1 Rev.00 provided additional feedback to questions posed by DHS regarding the Regression Testing Framework and the pending Regression Testing. Since the actual automated test suite are in Bit Bucket the AD is providing access to PO IVV. The question of who is responsible for the regression testing remains unclear. Based on efforts to date, only Selenium Tests have been developed and executed. Regression testing will be used and built on for all releases. The goal would be to have only test failure where previously covered/ processing functional tests. On 7/29/2021 the AD provided feedback to questions posed by DHS regarding the 8.06.SS1 Rev.00 Deliverable addressed the following: • Selenium Guidelines • how the tests through Robot framework HTML/XML reports and XRay integration • Is Regression Testing part of the Build Pipeline? • Regression Testing has not been executed in the Continuous Delivery pipeline, but automated tests run between releases in testing/sustainment. • Regression Testing is not part of the Build Pipeline. • Regression Testing is planned to be run via the Jenkins Regression Test Pipeline. • Regression Test Results Report shall be/have been submitted to DHS? • was expected that a Regression Test Results Report would be posted in either SharePoint or GovTribune.	Since the purpose of regression testing is to help assure that code or configuration changes have not introduced defects, the AD should have offered previously working functionality a robust regression test suite is very relevant. The AD is working on creating that robust automated suite and adding tests to that suite for future releases. The expectation is that any relevant Regression Test failures will be reported to these executives.	8/30/2021 - It is also recommended that the AD document the process for how the Regression Test Suite will be executed for all releases moving forward. The documented process should include how the candidates for inclusion in the regression suite are selected, how frequently the regression tests will be executed, how the regression test results are reviewed and how failures are addressed. It is important the timing for when regression testing is scheduled, where the regression test cases are stored and maintained, and how the project is notified that regression testing is complete and accurate. It is recommended that the AD review the Regression Test Suite with the DHS technical SMEs and be included in the weekly touchbacks. It is important that DHS be informed of all regression testing results of those passed and failed. Any regression test failures that are not expected to determine if code or configurations need to be made.	Immediate	4	5	High	Open		10/27/2021 - Lack of DHS visibility into regression testing may cause defects/rework. The AD has not provided the Regression Test Plan. Testing dashboard is now available, it does not provide a clear view of the actual testing results. Meet/Touches to the dashboard are in place. The AD has not provided the Regression Test Plan (Deliverable 5.1 - Release Delivery Log). - Effective regression testing is now limited to the code. IVW is focused on type 3 - new defects in code, that was previously defect free. Next - Regression testing is planned for each release as the code is deployed. IVW is concerned about the timeliness of the Regression Test Plan and the ability to incorporate the regression into our client/stakeholders. It is presently functioning in the needed property. 9/28/2021 - Progress is noted in the AD writing the Regression Testing Plan. Additional information from the AD is requested for questions posed by IVV related to Regression Testing. The AD has added a Regression Testing section in the ST dashboard which is a positive step. The AD has not provided the Test Plan. The AD has identified the virtual machines to host the Selenium and Python test cases, metrics gathered, the manual tests being presented to the AD for regression testing, and regression test results. Meetings between IVV and the AD are being scheduled and the IVV team will review the Regression Test Plan with the AD. The AD has not provided the document addressing the original questions regarding the Regression Testing process and how to interpret the results of test failures. Regression testing is not part of the Build Pipeline at this moment. IVV will continue to review the reports of Regression Testing with hopes of understanding the Failed tests. 8/30/2021 - Currently, the AD is conducting regression testing without having a	9/8/2021 - RAP: The AD disputes the overall tenor of the findings of the concern on regression testing. Regression test case validation was discussed with the SSEB in July. If there are follow up questions, as mentioned in the 9/8 RAP, we can provide answers to them as requested by IVV. We can invite a team of technical SMEs to address the original questions asked by the SSEB in late July on this and will publish in early September. The results of the regression tests are recorded in Jira. We do review reports of the runs internally and IVV is free to look at publishing the results on a more regular basis.
68		Insufficient planning/execution of the AIS Security Plan activities may l	Jeremy Riley	Finding - Risk	7/26/2021	Security and Privacy	Over the last several months, the AIS project team has been working to develop the AIS Security Control Plan. The AD has been working to develop key Project Security Team staffing changes. SHS and the AD agreed to modify the 8.10 Security Plan Deliverable Expectation Document (DED) to a 6 month and are currently working it to align to the requirements and changes to the project since inception.	The AIS project must have a clear plan to define, implement, test, and validate the AIS security controls and requirements. The AD has not yet provided a clear plan to address the needed security controls and the project team plans to utilize the AIS Security Control Implementation Workbook to document the status of each control. The Security Control Implementation Workbook must be detailed and clearly identify the control, the status of the control, the AD's plan to control, and implementation plan along with evidence for each control.	- DHS and the AD agree and finalize the 8.10 DED. - The AD continue to work with the DHS ISSO to develop a detailed plan for the AIS Security Plan and ensure that the plan is aligned with the DED. - The AD should ensure that the Security Plan is updated to reflect the AD's plan to address the AIS security controls and requirements. - The AD should ensure that the Security Plan is updated to reflect the AD's plan to address the AIS security controls and requirements. - The AD should ensure that the Security Plan is updated to reflect the AD's plan to address the AIS security controls and requirements. - The AD should ensure that the Security Plan is updated to reflect the AD's plan to address the AIS security controls and requirements.	ASAP	3	3	High	Open		10/28/2021 - The AD is working to resolve the final outstanding comments from DHS on the 8.10 Security Plan Deliverable. It is noted that the Security Plan and control implementation will follow 800-53 Rev 4 but with the addition of several Rev 5 controls as indicated by the latest IVV AIS publication. The AIS agrees that they are contractually responsible for updating the Security Plan to the latest requirements and guidance and will do so at the point in time when they are expected to watch versions. The AD is populating the Security Requirements Matrix in workbooks and importing it into Jira/Xray to track the implementation of the controls. The AD is also modifying security artifacts to reflect recommendations from DHS and IVV. Most feedback from DHS addresses the proper documentation of inherited controls. DHS made it clear that creating a control is inherited from GCP is not enough, and that it must be noted how the GCP controls are implemented. The AD is in the process of addressing feedback on the 8.10 Security Plan DED and is in the process of finalizing the document. Discussions between DHS and the AD about the content of the DED are ongoing. The AD is also working to update security and privacy controls to use an ongoing ATO to having internal discussions on how to shift to Rev 5 and will complete the update to the Security Plan after the DED is approved by DHS. It has been noted that one of the Rev 5 types of controls is supply chain and would like to see the data used by the AD to estimate level of effort. The lack of mobile activities could result in schedule delays if AD and DHS executives are not at the level necessary to complete the work. 9/29/2021 - The AD is working to update the Security Plan and is leveraging controls as IVW does to follow suit to streamline efforts.	9/8/2021 - RAP: The decision to move to eCP for deployment has shown the need for a complete rewrite of the security plan per DHS. The AD is in the process of planning the effort to make these updates. The effort required to complete this work will be included in either the ECP change request or a new change request We look forward to additional discussions with SSEB and DHS.
67		The Americans With Disabilities Act (ADA) Section 508 compliance test	Earl Burba	Finding - Risk	7/21/2021	Testing	While 9.0.3 and 9.0.4 reported that Section 508 compliance had been successfully completed the AD confirmed that there is something/a testing tool installed and that Section 508 compliance testing has not been executed. The AD has stated that they are working to set up the AWS environments, but there have been instances of results to date. The AD did state that they are waiting in some of the AIS environments to complete a deep dive test for 508 compliance on an application selection. IVV has not tested any due to environments not deploying test results nor if it provides coverage to all ADA compliance items.	There is a contractual obligation and requirement for AIS to be ADA compliant to the Section 508 and Federal funds for the development of the AIS. The AIS Section 508 intent is to make elements and information accessible to people with disabilities (e.g., blindness, low vision, color blindness, vision and hearing disabilities), in a way that is comparable to the access available to others. Part of the system requirements for the AIS is that the AIS must be compliant with federal and state laws, regulations, and standards, including but not limited to the Rehabilitation Act, the Americans with Disabilities Act, and the Architectural Barriers Act. The AIS must be in accordance with Section 508 of the Rehabilitation Act, which was ratified in the AIS proposed Technical Requirements Document (TRD). The AIS must conform to the Web Content Accessibility Guidelines (WCAG) 2.0 and adhere to WCAG level 2 success criteria guidelines, sub-parts of Section 508 of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act. The WCAG 2.0 guidelines (https://www.w3.org/wai/intro/wcag.php) are the recognized industry standard for web accessibility[, FNS Guidelines from the 508 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.	8/30/2021 - The AD should gain DHS' approval on the test scripts/ after the AD validates it will perform as expected within the AIS architecture, meeting all contractual and project requirements. The AD should then execute the test scripts in the AIS environment. The test will be put into action, then the test will report compliance or non compliance, how non-compliance will be corrected, and how and when DHS/IVV will be provided with the testing results. Identify and how to interpret those reports for code fixes previous, comment and future releases	As soon as possible and prior to final validation exercise	4	5	High	Open		10/27/2021 - No material updates in this reporting period. Until a test is present to work with the current architecture this finding will remain open, and IVV will continue to monitor. 9/30/2021 - IVV met with the AD on 9/29/2021 to discuss the AD's plan to address this finding. The AD has identified a DHS currently working to develop tests to run pages locally and cannot deliniate. This test (Axebot) is a browser plugin that can be run locally. The AD is also considering using the CI/CD tool in conducting these tests and the reporting and ability to work within the Google Cloud Platform (GCP). Once Axebot has been tested a follow on demonstration will be scheduled between IVV and the AD development team. IVV will continue to monitor the progress in this area. 8/31/2021 - No material updates in this compliance test (508). 8/30/2021 - IVV contacted the development team through email on 8/30/2021 to initiate a demonstration and discussion of accessibility testing. On 8/31/2021 IVV met with and followed by a second contact email on 9/01/2021 where the development team responded with dates/times for meeting. IVV then met with the development team on 9/2/2021 to discuss the AD's plan to address this finding. 8/30/2021 - The AD has stated that a test to provide ADA 508 compliance verification for the project was recently contacted and they are validating the tool will effectively perform in the AIS architecture. As soon as this is complete, the AD will provide the test scripts to the potential ADA compliance issues however, IVV has not seen the	
66		The number of issues/defects found during testing may cause planned	Earl Burba	Finding - Issue	3/29/2021	Testing	During discussions of UAT progress and metrics the number of defects found during the phase of testing appears greater than what would be expected during UAT. On 3/29/2021 at the conclusion of RO.3 Sprint 1 the AD reported that there were 1,000 defects found during testing. On 3/30/2021 at the conclusion of RO.3 Sprint 2 the AD reported that 40 issues were identified, 2 are marked as "Test a Defect", and 2 are marked as "Done". Given the functionality that was planned to be tested during RO.3 Sprint 2 and the number of issues found during UAT one-on-one testing before are expected. As such, the amount of testing expected to be completed during the current RO.3 sprint will not be executed and/or not passed to the next release. If that trend continues, UAT may not complete as planned and the number of defects found during UAT may be greater than what is being tested and reported. The AD reported the use of Jira as an issue for defects, along with the time needed to retest those corrects, and reporting of the defects. Additional details are in the 3/29/2021 IVV Risk Log. As of RO.3 it was reported that 42 issues were "Done" and 236 issues were incomplete (84 of which had all of their sub-tests completed) and will be moved to the next Sprint designated RO.3-UAT Sprint-2.	Since UAT is the vehicle for users to ensure that the functionality developed and declared meets their needs it is important that UAT be successful/accomplished. The high number of defects reported along with the testing planned/executed may impact the release or inclusion of others the time needed to complete UAT.	Perform a Joint Release Exit UAT (DHS/AD/IVV) Root Cause Analysis (RCA) to identify and take corrective actions. -AD/SE Complete Adjust the project plan and provide reasonable scope for UT + subsequent UAT sprints/releases to ensure adequate time for testing and fixes. - Status updates: All UAT defects are retested in UT to ensure they are included in Regression Testing. -SME Canceled System and Regression Testing Complete Ensure that the Regression Testing tools, and DHS branch models/ environments are included in the regression suite. - FSD's to complete and freeze prior to the completion of ST, and that completion of FSD's be added to the exit criteria for ST and entrance criteria for UAT. An alternate recommendation would be to adjust the FSD completion to the end of Signage and rework by the ST and UAT teams. - Closed 7/30/2021	Immediate	5	5	Med	Open		10/27/2021 - While the defect leakage metric for RO.3 was greatly improved, that does not ensure good testing, but is a positive step in the right direction. IVV will continue to monitor defects reported during UAT and the ability to retest and close defects. 9/30/2021 - The AD evaluated the Release 0.6 test execution metrics and met with DHS and IVV. 9/28/2021 - This finding has been expanded to focus on the overall UAT process and not just defects. The AD has met with the System Integration Testing (SIT) Manager to discuss the test execution of the Release 0.6 testing defects root cause analysis, SME and the AD needed to be participant (all) per release and needed to be full resource participating in ST. By combining the SME and AD testing resources, the AD can ensure that the SME's time and effort in ST will be fine tuned to, and the AD application quality will improve. During this reporting period Release 0.5 ST completed and the project team began Release 0.6 ST on 9/20/2021. On 9/21/2021 the AD and IVV implemented an integrated testing team approach for ST that has DHS testers with the AD testing team to help ensure that ST includes the SME's participation and that defects are identified and fixed. There will be a Root Cause Exit defects documented this finding becomes obsolete/meaningless. It is recommended that this finding be modified to address the testing approach for UAT and ST and to monitor defect leakage or other quality metrics related to the number of defects found during UAT. 9/1/2021 - The AD met with the SME and DHS, revised the SME process to no longer conduct a UAT testing cycle with each AIS release.s. Final UAT phase will be performed prior to PIA. The AD is working to update the Master Test Plan (MTP) to incorporate the revised SME process and Project Schedule. 8/31/2021 -	
65		Insufficient project overlap/input SME/BSSD staff with expansive knowl	Ryan	Finding - Risk	5/1/2021	Project Management	As the AIS system is designed, it appears there is a lack of BSSD staff with expansive business knowledge and availability to work on the project to ensure the AIS system meets the business need and requirements.	BSSD 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.	5/6/2021 - DHS continue planning, transitioning, and adapting to staff changes. - In progress. [Created earlier] - DHS continue to identify BSSD SME's to support the project as the project progresses. - In progress and continuous. DHS develop a project team format identifies the participants along with their roles and areas of responsibility. - Complete DHS has identified a replacement BSS PM, DHS will hire the BSS Project Schedule support developed by the AD to identify those tasks owned by DHS in the short term in addition to the long term. - Complete DHS has identified a replacement BSS PM, DHS is a high demand on DHS resources. - Complete Identify and on board a replacement BSS Program Manager. - Complete Continue working the new BSS Product Owners to ensure the new system takes advantage of new technologies and aligns to the planned business processes.	Q2 2021	5	5	High	Open		10/28/2021 - The project team continues to update the communication plans. One interface contact (ITSCA) is still outstanding. There are 3 interface SME's. The AD has met with each of the 3 interface partners, invited to interface meetings, which have been very productive. The AD and DHS have made major progress in identifying interface partner contacts. The AD has met with all 3 interface partners and 2 interface partners to interface planning. DMV is managing the need for a separate finding regarding the implementation of interfaces. 10/31/2021 - The AD has met with the interface partners to discuss the Communication Plans and found that 2 interface partners' contacts have not been documented, 5 SMEs have not been approved, 12 need unit test dates confirmed, 27 need pilot and production test dates confirmed, and 2 need pilot and production test dates confirmed. The AD is responsible for identifying the contacts, ensuring that the SMEs are approved, and confirming the test and release dates. IVV will continue to monitor. 9/30/2021 - The AD met with the interface partners to review communication plans. 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39	Poor quality/poor deliverables may impact system design, testing and Read	Finding - Issue	6/16/2020	Project Management	In April, four RI-Aldergate deliverables and one Interface Control Document deliverable were submitted for client review. There was an expectation that these deliverables would be of good quality and complete. The documents exhibited erroneous information, a lack of a logical organizational flow, an insufficient level of detail, and a lack of completeness. Client reviewers rejected the deliverables and provided technical perspective. EHS logged this issue in the Project Issue log for corrective action by Nov 30. The ASA acted by conducting an internal root-cause analysis and presented EHS and VIV the high-level results.	The swift time spent on reviewing deliverables is exceeding the plan for all project entities and has caused schedule delays due to the additional rework and review cycles required. The quality of deliverables continues to be produced and submitted for review, but can continue to result in unproductive use of time, unanticipated rework, and additional review cycles. This can result in impacts to unbudgeted workload/staffing, and additional schedule delays.	Immediate	2	2	Low	Open	06/30/2020: EHS testing team reported inconsistencies between wireframes and Functional Design Documents, causing challenges in testing. Additionally, the testing team reported that many aspects of the UIVs are assumed that as the project moves to larger and more complex releases, these quality issues could negatively impact the ability to test and release software. EHS and VIV will work to address/stop these inconsistencies. 9/30/2020 - No material updates in this reporting period. The JCI reported in April 2020 that they would be providing a draft Quality Plan by May 31. This deliverable is not concerned with the lack of evidence that the JCI is following the Quality Management Plan and will evaluate as long the critical by rating of this finding. 6/15/2021 - The ASA has indicated they do plan on providing updated quality metrics that align with the revised project schedule. The ASA has indicated that they are