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December 16, 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 (Dec 20, 2021 16:48 HST)

Douglas Murdock
Chief Information Officer
State of Hawaiʻi

Attachment (2)

Hawaii Department of Human Services Systems Modernization Project

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

Submitted: ***December 13, 2021***

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

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CONSULTING GROUP

Solutions that Matter

Executive Summary

Executive Summary

In this reporting period the BES project team appears to be at a crossroads, where they are facing several challenges. Some of those challenges include:

- Discrepancies between the ASI's design artifacts and DHS' requirements, which have not been mitigated by modifications to the SDLC process.

- Delays in release 6 development, which includes the CMM Interview, SSP, FMM Overpayments, and Interfaces.

- Inefficient project management, evidenced by a continued inability to accurately plan and execute tasks, and the absence of an approved project schedule.

The BES Project Schedule was opened as a new risk finding by IV&V. While the lack of an approved schedule has been reported for months in conjunction with finding #2 concerning late deliverables, the inability to accurately plan and execute tasks is now tracked as a separate risk.

IV&V notes four of the six categories have a high criticality rating. The BES Project leaders and staff are developing or executing mitigation plans for these risks/issues meaning they are diverted from planned to unplanned activities. Unless new resources are added, this increases the risk the project team cannot meet the planned BES Pilot and Go-Live dates.

Sep	Oct	Nov	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 and reasonable 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 (17 months).
M	M	M	System Design	IV&V observed DHS product owners (PO) raising design concerns late in the process. In some cases, the DHS PO assigned has changed over time, and design artifacts do not capture enough detail including prior decisions. IV&V remains concerned about the complex design of the BES Infrastructure and possible impacts. The ASI stated that the proposed BES Infrastructure is designed to automate tasks and improve efficiency.

Executive Summary

Sep	Oct	Nov	Category	IV&V Observations
M	M	M	Configuration and Development	IV&V is concerned that DHS POs are being asked to finalize designs before they are fully vetted by DHS. The DDI process does not appear to be consistently followed, as design issues are showing up after development.
H	H	H	Integration and Interface Management	IV&V is concerned with additional scope regarding the 120-day certification process for the IRS interface, the DLIR modernization phase, and the modernization of the tax interface. These new items may impact the BES project schedule, scope, and previously completed work.
M	M	H	Testing	This category has elevated to high based upon the Regression testing finding. IV&V requested the ASI further detail the root cause of defects found during testing and the remediation plans to address. The ASI demonstrated the ADA compliance tool against the vendor's website, but it has not been verified to work for the BES application and environment.
H	H	H	Security and Privacy	DHS and the ASI continue discussions on the BI-13 BES Security Plan DED to ensure it will meet all State and Federal Partner requirements.

IV&V Findings and Recommendations

IV&V Findings and Recommendations

As of the November 2021 reporting period, PCG is tracking 19 open findings (11 risks and 8 issues) and has retired a total of 50 findings. Of the 19 open findings, 10 are related to Project Management, 2 in Integration and Interface Management, 3 in Testing, 2 in System Design, 1 in Configuration and Development, and 1 in 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
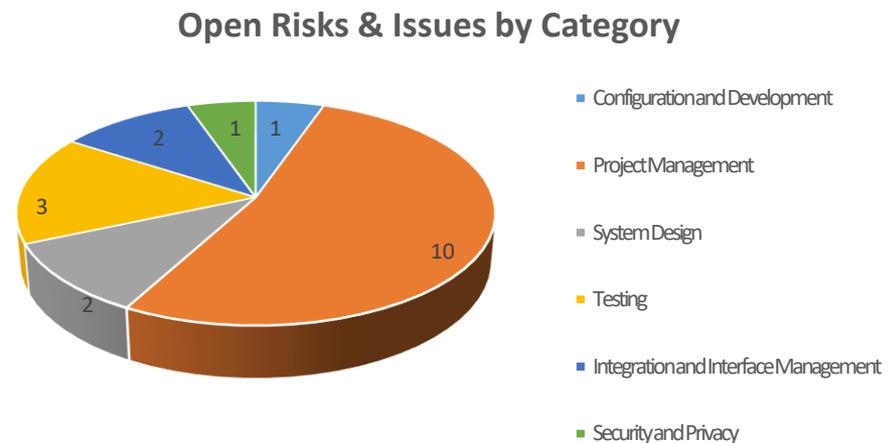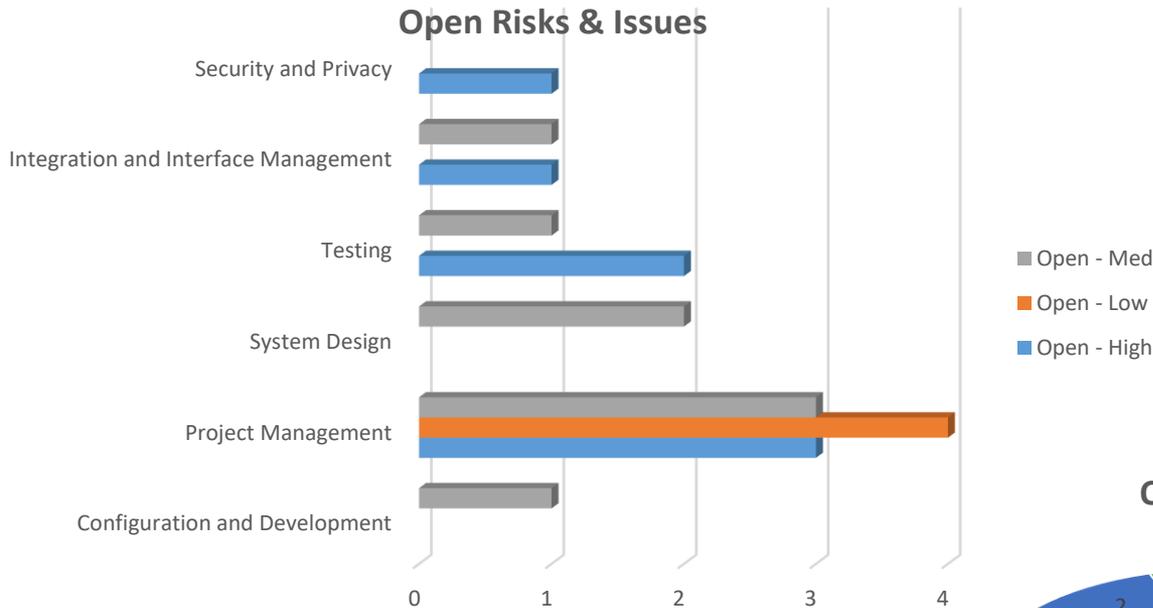
IV&V Findings and Recommendations

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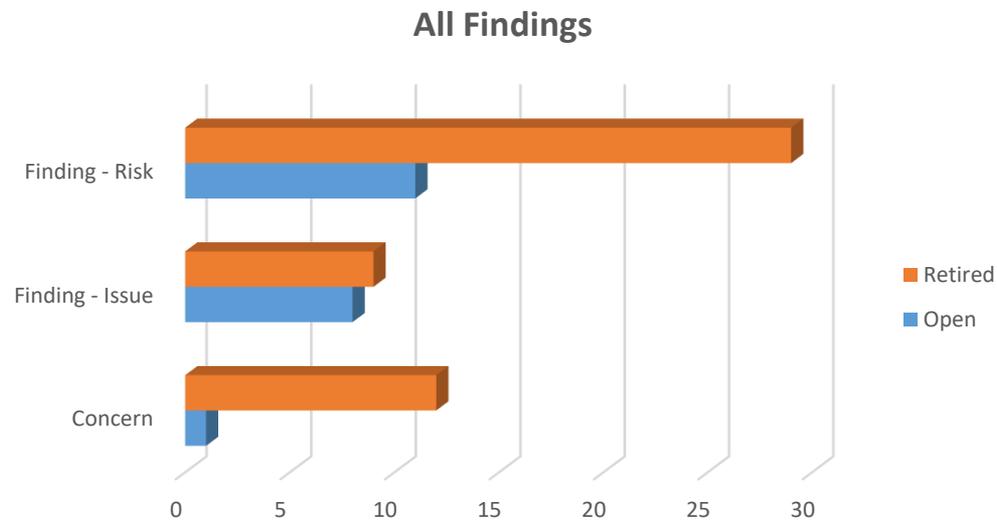
All Findings

IV&V Findings and Recommendations

Findings Retired During the Reporting Period

#	Finding	Category
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 multiple go/no go meeting for testing. Artifacts required as entry and exit criteria have been provided by the ASI and approved by DHS for transition to the next testing stage. Therefore IV&V retired this finding.	Project Management

IV&V Findings and Recommendations

Preliminary Concerns Investigated During the Reporting Period

| #	Finding	Category
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 plans to utilize Service Now as their Configuration Management Database (CMDB). If utilized to its fullest extent, Service Now can effectively track system configurations and provide system support personnel with an effective means to resolve system bugs. IV&V will continue to monitor for the effective build out of the CMDB and further elaboration by the ASI of their configuration management plans.	Configuration and Development

IV&V Findings and Recommendations

Findings Opened During the Reporting Period

#	Finding	Category
74	**Risk – The ASI demonstrates the inability to accurately plan and execute tasks in the BES project schedule, which could result in late deliverables, cost increases, and a late go-live.** **Observation:** DHS and the ASI have tried multiple times to rework the schedule with results that have not yielded improvement. Concerns with the structure, estimating practices, and ability to manage to the schedule persist. The use of multiple tools to track resources obfuscate resource management. **Significance:** If estimates for project schedule activities are not accurate, this can lead to constant schedule changes, resources not being available when needed, rushed activities, and general frustration which can lead to schedule delays, low quality output, scope changes, and budget issues. **Recommendations:** - Using the available tools, review the current estimates to complete each activity compared to past actual hours. - Update as necessary and provide the DHS/ASI Project Managers with reports and data that accurately reflect the DHS/ASI resource needs along with over/under allocations of staff for the duration of the project. - Develop mitigation and contingency plans that are tracked/managed by DHS/ASI for all tasks that are behind schedule or are at risk of being behind schedule which includes resource management. - Discuss, validate and address additional concerns within the project processes that may cause the project delays other than inaccurate estimates such as over reliance on POs, slow design sprints, and cadence of development teams.	Project Management

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
2	**Issue – Late Delivery of project deliverables may cause schedule delays**. Some project deliverables were late this month. For example, CF Special Indicator and CMM Interview did not go into Release 6 System Integration Testing on schedule. As project deliverables slip, it may be an indication that the schedule itself is unreasonable versus the execution of project tasks. The project team is currently re-evaluating the schedule. IV&V has opened a new risk #74 to monitor planning and scheduling activities.	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 ASI reported progress in finalizing details of the Two-Portal and GCP change requests (CRs) and vetted several key details with DHS. They are also working to finalize some of the architecture components. However, it remains unclear if these changes are fully communicated and vetted by the larger project team.	Ⓛ

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.** The ASI has transitioned their team from working remotely to primarily working in their Honolulu office as of October 2021. It remains unclear whether the new COVID variant (Omicron) will disrupt project activities.	L

Recommendations	Progress
• Suggest the project and DHS create a detailed, documented risk mitigation strategy and plan that is reviewed regularly and revised to address the current state of the COVID-19 threat and related impacts over the next 6 to 12 months. The plan should include the possible economic impacts to the state budget directly related to project resources.	In process
• Send broad communications to stakeholders to assure clear understanding of changes to the project with this regard to impacts of COVID as well as clarifying communications as to what will remain the same.	In process
• Project leadership continue to encourage independent phone conversations to enhance and accelerate communications, and for team members not wait for meetings to converse.	In process

IV&V Findings and Recommendations

Project Management

#	Key Findings	Criticality Rating
49	**Issue – Poor quality project deliverables may impact system design, testing artifacts and the project schedule.** The results of the system test for release 0.6 showed a significant reduction in defects compared to prior releases, which could reflect improvement in the quality of deliverables. IV&V will review the root cause analysis when provide by the ASI.	Ⓛ

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
• ASI perform a root cause analysis with DHS and IV&V in attendance to determine the source of the design defects.	Not started

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 met with the ASI on November 3rd to discuss the velocity charts. There are six development teams (3 for FCM and 3 for SSP). IV&V found that the velocity charts contain aggregated data that does not represent each team's velocity. At this time, IV&V cannot determine if each development team is tracking its velocity.	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 process
• 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.** DHS BESSD staff with extensive business knowledge have been available for the project, especially in the last month now that a permanent BESSD PM has been hired and involved. There is significant improvement with the availability of DHS product owners, SMEs, and managers. As a result, IV&V is lowering the criticality rating to low.	L

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 process

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.** DHS has received information and pricing for the GCP CR from the ASI. The ASI and DHS are working to confirm the scope of this change request. IV&V waits to see if the ASI addressed our recommendations in the CR details.	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.	In process

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 ASI is re-estimating the remaining Data Conversion work and is developing a Data Conversion Dashboard, intended to provide a comprehensive view of work completed and work remaining. Additionally, the ASI added a data modeler to the Data Conversion team.	(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.** The ASI stated that communications between their development teams have improved, and as result, moved some integration components into earlier releases. However, most of the integrations are scheduled for implementation shortly before go-live based on the project schedule.	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.** No changes to the interface communication plans in this reporting period. IV&V has concerns regarding the 120-day certification process for the IRS interface, the DLIR modernization phase, and the modernization of the tax interface from a flat file to a direct web service with DOTAX. These new items may impact the project schedule, the existing process for the DHS Financial Management Office, and the functional designs for the FMM module.	H

Recommendations	Progress
• Identify and document all interface partners' contacts.	In process
• Define a detailed schedule for each interface to include milestone dates, coordination, and execution and share with the interface partners.	In process
• Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces.	In process
• Complete all MOAs and obtain approval.	In process
• Confirm testing dates with interface partners in writing.	In process
• Distribute preparation procedures for interface implementation to the interface partners.	In process
• Develop a mitigation plan to address the unavailability of Interface Partners during interface implementation.	Not started

IV&V Findings and Recommendations

Configuration and Development

#	Key Findings	Criticality Rating
16	**Issue – Lack of clear understanding of the DDI approach may reduce effectiveness of all SDLC Processes.** The ASI reported that their new testing approach has reduced DHS testers level of effort to support testing and streamlined the overall effort. DHS reported that some of their product owners (POs) may have been put in a position (by the ASI) to provide final approval of designs without a proper understanding of what should be considered and vetted by other DHS stakeholders/SMEs. This has led to testing DHS SMEs to request changes to the finalized designs in the form of enhancements. Further, it remains unclear to DHS SMEs whether enhancement requests will incur additional costs to DHS which could later lead to cost overruns or scope reduction.	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.** IV&V continues to ramp up participation in design sprint meetings. IV&V observed that new/replacement DHS POs who were not involved earlier sometimes request a revisit of prior decisions, and in some cases, the replacement PO will have a different opinion on how to design the solution. IV&V will continue to observe these meetings and capture issues that could negatively impact the design of solution.	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 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
• ASI and DHS should work together to vet the in-progress design with all SMEs for the area of focus.	In process

IV&V Findings and Recommendations

System Design

#	Key Findings	Criticality Rating
73	**Risk – The planned BES infrastructure is complex which could be difficult to implement and maintain and could lead to schedule/cost impacts** The ASI stated that, though their infrastructure is complicated and cutting edge, the risk is acceptable given the long-term benefits as they expect the final platform will be highly functional, efficient, resilient, automated, and could reduce long term maintenance costs. IV&V remains concerned with the level of effort and component costs of implementing and maintaining this sophisticated technology and the potential schedule delays if the work is more than expected.	M

Recommendations	Progress
• ASI clearly communicate the potential costs and schedule impacts to implementing the planned infrastructure.	In process
• 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.	In process
• ASI develop a process to closely monitor cloud and other product changes (software updates/new releases), manage changes, and regression test once updates are applied.	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.** The computation of the defect leakage between Integration and SIT for the last 2 releases trend favorably and shows that most of the defects/bugs are identified during Integration Testing. This partially meets the recommendations made by IV&V but does not meet all recommendations. The ASI has categorized the defects but has not identified the true root causes or developed corrective action plans to minimize future occurrences of these defect types.	M

Recommendations	Progress
• 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
• Execute System and Integration testing more rigorously.	In process
• The ASI should report testing metrics and DHS should monitor this Key Performance Indicator (KPI).	Not started
• Perform a joint Release 0.5 SIT (DHS/ASI/IV&V) Root Cause Analysis (RCA) to identify and take corrective actions.	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.** The ASI demonstrated the capabilities of the AccessiBe tool as provided by the product vendor. The demonstration showed that the tool can identify accessibility issues based on the chosen or configured rules. The ASI also generated a report to document compliance. It is not clear that this tool will work successfully with the architecture of the BES solution. IV&V looks forward to a future demonstration once the tool is shown to work with the current BES architecture and is acceptable to DHS.	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

Testing

#	Key Findings	Criticality Rating
69	**Risk - Lack of DHS visibility into regression testing may cause defects/rework within the BES application.** This risk was previously a concern. Although the Regression Testing dashboard provides a significant amount of data, there is no explanation of what that data represents. The ASI has agreed to explain the data in the Regression Testing dashboard to help DHS and others understand it. IV&V will review the Regression Testing dashboard once clearly understandable regression test data is provided.	H

Recommendations	Progress
• The ASI document the process of regression testing from start-to-finish and then review that process with DHS. The documented process should include how the candidates for inclusion in the regression suite are selected, how those chosen candidate test cases are validated, how the regression tests are reviewed and how failed tests are resolved and reported, the timing for when regression testing is scheduled, where the regression test cases are stored and documented, and how the project is notified that regression testing is complete and accurate.	In process
• Regression testing results should be reported to the project on a regular basis and be included in the weekly dashboards. It is important that DHS be informed of all regression testing results of those passed and failed test cases and that any failed test cases be analyzed to determine if code or configuration changes need to be made.	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 BI-13 DED is not finalized as DHS has requested verbiage that explicitly states that federal approval is part of the acceptance criteria. The ASI believes that their contract already states that they must meet federal standards as prescribed by IRS, FNS, and SSA so they are reluctant to add verbiage to this document. The DED discussion is ongoing. The Security Requirements Traceability Matrix is being developed in Aha and the ASI will be providing a report from Aha for DHS and IV&V to review. Per DHS, this is to be done as soon as is possible.	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
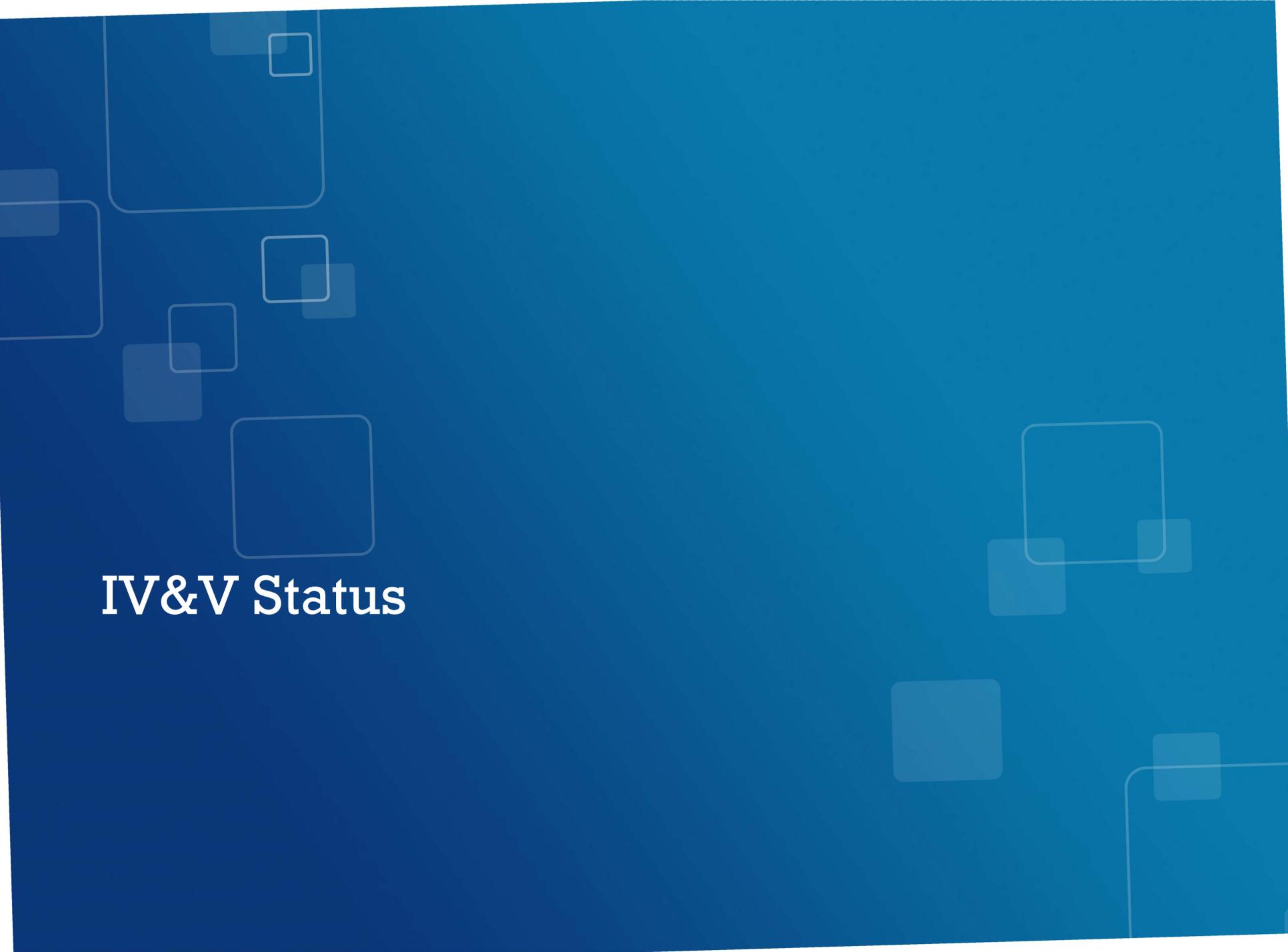
IV&V Status

IV&V Engagement Status

IV&V Engagement Area	Sep	Oct	Nov	Comments
IV&V Budget	🟢	🟢	🟢	
IV&V Schedule	🟢	🟢	🟢	The ASI is conducting a BES project schedule review that may result in changes to the IV&V schedule.
IV&V Deliverables	🟢	🟢	🟢	PCG submitted the final October 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 November reporting period:
  - Completed – October 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 December 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-10 R0.6 Common Functions Special Indicators – REVISIONS	11/29/2021	V1.2
BI-31 DED - REVISIONS	11/23/2021	V2.0
BI-29 DED - REVISIONS	11/23/2021	V2.0
BI-14 Release 0.6 Technical Design Document - SSP	11/23/2021	V0.9
BI-11 Release 0.8 BESSD Interfaces	11/9/2021	0.1
BI-21 Release 0.4 Updated and Completed Detailed Functional and Technical RTM	11/3/2021	0.1
BI-10 R0.6 SSP Application Management (No Account), Prepopulate Online Application deliverable (Iteration 1)	11/2/2021	1.0
BI-10 R0.7 SSP Electronic Notes	11/2/2021	0.1

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)	11/1/2021	N/A
BES Weekly Status Report	11/3/2021 11/10/2021 11/17/2021 11/24/2021	N/A
BES Risks and Issues Log	11/3/2021 11/10/2021 11/17/2021 11/24/2021	N/A
BES Interface Communication Plans and Interface Control Documents	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
ATC Impacts to BES_DHS Exec Summary	2/22/2021	N/A
ATC Impacts to BES_DHS Additional Details	4/9/2021	N/A

Additional Inputs

Meetings and/or Sessions Attended/Observed:

1. Weekly Platform Status Meeting – 11/2/2021, 11/9/2021, 11/16/2021, 11/23/2021, 11/30/2021
2. Weekly DDI Architecture Review Meeting – 11/9/2021
3. Bi-Weekly Project Status Meeting – 11/10/2021, 11/24/2021
4. Bi-Weekly BES PMO and IV&V Touch Base – 11/10/2021, 11/24/2021
5. Weekly BES Dev Stand-up – 11/3/2021, 11/10/2021, 11/17/2021, 11/24/2021
6. Weekly SSP Backlog Grooming Session – 11/3/2021, 11/10/2021, 11/17/2021
7. Weekly CMM Backlog Grooming Session – 11/10/2021, 11/17/2021, 11/24/2021
8. BES Data Conversion Meeting – 11/1/2021, 11/8/2021, 11/15/2021, 11/22/2021, 11/29/2021
9. BES Data Conversion Working Group Meeting – 11/16/2021
10. Weekly BES Project Schedule Review Meeting – 11/2/2021, 11/16/2021,
11. IV&V Team Meeting – 11/1/2021, 11/4/2021, 11/8/2021, 11/10/2021, 11/15/2021, 11/18/2021, 11/22/2021, 11/24/2021, 11/29,2021
12. Weekly DHS-Unisys Security Touchpoint – 11/2/2021, 11/9/2021, 11/16/2021, 11/23/2021, 11/30/2021
13. Velocity Discussion – 11/3/2021
14. R0.6 Weekly SIT Status – 11/4/2021
15. BES – Touch base with DHS – 11/4/2021, 11/17/2021
16. BES CCB Monthly Meeting – 11/3/2021
17. HI DHS BES October Draft IV&V Report Review – 11/15/2021
18. Bi-Weekly DHS and IV&V Touch Base Meeting – 11/2/2021, 11/16/2021, 11/30/2021
19. ASI/IV&V Mid-month Check-in – 11/19/2021
20. Executive Steering Committee Meeting – 11/18/2021
21. HI BES ASI and IV&V Touch Base - Functional Team – 11/16/2021
22. HI BES ASI and IV&V Touch Base - Technical Team – 11/23/2021

Additional Inputs – Continued

Meetings and/or Sessions Attended/Observed:

23. Monthly Project Risk and Issue Review Meeting – 11/3/2021
24. [BES] R0.4 BI-21 Updated and Completed Detailed Functional and Technical RTM Deliverable – 11/12/2021
25. Implementation Planning – 11/10/2021, 11/17/2021, 11/24/2021
26. R0.6 SSP SIT Exit Go/No-go – 11/18/2021
27. FMM R0.8 issuance functional sessions – 11/4/2021, 11/18/2021
28. FMM OP Recovery functional session – 11/9/2021
29. [BES] DHS PO Working Session– 11/2/2021, 11/9/2021, 11/16/2021, 11/23/2021
30. CMM Product Owner Meeting– 11/1/2021, 11/4/2021, 11/12/2021, 11/18/2021, 11/19/2021, 11/23/2021
31. CO20 View Alerts Product Owner Meeting – 11/5/2021, 11/12/2021, 11/19/2021
32. Interface Consumption DHS PO Meeting (CMM Interfaces) – 11/2/2021, 11/4/2021, 11/9/2021, 11/16/2021, 11/23/2021, 11/30/2021
33. MDM Data Sharing and Consent Management – 11/4/2021, 11/16/2021, 11/18/2021, 11/23/2021
34. [BES] Release Checkpoint – 11/4/2021
35. [BES] R0.7 Sprint Demo - CF07 Manage Case Assignment – 11/4/2021
36. Sprint Demo – 11/8/2021, 11/23/2021
37. [BES] R0.6 Sprint Demo - CO05j Manage Asset Information – 11/18/2021
38. [BES] R0.8 Prototype Review - QM24, QM24a-f – 11/18/2021
39. [BES] R0.6 BI-22 Walk-Through – SSP – 11/19/2021
40. R0.5 and R0.6 RCA Review – 11/22/2021
41. BES Defects and Enhancements – Action Item Updates – 11/10/2021
42. Review ADA Compliance Sample Report – 11/16/2021
43. Junit test case Demo – 11/24/2021

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

Solutions that Matter

Finding Number	Title	Reporter	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Priority	Finding Status	Status Update	Client Comments	Vendor Comments	Risk Statement
74	The ASI demonstrates the inability to accurately plan and execute tasks in the BES project schedule, which could result in late deliverables, cost increases, and a late go-live.	Ryan	Finding - Risk	11/29/2021	Project Management	DHS and the ASI have tried multiple times to rework the schedule with results that have not yielded improvement. Concerns with the structure, estimating practices, and ability to manage the schedule persist. The use of multiple tools to track resources obfuscate resource management.	If estimates for project schedule activities are not accurate, this can lead to constant schedule changes, resources not being available when needed, rushed activities, and general frustration which can lead to schedule delays, low quality output, scope changes, and budget issues.	• Using the available tools, review the current estimates to complete each activity compared to past actual hours • Update as necessary and provide the DHS/ASI Project Managers with reports and data that accurately reflect the DHS/ASI resource needs along with over/under allocations of staff for the duration of the project • Develop mitigation and contingency plans that are tracked/managed by DHS/ASI for all tasks that are behind schedule or are at risk of being behind schedule which includes resource management • Discuss, validate and address additional concerns within the project processes that may cause the project delays other than inaccurate estimates such as over reliance on POs, slow design sprints, and cadence of development teams.	Immediate	4	4	Med	Open				
73	The planned BES infrastructure is complex which could be difficult to implement and lead to schedule/cost impacts.	mfors	Finding - Risk	10/28/2021	System Design	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.	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 being implemented could exacerbate this risks and lead to further delays. Complex platforms often present system maintenance and operations challenges as system changes can hold the 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. If DHS intends to eventually reduce M&O outsourcing costs turning over M&O tasks to State employees, they could face challenges supporting tools they may not be familiar with in a complex infrastructure environment.	• ASI 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. • ASI develop a process to closely monitor cloud and other product changes (software updates/new releases), manage changes, and regression test once updates are applied.	Next several months	3	3	Med	Open	11/29/21 - The ASI stated that, though their infrastructure is complicated and cutting edge, the risk is acceptable given the long-term benefits as they expect the final platform will be highly functional, efficient, resilient, automated, and could reduce long term maintenance costs. IVV remains concerned with the continued level of implementing and maintaining this sophisticated technology and the potential schedule delays if the work is more than expected.			
72	The inability to measure and report the overall Data Conversion work effort and progress may lead to overall schedule slippage.	Brad	Finding - Risk	8/31/2021	Project Management	The data conversion work shows good progress at the tactical level, focused on just-in-time work as the releases of BES are developed. However, clarity on progress at a strategic/project level is difficult to measure/guage.	Data Conversion (DC) is often considered one of the longest and most complex tasks in a DDI project. As the releases get more complex and impactful to the overall BES 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 ASI should develop reports with metrics that accurately measure the Data Conversion progress. - The DHS Data Governance committee continue to clarify the usage of MDM so the BES conversion team aligns to the planned governance structure. - The Data Conversion team should evaluate the Just In Time (JIT) approach to determine if there are risks to the project that should be monitored/managed. - The Data Conversion team consider using use cases and story points to measure progress.	Q3 2021	3	2	Med	Open	11/30/2021 -The ASI is currently re-estimating the remaining Data Conversion work and is developing a Data Conversion Dashboard, intended to provide a comprehensive view of work completed and remaining. Additionally, the ASI added a data modeler to the Data Conversion team. 10/31/2021 - IVV 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. IVV 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. 9/30/2021 - The Data Conversion team is not accurately and concisely report status of work completed . The ASI is currently working to revise 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. IVV will continue to monitor. 8/30/2021 - The Data Conversion team continues to progress through the data cleansing, planning, and conversion activities. However, the plan does not yet include estimates of all work that is planned to be complete for each release so it is unclear if there are risks to the project. Note: This finding replaces finding 58, to more accurately describe the current Data Conversion risk.		9/9/2021 - RAP: The ASI 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 Cloud Platform (GCP) Change Request (CR) may lead to unanticipated DHS costs, schedule delays, and/or the need to reduce scope.	Joe Frasca	Finding - Risk	8/23/2021	Project Management	In April 2020, the DHS/ASI SOAP contract amendment codified the migration of some of the BES environments from an on-prem to cloud based solution however, not all details were vetted at that point in time. In the July/August 2020 timeframe, DHS and the ASI agreed to have all BES environments migrated to the cloud. Since then, the scope has been adjusted and the CR is being drafted by the ASI. It has been over 12 months since the project decided to move all BES environments to the Cloud solution – more than enough time to document, price and negotiate the scope of work. The BES is being developed in GCP and DHS/ASI consistently report they are working on the CR however, it is not final.	The migration of some BES environments to the cloud and shifting the maintenance of cloud environments from the ESI to the ASI was included in the ASI/DHS SOAP Contract Amendment finalized in April 2020. The decision to migrate all BES environments to the cloud was made in the July/August 2020 timeframe. DHS' intent is for this CR to be cost-neutral. While the BES application is being developed in the cloud, details regarding the specific services to be provided and by which vendor during the BES DDI and Maintenance and Operations Phases have not been finalized.	- The ASI should document the current environment M and 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 and O. The ASI clearly document the scope of work and cost for the GCP CR during DDI and M and O and provide to DHS for approval. - DHS and the ASI agree to a firm delivery date for when DHS will receive the GCP CR.	ASAP	3	3	Med	Open	11/30/2021 - DHS has received information and pricing for the GCP CR from the ASI. The ASI and DHS are working to confirm the scope of this change request. IVV waits to see if the ASI addressed our recommendations in the CR details. 10/28/2021 - The ASI has not submitted the GCP Change Request to DHS. IVV recommends that DHS and the ASI agree to a firm delivery date for the change request. 09/30/2021 - The ASI met with the IVV team on 09/15/2021 and provided a high-level overview of GCP Change Request. The ASI continues to draft the CR and a date has not yet been established to present the CR at the BES CCB. IVV is concerned with the scope of this CR and ability for the project team to fully implement the scope of work in the time remaining prior to pilot.		9/9/2021 - RAP: Point of clarification. The SOAP agreement did not establish that the project would be deployed to the Cloud. SOAP provided that development be done in the Cloud and specifically that deployment would we be to the on-premise environment. However, we did acknowledge that deployment may move to the Cloud. The final decision to move to GCP for production was made in July 2020. The costs for managing the UAT, Production, and Disaster Recovery environments were not included in the SOAP agreement nor did the ASI agree that these would be cost neutral. We continue to work through the CR process for the	
70	Insufficient configuration management could lead to development confusion and reduce the effectiveness of bug resolution	mfors	Concern	8/23/2021	Configuration and Develo	The BI-6 DDI Plan Deliverable, Section 5.2 establishes the framework for the Configuration Management Plan, however, it remains unclear if sufficient progress has been toward establishing CM processes, selecting CM tools (e.g., CMDB), and building out the CM infrastructure. The projects Google Cloud Platform (GCP) Change Request and Security Plan have yet to be finalized which may include additional requirements or decisions that could 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 BES is understood and works correctly. The BES solution includes tools that may provide a level of automation for Configuration Management that may reduce errors and should provide the project team with accurate, dynamic and timely information on some of the configuration items. However, it is critical that DHS/ASI agree 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 features.	• ASI adhere to plans for configuration management as documented in BI-6 DDI Plan, Section 5.2 and clarify details and/or any changes with DHS. • ASI validate plans for configuration management with DHS and agree on a meaningful set of configuration items or settings they will track. • Identify the DHS POC for the Configuration Management Activities that would provide oversight of configuration management activities and assure defined CM steps and plans are being followed, are effective, and are achieving DHS objectives for CM.	ASAP	2	2	Low	Open	11/29/21 - The ASI stated their plans to utilize Service Now as their Configuration Management Database (CMDB). If utilized to its fullest extent, Service Now can effectively track system configurations and provide system support personnel with an effective means to resolve system bugs. IVV will continue to monitor for the effective build out of the CMDB and further elaboration by the ASI of their configuration management plans. 10/29/21 -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. The project is 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. 9/29/21 - The ASI has stated their intention to make updates to the Configuration Management Plan. It is anticipated that the GCP will shift some configuration management responsibilities from the ESI to the ASI. It remains unclear if the ASI is fully prepared to fully support configuration management.		9/9/2021 - RAP: We look forward to receiving specific inquiries from the IV&V team on configuration management and having conversations. We do acknowledge that the plan likely needs to be updated to reflect the processes in place on the project for configuration management.	

Finding Number	Title	Reporter	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Priority	Finding Status	Status Update	Client Comments	Vendor Comments	Risk Statement
69	Lack of DHS visibility into regression testing may cause defects/rework within the BES application.	Earl Burba	Finding - Risk	7/28/2021	Testing	On 8/16/2021 the ASI provided additional feedback to questions posed by PCG IVV team that clarified more completely the plan for conducting Regression Testing. Since the actual automated test scripts are in Bit Bucket the ASI is providing access to PCG IVV. The question of why so many test runs failed was explained and it is expected that a suite of automated Regression Tests that have passed baseline testing will be used and built on for all releases. The goal would be to have only test failure where previously correctly executing functionality fails. On 7/29/2021 the ASI provided feedback to questions from the IVV team dated 6/23/2021. The response/feedback addressed the IVV questions but did not address how the results through Robot framework HTML/XML reports and X-Ray integration. It is understood that the ASI has reported having built a regression suite and integrated it into their Continuous Delivery pipeline, but evidence has not been observed in testing status meetings or provided to DHS and IVV to demonstrate the effectiveness of regression testing. Since the exit criteria for Regression Testing as provided in the BI-19 Complete and Final Test Plan.pdf is "Regression Test Results Report draft has been submitted to DHS" it was expected that a Regression Test Results Report would be posted in either SharePoint or Confluence.	Since the purpose of regression testing is to help assure that code or configuration changes to address defects/bugs do not negatively affect previously working functionality having a robust regression test suite is very relevant. The ASI is working on creating that robust automated suite and adding tests to that suite for future releases. The expectation is that only relevant Regression Test failures will be reported for future executions.	8/30/2021 - The ASI document the process of regression testing from start-to-finish and then review that process with DHS. The documented process should include how the candidates for inclusion in the regression suite are selected, how those chosen candidate test cases are validated, how the regression tests are reviewed and how failed tests are resolved and reported, the timing for when regression testing is scheduled, where the regression test cases are stored and documented, and how the project is notified that regression testing is complete and accurate. Regression testing results are reported to the project on a regular basis and be included in the weekly dashboards. It is important that DHS be informed of all regression testing results of those passed and failed test cases and that any failed test case be analyzed to determine if code or configuration changes need to be made.	Immediate	4	5	High	Open	11/28/2021 - This risk was previously a concern. Although the Regression Testing dashboard provides a significant amount of data, there is no explanation of what data represents. The ASI has agreed to explain the data in the Regression Testing dashboard to help DHS and others understand it. IV&V will review the regression Testing dashboard once clearly understandable regression test data is provided. 10/27/2021 - 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. IVV 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. IVV 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. 9/28/2021 - Progress is noted in the ASI raising the visibility of regression testing in the following actions. - The ASI responded to questions posed by IVV 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 IVV understand the Python test cases, metrics gathered, the manual tests being executed by the ASI for regression testing, and regression test results. Meetings between IVV and the ASI are being scheduled and the IVV team will continue to monitor regression testing. 9/21/2021 - Once the ASI has provided the document addressing the original questions regarding the Regression Testing process and how to interpret the results of test runs it is expected that any additional questions will help mitigate this concern. IVV will continue to review the reports of Regression Testing with hopes of understanding the Failed tests. 8/30/2021 - Currently, the ASI is conducting regression testing without having a clear process for selecting the regression tests, resolving defects, and communicating those plans/results with DHS. "Failed" regression tests from past releases may cause defects in future releases. IVV met with the ASI in August to discuss their regression testing tools and processes to identify, track, monitor and report on the status of regression testing activities. Follow-on research and action items are in-		9/9/2021 - RAP: The ASI disputes the extent or timing of the findings of the concern on regression testing. Regression test case selection was discussed with the IV&V in July. If there are follow-up questions, we recommend that those be completely vetted before the Concern is migrated to a Risk. We are in the process of developing a document to address the original questions asked by the IV&V 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 weekly. We are happy to look at publishing the results on a more regular basis.	
68	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.	Jeremy Riley	Finding - Risk	7/28/2021	Security and Privacy	Over the last several months, the BES project team has been working through the planning efforts to develop the BI-13 Security Plan while also managing through ASI Security Lead staffing changes. DHS and the ASI agreed to modify the BI-13 Security Plan Deliverable Expectation Document (DED) last month and are currently revising it to align to the requirements and changes to the project since inception.	The BES project must have a clear plan to define, implement, test, and validate all Security and Privacy Requirements/Controls prior to entering the Pilot phase. There are many standards that must be met, and the project must work collaboration with DHS. - DHS and the ASI agree upon team plans to utilize the BES Security Control Implementation Workbook to document the status of each control. The Security Control Implementation Workbook must be detailed and allow for ease of referencing to the Security Policies, Standards, Controls, and implementation plan along with evidence for each control.	- DHS and the ASI agree and finalize the BI-13 DED. - The ASI continue to develop the B13 Security Plan in close collaboration with DHS. - 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. ASI, per DHS guidance, should continue the use 800-53 Rev 4 but add Rev 5 controls as required by latest IRS guidance. DHS should provide written notice to ASI when they are to make the full shift to Rev S.	ASAP	3	3	High	Open	11/28/2021 - The BI-13 DED is not finalized as DHS has requested verbiage that explicitly states that federal approval is part of the acceptance criteria. The ASI believes that their contract already states that they must meet federal standards as prescribed by IRS, FNS, and SSA so they are reluctant to add verbiage to this document. The DED discussion is ongoing. The Security Requirements Traceability Matrix is being developed in Aha and the ASI will be providing a report from Aha for DHS and IV&V to review. Per DHS, this is to be done as soon as is possible. 10/28/2021 - 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 IVV. The ASI is 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 stating a control is inherited from GCP is not enough, and that it must be noted how the GCP satisfies the control objective. 9/30/2021 - 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. IVV 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. 9/29/2021 - The state security team raised a concern that the ASI is basing the controls on 800-53 Rev 4 which will be obsolete by the time the system goes live. ASI is having internal discussions on how to shift to Rev 5 and still complete the work on time. 8/30/2021 - The ASI is updating the BI-13 Security Plan Deliverable Expectation Document (DED) with feedback from DHS and IVV. Simultaneously		9/9/2021 - RAP: The decision to move to GCP for deployment has driven the need for a complete rewrite of the security plan per DHS. The ASI 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 GCP change request or a new change request We look forward to additional discussions with IV&V and DHS.	
67	The Americans With Disabilities Act (ADA) Section 508 compliance tool has not been installed for the project, which may cause significant rework.	Earl Burba	Finding - Risk	7/12/2021	Testing	While R0.3 and R0.4 reported that Section 508 compliance had been successfully completed the ASI confirmed that there is currently no working tool installed and that Section 508 compliance testing has not been performed. This risk has been discussed with the ASI over the past several months, but there have been evidence of results to-date. The ASI did state that they are coding to some of the ADA requirements and are using a desk-top tool for ADA compliance as an interim solution. IVV has not received any data to demonstrate the desk-top tool results nor if it provides coverage for all ADA compliance items.	There is a contractual obligation and requirement for BES to be ADA compliant within this phase of testing and delivered meets the needs it is important that UAT be successfully completed. The ADA Section 508 intent is to make electronic and information technology accessible to people with disabilities (e.g., color blindness, vision and hearing disabilities), in a way that is comparable to the access available to others. Part of the system acceptance criteria for BES is to meet "all applicable State and Federal policies, laws, regulations, and Standards, including without limitation the Electronic and Information Technology Accessibility Standards associated with Section 508 of the Rehabilitation Act., which was verified in the ASI proposed Technical Requirements Approach that states "The system complies with DHS branding standards as defined by DHS and adheres to W3C level 2 accessibility guidelines, sub-parts of Section 508 of the Americans with Disabilities Act (ADA), nondiscrimination safeguards in 45 CFR 85.". If the Hawaii guidelines (https://www.hawaii.gov/uh-guidelines-for-accessibility/), FNS Guidelines from the 901 Handbook, and contractual obligations to adhere to the Section 508 compliance guidelines (https://section508.gov/) there may be a significant amount of rework to the solution.	8/30/2021 - 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. 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/IVV 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.	As soon as possible and prior to final solution acceptance.	4	5	High	Open	11/28/2021 - The ASI demonstrated of the capabilities of the Accessibe tool as provided by the tool vendor. The demonstration showed that the tool can identify accessibility issues based on the chosen or configured rules. The ASI also generated a report to document compliance. It is not clear that this tool will work successfully with the architecture of the BES solution. IVV looks forward to a future demonstration once the tool is shown to work for the current BES architecture and is acceptable to DHS. 10/27/2021 - No material updates in this reporting period. IVV will continue to monitor. 9/28/2021 - IVV 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 IVV and the ASI development lead. IVV will continue to monitor the progress in selecting, testing, configuring, and demonstrating the Section 508 compliance tool (ADA). 9/21/2021 - IVV contacted the development team through email on 8/19/2021 to initiate a demonstration and discussion around the selected ADA testing tool. That email was followed by a second contact email on 9/15/2021 where the development team responded with dates/times for meeting. IVV then scheduled a meeting for a demonstration and discussion of the selected ADA testing tool to take place on 9/23/2021. 8/30/2021 - The ASI has stated that a tool to provide ADA Section 508 compliance verification for the project was recently selected and they are validating the tool will effectively perform in the BES architecture. As an interim solution, the ASI is using a desk-top tool to identify potential ADA compliance issues however, IVV has not seen the results of the interim solution, nor it is known if the existing BES application code from Release 0.1 through Release 0.4 used this desk-top ADA tool.		9/9/21 - RAP: The ASI has invited the IV&V to make contact with the development team to review the results of the desk-top tool to gain insight. To date, the IV&V has not contacted the development lead to have further discussions on this topic.	
66	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.	Earl Burba	Finding - Issue	3/29/2021	Testing	During discussions of UAT progress and metrics the number of issues found during this phase of testing appears greater than what would be expected during UAT. On 3/29/2021 at the conclusion of R0.3 Sprint 3 there were 306 reported defects (4 High, 10 Medium, and 292 Low Severity) where 181 are "Unresolved", 108 are documented as "Not a Defect", and 17 are marked as "Done". Since the functionality had previously been Unit, System and Integration, and the needs of the state clarified during JAD sessions very few defects are expected. As such, the amount of testing expected to be completed during the current R0.3 will not be met and will be pushed to the next release. If that trend continues UAT may not complete as planned and the schedule negatively affected. Additionally, since more defects are being reported and corrected than expected the rate of closure for defects, along with the time needed to retest those corrects, and regression test the functionality additional risk exists to the planned schedule. At the end of R0.3 it was reported that 44 issues were "Done" and 238 issues were incomplete (30 of which had all of their sub-tasks complete) and will be moved to the next Sprint designated SSP R0.3 Sprint 4.	Since UAT is the vehicle for users to assure that the functionality developed and delivered meets their needs it is important that UAT be successfully completed. The high number of defects reported along with not meeting reasonable scope for SIT in subsequent releases taking into account the planned progress there may be an inclination to shorten the time needed to complete UAT.	Perform a joint Release 0.4 UAT (DHS/ASI/IVV) Root Cause Analysis (RCA) to identify and take corrective actions. 10/28 Complete Adjust the project plan and provide defects and testing time needed. Validate all UAT defects are retested in SIT to ensure they are included in Regression Testing. 10/6 Cancelled Execute System and Integration testing more rigorously. The ASI report testing metrics and DHS should monitor this Key Performance Indicator (KPI). FDD's be complete and frozen prior to the completion of SIT and that completion of FDD's be added to the exit criteria for SIT and entrance criteria for UAT. An alternate recommendation would be to adjust the process to minimize schedule slippage and rework by the SIT and UAT teams. - Closed 7/30/2021 Perform a joint Release 0.5 SIT (DHS/ASI/IVV) Root Cause Analysis (RCA) to identify and take corrective actions.	Immediate	3	3	Med	Open	11/29/2021 - The computation of the defect leakage between Integration and SIT for the last 2 releases trend favorably and shows that most of the defects/bugs are identified during Integration Testing. This quality meets the recommendations made by IV&V but does not meet all recommendations. The ASI has categorized the defects but has not identified the true root causes or developed corrective action plans to minimize future occurrences of the defect types. 10/27/2021 - While the defect leakage metrics for R0.5 were greatly improved, that does not ensure good trending, but is a positive step in the right direction. IVV 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 IVV. 9/28/2021 - 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 have 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 IVV are evaluating the results. 9/9/2021 - The project has implemented an integrated testing team approach for SIT that teams DHS testers with the ASI testing team to help assure that SIT includes the end-user viewpoint for testing and eliminated Sprint UAT. Since there will be no future Sprint UAT defects documented this finding becomes obsolete/meaningless. It is recommended that this finding be modified to address the testing approach for INT and SIT and to monitor defect leakage or other quality metrics related to the number of defects reported. 8/30/2021 - The ASI, with verbal agreement from DHS, revised the SDLC process to no longer conduct a UAT testing cycle with each BES release; a Final UAT phase will be performed prior to Pilot. IVV will determine if this finding should be retired after DHS reviews/accepts the revised SDLC process and Project Schedule. DHS and the ASI do plan to conduct a Release 0.4 UAT Root Cause Analysis with the project team to identify and take appropriate corrective actions. Also, the ASI has indicated they are reviewing testing metrics to generate and report to DHS during future testing cycles. 7/26/2021 - In this reporting period,		7/20/21 RAP - In response to the specific recommendations, we are taking the following actions: Recommendation 1: We will perform a RCA led by the testing leads this month. Recommendation 2: In progress, we are currently planning to integrate the UAT and SIT teams into a single team that will participate in a joint INT and SIT test. UAT will be reserved for FAT. Recommendation 3: All UAT defects are retested in both INT & SIT before they are promoted to UAT as fixed. Most will likely not become good regression candidates as the majority of the defects at this point are cosmetic, so once they are fixed, they are fixed.	

Finding Number	Title	Reporter	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Priority	Finding Status	Status Update	Client Comments	Vendor Comments	Risk Statement
65	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.	Ryan	Finding - Risk	3/2/2021	Project Management	As the BES system is designed, it appears there is a lack of BESSD staff with expansive business knowledge and availability to work on the project to ensure the BES system meets the business need and requirements.	BESSD staff with expansive business knowledge and availability are critical to the project to ensure business needs and requirements are effectively documented as the new system is designed and developed.	9/30/2021 - DHS continue planning, transitioning, and adapting to staff changes. In progress [Created earlier] - DHS continue to identify BESSD SME's to support the project as the project progresses. - In progress and continuous DHS develop a project team list that identifies the participants along with their roles and areas of expertise to be used as short-term needs are identified. - Complete DHS utilize the BI-5 Project Schedule report developed by the ASI to identify those tasks owned by DHS in the short term in addition to the 4-month look-ahead to identify time frames and activities where there is a high-demand on DHS resources. - Complete Identify and on-board a replacement BES Project Manager. - 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.	ASAP	1	1	Low	Open	11/26/2021 - DHS BESSD staff with expansive business knowledge have been sufficiently available for the project, especially in the last month now that a permanent BESSD PM has been hired and involved. There is significant improvement with the availability of DHS product owners, SMEs, and managers. As a result, IVV is lowering the criticality rating to low. 10/31/2021 - The ASI has reported significant improvement in the participation of experienced DHS BESSD staff since this finding was identified. IVV 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. 9/30/2021 - 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. IVV will continue to monitor. 8/30/2021 - DHS continues to recruit the BES PM position. 7/28/2021 - DHS continues to recruit the BES PM position. 06/30/2021 - In the 06/09/2021 Status Meeting, DHS reported they added a Reports SME and two additional staff to the UAT test team. DHS continues recruiting for the BES PM position. 05/31/2021 - The DHS Product Owners continue to adjust to their new roles to include decision making and designing BES to take advantage of the new technologies. DHS has identified a replacement BES PM; onboarding was delayed and is now planned for June 2021. 04/30/2021 - The DHS Product Owners are adjusting to their new roles to include decision making and designing BES to take advantage of the new technologies. DHS has identified a replacement BES PM, onboarding is planned for May 2021. 03/31/2020 - The DHS Product Owners continue to adjust to their new/revised project role, which is having a positive impact to the BES design. DHS is taking the planned actions to replace the DHS PM. 02/28/2021 - In January, DHS added many BESSD staff and is having a positive impact on the project. With the retirement of DHS' BES Project Manager (effective 2/26/2021) and Business Analyst (effective March 31, 2021) a transition plan was developed to support the onboarding of a new BES PM. DHS is taking the following actions, DHS developed a DHS BES Resource Pool to support future resource needs on the project. DHS is using a report from the BI-05 Project Schedule focused on the DHS activities and tasks planned to be performed in the next 4 months to provide early visibility to peak DHS resource needs.		4/23/21 RAP - DHS has added a number of product owners to the project over the past few months and given them the authority to make design decisions for the department. This has resulted in improvement in the turn around time for decisions being made.	
63	The lack of early planning and coordination with interface partners may result in schedule delays.	Al Pangelinan	Finding - Risk	1/21/2021	Integration and Interface	The following planning and execution items have not yet been addressed and documented by the ASI. - Connectivity is planned to utilize a presently undefined ETS API Gateway; however, there is no evidence that details have been determined or documented in this regard. - There is little evidence of active and sufficient communication with interface partners for coordination, design, and testing activities (Unit Test, SIT, UAT). - Interface planning and execution tasks and activities, including those for interface partners, are neither resident nor managed within the Project Schedule. - A mitigation plan has not been developed to address the unavailability of interface partners during interface implementation after MOAs have been approved, testing dates have been confirmed, and communications have been frequent.	Interfaces is one of the areas where DDI projects often underestimate the time needed to effectively manage all the tasks and activities to successfully implement data sharing. A clearly defined communication plan and schedule that includes the coordination, planning, and execution activities along with milestone dates may minimize the risk of possible delays. In addition, after planning has been completed, interface partners will have to be available during interface implementation to ensure that the interfaces are properly tested before deploying the system to production.	1. Establish a communication plan for each interface partner for the duration of the ASI DDI activities. 10/29 COMPLETE 2. Identify and document all interface partners' contacts. 3. Define a detailed schedule for each interface to include milestone dates, coordination, and execution and share with the interface partners. 4. Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces. 5. Complete all MOAs and obtain approval. 6. Confirm testing dates with interface partners in writing. 7. Distribute preparation procedures for interface implementation to interface partners. 8. Develop a mitigation plan to address the unavailability of Interface Partners during interface implementation.	Q4 2021	5	3	High	Open	11/29/2021 - No changes to the interface communication plans in this reporting period. IVV has concerns regarding the 120-day certification process for the IRS interface, the DUR modernization phase, and the modernization of the tax interface from a flat file to a direct web service with DOTAX. These new items may impact the project schedule, the existing process for the DHS Financial Management Office, and the functional designs for the FMM module. 10/28/2021 - 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. IVV 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, IVV is evaluating the need for a separate finding regarding the implementation of interfaces. 09/30/2021 - The project team continued to update the communication plans. IVV conducted another review of the Communication Plans and found that 1 interface partners' contacts have not been documented, 3 MOAs have not been approved, 2 need unit test dates confirmed, 4 need system test and UAT dates confirmed, 27 need pilot and production cutover dates confirmed. IVV understands that DHS is responsible for identifying the contacts, ensuring that the MOAs are approved, and confirming the test and cutover plans. IVV will continue to monitor. 08/31/2021 -The project team continued to update the communication plans. IVV conducted another review of the Communication Plans and found that 2 interface partners' contacts have not been documented, 3 MOAs have not been approved, 3 need unit test dates confirmed, 6 need system test and UAT dates confirmed, 27 need pilot and production cutover dates confirmed. The project team has escalated the lack of response from some Interface Partners to DHS for resolution. 08/30/2021 - The status has not changed. IVV conducted another review of the Communication Plans and found that 2 interface partners' contacts have not been documented, 3 MOAs have not been approved, 12 need unit test dates confirmed, 13 need system test and UAT dates confirmed, 27 need pilot and production cutover dates confirmed. 07/28/2021 - The project team continues to update the interface planning documents. IVV conducted another review of the Communication Plans and found that 2 interface partners' contacts have not been documented, 3 MOAs have not been approved, 12 need unit test dates		7/20/21 RAP - The ASI team requests that the IV&V reassess the severity of this risk in light of the following reasons: a) the ATC schedule extension has made the urgency for tackling these tasks less than it was before that started lessening the schedule risk, b) the increase from Medium to High in May was based on a misunderstanding of the current state of the MOA's and contact metrics, c) substantial progress has made against each of the In Progress recommendations, and it continues to trend in the right direction. In regards to the final recommendation, the ASI does not doubt the importance of this;	
62	Inability to measure development team velocity may impact the project's ability to forecast the delivery date of the remaining features.	Al Pangelinan	Finding - Issue	12/28/2020	Project Management	The subcontractor development teams don't currently track and report Sprint velocity to the ASI.	Velocity is an important metric in Agile development which provides project leadership the ability to forecast how many iterations the team will need to complete the remaining work. Development teams use velocity to avoid over-committing to work in future Sprints. Velocity can also be an early indicator that the project needs more time or resources to meet the planned release dates. If the ASI does not track development team's velocity, they cannot accurately forecast the delivery date of the remaining features, which may place the project cost and critical path at risk.	1. Calculate the average velocity from past iterations to be used as a historical reference. 2. Provide velocity charts with committed and completed story points for projects documented in Jira. 3. Optimize work based on estimations.	?	4	3	High	Open	11/29/2021 - IV&V met with the ASI on November 3rd to discuss the velocity charts. There are six development teams (3 for FCM and 3 for SSP). IV&V found that the velocity charts contain aggregated data that does not represent each team's velocity. At this time, IV&V cannot determine if each development team is tracking its velocity. 10/28/2021 - IVV 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, IVV noted inconsistencies in story points for Release 0.6 SSP between Ahal (222) and Jira (799). IVV will continue to monitor. 09/30/2021 - IVV 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. IVV will meet with the ASI to discuss the velocity charts in Jira and monitor this issue. 08/30/2021 - IVV observed continued improvement in the development of planning estimations for SSP in Release 0.6. However, IVV will meet with the ASI to discuss the Jira velocity chart to gain an understanding of how the actual completed story points are maintained by the development team within Jira. The ASI plans to release the FMM and CMM velocity reports in September. 7/27/2021 - IVV observed improvement in planning estimations for SSP in release 0.5 Sprint 5, and although the sprint is not finished yet, the planned vs actual velocity chart is trending in the right direction. There were major improvements this reporting period regarding FCM (FMM/CMM) work estimations in Ahal. Use case estimates are now in Ahal for the current and follow-on release. The FCM team is tracking story points in an MS-Excel worksheet as they validate their estimations and will be moving those estimations into Jira so they can track and report FCM velocity once the validation is complete. IVV will continue to monitor the progress on the SSP and FCM sprint teams ability to track velocity. 06/28/2021 - No progress to report this reporting period. The CMM/FMM team is still unable to measure sprint velocity and there are no story point estimations in the FCM_ALL backlog. Velocity is being tracked for the SSP sprint team but they consistently commit to more		9/9/21 RAP - See the notes from 7/20 regarding planning estimates for SSP. The IV&V is welcome to reach out in any of the regularly planned meetings to review the process for maintaining story points in JIRA; however, based on evidence to date on the SSP team, it is not clear why IV&V would have any need to understand those details in order to make an accurate assessment on risk to the project schedule. If they are just interested in the process, we are happy to have that discussion as time allows. 7/20/21 RAP - First in regards to the statement from the IV&V that "Velocity is being tracked for the SSP sprint team	
61	Poorly executed JAD and design sessions could lead to inaccurate design and rework.	Brad	Finding - Issue	11/30/2020	System Design	ASI-led Workflow JAD sessions have been held for CMM, with the following concerns being observed. - No clear introduction to all participants on the goal of the JAD, overview on the process and the importance of their participation. - On many occasions the conversation needed to be driven by leading questions, as expected, but was instead lead by business users - Too much pause time when participants did not know the answer to a question; several occasions where complete silence on the call for 30 seconds or more - Lack of thought leadership from the ASI on how workflow could be designed to ease/improve process for client	The CMM Workflow JAD sessions restarted in November. DHS indicated some concern regarding the CMM Workflow JAD sessions, specifically; (1) Do the JAD participants understand how the Case will be managed through workflow? (2) What improvements will be made in the new BES to support workflow? Incomplete or unclear JAD sessions with insufficient documentation could lead to a poor design, lacking the details needed to support business requirements; as well as missing opportunities to improve workflow and related system design.	- JAD and design sessions should be lead by experienced senior BAs, with goals, objectives and results communicated to all participants. - The facilitator should use their expertise to drive discussions through leading questions. - The DHS and ASI product owners should actively participate to ensure the system meets the requirements, designed taking advantage of new technology and aligns to the 'to be' business process. - The ASI should back-track significant differences in design direction to determine the root cause to identify these items as early in the SDLC as possible. - The Product Owners should have more direct interaction with the development team, proactively seeking collaboration. 10/5/21 Complete - The Functional Design Document process, to include the Design Sprint concept, should be clearly defined and shared with all project team members. - Invite IVV to all future design sessions and design sprints to allow IVV to observe and assess the effectiveness of the revised design processes. - ASI and DHS work together to vet the in-progress design with all SMEs for the area of focus.	ASAP	4	3	Med	Open	11/29/2021 - IV&V met with the ASI on November 3rd to discuss design sessions. IVV observed that new/replacement DHS POs who were not involved earlier sometimes request a revisit of prior decisions, and in some cases, the replacement PO will have a different opinion on how to design the solution. IVV will continue to observe these meetings and capture issues that could negatively impact the design of solution. 10/31/2021 - The BES Project Team (DHS, ASI, IVV) has shared concerns about issues arising late in the development process during in Sprint demo and prototype meetings. IVV 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. 9/30/2021 - IVV received invites to selected Design Sprint Meetings on 9/30 and will resume monitoring design discussions between ASI and DHS. IVV has observed and DHS/ASI has confirmed that the participation level of ASI and DHS product owners in design meetings has increased. 8/30/2021 - IVV did not participate in any design sessions or design sprints in this reporting period; therefore, we have no material update this month. Although these sessions were conducted, IVV was not included. IVV respectively requests to be included in the design sprints and/or sessions as they are scheduled by the project team. 7/30/2021 - Design sessions were conducted this month along with the corresponding Draft Functional Design Documents. It is IVV's understanding the project is planning to initiate "Design Sprints" to identify design issues earlier and will include DHS/ASI Product Owners, and IVV. IVV will assess the process when it is provided and observe the Design Sprint sessions. 6/30/2021 - No JAD or Design Sessions were conducted in this reporting period. However, the ASI provided IVV a brief overview of the proposed process change to conduct design sprints in concert with the project schedule revisions. In addition, the ASI subcontractor added two Systems Analysts, but it is unclear if they have Integrated Eligibility experience. 5/30/2021 - A few screen prototype review sessions were held with healthy collaboration between all participants. Product owners raised some concerns, for example the PO's stated the Manage Veterans Information screen might not be needed as the information could be captured elsewhere. This is exactly what these sessions are meant to identify and the earlier they are found in the SDLC process the better. IVV will continue to monitor in May. 4/30/2021 - This finding title was revised to include design		9/9/21 RAP - The IV&V does participate in many facets of the design process including screen mock-up reviews, backlog grooming sessions, and Sprint demo's. Product owner discussions are meant to have limited participation. The team is concerned about the participation of the IV&V for two main reasons: 1) IV&V does not always stay silent in discussions despite assurances from the IV&V PM that it is not their role, and 2) IV&V participation typically drives what are meant to be informal processes to more formal processes that are less effective based on their participation. There are a number of meetings	

Finding Number	Title	Reporter	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Priority	Finding Status	Status Update	Client Comments	Vendor Comments	Risk Statement
60	System Integration of the BES Modules (CMM, FMM, SSP) will be developed in the later releases vs. a continuous integration model within each release which may cause schedule delays.	mfors	Finding - Risk	9/30/2020	Integration and Interface	The BES Modules (CMM, FMM, SSP) are developed by separate teams and demo's are conducted separately with each release. Integration points between the modules are currently stubbed and the ASI has yet to demonstrate integration of the modules and end-to-end functionality.	Failure to perform integration testing and/or proof of concept integrations early in the development effort could lead to unexpected design and technical complications as well as bugs as go-live approaches and lead to unexpected delays. A 'big bang' integration strategy towards the end of development could result schedule slippage if components do not integrate as expected and additional testing time is required once repairs are completed.	- IVV recommends prioritizing the build and testing of integration points within each module to assure integrations (through early end-to-end testing) meet expectations throughout development instead of waiting to perform them for the first time as go-live approaches. 10/28/21 - 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, IVV is lowering its risk criticality to Medium. However, IVV 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. 09/29/21 - 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. IVV 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. 08/30/21 - The ASI has stated they intend to demonstrate some CMM/SSP integration as part of release 0.6. With only 4 releases remaining before the final release, it remains unclear if all integrations will be completed and fully tested without schedule slippage. The ASI has described their plan for mitigating this risk which includes enhancing communication between their development groups. 07/27/2021 - This reporting period, IVV observed improvement in the planning efforts for the integration of the BES core modules. Each of the upcoming releases plan to demonstrate the first integration points between CMM/SSP and CMM/Current (Workflow Tool). The ASI provided IVV with steps towards mitigating this risk and we will review the mitigation plan to verify the steps are currently in progress or complete. 06/28/2021 - This reporting period, IVV reviewed the SSP Integrations document in Confluence that outlines the integration approaches for the identified SSP integration points. The document was designed as a reference for developers and contains the expected low-level details (API calls, request/response). To prepare for future knowledge transfer, it should also include high-level information (specific module names associated with each integration point). The SSP integration document will continue to evolve and is a positive step towards the mitigation of this risk. 05/27/2021 -The ASI provided IVV with a timeline for the planned integration of the BES modules.	N/A	3	2	Med	Open	11/29/21 - The ASI stated that communications between their development teams have improved, and as a result, moved some integration components into earlier releases. However, most of the integrations are scheduled for implementation shortly before go-live based on the project schedule.	7/30/21 RAP - Integration of the core modules (SSP & CMM and CMM & FMM) will continue to evolve in future releases. R0.6 will demonstrate the first integration points between CMM & SSP. This is now four releases before the final planned development release. Similar interfaces between CMM & Current will begin in R0.7, 3 releases before the final development release. The ASI team is mitigating the risk stated by the IV&V in 3 ways: 1) gaining agreement from both development teams on the integration methods, and service contracts as noted in the July report from the IV&V, 2) providing a periodic
49	Poor quality project deliverables may impact system design, testing artifacts and the project schedule.	Brad	Finding - Issue	4/16/2020	Project Management	In April, four BI-10 design deliverables and one Interface Control Document deliverable were submitted for client review. There was an average of 85 comments submitted for each of these deliverables. The documents exhibited erroneous information, a lack of a logical organizational flow, an insufficient level of detail, and a lack of understanding of the subject matter from both a functional and technical perspective. DHS logged this issue in the Project Issue Log for corrective action by the ASI. The ASI acted by conducting an internal root cause analysis and provided DHS and IVV the high-level results.	The staff time spent on reviewing deliverables is exceeding the plan for all project entities and has caused schedule delays due to the associated rework needed for remediation. If poor quality deliverables continue to be produced and submitted for review, this can continue to result in unproductive use of time, unanticipated rework, misguided development and testing activities, potentially unfulfilled functionality, and additional schedule delays.	IVV recommends that a facilitated root cause analysis be performed by the ASI with DHS and IVV in attendance. Quality issues are rarely generated by a single entity in a project, so there could potentially be multiple causes or root causes of this current condition. Once the root cause(s) are identified, IVV recommends immediate action be employed to resolve quality concerns on in-process deliverables prior to submission of subsequent deliverables] Closed 7/30/2021 ASI reviews its Quality Management Plan to ensure that the project is working within the guidelines of this Plan document. 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. IVV has not seen evidence indicating the ASI is utilizing metrics to measure its process and product quality. - ASI verifies that the information in design and testing artifacts is kept in sync and consistent. - ASI perform a root cause analysis with DHS and IVV in attendance to determine the source of the design defects.	Immediate	2	2	Low	Open	11/30/2021 - The results of the system test for release 0.6 showed a significant reduction in defects compared to prior releases, which could reflect improvement in the quality of deliverables. IVV will review the root cause analysis when provide by the ASI. 10/31/2021 DHS testing team reported inconsistencies between wireframes and Functional Design Documents, causing challenges in creating test cases and resulting in defects in development. IVV and DHS are concerned that as the project moves to larger and more complex releases, these quality issues could negatively impact the project. IVV added a new recommendation that the ASI focus on addressing these inconsistencies. 9/30/2021 - 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. IVV 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. 8/31/2021 - The ASI has indicated they do plan on providing updated quality metrics that align with the revised process using the Confluence tool however, they have not yet published them. IVV recognizes this may be a lower priority item since the project team has been focused on the SDLC changes along with the necessary schedule adjustments. 7/30/2021 - The project deliverables published this month appeared to have most comments focused on functionality vs. format/grammar/spelling. This implies improvement however, without published ASI metrics on the quality of the deliverables, IVV is unable to validate. 6/30/2021 - No material update during this reporting period, DHS and IVV will review the ASI's revised process metrics when they are published. 05/30/2021 - One deliverable was submitted in this reporting period and is currently being reviewed. The revised metrics were not provided by the ASI. 04/30/2021 - Improved collaboration between ASI, DHS SMEs and Product Owners in design-related discussions is having a positive impact on the quality of deliverables. The ASI is currently developing additional quality metrics to quantify these improvements. IVV will continue to monitor. 03/31/2021 - The quality of deliverables continues to show improvement, mainly due to the use of the Confluence tool and its collaborative capabilities. IVV will continue to monitor the implementation and the effectiveness of quality improvements. 02/28/2021 - The Project continued to implement Release 0.2 Lessons Learned initiatives to improve project quality during February. Confluence is	06/30/2020 - New deliverables this month included BI-10 and BI-20. BI-10 was initially called back for quality issues, and the issues were corrected. DHS is not comfortable with BI-10 re-format, will be revised again.	7/30/21 RAP - The ASI team will review and respond to this email again when a material update is made by the IV&V. We also recommend the rethinking of the first recommendation based on the assessment from the IV&V that this is a low risk. The tone, tenor, and substance of that recommendation is out of step with a risk perceived by the IV&V for a number of months now to be low. 4/23/21 rap - The ASI team agrees that the full embrace by the project of the Confluence tool has improved the deliverable management process. We agree that the risk of poor quality deliverables will remain low if all parties
47	The COVID-19 pandemic and the related "stay at home" order could hinder project activities and negatively impact the project schedule and budget.	mfors	Finding - Risk	3/29/2020	Project Management	On 3/23/2020, the Governor of Hawaii issued a "stay at home, work from home" order that has reduced state departments' ability to be fully functional at the large majority of state workers will be required to work from home/remotely at least until the end of May and some offices may be completely shut down until that time as well. Unclear if the order will extend beyond that date.	DHS stakeholder participation in key activities could be significantly hindered, not only by working remotely but also by the need to focus on delivering services to beneficiaries. Planned key activities such as design sessions may be facilitated remotely which may impact the quality of the sessions. Going forward, most if not all project activities will more than likely be conducted remotely until this crisis passes. The DHS project team will soon lose some key members of the PMO, the PMO lead will retire on 4/30/20 and another key member in June 2020. DHS has concerns that the state could experience a significant loss of revenue due to COVID, which could lead to DHS budget challenges. If the state/DHS institutes a hiring freeze, DHS PMO may not be able to replace these key resources. Additionally, if the state institutes furloughs, DHS project team resources could be further constrained. Unclear if the state budget challenges will impact overall project funding.	- Continue to make efforts to setup, train, and assist new stakeholders on remote work devices and tools and continue to assist stakeholders with becoming highly functional with remote access technology (e.g. MS Teams/Skype). - Complete - Suggest the project and DHS create a detailed, documented risk mitigation strategy and plan that is reviewed regularly and revised to address the current state of the COVID-19 threat and related impacts. The plan should include the possible economic impacts to the state budget directly related to project resources. - Update the OCM Plan to include any new activities or updates to planned activities to aid the organization through this COVID-19 pandemic in the short and long term. Complete - Send broad communications to stakeholders to assure clear understanding of changes to the project with this regard to impacts of COVID as well as clarifying communications as to what will remain the same. - Explore options for freeing up key DHS SME's work on the project. - Complete - Project leadership continue to encourage independent phone conversations to enhance and accelerate communications, and for team members not wait for meetings to converse.	ASAP	2	2	Low	Open	11/29/21 - The ASI has transitioned their team from working remotely to primarily working in their Honolulu office as of October 2021. It remains unclear whether the new COVID variant (Omicron) will disrupt project activities. 10/28/21 - No material update in reporting period. 9/29/21 - No material update in reporting period. 8/30/21 - The ASI has recently reported they will be closing their offices for at least 2 weeks given the escalating number of COVID cases. As work will be ongoing, they do not expect significant impacts to productivity. 7/27/21 The ASI has reported that their off-shore (India) team is back to full strength again after having some challenges with COVID. IVV remains concerned that some communications between the project team could be hindered due to not being able to work in closer proximity. The ASI recommends project leadership continue to encourage independent phone conversations to enhance and accelerate communications, and for team members not wait for meetings to converse. 6/28/21 - The ASI continues to limit their office occupancy to 50% to comply with State mandates but has indicated that in-office team members continue to see increased productivity from in-person project collaboration. Some key DHS SME's will continue to work remotely which could pose a challenge to project productivity. Earlier concerns with COVID impacts to their offshore (India) team because of the spike in new cases appear to be subsiding. IVV changed the criticality of this finding from medium to low and will continue to monitor. 5/27/21 - The ASI has allowed their team and select DHS team members to return to their office. DHS' acting PM has noted in-person interactions with the ASI have improved communications and productivity at the PM level. It remains unclear whether the off-shore ASI team will continue to be impacted by COVID. 4/28/21 - The project continues to adapt to virtual project activities and sessions. Though in-person sessions are likely more productive and can increase stakeholder participation and the project's cadence, DHS has accepted this risk and continues to improve their virtual capabilities. The ASI stated their off-shore India SSP team has been directly impacted by the increased COVID infection rates as 3-4 of their developers have contracted COVID. If these numbers grow the ASI may transfer some of the work to other teams. 3/31/21 - As BESSD operational activities due to COVID subside, some BESSD SMEs are increasing their level of involvement on project tasks (e.g., UAT testing, Product Owners). Hawaii State	06/30/2020 - Office opening may be delayed until September/October. TBD.	7/30/21 RAP - The ASI agrees that COVID at this time is likely a risk to both schedule and budget for the project despite some increases related to the delta variant. The ASI team continues to maintain social distancing in the office in line with State mandates. However, the team has essentially reached the new normal in Honolulu. This includes fewer resources travelling and more conference calls; however, the project has adjusted to the lack of in person meetings. In our off-shore office, we still have staff working from home. We expect that to continue for at least the rest of the year. However, the impact to our off-shore resources have ameliorated since the
43	DHS PMO project team members have transitioned off the project, which may cause gaps in knowledge transfer and leadership on the project.	Ryan	Finding - Issue	1/10/2020	Project Management	As reported in various project meetings, several key DHS PMO, BES and ASI project team members are planning to retire or leave the project within the next few months or have already transitioned off the project. While there are plans and actions being taken, a formal transition/succession plan has not been documented. In January, the ASI did announce and introduce an interim Project Manager, but a plan for a permanent replacement is not currently known.	The key resources leaving the BES Project provide knowledge and history of DHS and its software, solutions, and business processes, along with a level of consistency and continuity to the extended project team. This experience and knowledge is critical for the BES DDI and KOLEA Modifications, and planning efforts for BES Maintenance and Operations activities.	5/31/2020 - DHS continue to work with the appropriate organizations to identify the funds necessary to fill these positions. - in progress The state should document a transition plan for the project and PMO resources as identified in the RFP (reference RFP section 3.4.3 'DHS Staffing'). The plan should include the possible COVID-19 economic impact to the state budget, directly in relation to the project resources. - Closed The ASI should document a transition plan for each key resource as required by the RFP (reference RFP section 3.5.1.2 'Benefits Eligibility Solution Project Staffing'.) - Closed	ASAP	3	5	High	Open	11/26/2021 - No material updates in this reporting period. 10/31/2021 - No material update in this reporting period. 9/30/2021 - 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. IVV will monitor the impact of these project management changes. The remaining DHS PMO positions continue to be unfilled. 8/30/2021 - No material update in this reporting period. 7/28/2021 - No material update in this reporting period. 6/30/2021 - No material update in this reporting period. 5/31/2021 - No material update in this reporting period. 4/30/2021- DHS reported the 'hiring freeze' has been lifted and are working to secure the budget for these positions. IVV will continue to monitor. 3/31/2021 - No material update to this finding in this reporting period. 2/28/2021 -No material update to this finding in this reporting period. Note - Previously this finding was addressing DHS PMO and DHS BESSD staff, they were split during this reporting period to accommodate different status updates and criticality ratings. The BESSD Staff are now in finding #65. 01/31/2021 - DHS assigned several BESSD staff to the project team this month and they are in the onboarding process. The DHS PMO positions remain in an open status. Although many new staff were added to the project in January, IVV retains this as a high-priority until DHS has validated the project has the staff with the required skill sets needed for the long-term. This may be challenging since the project is using Aha and MS-Project to manage the schedule and Aha does not currently have DHS resource estimates included for the activities and tasks. 12/31/2020 - DHS identified 2 additional staff to begin assisting in the deliverable review process in January 2021. Additional BESSD staff may be needed to support the project in the near term for the larger releases and the open PMO positions have not yet been approved/funded. 11/30/2020 - DHS has identified additional part time BESSD staff to work on the project in the Product Owner role. DHS is planning to establish roles and responsibilities for the new team members and continues to pursue additional staff to work on the project to minimize risk. 10/30/2020 - No material update to this finding during this reporting period. 9/30/2020 - The lack of DHS staff to work on the BES project is negatively impacting the project. The last DHS PMO	02/08/2021 - Brian Donohoe does not agree with IVV's high-criticality rating on this Finding (#43) and DHS rolled out the DHS Product Owner Roles and Responsibilities to the DHS team on January 29, 2021. (Gary provided the Final DHS Product Owner Roles and Responsibilities document to IVV on 02/8/2021). 06/30/2020 - Mark Choi is becoming more involved in the project. Involved in Arch decisions and PM decisions around tool sets, future vision, etc. Day to day PM working closely w/ Gary and Emerald. We have no insight into other DHS staffing.	4/23/21 RAP - From the ASI perspective, the changes to the project management of the BES project have provided little impact on the overall project. At this point, the knowledge transfer gaps remains strong hands from DHS. We recommend that the IV&V reassess the probability of impact and severity of impact and lower the overall rating for this risk.3/3/2020 - The ASI PM stated the Project Coordinator position is filled and they will begin work on 3/9/2020, transition activities from Donna will begin next week. ASI PM also stated they are currently filling the ASI PM and ASI Engagement

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29	Uncertainty and/or a lack of communication around long term architecture decisions could impact the project budget, schedule, system design, and planning decisions.	mfors	Finding - Issue	5/28/2019	Project Management	Some platform and BES system architecture decisions have yet to be made and socialized to the project. For example, the ASI and DHS have stated that they have reached agreement that the project will move forward with implementing two Siebel instances (one for KOLEA, one for BES), but this is not currently reflected in the project change log or the project decision log. It remains unclear if the details of the rationale for this decision or the plan for integrating the two instances post go-live have been thoroughly vetted and/or documented. Further, there may be some uncertainty around whether when/if all environments (including KOLEA and BES production) will be moved to the cloud.	The current project architecture and design should be as representative and inclusive of all known future solution plans as possible. As an example, if KOLEA and BES are to move to a single instance of Siebel in the future, planning for that integration should be incorporated into the project now. If such significant future changes are not planned for now, the project is likely to see increased complexity, rework, and costs when integrating the two systems in the future.	- The ASI continue to make updates to the BI-12 System Architecture Deliverable with additional details as they become available and with any architectural changes are finalized. - Complete - DHS should finalize the Portal strategy and implementation details and communicate clearly communicate out to stakeholders and project teams. - 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. - 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. - The project should continue to ensure communication between development leads and architecture team to assure optimal collaboration on possible architecture changes that could impact decisions in each area. - 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.	ASAP	2	2	Low	Open	11/29/21 - The ASI reported progress in finalizing details of the Two-Portal and GCP change requests (CRs) and vetted several key details with DHS. They are also working to finalize some of the architecture components. However, it remains unclear if these changes are fully communicated and vetted by the larger project team. 10/28/21 - IVV 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. 9/29/21 - The Two-Portal and GCP change requests are still not finalized. IVV remains concerned about the potential impact on the project schedule and budget. IVV 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. 8/30/21 - In August, the revised Two-Portal change request was not published. The ASI continues to research ADA tools that are compatible with the BES Architecture. There is a lack of clarity among stakeholders on how, and to what extent, the project will perform configuration management. DHS has indicated their desire to utilize the ServiceNow configuration management capabilities but have yet to resolve licensing issues and the ASI has yet to commit to the level of configuration management they will perform. 7/27/21 - The ASI has completed cost estimates for the 2 portal change order but are continuing efforts to refine the implementation plan. Many DHS stakeholders remain unclear on how the cost estimates were derived and the basis of allocating the cost between MQD and BESSD. Therefore, it is unclear if these plans and estimates were fully communicated and socialized prior to the CCB meeting. 6/28/21 - The ASI reviewed the change order to implement 2 portals (BESSD and MQD) instead of a single consolidated portal. Some details of this change have yet to be provided and the stakeholders raised multiple questions and concerns. The ASI indicated that the project is considering replacing the existing State hub with Boomi toolsets but details are not yet available. 5/27/21 - Although the ASI has taken efforts to clarify how they intend to utilize the State Hub, some aspects have yet to be decided by DHS and the ASI. IVV will continue to monitor communications between the various stakeholders to assure	06/30/2020 - Combined application is still planned. App still not finalized by DHS. From Arch perspective, we are building in Liferay. Future Integration of the portals is not going to be determined, but is not more complex than originally planned for data sharing. If change is made to Adobe, this would require a CR.	4/23/21 rap - The ASI and DHS continue to refine the final plan for the two portal vision. We expect that final decisions will likely be made during this reporting period and communicated to the project. The ASI refers the IV&V to our February update regarding Recommendation #3. From our perspective all necessary actions are complete. If the IV&V does not believe it is Complete we request supporting detail. 4/23/21 rap - The ASI and DHS continue to refine the final plan for the two portal vision. We expect that final decisions will likely be made during this reporting period and communicated to the	
16	Lack of clear understanding of the DDI approach may reduce effectiveness of all SDLC Processes.	mfors	Finding - Issue	12/17/2018	Configuration and Develo	Several DHS stakeholders have commented that the SI Design, Development, and Implementation (DDI) approach is unclear. While stakeholders can observe SI activity and have participated in some SI activities, they do not understand how it all fits together and some activity objectives seem unclear. The SI conducted a DDI approach overview session during an initial JAR session, however not all stakeholders were present. IVV did not locate any DDI approach documentation or materials that could be referenced by stakeholders who may have missed the overview session, by new members of the team, or other interested parties.	Lack of stakeholder understanding and buy-in to the SI DDI approach and project activity objectives may reduce the effectiveness of JAR and JAD sessions as well as other BES project activities and decisions.	PCG recommends one or more of the following to mitigate this risk, • 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 8/27/2021. • ASI make available their DDI approach documentation/materials for stakeholders to review and/or refresh their knowledge on demand. - Complete - • 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.	1/31/19	3	3	Med	Open	11/29/21 - The ASI has reported that their new testing approach has reduced DHS testers level of effort to support testing and streamlined the overall effort. DHS has reported that some of their product owners (POs) may have been put in a position (by the ASI) to provide final approval of designs without a proper understanding of what should be considered and vetted by other DHS stakeholders/SMEs. This has led to testing SMEs requesting changes to the finalized designs in the form of enhancements. DHS is making efforts to improve this process. Further it remains unclear to DHS SMEs whether enhancement requests will incur additional costs to DHS which could later lead to cost overruns or scope reduction. 10/28/21 - It remains unclear whether recent changes to testing and the SDLC design process have been fully communicated 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. 9/29/21 - 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. IVV is not aware if the SDLC design process changes have been communicated and fully understood by the project team. 8/30/21 - On 8/27/21, the ASI conducted a Lunch and Learn session to help the project better understand their DDI processes and highlighted key changes they have made to their previous process. The changes include the addition of design sprints and moving their current test lead out of testing and into a system design business analyst role. The ASI has stated they will be providing more documentation of their DDI approach and will post in Confluence. 7/27/21 - The ASI has stated they will continue to provide the DHS and their development teams with updates to the SDLC processes via their monthly release updates. However, it remains unclear whether this will effectively communicate the methodology to DHS project team members such that they become more productive in their participation in the SDLC	1/7/19; Note. During the 01-02-18 [sic] status meeting, DHS did not decline the offer and made suggestions. To my understanding, Confluence on prem. The testing lead will continue in her role as testing lead and will also continue to play an advisory role on the design of the system as she has done previously. The process changes did not change her role.	9/9/21 RAP - The most recent updates on the SDLC have been added to Confluence as promised. The testing lead will continue in her role as testing lead and will also continue to play an advisory role on the design of the system as she has done previously. The process changes did not change her role. 7/20/21 RAP - The ASI provides updates on the SDLC processes on published Confluence. They continue to review in response to lessons learned, project schedule impacts, and retrospective feedback from the development teams. We will leverage the monthly release updates like we did for the R0.4 updates in July to	
2	Late delivery of project deliverables may cause schedule delays.	Ryan	Finding - Issue	11/28/2018	Project Management	Based upon the project schedule dated 11/26/18 (refer to schedule for specifics), several due dates for project deliverables have been missed. As of the date of this report, these deliverables include the Project Management Plan (PMP), which is the formal document that is used to manage the execution of the project. In some instances, this risk may be compounded by a backlog of Deliverable Expectation Documents (DED) requiring approval and acceptance from the State.	Without a PMP that depicts all Project Management processes, the Project can suffer unplanned consequences in scope, schedule, cost, and quality parameters. Without a schedule that provides the required level of detail to manage the work, the project is at risk to be successful.	9/30/2021 - Despite not yet having a revised baseline schedule, continue monitoring and analyzing deliverables that may have impact to the critical path - In process 5/31/2021 - When the revised schedule is published the project team should restart the weekly practice of reporting actions being taken for late tasks and develop mitigation plans for those tasks that may be late. - Complete 4/30/2021 and 7/29/2021 - 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 SDLC process adjustments. 9/30/2020 Recommendation - IVV recommends the project team evaluate the estimating process to determine if changes should be made to reduce the number of late tasks and-or conduct a root cause analysis to determine and address the root cause(s). - Closed 8/31/2020 Recommendations; - Prior to acceptance of the new baseline, finalize the needed updates to the project schedule to address the outstanding items/issues identified by DHS, the ASI, and IVV to include the Release 0.1 lessons learned. - Closed - Establish the process for DHS and the ASI to mutually agree to the revised project baseline. - Complete - Establish the process for on-going schedule management and weekly updates, utilizing the Schedule Management sub-plan of the Project Management Plan (BI-04). - Complete 5/31/2020 - Finalize the updates to the project schedule to address the outstanding items/issues identified by DHS and IVV. - Closed. 5/31/2020 - Establish the process for DHS and the ASI to mutually agree to the revised project schedule baseline. - Closed 3/31/2020 - Add all tasks that have been performed or planned to be performed in the interim schedule. Closed 5/30/2020 - Under 5/15/2020 the ASI is no longer maintaining the interim schedule. IVV recommends that the ASI complete the Project Management Plan. The project team is moving forward with DHS and IVV for review and edit as needed, and attain approval of the PMP. This will help ensure that all processes within the project management entity are thoughtfully and collaboratively developed and implemented to meet the needs of the project. Review and update the project schedule to capture and discuss the late deliverable	TBD	4	5	High	Open	11/26/2021 - The project continues to demonstrate late deliverables. For example, CF Special Indicator and CMM Interview did not going into Release 6 System Integration Testing on schedule. As project deliverables slip, it may be an indication that the schedule itself is not reasonable and not necessarily the execution of project tasks. The project team is currently reevaluating the schedule. IVV has opened a new risk #74 to monitor planning and scheduling activities. 10/30/2021 – This month the ASI conducted two sessions to review the schedule questions raised by DHS and IVV. 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. 9/30/2021 - The ASI published a draft BI-5 Project Schedule for DHS and IVV review and comments. The intent is that the project schedule will be re-baselined once the comments are resolved, and DHS approves the revised schedule. IVV remains concerned about late deliverables while the new baseline schedule is still being revised. 8/30/2021 - No material change in this reporting period. The project team continues to update the schedule to incorporate the SDLC changes. The revised target date for DHS to accept the schedule is mid-September. 7/28/2021 - Revisions to the project schedule continued this month. DHS and the ASI are currently evaluating SDLC processes changes that may require further schedule updates. Additionally, the schedule impact of the KOLEA ATC changes is not yet final however, the ASI is planning on gaining DHS approval on the revised schedule next month. 6/30/2021 - The ASI published a draft revised schedule on 6/17/2021. The ASI is currently reviewing the comments and questions submitted by DHS and IVV. The project team is moving forward with the revised schedule understanding that further changes may be applied prior to DHS acceptance. 5/31/2021 - There are no material updates to this finding in this reporting period, the revised project schedule is under development. 4/30/2021 -The revised Project Schedule has not been published to reflect the full scope of the project due to the KOLEA ATC impact (the CMS required KOLEA modifications are	11/26/2021 - The project continues to demonstrate late deliverables.	7/20/21 RAP - The ASI will continue to refine the published schedule based on feedback from DHS and the IV&V while we work through the final change request for the ATC which is nearing completion. Regarding the recommendations: Recommendation #1: Based on progress made to date, the ASI is hopeful, that we can agree in principle on the ATC change request in July and have a final schedule published by the end of the month. Recommendation #2: The team has reinstituted every other week schedule meetings and is tracking actions be taken on late work on a weekly basis. 4/23/21 rap - The ASI acknowledges that in this	