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September 25, 2024

The Honorable Ronald D. Kouchi
President of the Senate
and Members of the Senate
Thirty-Second State Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki
Speaker and Members of the
House of Representatives
Thirty-Second State Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Aloha Senate 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 (IV&V) 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 Hawai'i, 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,

Christine M. Sakuda
Chief Information Officer
State of Hawai'i

Attachments (2)



Hawaii Department of Human Services Systems Modernization Project

Final IV&V Status Report
for Reporting Period: August 1 – 31, 2024

Submitted: Sept 16, 2024

Overview

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Solutions that Matter



Executive Summary

Executive Summary



DHS and the ASI began discussions to possibly delay the start of the BES Pilot, planned to start on September 16, 2024. The potential delay is based on many factors, including the number and severity level of the defects identified by DHS in the Final Acceptance Testing (FAT) Phase for the BES Pilot Implementation and added scope that must be developed to address DHS Change Requests (CR). Other factors include:

- ASI development efforts on the Statewide functionality (BES 1.1 – post Pilot) were delayed because the ASI diverted some of these development resources to resolving the defects identified for the BES Pilot.
- Development through the Testing phase continued for reporting with delays for some reports. These delays have downstream impacts that places an unexpected burden on the DHS reviewers. Work that should have been completed earlier is now competing for DHS resource time, slowing overall testing efforts.
- The BES third-party security assessment report was recently submitted, with 34 critical and 204 high findings. Additionally, the Social Security Administration (SSA) will provide DHS with their assessment pending evidence of security awareness training from DHS. This could impact the SSAs approval for Pilot to go live.
- Contract required Deliverables to include the final Requirements Traceability Matrix (RTM) and Conversion results were not delivered on their due dates and have yet to be delivered to DHS. Although an interim RTM was delivered prior to FAT, the final and comprehensive report is key to DHS to validate contract requirements are met, or planned for, in a BES Implementation Release. Data Conversion reports are needed to balance case numbers and may be required for any follow-up activities that must occur by the operations team once Pilot begins using the BES converted cases.

IV&V notes progress was made in the generation of the FNS required System Integrity Review Tool (SIRT) along with the Training and Knowledge Transfer Plan – both are also contract required deliverables. The project team is taking action to address these items, including redirecting and hiring additional resources, but if the root cause of these issues outlined above are not identified and addressed, there is risk of further future delays.

Jun	Jul	Aug	Category	IV&V Observations
			Project Management	The project has been focused on resolving the high number of defects in the Final Acceptance Testing cycle. Additionally, the project team is behind schedule with some Data Conversion, Interface and security tasks. The ASI has added some resources; however, IV&V does not know or their skill level and knowledge of the BES solution (impacting how soon they can be productive contributors).

Executive Summary



Jun	Jul	Aug	Category	IV&V Observations
M	L	L	System Design	IV&V continues to monitor the Project design activities included in the BES 1.1 release. The BES 1.1 release is when BES will be rolled-out statewide after the Pilot release is complete.
M	M	M	Configuration and Development	IV&V looks for the ASI to leverage the development metrics (velocity, burndown charts) to determine number of additional resources needed to complete development and testing to meet Pilot and Statewide Go Live dates.
M	M	L	Integration and Interface Management	Progress was made in completing physical and technical testing of the interfaces, with expectation of all testing being completed by the beginning of Pilot.
H	H	H	Testing	FAT testing continues to be a high-risk category this month; the number of unresolved defects increased, and high severity defects doubled. The ASI and DHS are currently discussing options to postpone the Pilot to allow time for defect resolution and retesting.
H	H	H	Security and Privacy	The project team continues to work on the missing and incomplete supporting documents for the BES System Security Plan. Additionally, the Social Security Administration is waiting on specific security awareness training evidence before they release their Security Assessment report. Therefore, this continues to be a high-risk category that could delay the BES Project.
M	M	M	Requirements Analysis & Management	Although an interim RTM was provided to DHS prior to FAT testing, the BES contract deliverable BI-21 Requirements Traceability Matrix (RTM) extract report has not been provided to DHS prior to the end of the reporting period. DHS cannot validate BES 1.0 (Pilot Release) has all contractually required functionality and requirements without a complete RTM, which may impact Pilot go live.

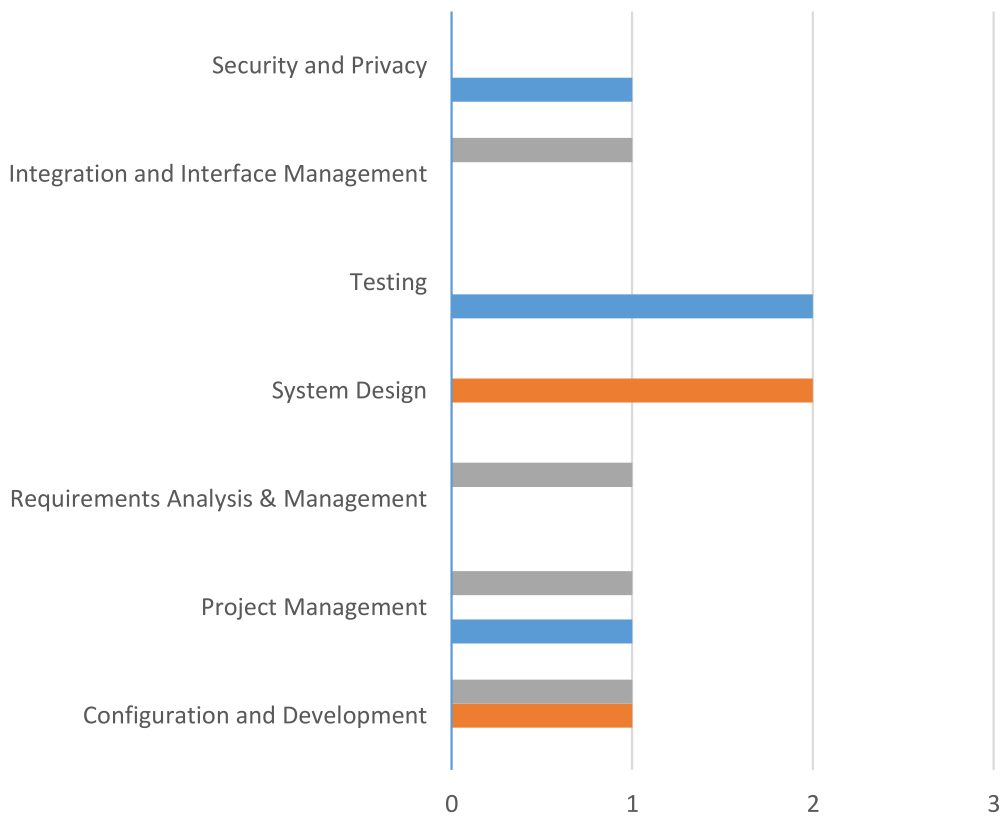
IV&V Findings and Recommendations

IV&V Findings and Recommendations



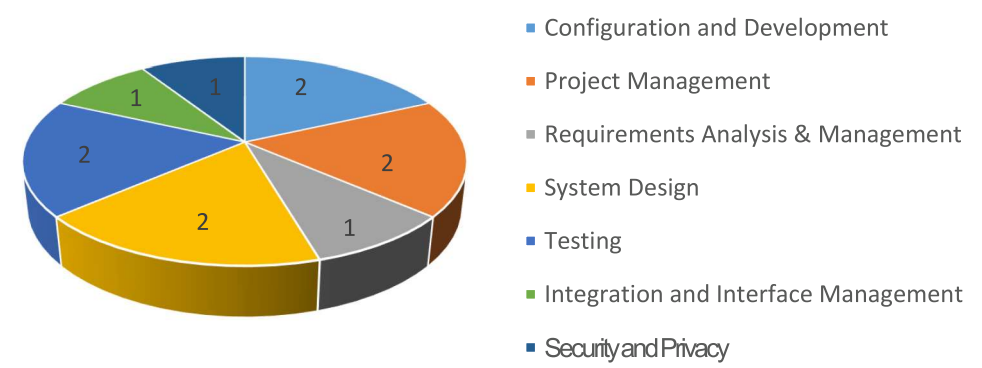
As of the July 2024 reporting period, PCG is tracking 11 open findings (5 risks, 6 issues) and has retired a total of 76 findings. Of the 11 open findings, 4 are High, 4 are Medium, and 3 are Low.

Open Risks & Issues



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

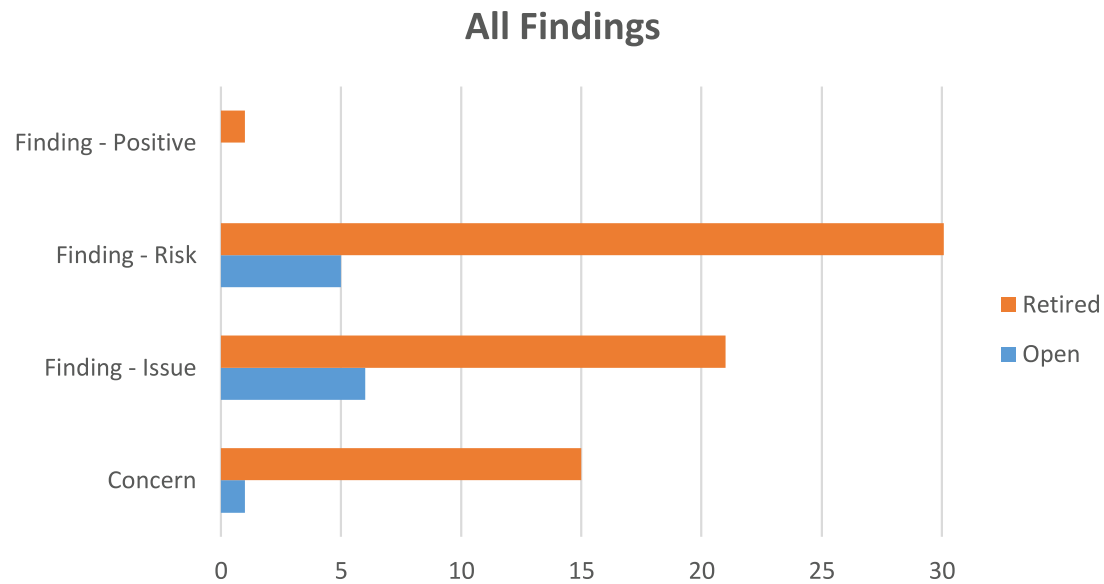
Open Risks & Issues by Category



IV&V Findings and Recommendations



The following figure provides a breakdown of the 88 IV&V findings (positive, risks, issues, concerns) by status (open, retired).



IV&V Findings and Recommendations



Findings Retired During the Reporting Period

#	Finding	Category
97	<p>Preliminary Concern - Insufficient coordination and management of time travel test execution and the time travel environment could lead to rework and schedule delays.</p> <p>On August 21, 2024, the ASI provided clarification on the configuration of the Time Travel tool that addresses IV&V's questions. The Time Travel tool does accommodate multiple testers to execute test cases via the nightly batch cycle that advances the system date sequentially. Therefore, IV&V is retiring this preliminary concern.</p>	Testing

IV&V Findings and Recommendations



Preliminary Concerns Investigated During the Reporting Period

#	Finding	Category
98	<p>Delays in providing the required deliverables to FNS could extend the review time needed and delay FNS's concurrence to start the pilot.</p> <p>As of 8/30/2024, six of the 26 required items have been submitted to FNS, with one key document, System Integrity Review Tool (SIRT) going through final reviews before being submitted to FNS. IV&V will continue to monitor to verify FNS is receiving documents in time to review and approve prior to Pilot.</p>	Project Management

IV&V Findings and Recommendations



Findings Opened During the Reporting Period

#	Finding	Category
	None	

IV&V Findings and Recommendations



Project Management

#	Key Findings	Criticality Rating
74	<p>Issue – A BES Project schedule based on inaccurate estimations diminishes effective planning and resource management, which could result in late deliverables, cost increases, and a late go-live.</p> <p>Underestimated development work that will coincide with FAT testing and related defect resolution, has created risk for completing Epics in time for comprehensive INT, SIT and FAT testing prior to Pilot. IV&V is concerned that Epics might need to enter Pilot without full testing, causing issues for workers completing their required work. DHS has also submitted additional Change Requests that may require the schedule to be delayed. As of the end of the reporting period, the ASI and DHS are talking through a revision of the schedule that will at a minimum push FAT testing out to end of September.</p>	

Recommendations	Progress
<ul style="list-style-type: none">Monitor, evaluate and revise scheduling estimates for accuracy based on the project teams past performance and resources available to do the remaining work.	In Process
<ul style="list-style-type: none">The ASI conduct a root cause analysis of the delays and share with DHS to provide them not only the RCA results but what changes the ASI will implement to avoid continued or further project delays.	In Process

IV&V Findings and Recommendations



Project Management

#	Key Findings	Criticality Rating
88	<p>Risk – Implementing a Core Solution for go-live carries inherent risks that may impact overall Project success and reduce user adoption.</p> <p>DHS continues to emphasize the need for workarounds to be documented and incorporated into training, with a plan to update documentation as defects are resolved to enable pilot workers to be most effective.</p>	

Recommendations	Progress
<ul style="list-style-type: none"> Increase OCM efforts to effectively manage user, general public, and legislative expectations for the BES version at go-live. 	In process
<ul style="list-style-type: none"> Prioritize feedback from users and FNS to ensure the solution meets their core needs and so users are clear on what features they are, and are not, getting. 	In process
<ul style="list-style-type: none"> Actively monitor, assess, and address potential challenges throughout the development process including code quality, cutting scope to meet development milestones, insufficient user validation of demonstrated functionality, and fully defined workarounds to accommodate for the missing functionality. 	In process
<ul style="list-style-type: none"> Actively monitor FAT and Pilot feedback and track users' biggest pain points. Pain points can then be prioritized based on negative impact and project leadership can decide if fixing or changing poor designs can be implemented prior to go-live. 	In process

IV&V Findings and Recommendations



System Design

#	Key Findings	Criticality Rating
86	<p>Issue – Limited collaboration between the ASI and DHS in the design process could lead to BES usability issues and functionality gaps in the application and not meeting critical business needs for DHS and State clients.</p> <p>Design activity was minimal in the reporting period, with DHS reviewing the final Self Service Portal (SSP) designs. IV&V continues to monitor design activities to validate continued collaboration between the ASI and DHS.</p>	

Recommendations	Progress
<ul style="list-style-type: none">Perform Sprint and Epic demos in alignment with development Sprint completion (demo functionality/requirements as they are developed) to get early feedback on work products.	In Process

IV&V Findings and Recommendations



System Design

#	Key Findings	Criticality Rating
73	<p>Risk – The planned BES infrastructure is complex which could be difficult to implement and maintain and could lead to schedule/cost impacts.</p> <p>The ASI has completed some initial successful disaster recovery (DR) tests.</p>	

Recommendations	Progress
<ul style="list-style-type: none">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
<ul style="list-style-type: none">The project team work to establish strong governance over the utilization and maintenance of various tools/components.	In process
<ul style="list-style-type: none">ASI allot time in the schedule to conduct proof of concepts to assure infrastructure components work as expected.	In process
<ul style="list-style-type: none">ASI maintain a detailed schedule for DevOps implementation tasks to avoid unexpected delays that could delay project milestones and the critical path.	In process

IV&V Findings and Recommendations



Configuration and Development

#	Key Findings	Criticality Rating
70	<p>Risk – Insufficient configuration management could lead to development confusion and reduce the effectiveness of defect resolution.</p> <p>IV&V has yet to receive a detailed, comprehensive list of configuration items the ASI will be tracking.</p>	

Recommendations	Progress
<ul style="list-style-type: none">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.	In process
<ul style="list-style-type: none">ASI validate plans for configuration management with DHS and agree on a meaningful set of configuration items or settings they will track.	In process
<ul style="list-style-type: none">DHS and ASI work to clarify/solidify plans for the potential use of configuration management tools and DHS work to fund and procure a CM tool, as required, to avoid any negative impacts to the Project.	Completed

IV&V Findings and Recommendations



Configuration and Development

#	Key Findings	Criticality Rating
80	<p>Issue – Development delays have negatively impacted the project schedule and delayed go-live.</p> <p>The ASI has initiated a Go-to-Green (G2G) Plan to mitigate project delays, including development delays that could impact go-live milestones. One of the G2G plan action items is to “Staff with additional developers”; with the ASI confirming they have added 50 additional developers. It remains unclear how quickly newly added developers will be able to get up to speed and how quickly they can be productive enough to make a measurable, positive impact on the pace of development. Additionally, IV&V is not aware whether current velocity, capacity, and burndown tracking will allow the project to determine how many additional developers are needed, if any, to avoid further delays.</p>	

Recommendations	Progress
<ul style="list-style-type: none"> ASI effectively track and regularly provide DHS (potentially via the weekly DDI status meeting) with an accurate velocity (e.g., story points per day/week/month) and assure that the current velocity is accurately and consistently reflected in the project schedule. 	In process
<ul style="list-style-type: none"> The ASI should provide DHS with the time needed to effectively evaluate the software demonstrations (demos) and elicit productive design discussions with DHS attendees during each demo. 	In process
<ul style="list-style-type: none"> ASI regularly reports estimated story points for the total remaining project work to reach go-live and presents a dynamic burn-down chart to track the progress. 	In process
<ul style="list-style-type: none"> The ASI should consider enhancing the depth of developer unit testing. 	In process

IV&V Findings and Recommendations



Integration and Interface Management

#	Key Findings	Criticality Rating
93	<p>Risk – Due to the lack of physical and technical (Transport Layer) testing of the interfaces and data transfer failure, conditions may exist with data format, boundaries, and dependencies. These failures may result in intermittent and hard-to-isolate problems or errors.</p> <p>All tests except those related to the Wells Fargo Lockbox interface have been completed for Pilot. These seven tests require initiating a new service ticket with Wells Fargo. Tests are expected to be completed before the beginning of the Pilot phase.</p>	

Recommendations	Progress
• API interfaces should be tested for failure conditions during connection and transfer operations.	In Process
• FTP and file interfaces should be tested for data and file integrity.	In Process
• Test data fields for system impacts resulting from data that is poorly formatted, out of range, or other unexpected data transmission errors.	In Process

IV&V Findings and Recommendations



Testing

#	Key Findings	Criticality Rating
83	<p>Issue – Gaps in test coverage and slower-than-expected progress in testing may result in schedule delays if subsequent test phases uncover a higher volume of defects and user feedback than initially anticipated.</p> <p>As of August 29, 2024, 29% of the defects identified during FAT, totaling 313 out of 1056, remain open and unresolved. The breakdown of these unresolved defects by severity is concerning, with 72 high-severity, 150 medium-severity, and 91 low-severity issues. Notably, the number of unresolved defects has increased, and the count of high-severity defects has doubled. With BES pilot planned to start next month the IV&V team remain concerned about the potential delays in testing and the project schedule. This trend warrants attention to ensure timely resolution of these defects and mitigate any impact on the project timeline.</p>	

Recommendations	Progress
<ul style="list-style-type: none">Monitor INT/SIT closely for both breadth and depth of testing to ensure the system is adequately tested.	In Process
<ul style="list-style-type: none">ASI should determine the root cause of the failure to identify simple defects in INT and SIT and implement effective improvement processes to confirm early testing is adequate before entering UAT/FAT.	In Process

IV&V Findings and Recommendations



Testing


	Key Findings	Criticality Rating
89	<p>Issue—The current mitigation approach to completing the development of the remaining Epics is condensed and aggressive, which may increase the likelihood of schedule delays, quality issues, and a higher volume of testing defects.</p> <p>In August, the ASI announced additional delays in delivering several reporting functions planned for phased implementation into FAT.</p> <p>The Epic due dates were pushed further, with Epic 243 due date moved from August 12,2024 to October 4,2024 and for Epic 244, the due date was updated from August 23,2024 to October 4,2024 which will result in the overlap of SIT, FAT testing support, and BES 1.1 (statewide) development efforts.</p> <p>The development progress for Epic 243 was revised downward from 93% to 85%.</p> <p>IV&V remains concerned that these further delays and concurrent activities will introduce increased complexity, making it challenging to manage and coordinate multiple tasks simultaneously. This may compromise the project’s ability to complete testing and other essential activities, ultimately impacting the pilot and statewide go-live dates.</p>	

Recommendations	Progress
• Develop Contingency Plans if the mitigation plan continues to see slippage affecting INT and SIT.	In process
• The ASI provides comprehensive INT results and SIT scenarios for incomplete Epics to DHS for review/approval ahead of SIT execution.	In process
• The ASI validates that development and testing resources have sufficient bandwidth to complete overlapping assigned responsibilities	In process

IV&V Findings and Recommendations



Security and Privacy

#	Key Findings	Criticality Rating
82	<p>Issue – The lack of technical documentation may lead to incorrect implementation statements or delay the System Security Plan (SSP).</p> <p>Through August, the ASI has continued authoring procedure documentation that supports the SSP. PCG completed the independent third-party assessment and delivered a draft report. The assessment found 34 critical, 204 high, 456 moderate, and 78 low findings. DHS and the ASI also responded to requests for evidence from the Social Security Administration (SSA) for their assessment. The SSA is pending evidence of SSA-specific security awareness training. Therefore, the SSA has not yet released its final report. The ASI continued to update IRS-specific controls in Appendix A before the IRS assessment, which is expected near the end of December 2024. Also, the ASI has been deploying scanning agents to system hosts to alleviate vulnerability and compliance scanning issues.</p>	

Recommendations	Progress
<ul style="list-style-type: none"> Determine when documentation will be created, updated, and available for the SSP authors. 	In process
<ul style="list-style-type: none"> Collaborate and communicate with SSP authors about when reliable and correct documentation will be available. 	In process
<ul style="list-style-type: none"> Perform a full review of all draft SSP controls for content and accuracy prior to the start of the Independent Security Controls Assessment of BES and submission of the SSP package to federal regulators. This will allow the SSP authors to update controls with changes from Design through Implementation. 	In process

IV&V Findings and Recommendations



Requirements Analysis & Management

#	Key Findings	Criticality Rating
94	<p>Risk - The lack of an effective way to validate BES requirements could lead to project delays and unfulfilled user needs if DHS later identifies unmet contractual requirements.</p> <p>As of the end of the reporting period, the ASI had not provided the comprehensive Requirements Traceability Matrix (RTM) for BES 1.0 based on the Deliverable Expectation Document (DED), only an interim version, prior to the start of FAT testing. DHS needs this finalized RTM to validate all contractual requirements have been included in BES 1.0 as scheduled and successfully tested prior to go live for Pilot.</p>	M

Recommendations	Progress
<ul style="list-style-type: none">Develop a document that provides DHS with a feasible and effective way to map contract requirements to passed test cases, and, per the BI-19 (Complete and Final Test Plan), "Maps the implementation, functional and technical requirements to the test cases and test scripts".	In Process
<ul style="list-style-type: none">Ensure test scripts thoroughly and comprehensively test the system to assure each requirement has been fully met.	In Process



IV&V Status

IV&V Engagement Status



IV&V Engagement Area	Jun	Jul	Aug	Comments
IV&V Budget				
IV&V Schedule				
IV&V Deliverables				PCG submitted the final July 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 in the August reporting period:
 - Completed – July Monthly Status Report
 - Ongoing – Review the BES Project Artifacts and Deliverables
 - Ongoing – Attend BES Project meetings, (see [Additional Inputs](#) pages for details)
 - Ongoing – Review available ASI contracts and contract amendment documentation
- Planned IV&V activities for the September reporting period:
 - Ongoing – Observe BES Design and Development sessions as scheduled
 - Ongoing – Observe Bi-Weekly Project Status meetings
 - Ongoing – Observe Weekly M&O Project Status meetings
 - Ongoing – Observe Weekly Architecture meetings
 - Ongoing – Observe Weekly Security 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 Bi-Weekly DHS and IV&V Touch Base meetings
 - Ongoing – Review BES artifacts and deliverables

Deliverables Reviewed



Deliverable Name	Deliverable Date	Version
BI-5 Project Schedule - BES 2023 Primary	08/03/2024, 08/10/2024, 08/17/2024	N/A
BI-5 Project Schedule - BES 2023 DDI	08/03/2024, 08/10/2024, 08/17/2024	N/A
BES M&O Project Schedule	08/02/2024, 08/12/2024, 08/19/2024, 08/26/2024	N/A
BI-25 Training and Knowledge Transfer Plan Amendment	08/23/2024	V1.0
BI-22a BES 1.0 SIRT	08/09/2024	V1.1

Additional Inputs – Artifacts



Artifact Name	Artifact Date	Version
BES 2023 Design Kanban board	N/A	N/A
FNS Handbook 901	01/2020	V2.4
NIST Special Publication 800-53 Security and Privacy Controls for Information Systems and Organizations	12/20/2020	Rev.5
SNAP_System_Integrity_Review_Tool	Sept 2022	N/A
Interface Dashboard – Confluence page	N/A	N/A
BES 2023 Implementation Planning – Confluence page	N/A	N/A
R0.12 Epic Assignment	N/A	N/A
R0.12 Epic and Sprint Demo Recordings	N/A	N/A
ADA dashboard	N/A	N/A
Jira Requirements Details	N/A	N/A
Jira Testing Lists	N/A	N/A
FAT Testing Dashboard	N/A	N/A



Meetings and/or Sessions Attended/Observed:




- 1.IV&V Team Meeting – 8/1/2024, 8/5/2024, 8/12/2024, 8/15/2024, 8/19/2024, 8/22/2024, 8/25/2024, 8/29/2024
- 2.IV&V/ASI August Pre-draft Review – 8/8/2024
- 3.HI DHS BES August Draft IV&V Report Review – 8/14/2024
- 4.Bi-Weekly DHS and IV&V Touch Base – 8/6/2024
- 5.Bi-Weekly DHS BES PMO/IV&V Check-in – 8/1/2024, 8/15/2024, 8/29/2024
- 6.Weekly BES Infrastructure meeting – 8/2/2024, 8/9/2024, 8/23/2024, 8/30/2024
- 7.Weekly Client BES 2023 Project Status Meeting – 8/7/2024, 8/14/2024, 8/21/2024, 8/28/2024
- 8.Security Touchpoint – 8/8/2024, 8/14/2024, 8/21/2024, 8/28/2024
- 9.(External) Weekly Interfaces Touchpoint – 8/5/2024, 8/12/2024, 8/19/2024
- 10.(External) Readiness - Working Group Meeting – 8/6/2024, 8/13/2024, 8/20/2024, 8/27/2024
- 11.(External) Bi-Weekly Client BES 2023 Schedule Review/Status – 8/14/2024
- 12.(External) Bi-weekly BES CCB Meeting – 8/7/2024, 8/21/2024
- 13.(External) BES: FNS Connect – 8/1/2024, 8/15/2024
- 14.(External) CIA Current Weekly Checkpoint– 8/13/2024
- 15.ASI/IV&V Mid-Month Check-in – 8/21/2024
- 16.(External) BES M&O Project Status Meeting – 8/2/2024, 8/12/2024, 8/19/2024, 8/26/2024
- 17.(External) BES Snow Touchpoint – 8/7/2024, 8/14/2024, 8/21/2024, 8/28/2024
- 18.(External) BES FAT Daily Touchpoint – 8/1/2024 - 8/30/2024 (met all workdays in month)
- 19.(External) BES FAT Daily Defect Status Meeting – 8/1/2024 - 8/30/2024 (met all workdays in month)
- 20.(External) BI-22a BES 1.0 SIRT Comment Response Review Meeting - cont'd – 8/9/2024
- 21.(External) BES Draft Disaster Recovery Plan Deliverable Response Review Meeting – 8/15/2024
- 22.(External) BI-25 Training and Knowledge Transfer Plan Amendment - Response Review Meeting – 8/23/2024



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
- Data Management and Conversion
- Security and Privacy
- Testing
- OCM and Knowledge Transfer
- Pilot Test Deployment
- Deployment

Ending Slide



Solutions that Matter

ID	Title	Reporter	Finding Type	Identified Date	Category	Description	Significance	Recommendation	Event/ Horizon	Impact	Probability	Analyst Priority	Finding Status	Initial Update	Client Comments	Vendor Comments
98	Delays in providing the required deliverables to FNS could extend the review time needed and delay FNS's concurrence to start the pilot.	Molina, Brad	Finding - Risk	7/24/2024	Project Management	Not all the documents that FNS is required to review have been provided. In the weekly Readiness meeting on 7/23, it was mentioned that FNS is at its year-end, so its workload is backing up, which might require its document review to take the full 60 days. The longer DHS delays getting deliverables to FNS, the closer it gets to the planned start for Pilot.	The BES pilot cannot start without FNS's concurrence. Therefore, it's critical the project team deliver the required deliverables to FNS as soon as possible so FNS has the necessary time to review and give the go-ahead to start Pilot.		8/30/2024	0	Low	Analyst	Open	08/30/2024 - As of 8/30/2024, six of the 26 required items have been submitted to FNS, with one key document, System Integrity Review Tool (SIRT) going through final reviews before being submitted to FNS. IVV will continue to monitor to verify FNS is receiving documents in time to review and approve prior to Pilot.		
94	The lack of an effective way to validate BES requirements could lead to project delays and unmet needs if DHS team identifies unmet contractual requirements.	Molina, Brad	Finding - Risk	4/25/2024	Requirements Analysis & Management	The Requirements Traceability Matrix (RTM) (B-21) plays a vital role in ensuring the system's compliance with contractual commitments by associating each requirement with passed test cases. However, the approved project schedule shows the RTM completed on 6/26/24, which falls after the Core SIRT end date on 6/30/24. The ASi provided the Bi-22a System Integrity Review Tool (SIRT) to DHS on April 28, 2024, but withdrew the deliverable due to DHS concerns. This Bi-22a deliverable may help DHS validate requirements.	It is unclear to DHS and IVV how the ASi will trace requirement coverage for SIRT completion. DHS may be unable to make an informed decision on SIRT exit criteria. This could lead to DHS starting Final Acceptance Testing (FAT) and then realizing that not all requirements have been fully met, resulting in delays.	IN PROGRESS - Develop a document that provides DHS with a feasible and effective way to map contract requirements to passed test cases, and per the Bi-22 (Complete and Final Release Plan). "Map the implementation, functional and technical requirements to the test cases and test scripts." - Ensure test scripts thoroughly and comprehensively test the system to assure each requirement has been fully met.	5/10/2024	3	3	Med	Open	08/31/2024 - As of the end of the reporting period, the ASi had not provided the comprehensive Requirements Traceability Matrix for BES 1.0 based on the Deliverable Expectations Document. The ASi is currently in the process prior to the start of FAT testing. DHS needs this finalized RTM to validate all contractual requirements have been included in BES 1.0 as scheduled and successfully tested prior to go live for Pilot. 7/31/2024 - Discussions were held throughout July regarding the format and structure of the Requirements Traceability Matrix (RTM). However, the ASi has not distributed a reformatted Bi-21 Requirements Traceability Matrix deliverable for DHS review and approval. IVV remains concerned that the delay in finalizing the RTM may lead to requirements tracing issues, missing required Pilot functionality in BES, testing gaps, and project delays. 6/30/2024 - IVV is reporting positive movement on this risk this month. The ASi delivered a draft Bi-21 RTM to DHS and used DHS feedback to revise the RTM's structure to simplify the tracing of requirements, use cross, epics, and tests in a single report. The ASi continues to make additional revisions to further streamline the RTM format and align more closely with the Deliverable Expectations Document. An approved RTM was not delivered by 6/21/2024 per the schedule nor by the end of this reporting period. Until the ASi submits a final RTM for review, the risk remains that all contractual requirements have not been fully validated, which could result in a system with unmet user needs. 5/31/2024 - In the revised schedule, the ASi provides the Bi-21 Requirements Traceability Matrix (RTM) for review on 6/7/24 (before FAT entry). The updated SIRT will be provided at the same time. Although the RTM is being provided ahead of schedule in response to DHS' request, DHS now faces reviewing 2 major project deliverables (B-21 RTM and Bi-22a SIRT) during the same 7-day (6/7-14/2024) period. If the revised schedule does not allow enough time for DHS to review these.	09/20/2024 - Includes information on interim version provided prior to FAT. 7/12/2024 - I'm not sure if this is worth noting but eWorkBES did deliver an "interim" Bi-21 RTM to satisfy the requirement criteria for entering into BES 1.0 FAT. 06/14/2024 - The Bi-21 RTM deliverable has been reviewed and discussed multiple times at the bi-weekly CoB meeting. DHS recommendations of the Bi-21.	
93	Due to the lack of physical and technical testing of the interfaces and data transfer formats, conditions may exist with data failure, boundaries, and dependencies. These failures may result in intermittent and hard-to-isolate problems or errors	Reynolds, Matt	Finding - Risk	4/29/2024	Integration and Interface Management	Aside from the functional testing accomplished during epic testing, specific data flow testing is usually part of an interface definition.	This testing is essential before initial deployment to prevent unexpected and difficult-to-resolve issues, such as scrambled or missing data -- or the system may have a fault or exception. Since the Project has not established and tested the fault scenarios, we do not know how the system may react.	IN Progress 1. API interfaces should be tested for failure conditions during connection and transfer operations. 3. IP and file interfaces should be tested for data and file integrity. 4. Test data fields for system impacts resulting from data that is poorly formatted, out of range, or other unexpected data transmission errors. 5. Removal 2. I/O, no transactional interfaces (other than race conditions) API interfaces should be tested for race conditions. 5. Independent with H1 interface records and files should be tested for format, length, or other physical formatting errors.	2024 2nd Qtr	3	2	Med	Open	08/22/2024 - All tests except those related to the Wells Fargo location interface have been transferred. These seven tests require installing a new service ticket with Wells Fargo. Tests are expected to be completed before the beginning of the Pilot phase. 06/28/2024 - The ASi has prepared the test scripts for the 2 interfaces included in the Pilot release. The first round of test scripts reside in the Jira tool and are being executed to be complete by mid-July. The Office of Information Technology (OIT) will be required to provide special case file alterations. 05/23/2024 - The ASi and DHS continue to define the interface test approaches. Technical interface testing details, including the Transport Layer, are planned to be discussed in June.	08/24/2024 - As mentioned at the pre-meet, a technical interface team plan does exist to address PCS's recommendations for this finding 5/11/2024	08/24/2024 - As mentioned at the pre-meet, a technical interface team plan does exist to address PCS's recommendations for this finding.
89	The current approach to completing the development of the remaining epics is condensed and aggressive, which may increase the likelihood of schedule delays, quality issues, and a higher volume of testing efforts.	Kalis, Neetu	Finding - Issue	12/21/2023	Testing	Ten of the Epics scheduled for completion before Release 0.12 SIRT will not be ready. To avoid SIRT delays, the current approach is to begin SIRT without the 10 Epics and test them as they are completed. Additionally, Release 0.12 development that was extended two weeks from the scheduled end date has been extended for another two business days.	Overlapping development and testing introduces potential quality issues. Insufficient IVV may create gaps in SIRT, leading to further quality issues. The 10 Epics and test them as they are completed. Additionally, Release 0.12 development that was extended two weeks from the scheduled end date has been extended for another two business days.	OPEN - The ASi validates that development and testing resources have sufficient bandwidth to complete overlapping assigned responsibilities - Develop Contingency Plans if the mitigation plan continues to see slippage affecting IVV and SIRT. The ASi provides comprehensive IVV results and SIRT scenarios for incomplete Epics to DHS for review/approval ahead of SIRT execution. CLOSED - The plan to complete BES implementation does not include overlapping testing phases (5/24/2024) - The ASi should evaluate if Epic entering SIRT might require retesting functionality that had already been tested. (closed 06/01/2024) - The ASi release a detailed schedule of events, including development completion, IVV start, and SIRT start for each epic covered in the mitigation plan. (closed 06/01/2024) CANCELLED - Develop a Risk Mitigation Plan to address challenges of managing multiple test environments, multiple code bases and versioning within and across Releases.	Now	4	5	High	Open	8/30/2024 - In August, the ASi announced additional delays in delivering several reports/sections planned for advanced implementation into FAT. The Epic due dates were pushed further, with Epic 243 due date moved from August 12, 2024 to October 4, 2024 and for Epic 244, the due date was updated from August 23, 2024 to October 4, 2024, which will result in the overlap of SIRT, FAT testing support, and BES 1.1 (statewide) development efforts. The development progress for Epic 243 was revised downward from 83% to 65%. IVV remains concerned that these further delays and concurrent activities will introduce increased complexity, making it challenging to manage and coordinate multiple tasks simultaneously. This may compromise the project's ability to complete testing and other essential activities, ultimately impacting the pilot and statewide go-live dates. 7/31/2024 - In July, the ASi delayed the delivery of several reporting functions planned to be phased into FAT. Some of these reports are financial and provide key operational metrics that are complex and take time to validate for accuracy and completeness. The 2-week delay for Epics 286b and 287 and the 1-week delay for Epics 203 and 244 is resulting in the overlap of SIRT, FAT testing support, and BES 1.1 (statewide) development efforts. IVV is concerned that the further delays and concurrent activities will lead to increased complexity due to the difficulty of managing and coordinating multiple tasks at the same time. This may impact the project team's ability to complete testing and other required activities to meet pilot and statewide go-live dates. 6/30/2024 - In May, the ASi published a revised implementation schedule that extended design, development, and System Integration Testing (SIT) execution and delayed the start of Final Acceptance Testing (FAT) by six weeks. This extension allowed the ASi to adopt a risk-reducing change to deliver all functional groups to the remainder of SIRT without slippage in functionality. However, the current schedule extension.	06/14/2024 - Why is this still red? This is yellow for monitoring after discussions in April (status report). In addition, the items listed should be done. All SIRT tests have been reviewed and approved by DHS. There is no retesting needed based on the epics being phased in on 6/15/2024. eWorkBES used and followed the same SIRT entry criteria as documented in the Bi-13 for BES 1.0. There were no amendments to the Bi-13 needed as a result of the "go" decision. An exception was made by DHS for	
88	Implementing a Core Solution for go-live carries inherent risks that may impact overall project success and reduce user adoption.	Molina, Brad	Finding - Risk	11/30/2023	Project Management	The project has elected to implement a Core Solution to go-live to meet their stated timeline. This version is generally referred to as Agile software development as a Minimum Viable Product (MVP), which is a simplified version of a product that 1) offers functionality that meets the core needs of users, 2) can accelerate the timeline for go-live, and 3) allows the project to get real-world feedback from users to refine future product development.	Going live with a limited version of a software product entails inherent risks such as potential challenges in securing user buy-in. This can result in limited user adoption, user dissatisfaction, and negative publicity, particularly considering the financial investment made for the delivery of limited functionality. A compressed timeline may compromise the quality of design, user interface sophistication, and lead to an uptick in software bugs and suboptimal code. Further, this approach may expose the project to regulatory compliance risks, such as last-minute objections from regulatory bodies like FNS, which could find certain system elements non-compliant with their standards and delay the go-live date. Misalignment between stakeholder expectations and the Core Solution may lead to dissatisfaction or a lack of support for the project and could negatively impact future project funding requests. Implementing a limited Core Solution typically requires the customer to implement multiple workarounds until automated features can be built into the system. Users could become impatient if these features are further delayed when bugs and other features take precedence. Others may lose confidence that the features or system improvements will ever be implemented. Going live with a solution that is missing functionality that stakeholders were expecting typically requires an increase in OCM efforts both by the ASi and DHS staff to temper stakeholders' reactions to a system with limited functionality.	OPEN - Increase OCM efforts to effectively manage user, general public, and Now legislative expectations for the BES version at go-live - Prioritize feedback from users and FNS to ensure the system meets their core needs and so users are clear on what features they are, and are not getting. - Actively monitor, assess, and address potential challenges throughout the development process including code quality, cutting scope to meet development milestones, insufficient user validation of demonstrated functionality, and fully defined workarounds to accommodate for the missing functionality. - Actively monitor FAT and Pilot feedback and track users' biggest pain points. Pain points can then be prioritized based on negative impact and project leadership can decide if new or changing poor designs can be implemented prior to go-live. COMPLETE - CLOSED - DHS carefully assess whether the advantages of a timely release outweigh the advantages of going live with a system that provides more comprehensive functionality, requires fewer workarounds, and increases user satisfaction and buy-in. (06/30/2024)	3	3	Med	Open	8/30/2024 - DHS continues to emphasize the need for workbooks to be documented and incorporated into training, with a plan to update documentation as effects are resolved to enable pilot workers to be most effective. 7/31/2024 - DHS and the ASi continue to document and develop workarounds in preparation for Pilot. There are now new workaround areas: 1) known gaps in functionality and 2) effects discovered during testing that will not be addressed prior to Pilot. Additionally, planning is ongoing for incorporating these workarounds into the training process. 6/20/24 - Per DHS's request, the ASi is currently developing a list of workarounds to address known gaps in BES 1.0 functionality. 5/23/24 - No material update. 4/30/2024 - No material update. 03/30/24 - The ASi's Go to Green plan and project schedule were approved by DHS. Per the Go to Green plan, some required BES functionality will be implemented post-Pilot. This may create unplanned workarounds and rework as the full impact of this approach becomes known through testing and training. 02/29/24 - The ASi drafted a Go-to-Green plan that includes an October 2024 Go-Live date, with several features to be released after Pilot, implementing the functionality of a core solution not tested in a real-world Pilot environment may lead to unexpected issues and bugs. IVV remains concerned that user expectations will not be fully met as the go live system will be missing functionality that could be important to many users. 01/23/24 - The ASi recently transitioned the OCM leadership role to a new resource. OCM activities will be crucial in reducing the risks associated with implementing the Core Solution and effectively managing user, public, and legislative expectations. The ASi has stated they do not expect this transition to negatively impact the project and have noted some potential improvements. 12/31/23 - Delays in some planned activities (e.g., epic demos, interface design) and the development of the secure enclave are causing milestones to be missed. IVV remains	04/10/2024 - "Some required BES functionality will be implemented post-Pilot." What does this mean? I think I know the intent and perhaps update as such? "Per the Go to Green plan, the ASi plans to implement required functionality in multiple releases. (Pilot/Statewide/Post Statewide)" 12/15/20 23 - Above already addressed by DHS/Peo Campo. Endorsements reflect "in Progress" or "In Process".		

ID	File	Reporter	Finding Title	Identified Date	Category	Description	Significance	Recommendation	Event/Action	Impact	Probability	Analyst	Finding Status	Event/Update	Final Comments	Vendor Comments
80	80	Fors, Michael	Development delays have negatively impacted the project schedule and delayed go-live.	6/30/2022	Configuration and Development	<p>ASI had previously reported development activities have been slowed as they have been unable to achieve and/or maintain their expected development velocity. Previously, the development team was challenged with accurately estimating development task level of effort (i.e., story points) and the project has been challenged with producing a project schedule that accurately reflects realistic timelines (see Finding #79). The ASI continues to be challenged with finding qualified resources in a timely manner.</p>	<p>If the ASI is unable to achieve a velocity that enables them to meet planned milestones, schedule delays may lead to a delayed system go-live date. Failure to achieve a level of accuracy in estimating development tasks could lead to a project schedule that is flawed and unrealistic. Previously, DHS had indicated, and IVV agreed, that some of these delays were due to some ASI BA's lacking the expertise required to create optimal designs and system specifications that developers could consume without requiring extensive clarification from the ASI BA/SA team. DHS and IVV observed instances where ASI BA/SAs have presented less than optimal designs and left to DHS who may lack software or UI design expertise to improve, which has contributed to unproductive design sessions (see Finding #61). It remains unclear if scope creep has contributed to these delays.</p>	<p>OPEN - ASI effectively track and regularly provide DHS (potentially via the weekly DR status meeting) with an accurate velocity (i.e., story points per day/week/month) and assure that the current velocity is accurately and consistently reflected in the project schedule. ASI regularly report estimated story points for the total remaining project work to reach go-live and present a dynamic burndown chart to track the progress. • The ASI should consider enhancing the depth of developer unit testing. COMPLETE</p> <p>CLOSED - DHS request the ASI strategically add the right project team resources to effectively increase velocity. Note that adding additional junior resources may not be as effective as staffing additional expert-level development, analysis, and other resources that can lead and mentor junior resources. • ASI reviews the development process and identifies and mitigates the challenges preventing them from incorporating Epic demo activities into the project schedule. 02/23/23 - ASI will not be doing this, with DHS approval) ASI consider taking steps to increase code quality, including enhancing the depth of developer unit testing, tracking and proactively preventing leakage, and enforcing effective coding standards and good governance.</p>	Immediate	3	3	Med	Open	<p>08/22/24 - The ASI has initiated a Go-to-Green (G2G) Plan to mitigate project delays, including development delays that could impact go-live milestones. One of the G2G plan action items is to "Staff with additional developers," with the ASI confirming they have added 50 additional developers. It remains unclear how quickly newly added developers will be able to get up to speed and how quickly they can be productive enough to make a measurable, positive impact on the pace of development. Additionally, IVV is not aware whether current velocity, capacity, and burndown tracking will allow the project to determine how many additional developers are needed, if any, to avoid further delays. 07/26/24 - The ASI has recently reported additional development delays that could not go-live milestones at risk. The ASI plans to mitigate this risk by acquiring additional resources to compensate for recent delays. Burndown charts typically provide project stakeholders and executive leadership visibility into the overall productivity of system development efforts. However, DHS has stated the AD provided burndown charts currently provide little to no value to project stakeholders. IVV recommends DHS request burndown charts (or other reports) that provide value to the project and give visibility into their overall velocity and whether they will be able to meet Statewide go-live milestones. 06/30/24 - The ASI adjusted how they calculate velocity to provide greater transparency on the level of progress. The ASI is creating burndown charts to provide greater visibility/clarity into their development productivity and progress. The Project continues to be challenged with high defect rates which pose code quality risks that could delay go-live. 05/15/24 - The ASI adjusted how they calculate velocity to provide greater transparency on the level of progress they're making. The ASI is elevating the planned story points per sprint to motivate developers to be more productive even though the planned end may not be realistic or achievable.</p>		
81	81	Kalis, Neetu	Gaps in test coverage and slower-than-expected progress in testing may result in schedule delays if subsequent test phases uncover a higher volume of defects and user feedback than initially anticipated.	6/27/2023	Testing	<p>After examining the Project's R11 QA Dashboards, R11 Traceability Dashboard, and Test Repository, gaps in testing coverage may exist and the progress of testing might be lagging. Concerning testing coverage, it appears that not all epic and user cases in R11 have associated test cases or are testing the correct use cases, in terms of progress, some test cases remain unexecuted, and not all defects have been resolved as the project commences System Integration Testing (SIT). The ASI has plans to complete the SIT exit criteria by June 15, 2023, about 2 weeks after SIT begins.</p>	<p>Identifying defects early is vital for effective testing, as it is more efficient and cost-effective to address issues during the early testing stages. If there is slow progress or incomplete testing in the early stages, it can result in more defects leaking into subsequent testing phases, necessitating more extensive and rigorous testing efforts. Insufficient testing coverage or slower-than-anticipated progress throughout the project lifecycle increases the risk of encountering significant delays, extensions, or the introduction of defects into the production environment during the final testing stage, known as final Acceptance Testing (fAT).</p>	<p>OPEN - DHS should request that the ASI develop a Corrective Action Plan to address the failure of prior test phases (i.e., INT) to capture defects that rolled into SIT/CLOSED - The ASI should determine the root cause of the failure to identify simple fixes in INT and SIT and implement effective improvement processes to confirm early testing is adequate before entering UAT/fAT (Closed 4/30/2024) NOT COMPLETE - The Project team reviews the SIT exit criteria and notifies them as needed to ensure UAT/fAT begins with the best system possible. 03/12/2024 IN PROGRESS - DHS and ASI monitor INT/SIT closely for both breadth and depth of testing to ensure the system is adequately tested</p>	UAT	4	4	High	Open	<p>8/30/2024 - As of August 29, 2024, 29% of the defects identified during FAT, consisting of 33 of 113 defects, remain open. The remaining 80% of these unresolved defects by severity is concerning, with 72 High-severity, 130 Medium-severity, and 91 low-severity issues. Notably, the number of unresolved defects with increased or high-severity defects has doubled. With BES pilot planned to start next month the IVV team remain concerned about the potential delays in testing and the project schedule. This trend warrants attention to ensure timely resolution of these defects and mitigate any impact on the project timeline. 7/31/2024 - DHS Testers have lagged 653 defects (including duplicates or those determined not to be defects, such as user error) in the first 5 weeks of FAT with the following severities (High = 84, Medium = 201, Low = 168). Open/unresolved defects total 230 (50% with the following severities: High = 36, Medium = 112, Low = 82). Seven high-severity defects have been in unexecuted status for 5 days or more, with one defect remaining open since 6/28/2024. IVV is concerned that the test execution schedule will be compromised if testers continue to wait for fixes to be delivered before they can complete their planned tests and the risk that testers will discover new downstream defects that must also be fixed prior to Prod. 6/30/2024 - improvement of System Integration Testing (SIT) defect resolution rates addressed IVV's concern that a high number of unresolved defects would delay SIT exit. The ASI exited the SIT phase as scheduled on 7/12/2024 with 31 unresolved defects (43 medium severity and 48 low severity, or 10% of the total) remaining. 302 unresolved defects at the end of May and with no unresolved critical and high-priority/severity defects. However, IVV is concerned that the project team entered final Acceptance Testing (fAT) on 6/28/2024 without approved versions of the RIM and System Integrity Review Tool (SIRT) deliverables. While the SIRT is not a criterion for entering fAT, both the RIM and SIRT are critical. Through August, the ASI has continued authoring procedure documentation that supports the SIRT. FCG completed the independent third party assessment and delivered a draft report. The assessment found 34 critical, 204 high, 456 moderate, and 78 low findings. DHS and the ASI also responded to requests for evidence from the Social Security Administration (SSA) for their assessment. The SSA is pending evidence of SSA-specific security awareness training. Therefore, the SSA has not yet released its final report. The ASI continued to update IRS-specific controls in Appendix A to the IRS assessment, which is expected near the end of December 2024. Also, the ASI has been deploying scanning agents to system hosts to alleviate vulnerability and compliance scanning issues. 7/25/2024 The ASI stood up the production environment on July 8th, allowing the BES Independent Security Assessment penetration testing team to gain access and start the four week period of testing the BES system. The ASI participated in interviews with the BES Independent Security Assessment assessors. Additional interviews will continue into August. The ASI is internally reviewing the Disaster Recovery (DR) plan before delivering it to DHS. However, this DR plan is unavailable for the current security assessment and should be available and tested prior to another assessment, such as the IRS. The completion of the Secure Enclave design now allows for significant updates to "kissed" responses to be made to Appendix A, which contains IRS security controls in the SSP. The Social Security Administration (SSA) also performed its security assessment in July, and the ASI/DHS Security Team is providing additional information and evidence prior to the SSA report and POA/Ms (Plans of Action and Milestones) being issued for remediation. It is too early to determine the impact of remediation activities and if there are any impacts on the BES FAT schedule. 6/28/2024 - The ASI reported that they continue to author security documentation throughout</p>		
82	82	Heath, Dustin	The lack of technical documentation may lead to incorrect implementation statements or delays in the System Security Plan	4/27/2023	Security and Privacy	<p>In April, the ASI/DHS system security plan (SSP) authors began writing implementation statements. Currently, the technical documentation supporting the SSP is unavailable, outdated, or in a draft form. During April, decisions on what tools support the SSP controls are still being decided on. Implementation statements are currently being written from the perspective of how the system should be designed from the SSP author's perspective. Instead of how the system is actually designed. The SSP authors need to know and use documentation such as System Architecture and Design, network topology, dataflow, ports and protocols, tools used for logging, etc.</p>	<p>Once the system architecture and design have been completed, the SSP authors may need to edit or rewrite implementation statements. A full draft of the SSP is scheduled to be published August 15th, 2023, and the final SSP (ready for federal partner review) is scheduled for September 15, 2023. The SSP is a large technical document with hundreds of controls and control enhancements, and each one requires an implementation statement of how the control or enhancement has been met.</p>	<p>OPEN - Determine when documentation will be created, updated, and available for the SSP authors - Collaborate and communicate with SSP authors about when reliable and correct documentation will be available. Perform a full review of all draft SSP controls for content and accuracy prior to the start of the Independent Security Controls Assessment of BES and submission of the SSP package to federal regulators. This will allow the SSP authors to update controls with changes from Design Through Implementation. COMPLETE - Determine when the infrastructure design baseline will be completed. (06/30/2024)</p>	Prior to the start of the third-party assessment.	4	5	High	Open	<p>08/29/2024 - Through August, the ASI has continued authoring procedure documentation that supports the SIRT. FCG completed the independent third party assessment and delivered a draft report. The assessment found 34 critical, 204 high, 456 moderate, and 78 low findings. DHS and the ASI also responded to requests for evidence from the Social Security Administration (SSA) for their assessment. The SSA is pending evidence of SSA-specific security awareness training. Therefore, the SSA has not yet released its final report. The ASI continued to update IRS-specific controls in Appendix A to the IRS assessment, which is expected near the end of December 2024. Also, the ASI has been deploying scanning agents to system hosts to alleviate vulnerability and compliance scanning issues. 7/25/2024 The ASI stood up the production environment on July 8th, allowing the BES Independent Security Assessment penetration testing team to gain access and start the four week period of testing the BES system. The ASI participated in interviews with the BES Independent Security Assessment assessors. Additional interviews will continue into August. The ASI is internally reviewing the Disaster Recovery (DR) plan before delivering it to DHS. However, this DR plan is unavailable for the current security assessment and should be available and tested prior to another assessment, such as the IRS. The completion of the Secure Enclave design now allows for significant updates to "kissed" responses to be made to Appendix A, which contains IRS security controls in the SSP. The Social Security Administration (SSA) also performed its security assessment in July, and the ASI/DHS Security Team is providing additional information and evidence prior to the SSA report and POA/Ms (Plans of Action and Milestones) being issued for remediation. It is too early to determine the impact of remediation activities and if there are any impacts on the BES FAT schedule. 6/28/2024 - The ASI reported that they continue to author security documentation throughout</p>		
83	83	Kalis, Neetu	Gaps in test coverage and slower-than-expected progress in testing may result in schedule delays if subsequent test phases uncover a higher volume of defects and user feedback than initially anticipated.	6/27/2023	Testing	<p>After examining the Project's R11 QA Dashboards, R11 Traceability Dashboard, and Test Repository, gaps in testing coverage may exist and the progress of testing might be lagging. Concerning testing coverage, it appears that not all epic and user cases in R11 have associated test cases or are testing the correct use cases, in terms of progress, some test cases remain unexecuted, and not all defects have been resolved as the project commences System Integration Testing (SIT). The ASI has plans to complete the SIT exit criteria by June 15, 2023, about 2 weeks after SIT begins.</p>	<p>Identifying defects early is vital for effective testing, as it is more efficient and cost-effective to address issues during the early testing stages. If there is slow progress or incomplete testing in the early stages, it can result in more defects leaking into subsequent testing phases, necessitating more extensive and rigorous testing efforts. Insufficient testing coverage or slower-than-anticipated progress throughout the project lifecycle increases the risk of encountering significant delays, extensions, or the introduction of defects into the production environment during the final testing stage, known as final Acceptance Testing (fAT).</p>	<p>OPEN - DHS should request that the ASI develop a Corrective Action Plan to address the failure of prior test phases (i.e., INT) to capture defects that rolled into SIT/CLOSED - The ASI should determine the root cause of the failure to identify simple fixes in INT and SIT and implement effective improvement processes to confirm early testing is adequate before entering UAT/fAT (Closed 4/30/2024) NOT COMPLETE - The Project team reviews the SIT exit criteria and notifies them as needed to ensure UAT/fAT begins with the best system possible. 03/12/2024 IN PROGRESS - DHS and ASI monitor INT/SIT closely for both breadth and depth of testing to ensure the system is adequately tested</p>	UAT	4	4	High	Open	<p>8/30/2024 - As of August 29, 2024, 29% of the defects identified during FAT, consisting of 33 of 113 defects, remain open. The remaining 80% of these unresolved defects by severity is concerning, with 72 High-severity, 130 Medium-severity, and 91 low-severity issues. Notably, the number of unresolved defects with increased or high-severity defects has doubled. With BES pilot planned to start next month the IVV team remain concerned about the potential delays in testing and the project schedule. This trend warrants attention to ensure timely resolution of these defects and mitigate any impact on the project timeline. 7/31/2024 - DHS Testers have lagged 653 defects (including duplicates or those determined not to be defects, such as user error) in the first 5 weeks of FAT with the following severities (High = 84, Medium = 201, Low = 168). Open/unresolved defects total 230 (50% with the following severities: High = 36, Medium = 112, Low = 82). Seven high-severity defects have been in unexecuted status for 5 days or more, with one defect remaining open since 6/28/2024. IVV is concerned that the test execution schedule will be compromised if testers continue to wait for fixes to be delivered before they can complete their planned tests and the risk that testers will discover new downstream defects that must also be fixed prior to Prod. 6/30/2024 - improvement of System Integration Testing (SIT) defect resolution rates addressed IVV's concern that a high number of unresolved defects would delay SIT exit. The ASI exited the SIT phase as scheduled on 7/12/2024 with 31 unresolved defects (43 medium severity and 48 low severity, or 10% of the total) remaining. 302 unresolved defects at the end of May and with no unresolved critical and high-priority/severity defects. However, IVV is concerned that the project team entered final Acceptance Testing (fAT) on 6/28/2024 without approved versions of the RIM and System Integrity Review Tool (SIRT) deliverables. While the SIRT is not a criterion for entering fAT, both the RIM and SIRT are critical. Through August, the ASI has continued authoring procedure documentation that supports the SIRT. FCG completed the independent third party assessment and delivered a draft report. The assessment found 34 critical, 204 high, 456 moderate, and 78 low findings. DHS and the ASI also responded to requests for evidence from the Social Security Administration (SSA) for their assessment. The SSA is pending evidence of SSA-specific security awareness training. Therefore, the SSA has not yet released its final report. The ASI continued to update IRS-specific controls in Appendix A to the IRS assessment, which is expected near the end of December 2024. Also, the ASI has been deploying scanning agents to system hosts to alleviate vulnerability and compliance scanning issues. 7/25/2024 The ASI stood up the production environment on July 8th, allowing the BES Independent Security Assessment penetration testing team to gain access and start the four week period of testing the BES system. The ASI participated in interviews with the BES Independent Security Assessment assessors. Additional interviews will continue into August. The ASI is internally reviewing the Disaster Recovery (DR) plan before delivering it to DHS. However, this DR plan is unavailable for the current security assessment and should be available and tested prior to another assessment, such as the IRS. The completion of the Secure Enclave design now allows for significant updates to "kissed" responses to be made to Appendix A, which contains IRS security controls in the SSP. The Social Security Administration (SSA) also performed its security assessment in July, and the ASI/DHS Security Team is providing additional information and evidence prior to the SSA report and POA/Ms (Plans of Action and Milestones) being issued for remediation. It is too early to determine the impact of remediation activities and if there are any impacts on the BES FAT schedule. 6/28/2024 - The ASI reported that they continue to author security documentation throughout</p>		
84	84	Heath, Dustin	Feedback already provided by David Kalis as May pre-meet. "My concern with the Content & Privacy side is that there is no context & privacy	06/14/2024									Open			

ID	Title	Reporter	Finding Type	Identified Date	Category	Description	Significance	Recommendation	Event/Action	Impact	Probability	Analyst Priority	Finding Status	Recent Updates	Client Comments	Vendor Comments	
74	ABES Project schedule based on inaccurate estimations diminishes effective planning and resource management, which could result in late deliverables, cost increases, and a late go-live.	Molina, Brad	Finding Issue	11/29/2023	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 to the schedule persist. The use of multiple tools to track resources obfuscates resource management. Previous IVW Findings focused on specific schedule components such as resource management and critical path analysis, all of which were addressed and closed.	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.	OPEN - Monitor, evaluate and revise scheduling estimates for accuracy based on the project teams past performance and resources available to do the remaining work. ASI conduct a Root Cause Analysis (RCA) with DHS and IVW to determine why the BES project continues to experience schedule delays. ASI Project Management works with the development teams to evaluate the accuracy of development velocity and adjust accordingly to reduce risk in the revised BES project schedule. ASI provides Burndown charts that provide visibility into the remaining work. ASI provides details on how Velocity measures were used to calculate the remaining development work. DHS and the ASI agree to a revised schedule against which project deliverables can be managed. (2/28/2023 - complete) ASI host a weekly meeting with DHS and IVW to review all changes to the project schedules (Primary and DR). (6/31/2023 complete) CLOSED ASI plan and execute Epic development so that Epic demos can occur earlier in the release schedule and allow time for possible revisions. (12/31/2023 No done) As requested by DHS, add key milestones to the project schedule, such as Sprint and Epic demos, to show key progress towards completion of Epic. (5/29/23 ASI says that they will not do this.) Confirm current assumption that a delay with the current go-live date will not result in major implications. (6/29/23) Leverage velocity and burn down charts to adjust development tasks estimates if needed. Leverage velocity and burn down charts to adjust development tasks estimates if needed. (6/26/2023 - ASI using tool) Using the available tools, review the current estimates to complete each activity compared to past actual hours (4/31/2023 - new ASI - Not Started) Update as necessary and provide the DHS/ASI Project Managers with reports and data that accurately reflect the DHS/ASI resource needs along with	Immediate	3	4	High	Open	08/30/2024 - Underestimated development work that will coincide with FAT testing and related defect resolution, has created risk for completing Epic in time for comprehensive IVW, ST and FAT testing prior to Pilot. IVW is concerned that Epic might need to enter Pilot without full testing, causing issues for workers completing their required work. DHS has also submitted additional Change Requests that may require the schedule to be delayed. As of the end of the reporting period, the ASI and DHS are taking through a revision of the schedule that will start at a minimum push FAT testing out to end of September. 07/31/2024 - The ASI is actively working on defect resolution and new development work for BES 1.1. A few key documents/deliverables, including the Disaster Recovery Plan, Data Conversion results, and Requirements Traceability, are behind schedule. The ASI is having additional deliverables; however, it is not known if these resources will have a positive impact on the work remaining as defined in the schedule. 06/31/2024 - The Project's ability to perform according to the approved BES Project Schedule continues to be a high risk. The ASI completed their schedule reviews with DHS and IVW, baselining the schedule on 06/19/2024. IVW continues to monitor a schedule that has seen an (6) delays to the Pilot and Statewide Go Live dates since the BES 2023 restart in February 2023, with two (2) eight-week delays introduced in March and May of this year. The original Pilot start was 01/02/2024, with Statewide Go-live on 04/01/2024. Based on the schedule published on June 29, 2024, Pilot starts on 09/16/2024, and the Statewide Go-live is on 02/10/25. 05/30/2024 - The ASI released a revised schedule that may reduce DHS/IVW concerns. The draft schedule was under review at the end of this reporting period. The revised schedule has three key deliverables (Requirements, Traceability Matrix (RTM), System Integrity Review Tool (SIRT), and Validated Results of Data Conversion Testimonial) scheduled from June 7 - 14, which could be a		09/9/2024 Number of defects, phased in epic, also outside of CR pushing schedule out beyond Sept. Phased epics should be in this week. Optimistic for getting defects and epics addressed by end of September. But should include all three of the issues. HAWI notices are not fully approved.	8/14/2024 No BES 1.1. Reference with the finding as documented in the Executive Summary/PM Category. (mentioned)
73	The planned BES infrastructure is complex which could be difficult to implement and lead to schedule/cost impacts.	Fors, Michael	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 concentrate this risk and lead to further delays. Complex platforms often present system maintenance and operators 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). IVW 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 developing a process to closely monitor cloud and other product changes (software updates/new releases), manage changes, and regression test once changes/updates are applied. The project team work to establish strong governance over the utilization and maintenance of the various system tools/components. ASI add time in the schedule to conduct proof of concepts to assure infrastructure components work as expected. ASI maintain a detailed schedule for DevOps implementation tasks to avoid unexpected delays that could delay project milestones and the critical path.	Next several months	2	2	Low	Open	8/22/24 - The ASI continues to make progress in building out the finalized list of software components into their architecture. The ASI appears to have a structured approach for building out and testing these components and they have reported success with some disaster recovery (DR) tests. 7/26/24 - No material updates for this reporting period. 6/20/24 - No material updates for this reporting period. 5/31/24 - It remains unclear how infrastructure complexity will impact DR testing and execution. 4/30/24 - No material updates in this reporting period. 3/31/24 - During a recent Change Control Board (CCB) meeting the ASI presented DHS with a first cost change request (CR) to the design of the Secure Enclave (the addition of roles). In the CCB, it was clear that DHS and the ASI were not in agreement regarding the funding of this change request. 2/29/24 - No material update in the reporting period. 1/23/24 - No material updates in the reporting period. IVW continues to monitor this finding. 12/31/23 - No material update in the reporting period. IVW continues to monitor this finding. 11/30/23 - Some components of the BES system infrastructure have yet to be finalized and tested. It remains unclear how or if the added complexity will impact project schedules and budgets going forward. The ASI has reported they are close to finalizing the Secure Enclave infrastructure to house PII data. The ASI appears to be making progress on DR plans and designs. 10/30/23 - The ASI continues to have productive discussions with DHS during their weekly Architecture calls. The ASI has yet to finalize their plans and technical architecture for conducting Disaster Recovery (DR). The cloud technology being implemented offers some benefit and can simplify some elements of DR. However, it remains unclear if the complex infrastructure (with the multitude of components being employed) will impact their ability to test and perform DR. 9/28/23 - The ASI has experienced failures of their Enterprise Architect position. This does not		11/31/2023 - Again, why is DR being referenced here? Per the current project schedule, the DR plan is scheduled to be submitted at the end of the year. Reminder: Pilot Go-Live is April 2025. 10/31/2023 - We - we still do not understand why this remains. 10/11/2023 - Please reference your updates on finding RB2 Security and Privacy which documents the work being done for the Secure Enclave.	
70	Insufficient configuration management could lead to development confusion and reduce the effectiveness of defect resolution	Fors, Michael	Finding Risk	8/23/2021	Configuration and Development	The B-6 DDI Plan Deliverable, Section 5.2 establishes the framework for the Configuration Management Plan, however, it remains unclear if sufficient progress has been made toward establishing CM processes and governance, selecting CM tools (e.g., CMDB), and building out the CM infrastructure. The projects Security Plan has 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 error 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 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. 7/31/2022	ASAP	2	2	Low	Open	8/22/24 - IVW has yet to receive a detailed, comprehensive list of configuration items the ASI will be tracking. 7/26/24 - No material update for this reporting period. 6/20/24 - No material update for this reporting period. 5/31/24 - IVW has yet to receive a detailed, comprehensive list of configuration items the ASI will be tracking. 4/30/24 - IVW has yet to receive a detailed, comprehensive list of configuration items the ASI will be tracking. 3/31/24 - Responsibility for the Configuration Management Plan (CMP) reverted to the ASI (previously, the DHS Security Contractor was updating the CMP for related security controls). The ASI is resuming this scope of work at a time when its resources are stretched and may lead to CMP and configuration management quality challenges. 2/29/24 - No material update in this reporting period. 1/23/24 - No material update in the reporting period. 12/31/23 - The project will utilize the DHS contractor currently assisting with security activities to update the Configuration Management Plan (CMP). The scope of work that the DHS contractor is responsible for is unclear to IVW. 11/30/23 - The ASI has yet to provide a detailed list of configuration items to DHS and IVW. IVW has restated this request to the ASI so that the level of detail is clear. 10/26/23 - The ASI provided broad information on the configuration items being tracked but have yet to provide detailed configuration items for IVW review. The ASI has deprioritized some configuration management activities, which it needs to perform in preparation for Maintenance and Operation (M and O). 9/28/23 - The ASI gained DHS approval on the items that will be tracked and monitored as part of configuration management. IVW requested the list last month and is waiting on the ASI to respond. 8/31/23 - No material update. 7/31/23 - No material update. 6/30/23 - No material update. 5/31/2023 - The ASI continues to make progress with its utilization of the ServiceNow Configuration Management (CM) tool. They have recently performed an		9/9/2024 Still in progress. Plan to update Configuration Management Plan list of items. Two documents, management plan (end of week), Configuration Management procedures (more detailed). Working with Mark M on what should be included. Working with folks who really understand the details and are available.	10/31/2023 - We - We provided a listing, working on a plan to implement	