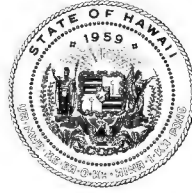


Josh Green, M.D.  
GOVERNOR



DOUGLAS MURDOCK  
CHIEF INFORMATION  
OFFICER

## OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

P.O. BOX 119, HONOLULU, HAWAII 96810-0119  
Ph: (808) 586-6000 | Fax: (808) 586-1922  
ETS.HAWAII.GOV

March 19, 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,

  
Douglas Murdock (Mar 20, 2024 11:01 HST)

Douglas Murdock  
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: February 1 – 29, 2024

*Submitted: March 14, 2024*

# Overview

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- [Executive Summary](#)
- [IV&V Findings and Recommendations](#)
- [IV&V Engagement Status](#)
- [Appendices](#)
  - [A – IV&V Criticality Ratings](#)
  - [B – Risk Identification Report](#)
  - [C – Acronyms and Glossary](#)
  - [D – Background Information](#)



Solutions that Matter

The background is a solid blue color. It features several abstract geometric shapes, including squares and rounded rectangles, in various shades of blue and white. Some shapes are solid, while others are outlined. They are scattered across the page, with a higher concentration on the left side. The text 'Executive Summary' is centered horizontally and positioned in the lower-left quadrant of the page.

# Executive Summary



The ASI published a draft “Go-to-Green” Plan this month, which proposed a six-month delay to implement BES. It also documented the root causes of the delay and presented a new approach to complete the Project within the extended timeline. Main points in the draft Go-to-Green Plan include:

- The ASI will assign **more experienced staff** to resolve critical defects (to address code quality issues resulting in defects, schedule delays to conduct the Sprint and Epic demos to DHS, and the completion of Integration Testing).
- The ASI will **add developers** to their team to reduce the development time of integrating Hana/BES (The scope is larger than expected due to the realization that the solution requires integration rather than a data interface as originally planned).
- The ASI also proposed a phased implementation approach that will offer the BES functionality in three major releases:
  - **Phase I** - The Pilot Rollout will contain the revised core BES functionality agreed to by DHS and the ASI. The Phase I Pilot is planned for July 22, 2024, to October 19, 2024, with Go-Live on October 28, 2024.
  - **Phase II** - The Statewide Rollout will add reports and interfaces to the functionality provided in the Pilot Rollout. The Phase II functionality is included in the October 28, 2024, Go-Live.
  - **Phase III** - The Post Statewide Rollout will add the security Enclave and related IRS and SSA interfaces to the Statewide Rollout. The Phase III Go-Live is planned for February 24, 2025.

The phased approach may add complexity to the BES implementation on a project that is realizing disconnects in requirements and design. Additionally, this approach may require additional staff and processes to manage user training, defect identification and resolution, any additional required infrastructure, and communication regarding workarounds. As DHS and the ASI finalize the revisions to the approach and schedule, IV&V will evaluate with the project team new potential risks and/or adjustments to the existing risks and issues.

# Executive Summary



| Dec | Jan | Feb | Category                             | IV&V Observations                                                                                                                                                                                                                                                                                                                                                                     |
|-----|-----|-----|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M   | H   | H   | Project Management                   | The ASI published a draft Go-to-Green Plan, currently under review by DHS, FNS, and IV&V. The Plan may increase implementation complexity by separating key functionality into three Roll-out Phases.                                                                                                                                                                                 |
| M   | M   | M   | System Design                        | The ASI was focused on developing the draft Go-to-Green Plan so there were minimal design activities in this reporting period. However, DHS identified new issues with eligibility design, meaning the ASI should include slack in the schedule to mitigate future delays.                                                                                                            |
| M   | M   | M   | Configuration and Development        | The draft Go-to-Green Plan highlighted code quality issues as a root cause of the development and schedule delays. The ASI reported the draft Go-to-Green Plan addresses these issues going forward.                                                                                                                                                                                  |
| M   | H   | H   | Integration and Interface Management | Issues within the Integration and Interface Management category are causing schedule delays. The ASI and DHS will need to resolve these issues and maintain a high level of visibility into the detailed interface activities to avoid a future schedule or functionality delay.                                                                                                      |
| H   | H   | H   | Testing                              | Progress continued during the reporting period to complete the Release 0.12 System Integration Testing (SIT) test scripts; a majority of the test scripts remain incomplete. If DHS approves the proposed multiple phases of implementation, the complexity of testing while implementing, along with defect resolution, adds additional coordination to all aspects of this project. |
| H   | H   | H   | Security and Privacy                 | The delivery date for the outstanding technical documentation needed for the System Security Plan (SSP) was delayed from the end of February into early March. As the technical documentation and 3rd Party Security Assessment must be completed before the Pilot, the security effort remains a risk.                                                                               |

# IV&V Findings and Recommendations

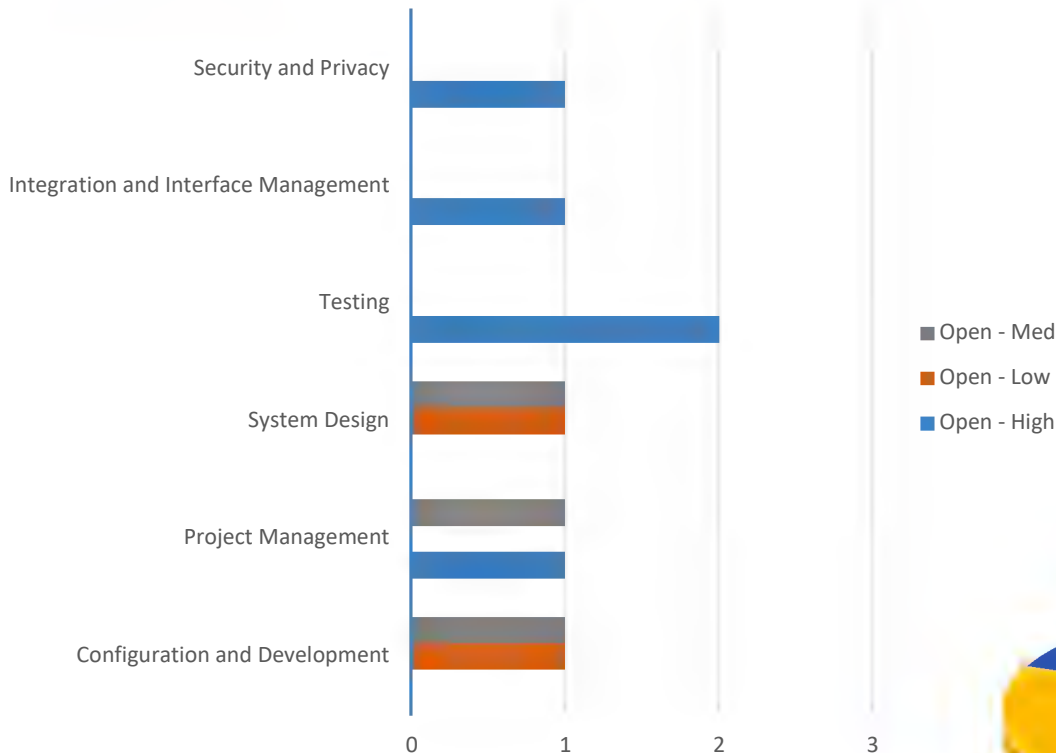


# IV&V Findings and Recommendations

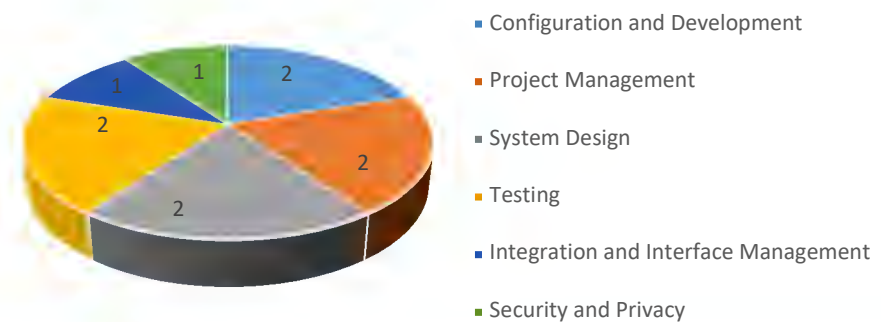


As of the February 2024 reporting period, PCG is tracking 10 open findings (4 risks, 6 issues) and has retired a total of 74 findings. Of the 10 open findings, 5 are High, 3 are Medium, and 2 are Low.

## Open Risks & Issues



## Open Risks & Issues by Category





# IV&V Findings and Recommendations



The following figure provides a breakdown of the 84 IV&V findings (positive, risks, issues, concerns) by status (open, retired).



# IV&V Findings and Recommendations



## Findings Retired During the Reporting Period

| #  | Finding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Category                             |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 90 | <p><b>Risk – Changes required to incorporate the Federal Tax Offset Program (TOP) interface within the Secure Enclave may not occur before the BES Pilot.</b></p> <p>DHS and the ASI determined that the TOP files do not need to be routed to the Secure Enclave. The TOP address information will be in the Secure Enclave, with the remaining TOP data integrated into BES as designed. In addition, the ASI draft Go-to-Green plan changed the implementation of the interface from the initial pilot to the statewide release, allowing the ASI more time to develop and test this interface, therefore this finding is retired.</p> | Integration and Interface Management |

# IV&V Findings and Recommendations



## Preliminary Concerns Investigated During the Reporting Period

| # | Finding | Category |
|---|---------|----------|
|   | None    |          |

# 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><b>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.</b></p> <p>The Project has experienced many delays, the most recent of which was a four-week delay announced the end of January with the draft Go-to-Green Plan adding another six months.</p> |                    |

| Recommendations                                                                                                                                                                                         | Progress    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <ul style="list-style-type: none"><li>Monitor, evaluate and revise scheduling estimates for accuracy.</li></ul>                                                                                         | In Process  |
| <ul style="list-style-type: none"><li>ASI provide details on how Velocity measures were used to develop estimations for development effort in new version of DDI schedule</li></ul>                     | Incomplete  |
| <ul style="list-style-type: none"><li>ASI conduct a Root Cause Analysis (RCA) with DHS and IV&amp;V to determine why the BES Project Schedule continues to be impacted by unanticipated work.</li></ul> | Not Started |
| <ul style="list-style-type: none"><li>ASI Project Management work with development teams to confirm the accuracy of Velocity to reduce risk in the new project schedules.</li></ul>                     | Not Started |

# IV&V Findings and Recommendations



## Project Management


| #  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Criticality Rating |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 88 | <p><b>Risk – Implementing a Core Solution for go-live carries inherent risks that may impact overall project success and reduce user adoption.</b></p> <p>The ASI drafted a Go-to-Green Plan that includes an October 2024 Go-Live date, with several features to be released after the Pilot. Implementing the functionality of a core solution not tested in a real-world Pilot environment may lead to unexpected issues and bugs. IV&amp;V 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.</p> | M                  |

| Recommendations                                                                                                                                                                                                                                                                                                                                               | Progress   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <ul style="list-style-type: none"><li>• Increase OCM efforts to effectively manage user, general public, and legislative expectations for BES version at go-live.</li></ul>                                                                                                                                                                                   | In process |
| <ul style="list-style-type: none"><li>• 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.</li></ul>                                                                                                                                                | In process |
| <ul style="list-style-type: none"><li>• 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.</li></ul> | In process |
| <ul style="list-style-type: none"><li>• DHS carefully assesses 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.</li></ul>                                                                          | In process |

# IV&V Findings and Recommendations



## Integration and Interface Management

| #  | Key Findings                                                                                                                                                                                                                                                                                                                                | Criticality Rating                                                                  |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 63 | <p><b>Issue – The lack of early planning and coordination with interface partners may result in schedule delays.</b></p> <p>The MOU/MOAs were completed and the Interface Control Documents (ICD) are updated. The interface testing team did not produce the Testing Plan on February 16th as specified in the draft Go-to-Green Plan.</p> |  |

| Recommendations                                                                                                                                                                                                                   | Progress    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <ul style="list-style-type: none"><li>• Confirm testing dates with interface partners in writing.</li></ul>                                                                                                                       | In process  |
| <ul style="list-style-type: none"><li>• Complete early proof of concept interfaces to avoid unexpected delays due to external organization miscommunications or their own internal delays in assisting the BES project.</li></ul> | Not started |

# IV&V Findings and Recommendations



## Configuration and Development

| #  | Key Findings                                                                                                                                                                                         | Criticality Rating |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 70 | <p><b>Risk – Insufficient configuration management could lead to development confusion and reduce the effectiveness of defect resolution.</b></p> <p>No material update in the reporting period.</p> |                    |

| Recommendations                                                                                                                                                                                                                                             | Progress   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <ul style="list-style-type: none"><li>• 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.</li></ul>                                                             | In process |
| <ul style="list-style-type: none"><li>• ASI validate plans for configuration management with DHS and agree on a meaningful set of configuration items or settings they will track.</li></ul>                                                                | In process |
| <ul style="list-style-type: none"><li>• 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.</li></ul> | In process |



# IV&V Findings and Recommendations



## Configuration and Development

| #  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Criticality Rating |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 80 | <p><b>Issue – Development delays could negatively impact the project schedule and delay go-live.</b></p> <p>The ASI reported additional delays that will push out Go-Live to October 2024, based on the draft Go-to-Green Plan. The ASI reported the Root Causes of this delay include:</p> <ul style="list-style-type: none"><li>• Excessive defects</li><li>• Lack of Code quality with downstream impacts to include additional defects and critical blockers causing delays with Sprint and Epic demos and the completion of Integration Testing</li><li>• New requirements were identified for both the Hana/BES interface and Secure Enclave.</li></ul> <p>The draft Go-to-Green plan includes reorganizing the development team to have more experienced developers focus on critical defects and consistent enforcement of development standards across all development teams and other process improvements.</p> | M                  |

| Recommendations                                                                                                                                                                                                                                                                                                            | Progress    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <ul style="list-style-type: none"><li>• 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.</li></ul> | In process  |
| <ul style="list-style-type: none"><li>• 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.</li></ul>                                                                                | In process  |
| <ul style="list-style-type: none"><li>• 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.</li></ul>                                                                                                         | Not started |

# IV&V Findings and Recommendations



## System Design

| #  | Key Findings                                                                                                                                                                                                  | Criticality Rating |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 73 | <p><b>Risk – The planned BES infrastructure is complex which could be difficult to implement and maintain and could lead to schedule/cost impacts.</b></p> <p>No material update in the reporting period.</p> |                    |

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

# IV&V Findings and Recommendations



## System Design

| #  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Criticality Rating |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 86 | <p><b>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.</b></p> <p>One demo (Epic Demo 211) was held in February as the ASI focused on developing a Go-to-Green Plan for the Project. DHS also raised concerns in Readiness meetings regarding a gap in design where eligibility is not forced to run when critical benefit data is modified on a case – which could also point to a gap in collaboration on key design decisions.</p> | M                  |

| Recommendations                                                                                                                                                                                                                                          | Progress    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| • Include a wide enough audience in all design and demo sessions to validate FNS and DHS functional and technical requirements and system usability.                                                                                                     | In Process  |
| • 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.                                                                          | Not Started |
| • Perform comprehensive (demo all requirements) review during Epic demos, not just the items that were added/updated, allowing DHS to provide early feedback on possible issues/gaps that might not be apparent when focusing on specific functionality. | In Process  |
| • ASI and DHS re-evaluate the effectiveness of the recorded Sprint review process to ensure that designs align with DHS expectations.                                                                                                                    | In Process  |

# IV&V Findings and Recommendations



## Testing


| #  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Criticality Rating |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 83 | <p><b>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.</b></p> <p>Entry into Release 12 SIT is delayed, the ASI is currently rescheduling the start date. A complete Release 12 SIT script package continues to be developed with 301 test scripts approved and ready for SIT and 886 test scripts pending review or in draft status. With a large number of test scripts pending and an undetermined SIT entry date, the risk of further delays remains high. Without the continuation of the comprehensive peer review of SIT test scripts, the risk of testing gaps remains high.</p> |                    |

| Recommendations                                                                                                                                                                                                                                         | Progress   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <ul style="list-style-type: none"><li>Monitor INT/SIT closely for both breadth and depth of testing to ensure the system is adequately tested.</li></ul>                                                                                                | In process |
| <ul style="list-style-type: none"><li>The project team reviews the SIT Entry and Exit criteria and revises them as needed to ensure UAT/FAT begins with the best system possible.</li></ul>                                                             | In process |
| <ul style="list-style-type: none"><li>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</li></ul> | In process |

# IV&V Findings and Recommendations



## Testing

| #  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Criticality Rating                                                                  |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 89 | <p><b>Issue – The current mitigation approach to complete the development of the remaining R0.12 Epics is condensed and aggressive and may increase the likelihood of schedule delays, quality issues, and a higher volume of testing defects.</b></p> <p>During the February 21, 2024, Weekly Project Status Meeting and February 28, 2024, BES Schedule Review Meeting, the ASI introduced the draft Go-to-Green Plan. However, edits to the Plan continue and final DHS approval is outstanding. The draft Go-to-Green Plan indicates an ongoing overlap of development and testing activities as functionality will be implemented during pilot and statewide rollout. System Development Best Practices recommend against overlapping testing phases because of the amount of rework and instability this causes to the project team and solution.</p> |  |

| Recommendations                                                                                                                                                                                       | Progress   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <ul style="list-style-type: none"> <li>Develop Contingency Plans if the mitigation plan continues to see slippage affecting INT and SIT.</li> </ul>                                                   | In process |
| <ul style="list-style-type: none"> <li>The ASI provides comprehensive INT results and SIT scenarios for incomplete Epics to DHS for review/approval ahead of SIT execution.</li> </ul>                | In process |
| <ul style="list-style-type: none"> <li>The ASI release a detailed schedule of events, including development completion, INT start, SIT start for each epic covered in the mitigation plan.</li> </ul> | In process |
| <ul style="list-style-type: none"> <li>The ASI should evaluate if Epics entering SIT late might require retesting functionality that had already been tested</li> </ul>                               | In process |
| <ul style="list-style-type: none"> <li>The plan to complete BES implementation does not include overlapping testing phases</li> </ul>                                                                 | In process |

# IV&V Findings and Recommendations



## Security and Privacy

| #  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Criticality Rating |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 82 | <p><b>Risk – The lack of technical documentation may lead to incorrect implementation statements or delay the System Security Plan (SSP).</b></p> <p>The security staff resolved issues in the Google Assured Workloads services for the Secure Enclave. The ASI continues to remediate findings from the vulnerability and compliance scans on the environment and work through issues related to the Tenable Nessus credentialed scanning. The security team rescheduled the due dates for the supporting security and privacy documentation for the SSP and intends to be completed by March 4th, 2024. Since there is a proposed schedule change in the Project's Go-To-Green Plan, this finding remains a risk instead of being elevated to a realized issue.</p> |                    |

| Recommendations                                                                                                                                                                                                                                                                                                                                                                            | Progress   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <ul style="list-style-type: none"><li>Determine when the infrastructure design baseline will be completed.</li></ul>                                                                                                                                                                                                                                                                       | In process |
| <ul style="list-style-type: none"><li>Determine when documentation will be created, updated, and available for the SSP authors.</li></ul>                                                                                                                                                                                                                                                  | In process |
| <ul style="list-style-type: none"><li>Collaborate and communicate with SSP authors about when reliable and correct documentation will be available.</li></ul>                                                                                                                                                                                                                              | In process |
| <ul style="list-style-type: none"><li>Perform a full review of all SSP controls for content and accuracy that have been written as drafts 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.</li></ul> | In process |



# IV&V Status

# IV&V Engagement Status



| IV&V Engagement Area | Dec | Jan | Feb | Comments                                                                                                |
|----------------------|-----|-----|-----|---------------------------------------------------------------------------------------------------------|
| IV&V Budget          |     |     |     |                                                                                                         |
| IV&V Schedule        |     |     |     | DHS and PCG are discussing the extension of the IV&V contract that currently ends in April 2024.        |
| IV&V Deliverables    |     |     |     | PCG submitted the final January IV&V Monthly Status Report.                                             |
| IV&V Staffing        |     |     |     | Erik Tarring is departing the IV&V team and Donna Hackett has been presented to DHS as his replacement. |
| 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 February reporting period:
  - Completed – January 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 contracts and contract amendments documentation
- Planned IV&V activities for the March 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 – 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 | 02/28/2024,      | N/A     |
| BI-5 Project Schedule - BES 2023 DDI     | 02/28/2024       | N/A     |
| BM-09 BES M&O Migration Plan             | 2/12/2024        | N/A     |
| BI-29 Roll Out Plan DED                  | 2/9/2024         | N/A     |
|                                          |                  |         |
|                                          |                  |         |
|                                          |                  |         |

# 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     |
| UAT Testing Dashboard                                                                                   | 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     |



## Meetings and/or Sessions Attended/Observed:




1. IV&V Team Meeting – 2/1/2024, 2/5/2024, 2/8/2024, 2/12/2024, 2/15/2024, 2/20/2024, 2/22/2024, 2/26/2024, 2/29/2024
2. IV&V September 2023 Pre-Draft MSR Findings Review – 2/6/2024
3. HI DHS BES January Draft IV&V Report Review – 2/13/2024
4. Bi-Weekly DHS and IV&V Touch Base – 2/6/2024, 2/13/2024
5. Weekly BES Infrastructure meeting – 2/2/2024, 2/9/2024, 2/16/2024, 2/23/2024
6. DHS/IV&V Check-in – 2/1/2024, 2/29/2024
7. Weekly Client BES 2023 Project Status Meeting – 2/21/2024, 2/28/2024
8. Security Touchpoint – 2/7/2024, 2/14/2024, 2/21/2024, 2/28/2024
9. Weekly Data Conversion Workgroup – 2/1/2024,
10. PMO End of Day Huddle – 2/1/2024, 2/29/2024
11. (External - Epic demo) Epic 211 Disability and Good Cause– 2/29/2024
12. (External) Weekly Interfaces Touchpoint – 2/5/2024, 2/12/2024, 2/26/2024
13. (External) Readiness - Working Group Meeting – 2/6/2024, 2/13/2024, 2/20/2024, 2/27/2024
14. (External) Bi-Weekly Client BES 2023 Schedule Review/Status – 2/28/2024
15. (External) Bi-weekly BES CCB Meeting – 2/21/2024
16. (External) BES: FNS Connect – 2/1/2024, 2/8/2024, 2/22/2024, 2/29/2024
17. (External) Testing Benefit Files from BES and HAWI– 2/22/2024
18. (External) Review Reports with MSO/R&S– 2/16/2024
19. (External) BM-09 Deliverable Discussion with IV&V– 2/15/2024
20. FAT Touchpoint Meeting with IM – 2/7/2024
21. (External-Epic Demo) Epic 247 Correspondence - Priority 2, Set #2– 2/2/2024
22. (External) Testing DOTAX files and Processing Schedule– 2/12/2024
23. (External) - BI-29 Roll Out Plan DED Deliverable Response Review Meeting– 2/9/2024



# Appendices



# Appendix A – IV&V Criticality Ratings

| Criticality Rating                                                                | Definition                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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.  |
|  | 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.                                 |
|  | 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

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- The complete Findings Log for the BES Project is provided in a separate file.

# Appendix C – Acronyms and Glossary



| <b>Acronym</b> | <b>Definition</b>                                             |
|----------------|---------------------------------------------------------------|
| 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



| <b>Acronym</b> | <b>Definition</b>                                             |
|----------------|---------------------------------------------------------------|
| 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

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| <b>Acronym</b> | <b>Definition</b>                         |
|----------------|-------------------------------------------|
| 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**

| ID | Title                                                                                                                                                                                                       | Reporter      | Finding Type    | Identified Date | Category             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Significance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Event Horizon                                     | Impact | Probability | Analyst | Finding Status | Status Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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                 | Vendor Comments |
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| 89 | Current approach to complete development of the remaining R0.12 epics is condensed and aggressive and may increase the likelihood of schedule delays, test issues, and higher volume of testing defects.    | Torring, Erik | Finding - Issue | 12/21/2023      | Testing              | Ten of the Epics scheduled for completion before Release 0.12 SIT will not be ready. To avoid SIT delays, the current approach is to begin SIT without the 50 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 ten business days.                                                                                                                                                                                                                                                                                                                        | Overlapping development and testing introduces potential quality issues. Significant INT may create gaps in SIT, leading to further quality issues. This may increase the risk of significant delays or introduce defects into the production environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Develop Contingency Plans if the mitigation plan continues to see slippage affecting INT and SIT. The ASI provides comprehensive INT results and SIT scenarios for incomplete Epics to DHS for review/approval ahead of SIT execution. The ASI releases a detailed schedule of events, including development completion, INT start, and SIT start for each epic covered in the mitigation plan. The ASI should evaluate if Epics entering SIT late might require retesting functionality that had already been tested. The plan to complete BES implementation does not include overlapping testing phases                                                                                                                                                                                                                                                                            | Now                                               | 4      | High        | Analyst | Open           | 2/22/2024 - During the February 21, 2024, Weekly Project Status Meeting and February 28, 2024, BES Schedule Review Meeting, the ASI introduced and detailed the draft Go-to-Green plan. However, edits to the plan continue and final DHS approval is outstanding. The draft Go-to-Green plan indicates an ongoing overlap of development and testing activities as functionality will be phased into pilot and statewide rollout. System Development Best Practices recommend no testing phases be overlapped because of the amount of rework and instability this causes to the project team and solution. 1/31/2024 - To mitigate the INT and SIT overlap and incomplete SIT test scripts, the ASI moved the start of SIT to February 2nd, and with "informal" SIT continuing in January. Despite this attempt, continued development delays and code quality issues led to adding 2 integration testing sprints, further extending integration testing. Additionally, on January 31, 2024, the ASI announced the delay of the February 2nd SIT entry date and stated that a new mitigation approach to meet the August Go-Live date was under development. IV&V has updated this finding to an "Issue" and the Critical Risk to "High".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |
| 88 | Implementing a Core Solution for go-live carries inherent risks that may impact overall project success and reduce user adoption.                                                                           | Fors, Michael | Finding - Risk  | 11/30/2023      | Project Management   | The project has elected to implement a Core Solution at go-live to meet their 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 bug fixes 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. | Increase OCM efforts to effectively manage user, general public, and legislative expectations for the Core Solution approach. • Prioritize feedback from users and FNS to ensure the Core Solution meets their core needs and so users are clear on what features they are, and are not getting in the released product. • Activate monitor, assess, and address potential challenges throughout the core solution development process including code quality, coding scope to meet development milestones, insufficient user validation to demonstrate functionality, and fully defined workarounds to accommodate for the missing functionality. • 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. | Now                                               | 3      | Med         | Analyst | Open           | 02/22/24 - 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 floor 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. 01/22/23 - The ASI recently transitioned the OCM leadership role to a new resource. OCM activities will be crucial in reducing the risk 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. 12/15/23 - Delays in some planned activities (e.g. epic demos, interface designs) and the development of the secure enclave are causing milestones to be missed. IVV remains concerned about potential quality impacts due to the need to accelerate efforts to compensate for missed milestones. Delay in some planned activities (e.g. epic demos, interface designs) and the development of the secure enclave are causing milestones to be missed. IVV remains concerned about potential quality impacts due to the need to accelerate efforts to compensate for missed milestones.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 12/15/2023 - Above already addressed by DHS/Joe Campos. Encouragements reflect "In Progress" or "In Process".                                                                                                                                                                                                                                                                                                                                                                                                            |                 |
| 86 | Limited collaboration between the ASI and DHS on the design of the BES system usability issues and functionality gaps in the applications and not meeting critical business needs for DHS State clients.    | Molina, Brad  | Finding - Issue | 8/1/2023        | System Design        | During the UAT process for release 11, there has been a high level of concerns raised by the DHS testers regarding the usability of the BES system, challenges with the user interface, missing functionality, and basic screen layout issues that would not be expected in a modern application. Based on defect reporting from the UAT process, a large majority of the defects are related to "design errors". Although the Release 11 UAT cycle was testing a partially built system, a significant amount of design defects was attributable to functionality developed for Release 11.                                                                                    | A significant amount of money and DHS resource time have been invested in the BES solution, with the expectation that the new system will at minimum provide additional capabilities, greatly enhanced user interface, and overall improved usability from current systems. Should the solution fall short of expectations, there may be challenges in DHS staff adoption, lack of confidence in the solution providing the accurate information needed to provide benefits to sit citizens, reduction in ability for DHS to provide the same level of needed services to clients, resulting in bad publicity for DHS and the institute.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Include a wide enough audience in all design and demo sessions to validate FNS and DHS functional and technical requirements and system usability. 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. Perform comprehensive (demo all requirements) review during Epic demos, not just the items that were added/updated, allowing DHS to provide early feedback on possible issues/gaps that might not be apparent when focusing on specific functionality. ASI and DHS re-evaluate the effectiveness of the recorded Sprint review process to ensure that designs align with DHS expectations.                                                                                                                                                           | Now                                               | 4      | 3 Med       | Analyst | Open           | 02/22/2024 - One demo (Epic Demo 211) was held in February as the ASI continues to address DHS concerns in Readiness meetings regarding a gap in design where eligibility is not forced to run when critical benefit data is modified on a case - which could also point to a gap in design. 01/31/2024 - DHS viewed Sprint demos for Epics 247 and 284 on January 9, 2024, where several concerns/issues were raised, resulting in necessary bug fixes. User experience issues that should have been raised during the sprint demos were brought up during the Epic Demo for Epic 240 (repayment agreement), that the ASI is not considering at this time. As of the end of January, the ASI was developing a Go-to-Green Plan to mitigate several delays, including demos. 12/31/2023 - DHS opened a new high-severity project risk, which then escalated to an issue, on December 4, 2023, since the sprint and epic demo will not be completed by the end of the Release 0.12 OOI phase. IVV shares this concern, as issues discovered during the demos will require additional design, development, and testing for the impacted epic, potentially pushing out the schedule. 11/30/2023 - As of the end of November, the ASI has nine Sprint demos to execute and all 28 Epic demos. Depending on the outcome, this could cause the ASI to extend development while testing is occurring or delay the functionality to go to Pilot, creating additional unplanned work for DHS. 10/31/2023 - IVV notes positive progress this month in that the DHS SMEs are providing more feedback to the ASI on the BES design. The DHS PM has requested Sprint demo process updates to ensure that DHS staff who provided feedback are aware of the resolution of their comments. The ASI has also noted gaps in communication (design misunderstandings) between the ASI Business Analysts and DHS SMEs. DHS SMEs have suggested that communications would be clearer if they were included in live demos. IV&V respectfully                                                                                                                                                   | 10/31/2023 - VC - Conversations with BES PMO about live demos. Will keep as recorded demos, but we addressed JF - open comments VC - after demo is complete, feedback and acknowledgement. VC - for the next reporting period. We want to keep the feedback to the SME Policy and Functional SMEs. We are getting off the way comments. Nicole is finding comments from staff that were not involved in details. 01/12/2024                                                                                              |                 |
| 83 | 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. | Torring, Erik | Finding - Issue | 6/2/2023        | Testing              | After examining the Project's R1 QA Dashboards, R11 Traceability Dashboards, 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 epics and use cases in R11 have associated test cases or are testing the correct use cases. In terms of progress, some test cases remain unexecuted, and all defects have been resolved as the project commences system integration testing (SIT). The ASI has plans to complete the INT exit criteria by June 15, 2023, about 2 weeks after SIT begins.                                                                                | 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 laborious 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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | OPEN The ASI should determine the root cause of the failure to identify simple defects in INT and SIT and implement effective improvement processes to ensure early testing is adequate before entering UAT/FAT. DHS and ASI monitor INT/SIT closely for both breadth and depth of testing to ensure criteria and review items needed to ensure UAT/FAT begins with the best system possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | UAT                                               | 4      | 4 High      | Analyst | Open           | 02/22/2024 - Entry into Release 12 SIT is delayed. The ASI is currently rescheduling the start date. A complete Release 12 SIT script package continues to be developed with 203 test scripts approved and ready for SIT and 886 test scripts pending review or in draft status. With a large number of test scripts pending and an undetermined SIT entry date, the risk of further delays remains high. Without the continuation of the comprehensive peer review of SIT test scripts, the risk of testing gaps remains high. 1/31/2024 - Due to development delays and testing defects, entry into SIT has been delayed to an undetermined date. Approved and final SIT test scripts remain incomplete for twenty-five Epics. With the lack of a complete SIT script package before the SIT Go/No-go decision, the risk of introducing gaps in test coverage in SIT remains. 12/21/2023 - The ASI delivered the Bi-20 (Release 0.12 BES Test Scenarios, Cases, and Scripts) to DHS for review and approval. However, 28 Epics did not include SIT test scripts, which the ASI proposed to provide as continuous updates when the data becomes available. This approach poses a risk to the Project as this deliverable informs DHS' go/no-go decision to start SIT testing. 11/30/2023 - During November, the ASI continued to create and update the SIT test cases. As reported last month, until this is completed DHS cannot evaluate the test cases for full coverage of BES functionality and provide proper sign-off to enter SIT. While these concerns are still present, the peer review process implemented by the ASI has resulted in improved quality and completeness of the test cases. There is additional concern related to the entry criteria for Release 12 SIT SIT test cases, as part of B202, are scheduled for completion on 12/18 but the schedule reflects a 12/4 start date for SIT. DHS is reviewing SIT scripts as they are written, but the full magnitude of DHS test scripts will be unclear until the delivery of Bi-20 on 12/18. Scope for SIT includes retests of Release 0.11 functionality and defect corrections which is part of | 12/15/2023 - The SIT that started on 12/14 is internal to IV&V/SES and not shared. The SIT that started in January is the external BES SIT. The SIT that is started is working appropriately. 10/31/2023 - VC - For R12, DHS will be evaluating SIT test scripts in Jira. FAT planning meeting when Trisha is back. SIT entrance criteria as well as these meetings. VC - overlap of INT and SIT. Testing will be testing everything that was previously done in prior releases.                                         | Phase reference |
| 82 | The lack of technical documentation may lead to incorrect implementation statements or delay the System Security Plan                                                                                       | Heath, Dustin | Finding - Risk  | 4/27/2023       | Security and Privacy | 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 authors' 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. | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Determine when infrastructure design baseline will be completed. Review when documentation will be created, updated, and available for SSP authors. Collaborate and communicate with SSP authors about when relate and correct documentation will be available. Perform a full review of all SSP controls for content and accuracy that have been written as drafts prior to the start of the third-party assessment and submission of the SSP package to federal regulators. This will allow the SSP authors to update controls with changes from Design through implementation.                                                                                                                                                                                                                                                                                                     | Prior to the start of the third party assessment. | 5      | 4 High      | Analyst | Open           | 02/22/2024 - The security staff resolved issues in the Google Assured Workflows Services for the Secure Enclave. The ASI continues to remediate findings from the vulnerability and compliance scans on the environment and work through issues related to the Tanium Nessus credentialized scanning. The security team rescheduled the due dates for the supporting security and privacy documentation for the SSP and intends to be completed by March 4th, 2024. Since there is a proposed schedule change to the project's "Go-to-Green Plan", this finding remains a risk instead of being elevated to a resolved issue. 01/31/2024 - The DHS and ASI security teams continue to work on the secure enclave and documentation that supports the SSP. Documents scheduled for completion by 1/31/24 include the secure enclave SSP additions, Incident Response Plan (IRP), Privacy Impact Analysis (PIA), Configuration Management Plan, and Continuous Monitoring Plan. Other procedural documents will be completed by the end of February 2024. As the Independent Security Controls Assessment is dependent on the completion of some of these documents and artifacts, incomplete documentation may result in assessment findings. Early in January, the ASI reported a working production environment would be available on February 5th for the Independent Security Controls Assessment of BES. 12/21/2023 - The ASI received DHS approval for the Bi-13 SSP on December 18. This deliverable is dependent upon draft DHS Policies and planned security controls that may change based on technical designs and documentation being finalized. The Bi-13 was provided to SSA with supporting material to begin the SSA interface certification process. 11/30/2023 - During November, the ASI and DHS Security SMEs focused on the design of the secure enclave. The Security SMEs have considered the "assured workload" service from Google for applying security controls for the secure enclave. IV&V is concerned about whether the entire system will be built and                                                                                    | 1/12/2024 - Progress should reflect "in process". David Rolla conducted a high level review of the SSP controls and shared it with Barbara/Vinif for feedback during the week of December 10 (prior to submitting it to SSA). The implementation status for each control was updated to reflect the current status as of 12/12. This activity should not be confused for the security controls assessment, which is a multi-episode validation of the controls - typically conducted by a third party. As stated before. |                 |

| ID | Title                                                                                                                                                                                     | Reporter      | Finding Type  | Identified Date | Category                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Significance                                                                                                                                                                                                          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| 30 | Development delays could negatively impact the project schedule and delay go-live.                                                                                                        | Fors, Michael | Finding Issue | 6/30/2022       | Configuration and Development | 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 #74). The ASI continues to be challenged with finding qualified resources in a timely manner. | 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/SA's have presented less than optimal designs and left it 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | OPEN - Request the ASI effectively track and regularly provide DHS (openly 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 accurate and consistently reflected in the project schedule. • ASI provide DHS with the time needed to effectively evaluate the software demonstrators (demo) and elicit productive design discussions with DHS attendees during each demo. • ASI regularly report estimated task level of the total remaining project work to reach go-live and presents a dynamic burn-down chart to track the progress. COMPLETE - DHS request that the ASI right project team resources to ensure that the project has increased velocity. Note that adding additional junior resources may not be as effective as staffing additional senior resources. • ASI review the resources that can lead and mentor junior resources. • ASI review the development process and identifies and mitigates the challenges preventing them from incorporating Epic demo activities into the project schedule. (9/29/23 - ASI will not be doing this, with DHS approval)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Immediate     | 3      | Med         | Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10/29/24 - The ASI reported additional delays that will push out Go-Live to October 2024, based on the draft Go-to-Green plan. The ASI reported the Root Causes of this delay include: - Excessive defects - Lack of Code quality with downstream impacts to include additional defects and critical blockers causing delays with Sprint and Epic demos and the completion of Integration Testing - development delays with the HANA/BES interface and Secure Enclave. The draft Go-to-Green plan includes reorganizing the development team to have more experienced developers focus on critical defects and consistent enforcement of development standards across all development teams and other process improvements. 11/21/24 - Ongoing development delays are still affecting the Project, requiring additional development and INT sprints and postponing Sprint and Epic Demos. To keep the planned go-live date the project elected to overlap INT and SIT, but this is subject to the Go-to-Green Plan that the ASI announced at the end of January. 12/11/23 - The ASI reported development delays related to 10 topics but has also produced a mitigation plan to manage these delays and stay on track for go-live. IVV remains concerned that any additional delays might push out the project schedule and implementation milestones. 11/30/23 - The ASI reported delays in interface design and development, and unplanned development effort required to unwind EBT functionality deferred to post-go-live due to a missing requirement for PIN issuance. Additional development sprints were added to address the delays, and these sprints resulted in a planned overlap of development and INT with SIT. IVV remains concerned that additional development delays could require further reduction of scope and system features. 10/25/23 - The ASI has noted gaps in communication (design misunderstanding) between ASI BAs and DHS SMEs. DHS project management is working with the ASI to determine the best way to address this. The DHS SMEs have suggested that design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                  | 10/31/2023 - Vic - missed bag here - we are mentioning design misunderstandings. MR - improve the design communications. Rana - I am trying to understand what development delays, two months left in DDI. Vic - we will evaluate the draft. |                 |
| 74 | ASIS 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 | 11/29/2021      | 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 to the schedule persist. The use of multiple tools to track resources obfuscate resource management. Previous IVV 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 change, 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. - ASI provide details on how Velocity measures were used to develop estimations for development effort in new version of DDI schedule - ASI conduct a Root Cause Analysis (RCA) with DHS and IVV to determine why the BES Project Schedule continues to be impacted by unanticipated work. - ASI Project Management team with development teams to confirm the accuracy of Velocity to reduce risk in the new project schedules. COMPLETE DHS and ASI agree to a revised schedule against which project deliverables can be managed. (2/28/2023 - complete) ASI had a weekly meeting with DHS and IVV to review all changes to the project schedules. COMPLETE (Primary and DDI). (8/31/2023 - complete) CLOSING 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. (9/29/23 ASI says that they will not do this) Confirm current assumption that a delay with the current go-live date will result in major implications. (8/29/23) 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. (4/20/2023 - ASI using (a) Using the available tools, review the current estimates to complete each activity compared to past actual hours (12/31/2023 - 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 over/under allocations of staff for the duration of the Project (1/31/2023 - new ASI - Not Started) Develop mitigation and contingency plans that are tracked/managed by DHS/ASI for all tasks that are behind schedule or at risk of being behind schedule which includes resource management. (12/28/2023 - new ASI) | Immediate     | 3      | 4 High      | Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2/29/2024 - The Project has experienced many delays, the most recent of which was a Full Go-Live delay announced at the end of January. The draft Go-to-Green Plan is adding another six months. 3/31/2024 - At the start of January a 4-week schedule delay to SIT was reported by the ASI to avoid an overlap of INT and SIT. On January 11, 2024, the ASI reported that SIT would not start as planned. The project status reported indicated "Red" in most categories and the ASI reported they were developing a Go-to-Green Plan. Further delays may be expected. IVV has issued the critically rating of this finding to "High". 12/31/2023 - With 10 topics for release 0.12 in development, another development and integration testing sprint was added to the schedule. IVV remains concerned that under-estimated effort and resulting elongation of schedule could impact implementation milestones. 11/30/2023 - Additional development and testing sprints were added to the schedule, supporting IVV's concern that the effort required for completing the core solution for BES continues to be under-estimated, potentially resulting in missed implementation milestones. The additional development sprints for interfaces will overlap with Integration Testing (INT) and the start of SIT in order to meet the Pilot and Go-Live dates. 10/31/2023 - The BES project schedule continues to have significant revisions after being re-baselined, including delays to tasks in Training task was delayed over a hundred days due to schedule refinements. IVV continues to monitor the schedule for possible estimation issues that could introduce risk in meeting key milestones of the project. 9/12/2023 - The ASI re-baselined both the Primary and DDI BES implementation schedules, adding 8 weeks to release 0.12 and addressing DHS and IVV's concerns that prior schedules were underestimating the effort required to complete the remainder of the Project. As the ASI requested to shift the Pilot functionality after stakeholder implementation, IVV remains concerned. 1/29/24 - No material update in the reporting period. 1/21/24 - No material update in the reporting period. IVV continues to monitor this finding. 12/31/23 - No material update in the reporting period. IVV 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 now 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 F7I data. The ASI appears to be making progress on DR plans and design. 10/20/23 - 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 turnover of their Enterprise Architect position; this does not appear to have had a material impact on the overall infrastructure build. The ASI continues to make progress in the build-out of their infrastructure and is confident that the automation they've implemented will simplify many maintenance tasks. Given that, they remain confident they will be able to meet infrastructure milestones without hindering development. The ASI has also stated that maintaining the system post-go-live will not require excessive effort and that achieving the SLAs will be possible. IVV remains concerned that some planned elements of the infrastructure have yet to be thoroughly architected, documented, and/or conceptually tested via proof of concept (e.g., the secure enclave and disaster recovery environment). 8/31/23 - The ASI has reported progress in the build out of Chronicler, their event logging tool. The weekly | As mentioned in our previous update, the ASI has reported significant revisions made to the schedules were with the refinement of training dates. I also mention dates will continue to evolve as we progress further into the project phases. Please consider "softening" your status verbiage. |                                                                                                                                                                                                                                              |                 |
| 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 not 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 risk 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). IVV 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. | Next several months updates/new releases), manage changes, and regression test once updates are applied. • The project team work to establish strong governance over the utilization and maintenance of the various system tools/components. • ASI allow 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2             | 2 Low  | Open        | 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 under review. 11/26/23 - The ASI has yet to provide a detailed list of configuration items to DHS and IVV. IVV 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 IVV review. The ASI has deprioritized some configuration management activities, which it intends 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. IVV 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. 5/31/23 - The ASI continues to make progress with its utilization of the ServiceNow Configuration Management (CM) tool. They have recently performed an initial import of Google Cloud Platform server details into the ServiceNow Configuration Management Database. *** Continued work. Setup in ServiceNow, will be building up instances. Ongoing support and main. Do not think still a risk, IVV to discuss. 4/30/2023 - The ASI finalized the ServiceNow (SN) modules they will utilize for the project. 3/31/2023 - The ASI is currently evaluating which ServiceNow (SN) modules will be the best fit for the project and for DHS going forward. Details of exactly how they'll be using SN and the level of configuration management they intend to perform has yet to be determined. 2/28/2023 - The new ASI intends to utilize ServiceNow (SN) for most configuration management tracking. Details of exactly how they'll be using SN and its multitude of modules and | 11/17/2023 - As mentioned in our previous update, the ASI has reported significant revisions made to the schedules were with the refinement of training dates. I also mention dates will continue to evolve as we progress further into the project phases. Please consider "softening" your status verbiage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |                 |
| 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 B16 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 project's 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 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | OPEN - ASI adhere to plans for configuration management as documented in B16 DDI Plan, Section 5.2 and clearly 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. • DHS and ASI work to clarify/validate plans for the potential set of configuration management tools. COMPLETE • 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. 7/31/2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ASAP          | 2      | 2 Low       | Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 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). 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They have recently performed an initial import of Google Cloud Platform server details into the ServiceNow Configuration Management Database. *** Continued work. Setup in ServiceNow, will be building up instances. Ongoing support and main. Do not think still a risk, IVV to discuss. 4/30/2023 - The ASI finalized the ServiceNow (SN) modules they will utilize for the project. 3/31/2023 - The ASI is currently evaluating which ServiceNow (SN) modules will be the best fit for the project and for DHS going forward. Details of exactly how they'll be using SN and the level of configuration management they intend to perform has yet to be determined. 2/28/2023 - The new ASI intends to utilize ServiceNow (SN) for most configuration management tracking. Details of exactly how they'll be using SN and its multitude of modules and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Please reference your updates on finding #82 Security and Privacy which documents the work being done for the Secure Enclave.                                                                                                                                                                    |                                                                                                                                                                                                                                              |                 |

| ID | Title                                                                                              | Reporter       | Finding Type    | Identified Date | Criticality                          | Observation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Significance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Event Horizon | Impact | Probability | Analyst Priority | Finding Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Initial Update | Client Comments | Vendor Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| 63 | The lack of early planning and coordination with interface partners may result in schedule delays. | Reynolds, Mark | Finding - Issue | 1/21/2021       | Integration and Interface Management | 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 AP 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. | DOI project 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 can minimize the risk of potential 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 developed and tested before deploying the system to production. | OPEN 6. Confirm testing dates with interface partners in writing. 7. Complete early proof of concept interfaces to avoid unexpected delays due to external organization miscommunications or their own internal delays in assisting the BES project. CLOSED 8. ASI and DHS conduct a root cause analysis to determine the reason FODs were changed without DHS knowledge. COMPLETED 9. Establish a communication plan for each interface partner for the duration of the BES DOI activities. COMPLETED 10/29/2. Identify and document all interface partners' contacts. COMPLETED 3/31/2022 3. Define a release schedule for each interface to include milestone dates, coordination, and execution and share with the interface partners. COMPLETED 01/04 4. Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces. COMPLETED 01/04 5. Complete all MOAs and obtain formal approvals. COMPLETED 01/31/2024 | Prior to FAT  | 5      | 4 - High    | Open             | 02-29-2024 - The MOU/MOAs were completed and the Interface Control Documents (ICD) are updated. The interface testing team did not produce the testing plan on February 26th as specified in the draft Go-to-Green plan, 01-31-2024. The final two MOU/MOAs were signed. Interface development is behind schedule and will require workarounds when FAT begins. The ASI faces challenges with interface partners that lack test environments. The interface testing team has not scheduled meetings, nor published test plans and schedules to coordinate with the interface partners. 01-04-2024 - Due to the number of open issues that could potentially impact interface development (e.g., incomplete agreements, unavailable test regions, and interface/batch testing schedules yet to be defined) IVV has raised the criticality rating to High. 11-30-2023 - Two of the 23 MOA/MOUs (DLIR and DoTAX) are not signed and remain outstanding. DHS continues efforts to complete these agreements to minimize further impact on the project. This finding is now an issue due to the realized impact to the project. The ISA interface requires documentation to be submitted 120 days before the pilot's data usage. This ISA documentation is expected to be ready by December 15th, 107 days prior to the April 1st pilot. Although the ISA has informally stated that they can complete the review within the shorter timeframe, a risk exists to the availability of the ISA data. The interface testing team was organized in November, but planning has not begun and coverage has not commenced. Interface testing remains unscheduled and is a growing concern as the Pilot data approaches. The ASI is internally reviewing the Interface Test Plan and will share it with DHS in December. 10-26-2023 - Two out of 23 MOA/MOU are outstanding; the DoTAX agreement was reached with DLIR and it is ready for signature; the DoTAX MOU does have some challenges and is currently being addressed by the ASI and DHS. The Functional Design of all 23 Interfaces was completed and |                |                 | 10/31/2023 - Good and accurate as of the end of October. Met with DoTAX (Cony) to get specific details. Sent to Scott M. to finalize updates, then send to AG. DoTAX is one of the interfaces that will overlap SIT. They are busy in the tax season. Ve - Rama has updates. Pushback from OIT about sample files. Rama - set up a batch team for end-to-end coverage. We met with Ryan S. and OIT about sample files. We asked for masked PRDD files for ease of use. OIT said no. We are creating a batch |