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November 17, 2021

The Honorable Ronald D. Kouchi,  
President, and  
Members of The Senate  
Thirty-First State Legislature  
Hawaii State Capitol, Room 409  
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,  
Speaker, and  
Members of The House of Representatives  
Thirty-First State Legislature  
Hawaii State Capitol, Room 431  
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawaii Department of Human Services' Systems Modernization Project.

In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,

  
Douglas Murdock (Nov 19, 2021 12:39 HST)

Douglas Murdock  
Chief Information Officer  
State of Hawai'i

Attachment (2)



# Hawaii Department of Human Services Systems Modernization Project

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

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

# Overview

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- [IV&V Findings and Recommendations](#)
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Solutions that Matter

The background is a solid blue color with a subtle gradient. It is decorated with several abstract geometric shapes, including squares and rectangles of various sizes and shades of blue. Some shapes have thin white outlines, while others are solid. They are scattered across the page, with a higher concentration on the left side and a few on the right.

# Executive Summary

# Executive Summary






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

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

The significant risks to the BES Project are:

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

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

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

# Executive Summary



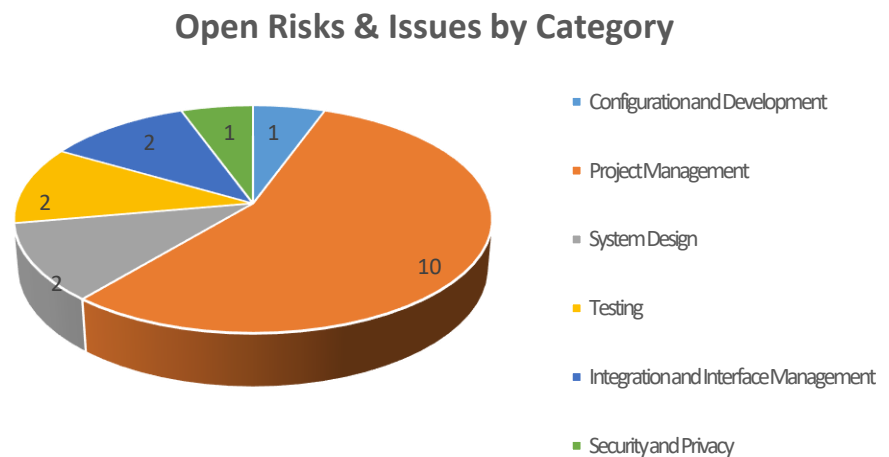
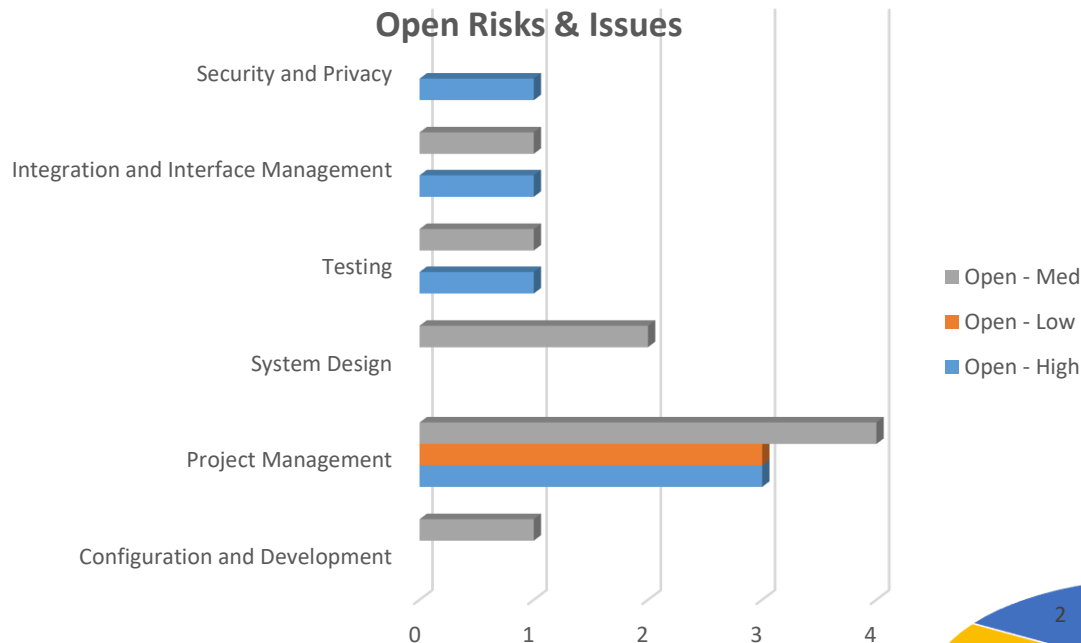
Aug	Sep	Oct	Category	IV&V Observations
M	M	M	System Design	<p>IV&amp;V was invited to design sessions, which will increase our visibility into the ASI and DHS design discussions. Discrepancies between what is being designed and what is being developed, are leading to defects.</p> <p>A new IV&amp;V risk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

# IV&V Findings and Recommendations

# IV&V Findings and Recommendations



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

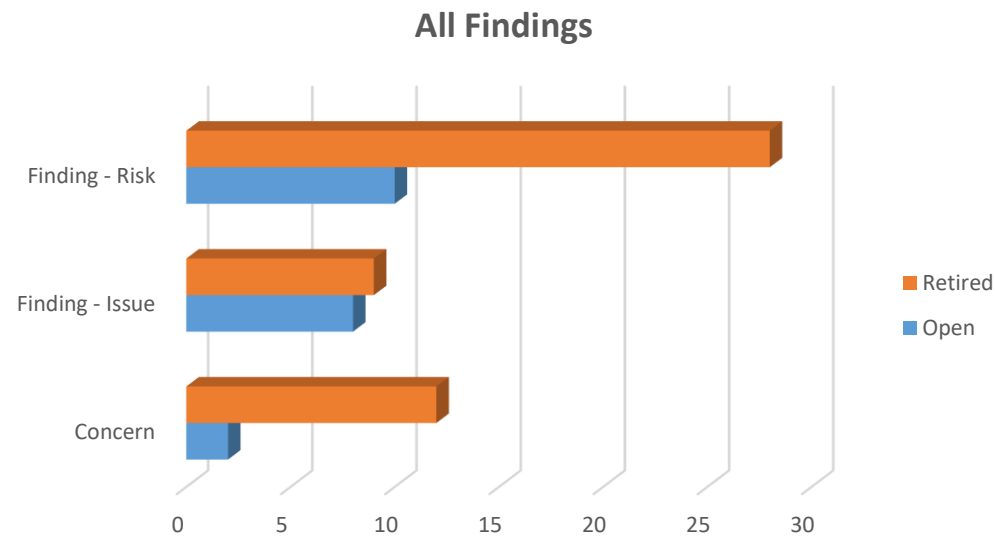




# IV&V Findings and Recommendations



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



# IV&V Findings and Recommendations



## Findings Retired During the Reporting Period

#	Finding	Category
	None	

# IV&V Findings and Recommendations



## Preliminary Concerns Investigated During the Reporting Period

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

# IV&V Findings and Recommendations




## Findings Opened During the Reporting Period

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

# IV&V Findings and Recommendations



## Project Management

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

Recommendations	Progress
<ul style="list-style-type: none"><li>DHS and the ASI agree and publish the revised schedule based on the KOLEA ATC impact, CMM development delays and any other changes to address the potential SDLC Process adjustments.</li></ul>	In process
<ul style="list-style-type: none"><li>Despite not yet having a revised baseline schedule, continue monitoring and analyzing deliverables that may have impact to the critical path.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
29	<p><b>Issue – Uncertainty and/or a lack of communication around long term architecture decisions could impact the project budget, schedule, system design, and planning decisions.</b></p> <p>IV&amp;V remains concerned with the significant delays in finalizing the Two-Portal, GCP, and Rescheduling change requests (CRs). The Rescheduling CR was previously tracked as the KOLEA ATC CR. Further, it remains unclear if these CRs will introduce significant scope changes and whether these potential scope changes are fully communicated and vetted by the larger project team.</p>	

Recommendations	Progress
• DHS should finalize the Portal strategy and communicate the strategy with the stakeholders and project teams.	In process
• The project should continue to vet possible architectural change impacts to the platform (e.g., ADA, Configuration Management tools), M&O, MQD, and BES systems before finalizing architectural decisions.	In process
• DHS continue to request ASI perform due diligence in any recommendation for foundational architecture change decisions and continue to review with appropriate DHS stakeholders to assure a common understanding of the implications of these decisions.	In process
• The project should continue to ensure communication between development leads and architecture leads to assure optimal collaboration on possible architecture changes that could impact decisions in each area.	In process
• Maintain current communication processes to ensure regular communication between the architecture team and the rest of the project team to assess impacts of architecture decisions to the project.	In process

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
43	<b>Issue – DHS PMO project team members have transitioned off the project, which may cause gaps in knowledge transfer and leadership on the project.</b> No material updates in this reporting period.	 H

Recommendations	Progress
<ul style="list-style-type: none"><li>DHS continue to work with the appropriate organizations to identify the funds necessary to fill these positions.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
47	<b>Risk – The COVID-19 pandemic and the related "stay at home" order could hinder project activities and negatively impact the project schedule and budget.</b> No material updates in this reporting period.	

Recommendations	Progress
<ul style="list-style-type: none"><li>Suggest the project and DHS create a detailed, documented risk mitigation strategy and plan that is reviewed regularly and revised to address the current state of the COVID-19 threat and related impacts over the next 6 to 12 months. The plan should include the possible economic impacts to the state budget directly related to project resources.</li></ul>	In process
<ul style="list-style-type: none"><li>Send broad communications to stakeholders to assure clear understanding of changes to the project with this regard to impacts of COVID as well as clarifying communications as to what will remain the same.</li></ul>	In process
<ul style="list-style-type: none"><li>Project leadership continue to encourage independent phone conversations to enhance and accelerate communications, and for team members not wait for meetings to converse.</li></ul>	In process



# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
49	<p><b>Issue – Poor quality project deliverables may impact system design, testing artifacts and the project schedule.</b></p> <p>DHS testing team reported inconsistencies between wireframes and Functional Design Documents, causing challenges in creating test cases and resulting in defects in development. IV&amp;V and DHS are concerned that as the project moves to larger and more complex releases, these quality issues could negatively impact the project. IV&amp;V added a new recommendation that the ASI focus on addressing these inconsistencies.</p>	A green circle with a white letter 'L' inside, indicating a low criticality rating.

Recommendations	Progress
<ul style="list-style-type: none"><li>ASI review the Quality Management Plan to ensure that the project is working within the Quality guidelines. In particular, the ASI should evaluate and consider if it is in alignment with Section 3.1.2 Measure Project Quality, which states “ASI measures process and product quality by 1) selecting BES implementation process and product attributes to measure; 2) selecting component activities to measure; 3) defining value scales for each component activity; 4) recording observed activity values; and 5) combining the recorded attribute values into a single number called a process quality index.” IV&amp;V has not seen evidence indicating the ASI is utilizing metrics to measure its process and product quality.</li></ul>	In process
<ul style="list-style-type: none"><li>ASI verifies that the information in design and testing artifacts is kept in sync and consistent.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
54	<p><b>Risk – Missing and incomplete artifacts required as entry and exit criteria for each testing stage could lead to schedule slippage or delivery of a solution that does not meet business needs or requirements.</b></p> <p>IV&amp;V observed the go/no go meeting for SSP in Release 0.6 SIT, with all artifacts required for entry criteria being in place. The CF and CMM modules were not ready for SIT so they will enter later. The ASI stated that SSP module entered SIT early, and that CF and CMM modules will enter SIT on time, but IV&amp;V is concerned with the impact multiple sessions put on DHS resources. IV&amp;V will assess the thoroughness of the go/no meeting for the Release 0.6 CF and CMM modules and future release go/no go meetings for consistency and accuracy.</p>	

Recommendations	Progress
• Designs need to be solidified prior to developing the scripts - should establish a cut-off date for the design.	In process
• Include the IV&V team as SDLC processes are modified based on the Release 0.4 UAT activities.	In process
• Include the IV&V team when the Release 0.4 UAT RCA session is scheduled.	Complete
• Verify that all entry and exit criteria are met per documented processes for each stage of testing.	In Process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
62	<p><b>Issue – Inability to measure development team velocity may impact the projects' ability to forecast the delivery date of the remaining features.</b></p> <p>IV&amp;V reviewed the velocity charts in Jira for Release 0.6 and found that the SSP velocity chart was complete. However, the velocity charts were incomplete for FMM, CMM, CF, BESSD Interfaces, and Shared Interfaces, which were scheduled in Release 0.6. In addition, IV&amp;V noted inconsistencies in story points for Release 0.6 SSP between Aha! (222) and Jira (799). IV&amp;V will continue to monitor.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Calculate the average velocity from past iterations to be used as a historical reference.</li></ul>	In process
<ul style="list-style-type: none"><li>Provide velocity charts with committed and completed story points for projects documented in Jira.</li></ul>	In progress
<ul style="list-style-type: none"><li>Optimize work based on estimations.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
65	<p><b>Risk – Insufficient project availability of DHS BESSD staff with expansive business knowledge could lead to a BES solution design that falls short of the DHS business needs.</b></p> <p>The ASI has reported significant improvement in the participation of experienced DHS BESSD staff since this finding was opened. IV&amp;V will validate this input regarding BESSD staff with the new BES Project Manager, who brings extensive BES experience with a minimal learning curve and significant value to the project.</p>	

Recommendations	Progress
• DHS continue to identify BESSD SME's to support the project as the project progresses.	In process
• Identify and on-board a replacement BES Project Manager.	Complete
• Continue coaching the new BES Product Owners to ensure the new system takes advantage of new technologies and aligns to the planned business processes.	In process
• DHS continue planning, transitioning, and adapting to staff changes.	In progress

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
71	<p><b>Risk – The lack of the final agreement on the scope and costs of the GCP Change Request (CR) may lead to unanticipated DHS costs, schedule delays, and/or the need to reduce scope.</b></p> <p>The ASI has not submitted the GCP Change Request to DHS. IV&amp;V recommends that DHS and the ASI agree to a firm delivery date for the change request.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>The ASI should document the current environment M&amp;O activities to ensure all activities are known with a clear understanding of the “AS IS” and “TO BE” model for services beginning with the DDI, through Pilot/Implementation and M&amp;O.</li></ul>	Not Started
<ul style="list-style-type: none"><li>The ASI clearly document the scope of work and cost for the GCP CR during DDI and M&amp;O and provide to DHS for approval.</li></ul>	Not Started
<ul style="list-style-type: none"><li>DHS and the ASI agree to a firm delivery date for when DHS will receive the GCP CR.</li></ul>	Not Started

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
72	<p><b>Risk – The inability to measure and report the overall Data Conversion work effort and progress may lead to schedule slippage.</b></p> <p>IV&amp;V remains concerned about the progress of data conversion, given the level of work still being performed on Release 0.4. The ASI data conversion lead stated that the remaining releases contain more tables, that are just as complex as those found in Release 0.4. The data conversion team reported they are working on a new metric/measure that will be a better gauge of progress. IV&amp;V has added a recommendation that the data conversion team consider using use cases and story points, which rest of development teams are utilizing, allowing them to have Velocity to measure progress.</p>	

Recommendations	Progress
• The ASI should develop reports with metrics that accurately measure the Data Conversion progress.	In process
• The Data Conversion team should evaluate the Just In Time (JIT) approach to determine if there are risks to the project that should be monitored/managed.	In process
• The DHS Data Governance committee continue to clarify the usage of MDM so the BES conversion team aligns to the planned governance structure.	In process
• The Data Conversion team consider using use cases and story points to measure progress.	Not Started

# IV&V Findings and Recommendations



## Integration and Interface Management

#	Key Findings	Criticality Rating
60	<p><b>Risk – System Integration of the BES Modules (CMM, FMM, SSP) will be developed in the later releases vs. a continuous integration model within each release which may cause schedule delays.</b></p> <p>Increased communication between the ASI's development teams is improving each team's understanding of integration requirements and impacts to each team's code base. Therefore, IV&amp;V is lowering this risk criticality to Medium. However, IV&amp;V remains concerned that implementation of some integrations will occur in later releases which could lead to unexpected issues and leave the project little time to correct these issues.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Prioritize the build of integration points within each module and the creation of scripts (API calls) required for integration.</li></ul>	In process
<ul style="list-style-type: none"><li>If the ASI needs all the remaining releases to demonstrate an end-to-end solution of the identified business processes across all modules, IV&amp;V recommends planning and communicating the mitigation strategy for handling risks associated with this approach.</li></ul>	In process

# IV&V Findings and Recommendations



## Integration and Interface Management

#	Key Findings	Criticality Rating
63	<p><b>Risk – The lack of early planning and coordination with interface partners may result in schedule delays.</b></p> <p>The project team continues to update the communication plans. One interface contact (CYRCA) is still outstanding. There are 3 MOAs (DAGS, HYCF, NCOA) still outstanding.</p> <p>IV&amp;V has recently been invited to interface meetings, which have been very productive. The ASI and DHS have made major progress in identifying interface partner contacts and planning for testing with them.</p> <p>Note: Since this risk only pertains to interface planning, IV&amp;V is evaluating the need of a separate finding regarding the implementation of interfaces.</p>	


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



# IV&V Findings and Recommendations



## Configuration and Development


#	Key Findings	Criticality Rating
16	<p><b>Issue – Lack of clear understanding of the DDI approach may reduce effectiveness of all SDLC Processes.</b></p> <p>It remains unclear whether recent changes to testing and the SDLC design process have been fully communicated to and understood by the project team. Further, it remains unclear if the new testing process/approach will effectively reduce leakage problems or whether leakage would be better addressed through increased efforts to reduce system design misunderstandings and development defects.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>• ASI make available their DDI approach documentation/materials for stakeholders to review and/or refresh their knowledge on demand.</li></ul>	In process
<ul style="list-style-type: none"><li>• The project monitor DHS product owner productivity, ability/willingness to provide effective feedback to the ASI for design and other important decisions and provide coaching as needed to assure their effectiveness in their role.</li></ul>	In process

# IV&V Findings and Recommendations



## System Design

#	Key Findings	Criticality Rating
61	<p><b>Issue – Poorly executed JAD and "design sessions" could lead to inaccurate design and rework.</b></p> <p>The BES Project Team (DHS, ASI, IV&amp;V) has shared concerns about issues arising late in the development process during in Sprint demo and prototype meetings. IV&amp;V has now been invited to many more of the design sprint meetings, where we will seek to understand how these gaps in design are occurring; and look to discuss potential resolutions with DHS and the ASI.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>JAD and design sessions should be led by experienced senior BAs, with goals, objectives and results communicated to all participants.</li></ul>	In process
<ul style="list-style-type: none"><li>The facilitator should use their expertise to drive discussions through leading questions.</li></ul>	In process
<ul style="list-style-type: none"><li>The DHS and ASI product owners should actively participate to ensure the system meets the requirements, designed taking advantage of new technology and aligns to the 'to be' business process.</li></ul>	In process
<ul style="list-style-type: none"><li>The ASI should back-track significant differences in design direction to determine the root cause in an effort to identify these items as early in the SDLC as possible.</li></ul>	In process
<ul style="list-style-type: none"><li>The Functional Design Document process, to include the Design Sprint concept, should be clearly defined and shared with all project team members.</li></ul>	In process
<ul style="list-style-type: none"><li>Invite IV&amp;V to all future design sessions and design sprints to allow IV&amp;V to observe and assess the effectiveness of the revised design processes.</li></ul>	In process

# IV&V Findings and Recommendations



## Testing


#	Key Findings	Criticality Rating
66	<p><b>Issue – The number of issues/defects found during testing may cause planned work in the future sprints to be delayed due to the resolution and retesting of issues/defects.</b></p> <p>Defect leakage metrics for R0.5 greatly improved. IV&amp;V will continue to monitor defects reported during INT and SIT and the leakage between those testing efforts.</p> <p>The ASI conducted the Release 0.4 root cause analysis session with DHS and IV&amp;V.</p>	A yellow circle with the letter 'M' inside, indicating a Medium Criticality Rating.

Recommendations	Progress
• Perform a joint Release 0.4 UAT (DHS/ASI/IV&V) RCA to identify and take corrective actions.	Completed
• Adjust the project plan and provide reasonable scope for SIT in subsequent releases taking into account the number of defects and testing time needed.	In process
• System and Integration testing be executed more rigorously.	In process
• The ASI should report testing metrics and DHS should monitor this Key Performance Indicator (KPI).	Not started

# IV&V Findings and Recommendations



## Testing

#	Key Findings	Criticality Rating
67	<p><b>Risk - The Americans With Disabilities Act (ADA) Section 508 compliance tool has not been installed for the project, which may cause significant rework.</b></p> <p>No material updates in this reporting period. Until a tool is proven to work with the current architecture this finding will remain open, and IV&amp;V will continue to monitor.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>The ASI should gain DHS' approval on the tool selected after the ASI validates it will perform as expected within the BES architecture, meeting all contractual and project requirements.</li></ul>	In process
<ul style="list-style-type: none"><li>The ASI create and communicate the plan for when the ADA compliance tool will be put into action, how the tool will report compliance or non-compliance, how non-compliance will be corrected, and how and when DHS and IV&amp;V will be provided the reports from the ADA compliance tool and how to interpret those reports for the code from previous, current and future releases.</li></ul>	In process

# IV&V Findings and Recommendations



## Security and Privacy

#	Key Findings	Criticality Rating
68	<p><b>Risk - Insufficient planning/execution of the BES Security Plan activities may lead to delays in gaining Federal Partner approval for the BES to begin the Pilot Phase.</b></p> <p>The ASI is working to resolve the final outstanding comments on the BI-13 Security Plan DED. Agreement has been reached that the Security Plan and controls documentation will follow 800-53 Rev 4 but with the addition of several Rev 5 controls as indicated by the latest IRS 1075 publication. The ASI agrees that they are contractually responsible for updating the Security Plan to the latest revision and have requested that DHS inform them in writing when they are expected to switch versions.</p> <p>The ASI is populating the Security Requirements Matrix in workbooks and importing it into Confluence, based upon feedback provided by DHS and IV&amp;V. The ASI is modifying security artifacts to reflect recommendations from DHS and IV&amp;V. Most feedback from DHS addresses the proper documentation of inherited controls. DHS made it clear that stating a control is inherited from GCP is not enough, and that it must be noted how the GCP satisfies the control objective.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>DHS and the ASI agree and finalize the BI-13 DED.</li></ul>	In process
<ul style="list-style-type: none"><li>The ASI continue to develop the BI13 Security Plan in close collaboration with DHS.</li></ul>	In process
<ul style="list-style-type: none"><li>DHS and the ASI agree upon the tools and process that will be used to document and track security control implementation, if not included in the BI-13 Security Plan. The process should define the level of detail needed to track progress (estimates, target dates, risks, issues, evidence) along with the Requirement Traceability Matrix.</li></ul>	In process
<ul style="list-style-type: none"><li>ASI, per DHS guidance, should begin to pivot toward the adoption of 800-53 Rev 5 since Rev 4 will be obsolete when the system goes live.</li></ul>	In process



# IV&V Status

# IV&V Engagement Status



IV&V Engagement Area	Jul	Aug	Sep	Comments
IV&V Budget				
IV&V Schedule				
IV&V Deliverables				PCG submitted the final September IV&V Monthly Status Report.
IV&V Staffing				
IV&V Scope				

Engagement Status Legend		
	The engagement area is within acceptable parameters.	
	The engagement area is somewhat outside acceptable parameters.	
		The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.



- IV&V activities in the October reporting period:
  - Completed – September Monthly Status Report
  - Ongoing – Review the BES Project Artifacts and Deliverables
  - Ongoing – Attend BES project meetings, (see [Additional Inputs](#) pages for details)
  - Reviewed available ASI Original Contract and BES Optimization contract amendment documentation
- Planned IV&V activities for the November reporting period:
  - Ongoing – Observe BES Design and Development sessions as scheduled
  - Ongoing – Observe Bi-Weekly Project Status meetings
  - Ongoing – Observe Weekly Architecture meetings
  - Ongoing – Observe Weekly Security meetings
  - Ongoing – Observe Agile Development meetings
  - Ongoing – Monthly IV&V findings meetings with the ASI
  - Ongoing – Monthly IV&V Draft Report Review with DHS, ETS and ASI
  - Ongoing – Participate in weekly DHS and IV&V Touch Base meetings
  - Ongoing – Review BES artifacts and deliverables



# Deliverables Reviewed



Deliverable Name	Deliverable Date	Version
BI-14 Release 0.5 Technical Design Document - DSNAP (Iteration 1)	10/29/2021	0.7
BI-14 Release 0.5 Technical Design Document - SSP (Iteration 1)	10/28/2021	1.0
BI-10 R0.6 CMM Interview	10/27/2021	1.0
BI-10 R0.6 Common Functions Special Indicators (Iteration 2)	10/27/2021	1.1
BI-15 Release 0.5 Fully Configured and Developed System (Iteration 1)	10/20/2021	1.0
BI-20 Release 0.6 Test Scenarios, Cases, and Scripts	10/15/2021	Draft
BI-13 Security Plan DED and DCF	10/13/2021	3.1
BI-22 Release 0.5 System Test Report (Iteration 1)	10/13/2021	1.0
BI-15 Release 0.5 Fully Configured and Developed System	10/4/2021	Draft
BI-10 R0.6 SSP Application Management (No Account), Prepopulate Online Application	10/4/2021	Draft
BI-22 Release 0.5 System Test Report	10/1/2021	Draft

# Additional Inputs – Artifacts



Deliverable Name	Artifact Date	Version
Unisys Contract Amendment 3	4/17/2020	N/A
FNS Handbook 901	01/2020	V2.4
BES Weekly Schedule (BI-5)	10/5/2021 10/12/2021 10/19/2021 10/26/2021	N/A
BES Weekly Status Report	10/13/2021 10/27/2021	N/A
BES Risks and Issues Log	10/13/2021 10/27/2021	N/A
BES Shared Interfaces	N/A	N/A
NIST Special Publication 800-53 Security and Privacy Controls for Information Systems and Organizations	12/20/2020	Rev.5
NIST Special Publication 800-53 Security and Privacy Controls for Information Systems and Organizations	1/22/2015	Rev. 4



## Meetings and/or Sessions Attended/Observed:

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



## Meetings and/or Sessions Attended/Observed:




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



# Appendices



# Appendix A – IV&V Criticality Ratings

Criticality Rating	Definition
	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



Acronym	Definition
APD	Advance Planning Document
ASI	Application System Integrator
BES	Benefits Eligibility Solution
CCWIS	Comprehensive Child Welfare Information System
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Center for Medicare and Medicaid Services
CR	Change Request
DDI	Design, Development and Implementation
DED	Deliverable Expectation Document
DHS	Hawaii Department of Human Services
DLV	Deliverable
E&E	Eligibility and Enrollment
EA	Enterprise Architecture
ECM	Enterprise Content Management (FileNet and DataCap)
ESI	Enterprise System Integrator (Platform Vendor)
ETS	State of Hawaii Office of Enterprise Technology Services
FIPS	Federal Information Processing Standard
HIPAA	Health Information Portability and Accountability Act of 1996
IDM	Identity and Access Management (from KOLEA to State Hub)
IEEE	Institute of Electrical and Electronics Engineers
IES	Integrated Eligibility Solution
ITIL	Information Technology Infrastructure Library





# Appendix C – Acronyms and Glossary

Acronym	Definition
IV&V	Independent Verification and Validation
KOLEA	Kauhale On-Line Eligibility Assistance
M&O	Maintenance & Operations
MEELC	Medicaid Eligibility and Enrollment Life Cycle
MEET	Medicaid Eligibility and Enrollment Toolkit
MOU	Memorandum of Understanding
MQD	Hawaii Department of Human Services MedQuest Division
NIST	National Institute of Standards and Technology
OE	Operating Environment
OIT	Department of Human Services Office of Information Technology
PIP	Performance/Process Improvement Plan
PMBOK®	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project/Program Management Office
PMP	Project Management Plan
QA	Quality Assurance
QM	Quality Management
RFP	Request for Proposal
ROM	Rough Order of Magnitude
RMP	Requirements Management Plan
RTM	Requirements Traceability Matrix
SEI	Software Engineering Institute
SLA	Service-Level Agreement
SME	Subject Matter Expert

# Appendix C – Acronyms and Glossary

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Acronym	Definition
SOA	Service Oriented Architecture
SOW	Statement of Work, Scope of Work
VVP	Software Verification and Validation Plan
XLC	Expedited Life Cycle

# Appendix D – Background Information



## Systems Modernization Project

The DHS Enterprise Program Roadmap includes contracting with three separate vendors with the following high-level scope:

- ESI or Platform Vendor – responsible for the shared technology and services required for multiple Application vendors to implement and support functionality that leverages the DHS Enterprise Platform.
- ASI or ASI Vendor – responsible for the DDI of the Benefits Eligibility Solution (BES Project) enhancing the currently implemented Medicaid E&E Solution (KOLEA) and providing support for the combined Solutions.
- CCWIS Vendor – responsible for the DDI of the CCWIS Solution to meet the needs of child welfare services and adult protective services (CCWIS Project) and providing support for the Solution.

## Systems Modernization IV&V Project

IV&V performs objective assessments of the design, development/configuration and implementation (DDI) of DHS' System Modernization Projects. DHS has identified three high-risk areas where IV&V services are required:

- Transition of M&O from DHS' incumbent vendor to the ESI and ASI vendors
- BES DDI
- CCWIS DDI

On the BES DDI Project, IV&V is responsible for:

- Evaluating efforts performed by the Project (processes, methods, activities) for consistency with federal requirements and industry best practices and standards
- Reviewing or validating the work effort performed and deliverables produced by the ASI vendor as well as that of DHS to ensure alignment with project requirements
- Anticipating project risks, monitoring project issues and risks, and recommending potential risk mitigation strategies and issue resolutions throughout the project's life cycle
- Developing and providing independent project oversight reports to DHS, ASI vendors, State of Hawaii Office of Enterprise Technology Services (ETS) and DHS' Federal partners

# Appendix D – Background Information



## What is Independent Verification and Validation (IV&V)?

- Oversight by an independent third party that assesses the project against industry standards to provide an unbiased view to stakeholders
- The goal of IV&V is to help the State get the solution they want based on requirements and have it built according to best practices
- IV&V helps improve design visibility and traceability and identifies (potential) problems early
- IV&V objectively identifies risks and communicates to project leadership for risk management

## PCG's Eclipse IV&V® Technical Assessment Methodology

- Consists of a 4-part process made up of the following areas:
  1. **Discovery** – Discovery consists of reviewing documentation, work products and deliverables, interviewing project team members, and determining applicable standards, best practices and tools.
  2. **Research and Analysis** – Research and analysis is conducted in order to form an objective opinion.
  3. **Clarification** – Clarification from project team members is sought to ensure agreement and concurrence of facts between the State, the Vendor, and PCG.
  4. **Delivery of Findings** – Findings, observations, and risk assessments are documented in this monthly report and the accompanying Findings and Recommendations log. These documents are then shared with project leadership on both the State and Vendor side for them to consider and take appropriate action on.

## IV&V Assessment Categories for the BES Project

- |  |                              |
|--|------------------------------|
| • Project Management                   | • Security and Privacy       |
| • Requirements Analysis & Management   | • Testing                    |
| • System Design                        | • OCM and Knowledge Transfer |
| • Configuration and Development        | • Pilot Test Deployment      |
| • Integration and Interface Management | • Deployment                 |

Ending Slide



**Solutions that Matter**



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