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March 30, 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 (Mar 31, 2021 09:01 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: January 1 - 31, 2021

*Submitted: February 11, 2021*

# Overview

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Solutions that Matter

The background is a solid blue color. It features several abstract geometric elements: a cluster of overlapping squares and rectangles in various shades of blue (light, medium, and dark) in the upper-left corner; a single light blue square with a thin white border in the center-left, partially overlapping the text; and a few more squares and rectangles in the lower-right area, some with thin white lines extending from them.

# Executive Summary










# Executive Summary



In January, IV&V observed progress regarding DHS staffing and communication processes. DHS added resources to the project with BESSD expertise and they are currently in the onboarding process. DHS and the ASI are adjusting the Product Owner assignments and roles and responsibilities – both of which are critical to improve communications and ensure the BES solution meets the requirements and realizes planned improvements to BESSD business processes. DHS and the ASI agreed to adopt the Pilot deliverable review/approval process to reduce the turnaround time required for deliverables and avoid future schedule delays.

Considering the BES Pilot Phase (production) is scheduled to occur in less than a year, there are several risks that require mitigation plans to avoid additional project costs and schedule delays. High-risk areas include project management, and integration and interface management.

In this reporting period, Release 0.2 completed, and Release 0.3 began System Integration Testing. Other activities including JAD Sessions, Requirement Validation and Prototype Reviews continued to support future releases. Change Requests continued to be researched and/or estimated.

Nov	Dec	Jan	Category	IV&V Observations
			Project Management	High-criticality findings in the Project Management category include the Project Schedule, communications, DHS staffing and the inability to measure the velocity of the development team. Although we note progress in DHS staffing and communication changes, time is needed to determine the impact of these changes.
			System Design	No major change to the System Design category in this reporting period; the draft architecture deliverables were made available to the project team and the weekly architecture project meetings continued.
			Deployment	There were no material changes to this category in this reporting period. The Lessons Learned activity for Release 0.2 continued in January with follow-on activities planned in February.

# Executive Summary



Nov	Dec	Jan	Category	IV&V Observations
M	M	M	Configuration and Development	The project team continued to gain a better understanding of the ASI's development approach as deliverables were reviewed. The ASI conducted a couple of training sessions on the tools this month, enhancing the project teams understanding on how the tools are configured and data available.
N/A	H	H	Integration and Interface Management	A new high criticality finding was added this month in this category. Currently, there are gaps in the overall planning and execution activities for the BES Interfaces. DHS and the ASI are evaluating the gap analysis completed by IV&V to determine next steps including clarification on roles and responsibilities of DHS and the ASI regarding Interface Partner Communication and Coordination.

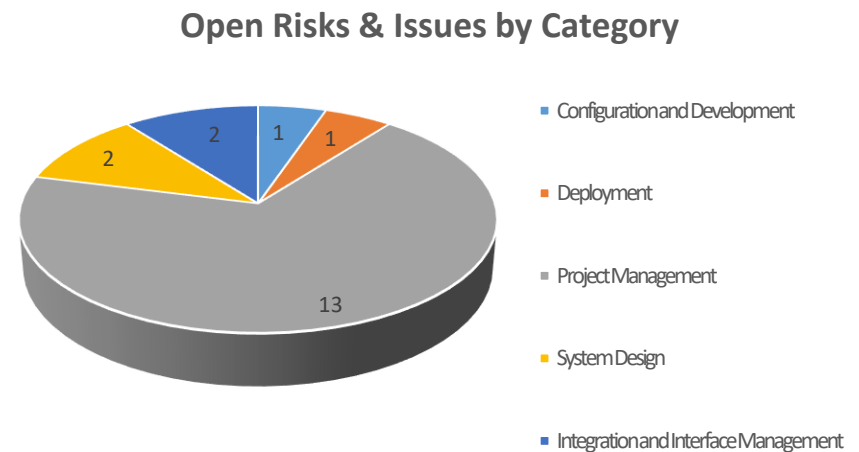
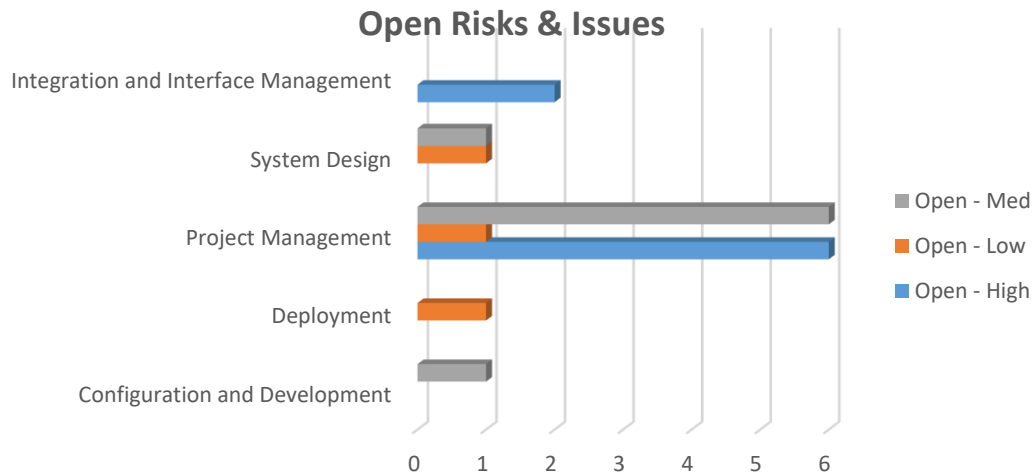
The background is a solid blue gradient. It is decorated with several abstract geometric elements: white-outlined squares of various sizes, some of which are nested or overlapping; solid squares in different shades of blue; and thin white lines that form partial rectangles or connect different shapes. These elements are scattered across the slide, with a higher concentration on the left side.

# IV&V Findings and Recommendations

# IV&V Findings and Recommendations



*As of the January 2021 reporting period, PCG is tracking 19 open findings (11 risks and 8 issues) and has retired a total of 40 findings. Of the 19 open findings, 13 are related to Project Management, 2 in System Design, 2 in Integration and Interface Management and 1 each in Configuration and Development, and Deployment.*

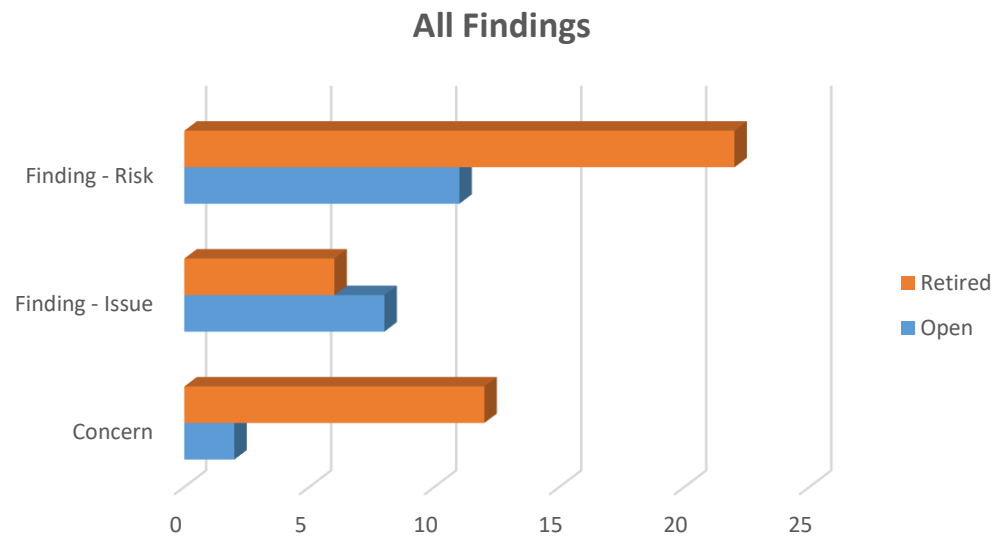




# IV&V Findings and Recommendations



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



# IV&V Findings and Recommendations



## Findings Opened During the Reporting Period

#	Finding	Category
63	<p><b>Risk - The Project's approach to planning, coordination and developing system interfaces may impact effective data sharing.</b></p> <p><b>Significance:</b> Interfaces is one of the areas where DDI projects often underestimate the time needed to effectively manage all the tasks and activities to successfully implement data sharing.</p> <p><b>Status:</b> The ASI provided a status update on the BES Interfaces at the Release 0.4 Checkpoint Meeting however, it was limited to those interfaces planned in Release 0.4. The ASI and DHS developed a MS-Excel list of all interfaces and are collaboratively updating it to include some of key Point of Contact data, MOA status and other attributes of each interface.</p> <p><b>Rating – High</b></p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"><li>• Establish a communication plan for each interface partner for the duration of the BES DDI activities.</li><li>• Define a detailed schedule for each interface to include milestone dates, coordination and execution and share with the interface partners.</li><li>• Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces.</li></ul>	Integration and Interfaces

# IV&V Findings and Recommendations



## Findings Retired During the Reporting Period

#	Finding	Category
	No findings were retired during this reporting period.	

# IV&V Findings and Recommendations




## Preliminary Concerns Investigated During the Reporting Period

#	Finding	Category
61	<p><b>Poorly planned/executed JAD sessions may lead to rework and schedule delays.</b></p> <p>As observed by DHS and IV&amp;V the JAD sessions conducted this month were inconsistent. Some showed improvement by conducting post meeting follow-ups and improved facilitation. However, the JAD for Release 0.5 Eligibility workflow experienced challenges in planning and preparing the participants to ensure the JAD session was productive and focused on the topics that needed to be clarified and/or modified to meet the business requirements.</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>In January, most deliverables were provided on-time. The Release 0.3 BI-10 Functional Design Document, Data Conversion activities, Training and Technical Design documents were late. The Security Plan due date was extended to mid-March.</p> <p>Due to the complexity of the BES Releases currently in-process, IV&amp;V retains this as a high priority finding.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Prior to acceptance of the new baseline, finalize the needed updates to the project schedule to address the outstanding items/issues identified by DHS, the ASI, and IV&amp;V.</li></ul>	In process
<ul style="list-style-type: none"><li>IV&amp;V recommends the project team evaluate the estimating process to determine if changes should be made to reduce the number of late tasks and/or conduct a root cause analysis to determine and address the root cause(s).</li></ul>	Not started

# 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>As the project continues to introduce new technology/tools to the solution environment, it remains unclear if sufficient governance over the technology has been established and communicated to DHS. In addition, it is difficult to determine whether the development team can quickly use the technology/tools to improve overall productivity.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>The ASI should continue to document the architectural details in the BI-12 System Architecture Deliverable and if possible, review draft content with DHS and IV&amp;V.</li></ul>	In process
<ul style="list-style-type: none"><li>DHS should finalize the Portal strategy and communicate the strategy with the stakeholders and project teams.</li></ul>	In process
<ul style="list-style-type: none"><li>The project should vet possible architectural change impacts to the platform, M&amp;O, MQD, and BES systems before finalizing architectural decisions.</li></ul>	In process
<ul style="list-style-type: none"><li>Communication should be improved to create an awareness of possible architecture changes so that they can prepare for the possibility of a change. For example, if there is a possibility that the platform could change then analysis/design could focus on platform agnostic design and avoid extensive efforts in refining a platform specific design.</li></ul>	In process
<ul style="list-style-type: none"><li>Establish 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.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
42	<p><b>Risk – Project delays and disruption in DHS operations may occur if ASI communications with DHS regarding key (urgent/time sensitive) project information does not improve.</b></p> <p>The project team is activity working on improving communications through multiple channels:</p> <ul style="list-style-type: none"><li>• The ASI initiated Monthly Release Checkpoint Meetings</li><li>• The Release 0.2 Lessons Learned action plans identify several areas to improve communications</li><li>• The updated product owner approach is planned and being rolled out to the project team.</li></ul> <p>IV&amp;V will continue to monitor these actions and overall results with an update in the next report.</p>	

Recommendations	Progress
• Request ASI enhance processes and planning for project communications and include key project communications to DHS in the project schedule. For example, notifications in preparation for release activities.	In process
• DHS work with the ASI to remove barriers of communication between the DHS stakeholders and the development team.	In process
• ASI increase dialog with the DHS project team individuals instead of relying on formal meetings to inform and discuss project topics. Update the project communications plan with enhanced communication processes.	In process
• DHS increase communication with the DHS project team members and ASI prior to key project meetings to ensure all participants are prepared.	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
43	<p><b>Issue - DHS key project team members have transitioned off the project, which may cause gaps in knowledge transfer and leadership on the project.</b></p> <p>DHS assigned several BESSD staff to the project team this month and they are in the onboarding process. The DHS PMO positions remain open. Although many staff were added to the project in January, IV&amp;V retains this as a high-priority until DHS has validated the project has the staff with the required skill sets needed for the long-term. This may be challenging since the project is using Aha and MS-Project to manage the schedule and Aha does not currently have DHS resource estimates included for the activities and tasks.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>The state should develop a transition plan for the project and PMO resources as identified in the RFP, which includes DHS PMO and DHS DDI resources (reference RFP section 3.4.3 'DHS Staffing'). It should also include possible project resource impacts considering the COVID-19 economic impacts to the State.</li></ul>	In process
<ul style="list-style-type: none"><li>DHS continue to identify BESSD SME's to support the project.</li></ul>	In process



# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
47	<p><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></p> <p>Although BESSD operational staff continue to manage the influx of citizen requests for public assistance due to the loss of income due to the COVID-19 shutdowns, BESSD leadership recently assigned additional staff to provide additional SME support to the project. Furloughs could further impact SME availability if they are implemented in July 2021..</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Ramp up efforts to setup, train, and assist stakeholders on remote work devices and tools and make every effort to help them to become highly functional with remote access technology (e.g. MS Teams/Skype).</li></ul>	In process
<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>Update the OCM Plan to include any new activities or updates to planned activities to aid the organization through this COVID-19 pandemic in the short and long term.</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>	
<ul style="list-style-type: none"><li>Explore options for freeing up key BESSD SME's work on the project.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
48	<b>Risk – The CMS Outcomes-Based Certification Requirements have not been published by CMS, which may impact the project schedule and funding.</b> No material update this month, IV&V will continue to monitor.	

Recommendations	Progress
<ul style="list-style-type: none"><li>DHS to continue dialogue with CMS regarding the project's approach to OBC and MITA alignment to ensure all CMS requirements are met by the BES Project.</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>The ASI submitted multiple deliverables during January spanning all current releases, with inconsistent document quality results. Some technical deliverables exhibited improved quality, while some design-related test deliverables continued to exhibit multiple anomalies. The project team conducted a Deliverable Review Pilot Process Review in January, which provided insight into the effectiveness of the process since its inception. The timing metrics clearly indicated that the deliverable review process had increased the pace and speed at which deliverables are reviewed, however the quality metrics did not indicate deliverable quality improvement. The Project Team began several Lessons Learned initiatives aimed at increasing both the speed and quality of deliverables, and IV&amp;V will continue to monitor both the implementation and the effectiveness of these initiatives through at least Release 0.4.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>IV&amp;V recommends that a facilitated root cause analysis be performed by the ASI with DHS and IV&amp;V in attendance. Quality issues are rarely generated by a single entity in a project, so there could potentially be multiple causes or root causes of this current condition. Once the root cause(s) are identified, IV&amp;V recommends immediate action be employed to resolve quality concerns on in-process deliverables prior to submission of subsequent deliverables.</li></ul>	In process
<ul style="list-style-type: none"><li>IV&amp;V recommends that the 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

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
54	<p><b>Risk – Poorly planned and executed UAT could lead to implementation delays and the delivery of a solution that may not meet BESSD's business needs.</b></p> <p>There was not any UAT activity in January however, the 44 design changes identified during Release 0.2 remain outstanding along with the Release 0.2 BI-10 changes identified during UAT. IV&amp;V has not seen the plan to resolve these items to include identification of the downstream impact to the follow-on releases to development, testing and UAT.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Further develop the Lessons Learned action plan to include target complete dates. Report progress in the weekly status meeting.</li></ul>	In process
<ul style="list-style-type: none"><li>All agreed upon actions to resolve issues called out in Lessons Learned should be added to project schedule so adequate timing is provided to support UAT preparation and execution.</li></ul>	In process
<ul style="list-style-type: none"><li>The ASI could conduct a debrief meeting with DHS after SIT and UAT have completed, summarizing work completed and follow-up actions required from ASI and DHS.</li></ul>	Planned
<ul style="list-style-type: none"><li>Develop a clear and collaborative approach and plan to review and categorize anomalies after testing if the current defined process is not being followed. This should include defining the severity for defects and determining the next steps for anomalies not identified to be defects.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
55	<p><b>Risk – Test Case creation without functionality acceptance from JAD/JAR sessions may lead to inadequate testing.</b></p> <p>The DHS product owners are planning to review the previous JAD session notes. They will then meet to review the design along with any possible design changes with the ASI product owner. This process is new, and they are currently working through the roles and responsibilities and communication plan between the ASI and DHS product owners. IV&amp;V will continue to monitor this risk.</p>	A yellow circle with a black border containing the letter 'M'.

Recommendations	Progress
<ul style="list-style-type: none"><li>• Include the details resulting from JAD/JAR sessions be provided in the Test Results documentation to help assure that acceptance criteria that was agreed upon is met.</li></ul>	In process
<ul style="list-style-type: none"><li>• Resend the JAD results from previous sessions, allowing the JAD participants time review what was previously agreed.</li></ul>	In process
<ul style="list-style-type: none"><li>• Establish a clear decision tree (DHS and ASI) to resolve comments/conflicts efficiently and timely.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
57	<p><b>Risk – Roles and responsibilities of the BES "Product Owner" and communication of this role's activities with DHS and the project team is not clear.</b></p> <p>The project team (ASI/DHS) have made updates to the Product Owner matrix to include Roles and Responsibilities and they expect further changes will be applied in February as the team executes to the revised approach. Adding DHS Product Owners with defined roles and responsibilities will ensure the design meets BESSD needs. IV&amp;V will continue to monitor and gain ASI/DHS feedback on the revised approach.</p>	A red circle with a white letter 'H' inside, indicating a high criticality rating.

Recommendations	Progress
<ul style="list-style-type: none"><li>Update the Communication Plan to support the revised Product/Owner/Manager matrix.</li></ul>	In process
<ul style="list-style-type: none"><li>DHS and the ASI clearly define the staff assigned and the roles and responsibilities of the Product Managers and Product Owners.</li></ul>	In process
<ul style="list-style-type: none"><li>DHS consider adding staff to the project team with 'deep' BESSD business knowledge to work hand-in-hand with the product owners and development team.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
58	<p><b>Risk – The data conversion effort lacks leadership, consistency in data governance, and effective communications which may impact the schedule.</b></p> <p>The Data Conversion team continued working on Release 0.4 tasks and activities during January. IV&amp;V notes that the R0.4 data conversion schedule was extended by approximately 2 weeks during January. IV&amp;V will continue to monitor throughout Release 0.6.</p>	A green circle with a white 'L' inside, indicating a Low Criticality Rating.

Recommendations	Progress
<ul style="list-style-type: none"><li>Assign a dedicated project leader to actively manage all aspects of the Data Conversion effort. Consider a full-time position until the Data Conversion effort is completed.</li></ul>	In process
<ul style="list-style-type: none"><li>Investigate and resolve communication issues that are suspected to be delaying the data conversion effort.</li></ul>	In process
<ul style="list-style-type: none"><li>Prioritize the conversion activities to validate the key tasks are addressed early to avoid further delays considering the complexity of the later releases.</li></ul>	Not started
<ul style="list-style-type: none"><li>The ASI should develop reports with metrics that accurately measure the Data Conversion progress.</li></ul>	Not started

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
59	<p><b>Issue – The Project's Critical Path does not include release / functionality dependencies, which may limit the projects' ability to identify and mitigate schedule slippage early.</b></p> <p>In January, the ASI began adding dependencies within the Aha tool to provide additional insight to the release dependencies but, are not complete with this activity. The ASI stated no further changes to the dependencies will be applied to the BI-05 Project Schedule. IV&amp;V will review the Aha updates and provide an update in next months report.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>The ASI, DHS PMO, and BESSD collaboratively review the next layer of detail showing the 'Big Picture', including key milestone dates for each release, the concurrent overlap of releases, and resource allocations across all releases to identify potential additional risks to the project.</li></ul>	In process
<ul style="list-style-type: none"><li>The functional dependencies are considered and visible in the critical path.</li></ul>	Not started
<ul style="list-style-type: none"><li>The ASI provides clarity as to how and why the critical path does not have tasks and activities on it until Release 0.6.</li></ul>	In process
<ul style="list-style-type: none"><li>The Project Team consider establishing a critical path for each Release in addition to the critical path for the overall project schedule.</li></ul>	In process



# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
62	<p><b>Issue – Inability to measure development team velocity.</b></p> <p>Velocity is an important metric in Agile development which provides project leadership the ability to forecast how many iterations the team will need to complete the remaining work. The ASI leadership recognized the importance of tracking their subcontractor's velocity and is working with them to track and provide the required information. IV&amp;V will continue to monitor progress on velocity reporting for all sprint teams.</p>	A red circle with a white 'H' inside, indicating a high criticality rating.

Recommendations	Progress
<ul style="list-style-type: none"><li>The ASI work with the subcontractor Scrum Masters to 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>Moving forward, the development teams should provide the ASI with Sprint and Product Burndown charts at the end of every iteration.</li></ul>	Not started
<ul style="list-style-type: none"><li>To calculate velocity, user stories need assigned values (IV&amp;V recommends relative story points). If the developers are not currently assigning values to user stories, IV&amp;V recommends this become common practice.</li></ul>	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>During this reporting period, IV&amp;V gained further insight regarding the system architecture and planned integration strategy for each module. The ASI considers each module a contained application, using services to integrate with other modules. While this does not change the risk to the project, IV&amp;V has updated our recommendations to reflect our new understanding of the plan for integrating modules.</p>	A red circle with a white 'H' inside, indicating a high criticality rating.

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>	Not started
<ul style="list-style-type: none"><li>• Each release demo should be a collaborative effort across all modules (end-to-end solution) and verified against system-level requirements.</li></ul>	Not started
<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 a 'big bang' release.</li></ul>	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>The ASI has yet to clarify how they will reconcile their subcontractors' differences in approach and whether they will be able to provide DHS with accurate project progress information including accurate estimated task completion dates.</p>	

Recommendations	Progress
• ASI provide an additional DDI approach overview session for stakeholders and allow time for Q/A.	Not started
• ASI provide DDI approach documentation/materials for stakeholders to review and/or refresh their knowledge on demand; the materials could be made available via the project SharePoint.	Not started
• Encourage ASI and DHS testers to consistently collaborate during SIT and UAT activities.	In process

# IV&V Findings and Recommendations



## System Design

#	Key Findings	Criticality Rating
38	<p><b>Risk – Due to the sequencing of JADs addressing Workflow at the end instead of during current JAD sessions, the project could be faced with significant design rework, which may result in schedule delays, and impact the quality of solution design.</b></p> <p>The project has initiated another round of JAD sessions during this reporting period. The recent 1/25/21 session titled, 'BES R0.5 JAD - Eligibility Determination, Redetermination, Review and General (Day 1)' to discuss the activity flows around Redetermination and SMRF. The project has recently released version 0.3 for testing. It remains unclear whether the design of functionality that has been implemented in the current release will need to change based on decisions or discovery during these JAD sessions.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>• ASI to quickly define how the workflow/task functionality will flow and provide training to the facilitators.</li></ul>	Unknown
<ul style="list-style-type: none"><li>• Introduce Workflow SME's to review workflow/task functionality and integrate into systems designs with input from DHS.</li></ul>	In process

# IV&V Findings and Recommendations



## System Design


#	Key Findings	Criticality Rating
53	<p><b>Issue – The System Architecture documentation is scheduled for completion after multiple releases are in development, and some releases are already completed which may cause rework.</b></p> <p>The BI-12 Architecture documents are nearing completion and only two comments remain before formal approval from DHS. The weekly architecture meetings continue to be productive as expectations are communicated to the ASI from DHS leadership.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Recommend completing and approving the BI-12 System Architecture deliverable prior to development of source code.</li></ul>	In process
<ul style="list-style-type: none"><li>If completing the BI-12 deliverable prior to development of code is not possible for any reason, ensure that all portions of the architecture that are directly or indirectly related to the source code development efforts, standards, and processes be submitted for approval by DHS in draft form prior to code development, and subsequently followed up with final completion of BI-12 in accordance with the project schedule.</li></ul>	In process

# IV&V Findings and Recommendations



## Deployment

#	Key Findings	Criticality Rating
40	<p><b>Risk - The planning and approach of the ASI Release Management practices were identified as an area to improve during early releases.</b></p> <p>As of the end of January, activities remained in progress for Releases 0.2 through 0.5. A second Release 0.2 Lessons Learned session was held in January, and the Project Teams commenced discovery, development, and implementation of action plans to address areas needing improvement. The ASI held the first of planned monthly Release Meetings, planned as separate events for each active release moving forward. The session held in January targeted Release 0.4, and it provided additional insight into tasks, activities, risks, and issues than had what has historically been provided in weekly status meetings. IV&amp;V considers this positive and will continue to monitor as the planned releases get significantly larger and more complex from R0.4 through R0.6.</p>	

Recommendations	Progress
• Assign a Release Manager to manage all details of planned releases.	Complete
• Develop a Release Plan document for each release, that provides details of the planned release and all associated configuration items, clear assignments for all staff involved in all tasks, a schedule for completion of all tasks and activities, planned release status communications, and back out procedures should they be necessary.	In process
• Ensure that release planning includes all deliverables within a release, in addition to the software development efforts.	In process
• Update the Release 0.1 and 0.2 Lessons Learned action plans to include milestone and due dates.	In process

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# IV&V Status

# IV&V Engagement Status



IV&V Engagement Area	Nov	Dec	Jan	Comments
IV&V Budget				
IV&V Schedule				
IV&V Deliverables				PCG submitted the final December IV&V Monthly Status Report.
Centers for Medicare and Medicaid Services (CMS) IV&V Progress Reports				The first quarterly CMS Eligibility and Enrollment (E&E) IV&V Progress Report is on hold until IV&V and DHS determine the appropriate time to submit the report.
CMS Milestone Reviews				The first CMS Milestone Review date has not yet been determined.
IV&V Staffing				
IV&V Scope				Initial meeting conducted regarding the CCWIS project. Follow-on meetings will occur in February.

Engagement Rating Legend		
<p>The engagement area is within acceptable parameters.</p>	<p>The engagement area is somewhat outside acceptable parameters.</p>	<p>The engagement area poses a significant risk to the IV&amp;V project quality and requires immediate attention.</p>





- IV&V activities in the January reporting period:
  - Completed – December 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 February reporting period:
  - Ongoing – Observe BES Development, JAD and Workgroup sessions as scheduled
  - Ongoing – Observe Weekly Project Status meetings
  - Ongoing – Observe Weekly Architecture meetings
  - Ongoing – Observe Weekly/Monthly 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-20 Release 0.3 Test Scenarios, Cases, and Scripts	1/29/2021	1.3
Release 0.4 BI-11 ICD's IF10 PARIS ICD, IF01 DOH ICD, IF30 Logate ICD	1/13/2021 and 01/25/2021	Multiple
BI-12 Shared Services Chapter	1/26/2021	1.4
BI-12 CMM System Architecture - Resubmission	1/22/2021	1.3
Release 0.3 Test Plan	1/25/2021	1.
BI-10 Release 0.3 CF - Alerts and Notifications - Resubmission	1/21/2021	1.4
BI-20 Release 0.3 Test Scenarios, Cases, and Scripts – Resubmission	1/20/2021	1.3
Release 0.3 Test Plan - Resubmission	1/15/2021	1.3
Release 0.4 BI-11 ICD's IF13 SSA ICD, IF14 BEER ICD, IF15 IRS ICD	1/12/2021	Multiple
BI-12 Shared Services System Architecture - Resubmission	1/12/2021	1.3
BI-10 Release 0.3 Business Rules Management	1/11/2021	1.3
BI-20 Release 0.3 Test Scenarios, Cases, and Scripts	1/8/2021	1.0
BI-12 CMM System Architecture	1/7/2021	1.0

# Additional Inputs – Artifacts



Deliverable Name	Artifact Date	Version
Unisys Contract Amendment 3	4/17/2020	N/A
2019-11-22 HI Test Plan - FNS Comments.xlsx	11/22/2019	N/A
FNS Handbook 901	01/2020	V2.4
BES Risks and Issues Log	1/05/2021 1/12/2021 1/19/2021 1/26/2021	BES Risks and Issues Log
BES Weekly Schedule (BI-5)	1/04/2021 1/11/2021 1/18/2021 1/25/2021	N/A
BES Weekly Status Report	1/05/2021 1/12/2021 1/19/2021 1/26/2021	N/A

# Additional Inputs – Artifacts



Deliverable Name	Artifact Date	Version
R0.2 Lessons Learned PPT	N/A	N/A
R0.2 Lessons Learned Leadership Review PPT	N/A	N/A
SonarQube Screenshots	09/22/2020	0.2
Java Coding Standards	12/30/2020	N/A
Release 0.2 Codebase	01/11/2021	0.2



## Meetings and/or Sessions Attended/Observed:

1. PCG Internal BES Project Meetings x14 (01/04/2021, 01/07/2021, 01/07/2021, 01/11/2021, 01/13/2021, 01/14/2021, 01/14/2021, 01/19/2021, 01/20/2021, 01/21/2021, 01/25/2021, 01/26/2021, 01/27/2021, 01/28/2021)
2. BESSD PM Team, IV&V Weekly Meeting x4 (01/06/2021, 01/13/2021, 01/20/2021, 01/27/2021)
3. BES Architecture Meeting x3 (01/12/2021, 01/19/2021, 01/26/2021)
4. BES Status Meetings x4 (01/06/2021, 01/13/2021, 01/20/2021, 01/27/2021)
5. BES Schedule Review Meetings x4 (01/05/2021, 01/12/2021, 01/19/2021, 01/26/2021)
6. BES Data Conversion Meetings (01/12/2021)
7. ASI/IV&V Touch Base x4 (01/13/2021, 01/19/2021, 01/20/2021, 01/28/2021)
8. BES Implementation Planning Meetings x2 (01/11/2021, 01/25/2021)
9. BES Development Standup Meetings x4 (01/06/2021, 01/13/2021, 01/20/2021, 01/27/2021)
10. BES SSP Sprint Demos x3 (01/04/2021, 01/19/2021)
11. BES SSP Backlog Meetings x4 (01/06/2021, 01/14/2021, 01/20/2021, 01/27/2021)
12. BES R0.2 Code Review Overview (01/11/2021)
13. R0.3 Release Test Plan Meetings x2 (01/05/2021, 01/19/2021)
14. R0.4 Requirements Validation Meetings x2 (01/05/2021, 01/07/2021)
15. R0.4 Prototype Review Meetings x2 (01/14/2021, 01/21/2021)
16. R0.3 BI-14 SSP Walkthrough (01/06/2021)
17. R0.2 Lessons Learned Meetings x2 (01/06/2021, 01/07/2021)
18. R0.2 BI-22 Walkthrough (01/21/2021)
19. December IV&V Report Review (01/12/2021)
20. R0.4 BI-11 ICD Walkthroughs x3 (01/12/2021, 01/13/2021, 01/25/2021)
21. Confluence Lunch & Learn (01/15/2021)
22. R0.4 Checkpoint (01/21/2021)
23. BES Deliverable Review Pilot Process Review (01/21/2021)
24. R0.5 Eligibility Workflow JAD (01/25/2021)
25. R0.5 FMM Work Sessions x2 (01/26/2021, 01/28/2021)
26. HANA/HAWI Interaction (01/26/2021)

# Additional Inputs - Continued

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## **Meetings and/or Sessions Attended/Observed:**




- 27. Lunch & Learn Aha! (01/29/2021)
- 28. R0.3 BI-20 DCF Review (01/29/2021)
- 29. CCWIS Project (01/25/2021)
- 30. HI BES Code Review - SSP R0.2 (01/11/2021)
- 31. SonarQube Meeting (internal) (01/26/2021)
- 32. SonarQube Code Coverage with the ASI (01/28/2021)

The background is a solid blue gradient. It is decorated with various geometric shapes: squares and rectangles of different sizes and shades of blue. Some shapes are solid, while others are outlined in white. These shapes are scattered across the page, with a higher concentration on the left side and some on the right side, creating a modern, minimalist aesthetic.

# 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                 |



**Solutions that Matter**





