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January 20, 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 (Jan 20, 2021 14:39 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: December 1 - 31, 2020

*Submitted: January 13, 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



December is typically a slow month due to the holidays. Minor updates were made to the IV&V findings. Several of the preliminary concerns reported previously materialized into risks and issues this month. Multiple BES releases were in progress and change requests continued to be researched and/or estimated during this reporting period.








In December, David Y. Ige, Governor of the State of Hawai'i announced the delay of the implementation of furloughs, originally planned to begin in January 2021. The State continues to work through significant budget issues due to the Pandemic, meaning furloughs may be necessary in the future however, this update is good news for the near-term BES Project activities.

The project team continues to struggle with the deliverable review process due to changes introduced by the SOAP Amendment. The ASI is planning to provide a proposal to DHS to align the Waterfall project deliverable process to an Agile development approach along with possibly more effective use of the new tools. The intent is to streamline the process - utilize resources more efficiently and effectively. Considering the size of the future BES releases the sooner positive change is adopted the better.

Oct	Nov	Dec	Category	IV&V Observations
			Project Management	Three previously reported project management concerns were changed to risks/issues in this reporting period specifically related to (1) JAD session results alignment to the test cases, (2) data conversion and (3) the critical path within the project schedule. High-criticality risks in the Project Management category include the Project Schedule, communications and DHS staffing. Although DHS provided new resources to assist with deliverable reviews, additional staff with program knowledge and project management skills to support the BES project are still needed.
			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.

# Executive Summary



Oct	Nov	Dec	Category	IV&V Observations
			Deployment	There were no material changes to this category in this reporting period. The Lessons Learned activity for Release 0.2 began in December with follow-on activities planned in January.
			Configuration and Development	The project team continued to gain a better understanding of the ASI's development approach as deliverables were reviewed. The ASI plans to provide additional training on the tool set to enhance the project team's understanding of the data and reports available in the tools beginning in January.
N/A	N/A		Integration and Interface Management	A new high criticality finding was added this month in this category. Currently, the ASI's subcontractor is not able to report the velocity (amount of work completed in each sprint/release) of their development teams. In an Agile development project, this report is critical to identify and mitigate potential risks to the project.

The background is a solid blue color. It is decorated with several abstract geometric elements: various squares and rectangles in different shades of blue (some solid, some outlined), and thin white lines that form larger rectangular frames or connect smaller shapes. These elements are scattered across the slide, with a higher concentration on the left side.

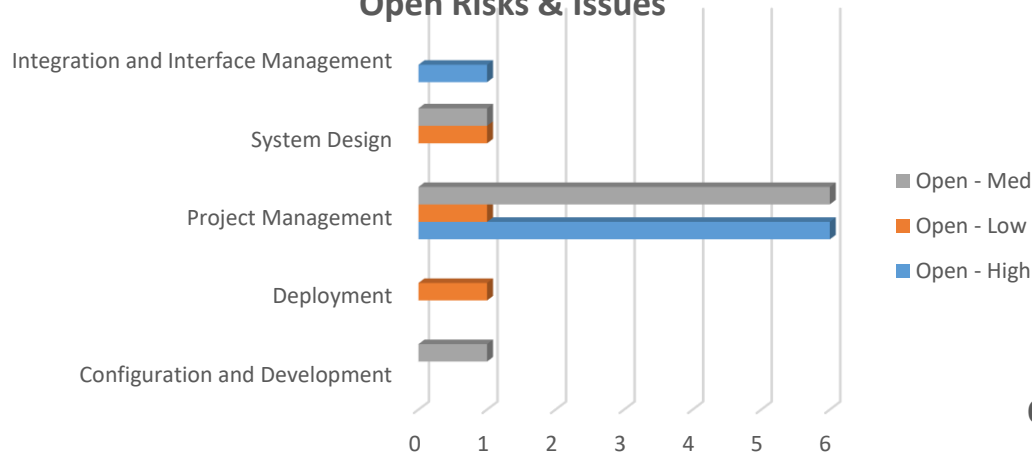
# IV&V Findings and Recommendations

# IV&V Findings and Recommendations

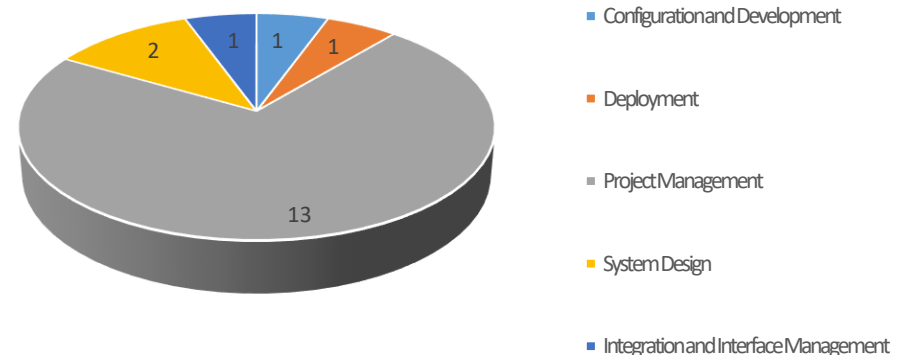


*As of the December 2020 reporting period, PCG is tracking 18 open findings (10 risks and 8 issues) and has retired a total of 40 findings. Of the 18 open findings, 13 are related to Project Management, 2 in System Design and 1 each in Configuration and Development, Integration and Interface Management and Deployment.*

## Open Risks & Issues



## Open Risks & Issues by Category

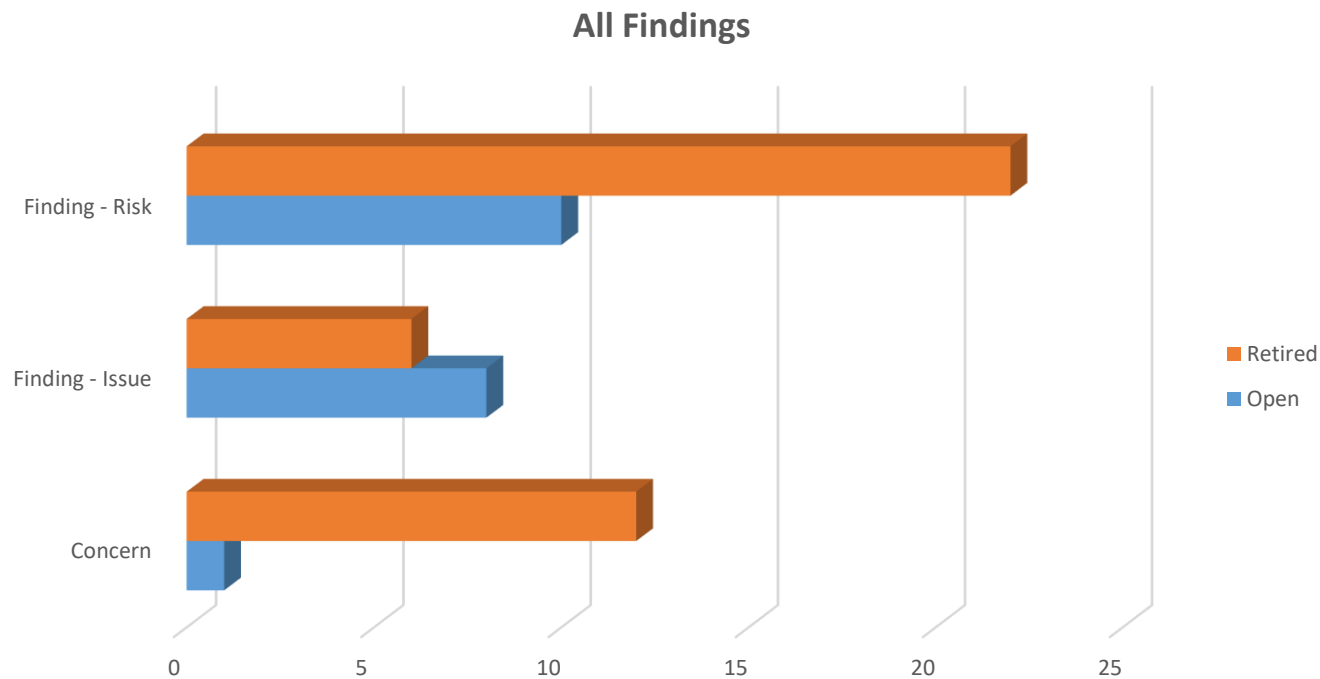




# IV&V Findings and Recommendations



*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
62	<p><b>Issue - Inability to measure development team velocity.</b></p> <p><b>Observation:</b> The subcontractor development teams do not currently track and report Sprint velocity to the ASI.</p> <p><b>Significance:</b> Velocity is an important metric in Agile development that provides project leadership the ability to forecast the number of iterations the team will need to complete the remaining work. Development teams use velocity to avoid over-committing to work in future sprints. Velocity can also be an early indicator that the project needs more time or resources to meet the planned release dates. If the ASI does not track the development team's velocity, they cannot accurately forecast the delivery date of the remaining features, which may place the project cost and critical path at risk.</p> <p><b>Recommendations:</b> IV&amp;V recommends the ASI work with the subcontractor Scrum Masters to calculate the average velocity from past iterations to be used as a historical reference. Moving forward, the development teams should provide the ASI with Sprint and Product Burndown charts at the end of every iteration. The Sprint Burndown chart provides the ASI with a visual representation of the planned vs actual work completed for each Sprint and the Product Burndown chart shows the bigger picture. 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.</p>	Project Management

# 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	<b>Poorly planned/executed JAD sessions may lead to gaps in system design, resulting in rework and schedule delays.</b> Two JAD sessions held this month showed improvement from previous JAD sessions. The noted improvement areas include: 1) A clear introduction to the JAD participants 2) The JAD facilitator led the discussion 3) Action items were documented and communicated back to participants. IV&V will continue to monitor this finding.	System Design

# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
2	<p><b>Issue – Late Delivery of project deliverables may result in schedule delays.</b></p> <p>IV&amp;V notes improvement for this finding, the number of late tasks has decreased. However, delays continue in the areas of the Security, Functional Design, and Architecture. The SSP Development team required additional time to complete the Release 0.3 planned activities, so the ASI added a two-week Development Sprint, slack time in the schedule will prevent a delay for the UAT activities. The project issue related to this finding continues to be in an open status and IV&amp;V is not aware of the DHS and ASI planned actions, nor the expected results.</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 lead to unexpected impacts to the project budget, schedule, system design, and planning decisions.</b></p> <p>No material updates in this reporting period. As reported last month, the weekly architecture meetings continue to improve attendee understanding of infrastructure changes introduced, or planned to be introduced, in BES. Given the number of new technology/tools/platforms that are being introduced, the impact on the development team and their ability to quickly adopt the tools to improve overall productivity is unclear.</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>	Complete
<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>Communication challenges between the ASI and DHS continue. This month there was confusion and a lack of clarity on the move forward plan for workload management and the timing of when this functionality will be integrated in BES.</p>	A red circle with a white 'H' inside, indicating a high criticality rating.

Recommendations	Progress
<ul style="list-style-type: none"><li>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.</li></ul>	In process
<ul style="list-style-type: none"><li>DHS work with the ASI to remove barriers of communication between the DHS stakeholders and the development team.</li></ul>	Not started
<ul style="list-style-type: none"><li>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.</li></ul>	In process

# IV&V Findings and Recommendations



## Project Management

#	Key Findings	Criticality Rating
43	<p><b>Issue - Due to key DHS and BES Project Team members departing and/or transitioning from the project, succession planning and knowledge transfer is needed to ensure there are no gaps in knowledge and leadership on the project.</b></p> <p>DHS identified 2 additional staff to begin assisting in the deliverable review process in January 2021. Additional BESSD staff may be needed to support the project in the near term for the larger releases and the open DHS PMO positions have not yet been approved/funded.</p>	A red circle with a white 'H' inside, indicating a high criticality rating.


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	<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> State leadership announced the potential furloughs planned for January may now be instituted in July.	

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 lead to rework and negatively impact the system design, testing artifacts and project schedule.</b></p> <p>The ASI submitted multiple deliverables during December spanning all current releases, with inconsistent document quality results. Generally, submitted technical deliverables exhibited improved quality, while design and some design-related test deliverables continued to exhibit anomalies. Specifically, the R0.3 BI-10 SSP Application Management design deliverable received a very high number of comments. As mentioned in November, the Project extended the timeframe for anticipated quality resolution to the end of the year. IV&amp;V will continue to monitor this issue and its mitigation steps in January.</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>	Not started

# 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 delivery of a solution that may not meet all business needs.</b></p> <p>There was not any UAT activity in December however, the 44 design changes identified during Release 0.2 remain outstanding. 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>The ASI further develop the action plan to include owners and 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>	Not started
<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>	Not started

# 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.</b></p> <p>No significant change was observed for this concern in December, so it was updated to a risk. During the Functional Meeting on 12/15/2020 it was discussed that the SSP language was approved by DHS in the earlier 2019 JAD sessions, new reviewers provided language change recommendations in the most recent JAD sessions that conflict with the already approved language. Unisys/DHS have agreed that any conflicts should be resolved by DHS. Also, prototypes based on recent JAD sessions do not reflect agreed upon changes. Following are examples of changes agreed to but not implemented in prototypes.</p> <ul style="list-style-type: none"><li>• R0.2 Client Search;</li><li>• R0.3 Common Functions - Alerts and Notifications; and</li><li>• R0.4 CMM – Appointment Scheduling and Interviews.</li></ul> <p>IV&amp;V will continue to monitor this risk.</p>	

Recommendations	Progress
• PCG recommends that 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.	In process
• Resend the JAD results from previous sessions, allowing the JAD participants time review what was previously agreed.	Not started
• Establish a clear decision tree (DHS and ASI) to resolve comments/conflicts efficiently and timely.	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>Additional ASI and DHS Product Owners were added to the Roles and Responsibilities matrix. The matrix has not yet been updated with roles and responsibilities, nor is there an updated Communication Plan to support the revised model.</p>	A red circle with a white 'H' inside, indicating a High Criticality Rating.

Recommendations	Progress
• Update the Communication Plan to support the revised Product/Owner/Manager matrix.	In process
• DHS and the ASI clearly define the staff assigned and the roles and responsibilities of the ASI Product Managers and Product Owners.	In process
• 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.	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.</b></p> <p>This finding was previously reported as a preliminary concern. With Data Conversion not being in scope for Release 0.3, the Data Conversion team is working on Release 0.4 tasks and activities and remains on schedule. IV&amp;V will continue to monitor throughout Release 0.4.</p>	A green circle with a white letter '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.</b></p> <p>This finding was previously reported as a concern and was changed to an issue in this reporting period. In discussions with the ASI, they planned to add release/functional dependencies within the releases, however this has not been addressed after three months of initially raising the concern. The ASI stated that they now plan to include the critical path and release / functional dependencies within the Aha! tool as opposed to the MS Project Schedule, however this proposal has not yet been presented to DHS or IV&amp;V to review. Based on continued delays in addressing this finding, IV&amp;V is promoting this finding from a high priority concern to a high priority issue. Remediation is strongly recommended in to avoid potential unplanned delays in the implementation of the BES Project.</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>	Not started
<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>	Not started
<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>	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..</b></p> <p>No major progress was observed this reporting period; therefore IV&amp;V has raised this concern to a risk. The importance of early integration became clearer this reporting period upon review of the BI-12 Shared Services System Architecture document which revealed over a dozen integration points required for the implementation of the BES solution. IV&amp;V continues to track the integration activities across all modules and recommends an integrated end-to-end solution as early as possible.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Adopt a continuous integration model and embed a member of the DevOps team on each development team to ensure one team owns the integration and delivery of the BES system in its entirety.</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 BES system is currently being developed by 2 development groups, an offshore Unisys development team and a Hawaii based subcontractor. However, there are some differences with the implementation methods between the 2 groups, which could create some confusion. For example, the Unisys group uses story points to size and track progress of development tasks and development team cadence, yet the Subcontractor group does not use this process.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>ASI provide an additional DDI approach overview session for stakeholders and allow time for Q/A.</li></ul>	Not started
<ul style="list-style-type: none"><li>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.</li></ul>	Not started
<ul style="list-style-type: none"><li>Encourage ASI and DHS testers to consistently collaborate during SIT and UAT activities.</li></ul>	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 workflow JAD sessions are ongoing, however, DHS SME's continue to report that sessions have not been fully productive and/or efficient. It remains unclear if the ASI has addressed DHS' feedback or made efforts to improve the productivity of these sessions.</p>	

Recommendations	Progress
• ASI to quickly define how the workflow/task functionality will flow and provide training to the facilitators.	Not started
• Introduce Workflow SME's to review workflow/task functionality and integrate into systems designs with input from DHS.	Not started

# 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.</b></p> <p>IV&amp;V observed improvements in this area over the last reporting period and downgraded this risk from medium to low. All architecture drafts are submitted and over half of them have been reviewed and accepted. IV&amp;V will continue to attend weekly architecture meetings to monitor the 'Just in time' architecture strategy the ASI is following and track the progress of the remaining documents for review.</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 December, activities are in progress for Releases 0.2 through 0.4. The initial Release 0.2 Lessons Learned session was conducted and follow-on sessions are planned to occur in January. IV&amp;V continued to see some improvement in the management of releases during December and will continue to monitor as the releases get significantly larger and more complex from R0.4 through R0.6.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>Assign a Release Manager to manage all details of planned releases.</li></ul>	Complete
<ul style="list-style-type: none"><li>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.</li></ul>	In process
<ul style="list-style-type: none"><li>Ensure that release planning includes all deliverables within a release, in addition to the software development efforts.</li></ul>	In process
<ul style="list-style-type: none"><li>Update the Release 0.1 Lessons Learned action plan to include owners and due dates.</li></ul>	In process

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# IV&V Status

# IV&V Engagement Status



IV&V Engagement Area	Oct	Nov	Dec	Comments
IV&V Budget				
IV&V Schedule				
IV&V Deliverables				PCG submitted the final November 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				AI Pangelinan joined the IV&V team.
IV&V Scope				PCG presented an overview of the FNS and CMS Requirements to secure BES Federal Funding to the BES Project Implementation team.

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 December reporting period:
  - Completed – November Monthly Status Report
  - Ongoing – Review the BES Project Artifacts and Deliverables
  - Ongoing – Attend ASI 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 January 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-10 Release 0.3 Business Rules Management - SNAP, Financial and Limits and Standards	12/31/2020	1.0
BI-10 Release 0.3 CF - Alerts and Notifications	12/29/2020	1.0
BI-11 Release 0.4 ICD's	12/23/2020	Draft
R0.3 BI-20 Walk-through (Test Scenarios/Cases/Scripts)	12/22/2020	Draft 0.2 or 1.0
Draft Release 0.3 Test Plan	12/11/2020	Draft (0.2)
BI-10 Release 0.3 SSP - Application Management	12/14/2020	0.6
BI-12 Physical Architecture Chapter - Resubmission	12/16/2020	1.3
BI-12 CMM System Architecture	11/18/2020	Draft (0.3)
BI-22b Release 0.2 UAT Evaluation Report - Resubmission	12/14/2020	1.3
BI-10 Release 0.3 OPA – Food and Financial Rules Management	12/4/2020	1.0
BI-22b Release 0.2 UAT Evaluation Report	12/4/2020	1.0
BI-10 Release 0.3 CF - Alerts and Notifications	12/2/2020	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	12/02/2020 12/09/2020 12/16/2020 12/23/2020 12/30/2020	BES Risks and Issues Log
BES Weekly Schedule (BI-5)	12/01/2020 12/08/2020 12/15/2020 12/22/2020 12/29/2020	N/A
BES Weekly Status Report	12/02/2020 12/09/2020 12/16/2020 12/23/2020 12/30/2020	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
INSPIRE documentation (Operational reporting possibility)	12/2/2020	V1.0
Splunk documentation	12/10/2020	N/A
SSP Burndown chart	12/15/2020	N/A

# Additional Inputs

## Meetings and/or Sessions Attended/Observed:

1. PCG Internal BES Project Meetings x11 (12/03/2020, 12/03/2020, 12/07/2020, 12/10/2020, 12/14/2020, 12/15/2020, 12/17/2020, 12/17/2020, 12/22/2020, 12/22/2020, 12/30/2020)
2. BESSD PM Team, IV&V Weekly Meeting x4 (12/02/2020, 12/09/2020, 12/16/2020, 12/23/2020)
3. BES Status Meetings x3 (12/02/2020, 12/09/2020, 12/16/2020)
4. BES Schedule Review Meetings x2 (12/15/2020, 12/22/2020)
5. BES Functional Meeting x2 (12/15/2020, 12/22/2020)
6. BES Data Conversion Meetings x2 (12/01/2020, 12/15/2020)
7. ASI/IV&V Touch Base x3 (12/01/2020, 12/16/2020, 12/31/2020)
8. BES R0.6 SSP JAD Third Party Requirements Meeting x2 (12/01/2020, 12/08/2020,
9. BI-22b DCF Review x2 (12/01/2020, 12/17/2020)
10. R0.2 Lessons Learned x2 (12/01/2020, 12/29/2020)
11. BES Code Review Planning (12/02/2020)
12. BES Dev Standup x4 (12/02/2020, 12/09/2020, 12/16/2020, 12/23/2020)
13. RTM Process Review (12/03/2020)
14. R0.3 BI-10 CF Alerts and Notifications Walkthrough x2 (12/03/2020, 12/11/2020)
15. R0.3 BI-10 OPA Foundation Food, Financial x4 (12/04/2020, 12/07/2020, 12/10/2020, 12/11/2020)
16. SSP Sprint Demo x2 (12/07/2020, 12/21/2020)
17. BES IV&V November Report Review Meeting (12/08/2020)
18. R0.4 BI-11 Draft ICD Review Meetings x3 (12/09/2020, 12/16/2020, 12/23/2020)
19. R0.4 CMM Requirements Validation Meeting x5 (12/10/2020, 12/14/2020, 12/15/2020, 12/22/2020, 12/23/2020)
20. R0.3 Draft Release Test Plan Review Meeting (12/14/2020)
21. R0.3 BI-20 Draft Walkthrough Meeting (12/22/2020)
22. SSP Backlog Meeting x4 (12/02/2020, 12/09/2020, 12/26/2020, 12/30/2020)
23. DHS DDI Architecture Review x 4 (12/1/2020, 12/8/2020, 12/15/2020, 12/22/2020)



## Additional Inputs - Continued

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

- 24. BES SSP Meeting (12/18/2020)
- 25. Weekly Platform Security Status Meeting x4 (12/3/2020, 12/10/2020, 12/17/2020, 12/23/2020)
- 26. BI-12 CMM System Architecture Walkthrough 12/11/2020
- 27. BI-14 Review 12/17/2020
- 28. Enterprise Operations Committee Meeting 12/14/2020
- 29. Enterprise Steering Committee Meeting 12/17/2020






The background is a solid blue color. It is decorated with various abstract geometric shapes, including 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. The word "Appendices" is written in a white, serif font in the lower-left quadrant.

# 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**



