April 19, 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  
Chief Information Officer  
State of Hawai‘i

Attachment (2)
Overview

- Executive Summary
- IV&V Findings and Recommendations
- IV&V Engagement Status
- Appendices
  - A – IV&V Criticality Ratings
  - B – Risk Identification Report
  - C – Acronyms and Glossary
  - D – Background Information
Executive Summary
In this reporting period, the project team made good progress towards improving the quality of deliverables, which was positively impacted by using Confluence for draft walkthroughs and final product creation. Release 0.3 UAT started, resulting in a high number of defects being reported. IV&V has introduced a preliminary concern regarding the high defect rate as the project team works through revisions to the defect triage process. Although most of the defects were resolved, the ASI conducted a root cause analysis to improve quality for future releases. Communication across the project continues to improve, resulting in the retirement of a communication-related finding and the reduction of rating for another finding.

The project team continues to address challenges reported with the CMM Interview, Single Sign-on, and KOLEA integration activities. The project schedule has remained static throughout the month as the project team works through options to address these challenges and developing a revised schedule to support the go forward plan.

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Category</th>
<th>IV&amp;V Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>H</td>
<td>H</td>
<td>Project Management</td>
<td>IV&amp;V retains a high criticality rating for this category due to schedule concerns and inability to measure the velocity of the development effort.</td>
</tr>
<tr>
<td>M</td>
<td>L</td>
<td>L</td>
<td>System Design</td>
<td>There were no material changes to this category in this reporting period as no JAD sessions were held.</td>
</tr>
<tr>
<td>L</td>
<td>L</td>
<td>L</td>
<td>Deployment</td>
<td>There were no material changes to this category in this reporting period. Release management will continue to be critical as the project team works through the complexities of Release 0.4 and remaining releases.</td>
</tr>
</tbody>
</table>
## Executive Summary

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Category</th>
<th>IV&amp;V Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>M</td>
<td>M</td>
<td>Configuration and Development</td>
<td>There were no material changes to this category in the reporting period.</td>
</tr>
<tr>
<td>H</td>
<td>H</td>
<td>H</td>
<td>Integration and Interface Management</td>
<td>Planning, coordination, and communication with interface partners showed improvement this reporting period. The biggest challenge remains to be the timing of actual integration between BES and interface partners.</td>
</tr>
</tbody>
</table>
IV&V Findings and Recommendations
As of the March 2021 reporting period, PCG is tracking 16 open findings (8 risks and 8 issues) and has retired a total of 44 findings. Of the 16 open findings, 11 are related to Project Management, 2 in Integration and Interface Management, and there is 1 finding each in Configuration and Development, System Design and Deployment.
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

<table>
<thead>
<tr>
<th>#</th>
<th>Finding</th>
<th>Category</th>
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<tbody>
<tr>
<td>66</td>
<td><strong>An excessive number of issues/defects in UAT may cause rework.</strong> The number of defects identified during R0.3 UAT was much larger than expected, considering that the functionality had previously passed Unit, System and Integration testing. This is a potential indication of SIT test coverage and depth concerns. Many of the unresolved R0.3 defects will roll into the backlog and the next release. IV&amp;V notes that the disposition of defects remaining from R0.2 UAT is still unclear. If this trend continues, the volume of unresolved defects will grow by release, potentially creating an unmanageable backlog of defects.</td>
<td>Testing</td>
</tr>
</tbody>
</table>

#### Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Perform a Root Cause Analysis (RCA) to identify and take corrective actions.</td>
<td>In process</td>
</tr>
<tr>
<td>• Validate all UAT defects are re-tested in SIT to ensure they are included in Regression Testing.</td>
<td>In process</td>
</tr>
</tbody>
</table>
## IV&V Findings and Recommendations

### Findings Retired During the Reporting Period

<table>
<thead>
<tr>
<th>#</th>
<th>Finding</th>
<th>Category</th>
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<tbody>
<tr>
<td>42</td>
<td><strong>Project delays and disruption in DHS operations may occur if ASI communications with DHS regarding key (urgent/time sensitive) project information does not improve.</strong> The changes/improvements implemented by both ASI and DHS focused on communication are now having a positive and ongoing impact on the project.</td>
<td>System Design</td>
</tr>
</tbody>
</table>

### Recommendations

| 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.                                                                                                             | Complete  |
| - DHS work with the ASI to remove barriers of communication between the DHS stakeholders and the development team.                                                                                                                                                                                                               | Complete  |
| - 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.                                                                                                         | Complete  |
| - DHS increase communication with the DHS project team members and ASI prior to key project meetings to ensure all participants are prepared.                                                                                                                                                                                       | Complete  |
## IV&V Findings and Recommendations

### Preliminary Concerns Investigated During the Reporting Period

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<th>#</th>
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<th>Category</th>
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</table>
| 61 | Poorly planned/executed JAD sessions may lead to rework and schedule delays.  
    No JAD sessions were held during the reporting period. IV&V will continue to monitor, looking for any negative downstream impacts to the project resulting from poorly executed JADs. | System Design |
# IV&V Findings and Recommendations

## Project Management

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<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>2</td>
<td><strong>Issue – Late Delivery of project deliverables may cause schedule delays.</strong></td>
<td>H</td>
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<tr>
<td></td>
<td>The schedule remained static through this reporting period as the project team continued to work through challenges regarding the Release 0.4 CMM Interview, KOLEA MDM and Single Sign-on development activities. During this reporting period, some deliverables were late. The project team is researching options and assessing the schedule impact. IV&amp;V retains this as a high criticality issue.</td>
<td></td>
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## Recommendations

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</thead>
<tbody>
<tr>
<td>• 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.</td>
<td>In process</td>
</tr>
<tr>
<td>• 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).</td>
<td>Complete</td>
</tr>
</tbody>
</table>
### Key Findings

**Issue** - Uncertainty and/or a lack of communication around long term architecture decisions could impact the project budget, schedule, system design, and planning decisions.

The project has made progress in clarifying their portal strategy. The BES portal will include a combined BESSD/MQD application for users from either division. The MQD KOLEA portal will include only the MQD application, and transfer users to the BES portal if they also need to apply for BESSD services.

**Recommendations**

- 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&V.  
  - **Progress**: Complete

- DHS should finalize the Portal strategy and communicate the strategy with the stakeholders and project teams.  
  - **Progress**: In process

- The project should vet possible architectural change impacts to the platform, M&O, MQD, and BES systems before finalizing architectural decisions.  
  - **Progress**: In process

- 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.  
  - **Progress**: Complete

- 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.  
  - **Progress**: Complete
## IV&V Findings and Recommendations

### Project Management

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<tbody>
<tr>
<td>43</td>
<td>Issue - DHS PMO project team members have transitioned off the project, which may cause gaps in knowledge transfer and leadership on the project. No material update to this finding in this reporting period. IV&amp;V will continue to monitor.</td>
<td>H</td>
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### Recommendations

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<tr>
<th>Recommendations</th>
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<tbody>
<tr>
<td>• The state should develop a transition plan for the project PMO resources as identified in the RFP, (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.</td>
<td>In process</td>
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</table>
IV&V Findings and Recommendations

Project Management

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<tbody>
<tr>
<td>47</td>
<td>Risk – The COVID-19 pandemic and the related &quot;stay at home&quot; order could hinder project activities and negatively impact the project schedule and budget. As BESSD operational activities due to COVID subside, some BESSD SMEs are increasing their level of involvement on project tasks (e.g., UAT testing, Product Owners). Hawaii State leadership has announced that with the influx of Federal funds, furloughs will not be necessary. The ASI is making plans for mitigating risks regarding virtual/remote training and remote user support for teleworkers.</td>
<td>M</td>
</tr>
</tbody>
</table>

Recommendations

- 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).
  - Progress: Complete

- 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.
  - Progress: In process

- 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.
  - Progress: Complete

- 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.
  - Progress: In process

- Explore options for freeing up key BESSD SME’s work on the project.
  - Progress: Complete
## IV&V Findings and Recommendations

### Project Management

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<tbody>
<tr>
<td>48</td>
<td>Risk – The CMS Outcomes-Based Certification Requirements have not been published by CMS, which may impact the project schedule and funding. No material update this month, IV&amp;V will continue to monitor.</td>
<td>M</td>
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### Recommendations

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<tr>
<th>Progress</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td>In process</td>
<td>• 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.</td>
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</tbody>
</table>
**IV&V Findings and Recommendations**

**Project Management**

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<thead>
<tr>
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<th>Key Findings</th>
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</thead>
</table>
| 49 | **Issue – Poor quality project deliverables may impact system design, testing artifacts and the project schedule.**  
The quality of deliverables continues to show improvement, mainly due to the use of the Confluence tool and its collaborative capabilities. IV&V will continue to monitor the implementation and the effectiveness of quality improvements. | ![Rating Icon] |

**Recommendations**

- IV&V recommends that a facilitated root cause analysis be performed by the ASI with DHS and IV&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&V recommends immediate action be employed to resolve quality concerns on in-process deliverables prior to submission of subsequent deliverables.  
  
  | Progress |  
  | In process |

- IV&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&V has not seen evidence indicating the ASI is utilizing metrics to measure its process and product quality.

  | Progress |  
  | In process |
## IV&V Findings and Recommendations

### Project Management

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| 54 | **Risk – User Acceptance Testing (UAT) processes could lead to implementation delays and delivery of a solution that does not meet business needs or requirements.**  
UAT for release 0.3 is now in progress and continues to be facilitated and executed well. New metrics have been introduced which help clarify progress and focus areas. IV&V will continue to monitor. | ![Rating Icon]     |

### Recommendations

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<tr>
<th>Recommendations</th>
<th>Progress</th>
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<tbody>
<tr>
<td>• Further develop the Lessons Learned action plan to include target complete dates. Report progress in the weekly status meeting.</td>
<td>Complete</td>
</tr>
<tr>
<td>• 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.</td>
<td>Complete</td>
</tr>
<tr>
<td>• 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.</td>
<td>In process</td>
</tr>
<tr>
<td>• 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.</td>
<td>In process</td>
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</tbody>
</table>
**IV&V Findings and Recommendations**

**Project Management**

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<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>58</td>
<td><strong>Risk</strong> — The data conversion effort lacks leadership, consistency in data governance, and effective communications which may impact the schedule. OIT and IV&amp;V have been invited to more of the ongoing meetings and have been included in communications between ASI and DHS on conversion tasks, greatly increasing visibility to progress in this workstream. Prior to these changes, high level status was shared every two weeks on the status call – making it very difficult to gauge progress. IV&amp;V will continue to monitor.</td>
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</table>

**Recommendations**

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<tr>
<th>Recommendations</th>
<th>Progress</th>
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<tbody>
<tr>
<td>• 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.</td>
<td>Complete</td>
</tr>
<tr>
<td>• Investigate and resolve communication issues that are suspected to be delaying the data conversion effort.</td>
<td>Complete</td>
</tr>
<tr>
<td>• Prioritize the conversion activities to validate the key tasks are addressed early to avoid further delays considering the complexity of the later releases.</td>
<td>In process</td>
</tr>
<tr>
<td>• Update the timing of the project Data Conversion meeting from every-other-week to weekly.</td>
<td>In process</td>
</tr>
<tr>
<td>• The ASI should develop reports with metrics that accurately measure the Data Conversion progress.</td>
<td>Not started</td>
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## IV&V Findings and Recommendations

### Project Management

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<tr>
<th>#</th>
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<th>Criticality Rating</th>
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<tbody>
<tr>
<td>59</td>
<td><strong>Issue</strong> – The approach used to identify release and functional dependencies may limit the projects’ ability to identify and mitigate schedule slippage early.</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>The ASI has employed other methods (instead of fully utilizing MS Project critical path features) which could require manual tracking of critical path activities in order to avoid unplanned slippage. The ASI has agreed to meet with IV&amp;V to collaboratively validate whether the critical path methods employed by the ASI are optimal. IV&amp;V will continue to monitor.</td>
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### Recommendations

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<th>Progress</th>
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<tbody>
<tr>
<td>• 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.</td>
<td>Complete</td>
</tr>
<tr>
<td>• The functional dependencies are considered and visible in the critical path.</td>
<td>In process</td>
</tr>
<tr>
<td>• The ASI provides clarity as to how and why the critical path does not have tasks and activities on it until Release 0.6.</td>
<td>Complete</td>
</tr>
<tr>
<td>• The Project Team consider establishing a critical path for each Release in addition to the critical path for the overall project schedule.</td>
<td>Not started</td>
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</table>
## IV&V Findings and Recommendations

### Project Management

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<th>#</th>
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<th>Criticality Rating</th>
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<tbody>
<tr>
<td>62</td>
<td><strong>Issue – Inability to measure development team velocity.</strong></td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>Velocity is an important metric in Agile development to provide project leadership the ability to forecast the number of iterations needed to complete any remaining work. During this reporting period, IV&amp;V observed the shifting of use cases to future releases. This is a result of the inability to use the development team's velocity to plan and forecast work by Sprint and Release. The CMM/FMM team migrated to JIRA but it is too early to tell how effectively the tool is being used to track and utilize agile metrics for planning. IV&amp;V will continue to monitor the team's progress towards using JIRA to track and utilize agile metrics to accurately plan future work.</td>
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### Recommendations

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<tr>
<td><strong>Recommendations</strong></td>
<td></td>
</tr>
<tr>
<td>The ASI work with the subcontractor Scrum Masters to calculate the average velocity from past iterations to be used as a historical reference.</td>
<td>In process</td>
</tr>
<tr>
<td>Moving forward, the development teams should provide the ASI with Sprint and Product Burndown charts at the end of every iteration.</td>
<td>In process</td>
</tr>
<tr>
<td>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.</td>
<td>In process</td>
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</table>
## Project Management

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<tr>
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<tbody>
<tr>
<td>65</td>
<td>Issue - DHS BESSD knowledgeable staff are needed on the project to ensure the BES solution is designed to meet the business needs and requirements. The DHS Product Owners continue to adjust to their new/revised project role, which is having a positive impact to the BES design. DHS is taking the planned actions to replace the DHS PM.</td>
<td>M</td>
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### Recommendations

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<tbody>
<tr>
<td>• DHS continue to identify BESSD SME’s to support the project as the project progresses.</td>
<td>In process</td>
</tr>
<tr>
<td>• DHS develop a project team list that identifies the participants along with their roles and areas of expertise to be used as short-term needs are identified.</td>
<td>Complete</td>
</tr>
<tr>
<td>• DHS utilize the BI-4 Project Schedule report developed by the ASI to identify those tasks owned by DHS in the short team in addition to the 4-month look-ahead to identify time frames and activities where there is a high-demand on DHS resources.</td>
<td>Complete</td>
</tr>
<tr>
<td>• Identify and on-board a replacement BES Project Manager.</td>
<td>In process</td>
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## IV&V Findings and Recommendations

### Integration and Interface Management

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<tr>
<td>60</td>
<td><strong>Risk</strong> – 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. MDM integrations are currently being worked and CIA integrations are planned to be complete by the end of the next reporting period. IV&amp;V will continue to track the progress of the integration of modules and the prioritization of building integration points.</td>
<td><strong>H</strong></td>
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### Recommendations

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<tbody>
<tr>
<td>• Prioritize the build of integration points within each module and the creation of scripts (API calls) required for integration.</td>
<td>In process</td>
</tr>
<tr>
<td>• Each release demo should be a collaborative effort across all modules (end-to-end solution) and verified against system-level requirements.</td>
<td>Not started</td>
</tr>
<tr>
<td>• 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.</td>
<td>Not started</td>
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</table>
### IV&V Findings and Recommendations

#### Integration and Interface Management

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<tr>
<td>63</td>
<td><strong>Risk – The Project's approach to planning, coordination and developing system interfaces may impact effective data sharing.</strong>&lt;br&gt;The ASI has incorporated communication plans into the Interface Control Documents (ICD). In addition, the ASI has maintained the Interface MOA and Testing spreadsheet (updated 03/17/2021), which contains the status and dates for each interface. However, there are outstanding MOAs, which need to be established. Overall, the ASI has made improvements regarding the planning and managing of interface activity. IV&amp;V lowered the rating from High to Medium. IV&amp;V will continue to monitor.</td>
<td>M</td>
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#### Recommendations

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<tbody>
<tr>
<td>• Establish a communication plan for each interface partner for the duration of the BES DDI activities.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Define a detailed schedule for each interface to include milestone dates, coordination, and execution and share with the interface partners.</td>
<td>In process</td>
</tr>
<tr>
<td>• Determine which deliverable will include the details associated with the planned connectivity and detailed technical designs of all interfaces.</td>
<td>In process</td>
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# Key Findings

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<th>Criticality Rating</th>
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</table>
| 16 | Issue – Lack of clear understanding of the DDI approach may reduce effectiveness of all SDLC Processes.  
No material update for this reporting period. |  

### Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ASI provide an additional DDI approach overview session for new project team members and allow time for Q/A.</td>
<td>In process</td>
</tr>
<tr>
<td>• 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.</td>
<td>In process</td>
</tr>
<tr>
<td>• Encourage ASI and DHS testers to consistently collaborate during SIT and UAT activities.</td>
<td>In process</td>
</tr>
</tbody>
</table>
# Key Findings

<table>
<thead>
<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
</tr>
</thead>
</table>
| 38 | **Issue** – 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.  
No JAD sessions were held in this reporting period. IV&V remains concerned that designs could still be less than optimal given that early JAD sessions had deferred workflow discussions until now. | L                 |

## Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ASI to quickly define how the workflow/task functionality will flow and provide training to the facilitators.</td>
<td>In process</td>
</tr>
<tr>
<td>• Introduce Workflow SME’s to review workflow/task functionality and integrate into systems designs with input from DHS.</td>
<td>In process</td>
</tr>
</tbody>
</table>
### IV&V Findings and Recommendations

#### Deployment

<table>
<thead>
<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td><strong>Risk</strong> - The planning and approach of the ASI Release Management practices were identified as an area to improve during early releases. No significant change in this reporting period. IV&amp;V will continue to monitor the management of the first complex release (0.4 integration and conversion) and planning for release 0.5.</td>
<td>40</td>
</tr>
</tbody>
</table>

#### Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assign a Release Manager to manage all details of planned releases.</td>
<td>Complete</td>
</tr>
<tr>
<td>• 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.</td>
<td>Complete</td>
</tr>
<tr>
<td>• Ensure that release planning includes all deliverables within a release, in addition to the software development efforts.</td>
<td>Complete</td>
</tr>
<tr>
<td>• Update the Release 0.1 and 0.2 Lessons Learned action plans to include milestone and due dates.</td>
<td>Complete</td>
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</table>
## IV&V Engagement Status

<table>
<thead>
<tr>
<th>IV&amp;V Engagement Area</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV&amp;V Budget</td>
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<tr>
<td>IV&amp;V Schedule</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Centers for Medicare and Medicaid Services (CMS) IV&amp;V Progress Reports</td>
<td></td>
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<td></td>
<td>The first quarterly CMS Eligibility and Enrollment (E&amp;E) IV&amp;V Progress Report is on hold until IV&amp;V and DHS determine the appropriate time to submit the report.</td>
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<tr>
<td>CMS Milestone Reviews</td>
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<td>The first CMS Milestone Review date has not yet been determined.</td>
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<tr>
<td>IV&amp;V Staffing</td>
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<td>Ryan Tan rejoined the IV&amp;V team.</td>
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<tr>
<td>IV&amp;V Scope</td>
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</tr>
</tbody>
</table>

### Engagement Rating Legend
- 🟢 The engagement area is within acceptable parameters.
- 🟠 The engagement area is somewhat outside acceptable parameters.
- 🔴 The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.
IV&V Activities

- IV&V activities in the March reporting period:
  - Completed – February 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 April 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
<table>
<thead>
<tr>
<th>Deliverable Name</th>
<th>Deliverable Date</th>
<th>Version</th>
</tr>
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<tbody>
<tr>
<td>BI-22 Release 0.3 System Test Report</td>
<td>3/1/2021</td>
<td>Draft</td>
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<tr>
<td>R 0.3 BI-19 Complete and Final Test Plan Deliverable</td>
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<td>2.2</td>
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<td>BI-10 Release 0.4 SSP - Case Management</td>
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<td>BI-14 Release 0.3 TDD - CF &amp; BRM</td>
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<td>BI-15 Release 0.3 Fully Configured and Developed System</td>
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<tr>
<td>R0.3 BI-21 Walk-Through - Updated and Completed Detailed Functional and Technical RTM Deliverable</td>
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## Additional Inputs – Artifacts

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<tr>
<td>Java Coding Standards</td>
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<td>Release 0.1 BI-21 RTMs</td>
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### Additional Inputs – Artifacts

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<td>Release 0.3 BI-14 CF Alerts and Notifications and OPA Food, Financial Rules Mgmt</td>
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<td>Release 0.3 BI-14 Technology Design Documents SSP</td>
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<td>Release 0.3 BI-15 Fully Configured and Developed System</td>
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<td>SonarQube Screenshots</td>
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</table>
Meetings and/or Sessions Attended/Observed:

1. PCG Internal BES Project Meetings x13 (03/01/2021, 03/03/2021, 03/04/2021, 03/08/2021, 03/08/2021, 03/15/2021, 03/15/2021, 03/15/2021, 03/18/2021, 03/22/2021, 03/25/2021, 03/29/2021, 03/30/2021)
2. PCG Team Knowledge Transfer Session BI-10 (03/15/2021)
3. PCG Team Knowledge Transfer Session BI-11 (03/25/2021)
4. BESSD PM Team IV&V Weekly Meeting x3 (03/17/2021, 03/24/2021)
5. BES Status Meetings x5 (03/03/2021, 03/10/2021, 03/17/2021, 03/24/2021, 03/31/2021)
6. BES Development Standup Meetings x5 (03/03/2021, 03/10/2021, 03/17/2021, 03/24/2021, 03/31/2021)
7. ASI/IV&V Touch Base x2 (03/01/2021, 03/16/2021)
9. BES Implementation Planning Meetings x5 (03/02/2021, 03/09/2021, 03/16/2021, 03/23/2021, 03/30/2021)
10. BES SSP Sprint Demos x4 (03/01/2021, 03/15/2021, 03/29/2021, 03/31/2021)
11. BES SSP Backlog Meetings x2 (03/03/2021, 03/10/2021)
12. ASI FMM/CF/CMM Backlog Meetings x2 (03/16/2021, 03/30/2021)
13. AHA Dependencies Walkthrough (03/02/2021)
14. BES CMM RACI Walkthrough (03/02/2021)
15. R0.4 Prototype Review – CMM Interview (03/04/2021)
16. R0.4 SSP Walkthrough (03/04/2021)
17. Confluence Meeting with ASI (03/04/2021)
18. R0.4 UAT Go/No Go Meeting (03/04/2021)
19. UAT Huddle x8 (03/09/2021, 03/15/2021, 03/16/2021, 03/18/2021, 03/22/2021, 03/23/2021, 03/29/2021, 03/30/2021)
20. Weekly UAT Summary (03/11/2021, 03/25/2021)
21. R0.5 BI-11 ICD Walkthroughs (03/09/2021)
22. R0.4 BI-10 CMM Application Registration walkthrough (03/10/2021)
23. R0.5 CF/CMM Requirements Validation x2 (03/11/2021, 03/18/2021)
24. R0.5 Requirements/Wireframes FMM Benefits Issuance & Overpayments (03/12/2021)
25. BES Data Conversion Meetings (03/11/2021, 03/22/2021)
Meetings and/or Sessions Attended/Observed:

26. R0.5 Requirements/Wireframes CMM Case Management (03/19/2021)
27. R0.3 BI-21 RTM Walkthrough (03/19/2021)
28. R0.4 Release Checkpoint (03/25/2021)
29. R0.4 Prototype Review Client Search (03/30/2021)
## Appendix A – IV&V Criticality Ratings

<table>
<thead>
<tr>
<th>Criticality Rating</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>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.</td>
</tr>
<tr>
<td>M</td>
<td>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.</td>
</tr>
<tr>
<td>L</td>
<td>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.</td>
</tr>
</tbody>
</table>
Appendix B – Findings Log

• The complete Findings Log for the BES Project is provided in a separate file.
# Appendix C – Acronyms and Glossary

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

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>IV&amp;V</td>
<td>Independent Verification and Validation</td>
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<td>KOLEA</td>
<td>Kauhale On-Line Eligibility Assistance</td>
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<td>M&amp;O</td>
<td>Maintenance &amp; Operations</td>
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<td>MEELC</td>
<td>Medicaid Eligibility and Enrollment Life Cycle</td>
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<td>MEET</td>
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<td>MOU</td>
<td>Memorandum of Understanding</td>
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<td>MQD</td>
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<td>NIST</td>
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<td>Operating Environment</td>
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<td>Department of Human Services Office of Information Technology</td>
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<td>PIP</td>
<td>Performance/Process Improvement Plan</td>
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<td>PMBOK®</td>
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<td>PMI</td>
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<td>ROM</td>
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<td>SME</td>
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## Appendix C – Acronyms and Glossary

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<td>SOA</td>
<td>Service Oriented Architecture</td>
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<td>Statement of Work, Scope of Work</td>
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<td>VVP</td>
<td>Software Verification and Validation Plan</td>
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<td>XLC</td>
<td>Expedited Life Cycle</td>
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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
What is Independent Verification and Validation (IV&V)?

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

PCG’s Eclipse IV&V® Technical Assessment Methodology

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

IV&V Assessment Categories for the BES Project

• Project Management
• Requirements Analysis & Management
• System Design
• Configuration and Development
• Integration and Interface Management
• Security and Privacy
• Testing
• OCM and Knowledge Transfer
• Pilot Test Deployment
• Deployment
03/31/2020 - The DHS Product Owners continue to adjust to their new/revised project role, which

03/30/21 - The ASI has employed other methods (instead of fully utilizing MS Project critical path

Client Comments

03/31/2021 - OIT and IV&V have been invited to more of the ongoing meetings and have been

Velocity is an important metric in Agile development which provides project leadership the ability

66

solution is designed to meet the business needs and requirements.

John Finding - Risk 9/30/2020 Integration and Interface Management

216x438

when requesting, sending, and receiving, and processing interface data. While risks are

may not necessitate have additional constraints for BES, there are typically multiple constraints

there is no evidence that details have been determined or documented in this regard. - There is

release. If that trend continues UAT may not complete as planned and the schedule negatively

project. The lack of a Project Conversion Lead, coupled with communication challenges on tasks,

focused on individual components rather than system capabilities.

System Integration has historically followed a 'big bang' model where all system components

requirements; as well as missing opportunities to improve workflow and related system design.

the CMM Workflow JAD sessions, specifically; (1) Do the JAD participants understand how the

metrics that accurately measure the Data Conversion progress.

Prioritize the conversion activities to validate the key tasks are addressed early to avoid further

resolve communication issues that are suspected to be delaying the data conversion effort. -

2/27/2021 - IVV recommends prioritizing the build of integration points within each module and

1/27/2021 - IVV recommends prioritizing the build of integration points within each module and

planned vs actual work completed for each Sprint and the Product Burndown chart shows the

development teams should provide the ASI with Sprint and Product Burndown charts at the end

4-month look-ahead to identify time frames and activities where there is a high-demand on

 Validate all UAT defects are retested in SIT to ensure it is included in Regression Testing.


to identify outstanding questions on the

两部分

this reporting period. In discussions with the ASI, they planned to add release/functional

tasks and activities. IVV supports this as being beneficial to the project. Based on the importance

monitor. 02/28/2021 - Release 0.4 Data Conversion continued during February and is scheduled

IVV noted some

monitor throughout Release 0.6. 12/31/2020 - With Data Conversion not being in scope for

this reporting period, IVV gained further insight regarding the system architecture and planned

integration points of the modules still in development. IVV continues

duration. There are still three primary points of connections for 3rd party interfaces: for

provided the details demonstrating that >90% of the interfaces were in the tracker spreadsheet, BI

02/25/2021 rap - Observation #1 was largely inaccurately reported by the IV&V in January. The ASI

AIS may apply. IVV will continue to monitor this finding. 10/31/2020 - The Project's Critical Path

in the implementation of the BES Project. 11/30/2020 - No changes reported for the month of

dependencies on the project. For recommendation 3, the critical path currently starts with UAT

the BI-05 Project Schedule. Based on the ASI's approach, schedule slippage may not be recognized

therefore IVV has raised this concern to a risk. The importance of early integration became clearer

this reporting period. In discussions with the ASI, they planned to add release/functional

the retirement of DHS' BES Project Manager (effective 2/26/2021) and Business

4.5 months of UAT for the entire system, quite a bit longer than initially estimated

dependencies in the implementation of the BES Project. 11/30/2020 - No changes reported for the month of

this issue from the ASI perspective. If the IV&V has additional details regarding

the IV&V's definition of High, the risk is having a direct impact on the project now and needs to be
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Action</th>
<th>Due Date</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>3/31/21</td>
<td>As BESSD operational activities due to COVID subside, some BESSD SMEs are increasing the productivity of remote meetings. The ASI is currently evaluating how they will adapt to work with DHS teams.</td>
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<td>3/31/2021</td>
<td>The quality of deliverables continues to show improvement, mainly due to the use of new collaboration tools.</td>
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<td>6/30/2020</td>
<td>Mark Choi is becoming more involved in the project. Involved in the roles of program manager and engagement manager.</td>
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<tr>
<td>9/28/2020</td>
<td>Effective October 15, 2020 the 14 day quarantine for transpacific designs has been limited and DHS has elected to rely on ASI resources. The ASI also named a release manager for the January and future releases.</td>
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<tr>
<td>9/30/2020</td>
<td>The lack of DHS staff to work on the BES project is negatively impacting the project. Further, the project is concerned that SNAP support will not be increasing the productivity of remote meetings.</td>
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<tr>
<td>10/30/2020</td>
<td>No material status update received.</td>
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<tr>
<td>10/31/2020</td>
<td>The UAT process continues to be positive. There is awareness that there were some key questions that need to be answered during the upcoming UAT cycle.</td>
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</tr>
<tr>
<td>1/30/2021</td>
<td>The current status of the project is as follows: 1) New roles have been defined to manage the project. 2) The project team is working with DHS and BESSD Executive Leadership to identify new owners of some of the key deliverables.</td>
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<tr>
<td>2/25/21</td>
<td>The ASI agrees that this risk is low. Regarding the recommendations, 1) Complete, 2) Update the Project's Release 0.1 and R0.2 planning tasks began, 3) The plan should include the possible COVID-19 threat and related impacts over the next 6 to 12 months.</td>
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</tbody>
</table>

**Insufficient release management processes can lead to implementation schedule delays and poor quality, while some design-related test deliverables continued to exhibit multiple anomalies. The staff time spent on reviewing deliverables is exceeding the plan for all project entities and has increased, and the quality metrics did not indicate deliverable quality gains.**
Some platform and BES system architecture decisions have yet to be made and socialized to the project team. Without a PMP that depicts all Project Management processes, the project can suffer unplanned productivity, confusion among SMEs and the ASI project team, unproductive analysis of activities and decisions.

Stopping (or putting on hold) design and process flow discussions during JAD's can result in an incomplete understanding of future processes. Uninformed design decisions could lead to significant rework. Uncertainty around whether when/if all environments (including KOLEA and BES production) will be available and functional on schedule, can contribute to late deliverables. Delays in identifying and agreement with DHS on DDI to resolve the late activities and tasks.

Recommendation:

- Continue to manage and track the schedule to ensure that late deliverables and tasks are identified, and mitigation actions along with potential options to the project schedule and content are developed.

As of the date of this report, these deliverables are still missing dates. As a result, the ASI is no longer maintaining the interim schedule. IVV recommends that the ASI continues to schedule and review opportunities for pull in design activities.

The BI-5 Project Schedule continued to be updated to include new tasks and outstanding action items. Due to the complexity of the BES Releases currently in-process, IVV is researching options and assessing the schedule impact. As a result, some deliverables were late. The ASI is not maintaining the interim schedule.

We recommend:

- The ASI work with DHS in assessing whether to change the current schedule for the project.
- The BI-5 Project Schedule be updated to reflect DHS's current schedule and review opportunities for pull in design activities.
- The ASI work with DHS to ensure the schedule is maintained.

The ASI continues to work with DHS to address the project's critical path issues. The ASI and client are also holding weekly standup meetings to review progress made that day, as well as reviewing project issues and potential solutions.

The ASI continues to work with DHS to ensure the project's critical path issues are addressed.

Recommendation:

- The ASI and client work together to ensure the project's critical path issues are addressed.

As of the date of this report, the ASI has not yet agreed to the updated BI-10 template for reviewing as part of this report. The ASI and client are also holding weekly standup meetings to review progress made that day, as well as reviewing project issues and potential solutions.

The ASI continues to work with DHS to ensure the project's critical path issues are addressed.

Recommendation:

- The ASI agrees to the updated BI-10 template for reviewing as part of this report.

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