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August 24, 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 (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the IV&V report the Office of Enterprise Technology Services received for the State of Hawaii Department of Labor & Industrial Relations Hawaii Unemployment Insurance (HUI) 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 (Aug 24, 2021 14:01 HST)

DOUGLAS MURDOCK  
Chief Information Officer  
State of Hawai'i

Attachment (1)



# Hawaii Unemployment Insurance Modernization (HUI Mod) Project

Department of Labor and Industrial Relations (DLIR)

IV&V Monthly Status Report – Draft  
For Reporting Period: July 2021

*Draft Submitted: 8/6/2021*

*Final Submitted: 8/23/2021*

# Overview

- Executive Summary
- IV&V Findings and Recommendations
- Appendices
  - A – IV&V Criticality Ratings
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  - C – IV&V Details



# Executive Summary

The HUI Mod Project remains on track for go-live in October 2022. This month, the Project completed Sprint 1 for the Benefits workstream and is in the planning stages for the Tax and Employer Portal (EP) workstreams. Project leadership remains proactive in identifying upcoming project activities, planning risk remediation strategies as risks are identified by the Project teams, and engaging DLIR stakeholders to ensure their valuable input is incorporated into the Project. Environment access and stabilization issues have impacted Data Migration and Testing activities, and highlight the need for a complete schedule which identifies the critical path so the impacts of delays can be understood.

May 2021	June 2021	July 2021	Category	IV&V Observations
N/A	M	M	Project and Schedule Management	The Project continues to refine Project Management (PM) processes, such as completing the initial vendor deliverables <b>(#1, now closed)</b> and identifying an approach to manage the schedule in a single consolidated location <b>(#7, lowered priority High → Medium)</b> . Additional dates were added to the schedule for UAT and go-live activities, but are still missing for Training and Organizational Change Management (OCM) <b>(#4)</b> . This month, the IV&V team provided recommendations to improve the PM Plan <b>(#2)</b> with more details around managing Scope, Schedule, Communication, Risk, and Resources. Resource Management in particular will be important to plan for, as both DLIR and SSO are running lean teams with limited backup options and availability. Resources should be given advance notice for assignments and meetings, so they can come prepared and make timely decisions <b>(#13)</b> .
N/A	M	L	Requirements Management	Benefits gap analysis remediation activities completed this month and identified 36 additional gaps to be addressed by the Project. The IV&V team closed the associated High priority finding <b>(#3)</b> . The Tax and EP workstreams are in the planning stages and should begin their Sprint activities next month to stay aligned with Benefits activities and on track for go-live in October 2022.
N/A	L	M	Design and Development	Benefits Sprint 1 completed this month and Sprint 2 is now underway. There were limited details shared about sprint progress <b>(#21)</b> , and future sprints should plan to report on key details such as planned vs. completed user stories and their complexity, % of passed test scripts, and any user stories deferred to future sprints. The Project is also facing access issues in the development environment, which did not affect development activities but prevented Sprint testing.



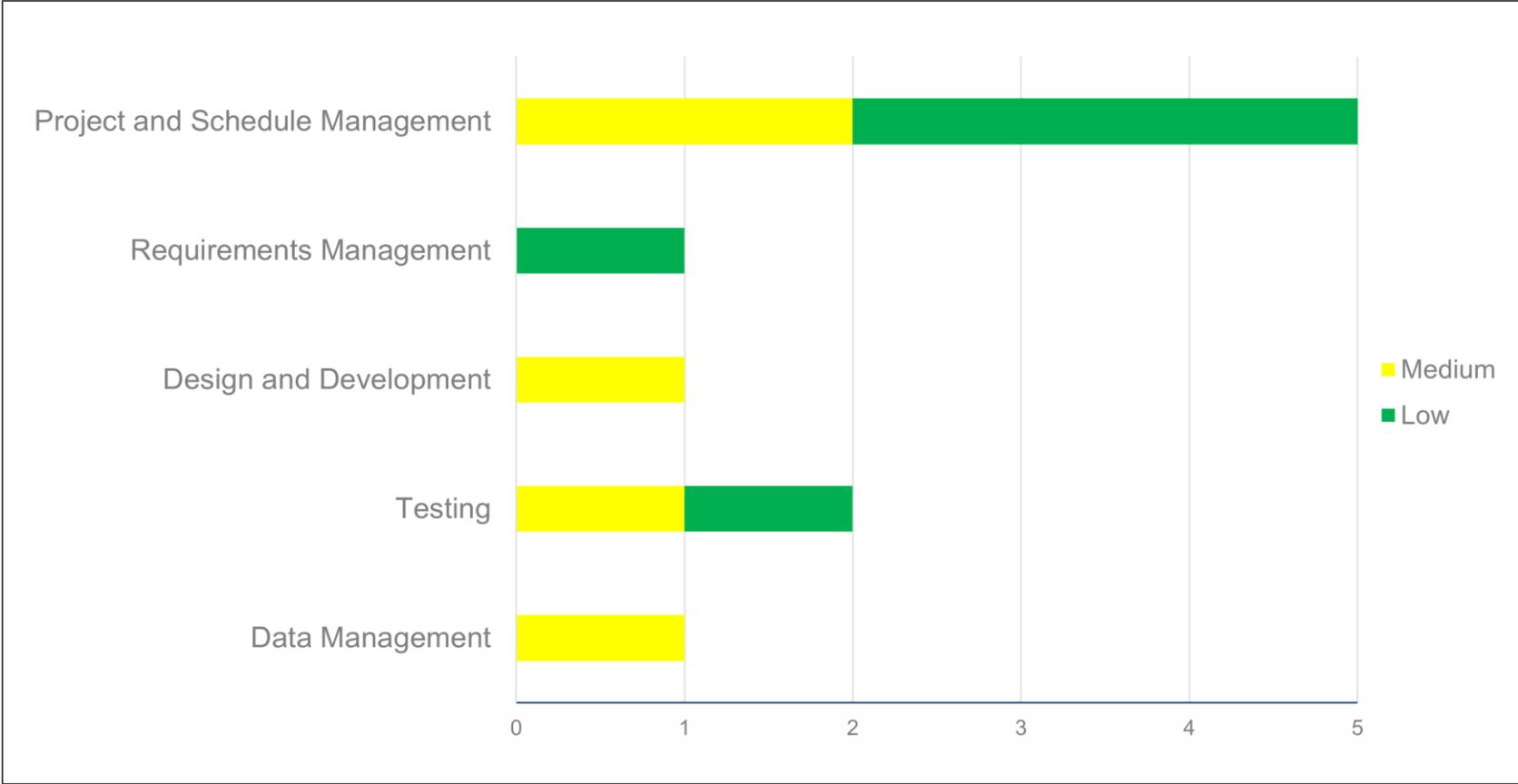
# Executive Summary (cont'd)

May 2021	June 2021	July 2021	Category	IV&V Observations
N/A	L	M	Testing	Accessibility issues with the development environment prevented planned testing from occurring for Benefits Sprint 1 (#15). An important benefit of using an Agile approach is rapid development and feedback via testing, and that benefit is lost if testing does not occur in the same sprint cycle. The Project should prioritize stabilizing the environment to enable this feedback loop. The Project should also create a comprehensive Master Test Plan (#24) to describe how testing will be conducted throughout the Project and what resources and preparation are needed.
N/A	L	M	Data Management	Activities this month were impeded because key resources were unavailable, and the environment is not available yet for DLIR to begin data validation activities on converted data (#6). The Project does not yet have a Data Migration Plan (#22), which could help to mitigate these issues and provide a framework for better project reporting. DLIR acknowledged this and is actively working to draft a Plan.
N/A	N/A	L	Security	The Project held preliminary meetings this month to address security topics such as user authentication and authorization, as well as security considerations for interfaces with partners such as the IRS and SSA. There were no findings for this assessment period.
N/A	L	L	Organizational Change Management	The Project continues to hold weekly working sessions with DLIR stakeholders from all affected program areas which is useful to communicate status, share upcoming processes, and gain buy-in from staff. Staff remain engaged and active participants in these sessions.
N/A	L	L	Knowledge Transfer	Activities have not yet started but are planned in the project schedule and will be monitored.



# Executive Summary

## Open IV&V Findings by Category and Priority



# IV&V Findings and Recommendations

## M Project Schedule and Management

#	Key Findings	Criticality Rating
4	<p><b>Risk – Baseline Schedule Is Missing Key Milestone Dates:</b> The schedule is missing dates for key milestones including UAT, Training, OCM, Deployment Preparation, Go-Live, Stabilization, and Maintenance and Operations (M&amp;O). This makes it difficult to determine the critical path, accurately report on project progress, and identify downstream dependencies.</p> <ul style="list-style-type: none"> <li>07/29: Dates have been added for UAT, Deployment Preparation, and Go-Live, but are still missing for Training, OCM, Stabilization, Maintenance and Operations.</li> </ul>	M
7	<p><b>Lowered Risk – Use of Multiple Schedule Tracking Locations May Lead to Confusion:</b> SSO is tracking project progress in DevOps instead of the Smartsheets tool identified in the Time Management Plan, which has made it difficult for Project leadership to understand project progress and schedule variance at any given point.</p> <ul style="list-style-type: none"> <li>07/29: SSO has agreed to make updates to the project schedule on Smartsheets. The IV&amp;V team will continue to monitor and evaluate the effectiveness of the new approach. This risk priority has been lowered to Medium.</li> </ul>	M
1	<p><b>Closed Risk – Initial Vendor Deliverables Not Completed:</b> SSO did not complete their initial deliverable of a project work plan and project charter on time. As part of completing the Integration Phase, these deliverables were required and expected by the start of the Infrastructure Phase on 5/5/2021.</p> <ul style="list-style-type: none"> <li>07/29: The initial deliverables have been provided by SSO. The risk has been mitigated and is now closed.</li> </ul>	M

# IV&V Findings and Recommendations

## M Project Schedule and Management

#	Key Findings	Criticality Rating
2	<b>Risk – Project Management Plan Missing Information:</b> The Project Management Plan contains many of the expected subplans, but would be more useful if additional details/sections were included for Scope, Schedule, Communication, Risk, and Resources. The recommended sections, which are based on IEEE standards, will provide more structure and processes to effectively carry out the project.	L
8	<b>Risk – Vendor Resource Assignments are Unclear:</b> The project schedule has tasks that are not assigned to individual resources, which could lead to misallocation of resources and potential project delays.	L
13	<b>Risk – Resource Management Needs Clarity:</b> Resource needs for reviews and information gathering has been disjointed, often with a lack of lead time which has resulted in individuals not being available or prepared for meetings and reviews. There is a risk that downstream activities will get take longer than expected or end up blocked because resources are not available.	L



# IV&V Findings and Recommendations

## M Project Schedule and Management

Recommendations	Status
<ul style="list-style-type: none"><li>PCG understands the Agile nature of the project and that exact delivery dates for each user story may change as the product backlog is prioritized and worked. However, a periodic snapshot on at least a weekly basis extracted from DevOps into SmartSheets would help provide better visibility to the management team and ensure variance reporting is accurate, and any dependencies and constraints can be identified and mitigated at the earliest.</li></ul>	Complete
<ul style="list-style-type: none"><li>The project schedule on Smartsheets should be completely baselined by SSO with dates for all remaining milestones including Training, OCM, Stabilization, and Maintenance and Operations. This should also include updating the Project Schedule to include the schedule of user stories by Sprint, adding realistic schedule dates for data conversion and start/end dates for tasks, and including timelines for the requirements that are gathered prior to each development Sprint. This will help better evaluate any changes, track the progress of tasks and monitor potential impacts to the project.</li></ul>	In Progress
<ul style="list-style-type: none"><li>The IV&amp;V team reviewed the Project Management Plan and has shared a Deliverable Comment Form (DCF) that includes recommendations on additional details that can be included by section.</li></ul>	In Progress
<ul style="list-style-type: none"><li>Data Conversion tasks were updated with assigned resources. The Project should complete the same assignment activity for the remaining phases including Benefits Stage 2, Tax, UAT, Training, Deployment Preparation, Go-Live, Stabilization, and Maintenance and Operations (M&amp;O).</li></ul>	In Progress
<ul style="list-style-type: none"><li>The Project should assign individual resources to all tasks as well as share required information ahead of time. This will help ensure the DLIR PM team has knowledge and clarity on the effort required to plan for resources and the project team to be involved in the decision-making process, as well as to keep state resources informed. As a best practice, the IV&amp;V team recommends documenting details in the Resource Management Plan, to ensure resource related information is shared in a more timely manner.</li></ul>	In Progress



# IV&V Findings and Recommendations

## L Requirements Management

#	Key Findings	Criticality Rating
3	<p><b>Closed Risk – Incomplete Gap Analysis:</b> The first pass of the gap analysis process completed, but DLIR SMEs were unclear about exactly what they were reviewing or approving. This led to re-work as SMEs had to be re-engaged, explained the gap analysis process more fully, and additional sessions held to confirm gaps.</p> <ul style="list-style-type: none"> <li>7/29: The Project held follow-up sessions which identified 36 additional gaps. The program SMEs feel more confident now that most gaps have been identified, and the Project is ready to provide conditional sign-off with the stipulation that SSO will address gaps identified in the future that are deemed to be in scope and necessary for operations of the UI program.</li> </ul>	H
12	<p><b>Risk – Delay in Employer Portal and Tax activities:</b> The Tax and Employer Portal modules are large scope activities that have not been incorporated into the Project Schedule. The IV&amp;V team understands that the initial plan was for activities to occur in parallel for both Benefits and Tax modules. Associated sprint activities were planned to start in July 2021 for EP but have been pushed out to August 2021, and Tax will start in October 2021. There is a risk that there is insufficient time to complete these activities prior to go-live.</p>	L

Recommendations	Status
<ul style="list-style-type: none"> <li>The Project should continue to diligently conduct Gap Analysis sessions to ensure all of DLIR's requirements are accurately captured and documented by SSO. This will help to minimize potential impacts and delays to the completion of detailed use cases and development activities, prior to signing off on the deliverable.</li> </ul>	Complete
<ul style="list-style-type: none"> <li>The Project should include all activities and associated dates for the Tax and Employer Portal workstreams into the project schedule to determine the true critical path. The Project should also prioritize user authoring activities for the initiatives to stay aligned to the Benefits workstream, and understand the full scope of these workstreams.</li> </ul>	In Progress



# IV&V Findings and Recommendations

## M Design and Development

#	Key Findings	Criticality Rating
21	<b>Risk – Limited clarity on user stories completed in each Sprint:</b> The progress of user stories completed in each sprint is not clearly discussed during PM meetings and reports, and it is uncertain which stories were completed vs deferred in a given sprint. For example, during the sprint planning sessions on 07/27, there were discussions around potentially moving two user stories from Sprint 1 to Sprint 2, but it was not clear on which stories or what their complexity was.	M

Recommendations	Status
<ul style="list-style-type: none"><li>To ensure alignment on progress of user stories, the IV&amp;V team recommends the Project create a sprint completion report at the end of each sprint which includes the following: user stories completed, deferred, pass/fail rate, number of defects generated, mitigation strategies with a revised due date, and user story complexity (high, medium, low), or share an update in the form of a burn down chart to show user stories completed vs expected to be completed by the end of each Sprint. This can help the Project monitor and track the progress of user stories, and to ensure future plans are realistic. It can also help avoid a common trap where complex user stories are deferred to the final sprints but the Project is not able to maintain the same user story completion velocity which leads to downstream delays.</li></ul>	In Progress



# IV&V Findings and Recommendations

## M Testing

#	Key Findings	Criticality Rating
15	<b>Risk – Issue with Development Environment for Benefits - Sprint 1:</b> The Benefits development environment has faced availability issues preventing testing from occurring. While the issue does not block development, screen changes cannot be shown to DLIR and testing activities may be delayed.	M
24	<b>Risk – Test Management Plan Needs to be Defined:</b> There is limited clarity on the testing approach and process, including how it is incorporated into sprint development, what types of testing will be conducted at which stages of the project (e.g., SIT, UAT, Performance, ADA compliance, Security, etc.), what tools will be used, what data will be required, and who has responsibility for test script creation and execution. Without these details, it will be difficult for the Project to appropriately prepare resources, and critical test elements may be overlooked, resulting in an unstable system.	L

Recommendations	Status
<ul style="list-style-type: none"> <li>The Project should resolve the issue associated with the availability of the Development environment as soon as possible and share details with relevant stakeholders so that the best possible options are explored and understood. The IV&amp;V team will continue to monitor this risk as further delays could affect testing and other activities in the project schedule.</li> </ul>	In Progress
<ul style="list-style-type: none"> <li>The Project should create a comprehensive Test Management Plan which provides clarity on the process for testing across all testing phases.</li> </ul>	Not Started



# IV&V Findings and Recommendations

## M Data Management

#	Key Findings	Criticality Rating
6	<b>Risk – Lack of a Data Conversion and Migration Strategy:</b> There is no Data Migration Plan, leading to confusion about which information and resources are needed at any given time. This could cause activities to be delayed and important information to be overlooked, especially if the right subject matter experts (both technical and business) are not engaged at the right time.	M

Recommendations	Status
<ul style="list-style-type: none"> <li>The IV&amp;V team understands that a Data Migration plan is not a required deliverable according to the SSO SoW, but still recommends it as a best practice to provide understanding and clarity on the process to all stakeholders. We understand that DLIR will create the Data Migration Plan. This Plan will be heavily dependent on information from SSO, and while SSO hired a technical lead during the July reporting period, that resource has not been onboarded yet. As a best practice, the IV&amp;V team recommends that the plan includes the following information: Data Migration objectives and scope, Data Conversion methodology, Data extraction, Data Profiling, Data cleansing, Data security, and the Testing approach for Data Conversion.</li> </ul>	In Progress
<ul style="list-style-type: none"> <li>The Project should encourage regular meeting attendance and engagement by related SMEs and stakeholders to ensure information is provided and decisions are made in a more timely manner. This should include employing meeting best practices such as providing agendas in advance, notifying participants of what information is expected of them so they can be prepared, and capturing action items and due dates.</li> </ul>	In Progress



# Appendix A – IV&V Criticality Ratings

See definitions of Criticality Ratings below:

Criticality Rating	Definition
 H	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.
 M	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.
 L	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 – IV&V Standard Inputs

Meetings attended during the reporting period:	
1. M/W/F Project Management meetings	8. Benefits Sprint Planning – 07/27
2. Data Conversion Scrum meetings	9. TOP Program Review – 07/27
3. Working Group meetings	10. ETS Print Services Discussion – 07/29
4. UI SME Meetings for Benefits	11. Executive Steering Committee – 07/16
5. BTQ DevOps meeting – 07/20	12. Schedule Review for Tax and EP – 08/03
6. Security – Authentication and Authorization – 07/21	13. Data Station Benefits Demo Part 2 – 08/03
7. IV&V Draft Report Review – 07/23	14. Data Migration Planning – 08/03



# Appendix B – IV&V Standard Inputs

## Artifacts reviewed during the reporting period:

1. Project Management Plan and associated subplans	
2. Data Migration Plan and template	
3. SSO Weekly Status Reports	

### To keep abreast of status throughout the project, IV&V regularly:

- Attends the project meetings
- Reviews the project documentation
- Utilizes Eclipse IV&V® Base Standards and Checklists



PCG Eclipse IVV  
Checklists



# Appendix C – IV&V Details

- 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 IV&V 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.

Note: This report is a point-in-time document with findings accurate as of the last day in the reporting period.





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