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DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA ʻOIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KEʻENA HOʻOLANA ʻENEHANA*

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

March 4, 2025

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

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaiʻi 96813

Aloha Senate President Kouchi, Speaker Nakamura, 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 10 days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawaiʻi, Department of Labor and Industrial Relations (DLIR) Hawaiʻi Unemployment Insurance Modernization (Hui Huakaʻi) Project

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

Sincerely,

Christine M. Sakuda
Chief Information Officer
State of Hawaiʻi

Attachments (2)

HUI Huaka'i Project

Department of Labor and Industrial Relations (DLIR)

IV&V Monthly Status Report – **[Final]**

For Reporting Period: **[January]**

Draft Submitted: February 6, 2025

Final Submitted: February 26, 2025

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

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

Executive Summary

The HUI Huaka'i Project is currently classified as low-risk with a **Green** status.

In January, the Hawaii UI PMO organized and hosted a collaborative on-site working session for all project vendors called *The Convening*. This visit provided vendors and IV&V with valuable insight into the culture of the project and enhanced IV&Vs ability to assess and support the state's modernization efforts. The most significant outcome of this trip was the strengthened relationships and connections among project stakeholders and vendors, fostering a more cohesive and aligned project environment. The shared commitment and in-person collaboration cultivated a renewed sense of optimism and partnership, which will contribute to the project's long-term success. As noted by the client, the dedication shown by all participants—whether traveling across the Pacific or stepping away from their daily responsibilities—demonstrated an exceptional level of commitment to the project. This investment in collaboration has already yielded tangible benefits, reinforcing trust, communication, and a shared vision for the project's future.

At the end of December, the UI Solution Vendor submitted an updated Project Management Plan (PMP), incorporating stakeholder management, change and scope management, and resource management plans, along with a revised baseline schedule. The Hawaii PMO approved these documents in January.

Four project areas—Project Organization and Management, Cost and Schedule Management, Requirements Management, and Scope Analysis—have **improved** from yellow to green status. Additionally, the UI Solution Vendor submitted the System Design Document, which is currently under review by the Hawaii UI PMO.

The IV&V team identified two (2) preliminary concerns, one (1) issues, and two (2) risks, detailed in the IV&V Findings and Recommendations section of this report.

In January, the IV&V team reviewed six project documents:

- Project Management Plan (PMP)
- Stakeholder Management Plan
- Resource Management Plan
- Scope Management Plan
- Change Management Plan
- Project Schedule

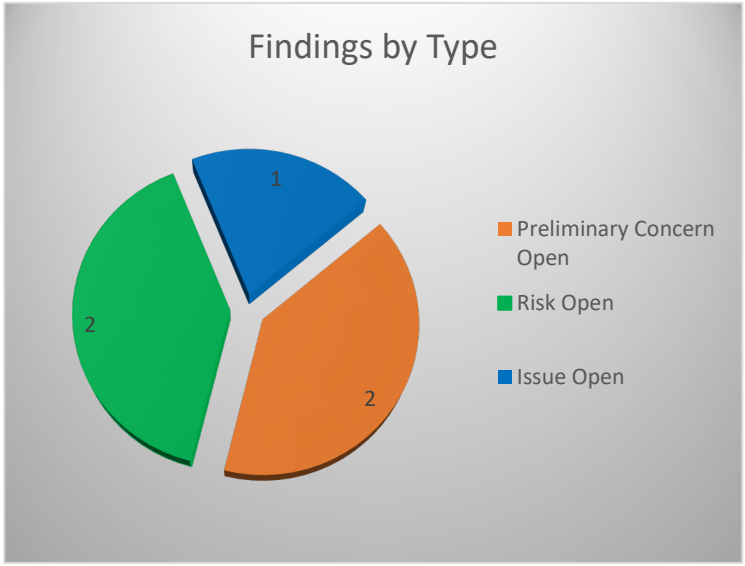
Changes Since Last Period

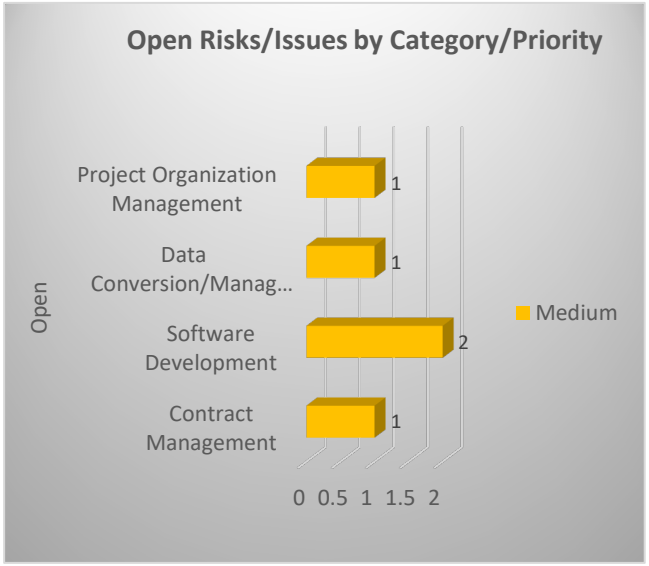
Category	December Status	January Status	Notable Changes
Project Management	Yellow trending Green	Green	UI Solution Vendor submitted Project governance documents
Requirements Management	Yellow trending Green	Green	RTM updated to include all known requirements
Resource Planning	Yellow tending Green	Green	Resource management plan was submitted
Project Schedule	Yellow trending Green	Green	Schedule was submitted and baselined

At the end of December, the UI Solution Vendor submitted an updated Project Management Plan (PMP), that incorporated stakeholder management, change and scope management, and resource management plans, along with a revised baseline schedule. These documents were approved by the Hawaii PMO in January. The System Design Document was submitted in January and is under review.

Executive Summary

IV&V identified (5) five findings that include two (2) preliminary concerns, one (1) issue, and two (2) risks for this reporting period. Findings, Risks and Issues, and Project Expenditures are represented below.

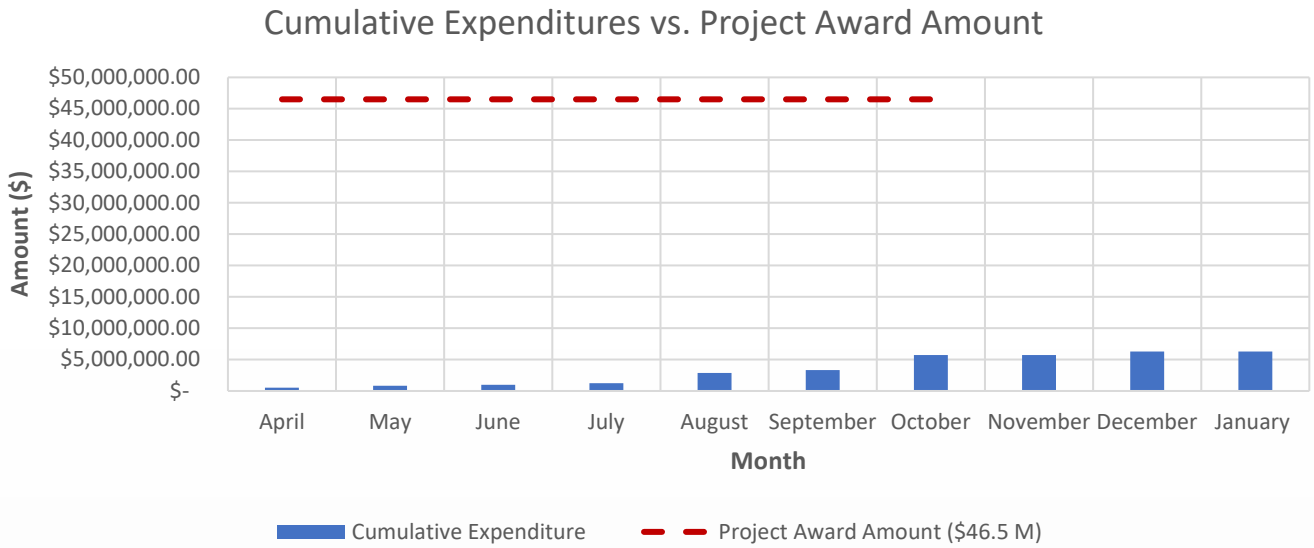




Executive Summary

*HUI Huaka'i Project expenditures to the contract vendor are represented below. * Other vendor expenditures being paid are not represented below.*

Month	Expenditure	Cumulative Expenditure	Project Award Amount ($46.5 M)
April	$ 536,437.50	$ 536,437.50	$ 46,500,000.00
May	$ 301,375.00	$ 837,812.50	$ 46,500,000.00
June	$ 125,000.00	$ 962,812.50	$ 46,500,000.00
July	$ 293,854.15	$ 1,256,666.65	$ 46,500,000.00
August	$ 1,625,000.00	$ 2,881,666.65	$ 46,500,000.00
September	$ 439,062.45	$ 3,320,729.10	$ 46,500,000.00
October	$ 2,408,548.00	$ 5,729,277.10	$ 46,500,000.00
November	$ -	$ 5,729,277.10	$ 46,500,000.00
December	$ 577,980.46	$ 6,307,257.56	$ 46,500,000.00
January	$ -	$ 6,307,257.56	$ 46,500,000.00



STANDARD REPORT SECTIONS

Project Organization and Management

November	December	January	IV&V Observations
L	M	L	Project Organization Management is **Green** with the following **Observations:** UI Solution Vendor submitted a Project Management Plan that included the Stakeholder, Change, Scope, Quality, and Resource Management Plan on December 31, 2024. Additionally, the RTM was updated, and the schedule was revised and baselined. These documents were approved on 1/16/2025. Meeting management has improved, and IV&V will continue to monitor. **To strengthen this project area, IV&V Recommends:** • Creating a consistent meeting schedule and minimizing meeting cancellations. **Related Open Findings:** **Finding #10** – Misalignment of Elicitation Session Agendas – **Closed due to considerable meeting management improvement 1/28** **Initial Observation # 29** – Meeting Mismanagement

Cost and Schedule Management

November	December	January	IV&V Observations
M	M	L	Cost and Schedule Management is trending **Green** with the following **Observations**: IV&V reviewed the schedule and other foundational documents at a high level and found the adjustments satisfactory. The schedule includes detailed and well-organized, high-level milestones, providing a strong foundation for tracking progress and accountability. The state has accepted the schedule as a governing but "living" document. The current Schedule Performance Index (SPI) is .96. IV&V will continue to monitor the schedule's implementation, particularly project velocity as the backlog evolves. Any concerns or discrepancies identified in future reporting periods will result in new findings if necessary. For now, the current schedule is deemed sufficient for project management and performance tracking. **Related Findings:** IV&V does not have any findings for Cost and Schedule Management in January.

Requirements Management

November	December	January	IV&V Observations
M	M	L	Requirements Management is **Green** with the following **Observations**: This category is now in **Green** due to significant improvements in traceability and alignment between the Requirements Traceability Matrix (RTM) and Azure DevOps features. The collaborative efforts of the RTM initiative, coupled with discussions involving IV&V, have successfully addressed and corrected traceability gaps. Both requirements-to-feature and feature-to-requirement relationships align consistently, ensuring effective scope control and governance. Additionally, the development and sharing of multiple queries with IV&V provide tools for continued monitoring and validation of traceability. **To strengthen this project area, IV&V Recommends**: • Continue leveraging the RTM initiative to ensure ongoing maintenance and accuracy of traceability as the project progresses. • Utilize the developed queries to routinely monitor traceability and promptly address any emerging gaps or inconsistencies. • Maintain collaborative governance practices to prevent future misalignments and strengthen resource planning. **Related Findings:** **Finding #4** – Traceability Concerns in Requirements Traceability Matrix and Azure DevOps Feature Items **– Closed 1/28 due to positive vendor response and adaptability, as well as improved traceability.**

System Architecture and Design

November	December	January	IV&V Observations
L	L	L	System Architecture and Design is **Green** with the following **Observations:** The initial System Design Document was not delivered on the scheduled date and a change request has been submitted to change the due date to 6/11/2025.

Testing (Sprint, Unit, System Integration, UAT)

November	December	January	Category	IV&V Observations
L	L	L	Testing (Sprint, Unit, System, Integration, UAT)	Testing (Sprint, Unit, System, Integration, UAT) is **Green** with the following **Observations:** This category remains **Green** as regular operations continue on schedule, with test cycles delivering working software. IV&V has not yet received a response, feedback, or an updated version of the solution vendor's Master Test Plan reflecting the recommendations from the quality checklist. IV&V observed a growing defect backlog for the Benefits development during this reporting period but is optimistic about its resolution, as the solution vendor has allocated an additional developer to address the backlog actively. IV&V will continue to monitor. **To strengthen this project area, IV&V Recommends:** • Address IV&V's Master Test Plan feedback. • Add comprehensive schedules, estimates, and milestones for all testing activities. • Clearly define roles and responsibilities for test activities and decision-making. • Establish quality control measures and metrics for all testing phases, not just UAT.
L	L	L	Operational Preparedness	**There are no updates for this period.**

Data Conversion/Management

November	December	January	IV&V Observations
L	L	L	Data Conversion / Management is **Green** with the following Observations: The weekly Data Conversion and Data Cleansing meetings continue to progress effectively. The Data Conversion team has completed reviews of the Mainframe and Supplemental Data Dictionaries (Web Admin, ICON, and Sides). The project has now entered the Transformation phase, with efforts currently centered on L1P and the team has also begun L1Z mapping and consumption, progressing with Claim-related, Appeals-related, and Employer-related transformations. The Data Cleansing vendor leverages SAP Information Steward to establish optimal business rules that ensure high-quality data for HI DLIR's modernization efforts. A monthly Data Scorecard is produced, detailing the results of data that failed the defined cleansing rules. Each table is assigned a score from 0 to 10 based on the number of failed data points. Any discrepancies are reviewed collaboratively with the HI DLIR UI Team to refine rules or implement necessary cleansing actions. According to the January 29th, 2025 Data Scorecard (data scores for January 2025), all tables with reported scores fall within the range of 9.99 to 10. The project manages Data Dictionary tasks using a Conversion Traceability Matrix in Excel. In contrast, Data Cleansing tasks are tracked through sprint boards in Azure DevOps (ADO), which IV&V currently cannot access. IV&V found the Data Conversion Plan document to be generally adequate. However, IV&V expects the next iteration to provide more detail on key areas such as user training, communication, downtime, and potential business disruptions. **To strengthen this project area, IV&V Recommends**: • A rollback plan and process are included in future documentation. • Including a project schedule detailing data conversion processes in future documentation. • Creating a risk to the project for the lack of legacy data documentation, such as a data dictionary. • Including legacy data source information in future documentation. • Including a more in-depth training approach for conversion procedures and activities in future documentation. • Defining a Business Glossary early in an IT project, such as during data conversion, to establish a foundation for clear communication, consistent documentation, and accurate requirements. It minimizes misunderstandings, reduces risks, and promotes efficiency, setting the project up for success from the start. While defining a Business Glossary is not always the primary focus of the conversion process itself, integrating one into the data conversion phase can enhance overall data management. It is a strategic and beneficial practice. **Related Findings:** **Finding #19** Defining a Business Glossary during the early phases of the project.

Security, Training/Knowledge Transfer, Interfaces, Quality Management

November	December	January	Category	IV&V Observations
L	L	L	Security	Security is **Green** with the following **Observations:** Security Requirements Gathering is in progress.
L	L	L	Training / Knowledge Transfer	**There are no updates for this period.**
L	L	L	Interfaces	**There are no updates for this period.**
L	L	L	Quality Management	**There are no updates for this period.**

Software Development

November	December	January	IV&V Observations

L	L	L	Software Development is **Green** with the following **Observations:**
			
			• The project lacks a defined source code quality threshold, but the solution vendor is actively researching its application. IV&V was informed that Sprint Retrospectives are being conducted, and the UI solution vendor indicated that these retrospectives are occurring independently of the project and are being used to inform the core product and its enhancements. There are concerns regarding the scope, operational methodology, and stakeholder inclusion, or lack thereof, of these retrospectives in their current state. These retrospectives appear to operate independently from the project, state, and oversight, potentially introducing risks and limiting the project's ability to achieve effective process improvements.
			• From the development dashboard:
			  ◦ The Benefits team maintains steady velocity, with completed tasks aligning closely to planned activities. However, the Benefits Burndown shows an expected growing scope increase of 382.
			  ◦ The Tax team continues to show variability in performance, with an average velocity of 10 and only 19% of the scope completed.
			  ◦ The Data Station Burndown highlights the completion of 29% of the scope, with a backlog of 929 remaining stories.
			
			To strengthen this project area, IV&V Recommends:
			• Finalize and implement a source code quality threshold.
			• Formalize sprint retrospectives, including oversight by project and state representatives.
			• Based on Scrum Alliance guidelines, additional questions should be asked to ensure the proper execution of a Scrum meeting and Sprint Planning meetings.
			• As a guideline, IV&V recommends the durations for key Scrum events for 2-week Sprints based on PMBOK Best Practices (refer to Finding #20).
			• Implementing Sprint Retrospectives to enhance team collaboration, continuously improve development processes, and ultimately increase the project's success.
			
			Related Findings:
			
			Finding #19 – Defining a Business Glossary during the Data Conversion Phase
			Finding #24 - Source code quality threshold
			Finding #26 - Sprint Retrospectives

Human Resources Staffing Management

November	December	January	IV&V Observations
M	M	L	Human Resources Staffing Management **Green** with the following **Observations:** During this reporting period, IV&V reviewed the latest version of the Resource Management Plan and found several opportunities for enhancement or awareness. Overall, the plan is well outlined for resource allocation strategies and adjustments, but areas such as capacity planning, skill requirements, and resources mapped to specific phases lack some expected detail. **To strengthen this project area, IV&V Recommends:** • Define specific capacity planning metrics (e.g. FTE estimates) • Add a mechanism to track changes in resource allocation during iterative planning sessions • Provide quantitative resource forecasts for key project activities like implementation and testing • Define specific skill sets required for each role to improve clarity • Establish a structured reporting cadence to share resource status updates with the steering committee and other stakeholders **Related Findings**: **Finding #3** – Monitor and Track Project Resourcing – **Closed due to submitted Resource Management Plan 12/31/2024.**

Scope Analysis

November	December	January	IV&V Observations
M	M	L	Scope Analysis is **Green** based on the following **Observations:** Significant progress has been made in aligning expectations and processes for scope analysis and reporting. During this reporting period, productive conversations occurred between the UI PMO, the UI Solution Vendor, IV&V, and ETS to define metrics and establish appropriate reporting for scope and project health. The Hawaii UI PMO reported that the developed and delivered project scope is 15%. **To strengthen this project area, IV&V Recommends:** • Ensure delivery of scope-related metrics by the UI PMO to support accurate reporting for future updates. **Related Findings:** **Finding #28** – Incomplete Scope Limiting IV&V Reporting Capabilities – **Closed 1/28/2025 Due to resolution and agreement on scope reporting.**

Contract Management, Communication Management

November	December	January	Category	IV&V Observations
L	L	L	Contract Management	Contract Management is Green but is trending Yellow with the following **Observations:** The HUI Huaka'i Project gave the UI Solution Vendor a Vendor Improvement Action Plan early in the project to establish a common understanding of the State's expectations. The UI Solution Vendor has significantly progressed in resolving the Vendor Improvement Action Plan. The Hawaii UI PMO anticipates the action plan being closed by the end of the February 2025 reporting period. **IV&V Related Findings**: **Initial Observation #30:** UI Solution Vendor PIP follow-up
L	L	L	Communication Management	**There are no updates for this period.**

Risk and Issue Management

November	December	January	IV&V Observations
L	L	L	Risk and Issue Management is **Green** with the following **Observations**: This category remains **Green**, reflecting the continued improvement and regularity of risk management practices. The cadence of risk meetings has been increased twice a week, occurring on Tuesdays and Thursdays. One meeting focuses on risks, while the other addresses the AID (Action, Issue, Decision) log. These meetings are productive, which demonstrates good practice and reinforces the project team's commitment to proactive risk management. IV&V has observed that these changes improve visibility and tracking of risks and issues. **To strengthen this project area, IV&V Recommends:** • Defining all relevant inputs and outputs in the risk management process in an appendix. • Considering risks at two levels (i.e., individual and overall) within the project. • Detail the five steps of the vendor's risk management framework and include all relevant inputs and outputs for each step. • Incorporating stakeholder risk appetite and thresholds into the plan. • Outlining the communication plan for risk management. • A section that lists the tools and software used for risk management is included. • Including a section that outlines the training requirements for the project team on risk management practices and initiatives.

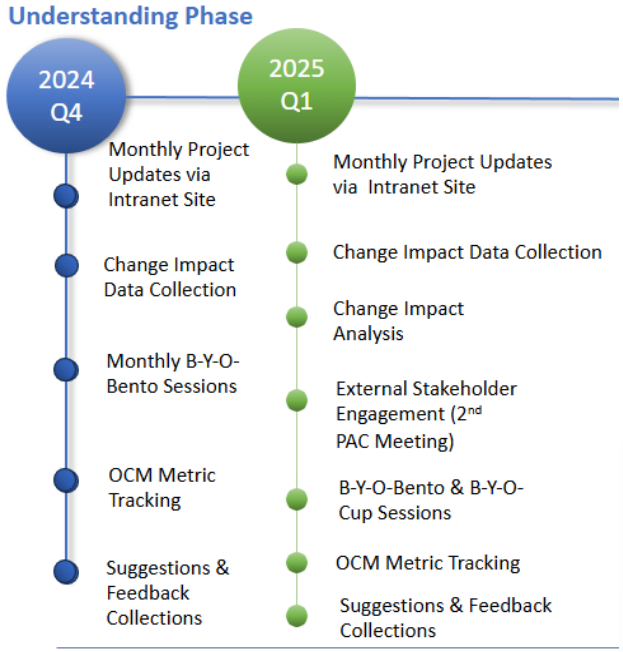
Technical Architecture

November	December	January	IV&V Observations
L	L	L	**There are no updates for this period.**

Organizational Change Management

The current OCM meetings are running smoothly without any issues. The Awareness Phase has been completed and has advanced to the Understanding Phase. During this phase, the OCM Team plans to conduct the Change Impact Analysis and 2nd PAC meeting. Overall, the OCM Team has held 20 engagement session with an average attendance of 72%. UI Solution Vendor has rated the effectiveness of communication and engagement a 4.31 out of 5. There have been no changes to OCM leadership.

OCM Activities	Date
The OCM Team January accomplishments included:	
• On-site Convening	January 21, 2025 – January 23, 2025
• Executive Steering Committee	January 23, 2025
• Project Advisory Committee (PAC) Meeting	January 22, 2025



# of Engagement Sessions Held:	# of Communications Sent:
20	11

Avg. Attendance for Engagement Sessions	Communication and Engagement Effectiveness Score (out of 5)
72%	4.31

IV&V Findings and Recommendations

L Project Organization Management

The following slides list the findings in each category (focus area) that IV&V tracks throughout the project. Criticality ratings are provided by category and finding. Findings are itemized and described, including the impact on the project and recommendations for mitigating risk. A separate findings log spreadsheet can be referenced as supporting documentation to provide greater detail on each IV&V finding.
Findings will include Issue Analysis (Open/Closed Issues), Risks/Concerns/Observations/Deficiencies, and Recommendations for Remediation.

#	Key Findings	Criticality Rating
10	Risk – **Misalignment of Elicitation Session Agendas:** IV&V observed that the agendas provided for the elicitation/requirements sessions are not consistently provided and not consistently accurate. This often leads to misalignment with the actual discussions during the meetings. Participants are instructed to prepare by reading and familiarizing themselves with the user stories and features to be discussed. However, the sessions often diverge from the prescribed agenda. Additionally, the meeting minutes, while accurately reflecting the discussions that took place, need to match the agenda distributed beforehand. This inconsistency hinders participants' engagement, leading to inefficiencies and a lack of productive engagement. Analysis and significance: As a result of inconsistent and inaccurate agendas, participants are unable to adequately prepare for sessions, leading to ineffective discussions and a lack of productive engagement. The discrepancies between the meeting minutes and the agenda further exacerbate these inefficiencies, potentially hindering the progress of elicitation activities.	Medium

Recommendations	Status
1/28/2025 - CLOSED IV&V is *closing this finding* due to improvement. Notably, the final week of monitoring demonstrated improvement, with agendas and meeting minutes present for all sessions, and alignment between the agenda and actual meeting discussions was observed.	**Closed**

IV&V Findings and Recommendations

L Project Organization Management

Recommendations	Status
IV&V Recommends: 1. Ensuring that meeting agendas are closely followed during Elicitation sessions to provide structure and allow participants to prepare and engage effectively. 2. Communicate any changes to the agenda in advance to give participants ample time to adjust their preparations. 3. Implement feedback to gather participant input on meeting effectiveness	**Closed 1/28/2025**

Update(s)
1/28/2025 **CLOSED Finding:** IV&V is *closing this finding* due to considerable improvements observed over the past couple of reporting periods. Agendas, minutes, and session recordings are now consistently uploaded and available in the centralized SharePoint repository. Additionally, the project team has established a practice of sending out revised agendas in advance when adjustments are anticipated, improving alignment between meeting plans and actual discussions. This progress represents a positive step towards standardization and effective collaboration, ensuring participants can prepare and engage productively in RTM sessions. IV&V will continue to monitor these practices and reopen the finding if new challenges arise in future reporting periods. **12/23/2024** IV&V has observed mixed progress during this reporting period. A centralized repository for agendas, meeting minutes, and session recordings is being consistently utilized, as discussed during a tax RTM session. This represents a positive step towards standardization and accessibility. However, significant gaps remain, as 7 out of 11 monitored sessions lacked agendas, and 7 sessions had no meeting minutes, according to the central repository folders. Notably, the final week of monitoring demonstrated improvement, with agendas and meeting minutes present for all sessions and alignment between the agenda and actual meeting discussions was observed.

IV&V Findings and Recommendations

Data Conversion/Management

#	Key Findings	Criticality Rating
19	Risk – **Defining a Business Glossary during the data conversion phase**: *Not defining a Business Glossary during the data conversion phase can lead to several disadvantages.* A Business Glossary is a comprehensive repository that defines key business terms, concepts, and relationships within an organization and has clear definitions for data. It provides clear and consistent definitions to ensure that everyone in the organization understands and uses the same terminology in the same way. Developing and documenting standard data definitions reduces ambiguity and improves communication. A Data Dictionary and a Business Glossary are integral to effective data management, supporting communication, consistency, and governance from different but complementary perspectives. A Business Glossary defines business terms to ensure common understanding across the organization. It's business-centric, with a focus on meaning and usage. A Data Dictionary defines data elements in a technical context, detailing data types, structure, and constraints. It's data-centric, with a focus on the specifics of data storage and management. Business glossaries have the following objectives: 1. Foster a shared understanding of key business concepts and terminology. 2. Minimize the risk of data misuse caused by inconsistent interpretations of these concepts (continued on the next slide). 3. Improve alignment between technical assets and the business organization by bridging naming conventions Not defining a Business Glossary during the data conversion and data cleansing phase can lead to several disadvantages: 1. Miscommunication: Without a shared understanding of terminology, team members may interpret data differently, leading to confusion and errors.	Medium

IV&V Findings and Recommendations

Data Conversion/Management

#	Key Findings	Criticality Rating
	2. Inconsistent Data: Variations in terms can result in inconsistencies in data mapping and conversion, compromising data quality. 3. Increased Errors: Ambiguities in definitions may lead to mistakes in data extraction, transformation, and loading processes. 4. Inefficiency: Team members may spend extra time clarifying terms and resolving misunderstandings instead of focusing on critical tasks. 5. Stakeholder Disagreement: Different stakeholders may have varying interpretations of terms, leading to conflicts and delays in decision-making. 6. Poor User Adoption: If end users encounter unclear or inconsistent terminology in the converted data, it may hinder their ability to effectively use the new system. 7. Difficulty in Compliance: Regulatory or compliance requirements may be harder to meet without clear definitions, increasing the risk of non-compliance. (continued on the next slide) 8. Limited Data Governance: A lack of a business glossary can weaken data governance efforts, making it challenging to maintain data integrity and accountability. 9. Longer Training Time: New users may require more extensive training to understand the data, as they lack a reference point for definitions. 10. Compromised Reporting and Analytics: Inconsistent terminology can lead to inaccurate reporting and analysis, impacting strategic decision-making. Based on Best Practices (in the *DAMA - DMBOK 2nd edition*), establishing a Business Glossary is necessary. It helps ensure clarity, consistency, and effective communication throughout the data conversion and data management processes. The project has not yet initiated the development of a Business Glossary. The PMO believes that the Glossary of Terms provided in the Request for Proposal (RFP) is sufficient for the current stage of the project. (*Recommendations found on the following slide**)	Medium

IV&V Findings and Recommendations

L Data Conversion/Management

#	Key Findings	Criticality Rating
	However, the IV&V team highlights that a Glossary of Terms and a Business Glossary serve distinct purposes, particularly in the context of data management. IV&V expresses concern that postponing the creation of a comprehensive Business Glossary could lead to increased rework in later stages of the project. This delay may result in teams facing inefficiencies, including frequent clarifications of terminology, verification of mappings, and correction of errors caused by ambiguity. The project commenced data conversion and data cleansing activities in June 2024, and these activities are ongoing. While defining a Business Glossary is not always the primary focus of the conversion process itself, integrating one into the data conversion phase can enhance overall data management. It is a strategic and beneficial practice.	Medium

Recommendations	Status
IV&V recommends defining a Business Glossary early in an IT project as it provides a foundation for clear communication, consistent documentation, and accurate requirements. It minimizes misunderstandings, reduces risks, and promotes efficiency, setting the project up for success from the start. Incorporating a Business Glossary during data conversion and cleansing not only ensures the success of the project but also lays the groundwork for ongoing data quality, governance, and effective communication within the organization.	Open

Update(s)
1/31/2025 IV&V's discussions with the Data Cleansing vendor on Wednesday, 1/22/2025 at DLIR, indicate their appreciation for the value of a Business Glossary. However, the project has yet to make any progress in defining one.

IV&V Findings and Recommendations

L Data Conversion/Management

Update(s)
12/31/2024 The project has not made any progress with defining a Business Glossary. The PMO considers the Glossary of Terms in the RFP adequate for the project's current phase. However, the IV&V team emphasizes the distinct roles of a Glossary of Terms and a Business Glossary in data management. IV&V remains concerned that delaying the creation of a comprehensive Business Glossary may lead to inefficiencies and rework later, including frequent clarifications, mapping verifications, and error corrections due to ambiguity.

IV&V Findings and Recommendations

L Software Development

#	Key Findings	Criticality Rating
24	Preliminary Concern – **Source code quality threshold:** *The absence of a source code quality threshold in tools like SonarQube can potentially impact both short-term productivity and long-term system stability.* During the Benefits Sprint Planning meeting on 10/10/2024, 1. The UI Solution Vendor confirmed they will use tools like SonarQube for code quality inspection and review. 2. However, UI PMO personnel confirmed that the project has not set a source code quality threshold. Setting a quality threshold in SonarQube or similar tools establishes a benchmark that enforces clean, secure, and maintainable code, reducing long-term risks and facilitating sustainable growth. The absence of a source code quality threshold in tools like SonarQube can lead to several significant issues, potentially impacting both short-term productivity and long-term system stability, for example, 1. Technical debt accumulation that leads to hard-to-maintain codebases, requiring more time and effort to fix issues later on. 2. Increased Defects and Bugs: Defects may proliferate, eventually requiring extensive testing and debugging, especially as the project scales. 3. Security Vulnerabilities: Critical vulnerabilities may reach production, posing serious security risks and potentially leading to costly breaches. 4. Reduced Code Maintainability: Source code without quality checks can lead to productivity issues and a slowdown in development velocity. 5. Lack of Accountability: Developers may skip best practices, leading to inconsistencies across the codebase. Quality thresholds promote accountability among developers. (continued on the next slide)	Medium

IV&V Findings and Recommendations

Software Development

#	Key Findings	Criticality Rating
	6. Performance Issues and Poor User Experience: Unchecked code can lead to inefficient, resource-heavy code. This can affect performance, responsiveness, and user satisfaction, especially in resource-sensitive environments.	Medium

Recommendations	Status
Establishing a source code quality threshold using tools like SonarQube involves defining measurable, enforceable standards for code quality, security, and maintainability. IV&V recommends: 1. Focus on metrics that matter most to the DLIR UI project. These metrics could be code smells, bugs, vulnerabilities, code coverage and technical debt. 2. Define quality gates that must be passed before code is merged or released. Examples of recommended thresholds are a) Bugs: No critical or blocker bugs. b) Vulnerabilities: No critical or blocker vulnerabilities. c) Code Coverage: Minimum of 80% or based on the project's needs. d) Code Smells: Defined maximum count or percentage per module. e) Duplications: Less than 5% code duplication. 3. Integrate SonarQube or similar tools with your CI/CD pipeline (e.g., Jenkins, GitHub Actions, Azure DevOps) and make quality gate failures block code merges or deployments to enforce compliance. 4. Use dashboards to track code quality trends over time and share reports with the team and management to demonstrate improvements or identify areas needing attention.	Open

Update(s)
1/31/2025 The project is currently researching the application of a source code quality threshold.

IV&V Findings and Recommendations

Software Development

Update(s)
12/31/2024 The development team has started using SonarQube. However, the project has not made any progress with defining a source code quality threshold. IV&V is concerned that the lack of a source quality threshold could lead to increased defects, technical debt, critical security vulnerabilities reaching production, inefficient code, performance issues, and reduced development velocity.
11/30/2024 The project has not yet established a quality threshold, as the current focus is on gathering requirements.

IV&V Findings and Recommendations

L Software Development

#	Key Findings	Criticality Rating
26	Issues – **Sprint Retrospectives**: *The absence of a Sprint Retrospective in an agile IT project can have several negative impacts.* A Sprint Retrospective is one of the key ceremonies in Scrum and other agile frameworks, focused on continuous improvement. It is an agile meeting held at the end of each sprint to allow the team to reflect on their performance, discuss what went well, identify areas for improvement, and agree on actionable changes for future sprints. Currently, the UI project lacks Sprint Retrospectives at the end of each development sprint. Some of the primary consequences of absence of a Sprint Retrospective in an agile IT project are: 1. Missed Opportunities for Continuous Improvement. 2. Increased Frustration and Low Morale of team members. 3. Lack of Team Alignment and Communication. 4. Reduced Product Quality and Customer Satisfaction. 5. Missed Innovation and Learning. Retrospectives are essential for fostering continuous improvement, ensuring agile processes are truly iterative and adaptive. Without a Sprint Retrospective, an agile IT project risks becoming static and inefficient, with reduced quality, team cohesion, and customer satisfaction.	Medium

Recommendations	Status
*Recommendations found on the following slide**	Open

IV&V Findings and Recommendations

L Software Development

Recommendations	Status
IV&V recommends: 1. Introducing regular Retrospectives: Schedule a Sprint Retrospective at the end of each sprint to give the team dedicated time to reflect on the sprint's successes, challenges, and areas for improvement. 2. Setting clear goals for retrospectives: Define specific objectives for retrospectives, such as improving processes, enhancing team communication, or identifying technical obstacles. 3. Encouraging open and constructive feedback: Foster a safe environment where team members feel comfortable sharing their thoughts and concerns. 4. Using structured formats: Adopt retrospective formats that guide discussions, like "Start, Stop, Continue" or "What Went Well, What Didn't, What Can Be Improved." These structures help keep discussions focused and actionable. 5. Assigning action items: Document key takeaways and assign clear action items with owners and deadlines. Follow up on these items in subsequent retrospectives to ensure improvements are implemented. 6. Involving stakeholders: Occasionally, involve key stakeholders to gain additional perspectives. 7. Leveraging Retrospective Tools: Use tools like Jira, Miro, or MURAL's retrospective feature to streamline and record feedback. 8. Making retrospectives consistent: Consistently holding retrospectives builds a rhythm and habit within the team, making continuous improvement a natural part of the development process. 9. Encouraging small, iterative Improvements: Small adjustments or incremental changes often lead to sustained improvements and are easier to adopt. 10. Monitoring the impact: Track whether changes from retrospectives improve team velocity, quality, or collaboration. Reviewing the impact helps refine the process and shows the value of retrospectives to the team. *Updates found on the following slide**	Open

IV&V Findings and Recommendations

L Software Development

Update(s)
1/31/2025 IV&V was informed that Sprint Retrospectives are being conducted, and the UI solution vendor indicated that these retrospectives are occurring independently of the project and are being used to inform the core product and its enhancements. There are concerns regarding the scope, operational methodology, and stakeholder inclusion, or lack thereof, of these retrospectives in their current state. These retrospectives appear to operate independently from the project, state, and oversight, potentially introducing risks and limiting the project's ability to achieve effective process improvements.
12/31/2024 The project is yet to incorporate Sprint Retrospectives at the end of every development sprint. IV&V is concerned that the absence of sprint retrospectives at the end of each sprint could result in missed opportunities for continuous improvement, increased frustration and low morale among team members, misalignment and poor communication within the team, reduced product quality and customer satisfaction, and missed opportunities for innovation and learning.

IV&V Findings and Recommendations

L Project Schedule and Cost Management

#	Key Findings	Criticality Rating
21	Risk—Enhancing Project Clarity: Identifying Critical tasks in the Project Schedule: To maintain schedule clarity, all critical tasks on the project schedule should be explicitly identified using a clear and consistent method (e.g., highlighting). By explicitly identifying critical tasks using a clear and consistent method, the Project Manager can ensure everyone involved is aware of the most important tasks, leading to better prioritization, communication, and, ultimately, a higher chance of project success. The project schedule should follow proper formatting to ensure all stakeholders understand the critical path and are aligned.	Low

Recommendations	Status
IV&V recommends: • All tasks that are on the critical path be highlighted in a different color.	Closed

Update(s)

01/30/2025 – Closed - IV&V is closing this finding as a result of the satisfactory, high-level review of the baselined schedule and other supporting documentation

12/31/2024 - The UI Solution Vendor submitted an updated RTM with an updated, baselined schedule on December 31, 2024. IV&V is in the process of reviewing the updated documents.

11/30/2024 - The UI Solution Vendor is expected to share an updated schedule version by the end of November. The UI Solution Vendor has been working on a mitigation plan to report accurate overall project performance in conjunction with the RTM and product roadmap. The plan was originally scheduled for delivery on 11/08/24 but was later pushed to 11/15/24. However, the mitigation plan was not shared by either of these dates, and no new delivery date has been set.

IV&V Findings and Recommendations

L Project Schedule and Cost Management

Update(s)
10/28/2024 - IV&V understands that the UI Solution Vendor has hired a resource to work on the schedule. They continue to refine their schedule to add more detail and have reported that they will have an updated version the week of 11/11/25.

IV&V Findings and Recommendations

L Project Schedule and Cost Management

#	Key Findings	Criticality Rating
22	Risk—**Incomplete Project Schedule** The HI DLIR project, initiated on March 12, 2024, lacks a complete schedule for stakeholders to reference despite being well into the development and requirements-gathering phases. Without a solidified schedule, tracking progress effectively is challenging. Stakeholders cannot accurately measure project velocity or monitor burndown rates. The inconsistency is evident in the current schedule, specifically requirements gathering, where all child items for requirements sessions are assigned the same 210-day duration. IV&V would expect these items to have distinct start and stop dates, levels of effort (LOE), and dependencies outlined. Representing the entire requirements-gathering effort as a single block of time is inaccurate and could mislead stakeholders about project progress and workload distribution. Due to the lack of a detailed project schedule, stakeholders are likely to face challenges in accurately assessing the project's progress and identifying potential delays. This can result in poor resource management, missed deadlines, and potential project scope creep.	Medium

Recommendations	Status
IV&V recommends: • Developing and finalizing a detailed project schedule. • Regularly updating the project schedule to reflect the actual progress and changes. • Using the schedule as a source of truth to measure and report on project velocity and burndown rates to better manage project performance. • Reevaluate requirements gathering tasks in relation to the project schedule.	Closed

IV&V Findings and Recommendations

L Project Schedule and Cost Management

Update(s)
01/28/2025 **Closed** -- IV&V is closing this finding as the UI Solution Vendor submitted an updated and baselined schedule on December 31, 2024, which IV&V reviewed at a high level and found satisfactory. The schedule includes detailed and well-organized high-level milestones, providing a strong foundation for tracking progress and accountability. The state has accepted the schedule as a governing but "living" document. IV&V will continue to monitor the schedule's implementation, particularly project velocity as the backlog evolves. Any concerns or discrepancies identified in future reporting periods will result in new findings if necessary. For now, the current schedule is deemed sufficient for project management and performance tracking. **12/31/2024** The UI Solution Vendor submitted an updated RTM with an updated, baselined schedule on December 31, 2024. IV&V is in the process of reviewing the updated documents. **12/23/2024** During this reporting period, according to the project's Decision Log, the schedule is slated to be re-baselined on 12/31, which will assist in resolving this risk and provide IV&V and the project more transparency in reporting. IV&V hopes to analyze this schedule and have more comments in the following reporting period.

IV&V Findings and Recommendations

L Requirements Management

#	Key Findings	Criticality Rating
4	***Issue* – Traceability Concerns in Requirements Traceability Matrix and Azure DevOps Feature Items:** IV&V identified anomalies with the traceability and linking of Requirements Traceability Matrix items to Feature items in Azure DevOps. During the review of the tax backlog features, IV&V found that 91 out of 149 Tax Features had no link to an existing Requirement. Several features were identified with the same title as an existing Requirement but were not linked (e.g., T1.71 is not linked to a feature, yet there is a feature with the same title within the tax backlog that isn't linked, such as Feature #39125). Numerous work items in Azure DevOps displayed related items listed as "Work item not found or no permission." Lack of traceability and proper linking can lead to incomplete or inaccurate tracking of project requirements and features. Potentially corrupted links may hinder project progress and cause delays. Misalignment between requirements and features could result in unmet project objectives.	Medium

Recommendations	Status
IV&V recommends conducting a thorough review of all related items in Azure DevOps to identify and correct any corrupted or missing links. Additionally, IV&V recommends establishing a routine audit process to ensure ongoing traceability and properly link requirements to features. If needed, additional training or guidance to team members on maintaining accurate and consistent links between requirements and features in Azure DevOps could be helpful.	**Closed 1/28/2025**

Update(s)
*Updates found on the following slide**

IV&V Findings and Recommendations

Requirements Management

Update(s)
1/28/2025 – CLOSED - *IV&V is closing this finding due to considerable improvement in traceability and alignment between the Requirements Traceability Matrix (RTM) and Azure DevOps features. Initiatives such as the RTM initiative, along with collaborative discussions and efforts with IV&V, have yielded desirable outcomes. Traceability gaps have been accounted for and corrected, ensuring consistent alignment from both perspectives. Additionally, multiple queries have been developed and shared with IV&V to facilitate ongoing monitoring of traceability.*

IV&V Findings and Recommendations

L Human Resource Staffing Management

#	Key Findings	Criticality Rating
3	Risk – ***Monitor and track project resourcing:*** *It is the nature of IT projects that resources can be onboarded/offboarded during the project's duration. Onboarding/offboarding impacts project areas such as team dynamics, project momentum, and productivity.*	Medium

Recommendations	Status
IV&V recommends that the HUI Huaka'i project • Monitor and track project resourcing as resources are onboarded/offboarded and the impact onboarding/offboarding has on areas such as team dynamics, team morale, project momentum, productivity, re-assignment of responsibilities, and knowledge transfer (KT). • Provides a Resource Management Plan.	**Closed**

Update(s)

12/31/2024
The project submitted the latest iteration of the Resource Management Plan to IV&V on 12/24/2024, and IV&V will review it.

11/30/2024
The project has added a part-time Project Manager (PM) and an additional Benefits Subject Matter Expert (SME). It is also planning to onboard another Tax SME and is in the process of hiring a junior Business Analyst (BA), a new Project Analyst for the Project Management Office (PMO), and a new Technical Lead. Additionally, the project has received approval for 5,000 contractor hours with the vendor, Guidehouse, for any required work. While these are positive developments for strengthening State-side resources, IV&V remains concerned that insufficient resources from the solution vendor could introduce significant risks.
(*continued on the next slide*)

IV&V Findings and Recommendations

Human Resource Staffing Management

Update(s)
10/31/2024 IV&V has reviewed the UI Solution Vendor's Resource Management Plan. DLIR/UI has hired three Unemployment Insurance Subject Matter Experts (SMEs)—a Benefits UI SME, a Tax UI SME, and an Appeals UI SME—along with a Behavioral Insights Analyst. IV&V remains concerned that the lack of sufficient resources in other areas may introduce several risks, such as reduced productivity and efficiency, quality compromises, employee burnout, and delayed time-to-market.
09/30/2024 The project has added three (3) new contractors that are going to initially assist with Appeals Requirements Gathering. IV&V is concerned that the lack of sufficient resources in other areas may introduce several risks: 1. Delays in Project Timeline: Key tasks may remain incomplete, resulting in overall project delays. 2. Resource Shortages: A lack of manpower could overburden existing team members, negatively impacting productivity and quality. 3. Scope Creep: Struggling to meet original goals may lead to scope changes that complicate timelines and budgets. 4. Lower Quality Deliverables: Insufficient skills and expertise may compromise the quality of work, affecting project success. 5. Increased Risk of Burnout: Existing staff may face burnout from increased workloads, leading to turnover and further resource challenges 6. Stakeholder Dissatisfaction: Delays or poor-quality outcomes can frustrate stakeholders, potentially damaging relationships and trust.
08/31/2024 The UI Solution Vendor is updating the Resource Management Plan. IV&V has not reviewed the final Resource Management Plan.

IV&V Findings and Recommendations

Scope Analysis

#	Key Findings	Criticality Rating
28	Risk – ***Incomplete Scope Limiting IV&V Reporting Capabilities:*** *IV&V cannot conduct a meaningful analysis of project scope due to missing data in several critical areas. Specifically, IV&V lacks:* *- An estimated percentage of RTM scope implemented,* *- The estimated percentage of testing completion for the current scope,* *- Dates and explanations for any scope changes.* *Without a finalized RTM and detailed testing dates, IV&V is unable to calculate these metrics. This data gap impedes a comprehensive assessment of project scope and health. The Hawaii UI PMO has indicated they are collaborating with the UI Solution Vendor to supply the necessary metrics, which are expected to be available for November reporting.* *As a result of insufficient RTM and testing information, IV&V cannot generate accurate estimates or track project scope effectively, likely resulting in an incomplete understanding of project progress and quality. This may lead to undetected scope issues or delayed identification of project health risks, potentially degrading project management effectiveness and stakeholder confidence.*	Medium

Recommendations	Status
IV&V recommends that the HUI Huaka'i project • Monitor and track project resourcing as resources are onboarded/offboarded and the impact onboarding/offboarding has on areas such as team dynamics, team morale, project momentum, productivity, re-assignment of responsibilities, and knowledge transfer (KT). • Provides a Resource Management Plan.	**Closed 1/28/2025**

IV&V Findings and Recommendations

L *Scope Analysis*

Update(s)
Closed 1/28/2025 This finding is now closed, as IV&V and the project team have reached a mutual understanding regarding the scope and metrics required for effective reporting. During this reporting period, productive discussions between IV&V, the UI PMO, the UI Solution Vendor, and ETS resulted in the identification of key metrics to support IV&V's analysis. These metrics include: • The estimated percentage of RTM scope implemented, • The estimated percentage of testing completion for the current scope, and • A list of dates and brief explanations for any solution scope reductions or expansions. The UI PMO confirmed that this information will be available for IV&V's January reporting period, ensuring alignment and clarity moving forward. The project has established a consistent process for communicating and providing these metrics to IV&V. **12/23/2024** During this reporting period and the latest HUI status report, they report that the RTM is both in progress, as it will remain throughout the entire SDLC, and also completed, that "the RTM now includes all current known requirements." According to the Project Decision Log, the schedule and RTM are slated to be finalized by 12/31. Recent observations from IV&V raise concerns about scope creep and project governance, which IV&V will continue to monitor (see Finding #4). **11/18/2024** As of 11.18, a finalized RTM and Testing schedule remain to be finalized. IV&V is unable to calculate these project reporting metrics effectively at this time. IV&V will continue to monitor.

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 a slight impact on 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

Artifacts reviewed during the reporting period:
December 2024 Project HUI Huaka'i Weekly Status Reports
Project Management Plan
CATCH and HI DLIR Cleansing Meeting Agendas for the weekly meetings in December 2024.
Data Cleansing meeting notes (sent by email) for the weekly meetings in December 2024
Ongoing UI Data Conversion_Weekly.docx
Development (Appeals) Features Backlog - Boards (azure.com)
Development (Benefits) Team Epics Backlog - Boards (azure.com)
DLIR Traceability Matrix Team Epics Backlog - Boards
Appeals Requirements Sessions agendas and Meeting Notes
Benefits Requirements Sessions agendas and Meeting Notes
Project Schedule
Data Conversion Plan
Decision Log
HI DLIR Data Scorecard 1.29.25
RAID Log

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.

Solutions that Matter