

JOSH GREEN, M.D.  
GOVERNOR



DEPT. COMM. NO. 100  
TOM KU  
ACTING CHIEF INFORMATION  
OFFICER

**OFFICE OF ENTERPRISE TECHNOLOGY SERVICES**

P.O. BOX 119, HONOLULU, HAWAII 96810-0119  
Ph: (808) 586-6000 | Fax: (808) 586-1922  
ETS.HAWAII.GOV

July 2, 2024

The Honorable Ronald D. Kouchi  
President of the Senate  
and Members of the Senate  
Thirty-Second State Legislature  
State Capitol, Room 409  
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki  
Speaker and Members of the  
House of Representatives  
Thirty-Second State Legislature  
State Capitol, Room 431  
Honolulu, Hawai'i 96813

Aloha Senate 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 10 days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawai'i, Department of Attorney General (AG), Child Enforcement Agency (CSEA).

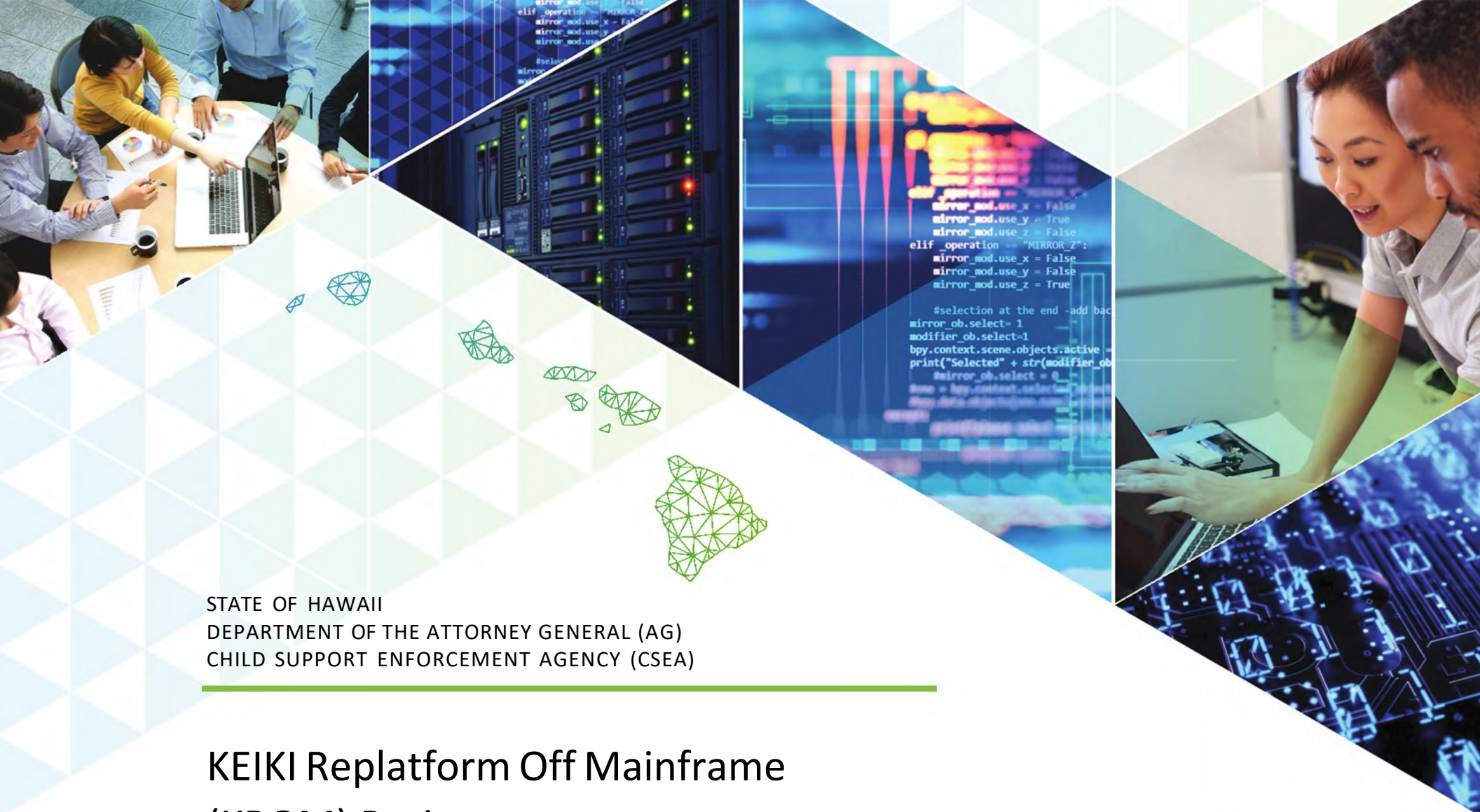
In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,

A handwritten signature in cursive script that reads "Tom Ku".

Tom Ku  
Acting Chief Information Officer  
State of Hawai'i

Attachment



STATE OF HAWAII  
DEPARTMENT OF THE ATTORNEY GENERAL (AG)  
CHILD SUPPORT ENFORCEMENT AGENCY (CSEA)

# KEIKI Replatform Off Mainframe (KROM) Project

MONTHLY IV&V REVIEW REPORT

May 31, 2024 | Version 1.0



An independent member of  
**bakertilly**  
INTERNATIONAL

# Table of Contents

## **EXECUTIVE SUMMARY**

Background	3
IV&V Dashboard	4
IV&V Summary	5

## **IV&V OBSERVATIONS**

Appendix A: IV&V Criticality and Severity Ratings	7
Appendix B: Industry Standards and Best Practices	9
Appendix C: Prior Findings Log	12
Appendix D: Comment Log on Draft Report	17

# Document History

DATE	DESCRIPTION	AUTHOR	VERSION
06/07/24	Monthly IV&V Review Report Draft created.	Julia Okinaka	0.0
06/25/24	Report draft was updated for minor edits and to make correction on page 6 which is also reflected in the Comment Log. Additional comments and responses were included in Appendix C which did not result in changes to the report.	Diana Dumitrascu	1.0

## BACKGROUND

The State of Hawaii (State), Department of Attorney General (AG), Child Support Enforcement Agency (CSEA) contracted Protech Solutions, Inc. (Protech) on October 2, 2023 to replatform the KEIKI System and provide ongoing operations support. Protech has subcontracted One Advanced and DataHouse to perform specific project tasks related to code migration, replatforming services, and testing. Department of AG contracted Accuity LLP (Accuity) to provide Independent Verification and Validation (IV&V) services for the project.

Our initial assessment of project health was provided in the first Monthly IV&V Review Report as of October 31, 2023. Monthly IV&V review reports will be issued through September 2024 and build upon the initial report to continually update and evaluate project progress and performance.

Our IV&V Assessment Areas include People, Process, and Technology. Each month we will select specific IV&V Assessment Areas to perform more focused IV&V activities on a rotational basis. The focus of our IV&V activities for this report included the completion of a two-month assessment of Technology and the beginning of a two-month assessment of Process.

The IV&V Dashboard and IV&V Summary provide a quick visual and narrative snapshot of both the project status and project assessment as of May 31, 2024. Ratings are provided monthly for each IV&V Assessment Area (refer to Appendix A: IV&V Criticality and Severity Ratings). The overall rating is assigned based on the criticality ratings of the IV&V Assessment Categories and the severity ratings of the underlying observations.

“The future  
TEAMWORK & PLANNING  
—depends on what—  
we do in the  
“Great things are  
present.”  
done by a series  
of SMALL THINGS  
- Mahatma Gandhi  
brought  
TOGETHER.”  
TESTING  
- Vincent Van Gogh—

# PROJECT ASSESSMENT

MAY 2024

## SUMMARY RATINGS OVERALL RATING



Minimal deficiencies were observed. Oversight may be needed to ensure risks stay low and project remains on track.

PEOPLE



PROCESS



TECHNOLOGY



CRITICALITY RATINGS



HIGH



MEDIUM

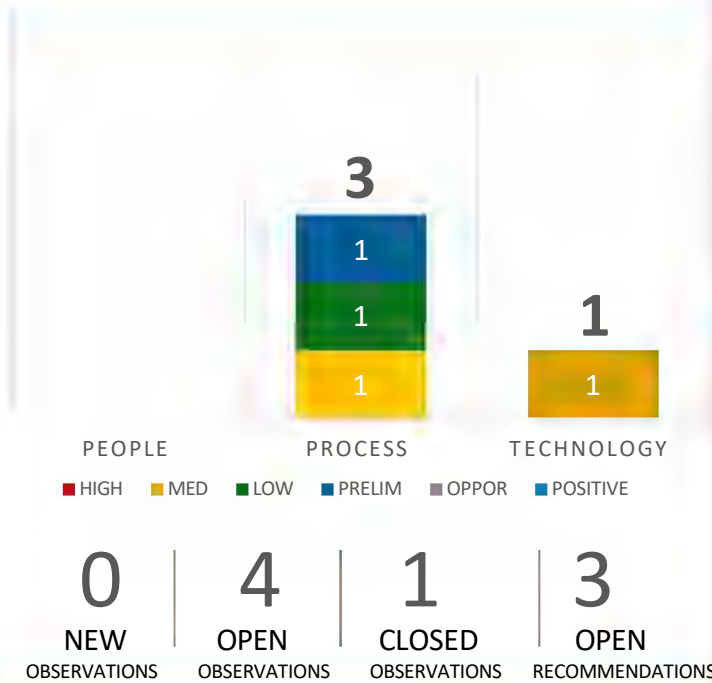


LOW

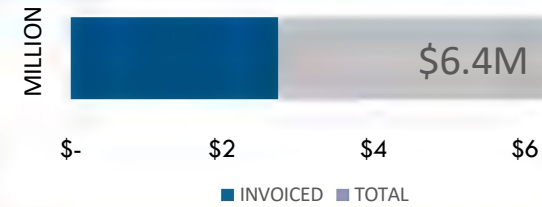


N/A

## IV&V OBSERVATIONS



## PROJECT BUDGET\*



\* Only includes contracts. IV&V unable to validate total budget.

## PROJECT PROGRESS



## KEY PROGRESS & RISKS

- The project team's collaboration and shared commitment to resolve issues timely are helping the project move forward and preventing further overall project delays.
- Protech delivered a draft of the replanned project schedule and analysis for CSEA's feedback and approval.
- Pre-delivery testing on the initial KEIKI application build is on target to be completed in June 2024.
- Protech postponed the testing overview presentation to June which will explain how the project's testing will ensure the new system and user interface maintain the same functionality as the old system.



\*\* IV&V unable to validate the progress percentage of the schedule as it does not include all project activities.



## Overall

The project team’s collaboration and shared commitment to resolve issues timely are helping the project move forward and preventing any further delays in the overall project schedule. The initial build of the KEIKI application is targeted for completion in June 2024. Pre-delivery testing is another important project milestone as it evaluates the accuracy of the new converted application and identifies any code modules that lost functionality after conversion.

**Project Schedule:** The overall project end date and Go-Live date continues to show a 17-day variance which is within CSEA’s acceptable threshold (2024.03.002). Protech delivered a draft of the replanned project schedule and analysis for CSEA’s feedback and approval. The revised schedule maintains the original Go-Live date. CSEA’s independent review of the schedule analysis is pending.

**Project Costs:** Contract invoices received to-date are within total contract costs. The CSEA Project Manager should establish a process to review payment schedules for changes in deliverable timelines (2023.10.002 and 2024.03.002).

**Quality:** For Pre-delivery testing, 100% of the test scripts were attempted and 80% of the test scripts passed showing incremental improvements. Test scripts could fail for various reasons including data, logic, or coding. The project will start more robust reporting on test and defect metrics when system testing begins in June (2024.01.001).







**Project Success:** The CSEA Project Manager presented some of the project's key success metrics including minimum downtime during migration, data integrity and loss prevention, functional integrity, and compliance and security (2024.01.001).



## People

Team, Stakeholders, & Culture

- The Monthly Steering Committee (ESC) convened in May, and the CSEA Project Manager played an active role in presenting project risks and key success metrics (2023.10.002 and 2024.03.002).
- Project team members are working collaboratively to make progress in the pre-delivery testing phase. They are actively addressing questions and issues that arise during the testing process.
- The expertise and commitment of the project team, including Enterprise Technology Services, to ensure project deliverables are meeting quality standards and project requirements are contributing to the project’s positive progress.
- CSEA continues to meet with external Departments and will work with Protech to identify external project stakeholders and communication activities starting in June 2024.

			<p><b>Process Approach &amp; Execution</b></p>	<ul style="list-style-type: none"> <li>• Protech delivered a draft of the replanned project schedule and analysis for CSEA’s approval (2023.10.002 and 2024.03.002). The revised schedule maintains the original Go-Live date; however, the project may change the Go-Live date to a 3-day weekend to minimize operational impacts.</li> <li>• The project managers have recurring meetings dedicated to discussing the schedule. CSEA’s independent review of the schedule analysis is pending.</li> <li>• The project continues to make progress on deliverables. The Code and Data Conversion Plan and Acceptance Test Plan were updated to incorporate CSEA comments and approved. The Disaster Recovery Plan was submitted and is under CSEA review.</li> <li>• Risks continue to be logged and actively discussed during weekly risk meetings.</li> <li>• Protech’s testing approach presentation was pushed back to June to explain how the project’s testing will ensure the new system and user interface maintain the same functionality as the old system (2024.02.001). The presentation is critical as system testing begins in June.</li> <li>• The CSEA Project Manager presented some of the project's key success metrics at the May Steering Committee Meeting. The project started reporting on high-level pre-delivery testing metrics in May and plans on producing more robust system testing metrics (2023.10.002 and 2024.01.001).</li> </ul>
			<p><b>Technology System, Data, &amp; Security</b></p>	<ul style="list-style-type: none"> <li>• Pre-delivery testing on the initial build of the KEIKI application is in progress with 15 online test scripts and 1 batch test script included in the test cycle. The purpose of pre-delivery testing is to ensure that the converted KEIKI application is functioning the same way as the original application so comprehensive system testing can begin. The project team is working together to address any failed scripts and resolve issues encountered.</li> <li>• The user interface (UI) refinement requirements and plan are delayed and expected in late July. The UI environment now has data and a functioning application, so Protech can focus on validating the UI refinement approach, develop a proof of concept, and create the UI Refinement Plan.</li> <li>• Protech has delivered the UI test scripts. The final UI test scripts were delivered on May 22<sup>nd</sup>, 2024.</li> <li>• The project built the test environment to support the upcoming system testing. It consists of the web server, app server, database server. The project is on schedule to begin system testing in June.</li> <li>• CSEA performed an initial vulnerability scan on the application database. A template was developed to report on the status and remediation plan for all future scans and vulnerabilities.</li> <li>• Regular technical meetings began in May to discuss current and upcoming technical activities, including the AWS test environment build and system vulnerability management.</li> <li>• In May, CSEA held its monthly meeting with other Departments to obtain updates on their respective system modernization efforts (2024.03.001). Protech reminded Departments to keep CSEA informed of their cyberfusion status so file interfaces are converted and tested appropriately.</li> </ul>



# Appendix A: IV&V Criticality and Severity Ratings

## IV&V CRITICALITY AND SEVERITY RATINGS

Criticality and severity ratings provide insight on where significant deficiencies are observed and immediate remediation or risk mitigation is required. Criticality ratings are assigned to the overall project as well as each IV&V Assessment Area. Severity ratings are assigned to each risk or issue identified.

### Criticality Rating

The criticality ratings are assessed based on consideration of the severity ratings of each related risk and issue within the respective IV&V Assessment Area, the overall impact of the related observations to the success of the project, and the urgency of and length of time to implement remediation or risk mitigation strategies. Arrows indicate trends in the project assessment from the prior report and take into consideration areas of increasing risk and approaching timeline. Up arrows indicate adequate improvements or progress made. Down arrows indicate a decline, inadequate progress, or incomplete resolution of previously identified observations. No arrow indicates there was neither improving nor declining progress from the prior report.

### TERMS

#### RISK

An event that has not happened yet.

#### ISSUE

An event that is already occurring or has already happened.



A **RED**, high criticality rating is assigned when significant severe deficiencies were observed, and immediate remediation or risk mitigation is required.



A **YELLOW**, medium criticality rating is assigned when deficiencies were observed that merit attention. Remediation or risk mitigation should be performed in a timely manner.



A **GREEN**, low criticality rating is assigned when the activity is on track and minimal deficiencies were observed. Some oversight may be needed to ensure the risk stays low and the activity remains on track.



A **GRAY** rating is assigned when the category being assessed has incomplete information available for a conclusive observation and recommendation or is not applicable at the time of the IV&V review.

**TERMS**

**POSITIVE**  
Celebrates high performance or project successes.

---

**PRELIMINARY CONCERN**  
Potential risk requiring further analysis.

### Severity Rating

Once risks are identified and characterized, Accuity will examine project conditions to determine the probability of the risk being identified and the impact to the project, if the risk is realized. We know that a risk is in the future, so we must provide the probability and impact to determine if the risk has a Risk Severity, such as Severity 1 (High), Severity 2 (Moderate), or Severity 3 (Low).

While a risk is an event that has not happened yet, an issue is something that is already occurring or has already happened. Accuity will examine project conditions and business impact to determine if the issue has an Issue Severity, such as Severity 1 (High/Critical Impact/System Down), Severity 2 (Moderate/Significant Impact), or Severity 3 (Low/Normal/Minor Impact/Informational).

Observations that are positive, preliminary concerns, or opportunities are not assigned a severity rating.



**SEVERITY 1:** High/Critical level



**SEVERITY 2:** Moderate level



**SEVERITY 3:** Low level

## Appendix B: Industry Standards and Best Practices

STANDARD	DESCRIPTION
<b>ADA</b>	Americans with Disabilities Act
<b>ADKAR®</b>	Prosci ADKAR: Awareness, Desire, Knowledge, Ability, and Reinforcement
<b>BABOK® v3</b>	Business Analyst Body of Knowledge
<b>DAMA-DMBOK® v2</b>	DAMA International's Guide to the Data Management Body of Knowledge
<b>PMBOK® v7</b>	Project Management Institute (PMI) Project Management Body of Knowledge
<b>SPM</b>	PMI The Standard for Project Management
<b>PROSCI ADKAR®</b>	Leading organization providing research, methodology, and tools on change management practices
<b>SWEBOK v3</b>	Guide to the Software Engineering Body of Knowledge
<b>IEEE 828-2012</b>	Institute of Electrical and Electronics Engineers (IEEE) Standard for Configuration Management in Systems and Software Engineering
<b>IEEE 1062-2015</b>	IEEE Recommended Practice for Software Acquisition
<b>IEEE 1012-2016</b>	IEEE Standard for System, Software, and Hardware Verification and Validation
<b>IEEE 730-2014</b>	IEEE Standard for Software Quality Assurance Processes
<b>ISO 9001:2015</b>	International Organization for Standardization (ISO) Quality Management Systems – Requirements
<b>ISO/IEC 25010:2011</b>	ISO/International Electrotechnical Commission (IEC) Systems and Software Engineering – Systems and Software Quality Requirements and Evaluation (SQuaRE) – System and Software Quality Models
<b>ISO/IEC 16085:2021</b>	ISO/IEC Systems and Software Engineering – Life Cycle Processes – Risk Management
<b>IEEE 16326-2019</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Project Management
<b>IEEE 29148-2018</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Requirements Engineering

STANDARD	DESCRIPTION
<b>IEEE 15288-2023</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – System Life Cycle Processes
<b>IEEE 12207-2017</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Software Life Cycle Processes
<b>IEEE 24748-1-2018</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 1: Guidelines for Life Cycle Management
<b>IEEE 24748-2-2018</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 2: Guidelines for the Application of ISO/IEC/IEEE 15288 (System Life Cycle Processes)
<b>IEEE 24748-3-2020</b>	IEEE Guide: Adoption of ISO/IEC TR 24748-3:2011, Systems and Software Engineering – Life Cycle Management – Part 3: Guide to the Application of ISO/IEC 12207 (Software Life Cycle Processes)
<b>IEEE 14764-2021</b>	ISO/IEC/IEEE International Standard for Software Engineering – Software Life Cycle Processes – Maintenance
<b>IEEE 15289-2019</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Content of Life Cycle Information Items (Documentation)
<b>IEEE 24765-2017</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Vocabulary
<b>IEEE 26511-2018</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Requirements for Managers of Information for Users of Systems, Software, and Services
<b>IEEE 23026-2015</b>	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Engineering and Management of Websites for Systems, Software, and Services Information
<b>IEEE 29119-1-2021</b>	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 1: Concepts and Definitions
<b>IEEE 29119-2-2021</b>	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 2: Test Processes
<b>IEEE 29119-3-2021</b>	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 3: Test Documentation
<b>IEEE 29119-4-2021</b>	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 4: Test Techniques
<b>IEEE 1484.13.1-2012</b>	IEEE Standard for Learning Technology – Conceptual Model for Resource Aggregation for Learning, Education, and Training
<b>ISO/IEC TR 20000-11:2021</b>	ISO/IEC Information Technology – Service Management – Part 11: Guidance on the Relationship Between ISO/IEC 20000-1:2011 and Service Management Frameworks: ITIL®
<b>ISO/IEC 27002:2022</b>	Information Technology – Security Techniques – Code of Practice for Information Security Controls

STANDARD	DESCRIPTION
<b>FIPS 199</b>	Federal Information Processing Standard (FIPS) Publication 199, Standards for Security Categorization of Federal Information and Information Systems
<b>FIPS 200</b>	FIPS Publication 200, Minimum Security Requirements for Federal Information and Information Systems
<b>NIST 800-53 Rev 5</b>	National Institute of Standards and Technology (NIST) Security and Privacy Controls for Federal Information Systems and Organizations
<b>NIST Cybersecurity Framework v1.1</b>	NIST Framework for Improving Critical Infrastructure Cybersecurity
<b>LSS</b>	Lean Six Sigma



## Appendix C: Prior Findings Log

Appendix C: Prior Findings Log

ASSESSMENT AREA	OBSERVATION ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	OBSERVATION	ANALYSIS	RECOMMENDATIONS	STATUS	STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Technology	2024.03.001	Risk	Moderate	Moderate	The timing of other State of Hawaii modernization projects impacts the ability to properly design KEIKI system interfaces and will necessitate the need for interface modifications after its deployment, which can lead to additional costs, delays, and disruption to the system.	<p>CSEA's KEIKI system currently relies on a legacy cyberfusion system running on the State's mainframe for system file and data exchanges with multiple State of Hawaii agencies. The timing of multiple agencies moving off the mainframe at different times will result in the need to modify KEIKI system interfaces after the system has been deployed. Until other State modernization projects are completed, the KEIKI project cannot perform server-based data exchanges and will need to continue to interface via the mainframe.</p> <p>In addition, as the KEIKI project involves integrating a modernized child support system with existing legacy systems, there may be other technological and architectural gaps that arise. These gaps can include differences in technology stacks, such as programming languages, database systems, and operating environments, as well as the absence of modern application programming interfaces (APIs) in the legacy systems. Based on the timing of concurrent State of Hawaii modernization projects and upgrades, the end-to-end testing of the KEIKI system may necessitate the undertaking of supplementary tasks, allocation of additional resources, and coordination efforts.</p>	<p>2024.03.001.R1 – CSEA should coordinate regular meetings with impacted State of Hawaii agencies.</p> <ul style="list-style-type: none"> <li>Roles, responsibilities, expectations and interface requirements should be clearly defined to ensure information and project status is proactively communicated for the various modernization efforts.</li> </ul> <p>2024.03.001.R2 – The projects should properly plan for interfaces so that they are flexible enough to accommodate future changes and are compatible with other agencies.</p> <ul style="list-style-type: none"> <li>Clearly identify all the interfaces that the system will interact with and how they will communicate.</li> <li>Develop interfaces and data structure that are flexible enough to accommodate changes to the interfaces.</li> <li>Detailed testing will be required as the various departments upgrade their systems to ensure compatibility.</li> </ul>	Open	<p>04/30/24: CSEA organized a meeting with other Departments in April to exchange information regarding the status of their respective system modernization efforts, specifically those related to the shared mainframe and dependencies.</p> <p>IV&amp;V will continue to monitor the coordination with other State of Hawaii modernization projects.</p>		
Process	2024.03.002	Issue	Moderate	Moderate	Inadequate schedule and resource management practices may lead to project delays, missed project activities, unrealistic schedule forecasts, or unidentified causes for delays.	<p>The overall project end date and Go-Live date is projecting a 17-day variance due to the delay in the assessment validation which was completed in February. It is crucial for the Protech and CSEA project managers to both take active roles in tracking and monitoring project activities, especially delayed and upcoming tasks, to collaborate on ways to get the project back on track.</p> <p>Although the project metrics are showing a 17-day variance, some project tasks are delayed 1 to 2 months from the approved baseline including building the KEIKI database, developing system test scripts, UI design, UI development, code conversion, system test execution, etc. CSEA should have a clear understanding of the impact of delays on the overall timeline and validate the 17-day schedule variance.</p>	<p>2024.03.002.R1 – Based on the complexity of the KEIKI project, review and refine the schedule regularly with detailed tasks, realistic durations, and adequate resources.</p> <ul style="list-style-type: none"> <li>The project managers should meet weekly to discuss the project schedule, continue to identify detailed-level tasks based on high-level timelines, and identify schedule and resource related risks.</li> <li>The CSEA project manager should conduct independent reviews of the schedule and project metrics, proactively communicate upcoming State tasks to CSEA stakeholders, create State specific detailed schedules, and communicate any concerns with the quality of vendor execution.</li> <li>The Protech project manager should be executing tasks based on the approved schedule, identify schedule variances, ensure all project resources are on track, and report on quality and project metrics to ensure the project is meeting its objectives and goals.</li> </ul>	Open	<p>04/30/24: Project managers started meeting regularly to review the project schedule. The project managers will do a deeper analysis of the upcoming technical tasks, and then recalibrate the project schedule in May.</p> <p>IV&amp;V will continue to monitor progress made on schedule and resource management practices.</p>		

ASSESSMENT AREA	OBSERVATION ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	OBSERVATION	ANALYSIS	RECOMMENDATIONS	STATUS	STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Process	2024.02.001	Preliminary	N/A	N/A	Additional information is needed regarding Protech's program development and testing approach.	<p>In February, Protech delivered the System Requirements Document and Test Plan which are still under review. CSEA already provided a number of comments for both deliverables requesting additional clarification or additional documentation. Both deliverables do not provide sufficient understanding of Protech and One Advanced's approach for the program development and testing phase. There needs to be a clearer mutual understanding of how Protech's development and testing approach will ensure that the new system and user interface will maintain the same functionality, data, and system interfaces as the old system. The System Requirements Definition deliverable is high-level documentation of items such as source code, data component, and interface tables but does not actually capture the required functionality using industry standard format for requirements. Documenting requirements is especially important for the development of the new front-end user interface (UI). The System Requirements Definition deliverable included a User Interface section but does not include sufficient information regarding UI requirements. Protech has another UI Refinement plan deliverable due in May 2024, however, it is unclear if UI requirements will be included in that deliverable.</p> <p>If system requirements will not be used to manage development of UI as well as replatforming and refactoring of code work, then it is important to understand how Protech and One Advanced are planning to manage and report on development progress. Additionally, without documented system requirements, testing will be even more critical for identifying gaps in or issues with functionality during the development process. CSEA also has a number of comments and questions on the Protech Test Plan deliverable. In addition to the System Test Plan, Protech is developing an Acceptance Test Plan (UAT Plan) deliverable due in April 2024 which may help to provide additional clarification of the comprehensive testing strategy and delineation of testing responsibilities between Protech and CSEA.</p> <p>CSEA plans to work with Protech to clarify and refine both deliverables. IV&amp;V will continue to monitor this preliminary concern as additional information is discovered.</p>	N/A for preliminary concerns	Open	<p>03/31/24: Protech is planning on a presentation in April or May to explain how their testing approach will ensure that the new system and user interface will maintain the same functionality as the old system. Without documented requirements, it is still unclear how program development progress, testing, and acceptance will be managed and monitored.</p> <p>04/30/24: Protech will present their testing approach in May. The presentation is important as test scripts are finalized, and system testing is approaching.</p> <p>IV&amp;V will continue to monitor the clarification of the program development and testing approach.</p>		
Process	2024.01.001	Risk	Moderate	Moderate	Ineffective project status meetings and reports can lead to delayed decision-making, lack of accountability, and reduced morale.	<p>Weekly status reports are provided with a dashboard of the project status, high level schedule, late tasks, tasks planned this week, open tasks, 30-day look ahead, deliverable status, risks log, key decisions, change requests, and other project information. Despite numerous data points, the weekly project status reports may not give a complete picture of the project's progress. To get a better understanding of any delays, risks, issues, or action items, additional research and analysis of past reports, review of the Microsoft Project schedule, and inquiry with project members is necessary. For example, late project deliverables may be listed as simply "in progress"; however, one is unable to determine how many additional days the deliverable was pushed back without checking the previous weekly status report and the reason for additional time is not discussed or disclosed.</p>	<p>CLOSED: 2024.01.001.R1 – CSEA should play an active role in refining the project status report and providing topics for weekly project meetings.</p> <ul style="list-style-type: none"> <li>Contribute to the improvement of project meetings and reports that actively engage team members and highlight key information relevant to the audience to promote problem-solving and constructive dialogue.</li> <li>CSEA could solicit feedback prior to meetings so the team can be prepared to ask questions or discuss relevant project topics.</li> </ul> <p>CLOSED: 2024.01.001.R2 – Set clear objectives for meetings and provide concise and relevant information that adds value.</p> <ul style="list-style-type: none"> <li>Meetings and reports without clear objectives can quickly turn into a one-way status update without any meaningful discussion or clear understanding of project status, risks, and issues.</li> <li>Provide reports that are concise, relevant and clear to the audience. Only include charts and tables that provide value and present data in a format that helps provide meaningful information to move the team forward.</li> </ul> <p>2024.01.001.R3 - Additional quality metrics and project success metrics should be added to project status reports.</p>	Open	<p>02/29/24: A new recommendation was added and two recommendations were closed. Two recommendations were closed as CSEA and Protech worked together to improve project status reports to be more clear, meaningful, and relevant to the audience. The streamlined status reports are facilitating greater understanding and allowing more time for meaningful discussion amongst project stakeholders.</p> <p>03/31/24: Although improvements were made to project status reports, they could be further improved by outlining delayed tasks and upcoming activities to ensure stakeholders are adequately prepared. CSEA continued to refine success metrics to prepare for reporting which will begin next month.</p> <p>04/30/24: Project status reports continue to be refined and now clearly report tasks that have been rescheduled from the previous week's reporting period. CSEA did not start reporting on success metrics in April as planned.</p> <p>IV&amp;V will continue to assess the effectiveness of project status reports and meetings.</p>		

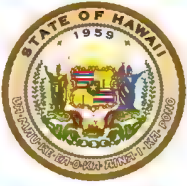



ASSESSMENT AREA	OBSERVATION ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	OBSERVATION	ANALYSIS	RECOMMENDATIONS	STATUS	STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Process	2023.10.002	Risk	Prelim	Moderate	Untimely project management responsibilities may impact effective project execution.	<p>The Protech Project Manager provided a draft project schedule; however, it was incomplete and listed due dates that were already missed for several deliverables. The implementation of strong schedule and resource management practices early will help the project start off right and stay on track. Protech's Project Manager is experienced with similar implementations and is working collaboratively with the project team to address feedback.</p> <p>Possible root causes or contributing factors are turnover of project managers, an aggressive project timeline, and need for additional project management support. Another possible root cause is Protech's need to revisit the project RFP and submitted proposal to reduce the misalignment of expectations, creating longer deliverable review cycles.</p> <p>Feedback on preliminary deliverables does not appear to be adequately addressed. For example, the need for a resource loaded schedule was communicated verbally and in meetings repeatedly.</p>	<p>CLOSED: 2023.10.002.R1 – Improve the project schedule to address schedule comments.</p> <ul style="list-style-type: none"> <li>Develop a detailed plan with assigned resources to complete project tasks.</li> <li>Provide the appropriate detail of tasks, durations, due dates, milestones, and key work products for various parties. CSEA assigned tasks should also be clearly reflected in the project schedule.</li> <li>Obtain agreement on the baseline schedule and then hold parties accountable for tasks and deadlines.</li> </ul> <p>CLOSED: 2023.10.002.R2 – Determine the root causes of delays and develop plans to address them.</p> <ul style="list-style-type: none"> <li>Perform a root cause analysis including defining the problem, brainstorming possible causes, and developing a plan to address the root cause of the problem such as resource constraints and undefined tasks.</li> <li>Based on the experience of the last two months, create a realistic schedule based on the time and resources needed to perform tasks.</li> </ul> <p>CLOSED: 2023.10.002.R3 – Assess the need for additional Protech resources for project management support.</p> <p>2023.10.002.R4 – Have the CSEA and Protech Project Managers adopt a more joint, collaborative approach.</p> <ul style="list-style-type: none"> <li>Have the PMs clearly define their roles and responsibilities in project management responsibilities.</li> <li>Actively plan, share and execute project responsibilities.</li> </ul>	Open	<p>11/30/23: This was originally reported in the October 2023 IV&amp;V Monthly Report as a preliminary concern but was upgraded to and rewritten as a risk this month with recommendations. The project is still challenged with insufficiently updating deliverables and continued delays in the proposed project schedule.</p> <p>12/31/23: Acuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate). More rigor on foundational project management practices is needed to prevent further delays and increase the quality of project execution. The approved project schedule still lacks detailed tasks to adequately plan project resources and monitor project performance. Although the project schedule has some percentage completion, the process to monitor and calculate metrics is unclear.</p> <p>01/31/24: Despite several meetings, there is still a need for a greater shared understanding of schedule concerns between Protech and CSEA. This risk will continue to be evaluated with the recent addition of Protech resources to improve the timeliness of project execution, a recommendation was added that project managers can adopt a more joint, collaborative approach to share and clearly delineate project management responsibilities.</p> <p>02/29/24: The project schedule does not include all project tasks and is being updated to include more granular-level project activities. One recommendation was closed as Protech added additional project management resources.</p> <p>03/31/24: Closed two recommendations as a new, separate observation with recommendations related to schedule and resource management was opened. Refer to observation 2023.03.002. Project managers should prioritize working closely together to assess upcoming activities, the impact of project delays, and determine if any changes are needed to the overall project timeline.</p> <p>04/30/24: The CSEA project manager still needs to independently validate the variance and critical path. For monthly steering committee and project status meetings, it would be beneficial for CSEA to take a more active role in communicating their perspective on project progress to stakeholders.</p> <p>IV&amp;V will continue to assess project management responsibilities.</p>		
Technology	2023.12.001	Positive	Moderate	N/A	The Automated Application Assessment process was well planned and executed.	Protech's partner, Advanced, worked closely with CSEA's technical SMEs and outlined a clear, well-defined process to collect and assess the KEIKI mainframe application in preparation for the migration and code conversion. Advanced's weekly status updates and follow-ups helped all stakeholders understand their roles, responsibilities, outstanding tasks, and status of activities. Their final assessment report was comprehensive, data-driven and insightful, and prepared the project team well as they begin the next phase of legacy code and data system migration.	N/A	Closed	N/A	01/31/24	Closed as this is a positive observation.

ASSESSMENT AREA	OBSERVATION ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	OBSERVATION	ANALYSIS	RECOMMENDATIONS	STATUS	STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Technology	2023.11.001	Risk	Moderate	Moderate	Complex data system migration requirements, combined with incomplete documentation and the absence of a formalized process for non-code tasks, may lead to project delays, unmet contract requirements, and quality issues.	<p>Data system migration and mapping can be complex and cause project delays if not properly planned and managed. The KEIKI system's incomplete documentation and multitude of jobs, workflows, interfaces, and interface files pose a risk of overlooking certain elements, making it challenging to track and validate migration requirements.</p> <p>The project lacks a formalized process for non-code tasks in the data system requirements collection, migration, and validation activities. The project has a formalized process for application code migration but lacks a clear process for gathering non-code and ancillary elements including hardware, software, interfaces, and batch files. The absence of a separate, formalized process and reliance on manual processes using Excel worksheets may result in data loss, poor quality, and technical issues affecting system performance and user experience.</p> <p>The SI's waterfall approach requires upfront gathering and definition of all requirements in a linear sequence. Late identification of data system migration requirements may result in insufficient time or budget to execute the migration properly.</p>	<p>2023.11.001.R1 – Develop separate formalized data system migration plans and processes for non-code elements.</p> <ul style="list-style-type: none"> <li>A separate implementation plan should be clearly outlined, determining the timeline, tasks, tools, and resources needed to perform these activities.</li> <li>Develop a formalized data migration acceptance process for the remaining cycles with defined acceptance criteria.</li> <li>Determine what validation is needed by other agencies and stakeholders that rely on CSEA's Keiki system and outputs.</li> </ul> <p>2023.11.001.R2 – Investigate automated tools for tracking and validating data system requirements.</p> <ul style="list-style-type: none"> <li>Automated data validation should be investigated to help identify missing elements, increase data accuracy, and alleviate resource constraints.</li> </ul> <p>2023.11.001.R3 – Ensure data system requirements are comprehensive and complete upfront.</p> <ul style="list-style-type: none"> <li>Given the waterfall approach, schedule and resource considerations should be given to increasing system requirement gathering upfront.</li> <li>The project managers should ensure greater coordination of project information needed for requirements management and tracking.</li> <li>Consider an iterative approach for non-code migration activities, which allows for several rounds of review and validation.</li> </ul> <p>2023.11.001.R4 – Appoint dedicated Data System Migration Leads from both Protech and CSEA.</p> <ul style="list-style-type: none"> <li>Consider identifying dedicated leads to assist with analyzing the existing data environment, identifying data migration requirements, supporting the migration process, troubleshooting issues that arise, and coordinating tasks with Protech, Advanced, Datahouse, and CSEA.</li> </ul>	Closed	12/31/23: CSEA appointed two dedicated Data System Migration Leads. It is unclear if Protech also appointed a dedicated lead. A clear plan is still missing, and CSEA documented a formal issue related to the lack of information coordination and redundant requests related to the data system migration requirements.  01/31/24: Risk closed as the inventory of non-code and ancillary elements including hardware, software, interfaces, and batch files was completed and will be validated as part of the technical architecture and system requirements documentation.	01/31/24	Risk closed as the inventory of non-code and ancillary elements was completed.
People	2023.10.001	Positive	N/A	N/A	The project team members are engaged and the environment between Protech and CSEA is collaborative.	The CSEA SMEs appear to be engaged in ongoing Assessment sessions and accountable for timely completing required tasks, providing information, and responding to questions. The project team members regularly seek feedback, input, and clarification in an open and respectful manner. The experience and knowledge of Protech team members combined with the dedication and high level of engagement from CSEA SMEs support the positive project team environment.	N/A	Closed	N/A	11/30/23	Closed as this is a positive observation.

## Appendix D: Comment Log on Draft Report

# Comment Log on Draft Report

KROM Project: IV&V Document Comment Log				
				
ID #	Page #	Comment	Commenter's Organization	Accuity Resolution
1				
2	6 - Process	The testing overview presentation is not a "critical" activity. The overview is being done to present DDI's approach to testing and to increase CSEAs understanding of the testing approach.	Protech	Statement from Protech regarding the classification of the testing overview presentation as a non-critical activity is noted. The testing presentation is key to aligning expectations and ensuring the new system meets functionality standards before testing begins in June. No changes were made to the May IV&V report.
3	6 Technology	The term comprehensive describes testing differently from what is described in the System Test Plan.	Protech	Statement from Protech regarding the use of pre-delivery testing was noted. The term "comprehensive" as used in this report refers to the thoroughness of the testing phase, ensuring the converted KEIKI application functions as intended before extensive system testing begins. No changes were made to the report, as the statement aligns with the System Test Plan's description of the testing process. However, to avoid any confusion, we clarify that pre-delivery testing is an initial phase within the broader system testing strategy outlined in the System Test Plan.
4	6 Technology	The final UI test scripts were delivered on May 22 <sup>nd</sup> (Group 7).	Protech	Report updated in version 1.0 to reflect that the final UI test scripts were delivered on May 22 <sup>nd</sup> .
5	6 Technology	The test environment build was completed in May. It consists of the web server, app server, database server.	Protech	Report updated to reflect that the test environment was completed, and it consists of the web server, app server, and database server.
6				



FIRST HAWAIIAN CENTER

Accuity LLP

999 Bishop Street

Suite 2300

Honolulu, Hawaii 96813

P 808.531.3400

F 808.531.3433

[www.accuityllp.com](http://www.accuityllp.com)



Accuity LLP is an independent member of Baker Tilly International. Baker Tilly International Limited is an English company. Baker Tilly International provides no professional services to clients. Each member firm is a separate and independent legal entity, and each describes itself as such. Accuity LLP is not Baker Tilly International's agent and does not have the authority to bind Baker Tilly International nor act on Baker Tilly International's behalf. None of Baker Tilly International, Accuity LLP, nor any of the other member firms of Baker Tilly International has any liability for each other's acts or omissions. The name Baker Tilly and its associated logo are used under license from Baker Tilly International Limited.

© 2024 Accuity LLP. This publication is protected under the copyright laws of the United States and other countries as an unpublished work. All rights reserved.