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STATE OF HAWAIʻI | *KA MOKUʻĀINA O HAWAIʻI*
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA 'OIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KEʻENA HOʻOLANA 'ENEHANA*

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

September 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 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,

Christine M. Sakuda
Chief Information Officer
State of Hawaiʻi

Attachments (2)

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

July 31, 2025 | Version 1.0

ACCUITY

An independent member of bakertilly INTERNATIONAL

Table of Contents

Document History

DATE	DESCRIPTION	AUTHOR	VERSION
8/11/25	Monthly IV&V Review Report Draft created.	Michelle Muraoka and Dawn Rose	0.0
9/2/25	Monthly IV&V Review Report has been finalized. Comments and responses have been included in Appendix D and incorporated into the report as indicated.	Michelle Muraoka and Dawn Rose	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. The agreement with DataHouse was terminated in February 2025. The 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 August 2025 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. 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 July 31, 2025. 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.

FACING CHALLENGES

"Obstacles don't have to stop you. If you run into a wall, don't turn around and give up. Figure out how to *climb it, go through it*, or *work around it.*"

- Michael Jordan

PROJECT ASSESSMENT

July 2025

SUMMARY RATINGS

OVERALL RATING

Y

Deficiencies were observed that merit attention. Remediation or risk mitigation should be performed in a timely manner.

PEOPLE G

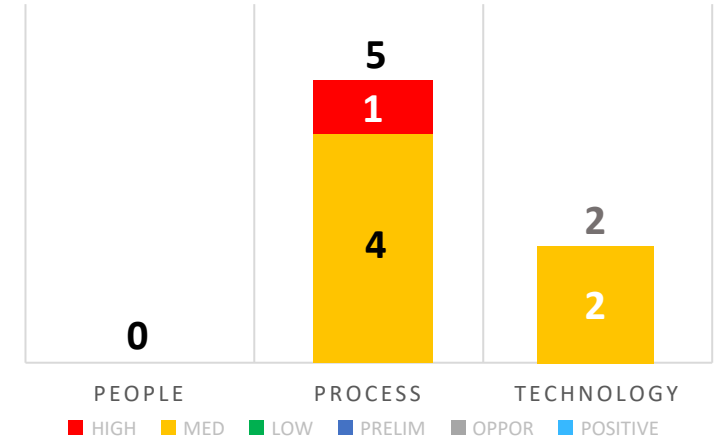
PROCESS Y

TECHNOLOGY Y

CRITICALITY RATINGS

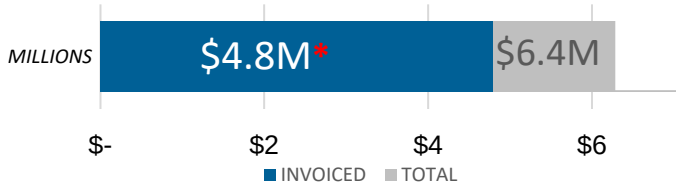
R	Y	G	NA
HIGH	MEDIUM	LOW	N/A

IV&V OBSERVATIONS



0	7	1	10
NEW OBSERVATIONS THIS MONTH	OPEN OBSERVATIONS TOTAL	CLOSED OBSERVATIONS THIS MONTH	OPEN RECOMMENDATIONS TOTAL

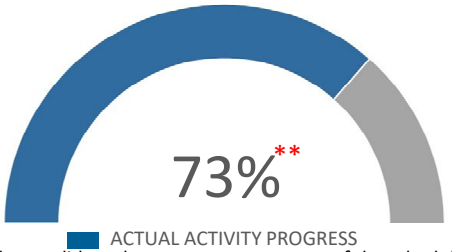
PROJECT BUDGET *



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

PROJECT PROGRESS

(Percent of the weighted duration of total tasks)



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

KEY PROGRESS & RISKS

Key Progress:

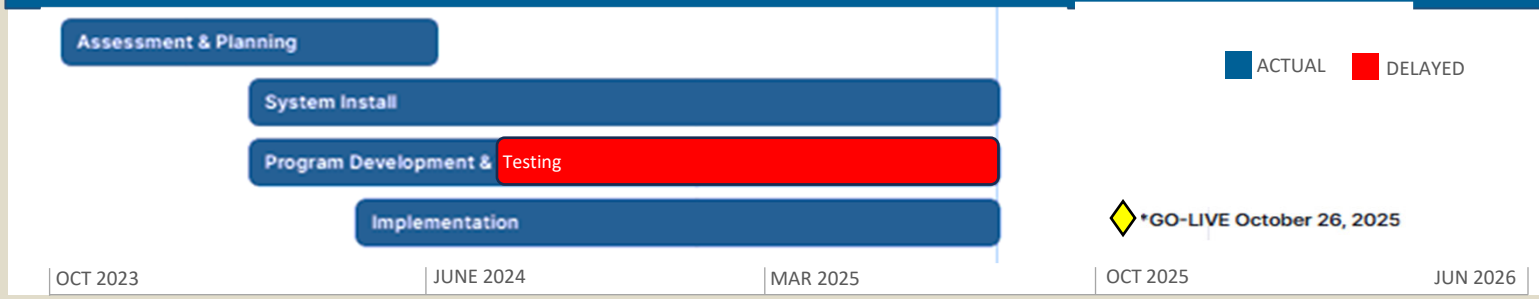
- Batch testing is 94% complete.
- CSEA has received an updated project schedule and is currently reviewing the proposal.
- Check validation printing has been confirmed as successfully tested.
- The defect classification terminology has been updated and accepted. Alignment concerns have been addressed.
- ProTech completed their responses to the SIT review comments. CSEA is working to complete their 2nd round of reviews.
- CSEA accepted the hybrid method for performing data extracts. IV&V still awaiting documented verification.

Key Risks:

- There is an 80-day schedule variance as of July 23rd affecting the critical path requiring escalation and leadership involvement.
- Continued system testing delays due to unresolved defects and untested batch jobs.
- Differences between ADABAS and SQL (KROM) record counts persist.
- A critical defect in NSDDC01J batch job execution is affecting the Precisely API allocation. Testing is currently limited to 10 records.
- There are 40 open tickets including 19 related to performance.
- The prorated method of payment based upon the current approved schedule may reduce accountability and performance incentives.

PROJECT SCHEDULE – Current Progress

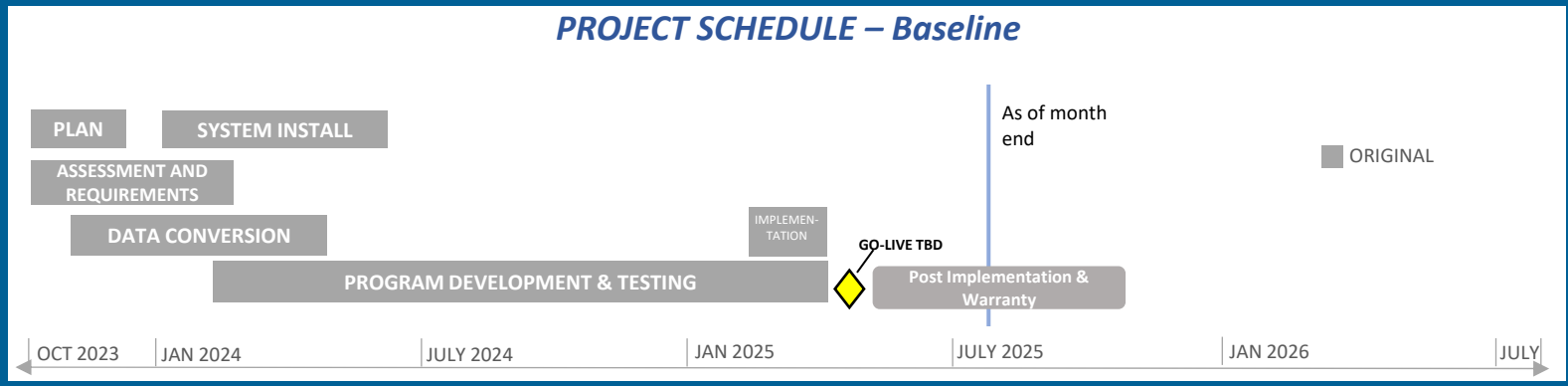
(See next page for the current agreement and schedule history)

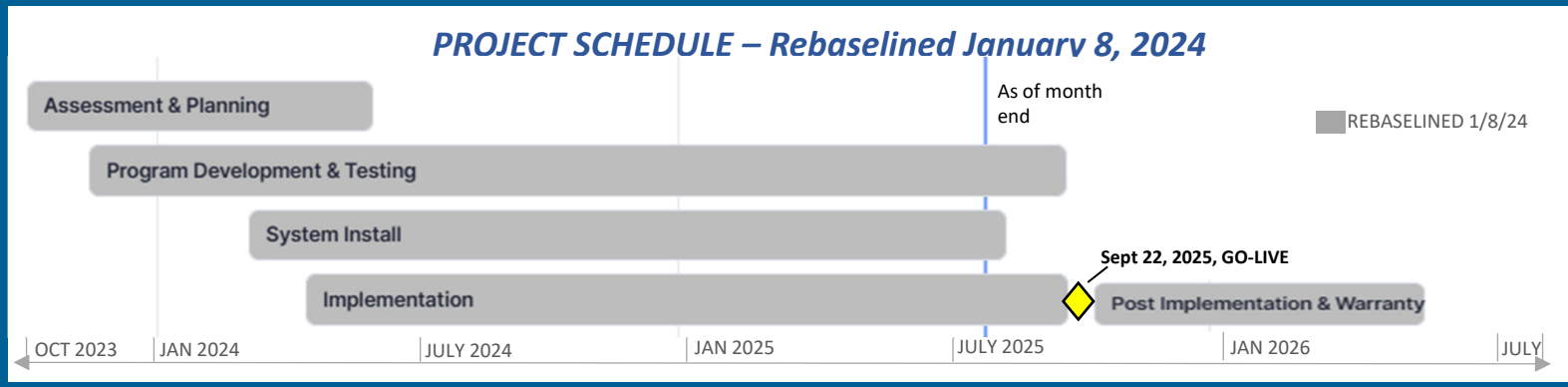


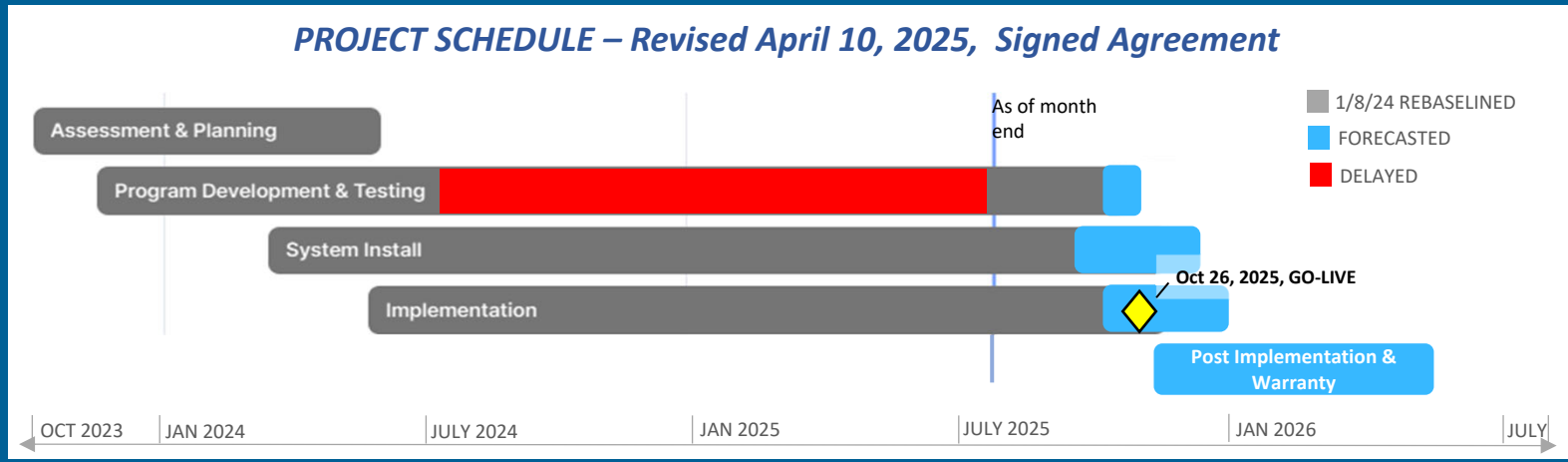
KROM PROJECT SCHEDULE HISTORY

Provided here is a comprehensive view of four timelines:

1. The baseline project schedule set in September 2023.
2. The rebaselined schedule following the approval of the DDI Project Management Plan on January 8, 2024.
3. The current schedule based on the April 10, 2025, no-cost change request.







JULY 2025 · KROM PROJECT

MAY	JUNE	JULY	IV&V ASSESSMENT AREA	IV&V SUMMARY
Y	Y	Y	Overall	**Project Schedule:** The project progress status as of July 23, 2025 remains flat at 73% with a 80-day variance from the baseline schedule reflecting challenges with data discrepancies, batch job testing, and critical system testing defects. The critical path has zero float between the D-21 System Test Results Report approval and the Acceptance Testing start date. SIT testing has exceeded the planned time. An October 26, 2025 'go-live' is unattainable based on the activities and deliverables remaining. While the project schedule has been updated, a formal rebaseline is needed to align the scope, schedule, and cost baselines with the approved changes. ProTech submitted an updated project schedule to rebaseline the timeline; however, CSEA is currently reviewing it and has yet to provide acceptance. **Project Costs:** Contract invoices remain within the total contracted costs. The concern raised last month regarding the current prorated method remains. With the new rebaselined schedule, it will be important to review whether any updates have been made to the *payment schedule or timing*. **Quality:** CSEA's primary objective is to receive a *high-quality* solution. To this end, the project members remain aligned to this goal. One of the key indicators is the resolution of all defects prior to exiting System Integration Testing (SIT). For July, there are 40 (up from 37 in June) *non-critical defects* varying in priority that remain open. One of the main focus areas and progress this month- ProTech responding to and providing answers to all the SIT test script comments. ProTech and CSEA met daily to review the responses, and CSEA is in their second round of reviews. Challenges, however, persist system integration testing as of July 23, 2025 is at 76% (down from 87% in June) and the system installation phase is at 68% (down from 72% in June). Despite these setbacks, the overall project progress remains unchanged for July. **Project Success:** The KEIKI KROM project has continued with forward momentum tackling issues through active collaboration among Protech (DDI), IBM, and CSEA teams. This included successfully completing the check validation printing with the bank. While system testing and data validation challenges remain, proactive retesting, weekly leadership meetings and weekly updates have helped sustain project momentum. The project is in **yellow** status trending downwards due primarily to the schedule slippage in the System Test Phase. While the proposed rebaselined schedule is likely to be accepted, CSEA has not yet approved it. Until formal acceptance occurs, the project will continue to carry elevated risk.

MAY	JUNE	JULY	IV&V ASSESSMENT AREA	IV&V SUMMARY
G	G	G	People Team, Stakeholders, & Culture	The project team has been actively engaged in addressing critical issues and key operational areas. Protech (DDI), IBM, and CSEA continue to work together to effectively resolve issues and close defects. The weekly meeting for the expected end-of-the-month reporting on July 30th was cancelled due to efforts directed to processing the SIT test script comments. As a result, metrics and performance updates are based primarily on the July 23rd meeting. **Team:** The joint leadership team comprised of ProTech's Engagement Manager, CSEA's IT manager, and other key CSEA staff continues to meet weekly to address critical and high priority issues. One issue that was addressed was to provide more visibility into processing of the remainder of the open SIT Test comments. The ProTech lead will prepare a burndown chart to be able to track the remaining comments more effectively. Other topics such as a review of batch performance times and the outstanding tasks needed to be completed to enter UAT were discussed in July. Protech continues to lead project delivery and is actively collaborating with IBM and CSEA teams to resolve defects, finalize system testing, and prepare for UAT IT training. Protech's focus has been on batch execution performance testing, mainframe printing transitions, addressing comments generated from the SIT test scripts, addressing defects through focused retesting cycles, and also updating the project schedule. The Protech (DDI) Test Team is also engaged daily, with status reviews and updates in the testing environment to ensure alignment and progress on defect resolution and system testing deliverables. In ProTech's commitment to support the KROM Project, ProTech also added five more staff to help with the SIT documents review. **Stakeholders:** CSEA remains deeply engaged, with active roles in • Validating data extract processes and addressing discrepancies. • Reviewing the status and progress of defects and open risk items. • Reviewing the responses to the SIT test script comments. • Developing content and preparing for the functional staff training. • Reviewing the proof of concept and demo for SQL replication within AWS. • Reviewing system testing outcomes and participating in weekly status meetings and interface discussions. Monthly stakeholder meetings include representatives from the State ETS, Department of Labor and Industrial relations and Department of Human Services. These stakeholders also utilize sensitive Federal information and are similarly impacted by the State's ETS mainframe shutdown directive. Notably these other State departments were not present at the July stakeholder meeting. CSEA plans to reach out directly to these departments to follow-up on any relevant topics and issues.

MAY	JUNE	JULY	IV&V ASSESSMENT AREA	IV&V SUMMARY
G	G	G	People Team, Stakeholders, & Culture	*People cont.* **Culture:** The project demonstrates a culture of collaboration and communication. As CSEA surfaces questions and issues, ProTech has been responsive in providing clarification, follows up as needed, and arranges additional meetings to ensure that they are fully addressed and resolved. The project's People dimension continues to be a **green** status. All parties continue to demonstrate strong commitment to a shared successful project delivery. CSEA's continued active engagement and oversight have helped to ensure that outcomes stay aligned with their goals.

MAY	JUNE	JULY	IV&V ASSESSMENT AREA	IV&V SUMMARY
Y	Y	Y	Process Approach & Execution	**Process:** The project team focused on responding and reviewing SIT test script comments, closing out system testing defects, refining batch job performance, and preparing for UAT. Schedule alignment remains a primary issue-with an 80-day variance and zero float in the critical path. Many tasks, activities, and deliverables are misaligned or unattainable due to the outdated baseline. In response, the team is actively working to update and realign the schedule to reflect the remaining tasks and outstanding deliverables. 1) In June, a new observation was opened regarding the classification of defects. IV&V reported that the new classification differed from the System Test plan. To address this, an alignment meeting was held between ProTech and CSEA. As a result, deliverable 10: Acceptance Test Plan was updated on July 25, 2025 to specify how defects designated as 'critical' priority *and* 'highest' severity should be managed. This clarification reflects project management best practices and is expected to reduce ambiguity during User Acceptance Testing (UAT) and support a smoother transition to go-live. Furthermore, with this update, the recommendations provided in 2025.06.001.R1 have either been adopted or addressed. Therefore, this observation is now considered closed. 2) Last month's previous comment regarding prorated payments to ProTech is based on an outdated schedule remains unresolved. Given the project's 80-day delay, rebaselining is needed-not only to update the timeline, but also to realign the payment schedule. This adjustment would help to provide accountability and financial incentive tied to actual progress. **Approach:** The team is following a milestone-driven approach, prioritizing defect closure and addressing performance issues. Protech's approach includes daily status reviews and testing cycles to validate data and system performance. However, as the schedule progresses, the lack of formal rebaseline limits the effectiveness of this approach in aligning stakeholders and providing adequate notification for future resource scheduling. **Execution:** Some of the key project metrics include overall project completion, phase completion and deliverable completion percentages. The process for *reporting significant percent completion changes* remains unclear. During recent meetings, IV&V observed a drop in both the system integration testing and the overall SIT phase completion percentages. The reasons for this reversal were not clear. This highlights the need for greater rigor in reporting execution. To improve clarity, significant changes impacting the schedule should be explicitly identified whether verbally during meetings or documented in the existing written report. Also, the written report update is provided as it is presented. Without having changes clearly stated, it is difficult for attendees to ask questions without a frame of reference. Providing the hard copy report in advance and explicitly stating (verbally or in writing) significant schedule changes and the reason why will provide more clarity to attendees so they can determine how the project or they may be impacted. A prior observation recommended the use of a dashboard that provides clear oversight of testing activities so they can be tracked and or reviewed by CSEA. IV&V will continue to monitor how effective CSEA's access to Jira including its real-time dashboard and database to assess whether this tools is delivering the expected visibility and usefulness for tracking and reviewing.

MAY	JUNE	JULY	IV&V ASSESSMENT AREA	IV&V SUMMARY
Y	Y	Y	Process Approach & Execution	*Process Cont.* Thus, from a process and execution standpoint, the **yellow** project status reflects ongoing challenges in communication, transparency, and schedule alignment. While technical progress is being made, the supporting processes—particularly around reporting, payment, and schedule management—require attention and improvement to ensure alignment and successful project completion.

MAY	JUNE	JULY	IV&V ASSESSMENT AREA	IV&V SUMMARY
Y	Y	Y	Technology System, Data, & Security	As of July 23, 2025, the KEIKI KROM project continues to progress through System Integration Testing and defect remediation, with infrastructure and testing deliverables actively in development. The System Installation Phase is reported at 68% complete, down from 72% in June following a schedule recalibration initiated by ProTech in coordination with CSEA as presented in the July 23rd status meeting. Testing is ongoing under KEIKI code version 1.0.0.35, with dependencies remaining unresolved in printing, performance validation, and SIT comment disposition. **System:** As of the end of July, Batch testing iteration #6 (performance testing) is at 83% completion. Keiki Mainframe Printing is at 40% completion. System Integration Testing (SIT) Iteration 2 is reported at 97% complete as of July 23rd . The Bridge Program for Address Normalization is at 91% completion, with integration tasks such as API processing and error handling marked fully complete. Keiki Online Printing is listed at 90% completion, and check validation printing is fully complete at 100%, while the Keiki Batch Print Manager testing sits at 85%. The system test results report remains at 0% completion and is a gating item for UAT. Acceptance testing preparation sits at 78%. Batch validation testing and refined UI online testing continue in version v1.0.0.35. SIT script reexecution and resolution of 1,450 logged comments are ongoing, 1,264 accepted by CSEA (87.2%) and 186 (12.8%) pending review. As of July 31, 2025, defect data from JIRA shows 1,204 active/open defects, including 19 high *or* highest priority items. Of these, five performance-related batch defects remain open, including issues in OCSE157, State Tax Offset, and AP Bill processing. CSEA and ProTech have initiated draft risk language around performance and expect completion in early August. **Data:** The hybrid extract method continues to support data validation and conversion testing, with ASCII-to-EBCDIC conversions confirmed as successful by CSEA. Some data inconsistencies remain, particularly with DHS files that contain packed fields and negative value formatting issues, and with output mismatches observed between legacy and KROM environments. The non-hybrid extract method, originally scheduled for validation in August 2024, has not yet been executed, and 19 batch jobs are still under review for performance issues that exceed legacy run-time thresholds. **Security:** The project completed its most recent Nessus vulnerability scan on July 9, 2025, with all previously identified issues remediated and no new vulnerabilities reported. Testing of address normalization using the Precisely API is currently limited to 10-record samples due to licensing constraints, which are documented in the RAID log and remain unresolved. The Disaster Recovery Plan (Deliverable #9) is 84% complete, with scenario execution pending and final approval currently targeted for August 22, 2025. The Technology status remains **yellow.** Technical progress is evident. However, several critical dependencies remain open, most notably in system testing deliverables, performance tuning, printing readiness, and data conversion which are delaying full preparation for UAT entry.

Appendix A: IV&V Criticality and Severity Ratings

TERMS

RISK
An event that has not happened yet.

ISSUE
An event that is already occurring or has already happened.

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.

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.

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

TERMS

POSITIVE
Celebrates high performance or project successes.

PRELIMINARY CONCERN
Potential risk requiring further analysis.

Appendix B: Industry Standards and Best Practices

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

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

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

Appendix C: Prior Findings Log

ASSESSMENT AREA	OBSERVATION ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	OBSERVATION	INDUSTRY STANDARDS AND BEST PRACTICES	ANALYSIS	RECOMMENDATIONS	STATUS	STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Process	2024.12.003	Risk	Moderate	Moderate	Non-critical tasks are being tracked alongside critical ones, diluting focus and potentially straining resources. Financial Test Deck (FTD) testing is blocked by unresolved defects, stalling progress on 92% of pending cases.	SPM (The Standard for Project Management) defines prioritization as essential for maintaining project alignment with strategic objectives.	Tracking non-critical tasks alongside critical ones is straining resources and delaying progress on essential activities like Financial Test Deck (FTD) testing, which is stalled by unresolved defects impacting 92% of cases. Refocusing on critical path tasks and resolving key defects, as emphasized by SPM, will prevent cascading delays and enable progress in blocked testing areas.	(2024.12.004.R1) Focus on critical path tasks, prioritize defect resolution in FTD and interface batch jobs, and deprioritize non-critical deliverables. Prioritizing critical deliverables ensures that delays do not propagate through the project timeline and unlocks progress for blocked testing activities.	Open	2025/07/25: The defect classification process has been addressed and resolved. Despite this accomplishment, the overall defect management process remains unchanged. Because there have been no changes to this process and schedule delays continue to increase, it is important to continue to monitor defect resolution activities to ensure that progress continues. In addition, three more tickets were added for a total of 40 non-critical defects (19 of these are performance related). 2025/06/25: In June, ProTech reported the eight remaining critical tasks had been resolved. Moreover, a different defect classification system was implemented that would differentiate between severity and priority defects and activities. Upon further review, four of the previously labeled critical defects had been reclassified to lower severity ratings and remain open. The overall defect management process remains largely unchanged: ProTech continues to escalate the highest-priority critical defects to IBM, while also reviewing and addressing lower-level non-critical ones. The approach is based upon the assumption that resolution of all defects is required to exit the SIT phase. 2025/05/30: In May, non-critical tasks continued to be tracked and documented in weekly status reports, although no formal update was provided on their resolution. These tasks remain open and should be aligned with the critical path to avoid compounding downstream delays. 2025/04/30: Process and task tracking improved in April but key readiness items (Batch Finalization, Pen Test, Compliance) are missing task details such as ownership or have not been fully scheduled yet. A formal Project Change Request (PCR-3) was approved on April 10th, extending SIT through April 30, 2025, and shifting the Go-Live date to October 26, 2025, with no cost impact. The targeted Go-Live date is currently November 11, 2025, to align with a long weekend for operational considerations. With the change occurring in mid-April the team continues actively planning toward UAT and scheduling alignments will continue through May. IV&V will continue to monitor the scheduling activities and strongly suggests a focused effort in task definitions and alignments to avoid schedule compression with increased risk in execution of UAT and Go-Live. 2025/03/31: During March, Protech assumed full responsibility for test execution and defect management, including taking over administration of the Jira defect tracking system. This transition supports improved traceability between test case execution and defect resolution. While the SIT dashboard continues to show script-level execution (106 of 119 scripts passed), IV&V is able confirm testing progress thru accessing of Jira reports. Defects are categorized as to Critical, Major, Minor, and Normal. ProTech has the ability to track and actively to work on critical and high priority defects. IV&V observed that linkage between failed/pending tests and their corresponding defects is still being validated under DDI's new triage process. CSEA and IV&V are monitoring this effort, and further improvements are expected as part of Protech's Jira backlog reconciliation. This item should remain open pending full integration and reporting consistency across SIT, batch, and UAT tracking systems. 2025/02/28: In February 2025, Protech fully assumed testing responsibilities following DataHouse's withdrawal, with AWS and JIRA administration transitioning on February 26. Batch job validation improved to 38%, but resource shortages continue to slow progress in financial and UI validation, impacting critical compliance tasks. Testing delays and data extraction issues persist, requiring additional skilled resources and prioritization of defect resolution to prevent further schedule slippage. The testing allocation and transition plan is currently underway with Protech. 2025/01/31: The status update for January regarding Observation 2024.12.003 emphasizes significant progress in addressing process inefficiencies, with a focus on optimizing workflows and refining procedural documentation. However, remaining gaps in execution and resource allocation necessitate continued oversight to ensure sustained improvements and full alignment with project objectives.		

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Process	2024.12.005	Risk	Moderate	Moderate	Testing metrics from weekly reports show varying levels of progress, with areas like enforcement batch validation at only 21% coverage. The risk log shows Issue #47: Data extraction delays highlight the need for improved progress tracking and reporting.	IEEE 1012-2016 recommends verification and validation checkpoints for effective oversight.	Inconsistent progress metrics, such as only 21% coverage in enforcement batch validation, indicate gaps in tracking and reporting that hinder effective oversight. Implementing a real-time dashboard, as recommended by IEEE 1012-2016, will provide actionable insights to prioritize resources and address delays efficiently.	(2024.12.06.R1) Establish Progress Monitoring and Reporting: Implement a real-time dashboard to monitor test execution rates, defect closure, and coverage metrics. This provides actionable insights for targeting resources and resolving delays more efficiently.	Open	2025/07/31: The weekly July 30th meeting was cancelled and as a result, testing and project progress was based upon the July 23rd update. Jira's real-time dashboard provides insight primarily into the *defect tickets* which increased in July to 40. IV&V noted that there were declines in system integration testing and the overall system installation phase. It is not clear based upon the status reports and accesing Jira's system why the reversal in reporting progress. Further clarification and/or modifying the current status reports may be needed so scheduling, resourcing, and level of effort impact can be determined. 2025/06/30: A testing report was not included in the June 26, 2025 weekly status meeting. It was unclear to CSEA as to the reclassification, reprioritization and handling of the remaining eight critical tickets. In a special meeting to review the eight critical Jira tickets, ProTech reviewed the internal documentation in Jira, which included the work performed, root cause analysis, screen shots of the results, and notes including the updated ticket status. IV&V confirmed that two members of the CSEA leadership team currently have access to Jira. However, due to ongoing testing delays and challenges, IV&V will continue to monitor this recommendation of test execution reporting as it supports overall testing progress. 2025/05/30: The weekly status reports and test status updates did not contain any evidence of final clarification or resolution of the discrepancies in defect retest counts across system testing. As such, there is no indication that these inconsistencies have been fully addressed or resolved, meaning this observation must remain open for continued monitoring and action. 2025/04/30: In April Protech (DDI) fully stood up and transitioned all testing activities and ownership of the AWS environment for the KROM project. While the team is now using a testing dashboard in Jira which is transparent, the Deliverable D-21 (System Test Results Report) is at 25% completion and defect traceability and test closure are not finalized. 2025/03/31: Throughout March, risk and issue tracking improved through targeted updates in the IV&V reports and touchpoint confirmations; however, the RAID log content was not consistently cited in weekly status reports. While IV&V validated the active status of several key risks (e.g., Risk #89 related to data validation and Risk #112 concerning test execution continuity), these risks were primarily referenced through summary narratives, not as direct log item linkages. The most recent RAID log submitted in March lists several active risks not fully integrated into status reports, suggesting this observation should remain open until cross-referencing practices between RAID logs and weekly reporting are standardized. 2025/02/28: While testing reports did show improvement in February, IV&V will continue to monitor the clarity of the weekly testing reports citing the transition of testing responsibilities to Protech. In order to placemark test reporting progress and clarity, the percentage of testing per testing stream is as of 02/19/2025, - Financial Test Deck (FTD): 75% complete (18 scenarios passed, 6 active). - System Integration Testing (SIT) Execution: 82% complete (78 out of 95 test scripts executed). - Batch Job Testing: 38% validated (improving from previous months, but still below required levels). - Refined UI Testing: 90% complete (410 screens tested, 41 failed cases awaiting defect resolution). IV&V will continue to monitor test reporting clarity through the transition to Protech testing oversight. 2025/01/31: Ongoing challenges related to resource constraints and finalizing validation efforts require continued monitoring to ensure full implementation and long-term stability.		

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Process	2024.12.006	Risk	Moderate	Moderate	Some lower-priority testing, such as reporting subsystem batch jobs, reflects 0% progress.	PMBOK® v7 encourages scope and schedule flexibility in adaptive project environments.	Delays in non-critical tasks, such as reporting subsystem batch jobs with 0% progress, highlight the need to reallocate resources to critical testing activities. By deprioritizing these areas and requesting extensions, as supported by PMBOK® v7, the project can focus on achieving timely completion of high-priority deliverables such as KMS Go Live.	(2024.12.07.R1) Request Extension for Non-Critical Deliverables: Deprioritize non-critical testing areas and request extensions for their delivery to reallocate focus to critical testing. To ensure timely completion of high-priority deliverables such as KMS Go Live.	Open	2025/07/31: CSEA has received an updated schedule from ProTech. However, IV&V has not yet reviewed or verified the revised schedule to determine if the proposed timeline adequately reflects the prioritization of critical testing activities or the inclusion of non-critical testing activities and deliverables. IV&V will provide an update once the revised schedule has been accepted (by CSEA), received and reviewed. 2025/06/30: The remaining open tickets have been reclassified with assigned levels (by ProTech) for priority and criticality. Tickets requiring assistance from IBM are forwarded. It appears that all of the remaining 37 open tickets are being actively worked upon as the goal for ProTech is to have no open tickets to exit SIT. The recommendation is still applicable and IV&V will continue to monitor the defects management process. 2025/05/30: May project updates did not provide explicit evidence of closure for lower-priority testing tasks, such as reporting updates and document finalization. These activities remain open and require focused attention to complete supporting documentation. 2025/04/30: The incomplete state (25%) of D-21 (System Testing Report) as of April 30 further supports keeping Observation 2024.12.006 open. The delays are not isolated to minor reports, they affect key transition documentation necessary for testing and cutover. This document is essential for closing out system testing, gating acceptance testing start, and meeting stakeholder validation requirements. 2025/03/31: In March, the project team communicated and aligned on a revised Go-Live date of November 11, 2025, extending the overall timeline to accommodate continued validation activities, including batch outputs and reporting. While a formal extension request specific to non-critical test items was not documented, the extended schedule and associated updates reflect a de facto approval for additional testing time. This schedule shift has enabled continued work on lower-priority validations, effectively meeting the recommendation's intent. This item may be considered for closure, contingent upon confirmation that remaining report testing is included in the updated cutover and UAT planning. Closure will also be contingent upon Protech completing the activities in the transition SOW for CSEA to review and provide approval in order to formalize the schedule. 2025/02/28: In February the testing teams have prioritized System Integration Testing (SIT) and Financial Deck Testing (FTD) execution, delaying non-essential batch jobs to mitigate schedule risks. A formal extension request is in discussion to defer lower priority deliverables like reporting subsystem batch jobs, ensuring resource alignment with critical milestones. IV&V will continue to monitor the outcome of the discussions. 2025/01/31: Continued progress in refining data management processes and enhancing coordination among key stakeholders. However, persistent challenges in ensuring data accuracy and resolving inconsistencies require further validation efforts and ongoing oversight to achieve full resolution.		
Process	2024.12.007	Risk	Moderate	Moderate	Risks related to dependencies, resource availability, and stakeholder approvals are not explicitly mitigated in the schedule. Weekly reports highlight an increasing trend in defects, with 480 defects logged as of December 18, 2024.	ISO/IEC 16085:2021 highlights risk management as a critical process for life cycle projects.	The increasing trend in logged defects (480 as of December 18, 2024) and unmitigated risks related to dependencies and resource availability emphasize critical gaps in risk management. Enhancing the risk mitigation plan, as recommended by ISO/IEC 16085:2021, will address recurring issues in defect-prone areas like financials and interfaces, reducing the likelihood of further delays.	(2024.12.08.R1) Further enhance the risk mitigation plan targeting defect-prone areas such as financials and enforcement systems, proactively reducing the likelihood of additional delays caused by recurring issues.	Open	2025/07/31: There is currently an increased 80-day variance and the open defect tickets have increased to 40. While ProTech has demonstrated adequate documentation of defects/tickets, the current schedule does not sufficiently address risks related to dependencies, resource availability, and stakeholder approvals. The project is currently undergoing rebaselining, and IV&V has not yet received, reviewed, or confirmed whether the revised schedule includes a comprehensive risk mitigation strategy. IV&V will provide an update once the revised schedule has been accepted (by CSEA), received and reviewed. 2025/06/30: The project schedule has a 69-day variance and there are still 37 open defect tickets remaining. Staff resourcing, coordination, and stakeholder approvals are areas of high risk. The risk mitigation plan is not tightly integrated with a current or realistic project schedule. IV&V will continue to monitor this observation. 2025/05/30: The weekly status and testing reports continue to document an upward trend in total logged defects, reaching 480 as of late May. This reinforces ongoing risks to schedule alignment and stakeholder confidence if defect closure efforts are not prioritized. 2025/04/30: Compliance and Penetration Testing tasks, dependencies and resource availability remain unassigned as of April 30. 2025/03/31: In March, risk awareness remained a core focus across IV&V and stakeholder reporting, with specific emphasis on transition readiness, batch data quality, and cutover planning risks. Active risks such as Risk #89 (data extraction) and Risk #112 (testing transition) were tracked through status reports and IV&V analysis, and the March RAID log reflected five open risks aligned with ongoing project concerns. However, RAID log integration into weekly reports was still partial, with risk IDs not consistently cited in narrative updates. As such, this observation should remain open, pending full and consistent mapping of RAID risks into weekly reporting artifacts and stakeholder communications.		

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										2025/02/28: In February, risk management processes remain active, with ongoing monitoring of resource allocation, batch job validation, and interface file resolution. Several risks remain open, including data extraction delays, defect resolution issues, and resource constraints. Additional verification and sustained monitoring are needed to ensure risk mitigation strategies are fully implemented before closure. 2025/01/31: Risk mitigation efforts, including strengthened collaboration between teams to address system integration challenges and resolve key technical issues improved in January. However, some dependencies remain unresolved, necessitating additional testing and validation to fully mitigate potential risks before implementation.		
Process	2023.10.002	Risk	Moderate	High	Project management responsibilities may impact effective project execution. The review of prior findings confirms that several closed issues correlate with ongoing challenges in data validation, resource management, interface dependencies, and testing progress. To ensure project success and minimize cutover risks, reopening these findings and implementing corrective actions are advised. Dependencies such as task 593 for "KMS: Acceptance Test Scripts Development Complete" remain unfulfilled. Weekly reports identify unresolved data file dependencies and incorrect file formats (e.g., GDG issues in batch jobs), further delaying progress. Linear task sequencing contributes to delays where tasks could feasibly run in parallel (e.g., compliance and database migration). Financials have 0% validation coverage in the refined UI, highlighting the backlog. REOPENED - May 2025 The May 2025 project schedule continues to show a 54-day variance from the baseline, with no formal rebaseline in place to reflect ongoing challenges. This delay is primarily driven by unresolved critical system testing defects, persistent data extract discrepancies, and performance tuning issues in key batch jobs. The lack of a formal schedule rebaseline or update further elevates the risk of downstream impacts on UAT readiness and stakeholder confidence. The CSEA Project Manager has exited the project with CSEA Project Leadership providing interim coverage. The project at the end of May was experiencing a 54 day variance with zero float in the critical path. Related RAID Log Action Items have not been reassigned to interim coverage owners.	PMBOK® v7 emphasizes resource optimization as part of the "Resource Management" domain. Aligning resource capacity with demand ensures timely task completion. **Performance Domain: Stakeholder** – emphasizes maintaining active engagement and accountability during governance transitions to ensure continued project alignment and stakeholder confidence. **Performance Domain: Planning** – requires integrated schedules that reflect realistic milestone targets and incorporate decision-making frameworks, ensuring that governance and planning activities are fully synchronized for project success. ISO/IEC 16085:2021 recommends proactive risk management to identify areas where concurrent task execution mitigates schedule risks.	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. 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. REOPENED-May 2025 **Schedule Variance:** This delay is primarily driven by unresolved critical system testing defects, persistent data extract discrepancies, and performance tuning issues in key batch jobs. The lack of a formal schedule rebaseline or update further elevates the risk of downstream impacts on UAT readiness and stakeholder confidence. **Project Management Interim Coverage:** The departure of the CSEA Project Manager in May has introduced an immediate need for documented interim project management coverage to maintain project governance continuity. While CSEA project leads have assumed responsibility in the short term, the lack of a formalized approach leaves potential gaps in accountability, risk tracking, and decision-making. Ensuring that interim coverage roles are clearly defined and integrated into overall project governance will reduce risks of miscommunication and schedule misalignment. The details of these governance alignments and assignments should be clearly communicated to stakeholders and reflected in project documentation.	REOPENED: 2023.10.002.R1 – Improve the project schedule to address schedule concerns. • Develop a detailed plan with assigned resources to complete project tasks. • 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. • Obtain agreement on the baseline schedule and then hold parties accountable for tasks and deadlines. REOPENED: 2023.10.002.R2 – Determine the root causes of delays and develop plans to address them. • 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, dependencies, and undefined tasks. Assess potential opportunities for parallelizing workstreams and efforts. • Based on the experience of the last two months, create a realistic schedule based on the time and resources needed to perform tasks. CLOSED: 2023.10.002.R3 – Assess the need for additional Protech resources for project management support. **CLOSED**: 2023.10.002.R4 – Have the CSEA and Protech Project Managers adopt a more joint, collaborative approach. • Have the interim PMs clearly define their roles and responsibilities in project management responsibilities. • Actively plan, share and execute project responsibilities.	Reopened	2025/07/31: 2023.10.002.R1- The project schedule delay has increased to an 80-day variance. Verfied that deliverables include supporting tasks related to when the submission and approval for the deliverables will occur. However, many of these dates are stale and need to be updated. CSEA has received an updated project schedule from ProTech. This revised schedule has not yet been approved by CSEA, nor reviewed by IV&V. Thus, confirmation of whether it includes the appropriate level of detail regarding the remaining task assignments, durations, milestones, and deliverables remains to be verified. 2025/07/31:2023.10.002.R2-Root cause analysis is being performed on open defect tickets, and various schedule delay priorities are being discussed, triaged to determine appropriate mitigation strategies and decisions assigned for follow-up action. Depite these efforts, the recommendation to have a current realistic schedule based on the time and resources needed to perform tasks remains outstanding. An updated schedule was received by CSEA, however, IV&V has not yet reviewed or verified whether it reflects a comprehensive approach to addressing the remaining open tasks, deliverables, defects, resource allocations with attainable timelines. IV&V will provide an update once the schedule has been accepted (by CSEA) and reviewed. 2025/06/30: 2023.10.002.R1- The project schedule delay has increased to a 69-day variance. While ProTech has shown the performance of root cause analysis, and documented problem solving solutions including screen shots, the schedule is still outdated and does not adequately reflect the current changes and remaining open tasks. ProTech has proposed to update the project schedule after the issues and defects have been resolved and have exited the SIT phase. ProTech continues to actively work on the 37 remaining open defects and batch load testing. The schedule is at risk and recommendations remain current. 2025/06/30: 2023.10.002.R2- Upon reviewing internal Jira documentation on testing, ProTech is performing root cause analysis, output(s) include screen shots, and testing notes on open tickets. The current schedule does not appear to reflect the timing of testing completion or the resolution of open activities. IV&V will continue to monitor. 2025/06/30: 2023.10.002.R4- CSEA leadership and ProTech have jointly addressed the gap left by the temporary departure of the CSEA Project Manager. This was conveyed both in written and verbal communications. This recommendation has been addressed and is now Closed. 2025/05/30: The temporary leave of absence of the CSEA Project Manager which is now being covered by the CSEA project leads furthers the need to update governance and decision frameworks to document and formalize the roles of interim CSEA project leads covering the CSEA's Project Management responsibilities. This will ensure accountability, maintain stakeholder alignment and reduce the risk of gaps in project oversight and consistency. This would be an opportune time to access the root causes driving schedule delays and work with Protech to align an agreed schedule in order to eliminate further cascading delays in the project go live date, which is experiencing a 54 day variance from the baseline schedule as of May 30, 2025. Project governance documents, (e.g. RAID Log) should be reviewed and assigned to appropriate action owners. Communications should be drafted to all project stakeholders in order to align them to the appropriate interim project manager with area of oversight responsibility.	Original Close: 2024/05/31 Reopened: 2023.10.002.R2 2024/12/24 Reopened: 2023.10.002.R1 and 2023.10.002.R4 2023/50/30 **Closed: 2023.10.002.R4** **2025/06/30**	Original Closure Note: Closed as the project managers are working more collaboratively to share and execute project responsibilities.

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										2025/04/30: The root causes driving schedule delays, such as lack of resource clarity, overlapping dependencies, and unscheduled support tasks, remain visible in April. While the project team responded to delays with schedule updates (PCR-3) and completed SIT Iteration 2, the conditions that led to earlier delays have not been systematically mitigated. The continued shifting of the estimated Go-Live date beyond PCR-3's approved timeline further supports the observation that a durable resolution has not yet been realized. IV&V also notes that the critical path from Deliverable D-21 approval to Acceptance Testing start remains under pressure, with zero float, increasing the likelihood of cascading delays if unresolved tasks are not completed promptly. IV&V recommends that the project team consider conducting a root cause analysis and reviewing ownership assignments for critical path readiness tasks, including batch finalization, training, and security preparation, in alignment with PMBOK® v7 guidance on Risk and Resource Management, to reduce the likelihood of further schedule compression. 2025/03/31: As of March, project reporting has improved in granularity, with weekly status reports consistently identifying active risks and testing-related blockers, and IV&V tracking individual RAID log items (e.g., Risks #89 and #112). However, formal distinction between risks, issues, and decisions remains inconsistent across communications, particularly in status reports, where these items are often combined into narrative summaries without clear labeling. While the March RAID log itself includes structured entries for each category, this observation should remain open until consistent, category-specific tagging is incorporated into all reporting streams. In order for CSEA to formally approve the new project schedule, Protech must complete the activities in the transition SOW. Protech needs to schedule a firm delivery date that is acceptable to CSEA with urgency, since the schedule cannot be formally aligned in its absence. 2025/02/28: Efforts to parallelize workstreams (2023.10.002.R2-2) are being evaluated, but coordination between Protech and CSEA while underway is facing larger priorities for testing transition. While progress has been made in identifying root causes and adjusting scheduling strategies, this recommendation is requiring a more structured approach to align testing priorities which may end up being addressed in the testing transition plan. IV&V will continue to monitor that progress. 2024/02/29: 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.		
Technology	2024.06.001	Risk	Moderate	Moderate	There is a risk for delays in the data extraction process, which is critical for the cutover activities, due to reliance on shared mainframe resources, inefficiencies in data extraction programs, and long download/upload times. This could impact the project by increasing costs, compromising the quality of the overall solution, and causing operational downtime of 4 to 5 days during the cutover weekend, thereby extending the project timeline. The static data collected from the data extract process projects a worst-case scenario of 12 to 36 days to fully extract ADABAS data to the 374 flat files, including downloading and uploading the files. This arises due to: 1) CSEA uses a shared mainframe, 2) inefficiencies of data extraction programs, 3) download/upload times. The data extract process is central to the cutover activities completing over Fri/Sat/Sun. If not improved, CSEA may face 4/5 days operational downtime for cutover weekend.	IEEE 1012-2016	The data extraction process is critical for the cutover activities and current projections show potential for significant delays. This issue results from reliance on shared mainframe resources, inefficiencies in data extraction programs, and long download/upload times. Each time new data is needed for testing, the entire database must be extracted, which is time-consuming. CSEA is evaluating a SQL replication strategy to replace the current process and has assigned two dedicated resources to identify and test this approach. Daily meetings with DDI and CSEA have been established to collaborate on this issue. The target for validating this approach is July 31st.	2024.08.001.R1 - Verification of Data Extraction and Conversion Processes • Standard(s): IEEE 1012-2016 Emphasis: Verification ensures that the system is built correctly according to its specifications. o Recommendation: Implement a thorough verification process for all data extraction and conversion methods, particularly the Ascii to BCP script conversions. Establish checkpoints where the file counts and conversion accuracy are verified before moving to subsequent phases of the project to avoid potential issues in later stages. 2024.08.001.R2 - Validation of Extracted Data Consistency • Standard(s): IEEE 1012-2016 Emphasis: Validation ensures that the system meets its intended use and satisfies user needs. o Recommendation: Conduct end-to-end validation of the extracted data, ensuring that the SQL-to-SQL comparisons are consistent and match across systems (Protech and CSEA). Given the noted discrepancies, a validation step should be introduced after each major extraction and conversion task (e.g., Task 18). This will confirm that the extracted data matches the expected output and is usable for further processing. 2024.08.001.R3 - Risk Management for Binary and Ascii File Handling • Standard(s): IEEE 1012-2016 Emphasis: Risk management is integrated into the IV&V process to identify potential risks and implement mitigation strategies. o Recommendation: Assess the risks associated with the conversion and handling of binary and Ascii files. Discrepancies in binary file counts and the use of converters for 27 files were discussed. It is recommended to perform risk analysis on these	Open	2025/07/31: As of July 31, 2025, Risk 2024.06.001 remains open. While improvements in the data extraction process are evident, full validation of the non-hybrid method has not been completed, and the risk of delays impacting cutover remains active. The project has not met the original July 31 target for validating the SQL replication strategy. However, efforts to improve performance and throughput have yielded measurable results. Protech implemented table partitioning (e.g., for table F156) and parallel binary loading, which reduced extraction times for large data sets—specifically lowering some batch load durations from 17 hours to under 5 hours. Despite these gains, record count mismatches persist between ADABAS and SQL outputs, and additional verification is required. The project continues to rely on the hybrid extract method, with the non-hybrid strategy still under evaluation. No confirmation has been issued that the non-hybrid method is viable or production-ready. As of the July reporting period, five performance-related defects remain open, primarily linked to batch programs such as OCSE157, State Tax Offset, and AP Bill processing. These defects further indicate that batch performance under current extract conditions has not yet met legacy expectations. Verification and validation efforts (Recommendations 2024.08.001.R1–R4 under IEEE 1012-2016) are partially implemented. ASCII to BCP script verification checkpoints are in place, and SQL-to-SQL data comparisons between CSEA and Protech are ongoing. However, interface-level discrepancies and binary file handling risks remain under review. Additional automated conversion validation, resource planning for extract capacity, and file-level error tracking are recommended to further reduce the risk of corruption and operational downtime during cutover.		

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								conversions, ensuring that any potential data corruption or loss during conversion is identified and mitigated. Consider implementing additional testing and validation for these specific files. 2024.08.001.R4 - Resource Management and Space Availability • IEEE 1012-2016 Emphasis: Resource management is crucial for the successful execution of project activities. o Recommendation: The observation regarding potential space risks should be taken seriously. Conduct a resource assessment to ensure that there is sufficient storage and computing resources to handle the extraction, conversion, and processing of data. This should be done before the extraction process begins, with contingency plans in place in case of resource shortages.		Given the persistence of mismatches, unvalidated non-hybrid extraction, and unresolved performance defects, this observation will remain open and under IV&V monitoring through August. The ability to mitigate cutover weekend downtime, projected at 4–5 days under current extraction conditions, depends on successful validation of an efficient and reliable data extract process. IV&V recommends continued tracking of this risk as a potential impact to cutover scheduling and system readiness. 2025/06/25: In June, the data extract validation process between ADABAS and SQL continued to show record count mismatches, requiring further investigation and validation during system testing. Both hybrid and non-hybrid extraction methods are under evaluation; however, the non-hybrid method remains untested, with its viability expected to be determined before UAT ends. A successful match was confirmed for the April 10 FCR outgoing pre-batch on June 20, but consistent alignment across all datasets has not yet been achieved. To address performance discrepancies, Protech initiated table partitioning (e.g., F156) and parallel binary data loading, which successfully reduced batch load times from 17 hours to under 5 hours. Despite this improvement, five open performance-related defects remain, primarily affecting batch processes such as OCSE157, State Tax Offset, and AP Bill processing. IV&V will continue to monitor progress toward the July target. 2025/05/30: The May weekly status and testing status updates confirmed that data extraction processes and performance discrepancies continue to delay system readiness for UAT testing. Additional testing cycles and data mapping validation efforts are underway to address these extract issues. IV& V will continue to monitor progress toward the July target. 2025/04/30: In April CSEA and Protech (DDI) continue daily coordination post transition (DataHouse departure and transitional SOW activity completion). SQL replication testing is active but not yet fully validated as stable (RAID log Risk #89). Over 30 data outputs from the Feb 18th batch are still in the validation process and the process is still reliant on workarounds and contingency planning ahead of the July 31 validation target. Observation 2024.06.001 should remain open. While progress across all four recommendation areas is evident, final validation has not been achieved, and extract-related risks remain active. Continued IV&V monitoring is necessary through July to assess the effectiveness of SQL replication and full extract validation before the system cutover. 2025/03/31: In March, the project team made notable progress toward addressing data extract quality issues, including the launch of structured half-day CSEA agency validation sessions, and the initiation of a deliverable to identify non-printable characters in hybrid DB fields. Although SQL replication failures and data formatting mismatches remain contributors to delayed batch output validation, Risk #89 continues to track these issues as open. With key activities underway but final validation still pending for over 30 outputs from the February 18 batch cycle, this observation should remain open, with closure considered once extract stability and validation results are fully confirmed. We acknowledge that targeting the new Go-Live date of 11/11/2025 to utilize a long weekend for cutover will reduce risk. 2025/02/28: While progress has been made in refining extraction strategies and implementing validation checkpoints, full validation and risk mitigation have not been achieved, and cutover risks remain active. Continued IV&V monitoring is required to ensure SQL replication testing is validated and operational before cutover planning. SQL replication testing continues (2024.08.001.R1), with CSEA and DDI holding daily coordination meetings, but validation of the approach has not yet been completed. These activities will need to resume with Protech taking over DDI's responsibilities. Verification and validation steps have improved (2024.08.001.R2), but discrepancies in extracted data persist, requiring additional conversion accuracy checks and space management adjustments (2024.08.001.R4). Risk management for binary and ASCII file handling. (2024.08.001.R3) is ongoing, with proactive error tracking reducing potential corruption risks, but validation remains incomplete. 2025/01/31: The latest status update for January indicates continued collaboration between CSEA and DDI to refine the SQL replication strategy, with dedicated resources actively testing extraction improvements to mitigate risks associated with prolonged data transfer times. In alignment with IEEE 1012-2016, verification checkpoints have been partially implemented (2024.08.001.R1), validation steps for extracted data consistency are progressing (2024.08.001.R2), and additional risk assessments for binary and ASCII file handling are ongoing to prevent data corruption (2024.08.001.R3), while space availability concerns remain under review with contingency planning in progress (2024.08.001.R4). 2024/12/24: (2024.08.001.R1) - Verification of Data Extraction and Conversion Processes: Verification processes have progressed, with partial implementation of checkpoints for ASCII to BCP script conversions. File counts and conversion accuracy validations are ongoing, resolving discrepancies iteratively to reduce downstream errors. Additional automated checks are required to fully strengthen the verification process. (2024.08.001.R2) - Validation of Extracted Data Consistency:			

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										SQL-to-SQL comparisons between Protech and CSEA systems have advanced, with validation checkpoints introduced after major extraction tasks. Improvements in data alignment are evident, but interface data discrepancies remain, requiring further validation for end-to-end consistency across systems. Batch validation using September 30 production data demonstrated reduced inconsistencies. (2024.08.001.R3) - Risk Management for Binary and ASCII File Handling: Risk assessments for binary and ASCII file conversions have identified critical areas requiring additional testing to mitigate risks of data corruption. Packed binary and date/time field issues have been resolved, but validation of file integrity during conversion phases is still crucial. Proactive error tracking has minimized potential issues during testing phases. (2024.08.001.R4) - Resource Management and Space Availability: Resource assessments and adjustments to mainframe utilization have improved testing efficiency by addressing storage and computational limitations. Contingency plans for storage shortages have been established, ensuring smoother testing and batch processing cycles. Continued focus on resource prioritization is needed to avoid delays in high-demand testing periods. 2024/11/27 - (2024.08.001.R1) - Verification of Data Extraction and Conversion Processes Verification processes have been strengthened, particularly for ASCII to BCP script conversions. File counts and conversion accuracy are now validated during batch validation and regression testing phases, with checkpoints implemented to ensure accuracy before advancing to subsequent phases. Discrepancies if field alignment and conversion accuracy are being resolved iteratively, reducing downstream errors. (2024.08.001.R2) - Validation of Extracted Data Consistency End-to-end validation has been introduced, including SQL-to-SQL data comparisons between Protech and CSEA systems. Validation checkpoints after major extraction tasks ensure consistency in extracted data outputs. Major improvements in data alignment and reduced inconsistencies, as seen in batch validation using September 30 production data. (2024.08.001.R3) - Risk Management for Binary and ASCII File Handling A detailed risk assessment has been performed for binary and ASCII file conversions, particularly for 27 critical files identfied in earlier phases. Additional testing is underway to mitigate risks of data corruption during conversion. Proactive error tracking and resolution are reducing potential issues, with measures in place to validate file counts and integrity during each phase of testing. (2024.08.001.R4) - Resource Management and Space Availability Resource assessments were conducted to ensure adequate storage and computational capacity for extraction and conversion tasks. Contingency plans have been established to address potential storage shortages or computing delays. Resource prioritization and adjustments to mainframe untilization have minimized space risks and improved processing efficiency for ongoing testing and validation. IV&V will continue to monitor the above recommendations until there is consistent evidence of resolution. 2024/10/31 - 2024.08.001.R1 (Verification of Data Extraction and Conversion): Open – In Progress: Verification steps are underway with some checkpoints implemented. Critical issues, like date/time discrepancies, have been resolved. Checkpoints to verify file counts and conversion accuracy have been partially implemented, although more robust, automated checks are still needed. 2024.08.001.R2 (Validation of Extracted Data Consistency): Open – Partially Implemented: SQL replication and extraction validations have progressed, with critical issues such as date/time and packed fields now resolved. The October reports indicate that ongoing discrepancies in interface data and batch outputs still require validation to confirm end-to-end consistency across systems. 2024.08.001.R3 (Risk Management for Binary and Ascii File Handling): Open – In Progress: Some risk assessments have been completed, but specific evaluations for the binary and Ascii files are still needed. The packed field and date/time data issues were resolved, reducing some risk associated with binary data. Additional validation and testing for converted files remain crucial to ensure data accuracy in other key areas.		

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										2024.08.001.R4 (Resource Management and Space Availability): Open - Ongoing Evaluation: Resource constraints, particularly related to mainframe and storage capacity, are still an area of focus. The October updates highlighted that batch and interface testing are sometimes delayed due to dependency on shared mainframe resources and long runtimes for large batch jobs. Develop contingency plans to manage high-demand periods and alleviate mainframe dependency for smoother testing cycles. 2024/9/30:There is a delay in the resolution of the production test data delivery method, as noted in the weekly status report. The datetime issue with the replicated SQL data is a key blocker, with the CSEA working to resolve this through Natural programs. This has the potential to delay critical testing phases, as it impedes the ability to test with accurate production data. The date/time issue continues to be a blocker. Nulls and packed binary fields have been resolved. The UI refinement process has progressed, with 84% of the tasks completed. However, finalization and validation are still pending, and the scheduling of the walkthrough of the UI Refinement Plan is underway. The Financial Test Deck (FTD) execution is still only 35% complete, and scenario execution is 17% complete, while not directly on the critical path, delays in the FTD could become a future risk if unresolved issues persist. Batch testing is progressing, with 31% of batch test execution complete. 2024.08.001.R1 (Verification of Data Extraction and Conversion): Open – Progress made but verification of Ascii to BCP scripts and checkpoints not fully implemented. 2024.08.001.R2 (Validation of Extracted Data Consistency): Open – Partial progress, but full end-to-end validation of extracted data is still pending. 2024.08.001.R3 (Risk Management for Binary and Ascii File Handling): Open – No mention of specific risk assessments for binary and Ascii file handling; further analysis needed. 2024.08.001.R4 (Resource Management and Space Availability): Open – Ongoing evaluation of SQL replication strategy; resource concerns still active. 2024/8/30: The key decision to determine and finalize the method of test data delivery is now anticipated for September and the outcome is now based upon the solution for the date/time issue and the packed binary fields. CSEA and Protech have worked diligently to clear the other issue of nulls. 2024/7/31: CSEA is still investigating and testing the SQL to SQL solution, however, the testing results are still not meeting CSEA's expectations. CSEA's decision is due during the first week of August. Because of CSEA's concern that this issue is still unresolved, the potential impact on the schedule, the severity has been raised to high. IV&V will continue to monitor these recommendations and validate progress until full resolution is achieved.		
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.		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. 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.	**CLOSED:** 2024.07.001.R1 - It was recommended that CSEA meet with the new Chief Data Officer. And also to meet with the EFS team to identify any potential impacts to CSEA and align with IT policies. **CLOSED:** 2024.03.001.R1 – CSEA should coordinate regular meetings with impacted State of Hawaii agencies. • Roles, responsibilities, expectations and interface requirements should be clearly defined to ensure information and project status is proactively communicated for the various modernization efforts. 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. • Clearly identify all the interfaces that the system will interact with and how they will communicate. • Develop interfaces and data structure that are flexible enough to accommodate changes to the interfaces. • Detailed testing will be required as the various departments upgrade their systems to ensure compatibility.	Open	2025/07/31: As of the end of July 2025, Risk 2024.03.001 remains open due to continued dependencies between the KEIKI system and multiple State of Hawaii agency modernization efforts. Although System Integration Testing (SIT) Iteration 2 reached 97% completion, interface-related performance issues persist, particularly for batch programs such as OCSE157, State Tax Offset, and AP Bill processing. These are being tracked under RAID Log IDs 35 and 56. Interface testing and development continue to be constrained by legacy system dependencies, as the KEIKI system must still rely on the State's mainframe, specifically Cyberfusion, for cross-agency file exchanges. The Bridge Program for Address Normalization is reported at 91% completion, supporting data compatibility, but the final decision on implementing Code-1 Plus software, a key enabler of address standardization across systems, remains pending. Additionally, the project team is actively exploring Twilio integration for job failure notifications, which would improve system monitoring and responsiveness post-deployment. These activities indicate ongoing efforts to improve interface resiliency and responsiveness but do not eliminate the fundamental limitation: the lack of end-to-end server-based data exchange until external agency modernizations are completed. While interface design has been developed with flexibility in mind, including defined communication methods and structured classifications for inbound and outbound data, the full validation of these interfaces remains incomplete. The risk of post-Go-Live interface modifications and associated rework remains present due to the timing of partner agency upgrades. Detailed testing and interface retesting will be required as external agencies move off the mainframe.		

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										IV&V recommends continued monitoring of this risk category through system testing and pre-Go-Live coordination activities. Until external system dependencies are fully resolved and interface adaptability is confirmed through testing, the risk of downstream delays and disruptions due to interface realignment remains credible and active. 2025/06/25: As of June, interface development and testing efforts continue under System Integration Testing (SIT) Iteration 2, which is 97% complete. Interface-related performance issues persist, particularly with batch processes such as OCSE157, State Tax Offset, and AP Bill, and are being tracked under RAID Log IDs 35 and 56. These issues highlight ongoing challenges in ensuring compatibility and performance across agency systems. The project has not yet confirmed a final decision on the use of Code-1 Plus software, which is critical for address normalization and cross-agency data compatibility. Additionally, the bridge program to support address normalization is 91% complete, and the Twilio integration for job failure notifications is being explored to improve system responsiveness. While progress is being made, continued attention to interface flexibility, performance tuning, and coordination with external system upgrades is needed to meet and support future integration requirements. 2025/05/30: In May, interface dependency updates focused on the CSEA proposed changes to the BOH interface file format, which have yet to be formalized and integrated into the schedule. Interface testing activities continued to address performance and data validation concerns, including FTP interface updates and mock file exchanges with external partners. Protech and CSEA should establish a formal change control process for interface upda tes, ensuring that any new interface file formats or dependencies are incorporated into the project baseline and verified through testing. 2025/04/30: Interface structures have been defined and designed for flexibility, but interface testing and retest confirmation remain incomplete. Dependencies on other agencies' modernization timelines continue to impact readiness, and discrepancies between legacy and replatformed outputs are still under resolution. Observation 2024.03.001 should remain open to track continued validation and confirmation of interface compatibility with both modern and legacy systems. While the interface inventory and flexibility planning are complete, testing delays and agency modernization dependencies are still impacting readiness and traceability. 2025/03/31: In March, Protech began validating the 228 open defects within Jira, including over 100 unconfirmed issues, and took ownership of ensuring traceability between defect resolution and retesting outcomes. While SIT retesting is well underway for most UI and batch-related defects, interface testing continues to experience delays, particularly due to difficulties capturing test files prior to downstream system consumption. These challenges have limited retesting confirmation for interface-related defects. Therefore, this observation remains open, with resolution contingent on improving test traceability and confirming retest documentation across all functional areas, including interfaces. 2025/02/28: Testing has identified compatibility challenges (2024.03.001.R2-2), particularly with external agency system upgrades, requiring enhanced flexibility in interface configurations. While progress has been made in interface planning and validation, ongoing compatibility challenges and pending refinements necessitate continued monitoring and testing before this recommendation can be closed. 2025/01/31: While progress has been made in developing flexible interface structures and planning for future modifications, end-to-end testing remains ongoing, and coordination with other departments is still required, meaning recommendation 2024.03.001.R2 cannot yet be closed until full compatibility and adaptability are validated. 2024/12/24 - (2024.03.001.R2) In December 2024, progress was made in identifying system interfaces and their communication methods, with updates shared during weekly interface workshops. Efforts to ensure flexibility in data structures and interface configurations continued, including adjustments for compatibility with modernization efforts in partner agencies. Testing activities focused on validating data exchange through SQL-to-SQL comparisons and resolving discrepancies in interface files, with additional workshops scheduled to address integration challenges. While significant improvements were achieved, ongoing coordination with other departments is essential to ensure compatibility as their systems undergo upgrades. Detailed end-to-end testing remains a critical next step to confirm readiness for production. 2024/11/27 -(2024.03.001.R2)– Interface Planning and Compatibility		

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										All interfaces have been cataloged, classified as inbound, outbound, or both, with their communication protocols clearly defined. This includes identifying dependencies with external systems from partner agencies. Further validation of interface files, particularly those with missing or incomplete data, is being prioritized during ongoing batch testing. Interfaces and related data structures have been developed with flexibility in mind, allowing for future changes without significant redevelopment. The system design supports updates to schema or message formats. Continue refining flexibility by testing adaptability with mock data representing potential future scenarios and configurations. Interface validation testing is underway using production-like files. Initial validations highlighted discrepancies in legacy and replatformed outputs, which are being addressed iteratively. Detailed testing will continue alongside integration testing (SIT) to ensure that interfaces remain compatible with upgrades to external agency systems. 2024.03.001.R2 (Interfaces) Open/In Progress: Good progress has been made in identifying interfaces, and with continued focus on data coordination and flexibility planning, we can further strengthen alignment with this recommendation. Ongoing efforts to secure reliable data and enhance adaptable structures will help ensure compatibility and reduce potential disruptions in the future. 2024/09/30: The new Chief Data Officer is engaged in the focus on data governance policies and interface details with the EFS team, this effort will be ongoing through project Go-Live. 2024/08/30: ETS' new Chief Data Officer has been aligned as a key stakeholder and is in the process of focusing on data governance policies and interface concerns with the EFS team (2024.07.001.R1) IV&V will continue to monitor and update as the focus on policies and interface concerns progress. 2024/07/31: The Chief Data Officer and the EFS team have been contacted and will be meeting with CSEA. 2024/06/30: CSEA and Protech agreed to develop a list of interfaces categorized into three groups: 1) Axway (source: AWS vs. Mainframe), 2) Mainframe (group of interfaces on the mainframe with departments pointing to Axway), and 3) Cyberfusion. They also decided to share this list at the next monthly meeting with State Departments. IV&V will continue to monitor the coordination with other State of Hawaii modernization projects. 2024/05/31: Accuity closed one recommendation as CSEA is coordinating regular meetings with impacted State of Hawaii agencies to monitor the status of their modernization projects and mainframe operations. CSEA is planning to develop an inventory of interfaces to share at an upcoming meeting with impacted Departments. 2024/04/30: 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.		
People	2024.12.001	Risk	Moderate	Moderate	Critical tasks like "AWS Environment Pub1075 Compliance" and "KMS: Acceptance Test Scripts Development Complete" have 0% completion despite their planned start in October 2023. This indicates potential resource or prioritization constraints. Weekly testing reports highlight slow progress due to insufficient resources (data processing) allocated to batch validation and interface testing. For example, only 16% of batch jobs have passed validation as of December 18, 2024. Though data transfer and processing is the primary issue, downstream considerations for knowledge transfer must also be considered and delivered timely to prevent future testing and validation delays and provide a seamless hand off to CSEA to maintain quality.	PMBOK® v7 emphasizes resource optimization as part of the "Resource Management" domain. Aligning resource capacity with demand ensures timely task completion.	Resource allocation challenges are hindering progress on critical tasks like compliance testing and test script development, evidenced by 0% completion rates and testing backlogs (e.g., only 16% of batch jobs validated). Addressing these issues through skilled resource deployment and upskilling initiatives will mitigate delays, accelerate milestone completion, and align with PMBOK® principles for optimized resource management.	(2024.12.001.R1) Enhancement of resource allocation: the vendor team should consider assigning and aligning additional or more experienced resources to the delayed tasks and backlog testing areas such as financials and support UI validation.	Closed	2025/04/30: System Installation activities progressed to 66% completion, including KEIKI database and AWS-hosted environment configuration.IRS Pub 1075 (security and privacy requirements for agencies and contractors who receive or process Federal Tax Information) compliance was documented and tracked throughout Q1. Functional SIT and system testing were completed in April, and backlog test cases appear closed via full script execution in SIT Iteration 2, which shows all 119 test scripts were executed and passed. IV&V recommends closing this observation and its resulting recommendation (2024.12.001.R1).. 2025/03/31: As of March 2025, CSEA has confirmed that they have appropriate access to AWS since the Protech transition and overall testing access and coordination have improved, particularly through structured agency validation meetings led by CSEA. The KEIKI project's batch testing was reported as 87% complete, according to the most recent Critical Path schedule update. This reflects cumulative progress across multiple batch testing iterations, including performance tuning efforts and output validation cycles associated with the February 18 dataset. The remaining batch activities, including Iteration 5 and final validation are scheduled to continue into April. This observation shall remain open until the formal schedule alignment has been conducted and approved by CSEA and backlog testing areas have been addressed. 2025/02/28: 38% of batch jobs have passed validation as of February 26, 2025, showing an improvement but still below required levels for progression into the next phase. Resource shortages in financials and UI validation are slowing testing execution, requiring additional skilled personnel to meet backlog demands. DDI has withdrawn from the project as of February 19, 2025, causing the necessity for a testing allocation transition plan to Protech which is still in progress, IV&V will continue to monitor progress. 2025/01/31: Progress continues in addressing the identified issue, with recent efforts focused on refining data validation processes and improving coordination between stakeholders. However, challenges remain in fully resolving discrepancies, and additional verification steps will be required to ensure consistency before final implementation.	45784	See Status Update 2025/04/30

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People	2024.12.002	Risk	Moderate	Moderate	Notes from the project schedule highlight that approvals (e.g., from CSEA) are critical to task progression. Weekly reports indicate challenges in joint troubleshooting sessions with IBM due to PII and file transfer protocol issues.	ADKAR® emphasizes building awareness and desire for change among stakeholders to align efforts.	Engaging multiple stakeholders in concurrent projects (Risk #31) is critical to mitigating interface testing risks, but this requires synchronized coordination to prevent delays. Interface workshops and stakeholder meetings (Risk #35) play a key role in fostering collaboration and ensuring timely resolution of interface-related issues, reducing the risk of misalignment in testing and implementation activities.	2024.12.002.R1) Facilitate regular communication with stakeholders like CSEA through daily meetings to expedite resolution of open issues. This will improve turnaround time for defect resolution and test execution dependencies while strengthening stakeholder engagement.	**Closed**	2025/02/28: CSEA is holding half day meetings with the business teams that started in early February to ensure that all the test scripts are fully reviewed and edited in order to expedite the resolution of open issues. This activity also provides a mechanism for change management by fostering collaboration and a mutual understanding of expected functionality, reducing the risk of misalignment in testing. IV&V notes that this recommendation has been acted upon and will close accordingly. 2025/01/31: The status this month reflects ongoing efforts to enhance system integration and streamline data exchange processes, with incremental improvements in validation and testing workflows. Despite progress, key dependencies and unresolved technical issues continue to pose challenges, requiring further collaboration and refinement to achieve full resolution.	**2/28/25**	IV&V notes that this recommendation has been taken into action and will close accordingly.

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Process	2024.08.001	Risk	Moderate	Low	Industry Standards and Best Practices: IEEE 730-2014 standard recommends that status reports include certain key information to ensure effective communication of testing and quality assurance activities.		There is currently a weekly testing report provided to the Project Team. The report conveys the number of testing scenarios in process, however the report does not offer a total number of test cases to be processed for each workstream, nor does it convey full metrics, such as percentage of completion of the total scope within the testing categories and how those align with the project schedule parameters. This can contribute to risk when total transparency is not displayed.	**Closed** 2024.08.001.R1 – The report should outline recommended actions based on the current state of testing, as well as the next steps for future testing activities. Ensure that key stakeholders can easily understand the report's findings and implications. •Metrics and Measurements: The separate weekly test report should provide metrics that reflect the quality of the software, such as pass/fail rates, coverage of tests (e.g., percentage of test cases executed), and other relevant testing metrics, i.e., total scenarios to be tested, percentage of completion and timeline for completion. •Schedule and Milestones: The current status of the testing schedule should be reported, noting any deviations from planned milestones and deadlines. The report should reflect the current state of testing completion tracking as aligned with the project schedule. •Decisions and Change Requests: Any key decisions made during the testing phase, including approved or pending change requests that impact testing or quality assurance activities, should be included.	Closed	2024/10/31: 2024.08.001.R1 (Testing Reports) The weekly testing reports now include pass/fail rates, coverage metrics, defect tracking, and milestone updates, providing a clearer understanding of testing progress and project health. This aligns with the recommendation for improved reporting metrics and stakeholder communication. 2024/09/30: 2024.08.001.R1 (Testing Reports) Significant improvements have been made in the most recent reports and provide a clearer understanding for all stakeholders. IV&V will continue to monitor as these improvements to visibility progress.	2024/10/31	There is now an aligned and improved test reporting metrics with stakeholder communication that affords efficiency and agility in the team making informed decisions.
Process	2024.06.002	Risk	Moderate	Moderate	The project faces a significant risk of incurring extensive costs for delivering the necessary data to test the refactored KEIKI application, potentially leading to delays in the project timeline and increased budget constraints. Despite discussions with Protech and AWS, the issue remains billing-related rather than technical, necessitating ongoing negotiations with ETS to determine financial responsibility. CSEA has developed a second option to use a SQL to SQL transfer in to reduce the amount of federal funding needed for this piece of the contract. In the month of July testing will be conducted to test the viability of this cost saving measure. A decision will be made at the end of July. With the new State CIO starting on August 15, decision-making could be further delayed into the Fall.		Meetings have been held with Protech to discuss the data extraction costs. Protech has engaged AWS for options, but AWS indicates the issue is billing-related, not technical. The cost of delivering data for testing is critical for the KEIKI project, but CSEA finds the current costs prohibitive. Discussions with Protech and AWS indicate the need to resolve the billing issue rather than technical challenges. Without a resolution, this issue could impact the project timeline and budget. CSEA continues to engage ETS to negotiate a cost cap and explore alternative solutions.	2024.07.002.R1 – Continue negotiations with ETS to secure financial support for data delivery. • Engage in discussions to find a feasible cost structure that aligns with project budgets. • Ensure clear communication of cost concerns and impacts to ETS. 2024.07.002.R2 – Explore alternative solutions with Protech and AWS.• Investigate potential cost-saving measures or alternative technical approaches. • Seek AWS assistance to better understand and manage billing concerns. 2024.07.002.R3 – Improve performance of data extraction programs to minimize timing and associated costs. • Work with Protech to identify and implement optimizations in the data extraction process.	Closed	2024/07/31: The SQL to SQL method for data extraction and transfer has been confirmed. CSEA has addressed the issue of cost.	2024/07/31	The SQL to SQL method for data extraction and transfer will be used. CSEA has confirmed that the costs have been addressed.
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.		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. 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.	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. • 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. • 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. • 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	Closed	2024/06/30: Issue closed. The schedule was updated and the 17-day variance was successfully mitigated, ensuring the project remained on track. The project schedule continues to be discussed weekly. IV&V encourages the CSEA PM to conduct in depended reviews of the schedule and project metrics. IV&V will continue to monitor progress made on schedule and resource management practices. 2024/05/31: 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. 2024/04/30: 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.	2024/06/30	The schedule was updated and the 17-day variance was successfully mitigated, ensuring the project remained on track. The project schedule continues to be discussed weekly.

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Process	2024.02.001	Preliminary	N/A	N/A	Additional information is needed regarding Protech's program development and testing approach.		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. 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. CSEA plans to work with Protech to clarify and refine both deliverables. IV&V will continue to monitor this preliminary concern as additional information is discovered.	N/A for preliminary concerns.	Closed	2024/06/30: Preliminary closed. CSEA acknowledged the risk associated with not having defined UI system requirements. Instead, the test scripts are used as the requirements. The teams collaborate closely and hold regular test meetings to ensure alignment and thorough testing. IV&V will continue to monitor the clarification of the program development and testing 2024/05/31: Protech's testing approach presentation was pushed back to June. The presentation is critical as test scripts are finalized and system testing begins in June. 2024/04/30: Protech will present their testing approach in May. The presentation is important as test scripts are finalized, and system testing is approaching. 2024/03/31: 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.	2024/06/30	CSEA acknowledged the risk of not having defined UI system requirements and addressed it by using test scripts as the requirements. Additionally, the teams collaborated closely and held regular test meetings to ensure alignment and thorough testing. This approach mitigates the risk by ensuring that the testing process is comprehensive and that any issues are promptly identified and resolved through ongoing communication and collaboration.

ASSESSMENT AREA	OBSERVATION ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	OBSERVATION	INDUSTRY STANDARDS AND BEST PRACTICES	ANALYSIS	RECOMMENDATIONS	STATUS	STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Process	2024.01.001	Risk	Moderate	Low	Ineffective project status meetings and reports can lead to delayed decision-making, lack of accountability, and reduced morale.		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.	CLOSED: 2024.01.001.R1 – CSEA should play an active role in refining the project status report and providing topics for weekly project meetings. • 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. • CSEA could solicit feedback prior to meetings so the team can be prepared to ask questions or discuss relevant project topics. CLOSED: 2024.01.001.R2 – Set clear objectives for meetings and provide concise and relevant information that adds value. • 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. • 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. CLOSED: 2024.01.001.R3 - Additional quality metrics and project success metrics should be added to project status reports.	Closed	2024/06/30: Risk closed. As system testing started in June, the team started adding a Weekly Test Report. The report outlines the testing scope, the defects that were retested and validated, and gives a summary of the progress of all test cases. IV&V will continue to assess the effectiveness of project status reports and meetings. 2024/05/31: Accuity decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). The CSEA PM presented some of the project's key success metrics at the May Steering Committee Meeting. High-level pre-delivery testing metrics were provided in May. 2024/04/30: Accuity closed two recommendations. 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. 2024/03/31: 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. 2024/02/29: 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.	2024/06/30	Test reports were added to the weekly status meetings. The report contains testing and defect metrics.
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	2024/01/31	Closed as this is a positive observation.
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.		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. 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. 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.	2023.11.001.R1 – Develop separate formalized data system migration plans and processes for non-code elements. • A separate implementation plan should be clearly outlined, determining the timeline, tasks, tools, and resources needed to perform these activities. • Develop a formalized data migration acceptance process for the remaining cycles with defined acceptance criteria. • Determine what validation is needed by other agencies and stakeholders that rely on CSEA's Keiki system and outputs. 2023.11.001.R2 – Investigate automated tools for tracking and validating data system requirements. • Automated data validation should be investigated to help identify missing elements, increase data accuracy, and alleviate resource constraints. 2023.11.001.R3 – Ensure data system requirements are comprehensive and complete upfront. • Given the waterfall approach, schedule and resource considerations should be given to increasing system requirement gathering upfront. • The project managers should ensure greater coordination of project information needed for requirements management and tracking. • Consider an iterative approach for non-code migration activities, which allows for several rounds of review and validation. 2023.11.001.R4 – Appoint dedicated Data System Migration Leads from both Protech and CSEA. • 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.	Closed	2024/01/31: 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. 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. 2023/12/31: 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.	2024/01/31	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.	PMI Project Management Body of Knowledge (PMBOK) Chapter 2.2 and PMI The Standard for Project Management (SPM) Chapter 3.2 state the importance and benefits of creating a collaborative project team environment.	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	2023/11/30	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	9	Regarding Item 1) statement that 'critical' and 'highest' should be treated with the same priority, this is not necessarily true. The 'critical' severity level refers to impact on the system, but the 'highest' priority level refers to the DDI's work scheduling level.	ITO	IV&V agrees that the use of 'priority' is confusing given the recent **clarifying language** addressing the differences between 'severity' and '*priority*.' The summary has been updated accordingly.
2	10	A multifaceted dashboard has been created to track UAT progress.	ITO	IV&V confirms that CSEA created a user acceptance testing (UAT) status dashboard. As UAT began in August, IV&V will include observations on its actual use in the August IV&V report. The July comment primarily focused on ProTech's reporting of SIT progress. While ProTech uses Jira to track defects, access is limited. Given the ongoing SIT delays, IV&V will continue to monitor the usefulness and effectiveness of ProTech's defect tracking reports as they support CSEA's progress.
3	18	The DDI's priority level is a useful tool to focus resources on the defects that need to be fixed most urgently. The Financial Test Deck was completed and all questions resolved.	ITO	IV&V confirms that the Financial Test Deck has been completed. Observation 2024.12.003 focuses on the issue that both critical and non-critical tasks are being worked on concurrently. The Financial Test Deck was cited as *an example* where a critical task appeared to be impacted by non-critical tasks being worked on simultaneously. This observation continues to update and monitor the progress of both critical and non-critical defects as they are concurrently being worked on

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